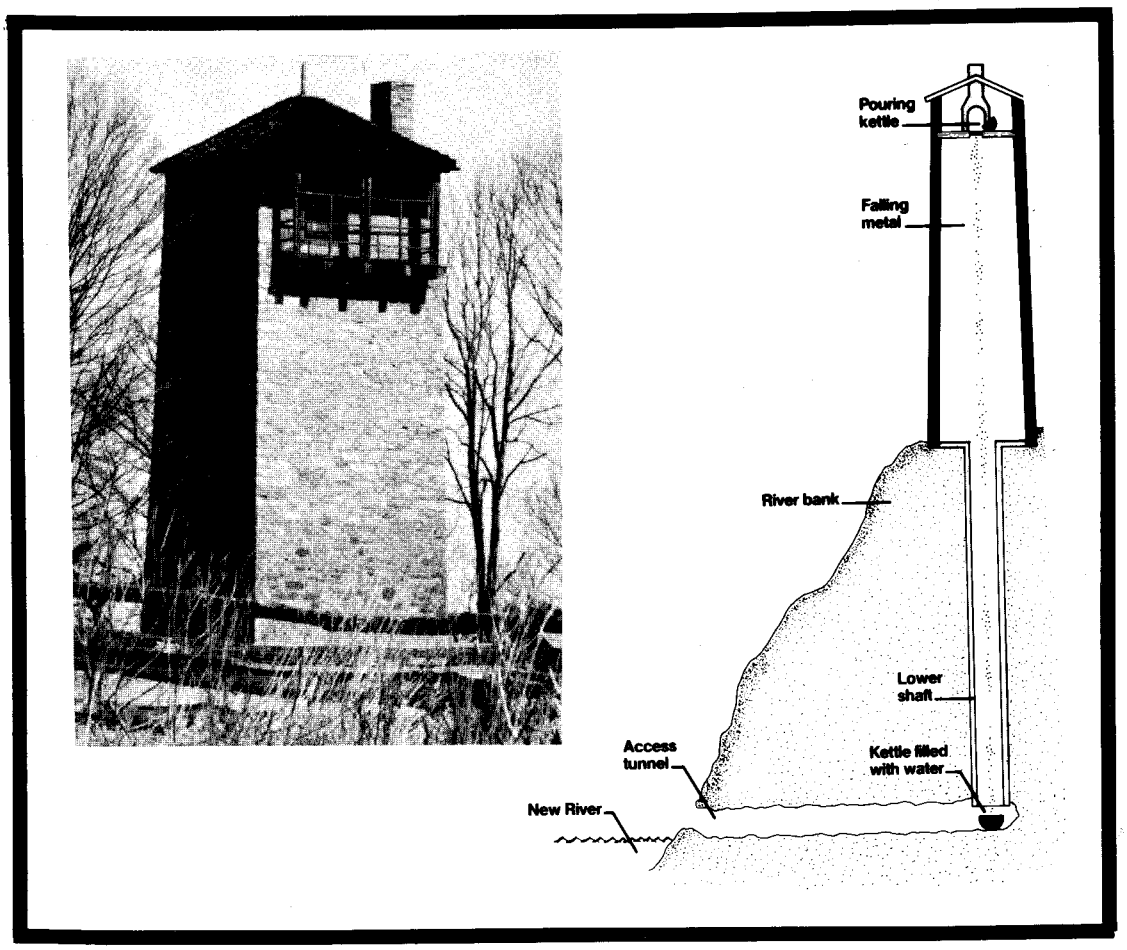
VIRGINIA DIVISION OF MINERAL RESOURCES
PUBLICATION 93

COPPER, LEAD, AND ZINC RESOURCES IN VIRGINIA

Palmer C. Sweet, Richard S. Good, James A. Lovett,
Elizabeth V. M. Campbell, Gerald P. Wilkes, and Lesley L. Meyers



COMMONWEALTH OF VIRGINIA

DEPARTMENT OF MINES, MINERALS AND ENERGY
DIVISION OF MINERAL RESOURCES
Robert C. Milici, Commissioner of Mineral Resources and State Geologist

CHARLOTTESVILLE, VIRGINIA
1989

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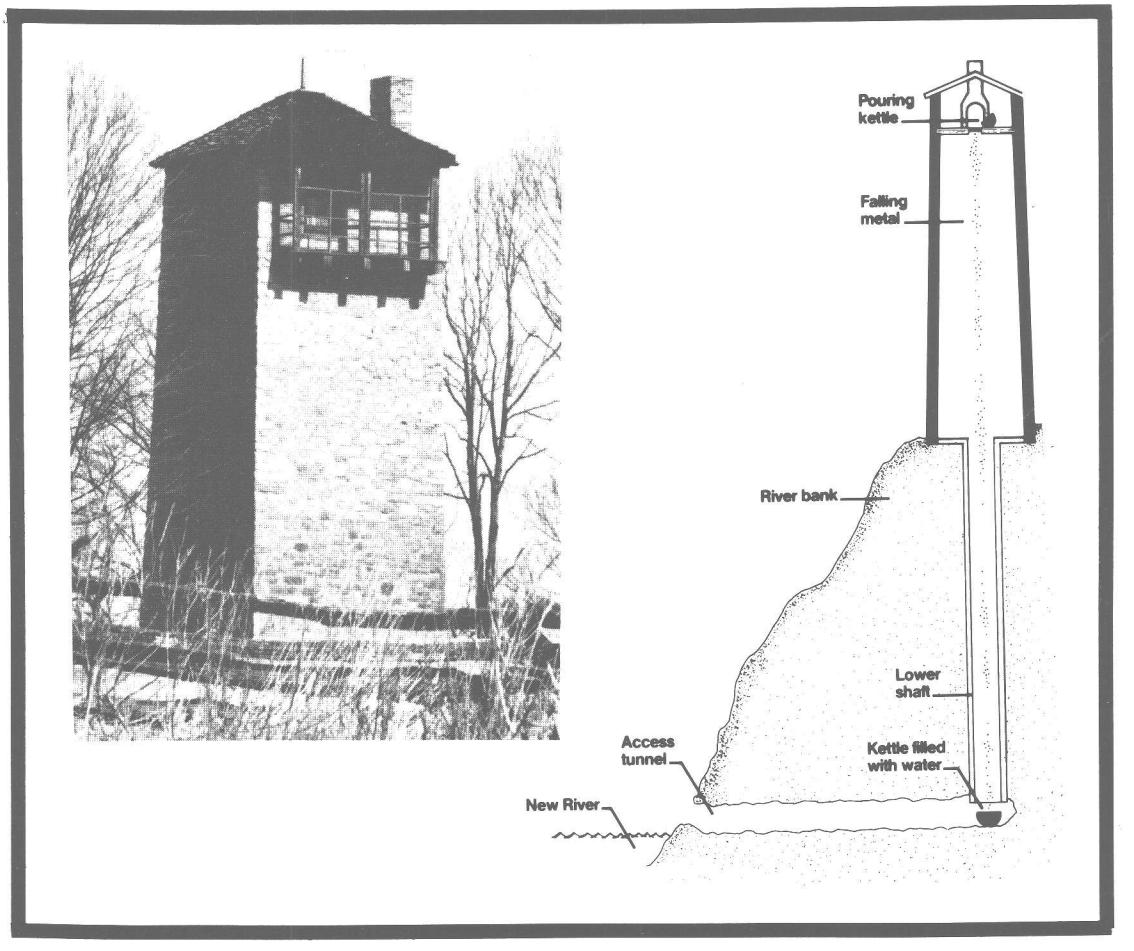

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FRONT COVER: The Shot Tower in Wythe County, Virginia was built about 1807 by Thomas Jackson to manufacture lead shot. The lead used at this facility was provided by nearby lead mines listed in this report. The Shot Tower was renovated and opened to the public in 1968 and is currently operated as the Shot Tower Historical State Park. Drawing by the Virginia Department of Conservation and Historical Resources, Division of State Parks. Photograph by G. P. Wilkes.

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DEPARTMENT OF MINES, MINERALS AND ENERGY
RICHMOND, VIRGINIA
O. Gene Dishner, Director

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF PURCHASES AND SUPPLY
RICHMOND, VIRGINIA

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CONTENTS

Page

Introduction 1
Copper, lead, and zinc resources 1
Piedmont province 2
Gold-pyrite belt 2
Virgilina district-Carolina slate belt 2
Culpeper basin 3
Mount Athos Member, Alligator Back Formation 3
Blue Ridge province 3
Gossan Lead district 4
Catoctin Formation copper deposits, northern Virginia 4
Granitoid plutons, veins, and greissens 4
Valley and Ridge province 5
Austinville-Ivanhoe district 5
References cited 5
Appendix: Copper, lead, and zinc mines, prospects, and occurrences in Virginia by county 7
Albemarle 7
Amelia 9
Amherst 12
Appomattox 14
Bedford 16
Bland 16
Botetourt 16
Buckingham 21
Campbell 28
Carroll 30
Charlotte 50
Clarke 54
Culpeper 54
Cumberland 58
Fairfax 58
Fauquier 63
Floyd 67
Fluvanna 74
Franklin 76
Goochland 78
Grayson 81
Greene 86
Halifax 88
Loudoun 95
Louisa 96
Madison 103
Mecklenburg 105
Montgomery 109
Nelson 112
Orange 114
Page 118
Patrick 121
Pittsylvania 121
Prince William 124
Pulaski 126
Rappahannock 129

Page
Roanoke 129
Rockbridge 132
Rockingham 132
Russell 139
Scott 141
Shenandoah 143
Smyth 147
Spotsylvania 157
Stafford 162
Tazewell 164
Warren 166
Wythe 170

ILLUSTRATIONS

Figure

1. Abandoned mine shaft, Arminius mine 2
2. Large dump area, High Hill copper mine 3
3. Water-filled shaft, Christian Tract (Dunlap) mine 4
4. Concrete foundations, Gooney-Manor mine 5

COPPER, LEAD, AND ZINC RESOURCES IN VIRGINIA

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INTRODUCTION

The Virginia Division of Mineral Resources, recognizing the need for computerized mineral resources data entered into a cooperative project with the U.S. Geological Survey in the early 1980s to prepare such a data base for the metallic mineral deposits in Virginia. In August, 1984, the Division began a four-year project under contract 14-08-0001-G-957 with the U.S. Geological Survey. Funds were provided for field expenses to enable Division personnel to gather new data and update records in the U.S. Geological Survey's Mineral Resources Data System. During the course of the project, records that were duplicated in the system were deleted. A total of 337 entries from 48 counties were added as new or updated records between 1984 and 1988.

The U.S. Geological Survey's Mineral Resources Data System (MRDS) is a computerized mineral data storage system that was established in 1972. The system was originally called the Computerized Resources Information Bank (CRIB) and was established to meet the growing need for automated storage and rapid retrieval of large amounts of descriptive information on metallic and non- metallic mineral resources.

MRDS-VIRGINIA is a subset of the MRDS master data base and contains records that provide the locations of, and geologic and resource information about, the metallic and some of the non-metallic mineral deposits in Virginia. Sweet and Rowe (1984) provide a descriptive report on the MRDS system and its use. Each record describes a mine, prospect, or occurrence and emphasizes geologic information, available production and analytical data, and references. The system was downgraded to the MINI-MRDS system in 1983. Recently MRDS-REV (REVELATION), a mineral deposit data base management system, was developed for microcomputers. REVELATION enables commercially available software to be used to add, update, retrieve, and print records from the MRDS file. Printouts of data may presently be obtained from the U.S. Geological Survey by contacting the project manager for the Mineral Resource Data System at (703) 648-6198; data for the State of Virginia may also be obtained from the Division of Mineral Resources. For information telephone (804) 293-5121.

COPPER, LEAD, AND ZINC RESOURCES

The culmination of the project is a printout of all the copper, lead, and zinc records (283) in the system arranged alphabetically by county. Information gathered on manganese, barite, and iron was not included in this report. These commodities may be reported in a future publication. Some deposits probably were mined initially for iron. In the Piedmont province, some gold and silver was recovered from the vicinity of iron mines, but generally precious metal recovery was from properties very close to, but not identical to, base-metal locations.

In Virginia, the distribution of base-metal, precious-metal, iron, manganese, and barite mines, prospects, and occurrences was recognized at an early date, especially deposits like the Gossan Lead district and the Gold-pyrite belt. Occurrences of iron-copper-zinc, iron-manganese, iron-manganese-barite, iron-copper-lead-gold, iron-gold, and lead-zinc-iron-barite commonly occur in closely parallel zones, overlap, or extend for miles along strike with locally different metal combinations.

An understanding of the causes of the belted distribution of minerals and the factors contributing to the geochemical sequences in which the metals are deposited has only recently begun to emerge. Recent detailed mapping, Vibroseis studies, and many new radiometric age dates of rocks have established that the entire Piedmont, the entire Blue Ridge, and much of the Valley and Ridge provinces consist of allochthonous imbricate stacks of thrust sheets. Because of this new structural data many previously interpreted structures, such as the James River synclinorium, were discarded, and many stratigraphic correlations had to be discarded or drastically revised.

With the exception of base metals associated with tin, all of the copper, lead, and zinc deposits were strata-bound; the final emplacement was probably modified or controlled by local fractures, regional thrust planes, paleokarst collapse structures, or recirculating ground waters directed by favorable porosity and permeability. All these deposits appear to be originally formed from warm metal-rich saline brines or submarine hot springs that flowed along fractures or mega-fractures associated with rift systems or island arcs. These deposits were subsequently deformed by thrusting and were masked by plate closing tectonism. The primary factors that controlled metal deposition were temperature dependence and proximity to hot spots along or near major extensional fracture systems. In the Piedmont province, felsic volcanic centers, mafic intrusives, and extensive flows in the Mesozoic basins were identified. Mafic flows or feeder dikes in the Blue Ridge province were also identified. In the Valley and Ridge province there are no known igneous bodies in the immediate vicinity of the major ore bodies, but fluid inclusions indicate ore solution temperatures that were greater

than 100°C.

The generation of rift systems and the location of island arc systems were controlled by mantle plumes.

PIEDMONT PROVINCE

Copper, lead, and zinc deposits occur: as highly localized simple-sulfide enrichments, in quartz veins, as strata-bound deposits in fractures, and as strata-bound disseminations.

Highly localized simple-sulfide enrichments, mostly copper and zinc with very minor lead, occur in strata-bound syngenetic, pyritic, massive sulfide lenses within the intermediate and felsic Cambrian metavolcanic and volcaniclastic sedimentary rocks of the Chopawamsic Formation and the coeval Ta River metamorphic suite (Gold-pyrite belt of north-central Virginia). The metals are commonly enriched as secondary oxides in weathered gossan zones that overlie the primary sulfide deposits.

Copper sulfides occur in quartz veins in the Late Precambrian to Cambrian metavolcanic beds of the Aaron Formation in the Virgilina district in the south central Piedmont province. These metavolcanic beds comprise the northern terminus of the Carolina slate belt in Virginia.

Strata-bound syngenetic and epigenetic copper sulfides and secondary copper minerals occur in fractures in Upper Triassic sedimentary rocks, particularly near basaltic feeder dikes and sills in the Culpeper basin of northern Virginia.

Strata-bound disseminations of copper minerals occur in dolomitic marble of the Late Precambrian Mount Athos Member of the Alligator Back Formation in the central Piedmont province.

GOLD-PYRITE BELT

The most important metallic mineral deposits in the Piedmont province are the massive sulfides of the Chopawamsic Formation. These sulfide bodies were estimated to contain 13.5-million short tons of mainly pyrite, copper, lead, and zinc with 10-million short tons in the Mineral district, Louisa County (Pavlides and others, 1982). The Chopawamsic crops out about 30 miles south of Washington, D.C., and extends for about 110 miles to the Andersonville district in Buckingham County. The Chopawamsic occupies a narrow belt, generally less than 10 miles wide, that contains Ordovician slates, phyllites, and schists in synforms. Beds are repeated and occur in tight folds, overturned to the northwest. The Ta River metavolcanic gneisses commonly occur on the east limbs of these folds. The Chopawamsic belt has been projected farther to the southwest, into North Carolina. The possible extension of the belt has not been mapped in detail or explored by modern methods. The gold deposits of the gold-pyrite belt consist of a linear zone of gold-quartz veins cutting Chopawamsic and other rocks. The veins are regionally parallel to, or at a small angle to, the massive sulfide deposits of the Chopawamsic Formation. The gold is believed to have formed in submarine hot spring environments, where mineral-bearing waters pooled in topographic lows (Good and others, 1977; Mangan, 1983).

The massive sulfides of greatest extent in the Mineral district are associated with large thicknesses of felsic metavolcanic rocks, including fragmental felsites that are probably rhyolite breccias associated with an ancient volcanic center. Mineralogical guides associated with massive sulfide deposits in both the Mineral and Andersonville districts are banded iron formations (thin, magnetite- hematite quartzites), manganese-rich zones of spessartine garnet and rhodonite, magnesium-rich chlorite schists, zinc spinel (gahnite), zinc-bearing staurolite, tourmalites, and kyanite that apparently formed in hot springs related to the ore zone. Pavlides and others (1982) consider this belt of deposits to have formed in a tholeiitic island arc. Duke (1983) attributes the deposits to near-surface hydrothermal activity in a volcanically active, back arc, oceanic rift. The last mining for by-product gold was in 1945. The Arminius mine, located north of Mineral, was one of the last mines worked in this district (Figure 1). Exploration in the Mineral district continued into the 1950s and 1960s particularly by the New Jersey Zinc Company and into the 1970s by Callahan Mining Corporation. A significant new deposit (Cofer property) was discovered in the Mineral district in the mid-1970s, but it was never mined. Some gold exploration has continued in the 1980s in the southern part of the Chopawamsic belt.

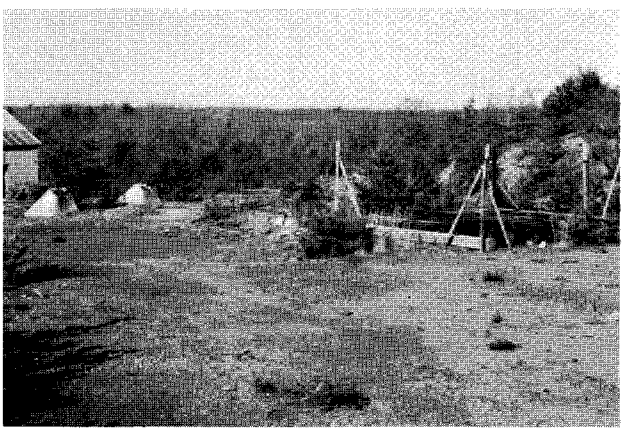

Figure 1: Abandoned mine shaft, covered with logs at the Arminius mine, Louisa County.

VIRGILINA DISTRICT-CAROLINA SLATE BELT

The Carolina slate belt extends from North Carolina into the southern Piedmont province of Virginia and apparently terminates in the Virgilina district, in Halifax and Charlotte counties. It lies east of the trend of Chopawamsic metavolcanic rocks. About 750,000 pounds of copper were

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The generation of rift systems and the location of island arc systems were controlled by mantle plumes.

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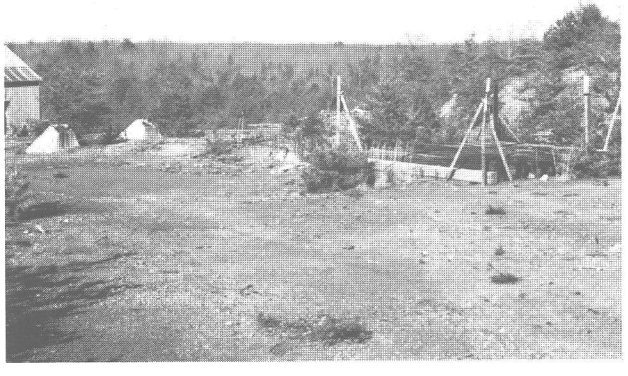

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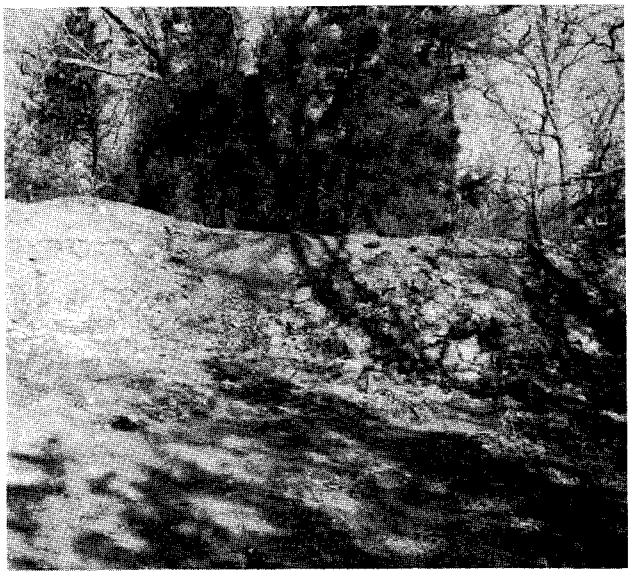

Figure 2: Large dump area around main shaft of High Hill copper mine, Halifax County.

The Virgilina synform is a Late Precambrian, allochthonous metavolcanic arc sequence that was formed offshore from the North American continent (Secor and others, 1983). The Aaron Formation of the Virgilina district, is a light-green actinolite-chlorite-epidote schist representing altered andesitic-basaltic flows and tuffs. There are lenses of chalcopyrite, pyrite, galena, bornite, chalcocite, covellite with limonite, siderite-ankerite, specular hematite, epidote, chlorite, quartz, and jasper in quartz veins that are subparallel to the regional lithologic trends (Linden and others, 1985). The deposits are considered to be coarse grained submarine-fan deposits formed from volcanic flows and pyroclastic rocks admixed with fine-grained epiclastic sediments (Harris, 1984). They are equivalent to the Uwharrie and Efland Formations of North Carolina (Conley, 1982) that were silicified and mineralized with gold and copper from fumarolic action.

CULPEPER BASIN

In the Mesozoic Culpeper basin of the northern Virginia piedmont, mainly in Culpeper, Fairfax, Fauquier, Loudoun, Orange, and Prince William counties, there are numerous mineral occurrences and five small, abandoned copper mines. There are also barite, lead-zinc, uranium, and very few precious-metal mines, prospects and occurrences. Metal-rich brines and hydrothermal solutions were probably generated from hot springs associated with basaltic feeder dikes, flows, and sills, and from granophyres and ferrogabbro. They deposited zinc, copper, lead, and silver in permeable Upper Triassic red-bed fluvial and lacustrine siltstones and sandstones (Smoot and Robinson, 1987). Fluid inclusions in quartz and sphalerite indicate that deposition occurred from a sodium-rich (11-14 % NaCl) solution deposited at temperatures of 150° to 225° C. Syngenetic deposition of copper was partly controlled by porosity, organic debris, temperature, and distance from intrusive bodies. Epigenetic fracture filling also occurs. The most common ore minerals are chalcopyrite, bornite, covellite, chalcocite, magnetite, and hematite. Surface copper occurs as mobilized, oxidized chrysocolla and malachite on fracture surfaces. The deposits are small, low grade, and shallow. All the mineralization is in Triassic rocks (Smoot and Robinson, 1987).

MOUNT ATHOS MEMBER, ALLIGATOR BACK FORMATION

Several mines and prospects are in the Late Precambrian Mount Athos Member of the Alligator Back Formation, Lynchburg Group, in Amherst, Appomattox, Campbell, Bedford, and Pittsylvania counties. Copper and pyrite are disseminated in phyllites, quartzites, and dolomitic marbles. The Christian Tract (Dunlap) mine is located in the Lynchburg gneiss, stratigraphically below the Mount Athos Member, in Amherst County (Figure 3). Most of the metallic occurrences are iron and manganese which occur syngenetically with the quartztites. Manganese also occurs in clays formed from collapsed and leached dolomitic marble. Additionally, syngenetic barite is strata-bound and occurs within the Mount Athos Member (Conley, 1985). It is spatially associated with fractures related to thrust faults. The few, small copper occurrences appear to be associated with higher temperature volcanic tuffs (slates and phyllites) in the Mount Athos Formation. Most of the deposits were formed from hydrothermally enriched brines formed in rift-related fractures as chemical sediment, later transported in sheeted blocks by thrusting and finally altered by ground water. The Mount Athos Member is considered to have formed in a major, rift-generated basin during the Late Precambrian break up of the North American continent and the formation of the Iapetan or proto-Atlantic Ocean or oceans (Conley, 1987a).

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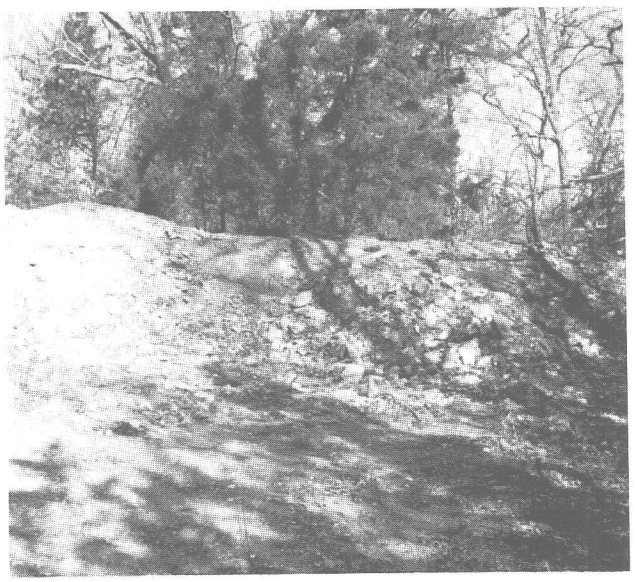

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BLUE RIDGE PROVINCE

Copper, lead, and zinc mineralization occurs as

three types of deposits in the Blue Ridge province: 1) strata-bound and syngenetic massive-sulfide zinc- and copper-bearing pyrrhotite deposits in the Late Precambrian Ashe Formation of the Lynchburg Group in the Gossan Lead district of Carroll, Grayson, and Floyd counties; 2) disseminated, small pods, and veinlets of copper minerals in gash fractures in the Late Precambrian Catoctin metabasalt flows and feeder dikes; and 3) veins and greisens associated with granitoid plutons.

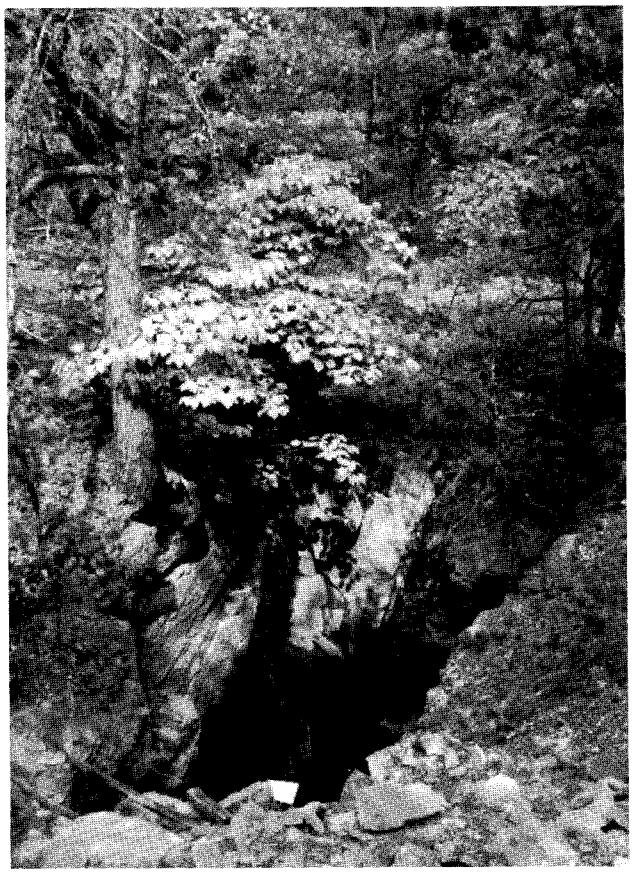


Figure 3: Water-filled shaft, near the contact of the Lynchburg gneiss with peridotite and metapyroxenite dikes, Christian Tract (Dunlap) mine, Amherst County.

GOSSAN LEAD DISTRICT

Massive lenses of sulfides were mined for iron and copper from strata-bound and syngenetic pyrrhotite lenses in the Late Precambrian Ashe Formation of the Lynchburg Group, a metasedimentary mica schist and gneiss. The lenses, mined from 1789 to 1976 in Carroll and Grayson counties, occur in a northeast trending zone 17 miles long. Combined past production plus remaining reserves was estimated at 20-million tons (Gair and Slack, 1980) but the total amount of near surface sulfides may be up to ten times this amount (Corriveau, 1956). Similar massive sulfides are found on strike 33 miles to the southeast in North Carolina in the Ashe Formation (1.4-million tons) and on strike 21 miles to the northeast at the Toncrae deposit (100,000 tons) in Floyd County. The sulfides of the Gossan Lead are massive pyrrhotite with accessory chalcopyrite, sphalerite, pyrite, and galena. Minor and rare terahedrite, stannite, and native bismuth also occur in the Gossan Lead. Arsenopyrite and galena occur as ubiquitous traces. Precious metals are absent, except to the northeast in Floyd County where nickel sulfides and arsenopyrite are important (Brush Creek area; Brinton, and Lick Fork mines). At the Brinton mine, arsenopyrite and pyrite are accompanied by chalcopyrite, native copper, and traces of gold and silver. At Lick Fork mine, pyrrhotite is accompanied by chalcopyrite, pentlandite, sphalerite, and violarite. In Carroll County, manganese-garnet and barite occur in the wall rocks of the sulfide ore zones. The grade of the sulfide bodies in the Gossan Lead is 2.0 weight percent zinc, 0.5 weight percent copper, and 0.1 weight percent lead (Henry and others, 1979). The enclosing Ashe Formation is a sequence of clastic metasedimentary rocks (metapelite, metagraywacke, minor quartzite, and carbonaceous schist), thought to be marine turbidites, and interlayered amphibolite, actinolite-chlorite schists, and other mafic rocks. The metamorphic rocks were deposited in an elongated marine basin overlying a crustal rift zone near the eastern edge of the North American plate during the opening of the Iapetus ocean (Rankin, 1975; Gair and Slack, 1984).

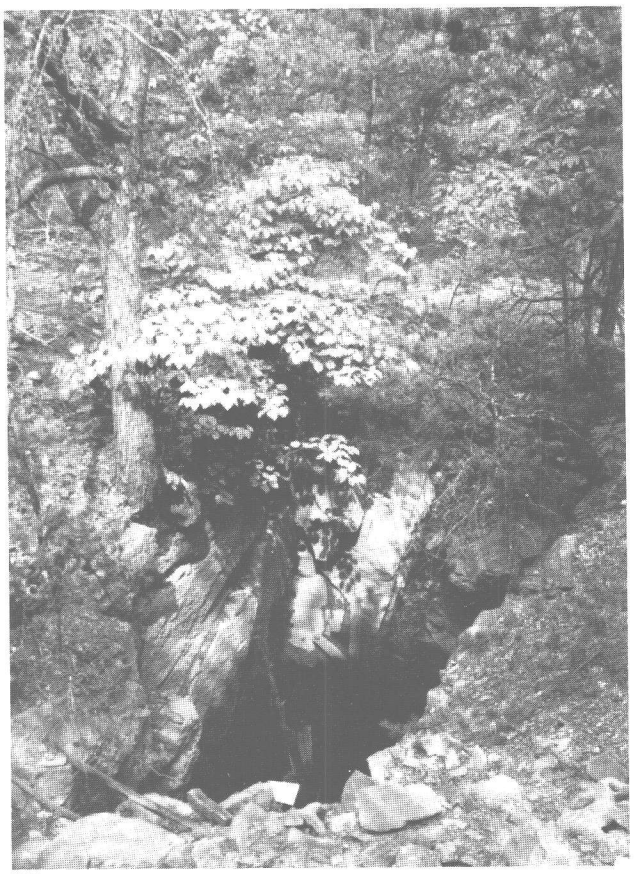
CATOCTIN FORMATION COPPER DEPOSITS, NORTHERN VIRGINIA

Copper occurs in the Blue Ridge province as chalcopyrite, bornite, or native copper as disseminations, as local pods, in gash fractures in flows, in feeder dikes, and in epidotized portions of the Late Precambrian Catoctin Formation. The mineralization is apparently confined to the lower few hundred feet of the formation and is found above the unconformable basal contact of the unit with underlying older granitoid and granulitic rocks (Allen, 1963). At least 18 abandoned mines, prospects, or occurrences are known in Clarke, Fauquier, Loudoun, Page, Rappahannock, and Warren counties, but little ore was produced. Most production occurred between 1890 to 1910 (Sweet and Bell, 1980; Luttrell, 1966). Weed (1901) noted that most of the deposits did not appear to extend more than 50 to 60 feet below the surface and often had joint surfaces with oxidized malachite and azurite stains. The deepest mine was the Gooney-Manor mine in Warren County, which was worked at a depth of 350 feet (Figure 4).

GRANITOID PLUTONS, VEINS, AND GREISENS

Small amounts of zinc, lead, and copper minerals are associated with tin and precious metals in the Irish Creek-

three types of deposits in the Blue Ridge province: 1) strata-bound and syngenetic massive-sulfide zinc- and copper-bearing pyrrhotite deposits in the Late Precambrian Ashe Formation of the Lynchburg Group in the Gossan Lead district of Carroll, Grayson, and Floyd counties; 2) disseminated, small pods, and veinlets of copper minerals in gash fractures in the Late Precambrian Catoctin metabasalt flows and feeder dikes; and 3) veins and greisens associated with granitoid plutons.



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GRANITOID PLUTONS, VEINS, AND GREISENS

Small amounts of zinc, lead, and copper minerals are associated with tin and precious metals in the Irish Creek-

Yankee Horse Ridge- Buck Mountain areas of Rockbridge and Amherst counties. Mineralized cataclastic zones occur near fluorite-bearing biotite granites and rhyolite dikes which intrude Grenville-age granulites and quartz monzonites. Good (in preparation) provides some recent data on a newly discovered area of mineralization in Rockbridge County. Other occurrences are known in Nelson and Rappahannock counties.

Figure 4: Concrete foundations for crushing equipment at the plant, Gooney-Manor mine, Warren County.

VALLEY AND RIDGE PROVINCE

Copper, lead, and zinc occur in the Valley and Ridge province as strata-bound Mississippi Valley type deposits within the Cambrian Shady Dolomite and the Ordovician Beekmantown Formation. A small number of occurrences and mined deposits are found within the Cambrian Rome Formation, which is stratigraphically above the Shady Dolomite. Most deposits within the Shady Dolomite and Rome Formation are located in Wythe and Smyth counties, but a few are located in Pulaski and Montgomery counties. The most important deposit of the zinc-lead ores within the Shady Dolomite is the Austinville-Ivanhoe group of ore bodies, Wythe County. Deposits within the Beekmantown Formation are located in Augusta, Rockingham, and Shenandoah counties. The most important mine in these counties is the Bowers-Campbell mine, Rockingham County, which operated from 1957 to 1962. Many of these properties were first worked for iron oxide and some have barite and manganese. Early extraction of zinc was from oxidized surface minerals, hemimorphite, and smithsonite.

AUSTINVILLE-IVANHOE DISTRICT

The largest deposits in the Valley and Ridge province, the Austinville-Ivanhoe district in Wythe County, produced 34-millon short tons (30-million metric tons) of 4.7 percent combined lead (0.8%) and zinc (3.9%) from 1756 to 1981 (Weinberg, 1980; Miller, 1985; personal communication, Weinberg, 1988, with R.S. Good). The ore mineralogy consists mostly of lenses of sphalerite-pyrite-galena with traces of marcasite and chalcopyrite. The pyrite is ubiquitous and makes up about 5 percent of the total sulfides. Oxidized zinc and lead minerals hemimorphite, smithsonite, hydrozincite, cerussite, and anglesite, generally with limonite and goethite, occur at the surface, around dolostone pinnacles and along fault zones as deep as 1100 feet. Some chalcopyrite, marcasite, fluorite, barite, gypsum, anhydrite, calcite, and several varieties of chert, calcite, and dolomite also occur in the ore zones. All the ore is within dolomite and shows varying amounts of bleaching and recrystallization around the ore zone contacts.

Temperatures of formation from sphalerite inclusions(100° -160° C) and high salinities (10-25% equivalent weight NaCl) indicate that ore fluids were warm, metal-rich brines (Foley, 1980). The base metals were probably generated from rift-related fractures near a hot spot or mantle plume, or from basinal compaction of metal-rich sediments that were remobilized during Taconic or post-Taconic deformation. The Austinville-Ivanhoe ores occur as breccia fillings and as thin lense-like replacements parallel to sedimentary layering. The sedimentary environment was an upward-shallowing platform margin of a carbonate ramp homocline, with skeletal algal reefs (Pheil and Read, 1980). Structurally the area now consists of multiple, imbricate, steep thrust faults.

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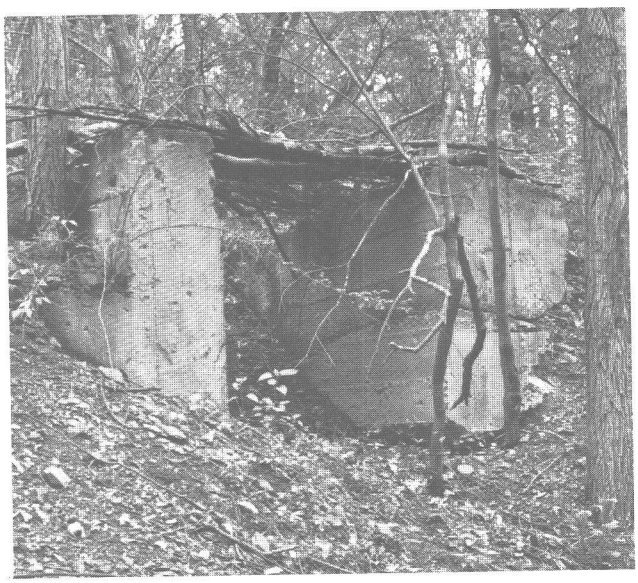

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APPENDIX: COPPER, LEAD, AND ZINC MINES, PROSPECTS, AND OCCURRENCES IN VIRGINIA BY COUNTY

Data in each record describes an individual mine, prospect, or occurrence and the combination of metallic and non-metallic minerals present. A county map showing the mine, prospect, and occurrence location follows the page of the first county entry. Numerous geologists have gathered data in the field over many years and the ideas pertaining to the geologic settings for metallic mineralization have changed. These changed views should be kept in mind when evaluating the geologic comments for the individual mineral deposits. The geologic comments were not completely edited for uniformity or for a current point of view throughout the data base.

This report contains copies of computer printouts of 283 copper, lead, and zinc mines, prospects, and occurrences in Virginia. The mines, prospects, and occurrences are located on county highway maps and the data is presented alphabetically by name. Each record contains the name, location, reported commodities, exploration and development status, analytical data, geology, production history, years of activity, landowner, and the most important references.

ALBEMARLE COUNTY

1. Faber Mine

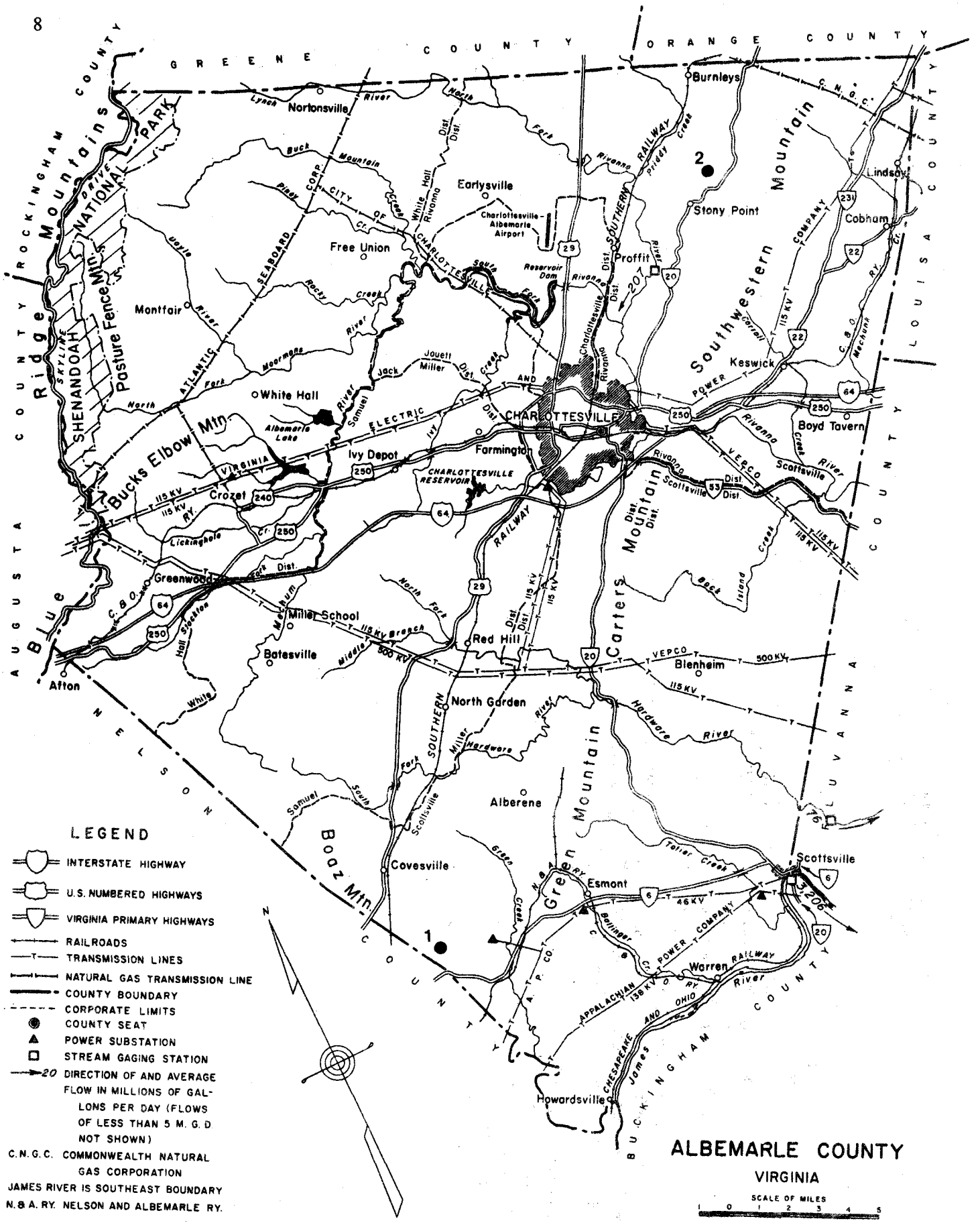
MRDS-REV RECORD NUMBER.....20
MRDS RECORD NUMBER.....W031302
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....12
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....FABER MINE
SYNONYM NAME.....ALBEMARLE ZINC AND LEAD CO. MINE
COUNTRY.....US STATE.....VA COUNTY.....ALBEMARLE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SCHUYLER, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....860 FT (262 M)
UTM NORTHING...4190040 EASTING...701860 ZONE...+17
LATITUDE.....37-50-14N LONGITUDE.....078-42-22W
POSITION FROM NEAREST LOCALITY.....2.73 KM (1.7 MI) ENE OF FABER.
LOCATION COMMENTS.....AT THE END OF A 2.4 KM (1.5 MI) WINDING JEEP TRAIL WHICH INTERSECTS THE NORTH SIDE OF STATE ROAD 6 ABOUT 3.4 KM (2.1 MI) BY ROAD EAST OF FABER, VA.
COMMODITIES PRESENT.....PB ZN AG CU PYR1 PYR FE
ORE MATERIALS.....ARGENTIFEROUS GALENA, SPHALERITE, CHALCOPYRITE, PYRITE, PYRRHOTITE, MAGNETITE
GENERAL ANALYTICAL DATA.....WATSON (1907) GIVES SEVERAL ANALYSES OF ORE WHICH YIELDED THE FOLLOWING RESULTS: MR. J.H. GIBBONEY REPORTED 62.11% ZN, 3.44% FE, 34.45% S: PROFESSOR W.H. SEAMON REPORTED 32% ZN, 4.02% PB, 1.88% FE: AND WATSON REPORTED 63.05% PB, 12.12% ZN, 3.16% FE, 19.32% S IN A SAMPLE OF LEAD CONCENTRATES AND IN A SAMPLE OF ZINC CONCENTRATES HE REPORTED 6.02% PB, 47.88% ZN, 7.26% FE, 0.94% CU, AND 29.52% S. ASSAY BY IRON KING ASSAY, HUMBOLDT, AZ, IN MARCH 1985 NOTES 2.04 OZ AG/TON.
COMMODITY INFO COMMENTS.....SOME SILVER, ABOUT 31 OZ/TON, WAS REPORTED IN THE EARLIEST PRODUCTION, PRIOR TO THE CIVIL WAR (WATSON, 1907, P. 57) ANALYSIS SHOWS 2-3 OZ/TON OF ORE (ROBERTS, 1942 P. 550).
MAJOR.....PB ZN
MINOR.....AG
OCCUR.....CU PYR PYRITE
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....MR. BURFORD
YEAR OF DISCOVERY.....1849
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-CIVIL WAR
OPERATOR.....ATLANTIC LEAD AND ZINC CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MR. BURFORD FIRST DISCOVERED MINE IN 1849. IT WAS WORKED BY THE CONFEDERATES DURING THE CIVIL WAR, PRODUCING A REPORTED TOTAL OF 7,204 POUNDS OF LEAD. THE MINE REMAINED CLOSED AFTER THE WAR UNTIL 1905 WHEN THE ALBEMARLE ZINC AND LEAD COMPANY BUILT AN 80-TON CONCENTRATING PLANT AND PRODUCED BOTH LEAD AND ZINC. PRIOR TO THIS, THE VEIN HAD BEEN WORKED ONLY FOR GALENA. IT IS UNCERTAIN HOW LONG THE MINE WAS OPERATED BY THE ALBEMARLE ZINC AND LEAD CO., BUT IN 1915 THE MINE WAS REOPENED-BY THE ATLANTIC LEAD & ZINC CO., AND DEVELOPMENT WORK WAS CARRIED ON DURING 1916. A 100-TON CONCENTRATING MILL WAS CONSTRUCTED. THE MINE CLOSED DOWN SOMETIME BETWEEN 1916 AND 1919. FROM JUNE 25, 1958 TO AUGUST 15, 1958, MR. SAM RANSON OF DILLWYN, VA. CONDUCTED A SELF-POTENTIAL SURVEY OF THE FABER LEAD-ZINC AREA. ADDITIONAL WORK INCLUDED GEOCHEMICAL SURVEY AND 2 DIAMOND DRILL HOLES, 82 AND 79 M (268 AND 259 FT) DEEP RESPECTIVELY. A RESISTIVITY SURVEY INDICATED A SHALLOW SOUTHWEST PLUNGING VEIN WITH A PROBABLE VERTICAL WIDTH OF 30.5 TO 61 M (100 TO 200 FT). AFTER MR. BURFORD DISCOVERED THE VEIN, WILLIAM FABER AND NICHOLAS L. MARTIN BOUGHT THE PROPERTY AND CRUDELY OPENED THE MINE WITH THE HELP OF SOME FARM HANDS. THEY THEN SOLD THE MINE AT A PROFIT TO A NORTHERN PARTY WHICH REPORTEDLY REMOVED A GOOD QUANTITY OF LEAD ORE AND SHIPPED IT TO NEW YORK FOR SMELTING (THIS APPARENTLY TOOK PLACE BEFORE THE CIVIL WAR). MR. BURRESS HAD THE ADIT OPENED IN OCTOBER, 1958, BUT IT IS NOW CAVED.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....POD/LENS, PINCH AND SWELL
MAXIMUM WIDTH.....1.3 UNITS...M
MAXIMUM THICKNESS.....3.7 UNITS...7
DEPOSIT SIZE.....SMALL
STRIKE.....N45 DEG. E
DIP.....87 DEG. NW
PLUNGE.....18 DEG.
DIRECTION OF PLUNGE.....SW
DEPOSIT DESCRIPTION COMMENTS.....THE VEIN PARALLELS A DIABASE-DIORITE DIKE WHICH LIES 7.6 M NW OF THE VEIN. ORE OCCURS IN QUARTZ. AT THE SW END OF THE ADIT THE VEIN IS 0.3M WIDE AND CONSISTS OF GALENA, SPHALERITE, FLUORITE, AND QUARTZ (NELSON, 1962, P 78-79).
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....36.6 UNITS...M
LENGTH OF WORKINGS.....212 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....MAIN DEVELOPMENTS ARE 3 SHAFTS HAVING DEPTHS OF 7.6 M, 15.2 M, AND 36.6 M RESPECTIVELY, SUNK WITH IN A DISTANCE OF 305 M. IN ADDITION, AN ADIT LEVEL HAS BEEN RUN INTO THE RIDGE FROM THE VALLEY BOTTOM, AND A CROSS-CUT RUN FROM THE ADIT ON AND ALONG THE VEIN FOR A DISTANCE OF 43 M (WATSON, 1905, P 57). THE MINE HAS BEEN ABANDONED SINCE 1919 AND THE SHAFTS AND ADIT ARE CAVED OR WATER-FILLED. THE ADIT WAS ABOUT 61 M (200 FT) LONG, THE DRIFT WAS ABOUT 24 M (80 FT) BACK FROM THE ENTRANCE TRENDING N 45 DEG E AND EXTENDING BOTH NE AND SW FROM ADIT, WITH A TOTAL LENGTH OF APPROXI MATELY 46 M (150 FT). A WINZE WAS SUNK AT THE INTERSECTION OF THE ADIT AND THE DRIFT REPORTEDLY TO A DEPTH OF 46 M (150 FT). APPROXIMATELY 100,000 CUBIC FEET OF STOPING WAS REPORTED.

HOST ROCK AGE.....PREC
HOST ROCK TYPE.....SCHIST, DIABASE, DIORITE, META-ARKOSE
PERTINENT MINERALS (NOT ORE).....QUARTZ, FLUORITE, CALCITE, CERUSSITE CHALCANTHITE, PYROMORPHITE, KAOLINITE, PYRITE, PYRRHOTITE, MAGNETITE., AZURITE, ARSENIC, ANTIMONY
ORE CONTROL/LOCUS.....WITHIN QUARTZ VEIN WHICH INTRUDES CHLORITIC SCHIST
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
SIGNIFICANT ALTERATION.....HYDROTHERMAL REPLACEMENT
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GEOLOGY COMMENTS.....THE SCHIST IS SERICITIC, CHLORITIC AND TALCOSE, AND IS INTERBEDDED WITH A QUARTZ-MICA CONGLOMERATE SCHIST. THE ORE-BEARING ROCK IS THE CHLORITIC SCHIST.
GENERAL COMMENTS.....THE WORKINGS ARE SITUATED IN THE EASTERN FOOT HILLS OF THE BLUE RIDGE, IN AN AREA HAVING IRREGULAR TOPOGRAPHY

NON-USGS WORK.....1906 DIREXPL ALBEMARLE LEAD AND ZINC CO.: BUILT 80-TON/DAY MILL
NON-USGS WORK.....1915 DIREXPL ATLANTIC LEAD AND ZINC CO: ERECTED 100 T. MILL; OPERATED UNTIL 1919.
REFERENCE....NELSON, W.A., 1962, GEOLOGY AND MINERAL RESOURCES OF ALBEMARLE COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 77, 92 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.
REFERENCE....GIANNINI, W. F., 1959, A STUDY OF THE LEAD-ZINC DEPOSIT NEAR FABER, VIRGINIA: UNPUBLISHED M.S. THESIS, NO. 2326, UNIVERSITY OF VIRGINIA.
REFERENCE....ROBERTS, J. K., 1942 ANNOTATED GEOLOGICAL BIBLIOGRAPHY OF VIRGINIA: CHARLOTTESVILLE, VA., THE DIETZ PRESS, 693 P.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULL. 43, P. 89-91.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
PB	ACC	7.20400	LB	1860-1865	UNCERTAIN IF FIGURES ARE FOR PB ORE OR PB



LEGEND

- INTERSTATE HIGHWAY
- U.S. NUMBERED HIGHWAYS
- VIRGINIA PRIMARY HIGHWAYS
- RAILROADS
- TRANSMISSION LINES
- NATURAL GAS TRANSMISSION LINE
- COUNTY BOUNDARY
- CORPORATE LIMITS
- COUNTY SEAT
- POWER SUBSTATION
- STREAM GAGING STATION
- 20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M. G. D NOT SHOWN)

C.N.G.C. COMMONWEALTH NATURAL GAS CORPORATION

JAMES RIVER IS SOUTHEAST BOUNDARY

N.& A. RY. NELSON AND ALBEMARLE RY.

- ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE

ALBEMARLE COUNTY
VIRGINIA

SCALE OF MILES
1 0 1 2 3 4 5

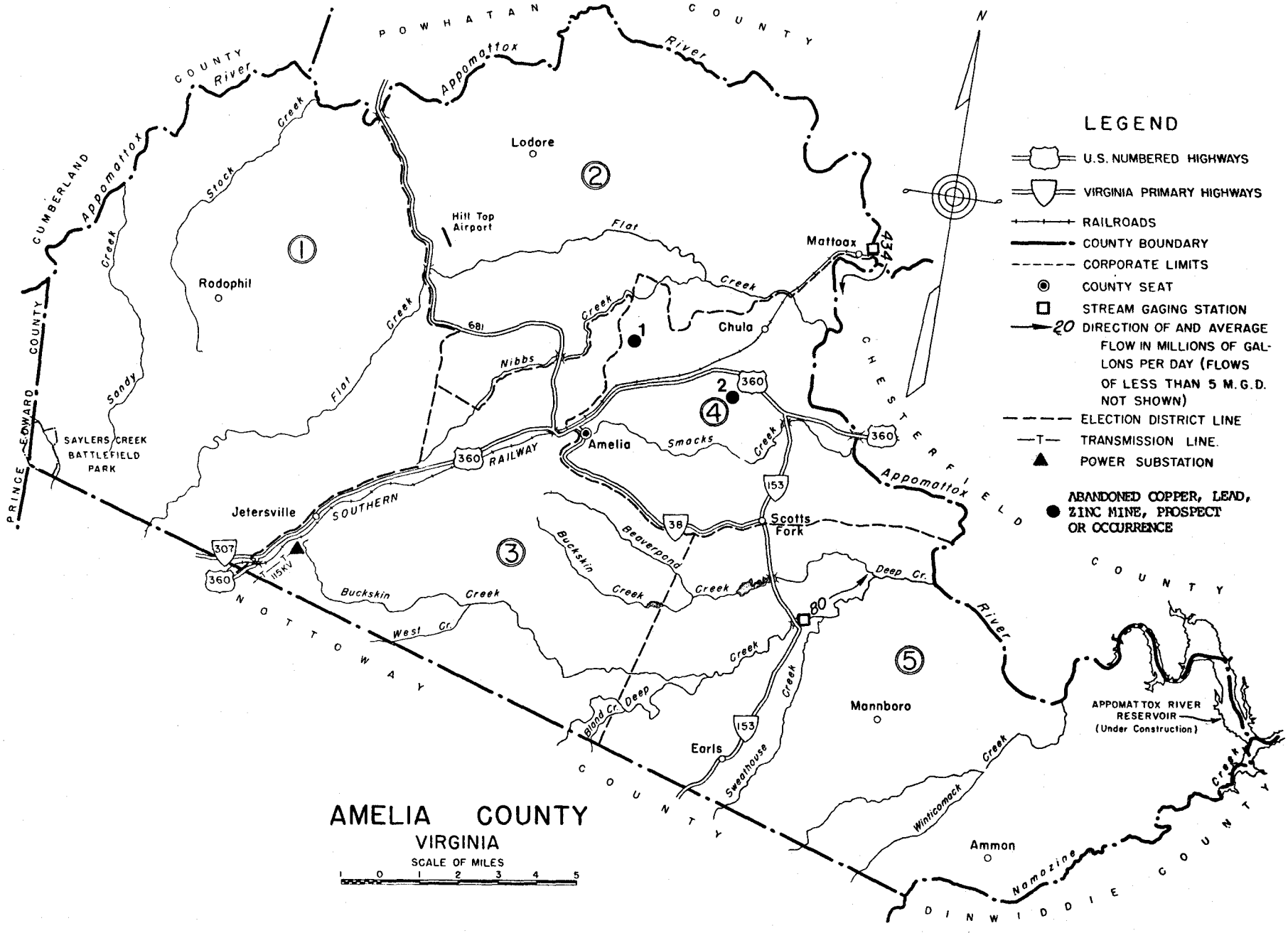
2. Stony Point Mine

MRDS-REV RECORD NUMBER.....22
MRDS RECORD NUMBER.....W031220
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....1 23
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....STONY POINT MINE
COUNTRY.....US STATE.....VA COUNTY.....ALBEMARLE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... KESWICK, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....152 M
UTM NORTHING...4222145 EASTING...732805 ZONE...+17
LATITUDE.....38-07-08N LONGITUDE.....078-20-40W
POSITION FROM NEAREST LOCALITY.....ABOUT 2.4 KM (1.5 MI) ENE OF STONY POINT.
LOCATION COMMENTS.....OFF BOTH SIDES OF STATE ROAD 640 ABOUT 0.2 KM (0.125 MI) NORTHWEST OF ITS INTERSECTION WITH STATE ROAD 20.
COMMODITIES PRESENT.....FE CU PYR
ORE MATERIALS..... MALACHITE, PYRITE
GENERAL ANALYTICAL DATA.....SAMPLES OF CHALCOPYRITE WERE ASSAYED WITH REPORTED YIELDS OF $5.00 PER TON IN GOLD AND 15 PERCENT IN COPPER. SAMPLE OF ORE FROM MINE WAS ASSAYED BY NORTHEAST GEOCHEMICAL AND ASSAY CO., YARMOUTH, ME IN AUGUST, 1986. ASSAY INDICATED <0.0005 OZ. AU/TON AND <0.1 OZ. AG/TON.
MAIN ORE MINERALS.....GOETHITE (LIMONITE), CHALCOPYRITE
MAJOR.....FE
MINOR.....CU
OCCUR.....PYR,AU,AG
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....MAJOR MASON
YEAR OF DISCOVERY.....1878
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1885
YEAR OF LAST PRODUCTION.....AROUND 1990
OPERATOR.....MAJOR MASON
EXPLORATION AND DEVELOPMENT COMMENTS.....THE GOSSAN WAS DISCOVERED IN 1885 AND BY MAJOR MASON. HE BEGAN MINING IN 1885 AND BY 1890 HAD MINED 2,500 CARLOADS OF GOSSAN IRON ORE AND SHIPPED IT TO THE PITTSBURG FURNACES. MINING CEASED SOON THEREAFTER DUE TO INCREASING AMOUNTS OF SILICA AND CHALCOPYRITE. FROM 1917 UNTIL 1922 THE OHIO SULPHUR MINING CO. CLEANED OUT THE OLD SHAFT AND PROSPECTED FOR A COPPER ORE ZONE, BUT FAILED TO LOCATE A ZONE. IN 1926, J.E. PERKINS ATTEMPTED TO REOPEN THE MINE, BUT WAS UNSUCCESSFUL. IN 1936, THE AMERICAN METAL CO. DRILLED 3 CORE HOLES, FOUND A CONSIDERABLE QUANTITY OF SIDERITE AND QUIT EXPLORATION WORK. THE PROPERTY HAS NOT BEEN WORKED SINCE.
DEPOSIT TYPE.....GOSSAN, VEIN/SHEAR ZONE
MAXIMUM WIDTH.....2 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 35 DEG E
DIP.....55 DEG S
DEPOSIT DESCRIPTION COMMENTS.....GOSSAN RESULTED FROM ALTERATION OF CHALCOPYRITE VEIN. GOSSAN OUTCROP WAS TRACED ALONG THE SURFACE FOR 1.2 KM (0.75 MI).
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....40 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS CONSISTED OF AN INCLINED SHAFT 40 M (130 FT) DEEP WITH DRIFTS, OPENCUTS AND PITS. IN 1982, A SHAFT ABOUT 7.6 M (25 FT) DEEP AND 9 M (30 FT) SQUARE, SEVERAL SMALLER PITS FILLED WITH TRASH, SEVERAL MORE PITS STILL OPEN, THE LARGEST OF WHICH IS ABOUT 6.1 M (20 FT) SQUARE AND 4.6 M (15 FT) DEEP, 2 CAVED TUNNELS, ONE OPENCUT AND DUMPS WERE EVIDENT.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....MICACEOUS SCHIST
PERTINENT MINERALS (NOT ORE).....SERICITE, QUARTZ, HEMATITE, SIDERITE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....A FAULT TRENDING NW-SE LIES ABOUT 152 M (1500 FT) NE OF THE MINE
SIGNIFICANT ALTERATION.....OXIDATION OF CHALCOPYRITE TO GOETHITE
FORMATION AGE.....PREC
FORMATION NAME.....SWIFT RUN FORMATION
NON-USGS WORK.....1885 DIREXPL MAJOR MASON: WORKED THE GOSSAN UNTIL 1890, SHIPPED 2500 CARLOADS OF ORE, BUT STOPPED WORKINGS DUE TO HIGH SILICA, AND INCREASING CHALCOPYRITE CONTENT MADE THE ORE UNSUITABLE FOR SMELTING (WEED, 1911).
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....NELSON, W.A., 1962, GEOLOGY AND MINERAL RESOURCES OF ALBEMARLE COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 77, 92 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY, BULLETIN 455, 166 P.
REFERENCE....TAZELAAR, J.F., 1958, A GEOLOGICAL AND GEOPHYSICAL SURVEY OF STONY POINT, VIRGINIA, IRON-COPPER DEPOSIT: UNPUBLISHED M.A. THESIS, UNIVERSITY OF VIRGINIA.
SOURCE OF PRODUCTION INFORMATION.....WEED (1911)
PRODUCTION COMMENTS.....SOME OF THE GOSSAN ORE WAS ASSAYED AT 75% FE IN CARLOAD LOTS CUMULATIVE PRODUCTION WAS ABOUT 2,500 CARLOADS OF ORE.

AMELIA COUNTY

1. Champion Mine

MRDS-REV RECORD NUMBER.....41
MRDS RECORD NUMBER.....W031176
RECORD TYPE.....X1M, N
REPORT DATE.....80 12
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
UPDATED.....87 07
UPDATER.....SWEET, PALMER C.
SITE NAME.....CHAMPION MINE
SYNONYM NAME.....JEFFERSON NO. 4 MINE; BLAND MINE
MINING DISTRICT/AREA.....AMELIA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....AMELIA
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 APPOMATTOX RIVER
LAND STATUS.....01
QUADRANGLE NAME..... CHULA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....333 FT (102 M)
UTM NORTHING...4141160 EASTING...237410 ZONE...+18
POSITION FROM NEAREST LOCALITY.....ABOUT 4.8 KM (3 MI) NORTHEAST OF AMELIA COURT HOUSE.
LOCATION COMMENTS.....ABOUT 1.6 KM (1 MI) NORTH ON STATE ROAD 630 FROM ITS INTERSECTION WITH STATE ROAD 661, ABOUT 12 M (39 FT) WEST OF ROAD.
COMMODITIES PRESENT.....MIC2 MIC1 BE TA NB AS PB PYR CU
ORE MATERIALS.....MUSCOVITE, BERYL, MICROLITE, ARSENOPYRITE, PYROCHLORE, SCORODITE, TANTALITE-COLUMBITE, MARCASITE, GALENA, PYRITE, CHALCOPYRITE.
MAJOR.....MIC2 MIC1
MINOR.....BE TA NB AS PB PYR CU
PRODUCTION.....S
STATUS AND ACTIVITY.....4
DISCOVERER.....MR. SKELTON?
YEAR OF DISCOVERY.....1866?
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1866?
OWNER (PRESENT/LAST).....MR. W. RITTER PRESENTLY OWNS THE PROPERTY (AUG 1983)/JUDGE GARLAND JEFFERSON
OPERATOR.....CHAMPION MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THIS MINE IS SAID TO HAVE BEEN OPERATED BY A MR. SKELTON SHORTLY AFTER THE CIVIL WAR, AT FIRST BY OPEN CUT METHODS AND LATER BY STOPING ALONG THE NORTH WALL OF THE DEPOSIT FROM A VERTICAL SHAFT. CHAMPION REOPENED THE MINE IN 1873. MINING OPERATIONS BETWEEN 1873 AND 1895 ARE UNKNOWN, BUT MINING IS REPORTED TO HAVE BEEN CARRIED ON FROM TIME TO TIME BY SHIELDS AND PROBABLY OTHERS. ABOUT 1895 BENZ GRINDSTAFF WORKED THE MINE FOR DR. SKELTON; AND LATER, ABOUT 1904, WORKED IT FOR HIMSELF. A SECOND SHAFT WAS SUNK BY GRINDSTAFF AT THIS TIME. IN 1913, BROOK SEWELL REOPENED THE MINE, BUT SHORTLY THEREAFTER J. BOYD BLAND OF RICHMOND, TOOK OVER ITS OPERATION. BLAND WORKED THE MINE FOR 18 MONTHS, DEEPENING THE GRINDSTAFF SHAFT AND DRIVING STOPES AND DRIFTS OFF THE SHAFT. HE PRODUCED 200,000 POUNDS (91 MET TONS) OF MICA, OF WHICH 15,000 POUNDS (6.8 MET TONS) WAS SOLD AS SHEET MICA. D.B. STERRETT LEASED THE MINE FROM JUDGE GARLAND JEFFERSON IN THE SPRING OF 1943 AND SHORTLY THEREAFTER SUBLEASED IT TO THE CHAMPION MINING CO. AND BECAME SUPERINTENDENT IN CHARGE OF OPERATIONS. THREE SHAFTS AND SEVERAL TRENCHES WERE DUG. THE MINE WAS ABANDONED ON DECEMBER 15, 1944 AND ON THE FOLLOWING NEW YEAR'S EVE THE WORKINGS CAVED IN, LEAVING A HOLE AT THE SURFACE 27 M (90 FT) LONG, 14 M (45 FT) WIDE, AND 8 M (25 FT) DEEP.
DEPOSIT TYPE.....PEGMATITE
DEPOSIT FORM.....IRREGULAR LENS
DEPTH TO BOTTOM.....34 UNITS...M
MAXIMUM LENGTH.....37 UNITS...M
MAXIMUM WIDTH.....6 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 80 DEG E
DIP.....60 DEG N TO VERTICAL
DEPOSIT DESCRIPTION COMMENTS.....PEGMATITE BODY IS DISCORDANT, SHAPED LIKE A LIMA BEAN AND VERY IRREGULAR IN DETAIL. IT IS WELL ZONED; THE WALLZONE AND CORE ARE PREDOMINATE. A BORDER ZONE UP TO 5 IN. WIDE IS COMPOSED OF PLAGIOCLASE (AB85) AND ABUNDANT SCRAP MUSCOVITE. THE PERTHITE RICH INTERMEDIATE-ZONE IS QUITE SPARSE OR ABSENT. THE WALL ZONE, WHICH COMPRISES MOST OF THE PEGMATITE AND FROM WHICH ALL THE SHEET MICA HAS BEEN PRODUCED, CONSISTS OF MOSTLY ALBITE, BOOK MUSCOVITE, AND VARIABLE QUARTZ. THE CORE ZONE IS DOMINANTLY QUARTZ. THE BOOK MUSCOVITE IS MOST ABUNDANT IN THE INNER 2 FT (0.6 M) OF THE WALL ZONE, AND MANY ARE IN CONTACT WITH THE QUARTZ CORE. MICROLITE CRYSTALS ARE FOUND EMBEDDED IN ALBITE. PYROCHLORE, MONAZITE, ZIRCON, AND TANTALITE-COLUMBITE ALSO OCCUR IN THE WALL ZONE, CHIEFLY ALONG OR NEAR CONTACTS BETWEEN QUARTZ AND FELDSPAR CRYSTALS.


AMELIA COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
ELECTION DISTRICT LINE
TRANSMISSION LINE.
POWER SUBSTATION
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
N
POWHATAN COUNTY
CUMBERLAND COUNTY
PRINCE EDWARD COUNTY
NOTTOWAY COUNTY
CHESTERFIELD COUNTY
DINWIDDIE COUNTY
Appomattox River
Lodore
Hill Top Airport
Rodophil
Mattoax
Chula
Amelia
Jetersville
Scotts Fork
Mannboro
Earls
Ammon
SAYLERS CREEK BATTLEFIELD PARK
APPOMATTOX RIVER RESERVOIR (Under Construction)
SOUTHERN RAILWAY
Flat Creek
Stock Creek
Sandy Creek
Nibbs Creek
Smacks Creek
Buckskin Creek
Beaverpond Creek
West Cr.
Deep Cr.
Bland Cr.
Sweathouse Creek
Winticomack Creek
Namozine Creek
434
681
360
307
38
153
115KV
80
1
2
3
4
5

DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....THE SKELTON SHAFT WAS SUNK TO A DEPTH OF AT LEAST 27 M (90 FT) AND STOPING WAS DONE FROM THE SHAFT. THE GRINDSTAFF SHAFT WAS SUNK 24 M (80 FT) VERTICALLY AND CONTINUED WITH A WESTERN SLOPE OF ABOUT 50 DEG FOR A DISTANCE OF 15 M (50 FT). TUNNELS AND IRREGULAR STOPES WERE DUG DURING MINING. BLAND EXTENDED THE STOPES DURING HIS OPERATIONS. STERRETT IN THE SPRING 1943 DUG SEVERAL TRENCHES AND TWO EXPLORATORY SHAFTS ABOUT 8 M (25 FT) DEEP AND 3 M (10 FT) APART WERE SUNK 12M (40 FT) NORTHWEST OF THE GRINDSTAFF SHAFT. BOTH SHAFTS WERE ABANDONED DUE TO SLUMPAGE TOWARD OLD WORKINGS. IN JULY 1943 A NEW SHAFT WAS BEGUN 18 M (60 FT) WEST-NORTHWEST OF THE GRINDSTAFF SHAFT AND EVENTUALLY REACHED A DEPTH OF 31 M (100 FT). A DRIFT WAS DRIVEN 8 M (25 FT) SOUTHWARD AT THE 13 M (43 FT) LEVEL, STRIKING A PEGMATITE BODY 2 M (6 FT) FROM THE SHAFT THAT WAS 3 M (10 FT) THICK. ANOTHER DRIFT WAS EXTENDED SOUTHEASTWARD AT THE 24 M (80 FT) LEVEL. AT THE 31 M (100 FT) LEVEL A DRIFT WAS DRIVEN 3 M (9 FT) SOUTHEASTWARD WHERE IT BROKE INTO AN OLD STOPE. THIS STOPE, ABOUT 20 M (65 FT) LONG, 12 M (40 FT) OR MORE HIGH, AND 5 M (15 FT) WIDE, WAS ELONGATED E-W ALONG STRIKE WITH THE PEGMATITE AND CONNECTED NEAR THE EASTERN END WITH THE GRINDSTAFF AND SKELTON SHAFTS. SKIDPOLES EXTENDED FROM THE BOTTOM OF THE GRINDSTAFF SHAFT TO A SUMP 6 M (20 FT) TO THE NW. THIS SUMP, AT A DEPTH OF 34 M (110 FT), REPRESENTED THE DEEPEST WORK IN THE MINE. A SUBSIDIARY STOPE ABOUT 3 M (10 FT) HIGH IN THE CEILING OF THE BIG STOPE AND A DRIFT OF UNKNOWN LENGTH EXTENDED E FROM THE BOTTOM OF THE SKELTON SHAFT REPRESENT ADDITIONAL WORK. IN AUG 1983, THE SHAFT HAD BEEN FILLED IN, BUT THE DUMP REMAINS.

HOST ROCK AGE.....EPAL?
HOST ROCK TYPE.....BIOTITE AND HORNBLENDE AUGEN GNEISS
PERTINENT MINERALS (NOT ORE).....QUARTZ, TOURMALINE, BIOTITE, ALLANITE, GARNET, CALCITE, KAOLIN, ALBITE, OLIGOCLASE, PERTHITE, SERICITE, ZIRCON, MONAZITE
ORE CONTROL/LOCUS.....PEGMATITE DIKE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....FAULTS
FORMATION AGE.....EPAL
FORMATION NAME.....GNEISS CHOPAWAMSIC FORMATION?
GENERAL COMMENTS.....THIS MINE WAS APPARENTLY THE FIRST MINE IN THE AMELIA DISTRICT.
NON-USGS WORK.....1866? DIREXPL MR. SKELTON-DUG OPEN CUTS, SHAFT, MINED
NON-USGS WORK.....1895 DIREXPL BENZ GRINDSTAFF-SUNK SHAFT, MINED
NON-USGS WORK.....1913 DIREXPL J. BOYD BLAND-REWORKED MINE
NON-USGS WORK.....1943 DIREXPL CHAMPION MINING CO. - DUG SHAFTS, MINED
REFERENCE....LEMKE, JAHNS, AND GRIFFITTS, 1952, MICA DEPOSITS OF THE SOUTHEASTERN PIEDMONT, PART 2. AMELIA DISTRICT, VIRGINIA, USGS PROF. PAPER 248-B, PP. 103-139.
REFERENCE....BROWN, W.R., 1962, MICA AND FELDSPAR DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES: MINERAL RESOURCES REPORT 3, 195 P.
REFERENCE....STERRETT, D.B., 1923, MICA DEPOSITS OF THE UNITED STATES: U.S. GEOLOGICAL SURVEY BULLETIN 740, PP. 307-330.
REFERENCE....PEGAU, A.A., 1932, PEGMATITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 33, 123 P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
MIC1	EST	0.00213	MET TONS	1944	EXCELLENT
MIC2	ACC	0.01814	MET TONS	1944	EXCELLENT

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
MIC	EST	0.09072	MET TONS	1913-1914	EXCELLENT
MIC1	ACC	0.00680	MET TONS	1913-1914	EXCELLENT
MIC1	SML			1866?-1944	EXCELLENT
MIC2	SML			1866?-1944	

SOURCE OF PRODUCTION INFORMATION.....BROWN (1962)
PRODUCTION COMMENTS.....ORIGINAL DATA IN POUNDS.
SOURCE OF RESERVES INFORMATION.....LEMKE, ETAL, (1952)
RESERVES COMMENTS.....MUCH OF DEPOSIT MINED OUT. SOME MICA-BEARING ROCK REMAINS IN DEEPER PARTS OF THE DEPOSIT EAST OF THE SKELTON SHAFT AND SOME PEGMATITE WITH MODERATE QUANTITIES OF MICA REMAINS IN THE DRIFT AT THE 24 M (80 FT) LEVEL OF THE STERRETT SHAFT; ITS EASTWARD EXTENT IS UNKNOWN.

2. Morefield Mine

MRDS-REV RECORD NUMBER.....40
MRDS RECORD NUMBER.....W101536
RECORD TYPE.....X1M
REPORT DATE.....83 12
INFORMATION SOURCE.....1
REPORTER.....WHITLOW, S.
REPORTER AFFILIATION.....USGS
UPDATED.....87 07
UPDATER.....SWEET, PALMER C./TRIMBLE, DAVID C.
SITE NAME.....MOREFIELD MINE
MINING DISTRICT/AREA.....AMELIA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....AMELIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 APPOMATTOX RIVER
LAND STATUS.....01
QUADRANGLE NAME..... AMELIA COURT HOUSE QUADRANGLE SCALE 1:24000
ELEVATION.....311 FT (95 M)
UTM NORTHING...4138645 EASTING...241880 ZONE...+18
LATITUDE.....37-21-38N LONGITUDE.....077-54-51W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....6 KM (3.8 MI) NE OF AMELIA COURT HOUSE.
LOCATION COMMENTS.....ABOUT A.6 KM (1.0 MI) SE ON STATE ROAD 628 FROM ITS INTERSECTION WITH U.S. HIGHWAY 360, TURN NE ON DIRT ROAD FOR 0.6 KM (0.4 MI).
COMMODITIES PRESENT.....FLD MIC2 MIC1 BE TA NB LI SN PB TI CU MN PYR
ORE MATERIALS.....PERTHITE, ALBITE,MUSCOVITE, ZINNWALOITE, BERYL, TANTALITE-COLUMBITE, MANGANOTANTALITE, PHENAKITE, MICROLITE, CASSITERITE, TOPAZ, GALENA, ILMENITE, RUTILE, CHALCOPYRITE, PYROLUSITE, PYRITE, BERIRANDITE
COMMODITY INFO COMMENTS.....FELDSPAR INCLUDE GEM AMAZONITE
MAJOR.....FLD MIC2 MIC1
MINOR.....BE TA NB LI CU MN PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....4
DISCOVERER.....SILAS V. MOREFIELD
YEAR OF DISCOVERY.....1929
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1929
OWNER (PRESENT/LAST).....W. D. BALTZBY / D.R. BOYLES
OPERATOR.....W. D. BALTZBY (POWHATAN MINING CO.)/D.R. BOYLES
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WAS OPENED IN 1929 BY S.V. MOREFIELD, THE OWNER, WHO MINED BY OPEN CUT METHODS UNTIL 1931. THE MINE WAS THEN LEASED TO W.W. HOWE, OF THE SEABOARD FELDSPAR CO., AND WAS WORKED FOR 3 YEARS. MOREFIELD THEN RESUMED OPERATIONS. THE MINE WAS LEASED TO THE MINERALS SEPERATION CORP. OF NORTH AMERICA IN 1942, LATER WAS TAKEN OVER BY THE METALS RESERVE COMPANY, AND FINALLY WAS RETURNED TO MOREFIELD IN JANUARY 1943. THE U.S. BUREAU OF MINES EXPLORED THE DEPOSIT DURING THE SUMMER AND FALL OF 1943. THE EXPLORATION INVOLVED CUTTING 4 TRENCHES SW OF THE CUT AND 1 TRENCH NE OF THE CUT TO ESTABLISH THE POSITION OF THE PEGMATITE BODY. SUBSURFACE DISTRIBUTION WAS DETER MINED BY MEANS OF 5 INCLINED DIAMOND-DRILL HOLES. THE PROPERTY WAS LEASED IN SEPT. 1947 BY THE U.S. BUREAU OF MINES, AND EXPERIMENTAL DEVELOPMENT AND MINING WERE CARRIED OUT UNTIL MARCH 1949. W. D. BALTZBY OF THE POWHATAN MINING CO. AQUIRED THE PROPERTY IN MARCH, 1985. THE MINE WAS REOPENED IN THE SPRING OF 1986, AS A COLLECTING SITE AND A POTENTIAL MICA PRODUCER. BALTZBY HAS DEWATERED THE MAIN MOREFIELD SHAFT (PUT IN BY THE USBM?) AND IS EXTENDING THE DRIFT TO THE SW ALONG STRIKE BY MEANS OF BLASTING.
DEPOSIT TYPE.....PEGMATITE
DEPOSIT FORM.....LINEAR TO IRREGULAR
DEPTH TO BOTTOM.....AT LEAST 6 UNITS...M
MAXIMUM LENGTH.....457 UNITS...M
MAXIMUM WIDTH.....9.1(AT SURFACE) UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 53 E (AVG)
DIP.....80 NW
DEPOSIT DESCRIPTION COMMENTS.....PEGMATITE DIKE THINS WITH DEPTH AND IS IRREGULARLY ZONED. CORE IS SMOKY QUARTZ INTERGROWN ON ITS BORDERS WITH LARGE CRYSTALS OF BERYL AND TOPAZ. INTERMEDIATE ZONE IS PERTHITE AND QUARTZ WITH SOME CLEAVELANDITE. THE WALL ZONE IS COMPOSED OF MUSCOVITE, ALBITE, PERTHITE, AND QUARTZ. BIOTITE AND QUARTZ MAKE UP THE BORDER ZONE. BIOTITE GNEISS AND BIOTITE-HORNBLENDE SCHIST FORM THE HOST COUNTRY ROCK. DIABASE DIKES CUT ACROSS THE DEPOSIT IN SEVERAL LOCATIONS WITH NORTH TO NORTHWEST TRENDS. ALL THE ROCKS ARE THOROUGHLY WEATHERED TO DEPTHS RANGING FROM 3 TO MORE THAN 9 M (10 TO MORE THAN 30 FT). THE PEGMATITE DIKE IS SHARPLY DISCORDANT AND APPEARS TO HAVE BEEN EMPLACED ALONG A PERSISTENT FRACTURE, BUT SEVERAL BRANCHING QUARTZ VEINS AND PEGMATITE MASSES ARE CONFORMABLE WITH THE WALL ROCK FOLIATIONS. TOPAZ OCCURS ONLY IN THE INTERMEDIATE ZONE. TANTALITE-COLUMBITE AND MANGANOTANTALITE ARE WIDESPREAD ACCESSORY CONSTITUENTS OF THE WALL ZONE AND CHARACTERISTICALLY ARE ASSOCIATED WITH ALBITE (CLEAVELANDITE). SOME MANGANOTANTALITE WAS FOUND IN THE INNER ZONES ALSO. CASSITERITE AND MICROLITE ARE ALSO FOUND ASSOCIATED WITH ALBITE-RICH PARTS OF THE DEPOSIT. PHENAKITE OCCURS SOLELY IN THE CORE AND INNER INTERMEDIATE ZONE AND PROBABLY REPRESENTS ONLY 0.1 % OF SUCH PEGMATITE. MOST OF THE ECONOMI CALLY DESIRABLE MINERALS ARE CONCENTRATED IN OR ALONG THE QUARTZ CORE OR THE PERTHITE-RICH INNER INTERMEDIATE ZONE, OR IN BOTH OF THESE ZONES. MOST OF THE SHEET MICA WAS OBTAINED FROMTHE SW HALF OF THE CUT AND CHIEFLY ALONG THE CONTACT BETWEEN THE WALL ZONE AND THE INNER INTERMEDIATE ZONE. AT LEAST 2/3 OF THE PEGMATITE WITHIN THE CORE AND INTERMEDI ATE ZONES IS FELDSPAR, OF WHICH 60 % IS PERTHITE. A LARGE FRACTION OF THE COARSE-GRAINED FELDSPAR IS SO NTERMINGLED WITH QUARTZ THAT MILLING IS REQUIRED. BERYL IS CONCENTRATED IN THE SW END OF THE CUT IN THE CORE AND INTERMEDIATE ZONES.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....35 UNITS...M
LENGTH OF WORKINGS.....6 (MIN) UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....MAIN OPENING IS AN IRREGULAR CUT 76 M (250 FT) LONG, 3-15 M (10-50 FT) WIDE AND 1.5 TO 9 M (5 TO 30 FT) DEEP. A SHAFT 35 M (115 FT) DEEP WAS DUG AT THE SW END OF THE CUT. ORIGINALLY THE SHAFT WAS DUG TO 14 M (45 FT). IN 1943-1944, MOREFIELD

ENLARGED AND DEEPED THE SHAFT; AT THE COLLAR THE SHAFT WAS 5 M BY 5 M (16 BY 16 FT) AND 18 M (60 FT) DEEP. IN 1948, THE USBM DEEPENED THE SHAFT TO 35 M (115 FT), THE NEW SHAFT SEGMENT IS 1.8M BY 2.4M (6 BY 8 FT). TWO SHORT DRIFTS AT THE 14M (45 FT)LEVEL WERE ENLARGED, AND SEVERAL HOLES WERE DRILLED TO ESTABLISH THE POSITION OF THE PEGMATITE WALLS. AT THE 30.5M (100 FT) LEVEL A DRIFT WAS DRIVEN AT LEAST 23 M (75 FT) SW, MAINLY ALONG THE SOUTHEASTERN WALL OF THE PEGMATITE. A RAISE FROM THIS DRIFT EXTENDED TO ABOUT THE 14M (45 FT) LEVEL SW OF THE SHAFT. ALL TOTALED, THERE WAS 40 M (130 FT) OF DRIFTS, A 18 M (60 FT) RAISE, AND A SMALL STOPE. THREE PROSPECT HOLES ARE NE AND E OF THE CUT, AND AT LEAST 6 TRENCHES AND SHALLOW PITS ARE SCATTERED ALONG STRIKE SW OF THE CUT. THE SOUTHWESTERN TRENCHES ARE 40 TO 55 M (130 - 180 FT) LONG, 4M (13 FT) WIDE, AND 0.6 - 6 M (2 - 20 FT) DEEP.

HOST ROCK AGE.....EPAL?
HOST ROCK TYPE.....GNEISS, SCHIST
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
PERTINENT MINERALS (NOT ORE).....FLUORITE, QUARTZ, GARNET, TOURMALINE, BIOTITE, TRIPLITE, ZIRCON, MONAZITE, APATITE, OLIGOCLASE, LABRADORITE
ORE CONTROL/LOCUS.....FRACTURE, FOLIATION PLANES, DIKE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....FAULTS
FORMATION AGE.....EPAL?
FORMATION NAME.....GNEISS, SCHIST CHOPAWAMSIC FM?
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE DIKES
GEOLOGY COMMENTS.....FOR DRILL-HOLE LOGS, ANALYSES, AND DESCRIPTION OF DRILLING TECHNIQUES USED DURING WORK DONE BY THE U.S. BUREAU OF MINES SEE GEEHAN (1953).
GENERAL COMMENTS.....RELATIVE TO OTHER PEGMATITES IN VIRGINIA, THIS MINE WAS A LARGE PRODUCER. IT IS ALSO KNOWN AS A COLLECTING SITE FOR MANY UNUSUAL MINERALS OF NO COMMERCIAL IMPORTANCE. CRIB ENTRY W031177 BY TRIMBLE COPIED INTO THIS RECORD AND W031177 DOES NOT (OR SHOULD NOT) EXIST.
NON-USGS WORK.....1929 DIREXPL S.V. MOREFIELD - DUG OPEN CUTS, MINED
NON-USGS WORK.....1931 DIREXPL SEABOARD FELDSPAR CO. - MINED OPEN CUTS
NON-USGS WORK.....1934 DIREXPL S.V. MOREFIELD - MINED OPEN CUTS
REFERENCE....SWEET, P. C, AND PENICK, D. A., JR., 1986, MOREFIELD PEGMATITE MINE REOPENS-VIRGINIA'S ONLY ACTIVE UNDER GROUND GEM MINE; VIRGINIA MINERALS, VOL. 32, NO. 2: VIRGINIA DIVISION OF MINERAL RESOURCES, CHARLOTTESVILLE, VA.
REFERENCE....LEMME, R. W., JAHNS, R.H., AND GRIFFITTS, W. R., 1952, MICA DEPOSITS OF THE SOUTHEASTERN PIEDMONT, PART 2. AMELIA DISTRICT, VIRGINIA, U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 248-B, P 103-139.
REFERENCE....PEGAU, A. A., 1932, PEGMATITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 33, 123 P.
REFERENCE....GLASS, J. J., 1935, THE PEGMATITE MINERALS FROM NEAR AMELIA, VIRGINIA; THE AMERICAN MINERALOGIST, VOL. 20, NO. 11, PP. 741-768.
REFERENCE....BROWN, W. R., 1962, MICA AND FELDSPAR DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 3, 195 P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
BE	EST	00.500	LB	1948	
TANTALITE	ACC	1423	LBS	1944	$1542.75 (1944 VALUE)

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
MIC1	EST	00.002	MET TONS	1929-1944	
MIC2	EST	00.024	MET TONS	1929-1944	
TA-NB	ACC	00.6455	KG	1929-1944	
BE	ACC	00.0068	MET TONS	1929-1944	
FLD	EST	00.526	MET TONS	1929-1944	
TOPAZ	ACC	00.0018	MET TONS	1929-1944	
LI	ACC	00.0013	MET TONS	1929-1941	

SOURCE OF PRODUCTION INFORMATION.....LEMKE, ET AL. (1952)
PRODUCTION COMMENTS.....ORIGINAL DATA IS SHORT TONS OR POUNDS. MOREFIELD SHIPPED ABOUT 3 CARLOADS OF AMA ZONSTONE (PERTHITE) AND 2.5 TONS (2.3 MET TONS) OF BERYL BETWEEN 1929-1931. USBM RECOVERED ABOUT 500 POUNDS OF PLACER BERYL FROM THE STREAM S OF THE PIT (BROWN, 1962).

RESERVES

ITEM	ACCURACY	THOUS UNITS	YEAR	GRADE
MIC1 (SHEET)	SML		1952	
MIC2 (SCRAP)	SML		1952	
TA-NB	SML		1952	
BE	SML		1952	

SOURCE OF RESERVES INFORMATION.....LEMKE, ET AL. (1952)
RESERVES COMMENTS.....AT LEAST SEVERAL THOUSAND POUNDS OF RECOVERABLE MICA THAT WOULD YIELD 2% TO 5% SHEET MATERIAL AND A FAIRLY LARGE TONNAGE OF SCRAP MICA PROBABLY COULD BE OBRAINED. WITHIN THE PEGMATITE 2 TO 3 POUNDS OF TANTALITE-COLUMBITE PER TON IS SUGGESTED BY SAMPLES TAKEN; THROUGH SELECTIVE MINING (ALONG ALBITE-RICH WALL ZONE), THE TENOR MIGHT BE RAISED TO AS MUCH AS 5 POUNDS PER TON. ADDITIONAL RESERVES OF TANTALUM ARE PESENT IN THE DUMP AND PLACER MATERIAL. ONE SMALL PLACER SE OF THE OPEN CUT CONTAINS 0.2 POUNDS PER CUBIC YARD AND THE OLD DUMPS CONTAIN 0.25 POUNDS PER CUBIC YARD. A FEW TONS OF PHENAKITE PROBABLY EXISTS AND MUCH MORE MAY BE PRESENT.

POTENTIAL RESOURCES

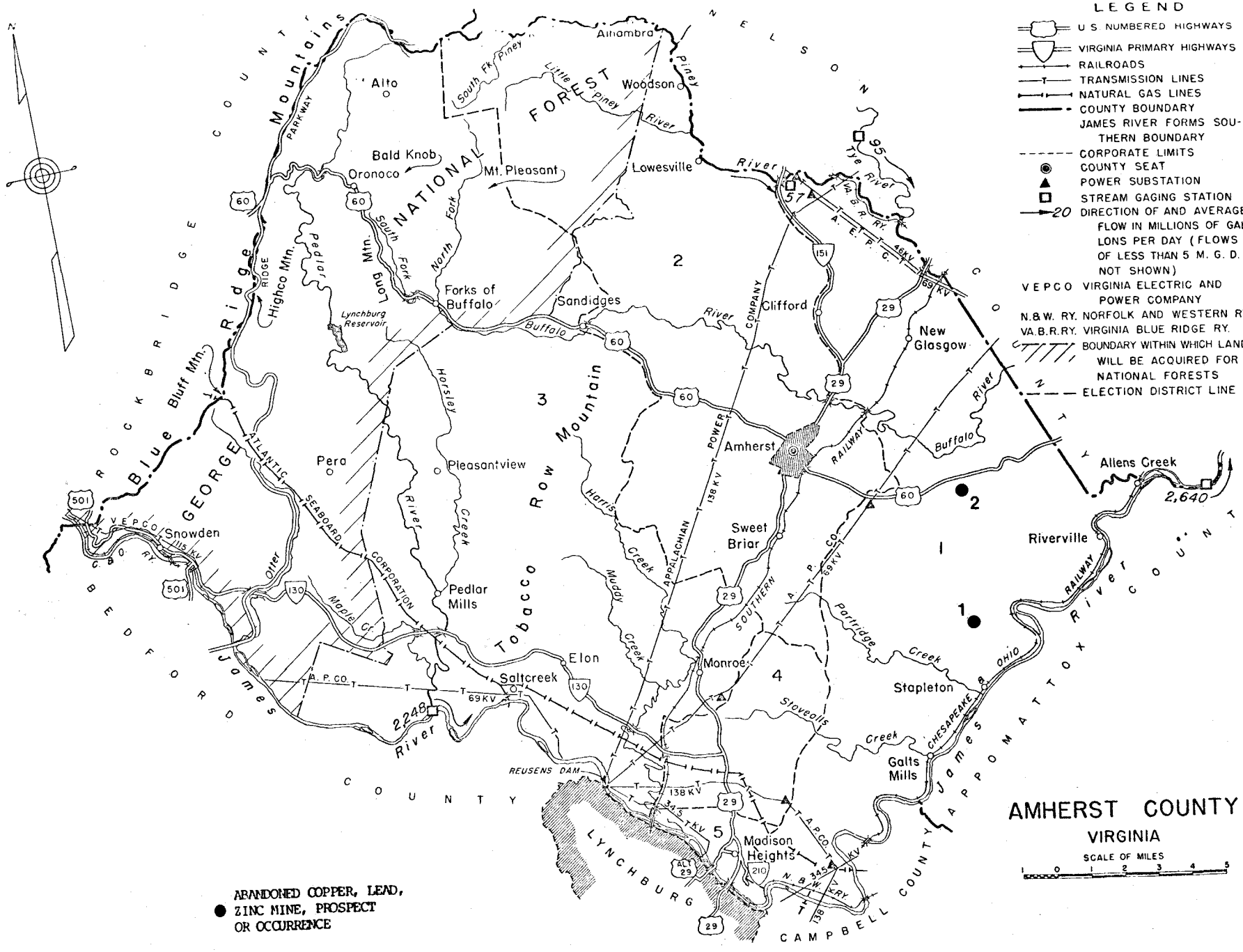
ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
FLD	SML			1952	HIGH GRADE

SOURCE OF POTENTIAL RESOURCES INFORMATION.....LEMKE, ET AL. (1952)

AMHERST COUNTY

1. Christian Tract Mine

MRDS-REV RECORD NUMBER.....47
MRDS RECORD NUMBER.....W030842
RECORD TYPE.....X1M
REPORT DATE.....79 12
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....CHRISTIAN TRACT MINE
SYNONYM NAME.....BUFFALO RIDGE PROSPECTS, PIEDMONT COPPER MINES, DUNLAP MINE
MINING DISTRICT/AREA.....JAMES RIVER-ROANOKE RIVER MANGANESE DISTRICT/GLADES AREA.
COUNTRY.....US STATE.....VA COUNTY.....AMHERST
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... AMHERST, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....720 FT (220 M)
UTM NORTHING...4153320 EASTING...675870 ZONE...+17
LATITUDE.....37-30-43N LONGITUDE.....079-00-36W
POSITION FROM NEAREST LOCALITY.....9.1 KM (5.6 MI) SSE OF AMHERST.
LOCATION COMMENTS.....200 M (600 FT) SOUTH OF STATE ROAD 624, 4.9 KM (3.1 MI) BY ROAD SE OF JUNCTION WITH STATE ROAD 604.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOPYRITE, MALACHITE, AZURITE, CHRYSOCOLLA, CHALCOCITE, COVELLITE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE-REVOLUTIONARY WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1880 (?)
OWNER (PRESENT/LAST).....JOHN W. MOSBY
OPERATOR.....BUFFALO RIDGE DEVELOPMENT CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THIS MINE WAS PROBABLY FIRST WORKED IN 1875-1885 AS PART OF THE PIEDMONT COPPER MINES AND CLEANED OUT AND REINVESTIGATED IN 1917-1918 BY THE BUFFALO RIDGE DEVELOPMENT CO. ADDITIONAL INVESTIGATIONS WERE CARRIED OUT AROUND 1948-1949 (VA. DIV. MIN. RES. FIELD REPORTS). MOORE (1940) REPORTED THAT A COMPANY WAS FORMED IN 1939 TO CLEAN OUT THE SHAFTS AND MINE ORE. NO RECORD OF ANY ACTUAL WORK HAS BEEN LOCATED.
DEPOSIT TYPE.....LENS, VEIN/SHEAR ZONE
DEPOSIT FORM.....LENS/STRINGERS, IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N. 45 DEG.E
DEPOSIT DESCRIPTION COMMENTS.....ZONE OF MINERALIZATION IS ABOUT 61 M WIDE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....27 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....A TRENCH STRIKING N. 55 DEG. W. WAS PRESENT IN 1948, LOCATED ALONG A MINERALIZED JOINT. SEVERAL PROSPECT PITS WERE ALSO NOTED IN 1948.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METAPERIDOTITE (SOAPSTONE)
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METAPERIDOTITE (SOAPSTONE)
PERTINENT MINERALS (NOT ORE).....TREMOLITE, CHLORITE, CHALCEDONY, QUARTZ, OLIVINE, ACTINOLITE, AMPHIBOLE, PYROXENE, TALC, DOLOMITE, GOETHITE.
ORE CONTROL/LOCUS.....SHEAR ZONES, JOINT SYSTEM
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, ESPENSHADE (1954) MAPPED A MAJOR REVERSE FAULT TO THE EAST BETWEEN LYNCHBURG AND CANDLER FORMATIONS.
SIGNIFICANT LOCAL STRUCTURES.....HIGH ANGLE FAULTING (?), CROSS-FAULTING(?)
SIGNIFICANT ALTERATION.....PERIDOTITE ALTERED TO SOAPSTONE
PROCESS OF CONCENTRATION/ENRICHMENT.....HYDROTHERMAL
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....METAPERIDOTITE DIKE
FORMATION NAME.....LYNCHBURG FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....METAPERIDOTITE DIKE
GENERAL COMMENTS.....ALTHOUGH DESCRIBED AS A SINGLE MINE, THIS MINE WAS PROBABLY WORKED AS PART OF EXTENSIVE WORKINGS ALONG THE GLADES ROAD CONTINUING TO THE NE TO THE POLLY MINE.
WORK DONE BY USGS.....1940 GEOL. MAP G.H. ESPENSHADE: BULLETIN 1008
NON-USGS WORK.....1875 DIREXPL THOMAS DUNLAP: MINED DEPOSITS (?)
NON-USGS WORK.....1925 GEOL. MAP VA. GEOL. SURV: AREA MAPPED
NON-USGS WORK.....1938 GEOLMAP C.H. MOORE, JR: AREA MAPPED
REFERENCE....ESPENSHADE, G.H., 1954, GEOLOGY AND MINERAL DEPOSITS OF THE JAMES RIVER-ROANOKE RIVER MANGANESE


LEGEND
U S NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
JAMES RIVER FORMS SOUTHERN BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M. G. D. NOT SHOWN)
VEPCO VIRGINIA ELECTRIC AND POWER COMPANY
N.&W. RY. NORFOLK AND WESTERN RY.
VA.B.R.RY. VIRGINIA BLUE RIDGE RY.
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
ELECTION DISTRICT LINE
AMHERST COUNTY
VIRGINIA
SCALE OF MILES
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
Alto
Ahlambra
Woodson
Bald Knob
Oronoco
Mt. Pleasant
Lowesville
Forks of Buffalo
Sandidges
Clifford
New Glasgow
Lynchburg Reservoir
Pera
Pleasantview
Amherst
Allens Creek
2,640
Sweet Briar
Riverville
Snowden
Pedlar Mills
Elon
Saltcreek
Monroe
Stapleton
Galts Mills
Madison Heights
2,248
REUSENS DAM
LYNCHBURG
CAMPBELL COUNTY
BEDFORD COUNTY
NELSON COUNTY
AMHERST COUNTY
Blue Ridge Mountains
Rock Bridge
George
Tobacco Row Mountain
Long Mtn.
Highco Mtn.
Blue Bluff Mtn.
FOREST
NATIONAL
PARKWAY
RIDGE
South Fk. Piney
Little Piney
Piney River
Tye River
South Fork
North Fork
Buffalo
Horsley
Creek
Harris
Muddy
Otter
Maple Cr.
Partridge
Stovepolis
James
River
Creek
Railway
Company
Power
Railroad
Corporation
Seaboard
Atlantic
Appalachian
Southern
Chesapeake & Ohio
A. P. Co.
V E P C O
N. & W. Ry.
A. E. P. C.
Va. B. R. Ry.
138 KV
115 KV
69 KV
46 KV
34.5 KV
501
60
29
130
151
210
ALT 29
57
95

DISTRICT, VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 1008, 155 P.
REFERENCE....FURCRON, A.S., 1935, JAMES RIVER IRON AND MARBLE BELT, VIRGINIA:VIRGINIA GEOLOGICAL SURVEY BULLETIN 39, 124 P.
REFERENCE....SIMPSON, T.C., 1980, THE HISTORY,GEOLOGY, AND BRIEF MINERALOGICAL SURVEY OF THE AREA KNOWN AS THE GLADES COPPER DISTRICT: UNPUBLISHED REPORT, COURSE EVSC 481, UNIVERSITY OF VIRGINIA
REFERENCE....MOORE, C.H., JR., 1940, GEOLOGY AND MINERAL RESOURCES OF THE AMHERST QUADRANGLE, VIRGINIA: CORNELL UNIVERSITY UNPUBLISHED PH.D. THESIS.

CUMULATIVE PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEARS GRADE
ORE CU ACC 0.01400 MT 1880 CU, $80,000 WORTH
SOURCE OF PRODUCTION INFORMATION.....MOORE (1940)
PRODUCTION COMMENTS.....PRODUCTION FIGURE IS PROBABLY FOR ENTIRE GLADES AREA.

2. Folly Mine

MRDS-REV RECORD NUMBER.....48
MRDS RECORD NUMBER.....W030838
RECORD TYPE.....X1M
REPORT DATE.....79 12
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....FOLLY MINE
SYNONYM NAME.....FOLLEY MINE, BUFFALO RIDGE PROSPECTS, PIEDMONT COPPER MINES
MINING DISTRICT/AREA.....JAMES RIVER-ROANOKE RIVER MANGANESE DISTRICT/GLADES AREA
COUNTRY.....US STATE.....VA COUNTY.....AMHERST
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... BUFFALO RIDGE, VA QUADRANGLE SCALE 1:24000
ELEVATION.....640 FT (195 M)
UTM NORTHING...4158880 EASTING...679410 ZONE...+17
LATITUDE.....37-33-41N LONGITUDE.....078-58-07W
POSITION FROM NEAREST LOCALITY.....6.9 KM (4.3 MI) SOUTH OF NEW GLASGOW.
LOCATION COMMENTS.....JUST SOUTH OF U.S. HWY 60 ABOUT 1.0 KM (0.6 MI) EAST OF JUNCTION WITH STATE ROAD 600. (NOTE: LOCATION APPROXIMATE, NOT FIELD CHECKED.)
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOPYRITE, MALACHITE, AZURITE, CHRYSOCOLLA, CHALCOCITE, COVELLITE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE-REVOLUTIONARY WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-REVOLUTIONARY WAR
OWNER (PRESENT/LAST).....H.E. GRAVES/A.W. MOSBY (?)
OPERATOR.....BUFFALO RIDGE DEVELOPMENT CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....FIRST MINING WAS CONDUCTED BY COL. JOHN CHISWELL PRIOR TO THE REVOLUTIONARY WAR, THE ORE BEING SHIPPED TO ENGLAND. IN 1837, THE GLADES COPPER MINING CO. WAS FORMED BY C.A. GOOCH, BUT APPARENTLY NO MINING WAS ACTUALLY ACCOMPLISHED. IN 1848, THE AMHERST COUNTY MINING CO WAS FORMED, BUT AGAIN LITTLE, IF ANY, MINING WAS ACCOMPLISHED. COL. T. DUNLAP FORMED THE PIEDMONT COPPER MINES IN 1879 AND WORKED THE AREA UNTIL 1882. IN 1917-1918, THE BUFFALO RIDGE DEVELOPMENT CO. CLEANED OUT THE SHAFT BUT SHIPPED NO ORE. SINCE THEN, BRIEF SUMMARIES OF DEPOSITS HAVE BEEN GIVEN BY FURCRON (1935) AND ESPENSHADE (1954). ADDITIONAL INVESTIGATIONS WERE MADE AROUND 1948-1949 (VA. DIV. MIN. RES. FIELD REPORTS).
DEPOSIT TYPE.....LENS, VEIN/SHEAR ZONE
DEPOSIT FORM.....LENS/STRINGERS, IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N. 45 DEG. E
DEPOSIT DESCRIPTION COMMENTS.....SHEAR ZONE IS ABOUT 30 M WIDE.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....91 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....SHAFT LAST CLEARED IN 1917. IN 1948, SHAFT HAD BEEN FILLED-IN.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METAPERIDOTITE (SOAPSTONE)
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METAPERIDOTITE (SOAPSTONE)
PERTINENT MINERALS (NOT ORE).....TREMOLITE, CHLORITE, CHALCEDONY, QUARTZ, OLIVINE, ACTINOLITE, AMPHIBOLE, PYROXENE, TALC
ORE CONTROL/LOCUS.....SHEAR ZONES, JOINT SYSTEM
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, ESPENSHADE (1954) MAPPED A MAJOR REVERSE FAULT TO THE EAST BETWEEN LYNCHBURG AND CANDLER FORMATIONS.
SIGNIFICANT LOCAL STRUCTURES.....HIGH ANGLE FAULTING (?)
SIGNIFICANT ALTERATION.....PERIDOTITE ALTERED TO SOAPSTONE
PROCESS OF CONCENTRATION/ENRICHMENT....HYDROTHERMAL
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....METAPERIDOTITE DIKE
FORMATION NAME.....LYNCHBURG FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....METAPERIDOTITE DIKE
GENERAL COMMENTS.....ALTHOUGH ORIGINALLY A SINGLE MINE, LATER WORKINGS INCLUDED ENTIRE MINERALIZED ZONE EXTENDING FROM THE FOLLEY MINE TO THE CHRISTIAN TRACT MINE.
WORK DONE BY USGS.....1940 GEOLMAP G.H. ESPENSHADE: BULLETIN 1008.
NON-USGS WORK.....1765 DIREXPL COL. CHISWELL: MINED DEPOSITS
NON-USGS WORK.....1875 DIREXPL THOMAS DUNLAP: MINED DEPOSITS
NON-USGS WORK.....1925 GEOLMAP VA. GEOL. SURV: AREA MAPPED
REFERENCE....ESPENSHADE, G.H., 1954, GEOLOGY AND MINERAL DEPOSITS OF THE JAMES RIVER-ROANOKE RIVER MANGANESE DISTRICT, VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 1008, 155 P.
REFERENCE....FURCRON, A.S., 1935, JAMES RIVER IRON AND MARBLE BELT, VIRGINIA:VIRGINIA GEOLOGICAL SURVEY BULLETIN 39, 121 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....THE VIRGINIAS, 1880, COPPER: V. 1, NO. 12, P. 193.

CUMULATIVE PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEARS GRADE
ORE CU ACC 0.01400 MT 1880 CU
SOURCE OF PRODUCTION INFORMATION.....THE VIRGINIAS (1880)
PRODUCTION COMMENTS.....1880 PRODUCTION PROBABLY INCLUDES ORE FROM OTHER WORKINGS ALONG GLADES ROAD.

APPOMATTOX COUNTY

1. Moore Mine

MRDS-REV RECORD NUMBER.....67
MRDS RECORD NUMBER.....W030839
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....MOORE MINE
SYNONYM NAME.....WRECK ISLAND CREEK MINE
MINING DISTRICT/AREA.....JAMES RIVER-ROANOKE RIVER MANGANESE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....APPOMATTOX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... STONEWALL, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....500 FT (152.4 M)
UTM NORTHING...4151290 EASTING...686840 ZONE...+17
LATITUDE.....37-29-29N LONGITUDE.....078-53-12W
POSITION FROM NEAREST LOCALITY.....ABOUT 1.65 KM (1.02 MI) E OF BECKHAM.
LOCATION COMMENTS.....ON THE E SIDE OF A NW BEND OF WRECK ISLAND CREEK; 0.24 KM (0.15 MI) NNE OF A JEEP TRAIL 0.35 KM (0.22 M2) BY TRAIL NE OF ITS INTERSECTION WITH A QUARRY ROAD THAT ITSELF INTERSECTS STATE ROAD 683 ABOUT 0.85 KM (0.53 MI) BY ROAD S OF BECKHAM, VA.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOPYRITE, BORNITE, CHRYSOCOLLA
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1776
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-1776
OWNER (PRESENT/LAST).....ALONZO MOORE
DEPOSIT TYPE.....DISSEMINATED
DEPOSIT FORM.....LENS
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....ORE MINERALIZATION OCCURS AS DISSEMINATIONS OF PYRITE AND COPPER SULFIDES WITHIN QUARTZ LENSES AND STRINGERS INTRUDING WHITE AND BLUE MARBLE.
DESCRIPTION OF WORKINGS.....B
LENGTH OF WORKINGS.....12.2 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....A 12.2 M TUNNEL HAS BEEN DRIVEN INTO A STEEP INCLINE THROUGH SCHIST AND INTO MARBLE. THE ORE WAS FLOATED DOWN WRECK ISLAND CREEK TO A SMELTER NEAR THE JAMES RIVER (FURCRON, 1935). THE TUNNEL OPENING WAS SEEN IN 1974.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....MARBLE, QUARTZ-GARNET-CHLORITE SCHIST
PERTINENT MINERALS (NOT ORE).....PYRITE, HEMATITE, QUARTZ, CHLORITE
ORE CONTROL/LOCUS.....IN QUARTZ LENSES AND STRINGERS WITHIN MARBLE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....JAMES RIVER SYNCLINORIUM
FORMATION AGE.....EPAL
FORMATION AGE.....PAL (?)
FORMATION NAME.....CANDLER FORMATION
IGNEOUS UNIT NAME.....MOUNT ATHOS FORMATION
GEOLOGY COMMENTS.....AT THE TUNNEL OPENING THE SCHIST IS DARK GREEN.
GENERAL COMMENTS.....SMELTER IS LOCATED ON PROPERTY OF MR JOE FERGUSON.
NON-USGS WORK.....DIREXPL PRE-REVOLUTIONARY WAR; COPPER ORE SHIPPED TO SMELTER NEARBY.

LEGEND
U. S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M. G. D. NOT SHOWN)
WEST BOUNDARY IS JAMES RIVER
ELECTORIAL DISTRICT LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPOMATTOX COUNTY
VIRGINIA
SCALE OF MILES
0 1 2 3 4 5
BUCKINGHAM COUNTY
NELSON CO.
AMHERST COUNTY
CAMPBELL COUNTY
CHARLOTTE COUNTY
PRINCE EDWARD COUNTY
Bent Creek
Tower Hill
Beckham
1
Oakville
Vera
Hollywood
Appomattox
Evergreen
Pamplin City
Spout Spring
Concord
BUCKINGHAM - APPOMATTOX STATE FOREST
Holiday Lake
Holiday Creek
Fish Pond Creek
Appomattox River
Rough Creek
Vaughns Creek
David Creek
Ben. Creek
Wreck Island Creek
Stonewall Creek
James River
Reedy Creek
Falling River
East Fork
Cub Creek
2,640
60
26
24
460
BY-PASS
47
727
CORP. PIPE
GAS
TRANSCONTINENTAL
NORFOLK AND WESTERN RAILWAY
Southern
V. P. L. CO.
VIRGINIA ELECTRIC & POWER CO.
115 KV
Stonewall Dist.
Clover Hill Dist.
Dist.

NON-USGS WORK.....1974 RECON VA. DIV. OF MINERAL RE SOURCES; INSPECTED SITE
REFERENCE....FURCRON, A.S., 1935, JAMES RIVER IRON AND MARBLE BELT, VIRGINIA:
VIRGINIA GEOLOGICAL SURVEY BULLETIN 39, 124 P.
REFERENCE....ESPENSHADE, G.H., 1954, GEOLOGY AND MINERAL DEPOSITS OF THE JAMES RIVER-ROANOKE RIVER MANGANESE DISTRICT, VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 1008, 155 P.
REFERENCE....POOLE, J.L., 1974, NOTES ON SOME ABANDONED COPPER, LEAD, AND ZINC MINES IN THE PIEDMONT OF VIRGINIA: VIRGINIA MINERALS V. 20, NO. 2 PP. 9-16.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
PRODUCTION COMMENTS.....PRODUCED BEFORE THE REVOLUTION ARY WAR.

BEDFORD COUNTY

1. Saxton-McMillan Mine

MRDS-REV RECORD NUMBER.....120
MRDS RECORD NUMBER.....W031239
RECORD TYPE.....X1B
REPORT DATE.....80 08
INFORMATION SOURCE.....12
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
UPDATED.....87 07
UPDATER.....SWEET, PALMER C.
SITE NAME.....SAXTON-MCMILLAN MINE
MINING DISTRICT/AREA.....BEDFORD COUNTY AREA
COUNTRY.....US STATE.....VA COUNTY.....BEDFORD
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... IRVING, VA. QUADRANGLE SCALE 1:24000
UTM NORTHING...4135620 EASTING...618890 ZONE...+17
POSITION FROM NEAREST LOCALITY.....MINE IS 0.75 MI E-NE OF IRVING
LOCATION COMMENTS.....3.6 KM (2.25 MI) WEST OF THAXTON, 1.2 KM (0.75 MI) EAST AND SLIGHTLY NORTH OF IRVING. MINE IS LOCATED ON PROPERTY NORTH OF STATE ROAD 689 AND WEST OF STATE ROAD 688 WHERE SAID ROADS INTERSECT, APPROXIMATELY 400 M (1312 FT) NORTH OF THE NORFOLK AND WESTERN RAILROAD. IT IS AT THE SOUTH TO SOUTHEAST BASE OF TAYLORS MOUNTAIN. NOT FIELD CHECKED.
COMMODITIES PRESENT.....BA PB ZN PYR
ORE MATERIALS.....BARITE, GALENA, SPHALERITE, PYRITE
MAJOR.....BA
OCCUR.....PB ZN PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1866
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1866
OWNER (PRESENT/LAST).....SAXTON-MCMILLAN
EXPLORATION AND DEVELOPMENT COMMENTS.....THE MINE WAS FIRST OPENED IN 1866, AND A SMALL QUANTITY OF ORE WAS SHIPPED TO BALTIMORE. OPERATIONS WERE ABANDONED WITHIN A FEW YEARS AND THEN THE MINE WAS REOPENED IN 1906. IT WAS REPORTED THAT A BARITE VEIN 30 IN. (0.76 M) THICK WAS MINED FROM BEDROCK. SEVERAL CARLOADS OF BARITE WAS RECOVERED. EXCEPT FOR SOME PROSPECTING THE AREA HAS REMAINED IDLE SINCE 1906. THE WORKINGS CONSIST OF OPEN CUTS, TRENCHES, AND SHAFTS AND EXTEND NE-SW FOR ABOUT 305 M (1000 FT).
DEPOSIT TYPE.....VEIN/SHEAR ZONE, WEATHERING RESIDUAL
DEPOSIT FORM.....IRREGULAR
MAXIMUM THICKNESS.....0.76 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 10-20 DEG E
DIP.....60 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....ONE VEIN WAS REPORTEDLY 0.76 M (30 IN) THICK. BARITE WAS CRYSTALLINE, WHITE, AND CONTAINS SMALL GRAINS OF GALENA AND SPHALERITE. IN LATE 1986, THE SHAFT WAS CAVED AND THE TRENCH HAS BECOME SLUMPED ON THE SIDES; MANY FRAGMENTS OF BARITE WERE PRESENT ON SURFACE; AND SHAFT DIMEN SIONS ARE ABOUT 25 FT BY 15 FT AND 4 FT DEEP.
DESCRIPTION OF WORKINGS.....B
OVERALL LENGTH.....305 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....MINE WAS WORKED BY OPEN CUTS, TRENCHES, AND SHAFTS. THE LARGEST OPEN CUT WAS 91M (300 FT) LONG, 9 M (30 FT) WIDE, AND 12 M (40 FT) DEEP. THE OPEN CUTS TRENDED N 40 E. DIMENSIONS OF TRENCHES AND SHAFTS ARE UNKNOWN. THE SOUTHWESTERN LIMIT OF THE WORKINGS BEGAN ABOUT 244M (800 FT) NORTH OF THE NORFOLK AND WESTERN RAILWAY AND CONTINUED NORTHEAST FOR APPROXIMATELY 305 M (1000 FT). MOST OF THE WORKINGS WERE ON THE MCMILLAN PROPERTY BUT DID EXTEND NORTHEAST ONTO THE ADJOINING SAXTON PROPERTY.
HOST ROCK AGE.....PREC-QUAT
HOST ROCK TYPE.....GRANITE-GNEISS, CLAY RESIDUUM
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....GRANITE-GNEISS
PERTINENT MINERALS (NOT ORE).....QUARTZ, FELDSPAR, BIOTITE, HORNBLENDE, CHLORITE, EPIDOTE, SERICITE, CLAY MINERALS
ORE CONTROL/LOCUS.....VEIN-SHEAR ZONE
TECTONIC SETTING.....BLUE RIDGE PROVINCE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....FAULTS, SUCK MOUNTAIN FAULT
PROCESS OF CONCENTRATION/ENRICHMENT.....HYDROTHERMALLY EMPLACED.
FORMATION AGE.....PREC
FORMATION AGE.....QUAT
FORMATION NAME.....VIRGINIA BLUE RIDGE COMPLEX-MARSHALL GNEISS-GRANITE.
FORMATION NAME.....CLAY RESIDUUM
NON-USGS WORK.....1866 DIREXPL ? - DUG OPEN PITS AND MINED BARITE
NON-USGS WORK.....1906 DIREXPL ? - DUG TRENCHES AND SHAFTS, MINED
REFERENCE....EDMUNDSON, R.S., 1938, BARITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 53, 85 P.
REFERENCE....WATSON, T.L., 1907, SULPHATES, IN MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, JAMESTOWN EXPOSITION COMISSION, PP. 305-335.
REFERENCE....HAMILTON, C.L., 1964, GEOLOGY OF THE PEAKS OF OTTER AREA, BEDFORD AND BOTETOURT COUNTIES, VIRGINIA: UN PUBLISHED PHD THESIS, VIRGINIA POLYTECHNIC INSTITUTE.
REFERENCE....WOODWARD, H.P., 1932, GEOLOGY AND MINERAL RESOURCES OF THE ROANOKE AREA, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 34, 172 P.
SOURCE OF PRODUCTION INFORMATION.....EDMUNDSON (1938)
PRODUCTION COMMENTS.....1866 - "A SMALL QUANTITY WAS SHIPPED TO BALTIMORE", 1906 - "A FEW CARS OF BARITE RECOVERED."

BLAND COUNTY

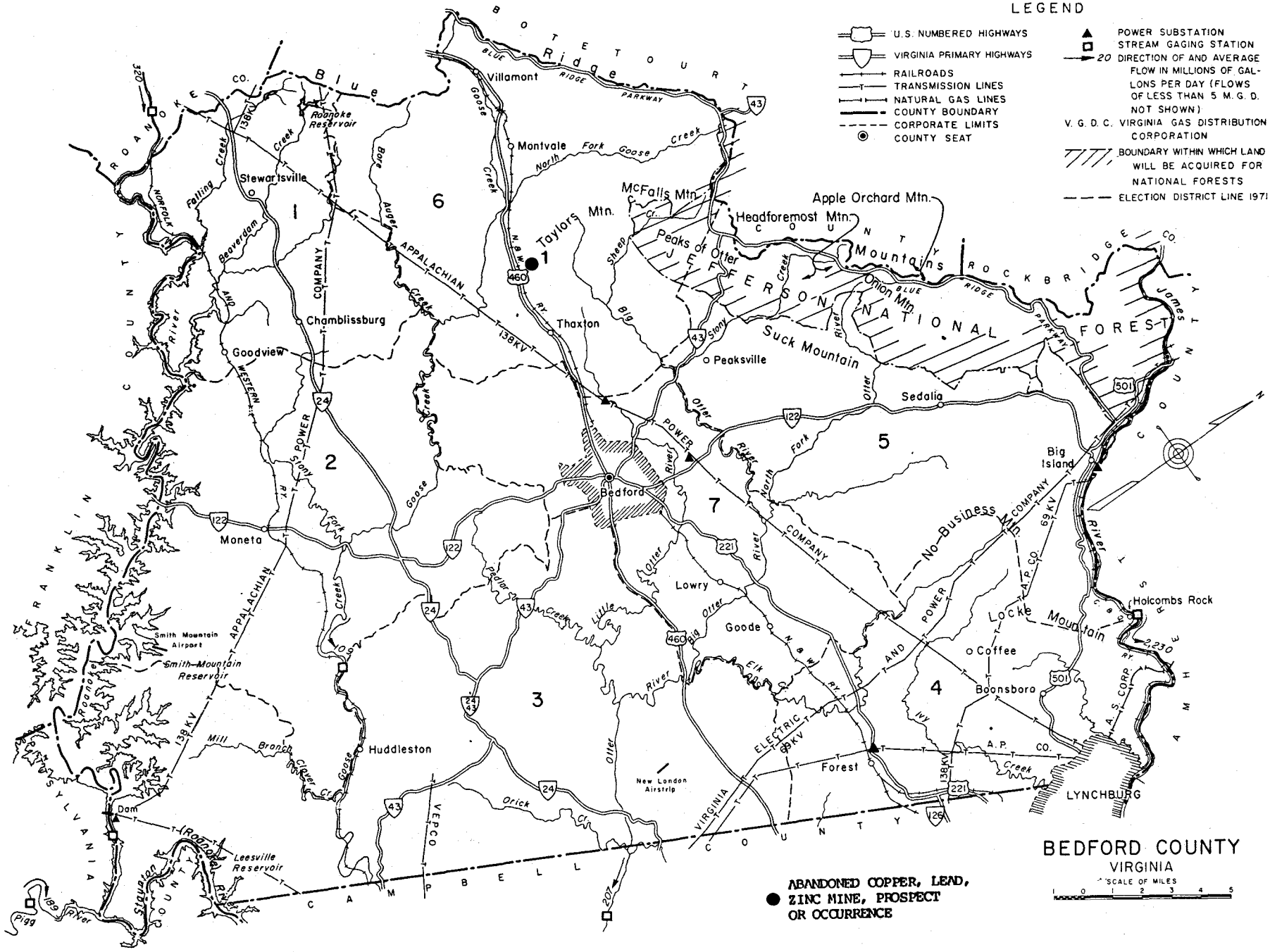
1. Kimberling and Nobusiness Creek Prospects

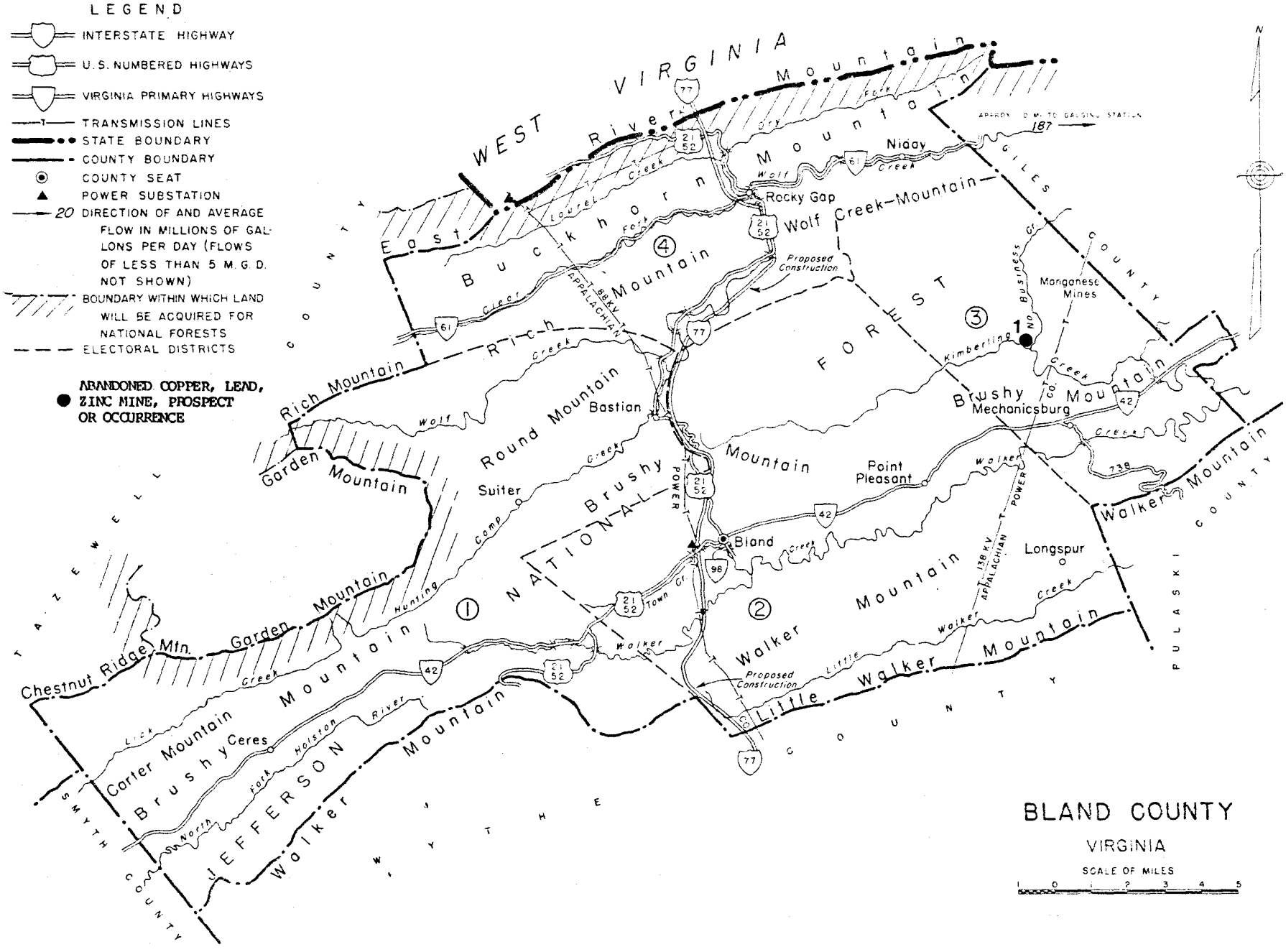
MRDS-REV RECORD NUMBER.....129
MRDS RECORD NUMBER.....W031303
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....KIMBERLING AND NOBUSINESS CREEKS PROSPECTS
COUNTRY.....US STATE.....VA COUNTY.....BLAND
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... MECHANICSBURG, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....37-11- N LONGITUDE.....080-58- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....SHOWINGS OF ORE HAVE BEEN REPORTED IN THE KIMBERLING - NOBUSINESS CREEK AREA NEAR HOLLY BROOK. THIS AREA IS WITHIN THE PURCHASE BOUNDARY OF JEFFERSON NATIONAL FOREST.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA
NON-PRODUCER MAIN.....ZN PB
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DEVELOPMENT OF PROSPECTS HAS OCCURRED
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT
HOST ROCK AGE.....DEV
HOST ROCK TYPE.....LIMESTONE
PERTINENT MINERALS (NOT ORE).....CALCITE, PYRITE, MANGANESE AND IRON OXIDES
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
FORMATION AGE.....EDEV
FORMATION AGE.....EDEV
FORMATION NAME.....HUNTERSVILLE FORMATION
FORMATION NAME.....ROCKY GAP SANDSTONE
NON-USGS WORK.....1933 GEOLMAP VA. GEOL. SURV.: ISSUED MAP.
REFERENCE....BUTTS, CHARLES, 1933, GEOLOGIC MAP OF THE APPALA CHIAN VALLEY IN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY, 1 SHEET, SCALE 1:250,000.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.

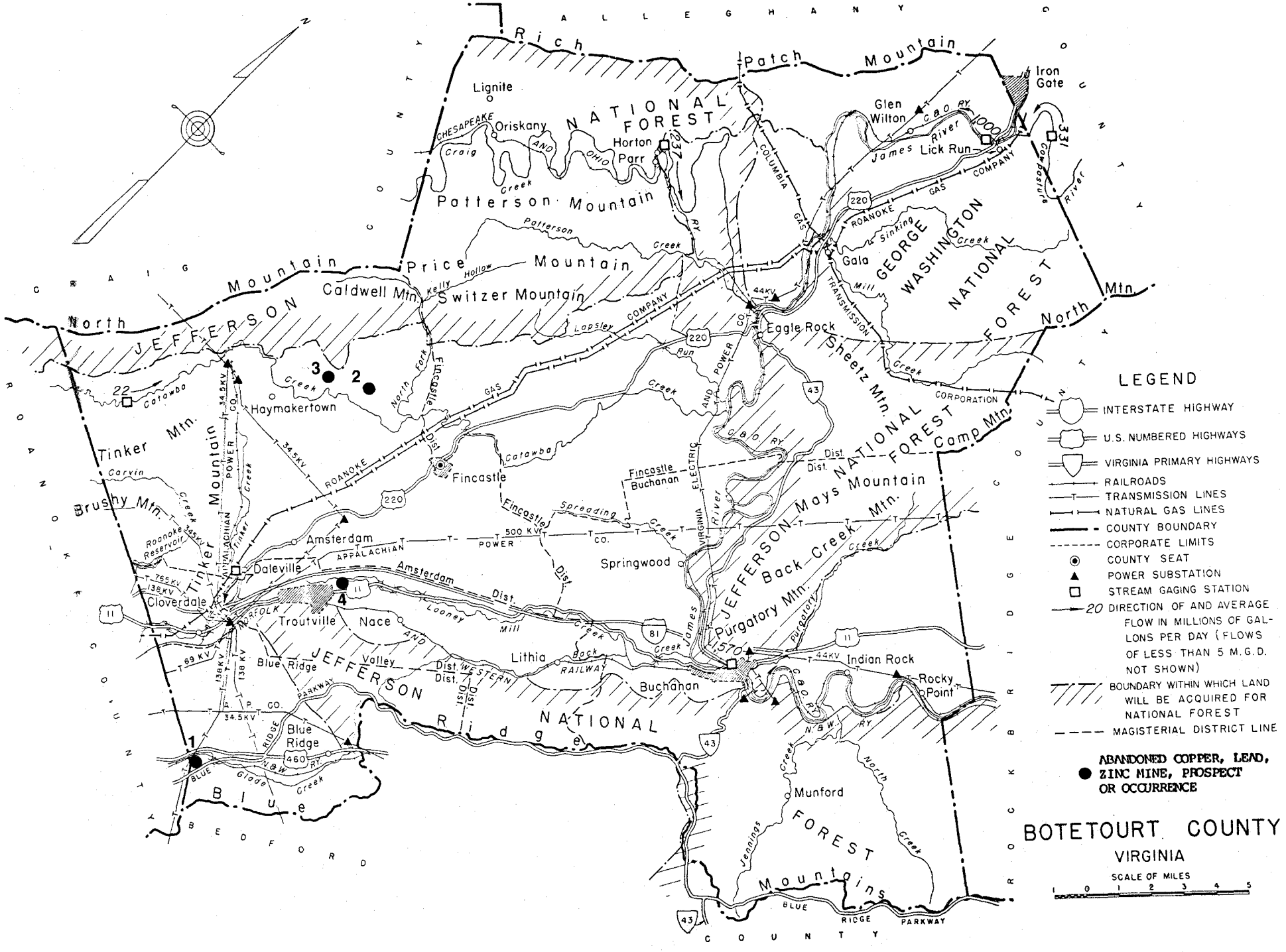
BOTETOURT COUNTY

1. Bonsack Prospect

MRDS-REV RECORD NUMBER.....151
MRDS RECORD NUMBER.....W031304
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 12
UPDATER.....GOOD, RICHARD S.
SITE NAME.....BONSACK PROSPECT
SYNONYM NAME.....BONSACKS PROSPECT, BONSACK MINE
COUNTRY.....US STATE.....VA COUNTY.....BOTETOURT
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
V.G.D.C. VIRGINIA GAS DISTRIBUTION CORPORATION
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
ELECTION DISTRICT LINE 1971
Blue Ridge Parkway
Roanoke Reservoir
Stewartsville
Villamont
Montvale
Chamblissburg
Goodview
Thaxton
Peaksville
Sedalia
Bedford
Moneta
Lowry
Goode
Big Island
Coffee
Boonsboro
Forest
Huddleston
Smith Mountain Airport
Smith Mountain Reservoir
New London Airstrip
Leesville Reservoir
Dam
Holcombs Rock
LYNCHBURG
Taylors Mtn.
McFalls Mtn.
Apple Orchard Mtn.
Headforemost Mtn.
Peaks of Otter
Suck Mountain
Onion Mtn.
Locke Mountain
No-Business Mtn.
JEFFERSON NATIONAL FOREST
1
2
3
4
5
6
7
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
BEDFORD COUNTY
VIRGINIA
SCALE OF MILES


LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
TRANSMISSION LINES
STATE BOUNDARY
COUNTY BOUNDARY
COUNTY SEAT
POWER SUBSTATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
ELECTORAL DISTRICTS
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
WEST VIRGINIA
East River Mountain
Buckhorn Mountain
Wolf Creek Mountain
Rocky Gap
Niday
Rich Mountain
Garden Mountain
Round Mountain
Bastian
Suiter
Brushy Mountain
Mechanicsburg
Point Pleasant
Bland
Longspur
Walker Mountain
Little Walker Mountain
Chestnut Ridge Mtn.
Carter Mountain
Ceres
Proposed Construction
Manganese Mines
NATIONAL FOREST
GILES COUNTY
TAZEWELL COUNTY
SMYTH COUNTY
WYTHE COUNTY
PULASKI COUNTY
JEFFERSON
BLAND COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5



LEGEND

- INTERSTATE HIGHWAY
- U.S. NUMBERED HIGHWAYS
- VIRGINIA PRIMARY HIGHWAYS
- RAILROADS
- TRANSMISSION LINES
- NATURAL GAS LINES
- COUNTY BOUNDARY
- CORPORATE LIMITS
- COUNTY SEAT
- POWER SUBSTATION
- STREAM GAGING STATION
- 20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
- BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FOREST
- MAGISTERIAL DISTRICT LINE

ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE

BOTETOURT COUNTY
VIRGINIA

SCALE OF MILES
1 0 1 2 3 4 5

DRAINAGE AREA.....05050001
LAND STATUS.....01
QUADRANGLE NAME..... STEWARTSVILLE, VA. (1984) QUADRANGLE SCALE 1:24000
ELEVATION.....1020 FT
UTM NORTHING...4131930 EASTING...600700 ZONE...+17
LATITUDE.....37-19-50N LONGITUDE.....079-51-47W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....0.36 MI NNE OF BONSACK RR CROSSING.
LOCATION COMMENTS.....DRIVE RIGHT (EAST) SIDE OF NORFOLK AND WESTERN RR TRACK 1900 FEET NE FROM CROSSING OF ROUTE 636. BONSACK STATION NO LONGER STANDS.
COMMODITIES PRESENT.....ZN CU PYR
ORE MATERIALS.....SPHALERITE, HEMIMORPHITE, SMITHSONITE, HYDROZINCITE. CHALCOPYRITE, PYRITE
GENERAL ANALYTICAL DATA.....EIGHT CARLOADS TAKEN IN 1880'S FROM SHAFT TO 35 FEET; 5 CARS ANALYSED 40.1% ZN AND 3 CARLOADS 36% ZN; IN 1888 11,878 TONS OF ORE WERE SHIPPED FROM BONSACK (AV ASSAY NOT KNOWN).
COMMODITY INFO COMMENTS.....CURRIER (1935) REFERS TO OXIDIZED MINERALS, BUT DOES NOT STATE SPECIES.
MAJOR.....ZN PB
NON-PRODUCER MAIN.....
NON-PRODUCER MINOR.....
PRODUCTION.....S
STATUS AND ACTIVITY.....4
DISCOVERER.....DAVID H. PLAINE AND JOHN BARTLETT
YEAR OF DISCOVERY.....LATE 1880'S
NATURE OF DISCOVERY.....B
YEAR OF FIRST PRODUCTION.....1888
YEAR OF LAST PRODUCTION.....1895
OWNER (PRESENT/LAST).....WALTER L. SUTOR
OPERATOR.....WASHINGTON ZINC COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....SHAFT DRIVEN TO 35 FEET WHEN BOULDERS WITH BEDDED SPHALERITE FOUND. ORE AVERAGED 36-40.1% ZN; AT 65 FEET MORE SPHALERITE AND CAVE 40X30X20 FEET. SPHALERITE VEINS ASSAYED 42-46% ZN; AT 90 FEET 3 FOOT CALAMINE BED ON EITHER SIDE SHAFT ASSAYED 52.37% ZN (KAGEY, D.D., 1983, FROM BARNES, 1958, NEWSPAPER ACCOUNT APPARENTLY BASED ON WASHINGTON ZINC COMPANY RECORDS).
DEPOSIT TYPE.....COLLAPSE BRECCIA
DEPOSIT FORM.....IRREGULAR AND LENSE
DEPTH TO BOTTOM.....90 UNITS...FT
DEPOSIT SIZE.....SMALL
STRIKE.....N 30 DEG. E
DIP.....55-65 DEG SE
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....90 UNITS...FT
LENGTH OF WORKINGS..... UNITS...
DESCRIPTION OF WORKINGS COMMENTS.....INACCESSIBLE SHAFT COVERED OVER ALONG RR CUT OF NORFOLK AND WESTERN. UPDATER NOTED WHITE HEMIMORPHITE, PYRITE, GOETHITE, IN GRAY RECRYSTALLING MASSIVE DOLOMITE WITH WHITE CALCITE JOINT FILLINGS.
HOST ROCK AGE.....CAMB
HOST ROCK TYPE.....DOLOMITE
PERTINENT MINERALS (NOT ORE).....PYRITE, CHALCOPYRITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, MAX MEADOWS FAULT, FRIES (BLUE RIDGE) FAULT
FORMATION AGE.....CAMB
FORMATION NAME.....ROME FORMATION
GEOLOGY COMMENTS.....ORE AT BASE OF ROME; WATSON (1905, P. 73) NOTED REDDISH SHALES EXPOSED JUST ABOVE SHAFT.
GENERAL COMMENTS.....WATSON (1907) NOTED THIS DEPOSIT ONLY AS A PROSPECT WITH A SINGLE SHAFT "LESS THAN 50 FEET" (P. 530). THIS ACCOUNT IS AT VARIANCE WITH KEMP (1903) WHO SAYS "...THE MINE YIELDED RICH EARTHY OXIDIZED ORES, WHICH, HOWEVER, PASSED IN DEPTH TO A VERY INTIMATE AND REBELLIOUS MIXTURE OF ZINCBLENDE AND PYRITE." BARNES (1958) AND KAGEY (1983) ARE SECONDARY, NON-TECHNICAL ACCOUNTS DRAWING FROM OTHER SOURCES BUT INDICATE CONSIDERABLY MORE DEVELOP MENT THAN WATSON REPORTED.
NON-USGS WORK.....DIREXPL PROSPECT SHAFT SUNK.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA : VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....WOODWARD, H.P., 1932, GEOLOGY AND MINERAL RESOURCES OF THE ROANOKE AREA, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 34, 172 P.
REFERENCE....KAGEY, D.D., 1983, COMMUNITY AT THE CROSSROADS, A STUDY OF THE VILLAGE OF BONSACK OF THE ROANOKE VALLEY, PRIVATELY PUBLISHED, ROANOKE, VIRGINIA, P. 120-121.
REFERENCE....ROANOKE TIMES AND WORLD NEWS, NOVEMBER 13, 1958: RAYMOND P. BARNES, "RICH ZINC MINE ONCE MADE BONSACK BIG FREIGHT CENTER."
REFERENCE....SUTOR, WALTER L., 1987, PERSONAL COMMUNICATION, GLADE CREEK ROAD, BONSACK (RECORDS OF TRANSFER OF MINERAL RIGHTS, DEEDS).
REFERENCE....KEMP, J.F., 1903 ORE DEPOSITS OF THE UNITED STATES AND CANADA, 5TH ED., NEW YORK, P. 249.
REFERENCE....BARTHALOMEW, MERVIN J., 1981, GEOLOGY OF THE ROANOKE AND STEWARDSVILLE QUADRANGLES, VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION NO. 34, 23 P.

2. Caldwell Prospect

MRDS-REV RECORD NUMBER.....163
MRDS RECORD NUMBER.....W031242
RECORD TYPE.....X1B
REPORT DATE.....80 08
INFORMATION SOURCE.....1, 3
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....CALDWELL PROSPECT
MINING DISTRICT/AREA.....ROANOKE-BOTETOURT COUNTIES AREA
COUNTRY.....US STATE.....VA COUNTY.....BOTETOURT
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... DALEVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1225 FT (373 M)
UTM NORTHING...4150185 EASTING...594000 ZONE...+17
LATITUDE.....37-29-44N LONGITUDE.....079-56-12W
POSITION FROM NEAREST LOCALITY.....2.2 KM (1.4 MI) WEST-SOUTHWEST OF HOWELL MILLS.
LOCATION COMMENTS.....1.8 KM (1.1 MI) WEST ON STATE ROAD 600 FROM ITS INTERSECTION WITH STATE ROAD 670, SOUTHWEST OF HOWELL MILLS; 290 M (951 FT) SOUTH OF ROAD ON THE CREST OF A HILL.
COMMODITIES PRESENT.....BA ZN
ORE MATERIALS.....BARITE, SPHALERITE
NON-PRODUCER MAIN.....BA
NON-PRODUCER MINOR.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1938
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....MRS. LENA EAST
EXPLORATION AND DEVELOPMENT COMMENTS.....PROSPECT WAS WORKED BEFORE 1938 AND THE WORKINGS CONSIST OF 8-12 OPEN PITS AND TRENCHES. THE WORKINGS WERE HAND DUG AND THEY STRIKE N 50 DEG E FOR ABOUT 91.5 M (300 FT).
DEPOSIT TYPE.....WEATHERING RESIDUAL
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 50 DEG E
DIP.....SE
DEPOSIT DESCRIPTION COMMENTS.....PITS CONTAIN FRACTURED LIMESTONE AND DOLOMITE AND ATHENS SHALE OUTCROPS ALL AROUND THE SITE. BARITE IS DARK GRAY TO BLACK IN COLOR, CONTAINS CARBONACEOUS MATTER, AND SMELLS OF H_2S WHEN RUBBED BY ANOTHER PIECE. THE PROSPECT OCCURS JUST SOUTH OF A FAULT TRACE.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....91.5 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....8-12 OPEN PITS AND TRENCHES WERE DUG, SIZES VARIED, BUT THE LARGEST TRENCH WAS 6 M (20 FT) LONG, 3 M (10 FT) WIDE, AND 2.4 M (8 FT) DEEP.
HOST ROCK AGE.....ORD-QUAT
HOST ROCK TYPE.....LIMESTONE, DOLOMITE, CLAY RESIDUUM, SHALE
PERTINENT MINERALS (NOT ORE).....LIMESTONE, DOLOMITE, CLAY MINERALS, SHALE
ORE CONTROL/LOCUS.....VEIN-SHEAR ZONE ?
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....UNNAMED THRUST FAULTS TO NORTH, WEST, AND SOUTH OF PROSPECT. SYNCLINE.
FORMATION AGE.....QUAT
FORMATION AGE.....ORD
FORMATION AGE.....ORD
FORMATION NAME.....CLAY RESIDUUM
FORMATION NAME.....EDINBURG FORMATION
FORMATION NAME.....LINCOLNSHIRE FORMATION
GEOLOGY COMMENTS.....EDMUNDSON (1938) DESCRIBES THE PROSPECT TO BE IN ATHENS SHALE. MORE RECENT WORK INDICATES THE DEPOSIT OCCURS IN LIMESTONE AND DOLOMITE OF THE LINCOLNSHIRE FORMATION AND THE SURROUNDING SHALE (ATHENS) IS PART OF THE EDINBURG FORMATION. THE CONTACT BETWEEN THESE TWO FORMATIONS IS VERY CLOSE TO THE DEPOSIT. FOR A GEOLOGIC MAP OF THE AREA SEE MCGUIRE, O.S., 1976, GEOLOGY OF THE DALEVILLE QUADRANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 42.
NON-USGS WORK.....DIREXPL -DUG OPEN PITS AND TRENCHES
NON-USGS WORK.....1975 RECON VA. DIV. MIN. RES. - INSPECTED SITE
REFERENCE....EDMUNDSON, R.S., 1938, BARITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 53, 85 P.
REFERENCE....ECONOMIC GEOLOGY FILE, VIRGINIA DIVISION OF MINERAL RESOURCES.

3. Gusler-Austin Mine

MRDS-REV RECORD NUMBER.....142
MRDS RECORD NUMBER.....W031244
RECORD TYPE.....X1B
REPORT DATE.....80 08
INFORMATION SOURCE.....123
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....GUSLER-AUSTIN MINE
MINING DISTRICT/AREA.....ROANOKE-BOTETOURT COUNTIES AREA
COUNTRY.....US STATE.....VA COUNTY.....BOTETOURT
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01

QUADRANGLE NAME..... DALEVILLE, VA QUADRANGLE SCALE 1:24000
ELEVATION.....1280 FT (390 M)
UTM NORTHING...4149280 EASTING...592100 ZONE...+17
LATITUDE.....37-29-16N LONGITUDE.....079-57-30W
POSITION FROM NEAREST LOCALITY.....2.4 KM (1.5 MI) NORTHEAST OF HAYMAKERTOWN. 4 KM (2.5 MI) SOUTHWEST OF HOWELL MILLS.
LOCATION COMMENTS.....0.4 KM (0.25 MI) SOUTH ON STATE ROAD 666 FROM ITS INTERSECTION WITH STATE ROAD 600; TO A 90 DEG RIGHT TURN IN THE ROAD; FOLLOW FENCE LINE, ON SOUTH SIDE OF THE CURVE IN THE ROAD, SOUTHEAST FOR 360 M (1181 FT) TO THE WATERFILLED PIT.
COMMODITIES PRESENT.....BA PYR FE CU
ORE MATERIALS.....BARITE, PYRITE-CHALCOPYRITE, LIMONITE
MAJOR.....BA
OCCUR.....PYR FE CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....J.N. AND N.S. HOTINGER
YEAR OF DISCOVERY.....1935
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1935
OWNER (PRESENT/LAST).....MR. DUFFEY OWNS THE GUSLER PROPERTY AND THE AUSTIN PROPERTY IS OWNED BY UNKNOWN REALTOR, NOW LIVING IN ROANOKE, VA.
OPERATOR.....CLINCHFIELD SAND AND FELDSPAR CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE MINE WAS OPENED IN 1835 ON THE GUSLER PROPERTY, BUT SOON EXTENDED OVER TO THE AUSTIN PROPERTY, WHERE THERE WAS EVEN MORE BARITE. AT FIRST THE MINE WAS SMALL SCALE AND THE PIT HAND DUG, BUT SOON A DRAG-LINE WAS BROUGHT IN AND MOST OF THE BARITE WAS MINED BY IT. A WASHING PLANT WAS ERECTED TO THE NORTH OF THE MINE. AT FIRST THE BARITE WAS HAULED TO THE WASHER BY TRUCKS BUT AS THE PIT WAS DEEPENED NARROW GAUGE CARS DRAWN BY CABLES REPLACED THE TRUCKS. A FLOW SHEET, TYPICAL OF BARITE WASHING PLANTS WAS USED HERE TO CONCENTRATE THE CRUDE MATERIAL. A MAGNETIC SEPERATOR AND DRYER WERE INSTALLED BY THE LAST OPERATORS TO DECREASE THE IRON CONTENT. THE MINE WAS CLOSED IN 1937 AND IS NOW PARTIALLY FILLED WITH WATER.
DEPOSIT TYPE.....WEATHERING RESIDUAL, VEIN, REPLACEMENT
DEPOSIT FORM.....IRREGULAR
DEPTH TO BOTTOM.....21 UNITS...M
MAXIMUM LENGTH.....46 UNITS...M
MAXIMUM WIDTH.....46 UNITS...M
MAXIMUM THICKNESS.....21 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 35-50 DEG E
DIP.....60 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....RED-YELLOW CLAY CONTAINING BARITE AND CHERT NODULES MAKES UP THE UPPER PART OF THE PIT. IN THE LOWER PART DOLOMITE PINNACLES WERE FOUND. NO CHERT WAS SEEN IN THE BEDROCK. BARITE ALSO OCCURS AS THIN VEINS WHICH CEMENT LARGE MASSES OF DOLOMITE AND AS IRREGULAR REPLACEMENT MASSES. BARITE IS SOMETIMES BLACK DUE TO IRON STAINING AND WHEN TWO PIECES ARE HIT TOGETHER THEY SMELL OF H_2S, THIS BARITE IS MORE ABUNDANT IN THE SOUTHERN PART OF THE PIT. SOME METAL SULFIDE (PYRITE?) MINERALIZATION CAN BE OBSERVED IN SMALL POCKETS IN THE DOLOMITE BRECCIA IN THE PINNACLES.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....46 UNITS...M
OVERALL WIDTH.....46 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....MINE IS NEARLY CIRCULAR PIT APPROXIMATELY 46 M (150 FT) IN DIAMETER AND 21 M (70 FT) DEEP. A TWELVE FOOT EXPOSURE CONTAINING BARITE IS IN THE SOUTH-SOUTHWEST BANK OF THE PIT IN 1986. PIT IS WATER-FILLED. A DUMP IS PRESENT JUST NORTHWEST OF THE MAIN PIT. ADDITIONAL DUMPS (ORE AND WASTE ROCK) ARE PRESENT AROUND THE FOUNDATIONS FOR THE OLD WASHING EQUIPMENT.
HOST ROCK AGE.....EORD-QUAT
HOST ROCK TYPE.....DOLOMITE, CLAY RESIDUUM
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CLAY MINERALS, CHERT, QUARTZ
ORE CONTROL/LOCUS.....CLAY RESIDUUM BETWEEN AND ABOVE DOLOMITE PINNACLES
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....FINCASTLE SYNCLINE; THRUST FAULTS TO NORTH AND SOUTH OF MINE
FORMATION AGE.....QUAT
FORMATION AGE.....EORD
FORMATION NAME.....CLAY RESIDUUM
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....FOR GEOLOGIC MAP SEE MCGUIRE, O.S., 1976, VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF IN VESTIGATIONS 42.
NON-USGS WORK.....1935 DIREXPL J.N. AND N.S. HOTINGER? - DUG PIT AND MINED
NON-USGS WORK.....1936 DIREXPL CLINCHFIELD SAND AND FELDSPAR CO. - MINED
NON-USGS WORK.....1975 RECON VIRGINIA DIVISION OF MINERAL RESOURCES - INSPECTED SITE
REFERENCE....EDMUNDSON, R.S., 1938, BARITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 53, 85 P.
REFERENCE....ECONOMIC GEOLOGY FILE: VIRGINIA DIVISION OF MINERAL RESOURCES.
REFERENCE....HAY, N.R.T., 1950, GEOLOGY OF THE FINCASTLE SYNCLINE, BOTETOURT COUNTY, VIRGINIA: UNIVERSITY OF VIRGINIA UNPUBLISHED MS THESIS.

CUMULATIVE PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEARS GRADE
ORE BA EST 10.000 TONS 1935-1936
SOURCE OF PRODUCTION INFORMATION.....EDMUNDSON, (1938)

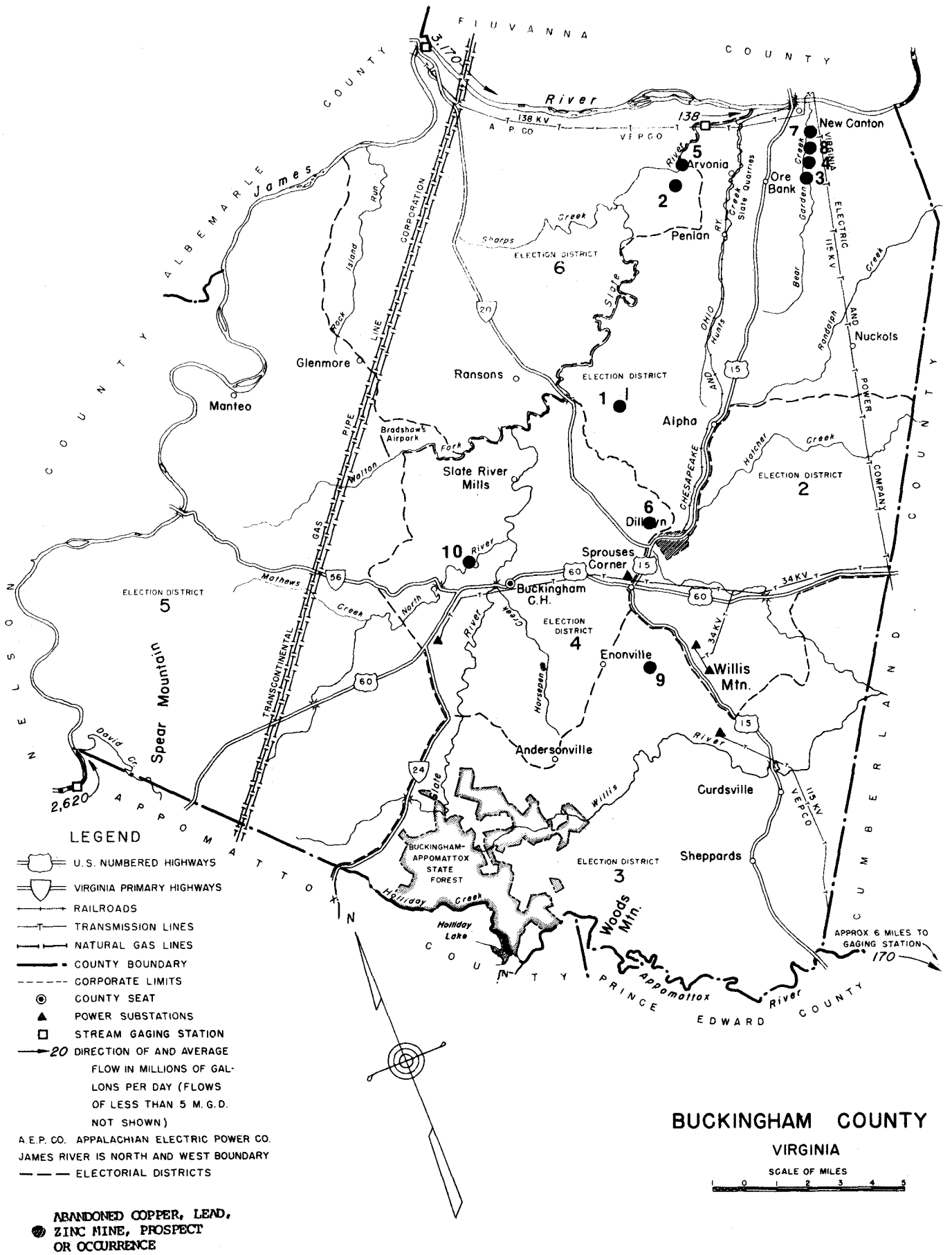
4. Troutville Prospect

MRDS-REV RECORD NUMBER.....150
MRDS RECORD NUMBER.....W031305
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....TROUTVILLE PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....BOTETOURT
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 JAMES RIVER
QUADRANGLE NAME..... VILLAMONT, VA. QUADRANGLE SCALE 1:24000
UTM NORTHING...4143700 EASTING...600500 ZONE...
LATITUDE.....37-26- N LONGITUDE.....079-52- W
POSITION FROM NEAREST LOCALITY.....LOCATION ACCURATE TO 200 METERS; ABOUT 2.5 KM (1.5 MI) NNE OF TROUTVILLE.
LOCATION COMMENTS.....WEST OF U.S. HIGHWAY II.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....GALENA, POSSIBLY SMITHSONITE AND/OR HEMIMORPHITE
COMMODITY INFO COMMENTS.....CURRIER (1935, P. 94) REPORTS AN OXIDIZED ZINC MINERAL
NON-PRODUCER MAIN.....ZN PB
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DEVELOPMENTS OF THIS OCCURRENCE HAVE BEEN REPORTED.
DEPOSIT TYPE.....PROBABLY DISSEMINATED, REPLACEMENT
DEPOSIT SIZE.....SMALL (?)
HOST ROCK AGE.....CAMB
HOST ROCK TYPE.....DOLOSTONE BRECCIA
PERTINENT MINERALS (NOT ORE).....DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, PULASKI FAULT
SIGNIFICANT ALTERATION.....ZINC MINERALS OXIDIZED.
FORMATION AGE.....CAMB
FORMATION AGE.....CAMB
FORMATION NAME.....ELBROOK FORMATION
FORMATION NAME.....ROME FORMATION
GEOLOGY COMMENTS.....CURRIER (1935) STATES MINERALIZATION IS IN THE ELBROOK FORMATION.
NON-USGS WORK.....1932 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 42.
REFERENCE....CHEN, PING-FAN, 1960, GEOLOGY AND MINERAL RESOURCES OF THE GOOSE CREEK AREA NEAR ROANOKE, VIRGINIA: UN PUBLISHED PH.D. THESIS, VIRGINIA POLYTECHNIC INSTITUTE.
REFERENCE....BUTTS, CHARLES, 1933, GEOLOGIC MAP OF THE APPALA CHIAN VALLEY OF VIRGINIA WITH EXPLANATORY TEXT: VIRGINIA GEOLOGICAL SURVEY BULLETIN 42, 56 P.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....MILICI, R.C., SPIKER, C.T., JR., AND WILSON, J.M., 1963, GEOLOGIC MAP OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, 1 SHEET, SCALE 1:500,000.
REFERENCE....HENIKA, W.S., 1981, GEOLOGY OF THE VILLAMONT AND MONTVALE QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 35, 18 P.

BUCKINGHAM COUNTY

1. Anaconda Mine

MRDS-REV RECORD NUMBER.....184
MRDS RECORD NUMBER.....W028992
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D.C.)
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID C.
SITE NAME.....ANACONDA MINE
SYNONYM NAME.....ELDRIDGE MILL MINE, ELDRIDGE MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....BUCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... DILLWYN, VA QUADRANGLE SCALE 1:24000
ELEVATION.....440 FT (133 M)
UTM NORTHING...4165430 EASTING...725160 ZONE...+17
LATITUDE.....37-36-37N LONGITUDE.....078-26-57W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....7.3 KM (4.6 MI) NORTH OF DILLWYN.
LOCATION COMMENTS.....SE OF STATE ROAD 617, 3.85 KM (2.4 MI) EAST OF JUNCTION WITH STATE HWY. 20.
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....SULFIDES
GENERAL ANALYTICAL DATA.....ORE SHIPPED WAS 10.75% CU.
MAIN ORE MINERALS.....CUPRIFEROUS PYRITE, CHALCOPYRITE


FLUVANNA COUNTY
ALBEMARLE COUNTY
NELSON COUNTY
APPOMATTOX COUNTY
CUMBERLAND COUNTY
PRINCE EDWARD COUNTY
James River
Appomattox River
Slate River
Willis River
Hatcher Creek
Randolph Creek
Bear Garden Creek
Slate Quarries Creek
Sharps Creek
Rock Island Run
Walton Fork
Mathews Creek
North Creek
Horsepen Creek
Holliday Creek
David Cr.
Bradshaws Airpark
Spear Mountain
Willis Mtn.
Woods Mtn.
Holliday Lake
BUCKINGHAM-APPOMATTOX STATE FOREST
New Canton
Arvonia
Ore Bank
Penlan
Nuckols
Glenmore
Manteo
Ransons
Alpha
Slate River Mills
Dillwyn
Sprouses Corner
Buckingham C.H.
Enonville
Andersonville
Curdsville
Sheppards
ELECTION DISTRICT 1
ELECTION DISTRICT 2
ELECTION DISTRICT 3
ELECTION DISTRICT 4
ELECTION DISTRICT 5
ELECTION DISTRICT 6
VIRGINIA ELECTRIC AND POWER COMPANY
CHESAPEAKE AND OHIO RY.
TRANSCONTINENTAL GAS PIPE LINE CORPORATION
138 KV
115 KV
34 KV
A.P.CO
VEPCO
3,170
2,620
170
APPROX 6 MILES TO GAGING STATION
LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATIONS
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
A.E.P. CO. APPALACHIAN ELECTRIC POWER CO.
JAMES RIVER IS NORTH AND WEST BOUNDARY
ELECTORIAL DISTRICTS
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
BUCKINGHAM COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5

MINOR ORE MINERALS.....BORNITE, AZURITE, MALACHITE
COMMODITY INFO COMMENTS.....GANGUE IS QUARTZ
MAJOR.....CU
OCCUR.....PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1903
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1905 (?)
OWNER (PRESENT/LAST).....U.S. MINERAL CO.
OPERATOR.....U.S. MINERAL CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....DEVELOPED BY Q.Q. COPPER CO. AROUND 1903 TO 1905, WHEN BOUGHT BY UNITED STATES MINERAL CO., WHICH CONTINUED SPORADIC DEVELOPMENT OFF AND ON THROUGH 1910.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....PINCH AND SWELL
MAXIMUM THICKNESS.....1 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE
DEPOSIT DESCRIPTION COMMENTS.....VEIN WAS DESCRIBED AS BEING SEVERAL FEET THICK AT MAXIMUM (TABER, 1913).
DEPTH BELOW SURFACE.....23 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1903, AN 18 M (60 FT) SHAFT WAS SUNK. FROM 1905 TO 1910 THE SHAFT WAS DEEPENED TO 23 M (75 FT) AND A SHORT DRIFT WAS DRIVEN NORTHEASTWARD. IN 1972, A WATER-FILLED SHAFT WAS EVIDENT. MUCH OF THE DUMP MATERIAL HAD BEEN REMOVED FOR USE AS ROAD METAL.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....EPIDOTIZED GREENSTONE (METABASALT (?)
AGE OF IGNEOUS ROCK.....EPAL
IGNEOUS ROCK TYPE.....PROBABLY METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, CHLORITE, EPIDOTE, ZOISITE, HORNBLENDE, CALCITE, OLIGOCLASE, TITANITE, ACTINOLITE, GARNET, MAGNETITE.
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....HARDWARE ANTICLINE - ARVONIA SYNCLINE, NE-SW TREND
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
IGNEOUS UNIT AGE.....EPAL
IGNEOUS UNIT NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....EVINGTON GROUP (PER BROWN, 1969) NOW CONSIDERED CHOPAWAMSIC FORMATION.
NON-USGS WORK.....1903 DIREXPL Q.Q. COPPER CO.: DROVE 18 M SHAFT
NON-USGS WORK.....1905 DIREXPL U.S. MINERAL CO.: DEEPENED SHAFT AND SHIPPED SOME ORE.
NON-USGS WORK.....1972 RECON VA. DIV. MIN. RES.: INSPECTED SITE
REFERENCE....BROWN, W.R., 1969, GEOLOGY OF THE DILLWYN QUAD RANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATION 10, 77 P.
REFERENCE....POOLE, J.L., 1974, NOTES ON SOME ABANDONED COPPER, LEAD, AND ZINC MINES IN THE PIEDMONT OF VIRGINIA: VIRGINIA MINERALS, V. 20, NO. 2, P. 9-14.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE CU	ACC	1.50000	KG	1905-1910	10.75 % CU
CU		0.16000	KG	1905-1910	

SOURCE OF PRODUCTION INFORMATION.....TABER (1913)
PRODUCTION COMMENTS.....ORE WAS SHIPPED TO NORFOLK FOR SMELTING.

2. Ford Mine

MRDS-REV RECORD NUMBER.....194
MRDS RECORD NUMBER.....W028970
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R.(LE VAN,D.C.)
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID C.
SITE NAME.....FORD MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....BUCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...DIANA MILLS, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....300 FT (91 M)
UTM NORTHING...4174840 EASTING...730820 ZONE...+17
LATITUDE.....37-41-37N LONGITUDE.....078-22-56W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 4.59 KM (2.85 MI) NE OF DIANA MILLS.
LOCATION COMMENTS.....0.08 KM (0.05 MI) OFF THE W SIDE OF ROCKY CREEK ABOUT 0.56 KM (0.35 MI) S OF ITS INTERSECTION WITH THE SLATE RIVER.
COMMODITIES PRESENT.....AU CU
MAIN ORE MINERALS.....NATIVE GOLD, CHALCOPYRITE
MAJOR.....AU CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1835
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1835 (?)
EXPLORATION AND DEVELOPMENT COMMENTS.....A VEIN IS SAID TO HAVE BEEN DISCOVERED IN 1835, WHICH WAS RICH IN GOLD AT THE SURFACE, BUT AT A DEPTH OF 1.2 TO 1.5 M (4 TO 5 FT) COPPER PYRITE (CHALCOPYRITE) BECAME SO PLENTIFUL AS TO INTERFERE WITH AMALGAMATION, AND THE WORK WAS ABANDONED. LATER, AN 18 M (60 FT) SHAFT WAS SUNK TO STRIKE THE VEIN AT ANOTHER POINT, BUT A FEW LENTICU LAR QUARTZ CONCRETIONS CONTAINING CHALCOPYRITE SEEM TO BE ALL THAT WAS FOUND. TWO OTHER SMALL VEINS WERE ALSO EXPOSED IN OPEN CUTS WHICH CONTAINED PYRITE, CHALCOPYRITE AND A LITTLE FREE-GOLD.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....REPORTEDLY RICH IN GOLD NEAR SURFACE, BUT MORE RICH IN COPPER WITH DEPTH.
DEPTH BELOW SURFACE.....18 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....7 SMALL DUMP PILES REPORTED 1974; UNPRODUCTIVE SHAFT SUNK. ALSO SEVERAL OPEN CUTS WERE REPORTEDLY DUG.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....GREENSTONE SCHIST
PERTINENT MINERALS (NOT ORE).....EPIDOTE, QUARTZ, PYRITE
ORE CONTROL/LOCUS.....QUARTZ VEINS
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....LONG ISLAND SYNCLINE; ARVONIA SYNCLINE, NE-SW TREND
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....LENTICULAR QUARTZ CONCRETIONS IN GREENSTONE SCHIST
GENERAL COMMENTS.....CHALCOPYRITE IN ORE INTERFERED WITH AMALGAMATION AND PRODUCTION CEASED UNTIL SHAFT WAS SUNK.
NON-USGS WORK.....1835 DIREXPL SHAFT SUNK
NON-USGS WORK.....1974 RECON VA. DIV. OF MINERAL RESOURCES: SITE INSPECTED
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19 77 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....CREDNER, H., 1869, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VII, P. 58.

3. Hudgins Prospect

MRDS-REV RECORD NUMBER.....183
MRDS RECORD NUMBER.....W028993
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,2,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D.C.)
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID C.
SITE NAME.....HUDGINS PROSPECT
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....BUCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...ARVONIA, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....320 FT (98 M)
UTM NORTHING...4173530 EASTING...737360 ZONE...+17
LATITUDE.....37-40-48N LONGITUDE.....078-18-30W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.4 MI (2.3 KM) E OF ARVONIA.
LOCATION COMMENTS.....0.1 MI (0.2 KM) OFF S SIDE OF STATE ROAD 672, ABOUT 0.8 MI (1.3 KM) BY ROAD WEST OF JUNCTION WITH STATE ROAD 670.
COMMODITIES PRESENT.....ZN CU PB AU AG PYR PYRI
ORE MATERIALS.....SULFIDES
MAIN ORE MINERALS.....PYRITE, CHALCOPYRITE, CHALCOCITE, BORNITE
MINOR ORE MINERALS.....NATIVE SILVER, NATIVE GOLD, PYRRHOTITE
NON-PRODUCER MAIN.....ZN CU
NON-PRODUCER MINOR.....PB AU AG PYR PYRI
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1890'S
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....VIRGINIA MINING CORP.
OPERATOR.....VIRGINIA MINING CORP.
EXPLORATION AND DEVELOPMENT COMMENTS.....DURING THE 1890'S A 21 M (70 FT) SHAFT WAS SUNK, BUT NO HIGH-GRADE SULFIDES WERE FOUND AND LITTLE MORE DEVELOPMENT WORK OCCURRED. IN 1950, THE BUCKINGHAM MINERAL SYNDICATE, INC., LEASED THE LAND AROUND THE NEW CANTON MINES, RAN A RESISTIVITY SURVEY AND BASED ON THE RESULTS SEVERAL DRILL HOLES WERE DRILLED BY THE MATHESON CORPORATION. THE DRILL HOLES WERE PROBABLY NOT BUT DOWN AT THE HUDGINS PROSPECT. IN 1955, THE VIRGINIA MINING CORP. RAN GEOPHYSICAL SURVEYS OVER THE SOUTHERN PORTION OF THE TREND. AS A RESULT OF MAGNETIC AND SELF-POTENTIAL SURVEYS, AN ANOMALY

WAS OUTLINED AND ELEVEN HOLES WERE DRILLED IN THE VICINITY OF THE HUDGINS MINE. NO OTHER DEVELOPMENT WORK HAS OCCURRED.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE, GOSSAN
DEPOSIT FORM.....IRREGULAR, POD/LENS
DEPOSIT SIZE.....SMALL
STRIKE.....N 20 DEG E
DIP.....ALMOST VERTICAL
DEPOSIT DESCRIPTION COMMENTS.....NEW CANTON-TYPE DEPOSIT (SEE TABER, 1913).
DESCRIPTION OF WORKINGS.....B
LENGTH OF WORKINGS.....21.3 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....70 FT (21.3 M) SHAFT SUNK AT TURN OF CENTURY, PARTLY CAVED AND INACCESSIBLE BY 1911. DIAMOND DRILLING CONDUCTED IN 1955. FOUR SMALL DUMP PILES EVIDENT IN 1974
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....CHLORITE-QUARTZ-SERICITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOUITE (SERICITE), HORNBLENDE, GARNET,
ORE CONTROL/LOCUS.....SHEAR ZONE, SCHISTOSITY
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....ARVONIA SYNCLINE, NE-SW TREND
FORMATION AGE.....EPAL
FORMATION AGE.....EPAL
FORMATION AGE.....ORD
FORMATION NAME.....CHOPAWAMSIC FORMATION
FORMATION NAME.....HATCHER COMPLEX
FORMATION NAME.....ARVONIA FORMATION
GENERAL COMMENTS.....PROSPECT IS THE SOUTHWESTERN MOST OF THE NEW CANTON MINES (MARGARET, MCKENNA, JOHNSON).
NON-USGS WORK.....1890 DIREXPL SHAFT SUNK
NON-USGS WORK.....1955 DIREXPL VIRGINIA MINING CORP., DIAMOND DRILLING
NON-USGS WORK.....1974 RECON VA. DIV. MIN. RES., RELOCATED MINE
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 19, 77 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....BARNES, R.C., 1963, GEOLOGICAL AND GEOPHYSICAL INVESTIGATION OF SULFIDE DEPOSITS NEAR NEW CANTON, VIRGINIA: UNIVERSITY OF VIRGINIA UNPUBLISHED M. S. THESIS.
REFERENCE....BROWN, W.R., 1969, GEOLOGY OF THE DILLWYN QUAD RANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 10, 77 P.

4. Johnson Mine

MRDS-REV RECORD NUMBER.....200
MRDS RECORD NUMBER.....W028969
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1,2 ,3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN,D.C.)
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID C.
SITE NAME.....JOHNSON MINE
SYNONYM NAME.....STAPLES MINE (ALSO NAME OF BURNETT MINE).
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....BUCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...ARVONIA, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....260 FT (79.2 M)
UTM NORTHING...4175000 EASTING...737940 ZONE...+17
LATITUDE.....37-41-36N LONGITUDE.....078-18-05W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.3 KM (0.8 MI) S OF NEW CANTON.
LOCATION COMMENTS.....ON THE W SIDE OF BEAR GARDEN CREEK. THE ADIT OPENING LIES 170 M (560 FT) NE OF THE SHAFT.

COMMODITIES PRESENT.....CU FE PYR ZN PB AU AG
ORE MATERIALS.....CHALCOCITE, BORNITE, PYRITE, PYRRHOTITE, CHALCOPYRITE, SPHALERITE, GALENA, NATIVE GOLD AND SILVER, GOETHITE, MAGNETITE
MAIN ORE MINERALS.....CHALCOPYRITE, SPHALERITE, PYRITE
MINOR ORE MINERALS.....GALENA, PYRRHOTITE, NATIVE GOLD, CHALCOCITE, GOETHITE.
MAJOR.....CU FE
POTEN.....PYR
OCCUR.....ZN PB AU AG
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-REVOLUTIONARY WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1770'S
OPERATOR.....JOHNSON MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THIS AND THE OTHER 3 NEW CANTON MINES WERE FIRST WORKED AS GOSSAN IRON-ORE MINES (PRINCIPALLY LIMONITE) STARTING AROUND THE REVOLUTIONARY WAR UP TO ABOUT 1840. THE MOST INTENSIVE MINING OCCURRED IN THE 1830'S, WHEN A CHARCOAL FURNACE, KNOWN AS THE BEAR GARDEN OR DEAN FURNACE, WAS BUILT ABOUT HALF A MILE SOUTH OF NEW CANTON. THE GOSSAN WAS SMELTED AT THIS FURNACE UNTIL 1840, WHEN IT WAS ABANDONED. THIS MINE WAS THE FIRST COPPER MINE IN THE AREA, OPENING IN THE 1880'S. A MR. STAPLES REPORTEDLY SANK A SHAFT 24 M (78 FT) DEEP AND SHIPPED 780 TONS OF ORE ASSAYING 8 PERCENT COPPER. THE MINE WAS LEASED IN 1891 TO WHITE AND WALTERS WHO WORKED THE MINE UNTIL 1894. SEVERAL SHIPMENTS WERE MADE AND $4,000 IS SAID TO HAVE BEEN REALIZED FROM THE COPPER IN THE ORE. ABOUT 1903 THE JOHNSON MINING CO. PURCHASED THE PROPERTY AND DEEPENED THE SHAFT TO 85 M (278 FT). DROVE AN ADIT TO MEET THE SHAFT, AND ADDED 305 M (1000 FT) OF UNDERGROUND WORKINGS IN THREE LEVELS, BUT LITTLE OR NO MINING WAS DONE. IN 1950, THE PROPERTY WAS LEASE BY BUCKINGHAM MINERAL SYNDICATE, INC., WHO CONDUCTED A RESISTIVITY SURVEY AND DRILLED SEVERAL HOLES. IN 1954-55, VIRGINIA MINING CORP. OF MONTREAL, QUEBEC, CONDUCTED A GEOPHYSICAL SURVEY AND DRILLED 5 HOLES. IN 1956, ROLAND A. BEERS, INC., CONDUCTED A GEOPHYSICAL SURVEY.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE, GOSSAN
DEPOSIT FORM.....TABULAR, LENTICULAR
MAXIMUM LENGTH.....335.3 UNITS...M
MAXIMUM THICKNESS.....6.1 UNITS...M
STRIKE.....N20 DEG E
DIP.....80 DEG NW
DEPOSIT DESCRIPTION COMMENTS.....ORE MINERALIZATION IS FOUND BELOW THE WATER LINE.
DEPTH BELOW SURFACE.....84.7 UNITS...M
LENGTH OF WORKINGS.....304.8 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....THREE LEVELS OF UNDERGROUND WORKINGS FROM A SINGLE SHAFT AND ADIT WERE REPORTED BY TABER (1913). THE SHAFT AND ADIT WERE STILL PRESENT IN 1974.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....CHLORITE-BIOTITE-HORNBLENDE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, SERICITE, GARNET, HORNBLENDE, CHLORITE, GAHNITE, MUSCOVITE
ORE CONTROL/LOCUS.....IN SCHIST AS TABULAR OR LENTICULAR ZONES, ALSO DISSEMINATED.
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....ARVONIA SYNCLINE, NE-SW TREND
FORMATION AGE.....EPAL
FORMATION AGE.....PAL
FORMATION AGE.....ORD
FORMATION NAME.....CHOPAWAMSIC FORMATION
FORMATION NAME.....HATCHER COMPLEX
FORMATION NAME.....ARVONIA FORMATION
GEOLOGY COMMENTS.....IN THE MASSIVE PYRITE-PYRRHOTITE ORE, PYRITE OCCURS AS ANHEDRAL UNIT GRAINS AS MUCH AS 2 CM ACROSS, ENCLOSING ROUNDED QUARTZ GRAINS AND A FEW SMALL GARNETS. SULFIDE OCCURS IN QUARTZ-GARNET-SERICITE SCHIST, CHLORITE-BIOTITE-GARNET SCHIST, AND CHLORITE-HORNBLENDE SCHIST, SOME AREAS ARE STRONGLY SILICIFIED. (KINKEL, 1967)
GENERAL COMMENTS.....THIS WAS THE AREA'S FIRST CU MINE. THE MINE WAS VISITED BY JAMES L. POOLE OF THE VIRGINIA DIVISION OF MINERAL RESOURCES IN 1974. THIS MINE IS ONE OF 4 NEW CANTON MINES, AND LIES ON STRIKE WITH THE MCKENNA, MARGARET, AND HUDGINS PROSPECTS.
NON-USGS WORK.....1890 DIREXPL MR. STAPLES; SUNK 23.8 M SHAFT AND SHIPPED 780 TONS OF ORE.
NON-USGS WORK.....1903 DIREXPL JOHNSON MINING CO.: PURCHASED THE MINE. BEGAN EXTENSIVE EXCAVATIONS; SHAFT WAS DEEPENED TO 84.7 M, AN ADIT WAS DRIVEN FROM BEAR GARDEN CREEK SW TO CONNECT WITH THE SHAFT, AND 3 LEVELS OF WORKINGS WERE DEVELOPED.
NON-USGS WORK.....1956 GEOPHYS R.F. BEERS, INC.: CONDUCTED GEOPHYSICAL SURVEY UNDER CONTRACT WITH DEFENSE MINERALS EXPLORATION ADMINISTRATION.
REFERENCE....POOLE, J.L., 1974, NOTES ON SOME ABANDONED COPPER, LEAD, AND ZINC MINES IN THE PIEDMONT OF VIRGINIA: VIRGINIA MINERALS V. 20, NO. 2 P. 9-16.
REFERENCE....TABER, S, 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....BROWN, W.R., 1969, GEOLOGY OF THE DILLWYN QUAD RANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 10, 77 P.
REFERENCE....BARNES, R.C., 1963, GEOLOGICAL AND GEOPHYSICAL INVESTIGATIONS OF SULFIDE DEPOSITS NEAR NEW CANTON, VIRGINIA: UNIVERSITY OF VIRGINIA UNPUBLISHED M.S. THESIS.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE	CU EST	0.78000	TONS	1880'S	8% CU
ORE	CU SML			1891	$4000 CU-ORE

SOURCE OF PRODUCTION INFORMATION.....TABER (1913), BARNES (1963).

5. Lightfoot Mine

MRDS-REV RECORD NUMBER.....182
MRDS RECORD NUMBER.....W028994
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1, 3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D.C.)
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID C.
SITE NAME.....LIGHTFOOT MINE
SYNONYM NAME.....COWAN MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....BUCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01

SECOND QUADRANGLE NAME...DIANA MILLS, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....300 FT (91 M)
UTM NORTHING...4175860 EASTING...731370 ZONE...+17
LATITUDE.....37-42-10N LONGITUDE.....078-22-32W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....2.75 MI (4.43 KM) NW OF ARVONIA.
LOCATION COMMENTS.....JUST OFF NORTH SIDE OF STATE ROAD 676, JUST NE OF ITS CROSSING OVER THE SLATE RIVER
COMMODITIES PRESENT.....AU CU
ORE MATERIALS.....SULFIDES
MAIN ORE MINERALS.....AURIFEROUS PYRITE, CHALCOPYRITE, NATIVE COPPER,
MINOR ORE MINERALS.....NATIVE GOLD
MAJOR.....AU CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....GEORGE FISHER
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-CIVIL WAR
EXPLORATION AND DEVELOPMENT COMMENTS.....GEORGE FISHER DISCOVERED DEPOSIT AND WORKED THE PROPERTY FOR SEVERAL YEARS UNDER LEASE. IT WAS THEN WORKED SUCCESSIVELY BY 3 DIFFERENT COMPANIES, WHO LEASED IT FROM MR. LIGHTFOOT. THE FIRST COMPANY REPORTEDLY MADE $300 TO $400 PER DAY STAMP-MILLING FOR GOLD. THE SECOND COMPANY CONFINED ITS WORK TO SURFACE WASHING, AND THE LAST COMPANY DEVELOPED THE COPPER DEPOSITS, SHIPPING 100 TONS OF $80-ORE TO BALTIMORE, BEFORE THE MINE CLOSED IN 1861. IN WORKING THE PLACER DEPOSITS, GOLD NUGGETS WORTH $20 TO $30 ARE SAID TO HAVE BEEN FOUND. IN 1904 (?) MORE DEVELOPMENT WORK WAS CONDUCTED.
DEPOSIT TYPE.....VEIN, VOLCANIC
DEPOSIT FORM.....LENS
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....3 VEINS WERE DEVELOPED(2 QUARTZ VEINS, ONE 1.2 M (4 FT) WIDE, CARRIED IRON OXIDE, PYRITE, AND FREE GOLD. THE THIRD VEIN WAS 1.2 TO 1.5 M (4 TO 5 FT) THICK, AND CONSISTED OF AN UPPER GOSSAN(THEN 6.1 M (20 FT) OF PYRITE-RICH QUARTZ, BELOW WHICH CHALCOPYRITE OCCURS AND INCREASES WITH DEPTH(THE LOWER CHALCOPYRITE RICH PORTION OF THE VEIN CONTAINED 11 PERCENT COPPER.
DEPTH BELOW SURFACE.....26 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....WATSON (1907) REPORTED MINE WAS DEVELOPED BY AN 26 M (85 FT) SHAFT FROM WHICH SEVERAL SHORT DRIFTS HAD BEEN DRIVEN. PREPARATIONS WERE THEN IN PROGRESS FOR SINKING THE SHAFT SEVERAL HUNDRED FEET DEEPER, EXTENDING THE DRIFTS, AND OPENING NEW ONES ON LOWER LEVELS, BUT IT IS UNCERTAIN IF THIS WAS DONE. CREDNER (1869) REPORTED A NUMBER OF PITS AND A SHAFT HAD BEEN SUNs TO OPEN THE VEINS. IN 1974, A WATER-FILLED SHAFT AND DUMPS WERE EVIDENT.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....GREENSTONE SCHIST
AGE OF IGNEOUS ROCK.....PAL
IGNEOUS ROCK TYPE.....GREENSTONE (METAVOLCANIC)
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, CALCITE, CHLORITE, MAGNETITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....ARVONIA SYNCLINE, NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....LONG ISLAND SYNCLINE
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
IGNEOUS UNIT AGE.....EPAL
IGNEOUS UNIT NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....BENEATH GOSSAN CAP WAS PYRITE TO A DEPTH OF ABOUT 6 M WHERE CHALCOPYRITE WAS FOUND AND INCREASED WITH DEPTH. GREENSTONE IS CONSIDERED TO BE METAMORPHOSED MAFIC VOLCANIC ROCK.
GENERAL COMMENTS.....PROPERTY FIRST WORKED FOR GOLD, BUT OPENED FOR COPPER JUST BEFORE CIVIL THE WAR. AFTER THE CIVIL WAR SPORATIC ATTEMPTS WERE MADE TO REOPEN, NONE WERE EVER SUCCESSFUL.
NON-USGS WORK.....1850 DIREXPL DURING PERIOD MINED FOR GOLD AND COPPER
NON-USGS WORK.....1904 DIREXPL 85 FT SHAFT SUNK
NON-USGS WORK.....1974 RECON VA. DIV. MIN. RES., MINE RELOCATED
REPORTS AVAILABLE.....CREDNER, H., 1869, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA, AMER. JOUR. MNG., VOL. VII, P. 58(HAMMETT, A.B.J., 1966, THE HISTORY OF GOLD: KERRVILLE, TEXAS, BRASWELL PRINTING CO., P. 43-53.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P
REFERENCE....BROWN, W.R., 1969, GEOLOGY OF THE DILLWYN QUAD RANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, REPORT OF INVESTIGATIONS 10, 77 P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
AU	SML				

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
CU	AVG	0.10000	TONS	PRIOR 1861	$80 CU ORE
AU	SML				

6. London and Virginia Mine

MRDS-REV RECORD NUMBER.....193
MRDS RECORD NUMBER.....W028971
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D.C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....LONDON AND VIRGINIA MINE
SYNONYM NAME.....ELDRIDGE MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....BUCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...DILLWYN, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....670 FT (204M)
UTM NORTHING...4158860 EASTING...723980 ZONE...+17
LATITUDE.....37-33-05N LONGITUDE.....078-27-52W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 1.1 KM (0.7 MI) NW OF DILLWYN.
LOCATION COMMENTS.....1.21 KM (0.75 MI) NE OF THE INTERSECTION OF U.S. HIGHWAY 15W/STATE HIGHWAY 20.
COMMODITIES PRESENT.....AU AG CU ZN PB PYR
ORE MATERIALS.....NATIVE GOLD AND SILVER, CHALCOPYRITE, CHALCOCITE, SPHALERITE, GALENA, PYRITE, TENNANTITE (?)
MAIN ORE MINERALS.....NATIVE GOLD, NATIVE SILVER
MINOR ORE MINERALS.....GALENA, CHALCOPYRITE, CHALCOCITE
MAJOR.....AU
POTEN.....AG ZN
OCCUR.....CU PB PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....MR. ELDRIDGE
YEAR OF DISCOVERY.....1840 (?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1853
OWNER (PRESENT/LAST).....ASHBY PANKEY
OPERATOR.....AMOS PANKEY
EXPLORATION AND DEVELOPMENT COMMENTS.....THE PROPERTY WAS FIRST KNOWN AS THE ELDRIDGE MINE AND WORKED FOR SEVERAL YEARS BY MR. ELDRIDGE BEFORE BEING SOLD TO THE LONDON AND VIRGINIA GOLD AND COPPER MINING CO., WHICH WAS FORMED IN LONDON AND INCORPORATED IN VIRGINIA IN 1853. AT FIRST MOST OF THE ORE WAS DERIVED FROM OPEN CUTS. LATER, UP TO FIVE SHAFTS WERE SUNK TO A DEPTH OF AT LEAST 45.7 M (150 FT) AND UNDERGROUND MINING WAS EXTENSIVELY CARRIED ON. OPERATIONS WERE BEING CONDUCTED AT THE SAME TIME AT THE ADJOINING BUCKINGHAM MINE AND THE TWO MINES WERE CONNECTED UNDERGROUND BY A CONTINUOUS DRIVE ALONG THE VEIN. THE MILL ERECTED BY MR. ELDRIDGE WAS OPERATED FOR 15 YEARS AND THE MINE WAS CLOSED DOWN IN 1855. BASED ON THESE DATES, THIS MINE WAS FIRST WORKED IN 1840 OR BEFORE. LATER, ANOTHER MILL WAS ERECTED A FEW HUNDRED YARDS SOUTHEAST OF THE VEIN. IT IS UNCERTAIN IF THIS MILL WAS OPERATED BY THE LONDON AND VIRGINIA GOLD AND COPPER MINING CO., BUT THAT IS WHAT IS IMPLIED, AND BASED ON THE WAY IT WAS WRITTEN THIS MINE MAY HAVE BEEN FIRST WORKED SOME TIME BEFORE 1840. THE TAILINGS AT THE MINE HAVE REPORTEDLY BEEN REWORKED AND $10,000 IN GOLD EXTRACTED FROM THEM. NO MORE PRODUCTION WAS REPORTED UNTIL 1939-40, WHEN THE MINE WAS REOPENED BY AMOS PANKEY. NO REPORT ON THE AMOUNT OF PRODUCTION DURING 1939-40 IS AVAILABLE. IN 1953 THE BELVILLE GOLD MINES LTD. (VIRGINIA MINING CORP.) DRILLED EXPLORATORY HOLES ON THE PROPERTY, UNDER CONTRACT WITH DEFENSE MINERALS EXPLORATION ADMINISTRATION. SINCE THEN THERE HAS BEEN SOME INTEREST IN THE MINE, BUT NO NEW COMMERCIAL PRODUCTION. FIRST EXPLORATION CORPORATION OF DENVER, COLORADO PUT DOWN 2 CORE HOLES AROUND 1982. THE DRILLING SUBSTANTIATED RESULTS FOUND BY DRILLING AT THE MINE IN THE 1950'S AND 1960'S. IN 1988 VIRGINIA GOLD MINES, LTD OF QUEBEC CITY, CANADA CONTRACTED NORTH AMERICAN EXPLORATION TO DO FUTHER GEOCHEMICA L SOIL AND GEOPHYSICAL SURVEYS AND ADDITIONAL DIAMOND DRILLING.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....DISSEMINATED, IRREGULAR
MAXIMUM WIDTH.....6.3 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 40 DEG E
DIP.....STEEPLY SE TO NEARLY VERTICAL
DEPOSIT DESCRIPTION COMMENTS.....METALLIFEROUS BED VARIES IN WIDTH FROM 1 M TO 6.3 M, BUT ONLY 1.2 M TO 1.5 M TOWARD THE SW; SHAFT PROVED THE VEIN TO A DEPTH OF 46 M; SCHIST DIPS STEEPLY TO SE. VEIN WIDENS OUT TO AS MUCH AS 15 M (50 FT) IN SOME PLACES. ITS CHARACTER VARIES WITH DEPTH. IN ITS UPPER 15 M (50 FT) IT CONSISTS OF SOFT, COARSE-GRAINED QUARTZ OF BROWNISH COLOR, MIXED WITH RED AND BROWN OXIDE OF IRON AND A LITTLE MICA. FROM 15 TO 30.5 M (50 TO 100 FT) IN DEPTH IT CARRIES VERY LIGHT COLORED PYRITES, AND FROM 30.5 M (100 FT) TO AND UNKNOWN DEPTH (AT LEAST 46 M) THE QUARTZ BECOMES WHITE AND IS CHARGED WITH A MIXTURE OF IRON PYRITES AND GALENA.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....45.7 UNITS...M

OVERALL LENGTH.....183 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....OPEN CUTS CARRIED TO DEPTH OF 6 M TO 12 M; LARGE OPEN CUT AND SEVERAL CAVED PITS REPORTED IN 1974. MINE WAS DEVELOPED AT FIRST BY OPEN CUTS UP TO 12 M (40 FT) DEEP AND LATER BY 3 TO 5 SHAFTS UP TO 46 M (150 FT) DEEP, THOUGH ONE SHAFT WAS REPORTEDLY 55 M (180 FT) DEEP.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZITE, SLATE, MICA SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, LIMONITE, PYRITE, BIOTITE, MUSCOVITE, SERICITE, CHLORITE, MAGNETITE, BARITE
ORE CONTROL/LOCUS.....DISSEMINATED IN QUARTZITE AND IN VEIN, PARTIALLY ASSOCIATED WITH SULFIDES.
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....ARVONIA SYNCLINE, NE-SW TREND
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....QUARTZOSE PARTS OF DEPOSIT CONTAIN BODIES OF PYRITE, WITH EARTHY MASSES OF CHALCOPY RITE.
NON-USGS WORK.....1853 DIREXPL LONDON AND VIRGINIA GOLD AND COPPER MINING CO.
REPORTS AVAILABLE.....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGI-CAL SURVEY BULLETIN 7, 271 P.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 19, 77 P.
REFERENCE....BROWN, W.R., 1969, GEOLOGY OF THE DILLWYN QUAD RANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 10, 77 P
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....SWEET, P.C., 1971, GOLD MINES AND PROSPECTS IN VIRGINIA: VIRGINIA MINERALS, V. 17, NO. 3, P. 25-33.
REFERENCE....CREDNER, H., 1869, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VII, P. 72.
REFERENCE....HAMMETT, A.B.J., 1966, THE HISTORY OF GOLD: KERRVILLE, TEXAS, BRASWELL PRINTING CO., 107 P.
REFERENCE....MANGAN, M., 1983, GOLD-SILVER MINERALIZATION AT THE LONDON-VIRGINIA MINE, BUCKINGHAM COUNTY, VIRGINIA: VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY M. S. THESIS, 65P.
SOURCE OF RESERVES AND RESOURCES INFORMATION.....BROWN (1969)
RESERVES AND RESOURCES COMMENTS.....THROUGH DRILLING BY BELVILLE GOLD MINES, LTD., AND INCLUDING THE BUCKING HAM MINE PROPERTY, IT WAS REPORTED THAT 723,000 TONS OF ORE CONTAINING 3.2 PERCENT ZINC, S0 PERCENT PYRITE, AND FRACTIONAL PERCENTAGES OF GOLD, SILVER, COPPER AND LEAD WERE BLOCKED OUT.

7. Margaret Mine

MRDS-REV RECORD NUMBER.....192
MRDS RECORD NUMBER.....W028972
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D.C.)
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID C.
SITE NAME.....MARGARET MINE
SYNONYM NAME.....TERRELL MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....BUCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...ARVONIA, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....250 FT (76.2 M)
UTM NORTHING...4175330 EASTING...738225 ZONE...+17
LATITUDE.....37-41-46N LONGITUDE.....078-17-53W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.0 KM (0.62 MI) S 13 DEG E OF NEW CANTON.
LOCATION COMMENTS.....ON THE NE SIDE OF BEAR GARDEN CREEK.
COMMODITIES PRESENT.....FE PYR CU ZN PB AU AG
ORE MATERIALS.....LIMONITE, PYRITE, CHALCOPYRITE, CHALCO CITE, BORNITE, SPHALERITE, GALENA, HEMATITE, NATIVE GOLD AND SILVER
MAIN ORE MINERALS.....PYRITE, CHALCOPYRITE, SPHALERITE
MINOR ORE MINERALS.....GALENA, BORNITE, GOETHITE, HEMATITE, NATIVE GOLD
COMMODITY INFO COMMENTS.....THE RICHEST ORE CONSISTED OF 80 TO 90% PYRITE (TABER, 1913)
MAJOR.....FE
POTEN.....PYR CU
OCCUR.....ZN PB AU AG
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....1770
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....VIRGINIA MINING CORP.
EXPLORATION AND DEVELOPMENT COMMENTS.....THIS AND THE OTHER 3 NEW CANTON MINES WERE ORIGINALLY WORKED FROM THE 1770'S TO AROUND 1840 FOR THEIR LIMONITE GOSSAN WHICH OUTCROPS ABOVE THE SULFIDES. THE MOST INTENSIVE MINING OCCURRED IN THE 1830'S, WHEN A CHARCOAL FURNACE, KNOWN AS THE BEAR GARDEN OR DEAN FURNACE, WAS BUILT ABOUT HALF A MILE SOUTH OF NEW CANTON. THE GOSSAN WAS SMELTED AT THIS FURNACE UNTIL IT WAS ABANDONED IN 1840. IN 1910 THE MINE WAS OPENED BY AN 80 TO 90 FT (24 TO 27 M) SHAFT IN SEARCH OF A PYRITE DEPOSIT. IN 1911 THE SHAFT WAS PUMPED OUT AND PREPARATIONS WERE BEING MADE TO DEEPEN IT BUT NO FURTHER INFORMATION IS AVAILABLE. IN 1956 R.F. BEERS, INC., DIAMOND DRILLED THE MINE AREA UNDER CONTRACT WITH THE DEFENSE MINERALS EXPLORATION ADMINISTRA TION.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE, GOSSAN
DEPOSIT FORM.....TABULAR, LENTICULAR
DEPTH TO TOP.....9.1 UNITS...M
MAXIMUM THICKNESS.....1.5 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 30 DEG E
DIP.....NEARLY VERTICAL
DEPOSIT DESCRIPTION COMMENTS.....PYRITE OCCURS IN THE SHAFT AT ABOUT 9.1 M DEPTH, WHERE THE WATER LEVEL IS ENCOUN TERED. IT IS SOMEWHAT CUPRIFEROUS AND IS THE CHIEF ORE MINERAL. AT THE 16.8 M DEPTH, CHALCOPYRITE AND BORNITE ACCOMPANY THE PYRITE. THE SULFIDES ARE NOT PLENTIFUL, AND APPEAR CONFINED TO PLANAR AND LENTICULAR ZONES WHICH PARALLEL THE SCHISTOSITY, AND OCCUR IN A ZONE 1.2-1.5 M THICK, AS MEASURED NORMAL TO THE SCHISTOSITY. PYRITE IS THE ONLY ORE MINERAL AT THE BOTTOM OF THE SHAFT AT DEPTH 27.4 M. THE STRIKE REFERS TO THE FOLIATION OF THE SCHIST, WHICH HAS A NEARLY VERTICAL NORTHWESTWARD DIP (TABER, 1913).
DEPTH BELOW SURFACE.....27.4 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....A SINGLE VERTICAL SHAFT IS THE ONLY WORKING REPORTED. THE SHAFT WAS FLOODED, WITH A SMALL COVERED DUMP WHEN THE SITE WAS VISITED IN 1974.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....HORNBLENDE-SCHIST, QUARTZITE, QUARTZ-SERICITE-CHLORITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, HORNBLENDE, GAHNITE, CHLORITE, SERICITE, SILLIMANITE, GARNET, BIOTITE, PLA GIOCLASE.
ORE CONTROL/LOCUS.....IN TABULAR AND LENS-SHAPED ZONES IN SCHIST, ALSO DISSEMINATED IN THE SCHIST
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....ARVONIA SYNCLINE, NE-SW TREND
FORMATION AGE.....EPAL
FORMATION AGE.....PAL
FORMATION AGE.....ORD
FORMATION NAME.....CHOPAWAMSIC FORMATION
FORMATION NAME.....HATCHER COMPLEX
FORMATION NAME.....ARVONIA FORMATION
GEOLOGY COMMENTS.....DARK BLUISH-GRAY SCHIST WITH PHENOCRYSTS OF GARNET AND BIOTITE OCCUR 30.5 M W OF THE SHAFT WHICH WAS SUNK THROUGH A LIMONITE CAPPING 9.1 M THICK. THE SCHISTS ARE OCCASIONALLY CUT BY SMALL LENTICULAR VEINS OF QUARTZ AND FELDSPAR UP TO 15 CM IN WIDTH. THE GARNETS ARE PINK AND HAVE A MAXIMUM SIZE OF 1.5 MM (TABER, 1913).
GENERAL COMMENTS.....THIS MINE IS ONE OF A GROUP OF 4 MINES AND PROSPECTS THAT ARE COLLECTIVELY NAMED THE NEW CANTON MINES; JOHNSON MINE, HUDGINS PROSPECT, AND MCKENNA PROSPECT. ALL 4 LIE ON THE SAME NE-SW STRIKE.
NON-USGS WORK.....1910 DIREXPL 30 M PROSPECT SHAFT SUNK IN SEARCH OF A PROFITABLE PYRITE DEPOSIT. IN 1911, THE SHAFT WAS PUMPED OUT IN PREPARATION FOR DEEPENING THE SHAFT (TABER, 1913). THERE IS NO FURTHER MENTION OF SHAFT WORKINGS.
NON-USGS WORK.....1956 DIREXPL R.F. BEERS, INC., DIAMOND DRILLED UNDER CONTRACT WITH DEFENSE MINERALS EXPLORATION ADMINISTRATION.
NON-USGS WORK.....1974 RECON VA. DIV. OF MINERAL RE SOURCES: INSPECTED SITE
REFERENCE....POOLE, J.L., 1974, NOTES ON SOME ABANDONED COPPER, LEAD, AND ZINC MINES IN THE PIEDMONT OF VIRGINIA: VIRGINIA MINERALS V. 20. NO. 2 PP. 9-16.
REFERENCE....TABER, S., GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....BROWN, W.R., 1969, GEOLOGY OF THE DILLWYN QUAD RANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 10, 77 P.
REFERENCE....BARNES, R.C., 1963, GEOLOGICAL AND GEOPHYSICAL INVESTIGATIONS OF SULFIDE DEPOSITS NEAR NEW CANTON, VIRGINIA: UNIVERSITY OF VIRGINIA UNPUBLISHED M.S. THESIS.
SOURCE OF PRODUCTION INFORMATION.....BARNES (1963)

8. McKenna Mine

MRDS-REV RECORD NUMBER.....191
MRDS RECORD NUMBER.....W028973
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D.C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....MCKENNA MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....BUCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...ARVONIA, VA SECOND QUAD SCALE 1:24000
ELEVATION.....240 FT (73.1 M)
UTM NORTHING...4175290 EASTING...738180 ZONE...+17

LATITUDE.....37-41-45N LONGITUDE.....078-17-55W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....ABOUT 1.0 KM (0.62 MI) S 10 DEG E OF NEW CANTON.
LOCATION COMMENTS.....ON SW SIDE OF BEAR GARDEN CREEK.
COMMODITIES PRESENT.....FE CU PYR ZN PB AU AG
ORE MATERIALS.....LIMONITE, CHALCOPYRITE, CHALCOCITE, BORNITE, PYRITE, PYRRHOTITE, SPHALERITE, GALENA, NATIVE GOLD AND SILVER
MAIN ORE MINERALS.....CHALCOPYRITE, SPHALERITE, PYRITE
MINOR ORE MINERALS.....GALENA, PYRRHOTITE, NATIVE GOLD, CHALCOCITE, GOETHITE
MAJOR.....FE
MINOR.....ZN CU PB
POTEN.....CU PYR
OCCUR.....ZN PB AU AG
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....AROUND 1770
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1906
OWNER (PRESENT/LAST).....VIRGINIA MINING CORP.
OPERATOR.....VIRGINIA COPPER CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THIS PROSPECT AND THE OTHER 3 NEW CANTON MINES AND PROSPECTS WERE ORIGINALLY LIMONITE GOSSAN SURFACE MINES WORKED FROM THE 1770'S TO AROUND 1840. THE MOST INTENSIVE MINING OCCURRED IN THE 1830'S, WHEN A CHARCOAL FURNACE, KNOWN AS THE BEAR GARDEN OR DEAN FURNACE, WAS BUILT. THE GOSSAN WAS SMELTED AT THIS FURNACE UNTIL IT WAS ABANDONED IN 1840. IN 1895, J.P. MCKENNA PROSPECTED POR COPPER AND IN 1906 THE VIRGINIA COPPER CO. BEGAN TO DEVELOP THE PROPERTY. A 16 M (53 FT) SHAFT WAS SUNK AND TWO SHORT DRIFTS OPENED FROM IT, BUT THE SHAFT WAS APPARENTLY UNPRODUCTIVE AND WORK CEASED IN 1907. IN 1956, R.F. BEERS, INC., DIAMOND DRILLED THE PROPERTY UNDER CONTRACT WITH THE DEFENSE MINERALS EXPLORATION ADMINISTRATION.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE, GOSSAN
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....SMALL
STRIKE.....N 20 DEG E
DIP.....80 DEG NW
DEPOSIT DESCRIPTION COMMENTS.....A BORNITE MASS WAS ENCOUNTERED 10.6 M (35 FT) FROM THE SURFACE, AND MEASURED 2.4 M WIDE BY 2 M THICK (TABER, 1913); DIP IS NEARLY VERTICAL.
DEPTH BELOW SURFACE.....16.1 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....2 SHAFTS WITH 2 SHORT DRIVES WERE PROSPECTED (TABER, 1913). BOTH SHAFT OPENINGS WERE SEEN IN 1974.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....GARNET-MUSCOVITE PHYLLITE, CHLORITE-ACTINOLITE SCHIST
PERTINENT MINERALS (NOT ORE).....CHLORITE, HORNEBLENDE, QUARTZ, BIOTITE, GARNET, MAGNETITE, PLAGIOCLASE, GAHNITE.
ORE CONTROL/LOCUS.....IN LENTICULAR AND PLANAR ZONES AND ALSO DISSEMINATED IN THE SCHIST.
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....ARVONIA SYNCLINE, NE-SW TREND
FORMATION AGE.....EPAL
FORMATION AGE.....ORD
FORMATION AGE.....PAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
FORMATION NAME.....ARVONIA FORMATION
FORMATION NAME.....HATCHER COMPLEX
GEOLOGY COMMENTS.....PYRITE IS FREQUENTLY IN CONTACT WITH MAGNETITE AND OFTEN OCCURS IN NARROW PLANES OR LENSES PARALLEL TO THE SCHISTOSITY. (TABER, 1913)
GENERAL COMMENTS.....THIS IS ONE OF A GROUP OF 4 MINES AND PROSPECTS WHICH ARE COLLECTIVELY CALLED THE NEW CANTON MINES; JOHNSON MINE, MARGARET PROSPECT, AND HUDGINS PROSPECT. ALL LIE ON STRIKE WITH EACH OTHER.
NON-USGS WORK.....1895 DIREXPL J.P. MCKENNA: BEGAN EXPLORATION.
NON-USGS WORK.....1906 DIREXPL VIRGINIA COPPER CO.: SUNK SHAFT, APPARENTLY UNPRODUCTIVE, AND WORK STOPPED IN 1907.
NON-USGS WORK.....1956 DIREXPL R.F. BEERS, INC.: GEOPHYSICAL SURVEY AND DIAMOND DRILLING CONDUCTED.
REFERENCE....BARNES, R.C., 1962, A GEOPHYSICAL INVESTIGATION OF SULFIDE DEPOSITS NEAR NEW CANTON, VIRGINIA (ABS.): VIRGINIA JOURNAL OF SCIENCE, V. 13, NO. 4, P. 277.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....BROWN, W.R., 1969, GEOLOGY OF THE DILLWYN QUADRANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 10, 77 P.
REFERENCE....BARNES, R.C., 1963, GEOLOGICAL AND GEOPHYSICAL INVESTIGATION OF SULFIDE DEPOSITS NEAR NEW CANTON, VIRGINIA: UNIVERSITY OF VIRGINIA UNPUBLISHED M.S. THESIS.
REFERENCE....POOLE, J.L., 1974, NOTES ON SOME ABANDONED COPPER, LEAD, AND ZINC MINES IN THE PIEDMONT OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES VIRGINIA MINERALS, VOL. 20 NO. 2, P. 9-14.

9. Morrow Mine

MRDS-REV RECORD NUMBER.....190
MRDS RECORD NUMBER.....W028974
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1, 3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU (D.C. LEVAN), HARVEY R.
UPDATED.....87 07
UPDATER.....SWEET, PALMER C./TRIMBLE, DAVID, C.
SITE NAME.....MORROW MINE
SYNONYM NAME.....BOOKER MINE, GARNETT MINE, MOSELY MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....BUCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...WILLIS MOUNTAIN, VA SECOND QUAD SCALE 1:24000
ELEVATION.....565 FT (172 M)
UTM NORTHING...4152590 EASTING...721570 ZONE...+17
LATITUDE.....37-29-44N LONGITUDE.....078-29-37W

ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 3.5 KM (2.2 MI) NW OF WILLIS MTN.
LOCATION COMMENTS.....0.5 KM (0.3 MI) OFF W SIDE OF STATE ROAD 774 ABOUT 1.37 KM (0.85 MI) BY ROAD S OF ITS INTERSECTION WITH U.S. HIGHWAY 15.

COMMODITIES PRESENT.....AU CU AG PYR TE
ORE MATERIALS.....NATIVE GOLD, CHALCOPYRITE, NATIVE SILVER, PYRITE, PYRRHOTITE, TELLURIUM
GENERAL ANALYTICAL DATA.....IT WAS REPORTED THAT THE ORE WAS TREATED IN A HOWLAND MILL AND YIELDED $13.00 PER TON.
MAIN ORE MINERALS.....NATIVE GOLD
MINOR ORE MINERALS.....CHALCOPYRITE
MAJOR.....AU
OCCUR.....CU AG PYR TE
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1835
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1835
OPERATOR.....SANTA FE MINING
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WAS ALREADY IN THE PROCESS OF DEVELOPMENT IN 1835. IN ITS EARLY HISTORY IT WAS FIRST CALLED THE BOOKER MINE. LATER THE MINE WAS WORKED AS TWO SEPARATE MINES, THE GARNETT AND THE MOSELEY, BY THE GARNETT MINING CO. AND W.M. MOSELEY AND CO. RESPECTIVELY. IN 1852 THEY WERE CONSOLIDATED UNDER ONE MANAGEMENT AND IN CORPORATED. FOR SEVERAL YEARS AFTER THIS THE PROPERTY WAS CONTROLLED BY AN ENGLISH COMPANY. IN 1880 THE MINE WAS WORKED BY THE MORROW MINING CO. AND THEREAFTER WAS REFERRED TO AS THE MORROW MINE. IN 1938 THE MINE WAS OPERATED FOR MOST OF THE YEAR AND THE BULLION WAS SHIPPED TO THE PHILADELPHIA MINT AND CONCENTRATES WERE SHIPPED TO CARTERET, N.J. WHILE THE GARNETT AND MOSELEY MINES WERE BEING WORKED SEPARATELY THERE WERE TWO SMALL MILLS IN OPERATION. IN 1854, SOON AFTER THE ENGLISH COMPANY HAD BOUGHT THE MINE, A NEW MILL WITH 72 STAMPS WAS IN OPERATION, REPLACING THE 24 STAMPS THAT HAD PREVI OUSLYBEEN EMPLOYED, AND THE AMALGAMATION WAS PERFORMED ON TWO SETS OF SHAKING TABLES. IN 1865 CREDNER FOUND TWO MILLS ON THE PROPERTY, ONE CONTAINING 4 SHAKING TABLES, NEARLY NEW, AND A VERY LARGE BALL-CRUSHER WHICH HAD NOT BEEN USED. THE OTHER WITH 12 BATTERIES OF 3 STAMPS EACH, 72 SHAKING TABLES, ARRANGED IN 2 SYSTEMS, AND CHILIAN MILLS. IN LATER YEARS, A HOWLAND MILL WAS USED TO PULVERIZE THE ORE AND THE SULPHIDES WERE CONCENTRATED ON 2 VANNERS. AN ATTEMPT WAS MADE IN 1893-4 TO TREAT THE SULPHIDES BY THE MEARS CHLORINATION PROCESS, BUT IT IS SAID TO HAVE FAILED BECAUSE OF MECHANICAL DEFECTS IN THE PROCESS USED, THOUGH A SATISFACTORY EXTRACTION OF THE GOLD WAS OBTAINED. PLACER OPERATIONS WERE ALSO CONDUCTED NEAR THE VEINS DURING ITS EARLY HISTORY. A NUGGET OF NEARLY 9 POUNDS, BESIDES MANY MASSES OF A FEW OUNCES EACH WERE MIXED WITH GRAINS OF GOLD IN THE BED OF A RIVULET AT THE MINE. CALLAN MINING CORPORATION PUT IN A 1000 FOOT TRENCH IN THE EARLY 1980'S. HUNT, WARE AND PROFFIT OF LYNCHBURG HAD SOME INTEREST LATER AND SO DID FREEPORT MACMORAND. THE PROPERTY WAS SOLD BY OWENS-ILLINOIS TO WESTVACO IN LATE 1986; HOWEVER OWENS-ILLINOIS RETAINED 1/2 INTEREST IN THE MINERAL RIGHTS.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....VEIN ESTIMATED TO BE OVER 9.1 M WIDE AND OVER 183 M LONG. MINE CONTAINED LENTICULAR VEINS OR CONCRETIONS OF WHITE QUARTZ, CARRYING IRON OXIDE, PYRITE, AND GOLD. IN SOME PLACES THESE GOLD-BEARING BEDS WERE CUT OFF BY DOMES AND RIDGES OF DIORITE, WHICH WAS TOTALLY BARREN OF GOLD. WHEN THE MINE WORKINGS STRUCK THIS DIORITE THEY WERE STOPPED.
DESCRIPTION OF WORKINGS.....B
LENGTH OF WORKINGS.....106.7 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....ORIGINALLY MINE WAS OPERATED AS AN OPEN CUT TO A DEPTH OF 9 M (30 FT) AND FOR A DISTANCE OF OVER 366 M (1200 FT). BY 1853, 5 SHAFTS HAD BEEN SUNK TO AN AVERAGE DEPTH OF 30.5 M (100 FT), AND CONNECTED BY DRIVES 107 M (350 FT) IN LENGTH. THE VEIN HAD BEEN PROVED FOR OVER 0.8 KM (0.5 MI) BY 4 OR 5 SHAFTS 9 TO 15 M (30 TO 50 FT) DEEP, AND BY AS MANY AS 50 SURFACE CUTS. LATER DEVELOPMENT WORK EXTENDED THE UNDERGROUND WORKINGS, AND A GOOD DEAL OF STOPING WAS DONE, BUT NONE OF THE SHAFTS SEEM TO HAVE BEEN CARRIED BELOW 35 M (115 FT)? IN 1974, 3 CAVED SHAFTS, 35 CAVED PITS, AN OPEN CUT, TRENCH AND DUMPS WERE REPORTED.

HOST ROCK AGE.....ORD
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, PYRITE, PYRRHOTITE, TETRADYMITE, GARNET, CALCIUM-IRON CARBONATE, MAGNETITE, BIOTITE.
ORE CONTROL/LOCUS.....IN QUARTZ VEINS, UNALTERED OR WITH SULFIDES.
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....ARVONIA SYNCLINE, NE-SW TREND
FORMATION AGE.....ORD
FORMATION NAME.....ARVONIA FORMATION
GEOLOGY COMMENTS.....OPALESCENT QUARTZ EYES IN SCHIST, WHICH SHOWS BANDING, USUALLY GARNETIFEROUS; GARNETS ARE GRANULAR AGGREGATES
NON-USGS WORK.....1852 DIREXPL W.M. MOSELY AND CO. AND GARNETT MINING CO.:
NON-USGS WORK.....1880 DIREXPL MORROW MINING CO:
NON-USGS WORK.....1974 RECON VA. DIV. OF MINERAL RESOURCES; SITE INSPECTED
REPORTS AVAILABLE.....THE VIRGINIAS, 1880, P. 31; 1882 P. 175; U.S. BUREAU OF MINES MINERALS YEARBOOK, 1939, P. 321
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES *RIVER BASIN, VIRGINIA;* VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA; VA. DIV. OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., E. P. BELL CO., 618 P.
REFERENCE....CREDNER, HERMANN, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., 1869, VOL. VII, P. 73.
REFERENCE....HAMMETT{ A.B.J., 1966, THE HISTORY OF GOLD: KERRVILLE, TEXAS, BRASWELL PRINTING CO., P. 43-53.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
AU	ACC	0.09792	TOZ	1850	PURE GOLD
AU	ACC	0.10849	TOZ	1851	PURE GOLD
AU	ACC	0.05136	TOZ	1852	PURE GOLD

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
AU	ACC	0.25777	TROY OZ	1850-1852	PURE AU

SOURCE OF PRODUCTION INFORMATION.....TABER, S., (1913) P. 200
PRODUCTION COMMENTS.....OVER $60,000 REPORTEDLY RECOVERED FROM PLACER WASHINGS NEAR VEINS, ACCORDING TO TABER (1913).

10. North River Prospect

MRDS-REV RECORD NUMBER.....1706
MRDS RECORD NUMBER.....VA01706
RECORD TYPE.....X1M
REPORT DATE.....87 11
INFORMATION SOURCE.....21
REPORTER.....SWEET, PALMER C.
REPORTER AFFILIATION.....VDMR
SITE NAME.....NORTH RIVER PROSPECT
MINING DISTRICT/AREA.....GOLD PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....BUCKINGHAM
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT PROVINCE
DRAINAGE AREA.....02080203 MID ATLANTIC
LAND STATUS.....01
QUADRANGLE NAME..... BUCKINGHAM (1981) QUADRANGLE SCALE 1:24000
ELEVATION.....400 FT.
UTM NORTHING...4160100 EASTING...714500 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.3 MILES NORTHWEST OF BUCKINGHAM
COMMODITIES PRESENT.....AG CU PY
ORE MATERIALS.....SILVER, CHALCOPYRITE, PYRITE
GENERAL ANALYTICAL DATA.....ASSAY BY BARRINGER RESOURCES, WHEATRIDGE, CO (9-27-83) AG .05 OZ/T
COMMODITY INFO COMMENTS.....CHALCOPYRITE PRESENT IN OXIDIZED PYRITE.
OCCUR.....AG CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
DEPOSIT TYPE.....VEIN
STRIKE.....N 20 DEGREES W
DEPOSIT DESCRIPTION COMMENTS.....QUARTZ VEIN IS MILKY
DESCRIPTION OF WORKINGS.....S
DEPTH BELOW SURFACE.....10 UNITS...FT
LENGTH OF WORKINGS.....20 UNITS...FT
OVERALL WIDTH.....12 UNITS...FT
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....CONTACT - METAGABBRO AND CHLORITE PHYLLITE AND QUARTZITE
SIGNIFICANT LOCAL STRUCTURES.....NW TRENDING DIKES AND VEINS IN AREA
PROCESS OF CONCENTRATION/ENRICHMENT.....QUARTZ VEIN
REFERENCE....ERN, ERNEST H. 1968, GEOLOGY OF THE BUCKINGHAM QUADRANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 15, 45 P.
REFERENCE....W.F. GIANNINI, 1983, PERSONAL COMMUNICATION
REFERENCE....SWEET, PALMER C., MANUSCRIPT, PRECIOUS METAL MINES, PROSPECTS AND OCCURRENCES IN VIRGINIA-AN UPDATE.

CAMPBELL COUNTY

1. Bishop Mine

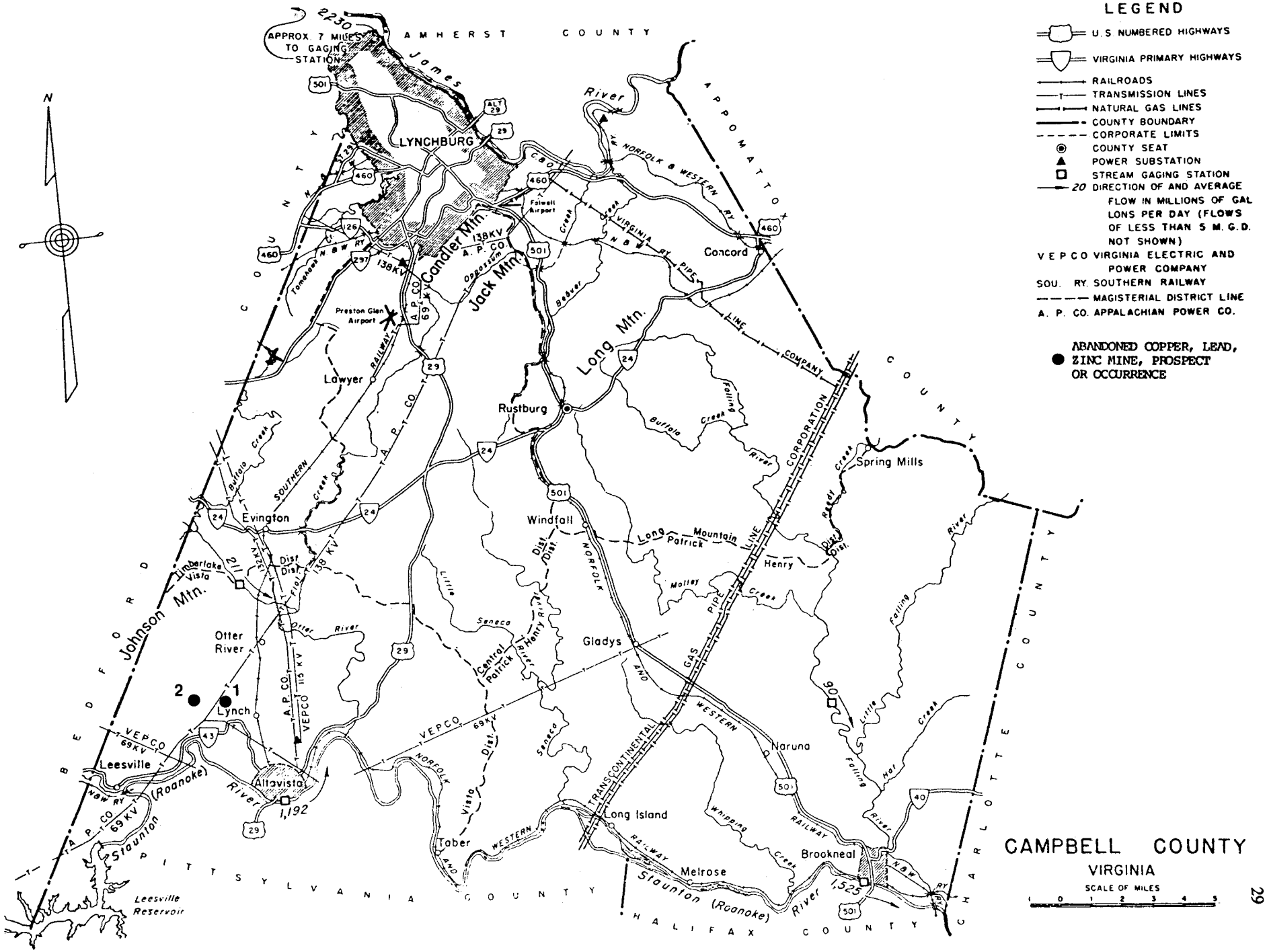
MRDS-REV RECORD NUMBER.....226
MRDS RECORD NUMBER.....W031211
RECORD TYPE.....X1M
REPORT DATE.....81 04
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....BISHOP MINE
MINING DISTRICT/AREA.....JAMES RIVER - ROANOKE RIVER MANGANESE DISTRICT

COUNTRY.....US STATE.....VA COUNTY.....CAMPBELL
COUNTRY NAME...UNITED STATES STATE NAME...

PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... LYNCH STATION, VA. (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....229 M
UTM NORTHING...4112680 EASTING...649265 ZONE...+17

LATITUDE.....37-09-02N *LONGITUDE.....079-19-09W*

POSITION FROM NEAREST LOCALITY.....1.6 KM (1.0 MI) WEST OF LYNCH STATION.
LOCATION COMMENTS.....0.7 KM (0.45 MI) NORTH ON STATE ROAD 627 FROM ITS INTERSECTION WITH STATE ROAD 43, TURN WEST ON DIRT ROAD FOR APPROXIMATELY 0.6 KM (0.4 MI), MINE WORKINGS EXTEND SOUTHWESTWARD ALONG THE RIDGE TOP AND ACROSS THE GULLY TO THE EAST. WORKINGS EXTEND SOUTHWEST ACROSS A TRIBUTARY TO BISHOP CREEK.
COMMODITIES PRESENT.....MN CU PYR FE AU
ORE MATERIALS.....PSILOMELANE, CRYPTOMELANE?, MALACHITE, CHALCOPYRITE, PYRITE, LIMONITE, NATIVE GOLD
GENERAL ANALYTICAL DATA.....COPPER ORE IS REPORTED TO HAVE CONTAINED 2 PERCENT COPPER.
COMMODITY INFO COMMENTS.....MINE IS ALSO ONLY SOURCE *IN UNITED* STATES POR CRYSTALLINE TURQUOISE.
MAJOR.....MN
MINOR.....CU
OCCUR.....PYR FE AU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....MID-1880'S (?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....MID-1880'S (?)
OWNER (PRESENT/LAST).....EARL SHAW
OPERATOR.....OTTER RIVER MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE BISHOP MINE WAS ONE OF THE FIRST MANGANESE MINES IN THAT PARTOF THE DISTRICT. IT WAS ACTIVE DURING THE 1880'S, PRODUCING MANGANESE AND SOME COPPER. RIVERS MINING AND MANUFACTURING CORP. PROSPECTED FOR COPPER IN 1909-1910. FROM 1938-1943, MORE THAN A DOZEN TRENCHES AND AN 11M-(35 FT-) SHAFT WERE OPENED AND THE PROPERTY WAS AGAIN PROSPECTED FOR MANGANESE BY THE OTTER RIVER MINING CO.
DEPOSIT TYPE.....WEATHERING RESIDUAL, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
MAXIMUM LENGTH.....244 UNITS...M
MAXIMUM THICKNESS.....1 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....APPROXIMATELY N 30 E
DEPOSIT DESCRIPTION COMMENTS.....2 MANGANIFEROUS ZONES PROSPECTED. IN THE EASTERN ZONE WAD WAS FOUND FOR A DISTANCE OF 244 M (800 FT), AND SEAMS OF SOFT MANGANESE OXIDES (0.3 TO 1 M THICK, ENCLOSED IN QUARTZITE) WERE FOUND OVER A LENGTH OF ABOUT 91.5 M (300 FT). THE WESTERN ZONE IS ON THE SAME QUARTZITE RIDGE AS THE WESTERN MAYHEW LEAD TO THE NORTH. MANGANESE OXIDES ALSO OCCUR HERE AS FRACTURE FILLINGS AND AS BRECCIA MATRIX IN QUARTZITE AND VEIN QUARTZ.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....11 *UNITS...M*
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS CONSIST OF AT LEAST 17 TRENCHES, 2 OPEN CUTS, 15 PROSPECT PITS, 1 SHAFT, AND 3 TUNNELS. THE SHAFT WAS 11 M (35 FT) DEEP AND WAS STILL OPEN IN 1981. IN 1981 THE TRENCHES VARIED IN LENGTH UP TO ABOUT 73 M (240 FT), AND WERE GENERALLY 1 M (3 FT) WIDE, AND UP TO 1 M (3 FT) DEEP. TWO OF THE TUNNEL ENTRANCES WERE CLOSED AND THE OTHER TUNNEL STILL HAD A SMALL OPENING AT THE TOP OF THE SLUMP PILE AT THE ENTRANCE TO IT. THIS LAST TUNNEL APPEARED TO STILL BE OPEN FOR AN UNKNOWN DISTANCE BACK INTO IT.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZITE, MUSCOVITE SCHIST, MARBLE?
PERTINENT MINERALS (NOT ORE).....QUARTZ, TURQUOISE, ILMENITE, HEMATITE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, JAMES RIVER SYNCLINORIUM
FORMATION AGE.....EPAL
FORMATION NAME.....MOUNT ATHOS FORMATION
REFERENCE....ESPENSHADE, G.H., 1954, GEOLOGY AND MINERAL RESOURCES OF THE JAMES RIVER-ROANOKE RIVER MANGANESE DISTRICT, VIRGINIA, U.S. GEOLOGICAL SURVEY BULLETIN 1008, 155 P.
REFERENCE....WATSON, T.L., 1907, MANGANESE OXIDES IN MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA,


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
V E P C O VIRGINIA ELECTRIC AND POWER COMPANY
SOU. RY. SOUTHERN RAILWAY
MAGISTERIAL DISTRICT LINE
A. P. CO. APPALACHIAN POWER CO.
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
N
APPROX. 7 MILES TO GAGING STATION
2230
AMHERST COUNTY
APPOMATTOX COUNTY
BEDFORD COUNTY
PITTSYLVANIA COUNTY
HALIFAX COUNTY
CHARLOTTE COUNTY
LYNCHBURG
Candler Mtn.
Jack Mtn.
Long Mtn.
Johnson Mtn.
Concord
Rustburg
Lawyer
Evington
Windfall
Spring Mills
Henry
Gladys
Otter River
Lynch
Leesville
Altavista
Taber
Long Island
Melrose
Brookneal
Naruna
Preston Glen Airport
Falwell Airport
Timberlake Vista
Leesville Reservoir
James River
Staunton (Roanoke) River
Long Mountain
Patrick
Central Patrick
Henry
Buffalo Creek
Falling River
Reedy Creek
Little Falling River
Hat Creek
Whipping Creek
Molley Creek
Seneca
Vista Dist.
Dist. Dist.
Flat Dist.
Oppossum
Tomahawk
Beaver
Little Seneca
Otter River
Falling River
NORFOLK & WESTERN RY.
VIRGINIA RY. PIPE LINE COMPANY
TRANSCONTINENTAL GAS PIPE LINE CORPORATION
NORFOLK AND WESTERN RAILWAY
SOUTHERN RAILWAY
A. P. CO.
VEPCO
138KV
69KV
115 KV
132KV
211
1,192
1,525
1
2
90
CAMPBELL COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5

JAMESTOWN EXPOSITION COMMISSION, PP. 235-259.
REFERENCE....SWEET, P.C., 1974, MINERAL-AND FOSSIL-COLLECTING LOCALITIES IN VIRGINIA: VIRGINIA MINERALS, VOL. 20, NO. 1, PP 1-8.
REFERENCE....POOLE, J.L., 1974, NOTES ON SOME ABANDONED COPPER, LEAD, AND ZINC MINES IN THE PIEDMONT OF VIRGINIA: VIRGINIA MINERALS, VOL. 20, NO. 2, PP. 9-16.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE MN	ACC	0.01179	MT	1885	HIGH GRADE
ORE MN	EST	0.63500	MT	1893	

SOURCE OF PRODUCTION INFORMATION.....ESPENSHADE (1954)
PRODUCTION COMMENTS.....ORIGINAL DATA IN SHORT TONS. MANGANESE ORE PRODUCED IN 1885 WAS SHIPPED TO ENGLAND.

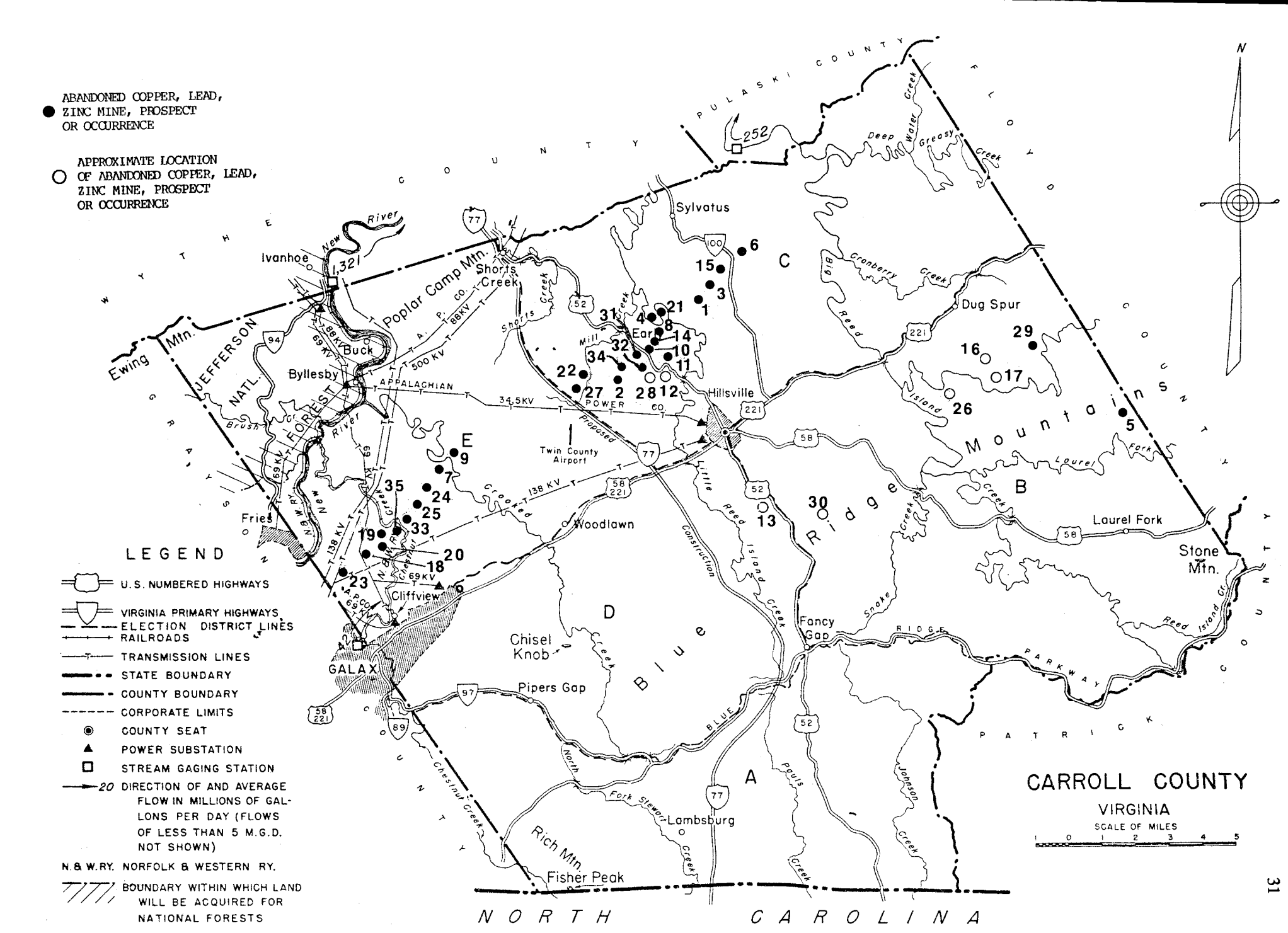
2. Cundiff Barite Prospect

MRDS-REV RECORD NUMBER.....213
MRDS RECORD NUMBER.....W031279
RECORD TYPE.....X1B
REPORT DATE.....87 06
INFORMATION SOURCE.....13
FILE LINK ID.....213
REPORTER.....TRIMBLE, DAVID C (SWEET, PALMER C)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 06
UPDATER.....GOOD, RICHARD S
SITE NAME.....CUNDIFF BARITE PROSPECT
MINING DISTRICT/AREA.....JAMES RIVER-ROANOKE RIVER MN, FE AND BA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....CAMPBELL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03010101
LAND STATUS.....01
QUADRANGLE NAME..... LYNCH STATION, VA. (1984) QUADRANGLE SCALE 1:24000
ELEVATION.....700 FT
UTM NORTHING...4112360 EASTING...647450 ZONE...+17
LATITUDE.....37-08-52N LONGITUDE.....079-20-23W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....4.17 MILES NW OF ALTAVISTA FROM ROUTE 29 ; 2.15 MILES WEST OF LYNCH STATION FROM ROUTE 712 AND ROUTE 713 INTERSECTION.
LOCATION COMMENTS.....THE SHAFT IS 740 FT S SW OF A FARM GATE. GATE IS 1310 FT ALONG DIRT ROAD SE OF ROUTE 628. ENTRANCE TO FARM ROAD IS 1.3 MILES EAST ON ROUTE 628 FROM INTERSECTION WITH ROUTE 682. ENTRANCE TO FARM ROAD SOMETIMES PADLOCKED.
COMMODITIES PRESENT.....BA PYR CU FE
ORE MATERIALS.....BARITE
NON-PRODUCER MAIN.....BA
NON-PRODUCER MINOR.....PYR CU FE
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE 1938
YEAR OF FIRST PRODUCTION.....NONE
OWNER (PRESENT/LAST).....ODELL TIPPIT
DEPOSIT TYPE.....STRATIFORM METAMORPHIC
DEPOSIT SIZE.....SMALL
STRIKE.....N 35 DEG E
DIP.....70 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....ONLY BLACK RESIDUAL SOIL EXPOSED IN PIT NOW FILLED WITH WATER. FLOAT NEAR ADIT HAD CLORITIC LAYERS WITH BLACK (COPPER?) MINERALS.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....40 UNITS...FEET
OVERALL WIDTH.....12 UNITS...FEET
DESCRIPTION OF WORKINGS COMMENTS.....PROSPECT IS IN SMALL WOODED CLUMP OF TREES (VIRGINIA PINE, SYCAMORE, DOGWOOD) IN MIDDLE OF CULTIVATED FIELD. WOODED ARE 25-30 FT IN DIAMETER; PIT IS 12 FT WIDE, 8 FT DEEP AND FILLED WITH WATER AND LEAVES. VERY LIMITED DUMP MATERIAL COVERED WITH PINE NEEDLES.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....GREENISH GRAY, SLATY, TUFFACEOUS (?) PHYLLITE
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....TOURMALINE, CHALCOPYRITE, EPIDOTE, MALACHITE, LIMONITE
ORE CONTROL/LOCUS.....CHEMICAL PRECIPITATION OF METAL RICH BRINES IN RIFT RELATED BASIN
TECTONIC SETTING.....STACKED PIEDMONT ALLOCTHONS, RIFT RELATED SUBMARINE DEPRESSION
SIGNIFICANT REGIONAL STRUCTURES.....SMITH RIVER ALLOCTHON
SIGNIFICANT ALTERATION.....MT ATHOS MARBLE TO RESIDUAL CLAY
PROCESS OF CONCENTRATION/ENRICHMENT.....REWORKED BY METEORITIC WATER AT LEAST ONCE
FORMATION AGE.....LATE PREC
FORMATION AGE.....EPAL
FORMATION NAME.....MT ATHOS MEMBER, ALLIGATOR BACK FORMATION, LYNCHBURG GROUP
FORMATION NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....GREENSTONE NOTED IN ROADBED 0.5 MILES TO NORTH AND GREENISH GRAY SCHISTOSE VOLCANICLASTIC (?) METASILTSTONE N 75 E/45 SE. QUARTZ AND GREENSTONE FLOAT 300 FT NW OF SHAFT.
GENERAL COMMENTS.....GANGUE MINERALS (QUARTZ, MICAZ, HORNBLENDE, TOURMALINE, CHALCOPYRITE, PYRITE, EPIDOTE, MALACHITE AND LIMONITE) ARE THOUGHT TO CAUSE TOO MUCH DIFFICULTY IN SEPARATION OF BARITE FOR ECONOMIC DEVELOPMENT.
NON-USGS WORK.....DIREXPL ? - DUG SHAFT
REFERENCE....EDMUNDSON, R.S., 1938, BARITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 53, 85 P.

CARROLL COUNTY

1. Ann Eliza Mine

MRDS-REV RECORD NUMBER.....318
MRDS RECORD NUMBER.....W030840
RECORD TYPE.....X1M
REPORT DATE.....87 04
INFORMATION SOURCE.....123
FILE LINK ID.....318
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 04
UPDATER.....MYERS, LESLEY L.
SITE NAME.....ANN ELIZA MINE
MINING DISTRICT/AREA.....LITTLE VINE SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... HILLSVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2570 FT (784 M)
UTM NORTHING...4075730 EASTING...522690 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....4.2 KM (13,900 FT) S 87 DEG W OF LIBERTY HILL
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN FOR COLLAPSED PORTAL; CROSSCUT TRENCHES EXTEND 900 FT S 60 DEG W AND SEVERAL SPOIL PILES OCCUR NE OF THE PORTAL, UP THE HILLSIDE. PORTAL IS ROUGHLY 1500 FT W OF ROUTE 768, 2000 FT (0.6 KM) NW OF JUNCTION WITH ROUTE 771. LOCATION FIELD CHECKED APRIL 8, 1987.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, NATIVE COPPER, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS (PRIMARILY CHALCOCITE, ALSO NATIVE COPPER AND CUPRITE).
MAJOR.....CU
POTEN.....ZN PB
OCCUR.....PYR1 FE AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1855
YEAR OF LAST PRODUCTION.....1860
OWNER (PRESENT/LAST).....TEXAS GULF (FOREST PRODUCTS DIVISION)
OPERATOR.....MEIGS COUNTY, TENNESSEE, AND VIRGINIA MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPENED IN 1855 AND OPERATED WITH ANNA MARY MINE AS PART OF OPERATIONS ON F.L. HALE PROPERTIES. ALL TONNAGE FIGURES, WORKINGS DESCRIPTIONS, ETC. ARE FOR THE COMBINED ANNA MARY - ANN ELIZA TREND.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....18.3 UNITS...M
MAXIMUM WIDTH.....6.1 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 60 DEG E.
DEPOSIT DESCRIPTION COMMENTS.....CURREY (1859) DESCRIBED THE ORE DEPOSIT IN THE LITTLE VINE SEGMENT AS AN OFFSHOOT OF THE MAIN VEIN ("50 YARDS TO THE NORTH OF IT.")
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....18.3 UNITS...M
LENGTH OF WORKINGS.....152 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....CURREY (1859): TOTAL DEPTH OF SHAFTS, 61 M; TOTAL LENGTH OF TUNNELS, 91 M (VALUES INCLUDE ANNAL MARY WORKINGS). APRIL, 1987: WORKINGS CONSIST OF 1 COLLAPSED PORTAL AND A SERIES OF CROSSCUT TRENCHES EXTENDING 900 FT IN A S 60 W DIRECTION. THESE TRENCHES ARE GENERALLY 50-100 LONG IN A NW-SE DIRECTION, SHALLOW, AND SPACED 20-40 FT APART ALONG THE TREND.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....SULFIDIC QUARTZ - MUSCOVITE SCHIST
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, SULFIDE WEATHERING PRODUCTS
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, 3 PHASES OF REGIONAL DEFORMATION.
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM (ALMANDINE GARNET ZONE)
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRATION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
GEOLOGY COMMENTS.....ONE MASS OF NATIVE CU WEIGHING 45.4 KG (100 LBS) REMOVED.
GENERAL COMMENTS.....CURRY (1859) DESCRIBES THE ANNA MARY MINE AS THE MAJOR MINE HERE, AS DOES LUTTRELL (1966). I HAVE THEREFORE ASSIGNED THE MAJOR COLLAPSED PORTAL TO THE ANNA MARY MINE AND THE SMALLER PORTAL TO THE SW TO THE ANN ELIZA MINE.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL 455.


ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
ELECTION DISTRICT LINES
RAILROADS
TRANSMISSION LINES
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
N.& W.RY. NORFOLK & WESTERN RY.
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
CARROLL COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
N
PULASKI COUNTY
FLOYD COUNTY
WYTHE COUNTY
GRAYSON COUNTY
PATRICK COUNTY
NORTH CAROLINA
Ewing Mtn.
JEFFERSON NATL. FOREST
Poplar Camp Mtn.
Ivanhoe
Buck
Byllesby
Fries
GALAX
Cliffview
Shorts Creek
Sylvatus
Earl
Hillsville
Twin County Airport
Woodlawn
Chisel Knob
Pipers Gap
Lambsburg
Rich Mtn.
Fisher Peak
Fancy Gap
Dug Spur
Laurel Fork
Stone Mtn.
Blue Ridge Mountains
A
B
C
D
E
1,321
252
APPALACHIAN POWER CO.
A. P. CO.
N.&W. RY.
BLUE RIDGE PARKWAY
Deep Water Creek
Greasy Creek
Cranberry Creek
Big Reed Island Creek
Laurel Fork
Reed Island Cr.
Snake Creek
Little Reed Island Creek
Construction
Proposed
Crooked Creek
Mill Creek
Shorts Creek
Brush Cr.
New River
Chestnut Creek
North Fork Stewart Creek
Pauls Creek
Johnson Creek
Creek
1
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4
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WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT
NON-USGS WORK.....1855 DIREXPL MEIGS CO., TENN., & VA. MNG. CO.: OPENED MINE.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V.1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....HENRY, D.K., CRAIG, J.R., AND GILBERT, M.C., 1979, ORE MINERALOGY OF THE GREAT GOSSAN LEAD, VIRGINIA: ECONOMIC GEOLOGY, V. 74, NO. 3, P. 645-656.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPT., 21 P.
REFERENCE....CONLEY, JAMES F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33P.
REFERENCE....LUTTRELL, GWENDOLYN W., 1966, BASE AND PRECIOUS - METAL AND RELATED ORE DEPOSTIS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE	CU	ACC	0.07000	TONS	1855-1860	14% CU

SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)

2. Ann Phipps Mine

MRDS-REV RECORD NUMBER.....277
MRDS RECORD NUMBER.....W030841
RECORD TYPE.....X1M
REPORT DATE.....87 04
INFORMATION SOURCE.....123
FILE LINK ID.....277
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 04
UPDATER.....MYERS, LESLEY L.
SITE NAME.....ANN PHIPPS MINE
MINING DISTRICT/AREA.....WILDCAT SEGMENT/GOSSAN LEAD DISTRICT/ SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2445 FT
UTM NORTHING...4072000 EASTING...517960 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....APPROXIMATELY 1 MILE S 30 W OF EARLY
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN ARE FOR THE MAJOR COLLAPSED PORTAL NEAR THE MIDDLE OF THE ANN PHIPPS WORKINGS. TURN N ON TO ROUTE 821 FROM INTERSECTION WITH ROUTE 705. 7300 FT. (1.4 MILE) N OF INTERSECTION, ON DIRT ROAD CONTINUATION OF ROUTE 821, WORKINGS INTERSECT THE ROAD. 1400 FT (0.25 MILE) N 57 E OF ROAD IS THE MAIN PORTAL. WORKINGS EXTEND 1200 FT TO NE AND 2700 FT (0.5 MILE) TO SW ALONG TREND. LOCATIONS FIELD CHECKED MARCH, 1987.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE; SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCEN TRATED ON SUPERGENE MINERALS (PRIMARILY CHALCO-CITE, COVELLITE, CUPRITE & MALACHITE).
MAJOR.....CU
POTEN.....ZN PB FE
OCCUR.....PYR1 AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1855
OWNER (PRESENT/LAST).....TEXAS GULF (FOREST PRODUCTS DIVISION)
OPERATOR.....TENNESSEE AND VIRGINIA MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPERATED BY TENNESSEE AND VIRGINIA MINING CO. FROM 1855-1859. 300 TONS OF 15+% CU ORE MINED BY 1859.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
MAXIMUM WIDTH..... UNITS...
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DIP.....45 DEG. SE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....9.1 UNITS...M
LENGTH OF WORKINGS.....350.6 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....1859: CURREY REPORTS 304.9 M OF TUNNELS AND 45.7 M OF SHAFTS. DEEPEST SHAFT IS NO MORE THAN 30 FT. 1987: WORKINGS EXTEND 0.75 MILES (1.2 KM) IN A N 57 E DIRECTION FROM A CLEAR CUT AREA E OF BABBITTS CREEK TO THE WOLFPIT MINE WORKINGS. THESE NEARLY CONTINUOUS SURFACE WORKINGS INCLUDE 4 COLLAPSED PORTALS, ANOTHER POSSIBLE PORTAL, AT LEAST 3 COLLAPSED SHAFTS, NUMEROUS PITS (LARGE AND SMALL), AND 2 LARGE SPOIL PILES.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE-BIOTITE-CHLORITE SCHIST, QUARTZ-MUSCOVITE GNEISS
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, BIOTITE (PORPHYROBLASTS), CHLORITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, 3 PHASES OF REGIONAL DEFORMATION
SIGNIFICANT LOCAL STRUCTURES.....2, POSSIBLY 3, S SURFACES VISIBLE IN ROCKS NEAR MAIN PORTAL
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM (BIOTITE ZONE)
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRA-TION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
GENERAL COMMENTS.....CURREY (1859) REPORTS THE ANN PHIPPS WORKINGS EXTEND 3/4 OF A MILE TO THE NE FROM THE KIRKBRIDE TRACT ON BABBITTS CREEK. HE ALSO DESCRIBES THE WILDCAT WORKINGS NE OF THE ANN PHIPPS MINES, BUT DOES NOT MENTION THE WOLFPIT MINE. LATER WORKS SHOW THE WOLFPIT MINE TO THE SW OF THE WILDCAT MINE, BUT DO NOT SHOW THE ANN PHIPPS. I HAVE INCLUDED WORKINGS NE OF THE MAIN PORTAL WITH THE ANN PHIPPS (RATHER THAN THE WOLFPIT) TO MATCH CURREY'S DESCRIP TION. SEE DESCRIPTIONS OF THE WOLFPIT AND WILDCAT MINES.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1855 DIREXPL TENN. & VA. MINING CO.: OPENED MINE.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P

REFERENCE....CONLEY, JAMES F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE	CU	ACC	0.30000	TONS	1855-1859	15% CU

SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)
PRODUCTION COMMENTS.....CUPRITE ORE AVERAGED 30% CU.

RESERVES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE		EST	750.000	TONS	1935	GOSSAN FE

SOURCE OF RESERVES INFORMATION.....ROSS (1935).
RESERVES COMMENTS.....PROBABLY INCLUDES SARAH ELLEN, WILDCAT, AND CRANBERRY CREEK SEGMENTS.

3. Anna Mary Mine

MRDS-REV RECORD NUMBER.....308
MRDS RECORD NUMBER.....W030843
RECORD TYPE.....X1M
REPORT DATE.....87 03
INFORMATION SOURCE.....123
FILE LINK ID.....308
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 03
UPDATER.....MYERS, LESLEY L.
SITE NAME.....ANNA MARY MINE
SYNONYM NAME.....F.L. HALE PROPERTIES
MINING DISTRICT/AREA.....LITTLE VINE SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... HILLSVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2570 FT
UTM NORTHING...4075840 EASTING...522870 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....4.1 KM (13,500 FT) WEST OF LIBERTY HILL.
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN FOR COLLAPSED PORTAL; WORKINGS EXTEND APPROXIMATELY 500 FT TO SW AND 800 FT TO NE. PORTAL ROUGHLY 1100 FT WEST OF ROUTE 768, 2200 FT (0.7 KM) NW OF JUNCTION WITH ROUTE 771. LOCATION FIELD CHECKED NOVEMBER 12-13, 1986 AND APRIL 8, 1987.

COMMODITIES PRESENT:.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, CHALCOCITE, ARSENOPYRITE, NATIVE COPPER, CUPRITE, GOETHITE.
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS (PRIMARILY CHALCOCITE, ALSO NATIVE COPPER AND CUPRITE).
MAJOR.....CU
POTEN.....ZN PB
OCCUR.....PYR1 FE AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1855
YEAR OF LAST PRODUCTION.....1860
OWNER (PRESENT/LAST).....TEXAS GULF (FOREST PRODUCTS DIVISION)
OPERATOR.....MEIGS COUNTY, TENNESSEE, AND VIRGINIA MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPENED IN 1855 AND OPERATED WITH ANN ELIZA AS PART OF THE OPERATIONS ON F.L. HALE PROPERTIES. ALL TONNAGE FIGURES, WORKINGS, DESCRIPTIONS, ETC. ARE FOR THE COMBINED ANNA MARY - ANN ELIZA TREND.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....18.3 UNITS...M
MAXIMUM WIDTH.....6.1 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 45 DEG. E
DEPOSIT DESCRIPTION COMMENTS.....CURREY (1859) DESCRIBED THE DEPOSIT MINED HERE AS AN OFFSHOOT OF THE MAIN VEIN. ("50 YARDS TO THE NORTH OF IT.")
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....18.3 UNITS...M
LENGTH OF WORKINGS.....152 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....CURREY (1859): TOTAL DEPTH OF SHAFTS, 61 M; TOTAL LENGTH OF TUNNELS, 91 M (VALUES INCLUDE ANN ELIZA WORKINGS). AN ADIT AND SEVERAL TRENCHES WERE NOTED IN 1948. 1987: A SHALLOW TRENCH EXTENDS 500 FT S 65 W OF MAJ OR PORTAL. AT HILLCREST, A SHALLOW TRENCH EXTENDS 50 FT TO SE AND ENDS AT A COLLAPSED SHAFT. NE OF PORTAL, OUTSLOPE TRENCH EXTENDS 200 FT N 65 E. ACROSS SMALL CREEK VALLEY, A SERIES OF SHALLOW TO MODERATELY DEEP TRENCHES EXTENDS 500 FT N 50 E TO A SHALLOW CROSSCUT TRENCH, WITH A PROBABLE COLLAPSED SHAFT AT 4075950N, 522990E.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....SULFIDIC QUARTZ-MUSCOVITE SCHIST
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, SULFIDE WEATHERING PRODUCTS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLIMORIUM, FRIES THRUST, 3 PHASES OF REGIONAL DEFORMATION
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM (ALMANDINE GARNET ZONE)
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG FORMATION
GENERAL COMMENTS.....CURREY (1859) DESCRIBES THE ANNA MARY MINE AS THE MAJOR MINE HERE, AS DOES LUTTRELL (1966). I HAVE THEREFORE, ASSIGNED THE MAJOR COLLAPSED PORTAL TO THE ANNA MARY MINE AND THE SMALLER TO THE SW TO THE ANN ELIZA MINE.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1855 DIREXPL MEIGS CO., TENN., & VA. MNG. CO.: OPENED MINE.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V.1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....HENRY, D.K., CRAIG, J.R., AND GILBERT, M.C., 1979, ORE MINERALOGY OF THE GREAT GOSSAN LEAD, VIRGINIA: ECON. GEOL., V. 74, NO. 3, P. 645-656.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL ESOURCES, BULL 72, 233 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOL. SURV. OPEN-FILE REPT., 21 P.
REFERENCE....CONLEY, J.F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33 P.
REFERENCE....LUTTRELL, GWENDOLYN W., 1966, BASE AND PRECIOUS METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167P.
SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)

4. Ben White Prospect

MRDS-REV RECORD NUMBER.....279
MRDS RECORD NUMBER.....W030844
RECORD TYPE.....X1M
REPORT DATE.....87 04
INFORMATION SOURCE.....123
FILE LINK ID.....279
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 04
UPDATER.....MYERS, LESLEY L.
SITE NAME.....BEN WHITE PROSPECT
MINING DISTRICT/AREA.....CRANBERRY CREEK SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2370 FT
UTM NORTHING...4073490 EASTING...520130 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.3 KM (4200 FT) N 86 E OF EARLY
LOCATION COMMENTS.....LOCATION FIELD CHECKED APRIL 10, 1987. THESE WORKINGS ARE 800 FT N 60 E OF THE BROWN AND STEPHENSON PORTAL, THEN 400 FT DUE NORTH (FOLLOWING CONTOURS). SEE THE BROWN AND STEPHENSON MINE DESCRIPTION.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE
COMMODITY INFO COMMENTS.....MINERALOGY OF DEPOSIT IS NOT DESCRIBED
NON-PRODUCER MAIN.....CU ZN PB
NON-PRODUCER MINOR.....PYR1 FE
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....TEXAS GULF (FOREST PRODUCTS DIVISION)
EXPLORATION AND DEVELOPMENT COMMENTS.....THE ONLY REFERENCE TO THIS PROSPECT IS FIGURE 25 IN WEED (1911). IT IS ASSUMED THAT THIS PROSPECT HAD A SIMILAR HISTORY TO THE OTHER MINES ALONG THE CRANBERRY CREEK SEGMENT.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....DEPOSIT NOT DESCRIBED IN WEED (1911).
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....APRIL 1987: WORKINGS CONSIST OF 2 SMALL PITS, LESS THAN 5 FT DEEP AND 8 FT WIDE WITH A SHALL TRENCH HEADING NW UP THE HILLSIDE. NO GOSSAN, BULL QUARTZ OR SULFIDE IN THIS AREA.O THE NW.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, 3 PHASES OF REGIONAL DEFORMATION
SIGNIFICANT LOCAL STRUCTURES.....3 S SURFACES OBSERVED IN SCHIST IN NEXT VALLEY TO NW
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM (GARNET GRADE)
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRATION DUE TO METAMORPHISM AND DEFORMATION WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
GEOLOGY COMMENTS.....THIS LOCATION IS NOT ON THE MAIN GOSSAN LEAD TREND WHICH RUNS OVER 2.5 MILES FROM THE KIRKBRIDE AREA THROUGH THE BROWN AND STEPHENSON MINE. IT APPEARS TO BE ON AN EN ECHELON SEGMENT TO THE NW.
GENERAL COMMENTS.....THERE ARE NUMEROUS PITS AND A LOT OF FE STAINED BLOCKS OF SCHIST ALL OVER THESE HILLSIDES, BUT MOST OF THEM PROBABLY WEREN'T BY MINING ACTIVITY.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....DIREXPL UNKNOWN COMPANY PROSPECTING
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....CONLEY, J.F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33 P.

5. Bergen Kemp Prospect

MRDS-REV RECORD NUMBER.....301
MRDS RECORD NUMBER.....W031212
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....BERGEN KEMP PROSPECT

MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... DUGSPUR, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2950 FT (899 M)
UTM NORTHING...4070290 EASTING...542590 ZONE...+17
LATITUDE.....36-46-45N LONGITUDE.....080-31-22W
POSITION FROM NEAREST LOCALITY.....9.0 KM (5.6 MI) SE OF DUGSPUR.
LOCATION COMMENTS.....ON E SIDE OF STATE ROAD 626 ABOUT 0.6 KM (0.4 MI) BY ROAD WNW OF ITS INTERSECTION / WITH STATE ROAD 628.
COMMODITIES PRESENT.....MN CU NI CO
GENERAL ANALYTICAL DATA.....ASSAY PERFORMED BY COLORADO ASSAYING COMPANY, DRAWER 298, DENVER, CO, INDICATED 15-20% MN; 0.5-1.0% CU, 0.5% NI, 0.5-10% ZN AND .5-1.0% CO.
COMMODITY INFO COMMENTS.....MINERALS NOT SPECIFIED: MN OXIDE AND MINOR OXIDES OF CO, NI AND CU
OCCUR.....CO
NON-PRODUCER MAIN.....MN
NON-PRODUCER MINOR.....CU NI CO
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
DEPOSIT TYPE.....VEIN
MAXIMUM WIDTH.....5 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 35 DEG E
DEPOSIT DESCRIPTION COMMENTS.....QUARTZ VEIN ENCLOSED BY GNEISS; WIDTH RANGES 3-5 M; STRIKE RANGES N 30-40 DEG E.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....GNEISS
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....IN QUARTZ VEIN
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
FORMATION NAME.....LITTLE RIVER GNEISS
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED
REFERENCE....SWEET, P.C., AND BELL, S.C.; 1980, METALLIC MINERALIZA TION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 27, P. 39-52.

6. Betty Baker Mine

MRDS REV RECORD NUMBER.....278
MRDS RECORD NUMBER.....W030845
RECORD TYPE.....X1M
REPORT DATE.....87 04
INFORMATION SOURCE.....123
FILE LINK ID.....278
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 04
UPDATER.....MYERS, LESLEY L.
SITE NAME.....BETTY BAKER MINE
SYNONYM NAME.....BETTIE BAKER MINE, PAINT BANK MINE, CARTER MINE.
MINING DISTRICT/AREA.....BETTY BAKER SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION - BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... HILLSVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2550 FT
UTM NORTHING...4077530 EASTING...524580 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....3.0 KM (1.9 MI) WNW OF LIBERTY HILL.
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN ARE FOR THE OPEN PIT AT THE NE END OF THE WORKINGS. PIT IS AP PROXIMATELY 1500 FT WEST OF ROUTE 752 ALONG POWER LINE. (POWER LINE CROSSES ROUTE 752 500 FT SOUTH OF THE INTERSECTION OF ROUTES 752 AND 829). WORKINGS EXTEND 5000 FT FROM THE PIT IN A S 50 W DIRECTION, 600 FT NE OF THE PIT IN A BROAD ZONE. LOCATION FIELD CHECKED NOVEMBER, 1986 AND APRIL, 1987.
COMMODITIES PRESENT.....CU PYR1 PYR FE MPG ZN PB
ORE MATERIALS.....PYRRHOTITE, PYRITE, SPHALERITE, CHALCOPY-RITE, GALENA, CUBANITE, MACKINAWITE, GOETHITE, HEMATITE, CHALCOCITE, COVELLITE, CUPRITE, ARSENOPY-RITE
COMMODITY SUBTYPES.....OCHREOUS IRON USED AS MINERAL PIGMENT.
GENERAL ANALYTICAL DATA.....AVG. FROM DRILL SAMPLES: 35.7% FE, 22.2% S, 0.59% CU, 0.56% ZN, 0.38% PB (VIRGINIA IRON, COAL & COKE CO. SA MPLES)
COMMODITY INFO COMMENTS.....PYRITE OCCURS AS PORPHYROBLASTS IN PYRRHOTITE.
MAJOR.....CU PYR1 PYR
MINOR.....FE MPG
POTEN.....ZN PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....MEIGS COUNTY, TENN., AND VIRGINIA MINING CO. (?)
YEAR OF DISCOVERY.....1854
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1854
OWNER (PRESENT/LAST).....TEXAS GULF (FOREST PRODUCTS DIVISION)
OPERATOR.....VIRGINIA IRON, COAL & COKE CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPENED IN 1854 BY MEIGS COUNTY, TENNESSEE, AND VIRGINIA MINING CO. WHO MINED SUPERGENE COPPER BELOW GOSSAN. THE MINE WAS CLOSED DURING THE CIVIL WAR AND NOT REOPENED UNTIL SOMETIME AFTER 1880. PRIOR TO ITS CLOSING IN 1900, THE MINE WAS OPERATED BY A CAPT. MCKEE WHO SHIPPED ORE TO THE SOUTHERN CHEMICAL CO. AT WINSTON-SALEM, N.C. FOR ACID MAKING PURPOSES. IN 1905, VIRGINIA IRON, COAL AND COKE CO. DEVELOPED MINE BY MEANS OF A SHAFT AND DRIFTS AT TWO LEVELS. IN 1928, 24 HOLES TOTALING 2808 M WERE DRILLED BY VIRGINIA IRON, COAL AND COKE CO. IN 1947, THE U.S. BUREAU OF MINES DRILLED SEVEN CORE HOLES TOTALING 1163 M.
DEPOSIT TYPE.....STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE, GOSSAN
DEPOSIT FORM.....POD/LENS
DEPTH TO BOTTOM.....333 UNITS...M
MAXIMUM LENGTH.....7500 UNITS...M
MAXIMUM WIDTH.....15.0 UNITS...M
DEPOSIT SIZE.....MEDIUM
STRIKE.....N. 45 DEG. E.
DIP.....47 DEG. SE
DEPOSIT DESCRIPTION COMMENTS.....AT NE END, DIP FLATTENS AND STRIKE SWINGS TO THE EAST. KLINE AND BALLARD (1949) SAY MINERALIZATION IS CONTINUOUS FOR 9600 FT TO THE SW FROM THE NE END. THIS MINERALIZED ZONE HAS BEEN MINED ALL ALONG ITS LENGTH (BETTY BAKER, GALUP, ANN ELIZA AND ANNA MARY MINES).
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....25.5 UNITS...M
LENGTH OF WORKINGS.....83 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....DRIFTS WERE DUG AT THE 40 FT AND 80 FT LEVELS. KLINE AND BALLARD (1949) REPORT EXTENSIVE SURFACE WORKINGS FOR 5600 FT ALONG THE STRIKE OF THE ORE BODY. IN NOVEMBER, 1986, THE SURFACE WORKINGS CONSISTED OF A SERIES OF TRENCHES EXTENDING ROUGHLY 5000 FT TO THE SW FROM AN OPEN PIT. THIS PIT WAS APPARENTLY EXCAVATED IN THE MID 70'S FOR SOME PROSPECTING WORK—EXCELLENT EXPOSURES OF FOOTWALL ROCKS AND SOME ORE ZONE MATERIAL. NE OF THE PIT IS A BROAD ZONE OF SURFACE WORKINGS, INCLUDING PORTALS, SHAFTS, TRENCHES AND SPOIL PILES.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....SULFIDIC QUARTZ-MUSCOVITE SCHIST, CHLORITE SCHIST, META ARKOSE, BULL QUARTZ
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....CHLORITE, QUARTZ, CALCITE, BIOTITE, MUSCOVITE, ACTINOLITIC HORNBLENDE, ACTINOLITE-TREMOLITE, GARNET (SPESSARTINE), RUTILE, ILMENITE, GRAPHITE, DOLOMITE.
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, GOSSAN LEAD THRUST, MAIN SULFIDE ZONE STRIKES N 45 E AND DIPS 30-60 SE.IPS 30-60 SE., FRIES OVERTHRUST.
SIGNIFICANT LOCAL STRUCTURES.....CROSS FAULT WITH 10 M OFFSET AT NE END.
SIGNIFICANT ALTERATION.....(ALMANDINE)-LOW GRADE REGIONAL METAMORPHISM (415-455 DEG. C, 5-5.5 KB) HAS PARTIALLY CONVERTED ORIGINALLY PYRITIC MASS TO PREDOMI-NANTLY PYRRHOTITE DURING ACADIAN (?) OROGENY.
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRA-TION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
GEOLOGY COMMENTS.....STATEN (1976) AS CITED IN HENRY AND OTHERS (1979) NOTED CHLORITE SCHIST OFTEN FORMS AN ENVELOPE 0-1 M THICKNESS AROUND THE SULFIDE ZONES AND IS INTERLEAVED WITH QUARTZ-MUSCOVITE SCHIST. THIS IS ONLY MINE IN DISTRICT WHERE PYRITE IS MORE THAN A RARE CONSTITUENT OF THE ORE, AT THE BETTY BAKER MINE, PYRITE CONSTITUTES AS MUCH AS 25% OF THE ORE.
GENERAL COMMENTS.....THE OPEN PIT IS THE MOST ACCESSIBLE PART OF THE BETTY BAKER WORKINGS AND HAS THE BEST EXPOSURES. PORTAL LOCATIONS (IN UTM): 4077560N, 524570E, 4077630N, 524640E, 4077530N, 524670E.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1854 DIREXPL MEIGS COUNTY, TENN., & VA. MINING CO.: MINED SUPERGENE COPPER.
NON-USGS WORK.....1928 DIREXPL VA. IRON, COAL & COKE CO.: CONDUCTED EXPLORATORY DRILLING.
NON-USGS WORK.....1947 DIREXPL U.S. BUREAU OF MINES: CONDUCTED EXPLORATORY DRILLING
REPORTS AVAILABLE.....WRIGHT, R.J. AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOL. SURV. OPEN FILE REPORT, 19 P.
REFERENCE....GAIR, J. E., AND SLACK, J. F., 1984, DEFORMATION, GEOCHEMISTRY, AND ORIGIN OF MASSIVE SULFIDES, GOSSAN LEAD DISTRICT, VIRGINIA: ECONOMIC GEOLOGY, V. 79, N. 7, P. 1483-1520.
REFERENCE....HENRY, D.K., CRAIG, J.R., AND GILBERT, M.C., 1979, ORE MINERALOGY OF THE GREAT GOSSAN LEAD, VIRGINIA: ECON. GEOL. V. 74, NO. 3, P. 645-656.
REFERENCE....KLINE, M.H., AND BALLARD, T.J., 1949, INVESTIGATION OF THE GREAT GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. BUR. MINES REPT. INV. 4532, 39 P.
REFERENCE....POOLE, J.L., 1973, IRON SULFIDE MINES IN VIRGINIA: VIRGINIA MINERALS, V. 19, NO. 3, P. 29-33
REFERENCE....STOSE, A.J. AND STOSE, G.W., 1957, GEOLOGY AND MINERAL

RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, BULL. 72, 233 P.
REFERENCE....CONLEY, JAMES F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE PYR1	ACC	1.70000	MT	1900	PYR1, FOR MANUFACTURE OF SULFURIC ACID

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
CU	ACC	0.59500	TONS	1854-1859	16% CU
FE	SML			1890-1900	OPERATION INTERMITENT
PYR1	SML			1900	
ORE SUL	SML			1854-1908	

SOURCE OF PRODUCTION INFORMATION.....HENRY AND OTHERS (1979), POOLE (1973)

RESERVES AND POTENTIAL RESOURCES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	6800.	MT	1956	PYR1, SULFIDES & GANGUE
ORE	EST	18000.	MT	1978	PYR1, IRON RIDGE & BETTY BAKER MINES

SOURCE OF RESERVES AND RESOURCES INFORMATION.....CORRIVEAU, M.P., 1956, MINERAL DRESSING STUDIES ON THE GREAT GOSSAN LEAD ORE FORM CARROLL COUNTY, VIRGINIA: VIRGINIA POLYTECH. INST. BULL; ENG. EXPT. STA. SER. NO. 113, 79 P.; GAIR, J.E. AND SLACK, J.F., 1978, STRATABOUND MASSIVE SULFIDE DEPOSITS OF THE U.S. APPALACHIANS IN REVIEW OF STRATABOUND APPALACHIAN-CALEDONIAN SULFIDE DEPOSITS: IRELAND GEOL. SURVEY (IN PRESS)
RESERVES AND RESOURCES COMMENTS.....ORE: ZN, PB, CU, PYR1

7. Blair, T., Mine

MRDS-REV RECORD NUMBER.....276
MRDS RECORD NUMBER.....W030846
RECORD TYPE.....X1M
REPORT DATE.....80 03
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....BLAIR, T., MINE
SYNONYM NAME.....BLAIR MINE
MINING DISTRICT/AREA.....COPPERAS HILL SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... GALAX, VA QUADRANGLE SCALE 1:24000
ELEVATION.....2350 FT (716.3 M)
UTM NORTHING...4066710 EASTING...509830 ZONE...+17
LATITUDE.....36-44-52N LONGITUDE.....080-53-24W
POSITION FROM NEAREST LOCALITY.....ABOUT 1.8 KM (1.1 MI) N. 77 DEG E. OF HEBRON.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. ABOUT 400 M NE. OF THE END OF A DIRT ROAD WHICH EXTENDS FROM THE E. SIDE OF STATE ROAD 735 ABOUT 0.8 KM (0.5 MI) FROM ITS INTERSECTION WITH STATE ROAD 635. WORKINGS EXTEND TO CROOKED CREEK ON NE AND 575 M TO SW.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS (PRIMARILY COVELLITE).
MAJOR.....CU
POTEN.....ZN PB
OCCUR.....PYR1 FE AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1857
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL AND COKE CO. (T. BLAIR TRACT) AND T. BLAIR.
OPERATOR.....YARNELL MINING CO.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
MAXIMUM LENGTH.....670.5 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 60 DEG. E.
DIP.....72 DEG. SE.
DEPOSIT DESCRIPTION COMMENTS.....DIMENSIONS APPROXIMATE. LENS IS A SEGMENT OF 27.4 KM (17 MI) ELONGATED MINERALIZED ZONE. WIDTH IS AT LEAST 3.6 M. MINERALIZED ZONE TRENDS NEARLY NORTH FOR A SHORT DISTANCE AT ABOUT 305 M SE OF SHARP BEND IN CROOKED CREEK, WHILE A SPLIT OF THE ZONE CONTINUES FOR ABOUT 61 M ALONG THE PREVALENT NE STRIKE (WRIGHT AND RAMAN, P. 15).
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....9.1 UNITS...M
LENGTH OF WORKINGS.....24.4 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....CURREY (1859) REPORTS SINGLE SHAFT AND TUNNEL (9.1 M AND 15.2 M RESPECTIVELY.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST, QUARTZ MUSCOVITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, FRIES OVERTHRUST, GOSSAN LEAD OVERTHRUST, MAIN SULFIDE ZONE STRIKES N. 45 DEG E. AND DIPS 30-60 DEG SE.
SIGNIFICANT ALTERATION.....REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT OF COPPER ORES. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULLETIN 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT
NON-USGS WORK.....1857 DIREXPL YARNELL MINING CO.: OPENED MINE.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIGINIAS, 1880 V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....KLINE, M.H., AND BALLARD, T.J., 1949, INVESTIGATION OF THE GREAT GOSSAN LEAD CARROLL COUNTY, VA.: U.S. BUREAU OF MINES REPORT OF INVESTIGATIONS 4532, 39 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)
PRODUCTION COMMENTS.....ORE OF GOOD QUALITY WAS REPORTED

8. Brown and Stephenson Mine

MRDS-REV RECORD NUMBER.....309
MRDS RECORD NUMBER.....W030847
RECORD TYPE.....X1M
REPORT DATE.....87 04
INFORMATION SOURCE.....123
FILE LINK ID.....309
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 04
UPDATER.....MYERS, LESLEY L.
SITE NAME.....BROWN AND STEPHENSON MINE
SYNONYM NAME.....BROWN AND STEVENSON MINE
MINING DISTRICT/AREA.....CRANBERRY CREEK SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2480 FT
UTM NORTHING...4073230 EASTING...519920 ZONE...+17
ACCURACY.....2
POSITION FROM NEAREST LOCALITY.....1.3 KM (0.8 MI) EAST OF EARLY.
LOCATION COMMENTS.....TURN NORTH ON TO STATE ROUTE 769 FROM U.S. HIGHWAY 52 (ACROSS FROM SMALL STORE). FOLLOW 769 TO CREST OF HILL, THEN TAKE FIRST LEFT ON TO A DIRT ROAD HEADING NORTH. 500 FT NORTH OF THIS INTERSECTION IS ANOTHER DIRT ROAD RUNNING TO THE NW. THE COLLAPSED PORTAL (LOCATION COORDINATES AND ELEVATION GIVEN ABOVE) IS 1000 FT TO THE NW ALONG THIS ROAD AND 20 FT UP THE HILLSIDE. LOCATION FIELD CHECKED MARCH 13, 1987.
COMMODITIES PRESENT.....CU ZN PB FE PYR1 AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, NATIVE COPPER, CUPRITE, GOETHITE, CUBANITE MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS (PRIMARILY CHALCOCITE).
MAJOR.....CU
POTEN.....ZN PB FE
OCCUR.....PYR1 AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1855
OWNER (PRESENT/LAST).....TEXAS GULF (FOREST PRODUCTS DIVISION)
OPERATOR.....BROWN & STEPHENSON
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPERATED 1855 TO BEGINNING OF CIVIL WAR.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....18.3 UNITS...M
MAXIMUM WIDTH.....1.2 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DIP.....35 DEG. SE
DEPOSIT DESCRIPTION COMMENTS.....DEPTH IS TO SUPERGENE ORE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....18.3 UNITS...M
LENGTH OF WORKINGS.....76.2 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....CURREY (1859) REPORTED ONE TUNNEL BEING DRIVEN 250 FT. 3/87: WORKINGS CONSIST OF A COLLAPSED PORTAL (CAN SEE APPROXIMATELY 5 FT

BACK INTO THE HILLSIDE) WITH 2 TRENCHES LEADING DOWNSLOPE TO THE DIRT ROAD. ANY WORKNGS UP THE HILLSIDE TO THE NE HAVE BEEN DESTROYED, PROBABLY BECAUSE OF THE POWER LINE IN NEAR THE CREST OF THE HILL.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....SULFIDIC QUARTZ-MUSCOVITE SCHIST, QUARTZ-MUSCOVITE GNEISS, AMPHIBOLITE
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, OLIGOCLASE, DOLOMITE, CHLORITE, ACTINOLITE, BIOTITE, GARNET
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, GOSSAN LEAD THRUST, SULFIDE ZONE STRIKES APPROXIMATELY N 5 E, 30-60 SE.DEG E. AND DIPS 30-60 DEG SE.
SIGNIFICANT LOCAL STRUCTURES..... STRIKES N 58 E, DIPS 67 SE; 2 S SURFACES VISIBLE
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM (ALMANDINE GARNET GRADE)
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLUME VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRATION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT
NON-USGS WORK.....1855 DIREXPL BROWN & STEPHENSON: PRODUCTION BEGUN
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
REFERENCE....CONLEY, J.F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33 P.
SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)

RESERVES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE EST 100.000 TONS 1948 GOSSAN FE
SOURCE OF RESERVES INFORMATION.....WRIGHT AND RAMAN (1948).
RESERVES COMMENTS.....RESERVES FOR ENTIRE SEGMENT (BEN WHITE, BROWN & STEPHENSON, FAIRMONT, AND CRANBERRY MINES.

9. Copperas Hill Mine

MRDS-REV RECORD NUMBER.....311
MRDS RECORD NUMBER.....W030848
RECORD TYPE.....X1M
REPORT DATE.....87 05
INFORMATION SOURCE.....123
FILE LINK ID.....311
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 05
UPDATER.....MYERS, LESLEY L.
SITE NAME.....COPPERAS HILL MINE
MINING DISTRICT/AREA.....COPPERAS HILL SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... AUSTINVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2590 FT
UTM NORTHING...4067400 EASTING...510280 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....2.6 MILES (4.2 KM) S 7 W OF CORINTH
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN ARE FOR A POSSIBLE COLLAPSED PORTAL. "MAJOR" WORKINGS EXTEND 400 FT IN N 55 E LINE, INCLUDING A POSSIBLE SHAFT AT UTM 4067470N, 510350 E. MINOR WORKINGS EXTEND 300 FT IN S 20 W DIRECTION, CONSIST OF SMALL CROSSCUT TRENCHES AND SMALL PITS. AN INTERSECTION OF ROUTE 733 AND 735, TAKE ROUTE 733, 0.5 MILES (0.75 KM) WEST TO A DIRT ROAD WHICH RUNS 0.3 MILES (0.45 KM). "PORTAL" IS 0.3 MIL S 76 W THROUGH THE WOODS. FIELD CHECK DONE MAY, 1987.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS.
MAJOR.....CU
POTEN.....ZN PB
OCCUR.....PYR1 FE AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1857
OWNER (PRESENT/LAST).....ALLIED CHEMICAL CO.
OPERATOR.....COOK & WISTAR
EXPLORATION AND DEVELOPMENT COMMENTS.....LIMITED MINING CONDUCTED BETWEEN 1857 AND 1859.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....SMALL
STRIKE.....N. 10 DEG. E.
DIP.....SE
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....6.1 UNITS...M
LENGTH OF WORKINGS.....21.3 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....1859: CURREY REPORTED A TOTAL DRIVAGE OF LEVELS AS 15.2 M AND TOTAL DEPTH OF SHAFTS AS 6.1 M. 1948: WRIGHT AND RAMAN INDICATE SEVERAL ADITS, TRENCHES, AND PROSPECT PITS. 1987 (MAY): ONE POSSIBLE COLLAPSED PORTAL AT LOCATION GIVEN. N 55 E OF "PORTAL" ARE 3 CROSSCUT TRENCHES 100+ FT LONG, AND AT THE CREST OF THE HILL ARE SEVERAL SMALL PITS, SHALLOW CROSSCUT TRENCHES, AND A POSSIBLE COLLAPSED SHAFT (PIT 8 FT DEEP AND 10-12 FT WIDE).
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE-CHLORITE-BIOTITE SCHIST AND GNEISS
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, GOSSAN LEAD THRUST
SIGNIFICANT LOCAL STRUCTURES.....3 S SURFACES VISIBLE; MAJOR LINEATION 84 DEGREES, S 19 E
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM (ALMANDINE GARNET ZONE)
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRATION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF CU ORES.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1857 DIREXPL COOK & WISTAR: OPENED MINE.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
REFERENCE....CONLEY, J.F., 1985, GEOLOGY OF SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33P.
SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)
PRODUCTION COMMENTS.....CURREY (1859) GIVES NO FIGURES FOR PRODUCTION; THERE PROBABLY WAS ONLY LIMITED PRODUCTION, AS SECONDARY COPPER ZONE IS RELATIVELY SMALL DUE TO TOPOGRAPHY (WRIGHT AND RAMAN, 1948).

10. Cranberry Copper Mine

MRDS-REV RECORD NUMBER.....310
MRDS RECORD NUMBER.....W030849
RECORD TYPE.....X1M
REPORT DATE.....87 04
INFORMATION SOURCE.....123
FILE LINK ID.....310
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 04
UPDATER.....MYERS, LESLEY L.
SITE NAME.....CRANBERRY COPPER MINE
MINING DISTRICT/AREA.....CRANBERRY CREEK SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION - BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA QUADRANGLE SCALE 1:24000
ELEVATION.....2520 FT
UTM NORTHING...4072850 EASTING...519240 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....2500 FT (APPROXIMATELY 0.5 MILES) SE OF EARLY
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN ARE FOR COLLAPSED PORTAL. PORTAL IS 0.5 MILES SE OF EARLY

ALONG U.S. HIGHWAY 52, THEN 500 FT IN A N 60 E DIRECTION UP THE SLOPE. WORKINGS EXTEND 1200 FT TO NE FROM THE PORTAL. LOCATION FIELD CHEKED NOVEMBER 14, 1986.
COMMODITIES PRESENT.....CU ZN PB FE PYR1 AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS (PRIMARILY CHALCOCITE)
MAJOR.....CU
POTEN.....ZN PB FE
OCCUR.....PYR1 AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1854
OWNER (PRESENT/LAST).....TEXAS GULF (FOREST PRODUCTS DIVISION)
OPERATOR.....EDGAR C. MOXHAM
ECONOMIC COMMENTS.....THE BALTIMORE AND CUBA SMELTING FURNACE WAS IN CONSTRUCTION NEARBY IN 1859 TO PROCESS ORE BY ROASTING (CURREY, 1859). THIS FURNACE IS PROBABLY THE CRANBERRY PLAINS FURNACE REPORTED BY STOSE AND STOSE (1957). EXPLORATION AND DEVELOPMENT COMMENTS.....TENNESSEE AND VIRGINIA MINING CO. OPERATED MINE FROM 1854 TO 1859. IN 1893, E.C. MOXHAM OPERATED THE MINE VIRGINIA IRON, COAL AND COKE CO. DIAMOND-DRILLED A 159.8 M (524 FT) HOLE, HOWEVER NO MINING RESULTED.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....12.2 UNITS...M
MAXIMUM WIDTH.....7.6 UNITS...M
MAXIMUM THICKNESS.....3.0 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 54 DEG. E.
DIP.....60 DEG. SE.
DEPOSIT DESCRIPTION COMMENTS.....FIGURES ABOVE WERE REPORTED BY CURREY (1859); THICKNESS AND WIDTH WERE ESTIMATES.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....31.7 UNITS...M
LENGTH OF WORKINGS.....320 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....1859: CURREY REPORTS TOTAL DRIVAGE OF LEVELS, 244 M, AND TOTAL DEPTH OF SHAFTS, 76 M. 1986: WORKINGS EXTEND 1200 FT ALONG SURFACE FROM PORTAL, TREND IS N 60 E. THESE WORKINGS CONSIST OF AT LEAST 15 PITS IN 2 PARALLEL LINES APPROXIMATELY 100 FT APART. THE WESTERN PITS ARE QUITE LARGE, 20-30 FT ACROSS AND 15-25 FT DEEP, HAVE SPOIL PILES AROUND THEM, AND LIE ON THE TREND OF THE DEPOSIT. 100 FT TO THE E IS A LINE OF SMALLER PITS, 10 FT WIDE AND 5 -10 FT DEEP, WHICH MAY HAVE BEEN SHAFTS. OUTSLOPE DUMP AT SW END OF TREND, BEYOND COLLAPSED PORTAL.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST, QUARTZ-MUSCOVITE GNEISS, AMPHIBOLITE
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, OLIGOCLASE, DOLOMITE, CHLORITE, ACTINOLITE, BIOTITE, GARNET.
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, 3 PHASES OF DEFORMATION REGIONALLY
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM (ALMANDINE GARNET GRADE)
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRATION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
GENERAL COMMENTS.....GOOD LOCALITY FOR COLLECTING SULFIDE AND GOSSAN SPECIMENS. SOME OF THE SPOIL PILES CONTAIN SULFIDE BLOCKS WITH 2-3% CHALCOPYRITE.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT
NON-USGS WORK.....1854 DIREXPL TENNESSEE & VIRGINIA MINING CO.: PRODUCTION BEGUN
NON-USGS WORK.....1893 DIREXPL E.C. MOXHAM: OPERATED MINE
NON-USGS WORK.....1902 DIREXPL VA. IRON, COAL & COKE CO.: DRILLED EXPLORATORY HOLE.
REPORTS AVAILABLE.....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA. , J. P. BELL CO., 618 P.
REFERENCE....CONLEY, J.F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33 P.
REFERENCE....CRAIG, J.R., HENRY, DONALD K., AND GILBERT, CHARLES, 1978, THE GREAT GOSSAN LEAD IN GAIR, J.E., ED., MASSIVE SULFIDES OF VIRGINIA FIELD TRIP GUIDEBOOK: U.S. GEOLOGICAL SURVEY OPEN FILE REPORT 78-1068, P.57-84.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE	CU EST	0.70000	TONS	1854-1859	15% CU
ORE	CU SML			1893	CU

SOURCE OF PRODUCTION INFORMATION.....CURREY (1859), WEED (1911)

RESERVES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	100.000	TONS	1948	GOSSAN FE
ORE	EST	750.000	TONS	1935	GOSSAN FE

SOURCE OF RESERVES INFORMATION.....WRIGHT AND RAMAN (1948), ROSS (1935).
RESERVES COMMENTS.....RESERVES ARE FOR ENTIRE SEGMENT (BEN WHITE, BROWN & STEPHENSON, FAIRMONT, AND CRANBERRY MINES); SECOND ESTIMATE PROBABLY INCLUDES WILD CAT AND SARAH ELLEN SEGMENTS.

11. Dalton Hill Mine

MRDS-REV RECORD NUMBER.....307
MRDS RECORD NUMBER.....W030850
RECORD TYPE.....X1M
REPORT DATE.....87 03
INFORMATION SOURCE.....123
FILE LINK ID.....307
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 03
UPDATER.....MYERS, LESLEY L.
SITE NAME.....DALTON HILL MINE
MINING DISTRICT/AREA.....DALTON HILL AREA/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA QUADRANGLE SCALE 1:24000
ELEVATION.....2600 FT (793 M)
UTM NORTHING...4071840 EASTING...520600 ZONE...+17
LATITUDE.....36-47-38N LONGITUDE.....080-46-09W
ACCURACY.....EST +/- 1000 FT
POSITION FROM NEAREST LOCALITY.....2.5 KM (1.5 MI) SE OF EARLY.
LOCATION COMMENTS.....LAND HAS BEEN RECLAIMED SINCE MINING; EXACT MINE LOCATION CANNOT BE DETERMINED. LOCATION AND ELEVATION GIVEN ARE FROM LITERATURE. WORKINGS SUPPOSEDLY EXTENDED NE OF U.S. 52 ON EITHER SIDE OF ROUTE 819, TO JUST N OF ROUTE 770. LOCATION FIELD CHECKED MARCH 3, 1987.
COMMODITIES PRESENT.....CU ZN PB FE PYR1 PYR AG
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, CHALCOCITE, GOETHITE, COVELLITE, PYRITE
GENERAL ANALYTICAL DATA.....AG: 1.16 OZ/TON (FONTAINE, 1884, P. 10)
COMMODITY INFO COMMENTS.....GALENA CONTENT REPORTEDLY HIGHER THAN IN OTHER SECTIONS OF GOSSAN LEAD.
MAJOR.....CU
POTEN.....ZN PB FE
OCCUR.....PYR1 PYR AG
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1855
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL & COKE CO. (DALTON HILL TRACT).
OPERATOR.....C.H. THOMPSON
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE FIRST OPENED IN 1855 BY DALTON MINING CO.AND WORKED UNTIL 1859 (LARGELY PROSPECTING). IN 1939, C.H. THOMPSON OF HOLLINS, VA., INVESTIGATED THE AREA.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....10.7 UNITS...M
MAXIMUM WIDTH.....7.6 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DEPOSIT DESCRIPTION COMMENTS.....DEPTH IS TO TOP OF CHALCOPYRITE ZONE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....10.7 UNITS...M
LENGTH OF WORKINGS.....366 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....1859: CURREY REPORTED 6 TUNNELS (152 M) AND 30 SHAFTS (213 M). 1939: THOMPSON SANK 1 SHAFT. MARCH, 1987: LAND USED FOR PASTURE AND HOUSING; VERY LITTLE EVIDENCE OF MINING ACTIVITY. WEST OF ROUTE 819 IS A DISTURBED ZONE, WITH BLOCKS OF GOSSAN AND BULL QUARTZ LYING AROUND. EAST OF 819, ON A HILLSIDE NEAR ROUTE 770, ARE SMALL GOB PILES, 2 TRENCHES, AND A POSSIBLE COLLAPSED PORTAL. NORTH OF 770 ON A N 55 E LINE FROM THE "PORTAL" ARE 3 SMALL PITS AND A TRENCH, PLUS BLOCKS OF GOSSAN AND BULL QUARTZ.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, DOLOMITE
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM FRIES OVERTHRUST
SIGNIFICANT LOCAL STRUCTURES.....3 PHASES OF DEFORMATION PRODUCED F1-F2 AGES OF DEFORMATION CORRELATIVE WITH PALEOZOIC OROGENIES?
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM

(ALMANDINE GARNET ZONE)
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATION FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRATION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
GEOLOGY COMMENTS.....MUCH MORE QUARTZ IS ASSOCIATED WITH THIS AREA THAN ON OTHER SEGMENTS OF THE GOSSAN LEAD. WRIGHT AND RAMAN (1948) FEEL THE DEPOSIT REPRESENTS A GROUP OF SMALL SULFIDE LENSES. THE TOPOGRAPHIC SITUATION DOES NOT FAVOR SECONDARY ENRICHMENT.
GENERAL COMMENTS.....AREA OUTLINED PROBABLY INCLUDES DAVIS AND STONE PROSPECTS.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1855 DIREXPL DALTON MINING CO.: OPENED MINE.
NON-USGS WORK.....1939 DIREXPL C.H. THOMPSON: DROVE SHAFTS AND DUG PITS.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....FONTAINE, W.M., 1883-84, NOTES ON THE GEOLOGY AND MINERAL RESOURCES OF THE FLOYD, VA., PLATEAU: THE VIRGINIAS, V. 4, P. 167, 178-180, 185-192; V. 5, P. 8-12.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
REFERENCE....CONLEY, J.F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33 P.

12. Davis Prospect

MRDS-REV RECORD NUMBER.....306
MRDS RECORD NUMBER.....W030851
RECORD TYPE.....X1M
REPORT DATE.....87 03
INFORMATION SOURCE.....123
FILE LINK ID.....306
REPORTER.....MEINTZER, ROBERT E. (SWEET, P.C)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 03
UPDATER.....MYERS, LESLEY L.
SITE NAME.....DAVIS PROSPECT
MINING DISTRICT/AREA.....DALTON HILL AREA/GOSSAN LEAD DISTRICT/ SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2560 FT
UTM NORTHING...4071935 EASTING...520720 ZONE...+17
LATITUDE.....36-47-38N LONGITUDE.....080-46-09W
ACCURACY.....EST +/- 1500 FT
POSITION FROM NEAREST LOCALITY.....APPROXIMATELY 2.5 KM (1.5 MILES) SE OF EARLY NEAR DALTON HILL CHURCH
LOCATION COMMENTS.....LAND HAS BEEN RECLAIMED SINCE MINING; EXACT LOCATION CANNOT BE DETERMINED. LOCATION AND ELEVATION GIVEN ARE FOR A CENTRAL POINT IN THE DALTON HILL AREA; PROSPECT WAS PROBABLY WITHIN A 1500 FT RADIUS OF CENTRAL POINT. LITERATURE SAYS ONLY THAT THIS PROSPECT WAS LOCATED NEAR THE DALTON HILL MINE. LOCATION FIELD CHECKED MARCH 3, 1987.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE PYR
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, GOETHITE, PYRITE
NON-PRODUCER MAIN.....CU ZN PB
NON-PRODUCER MINOR.....PYR1 FE PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL & COKE CO. (?)
OPERATOR.....TENNESSEE AND VIRGINIA MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....CURREY (1859) REPORTED NO WORK BEING DONE IN 1859.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENSE
DESCRIPTION OF WORKINGS COMMENTS.....NO WORKINGS REPORTED; AREA CHECKED FOR WORKINGS MARCH 3, 1987.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, FRIES OVERTHRUST
SIGNIFICANT LOCAL STRUCTURES.....3 PHASES OF DEFORMATION PRODUCED F1-F3; AGES OF DEFORMATION CORRELATIVE WITH PALEOZOIC OROGENIES
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM (ALMANDINE GARNET ZONE)
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
GEOLOGY COMMENTS.....MORE QUARTZ ASSOCIATED WITH DEPOSITS IN THIS AREA THAN IN OTHER SECTIONS OF THE GOSSAN LEAD. GALENA CONTENT OF ORES ALSO REPORTEDLY HIGHER IN THIS AREA.
GENERAL COMMENTS.....SEE DESCRIPTION OF DALTON HILL MINE. CURREY (1859) REPORTED NO DEVELOPMENT AT THIS SITE AND IT IS LIKELY THERE WAS NEVER ANY DEVELOPMENT.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1855 OTHER TENN. & VA. MINING CO.: OBTAINED PROPERTY.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P

REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
REFERENCE....CONLEY, J.F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33 P.

13. Early Prospect

MRDS-REV RECORD NUMBER.....281
MRDS RECORD NUMBER.....W030852
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....EARLY PROSPECT
MINING DISTRICT/AREA.....NATIVE LEAD/SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FANCY GAP, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-45- N LONGITUDE.....080-42- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN. ABOUT 4 KM (2.5 MI) SE OF HILLSVILLE.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....NATIVE COPPER, PROBABLY CHALCOPYRITE
MAIN ORE MINERALS.....NATIVE COPPER
COMMODITY INFO COMMENTS.....PROBABLY CHALCOPYRITE AT DEPTH.
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....PRE-1900
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....JAMES EARLY
EXPLORATION AND DEVELOPMENT COMMENTS.....VEIN WAS PROSPECTED AROUND 1880
DEPOSIT TYPE.....DISSEMINATED, METAMORPHIC
DEPOSIT FORM.....TABULAR
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....HORNBLENDE GNEISS
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....HORNBLENDE GNEISS (METAGABBRO)
PERTINENT MINERALS (NOT ORE).....QUARTZ, FELDSPAR, EPIDOTE, HORNBLENDE
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM
SIGNIFICANT ALTERATION.....METAMORPHOSED
PROCESS OF CONCENTRATION/ENRICHMENT.....METAMORPHISM; SUPERGENE ALTERATION OF SULFIDES.
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....HORNBLENDE GNEISS
FORMATION NAME.....LYNCHBURG FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....HORNBLENDE GNEISS
GEOLOGY COMMENTS.....ESPENSHADE AND OTHERS (1975) CALL THESE UNITS THE ASHE FORMATION.
WORK DONE BY USGS.....1970 RECON K.W. SHAW: RECON GEOLOGIC MAPPING (I-709-B)
NON-USGS WORK.....1880 DIREXPL POSSIBLE PROSPECTING WORK.
REFERENCE....BOYD, C.R., 1880, MINERAL WEALTH OF SOUTHWESTERN VIRGINIA: AMERICAN INSTITUTE OF MINING ENGINEERS TRANSACTIONS, V. 8, P. 338-348.
REFERENCE....BOYD, C.R., 1881, RESOURCES OF SOUTH-WEST VIRGINIA: NEW YORK, JOHN WILEY & SONS, 321 P.
REFERENCE....ESPENSHADE, G.H., RANKIN, D.W., SHAW, K.W., AND NEUMAN, R.B.: 1975, GEOLOGIC MAP OF THE EAST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA-VIRGINIA: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-B, SCALE 1:250,000.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P .
PRODUCTION COMMENTS.....IT IS DOUBTFUL THERE WAS ANY PRODUCTION.

14. Fairmont Copper Mine

MRDS-REV RECORD NUMBER.....305
MRDS RECORD NUMBER.....W030853
RECORD TYPE.....X1M
REPORT DATE.....87 04
INFORMATION SOURCE.....123
FILE LINK ID.....305
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 04
UPDATER.....MYERS, LESLEY L.
SITE NAME.....FAIRMONT COPPER MINE
SYNONYM NAME.....FAIRMOUNT COPPER MINE
MINING DISTRICT/AREA.....CRANBERRY CREEK SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA QUADRANGLE SCALE 1:24000
ELEVATION.....2480 FT
UTM NORTHING...4073170 EASTING...519860 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.1 KM (0.7 MI) ESE OF EARLY.
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN ARE FOR PARTIALLY COLLAPSED PORTAL. TURN NORTH ON TO STATE ROUTE 769 FROM U.S. HIGHWAY 52 (ACROSS FROM SMALL STORE). FOLLOW 769 TO CREST OF HILL, THEN TAKE FIRST LEFT ON TO A DIRT ROAD HEADING NORTH. 500 FT NORTH OF THIS INTERSECTION IS ANOTHER DIRT ROAD RUNNING TO THE NW. FOLLOW THIS ROAD APPROXIMATELY 1000 FEET, THEN CUT ACROSS THE CREEK VALLEY IN A S 50 W DIRECTION. PORTAL IS APPROXIMATELY 300 FT FROM ROAD, UP THE HILLSIDE. WORKINGS EXTEND 500 FT UP THE HILL. FIELD CHECKED 11/13/86, 3/13/87.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, NATIVE COPPER, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE, MALACHITE, COVELLITE.
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS (PRIMARILY MALACHITE AND COVELLITE).
MAJOR.....CU
POTEN.....ZN PB FE
OCCUR.....PYR1 AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1855
OWNER (PRESENT/LAST).....TEXAS GULF (FOREST PRODUCTS DIVISION)
OPERATOR.....TENNESSEE AND VIRGINIA MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPENED IN 1855 AND PROBABLY CLOSED AROUND 1860.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....12.2 UNITS...M
MAXIMUM WIDTH.....7.6 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DIP.....35 DEG. SE
DEPOSIT DESCRIPTION COMMENTS.....DEPTH TO TOP AND WIDTH GIVEN ABOVE REFER TO SECONDARY COPPER. GOSSAN IS 1.2 M WIDE IN ADIT AND EXPOSED ON SURFACE. WIDTH OF MINERALIZED ZONE IN AREA IS 45.7 M (ROSS, 1935).
DESCRIPTION OF WORKINGS.....B
LENGTH OF WORKINGS.....259.1 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....1859: CURREY REPORTS TOTAL DRIVAGE OF TUNNELS AT 213.4 M AND TOTAL DEPTH OF SHAFTS AT 45.7 M. 1986-87: WORKINGS EXTEND APPROXIMATELY 500 FT ALONG THE SURFACE. EXTENDING TO THE SW FROM THE PORTAL, UP THE HILL, ARE 2 COLLAPSED SHAFTS AND 2 SMALLER PITS. ONE SHAFT HAS GOOD EXPOSURES OF ROCK IN ITS WALLS, BUT IT'S VERY UNSTABLE (CONTINUALLY COLLAPSING). A TRENCH EXTENDS NE FROM THE PORTAL IN A N 60 E DIRECTION AND LEADS TO A LARGE OUTSLOPE DUMP.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....SULFIDIC QUARTZ-MUSCOVITE SCHIST, QUARTZ-MUSCOVITE GNEISS, AMPHIBOLITE
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, OLI GOCLASE, DOLOMITE, CHLORITE ACTINOLITE, BIOTITE, GARNET.
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, 3 PHASES OF DEFORMATION REGIONALLY
SIGNIFICANT LOCAL STRUCTURES.....GENERAL STRIKE OF TRENCHES AND ROCK EXPOSED IN SHAFT WALLS IS N 60 E
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM (ALMANDINE GARNET GRADE)
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRATION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT
NON-USGS WORK.....1855 DIREXPL TENNESSEE & VIRGINIA MINING CO.: PRODUCTION BEGUN.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE.....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRG INIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE.....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOLOGICAL SURVEY PROFFESSIONAL PAPER 179, 165 P.
REFERENCE.....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE.....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
REFERENCE.....CONLEY, J.F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33 P.
SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)

RESERVES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	100.000	TONS	1948	GOSSAN FE

SOURCE OF RESERVES INFORMATION.....WRIGHT AND RAMAN (1948).
RESERVES COMMENTS.....RESERVES ARE FOR ENTIRE SEGMENT (BEN WHITE, BROWN & STEPHENSON, FAIRMONT, AND CRANBERRY MINES).

15. Galup Mine

MRDS-REV RECORD NUMBER.....304
MRDS RECORD NUMBER.....W030854
RECORD TYPE.....X1M
REPORT DATE.....80 03
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....GALUP MINE
MINING DISTRICT/AREA.....BETTY BAKER SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... HILLSVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2570 FT (784 M)
UTM NORTHING...4076650 EASTING...523710 ZONE...+17
LATITUDE.....36-50-14N LONGITUDE.....080-44-03W
POSITION FROM NEAREST LOCALITY.....3.3 KM (2.1 MI) WNW OF LIBERTY HILL.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED; ABOUT 0.2 KM (0.1 MI) WEST OF VA. HWY 100, 1.3 KM (0.8 MI) NORTH OF JUNCTION WITH STATE ROAD 771.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE PYR
ORE MATERIALS.....CHALCOCITE, PYRRHOTITE, PYRITE, SPHALERITE, GALENA, GOETHITE, HEMATITE
MAJOR.....CU
POTEN.....ZN PB
OCCUR.....PYR1 PYR FE
PRODUCTION.....Y
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-CIVIL WAR
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL & COKE CO. (HALE & COLETRAIN).
EXPLORATION AND DEVELOPMENT COMMENTS.....THIS MINE WAS PROBABLY DEVELOPED DURING THE 1850'S, BUT THE ONLY REFERENCE TO IT IS FIG. 88 IN WATSON (1907).
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....LINEAR, POD/LENS
STRIKE.....N. 45 DEG. E.
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS ARE NOT DESCRIBED.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST (?)
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....GOSSAN LEAD OVERTHRUST; BLUE RIDGE ANTICLINORIUM NE-SW TREND, FRIES OVER THRUST
SIGNIFICANT ALTERATION.....REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT FOR GOSSAN AND COPPER. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....DIREXPL MINE OPENED
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL 72.
REFERENCE.....HENRY, D.K., CRAIG, J.R., AND GILBERT, M.C., 1979, ORE MINERALOGY OF THE GREAT GOSSAN LEAD, VIRGINIA: ECON. GEOL., V. 74, NO. 3, P. 645-656.
REFERENCE.....KLINE, M.H., AND BALLARD, T.J., 1949, INVESTIGATION OF THE GREAT GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. BUR. MINES REPT. INV. 4532, 39 P.

REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOL. SURV. OPEN-FILE REPT., 21 P.

16. Gardner Mine

MRDS-REV RECORD NUMBER.....283
MRDS RECORD NUMBER.....W030855
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....GARDNER MINE
MINING DISTRICT/AREA.....NATIVE LEAD/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... DUGSPUR, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-47- N LONGITUDE.....080-36- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN.
LOCATION COMMENTS.....LOCATED SE OF DUGSPUR AND EAST OF BIG REED ISLAND CREEK.
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....CHALCOPYRITE, NATIVE COPPER, PYRITE
COMMODITY INFO COMMENTS.....NATIVE COPPER OCCURRED IN WEATHERED OUTCROP.
MAJOR.....CU
OCCUR.....PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....VIRGINIA COPPER CO.
OPERATOR.....VIRGINIA COPPER CO.
ECONOMIC COMMENTS.....WRIGHT AND RAMAN (1948) FELT FURTHER INVESTIGATION WAS UNWARRANTED DUE TO SPARSE AND ERRATIC MINERALIZATION.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPENED BY VIRGINIA COPPER CO. PRIOR TO 1907.
DEPOSIT TYPE.....DISSEMINATED, METAMORPHIC
DEPOSIT FORM.....TABULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N50-65 DEG E
DIP.....60 DEG. SE
DEPOSIT DESCRIPTION COMMENTS.....CHALCOPYRITE OCCURS AS SLICKENSIDED BALLS (UP TO SEVERAL CM IN DIAMETER) IN FISSILE SCHIST. ALSO AS GRAINS IN PODS OF QUARTZ AND EPIDOTE IN SCHIST.
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....OPENED BY TUNNEL AND SHAFT.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....ACTINOLITE SCHIST
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....ACTINOLITE SCHIST (METAGABBRO?)
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, ACTINOLITE, HORNBLENDE, MAGNETITE.
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW, BLUE RIDGE ANTICLINORIUM
SIGNIFICANT ALTERATION.....METAMORPHOSED
PROCESS OF CONCENTRATION/ENRICHMENT.....METAMORPHISM
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....HORNBLENDE GNEISS
FORMATION NAME.....LYNCHBURG FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....HORNBLENDE GNEISS
GEOLOGY COMMENTS.....STOSE AND STOSE (1957) CONSIDER AMPHIBOLE SCHIST AND GNEISS TO BE A METAGABBRO. DIKE CUTS FOLIATION OF LYNCHBURG FORMATION AT AN ANGLE OF 20 DEG. (WEED, 1911).
GENERAL COMMENTS.....NATIVE LEAD IS ALSO CALLED THE TRAP LEAD.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....DIREXPL VIRGINIA COPPER CO. (?): OPENED MINE.
NON-USGS WORK.....1939 RECON VA. GEOL. SURV.: BULL. 72.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.

17. Goad Mine

MRDS-REV RECORD NUMBER.....303
MRDS RECORD NUMBER.....W030856
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....GOAD MINE
MINING DISTRICT/AREA.....NATIVE LEAD/SOUTHERN SECTION - BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... DUGSPUR, VA QUADRANGLE SCALE 1:24000
LATITUDE.....36-47- N LONGITUDE.....080-36- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....LOCATED SE OF DUGSPUR AND EAST OF BIG REED ISLANDCREEK.
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....CHALCOPYRITE, NATIVE COPPER, PYRITE
COMMODITY INFO COMMENTS.....NATIVE COPPER OCCURRED IN WEATHERED OUTCROP.
MAJOR.....CU
OCCUR.....PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....VIRGINIA COPPER CO.
OPERATOR.....VIRGINIA COPPER CO.
ECONOMIC COMMENTS.....WRIGHT AND RAMAN (1948) FELT FURTHER INVESTIGATION WAS UNWARRANTED DUE TO SPARSE AND ERRATIC MINERALIZATION.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPENED BY VIRGINIA COPPER CO. PRIOR TO 1907.
DEPOSIT TYPE.....DISSEMINATED, METAMORPHIC
DEPOSIT FORM.....TABULAR
MAXIMUM THICKNESS.....4.6 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N50-65 DEG. E
DIP.....60 DEG. SE
DEPOSIT DESCRIPTION COMMENTS.....CHALCOPYRITE OCCURS AS SLICKENSIDED BALLS UP TO 2-3 CM IN DIAMETER IN SCHIST. PYRITE MIRRORS AND STREAKS ALSO OCCUR.
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....ONE SHAFT OF UNKNOWN DEPTH AND ONE TUNNEL 61.3 M LONG WERE DRIVEN; BOTH WERE FULL OF WATER IN 1911.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....ACTINOLITE SCHIST
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....ACTINOLITE SCHIST (METAGABBRO?)
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, ACTINOLITE, HORNBLENDE, MAGNETITE.
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW, BLUE RIDGE ANTICLINORIUM
SIGNIFICANT ALTERATION.....METAMORPHOSED
PROCESS OF CONCENTRATION/ENRICHMENT.....METAMORPHISM
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....HORNBLENDE GNEISS
FORMATION NAME.....LYNCHBURG FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....HORNBLENDE GNEISS
GEOLOGY COMMENTS.....STOSE AND STOSE (1957) CONSIDER AMPHIBOLE SCHIST AND GNEISS TO BE A METAGABBRO. DIKE CUTS FOLIATION OF LYNCHBURG FORMATION AT AN ANGLE OF 20 DEG. (WEED, 1911)
GENERAL COMMENTS.....NATIVE LEAD IS ALSO CALLED THE TRAP LEAD.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....DIREXPL VIRGINIA COPPER CO. (?): OPENED MINE.
NON-USGS WORK.....1939 RECON VA. GEOL. SURV.: BULL. 72.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.

18. Gossan Howard Mine

MRDS-REV RECORD NUMBER.....282
MRDS RECORD NUMBER.....W031206
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....GOSSAN HOWARD MINE
MINING DISTRICT/AREA.....IRON RIDGE SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION - BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... GALAX, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2540 FT (770 M)
UTM NORTHING...4062340 EASTING...506110 ZONE...+17
LATITUDE.....36-42-31N LONGITUDE.....080-55-54W
POSITION FROM NEAREST LOCALITY.....5.2 KM (3.2 MI) NORTH OF GALAX.

LOCATION COMMENTS.....ON SOUTH SIDE OF STATE ROAD 607, 0.9 KM (0.6 MI) NORTH OF JUNCTION WITH STATE ROAD 721.
COMMODITIES PRESENT.....ZN CU PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, CUBANITE, MACKINAWITE, TETRAHEDRITE, STANNITE, ARSENOPYRITE
GENERAL ANALYTICAL DATA.....AVG. GRADE: 35% FE, 1.5% ZN, 0.5% CU, 0.1% PB, 25% S, 37.9% GANGUE. (WT%)
COMMODITY INFO COMMENTS.....ORE IS PREDOMINANTLY PYRRHOTITE (GREATER THAN 90%).
MAJOR.....PYR1
MINOR.....ZN CU PB FE AS
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....1789
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1962
OWNER (PRESENT/LAST).....ALLIED CHEMICAL CORP.
OPERATOR.....ALLIED CHEMICAL CORP.
EXPLORATION AND DEVELOPMENT COMMENTS.....PIT INTERMITTENTLY OPERATED FOR PYRRHOTITE FOR CAPTIVE USE.
DEPOSIT TYPE.....STRATABOUND & STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....MEDIUM
STRIKE.....NE-SW
DIP.....SE
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....OPEN PIT.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST, CHLORITE SCHIST
PERTINENT MINERALS (NOT ORE).....CHLORITE, QUARTZ, CALCITE, BIOTITE, MUSCOVITE, ACTINOLITIC-HORNBLENDE, ACTINOLITE-TREMOLITE, GARNET (SPESSARTINE), RUTILE, ILMENITE, GRAPHITE, NATIVE BISMUTH
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND, GOSSAN LEAD OVERTHRUST, FRIES OVERTHRUST, MAIN SULFIDE ZONE STRIKES N. 45 DEG. E. AND DIPS 30-60 DEG. SE.
SIGNIFICANT LOCAL STRUCTURES.....FOLIATION STRIKES NE, DIPS SE.
SIGNIFICANT ALTERATION.....(ALMANDINE) - MEDIUM GRADE REGIONAL METAMORPHISM HAS CONVERTED PYRITIC MASS TO PYRRHOTITE DURING ARCADIAN (?) OROGENY.
PROCESS OF CONCENTRATION/ENRICHMENT.....SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GEOLOGY COMMENTS.....PYRRHOTITE DETERMINED TO BE PYRRHOTITE-6C.
GENERAL COMMENTS.....PREVIOUS OPERATIONS IN AREA DISCUSSED UNDER IRON RIDGE MINE; ADDITIONAL REFERENCES LISTED THERE UNDER. NOTE: HENRY AND OTHERS (1979) ERRONE OUSLY CALL IRON RIDGE MINE THE "IRON KING" MINE.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1962 DIREXPL ALLIED CHEMICAL CORP.: OPENED PIT
NON-USGS WORK.....1976 OTHER ALLIED CHEMICAL CORP: CEASED OPERATION
REFERENCE....HENRY, D.K., CRAIG, J.R., AND GILBERT, M.C., 1979, ORE MINERALOGY OF THE GREAT GOSSAN LEAD, VIRGINIA: ECON. GEOL., V.74, NO. 3, P. 645-656.
REFERENCE....POOLE, J.L., 1973, IRON SULFIDE MINES IN VIRGINIA: VIRGINIA MINERALS, V. 19, NO. 3, P. 29-33.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOL. SURV. PROF. PAPER 179, 165 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, BULL. 72, 233 P.
REFERENCE....GOOD, R. S., 1971, MELANTERITE-ROZENITE-PYRRHOTITE OCCURRENCE IN CARROLL COUNTY, VIRGINIA: VIRGINIA MINERALS, V. 17, N. 1, P. 10.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE PYR1	EST	2.70000	MET TONS		PYR1, APPROXIMATE ANNUAL PRODUCTION

SOURCE OF PRODUCTION INFORMATION.....HENRY AND OTHERS (1979)
PRODUCTION COMMENTS.....PRODUCTION WAS INTERMITTENT.
RESERVES AND RESOURCES COMMENTS.....SEE IRON RIDGE MINE

19. Gossan Mine

MRDS-REV RECORD NUMBER.....280
MRDS RECORD NUMBER.....W023155
RECORD TYPE.....X1M
DEPOSIT NUMBER.....5103500001
REPORT DATE.....75
INFORMATION SOURCE.....123
FILE LINK ID.....USBM, VDMR
UPDATED.....79 08
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....GOSSAN MINE
SYNONYM NAME.....CHESTNUT YARD MINE, MONARAT MINES
MINING DISTRICT/AREA.....IRON RIDGE SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION - BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....PRIVATE
SECOND QUADRANGLE NAME...GALAX SECOND QUAD SCALE 1:24000
ELEVATION.....2540 FT (770 M)
UTM NORTHING...4063100 EASTING...506940 ZONE...+17
LATITUDE.....36-42-55N LONGITUDE.....080-55-20W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....5.9 KM (3.7 MI) NORTH OF GALAX.
LOCATION COMMENTS.....0.2 KM (0.1 MI) ALONG SERVICE ROAD SSW OF JUNCTION WITH STATE ROAD 607, 2.7 KM (1.7 MI) BY ROAD NE OF JUNCTION WITH STATE ROAD 721 NORTH OF HICKORY FLAT. NE ADIT LOCATED AT UTM COORDINATES: N4063700, E507220.
COMMODITIES PRESENT.....PYR1 ZN CU PB FE
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA
GENERAL ANALYTICAL DATA.....AVG GRADE FOR GOSSAN LEAD SULFIDE ORE: 35% FE, 1.5% ZN, 0.5% CU, 0.1% PB, 25% S AND 37.9% GANGUE (WT%).
COMMODITY INFO COMMENTS.....ORE IS PREDOMINANTLY PYRRHOTITE
MAJOR.....PYR1
MINOR.....FE
POTEN.....ZN CU PB
PRODUCTION.....M
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1789
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1925
OWNER (PRESENT/LAST).....ALLIED CHEMICAL CORPORATION
OPERATOR.....PULASKI MINING CO OF GENERAL CHEMICAL CO
MILL CAPACITY PER YR. (THOUS. UNITS)...190
YR APPLICABLE.....1962
ECONOMIC COMMENTS.....MILL ERECTED IN 1938.
EXPLORATION AND DEVELOPMENT COMMENTS.....EXPLORATION AND DEVELOPMENT DELINEATED HEREIN IS FOR UNDERGROUND MINING OPERATION ONLY. FOR SURFACE OPERATIONS, SEE IRON RIDGE MINE AND GOSSAN HOWARD MINE.
DEPOSIT TYPE.....STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
MAXIMUM WIDTH.....30 UNITS...M
DEPOSIT SIZE.....MEDIUM
STRIKE.....N40-45 DEG E
DIP.....30-45 DEG SE
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....212 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....MINE WAS DEVELOPED ON SEVEN LEVELS AT 30 M INTERVALS. ONLY A RELATIVELY SMALL AMOUNT OF ECONOMICALLY MINEABLE ORE WAS MINED ON THE 7TH LEVEL. IN 1974, THE UNDERGROUND MINE WAS COVERED BY THE DUMP AND TAILINGS POND. THE ADIT BY CHESTNUT CREEK WAS CLOSED OFF BY A WOODEN DOOR.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST, SERICITE PHYLLITE, BIOTITE-CHLORITE SCHIST, GNEISS
PERTINENT MINERALS (NOT ORE).....CHLORITE, QUARTZ, CALCITE, BIOTITE, MUSCOVITE, ACTINOLITIC-HORNBLENDE, ACTINOLITE-TREMOLITE, GARNET (SPESSARTINE), RUTILE, ILMENITE, GRAPHITE.
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, GOSSAN LEAD OVERTHRUST, FRIES OVERTHRUST, NE-SW TREND, MAIN SULFIDE ZONE STRIKES N 45 DEG E AND DIPS 30-60 SE.
SIGNIFICANT ALTERATION.....(ALMANDINE)-MEDIUM GRADE REGIONAL METAMORPHISM HAS CONVERTED PYRITIC MASS TO PYRRHOTITE DURING ACADIAN(?) OROGENY.
PROCESS OF CONCENTRATION/ENRICHMENT.....SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GENERAL COMMENTS.....THIS MINE REPRESENTS THE UNDERGROUND MINING ACTIVITY IN THE IRON RIDGE SEGMENT, ALSO SEE REPORT FOR THE IRON RIDGE MINE INCLUDING HUEY AND BUMBARGER PITS PLUS FORMER OPERATIONS AND GOSSAN HOWARD MINE; ESPECIALLY FOR ADDITIONAL REFERENCES.
WORK DONE BY USGS.....1935 OTHER C S ROSS: PROF PAPER 179.
WORK DONE BY USGS.....1948 OTHER R J WRIGHT & N D RAMAN: OPEN FILE REPORT.
NON-USGS WORK.....1925 DIREXPL PULASKI MINING CO: BEGAN UNDERGROUND MINING
NON-USGS WORK.....1962 OTHER GENERAL CHEMICAL DIV: CEASED MINING
NON-USGS WORK.....1974 RECON VA DIV MIN RES: INSPECTED SITE
REPORTS AVAILABLE.....WRIGHT, R J AND RAMAN, N D, 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: US GEOL SURV OPEN FILE REPORT, 19 P
REFERENCE....HENRY, D K, CRAIG, J R, AND GILBERT, M C, 1979, ORE MINERALOGY OF THE GREAT GOSSAN LEAD, VIRGINIA: ECON GEOL V 74, NO 3, P 645-656.
REFERENCE....GENERAL CHEMICAL DIVISION, 1962, BRIEF OUTLINE OF GOSSAN MINE OPERATIONS, GENERAL CHEMICAL DIVISION, ALLIED CHEMICAL CORPORATION: VIRGINIA DIVISION OF MINERAL RESOURCES, OPEN-FILE REPORT, 11 P
REFERENCE....POOLE, J L, 1973, IRON SULFIDE MINES IN VIRGINIA: VIRGINIA MINERALS, V 19, NO 3, P 29-33.
REFERENCE....STOSE, A J, AND STOSE, G W, 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 72, 233 P

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE SUL	ACC	5267.	MET TONS	1905-1962*	24-28% S; FE *
FE	SML			1925-1962	
PYR1	MED			1925-1962	

SOURCE OF PRODUCTION INFORMATION.....POOLE (1973)
PRODUCTION COMMENTS.....PRODUCTION INCLUDES ORE REMOVED FROM BUMBARGER AND HUEY PITS. ORE WAS SHIPPED TO ACID PLANT IN PULASKI AND UNTIL 1930.

CINDERS WERE TURNED OVER TO THE PULASKI IRON COMPANY. IRON FIRST REFINED IN PULASKI (UNTIL 1930), THEN IN BIRMINGHAM, ALA.
RESERVES AND RESOURCES COMMENTS.....SEE IRON RIDGE MINE

20. Iron Ridge Mine

MRDS-REV RECORD NUMBER.....284
MRDS RECORD NUMBER.....W030857
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....IRON RIDGE MINE
SYNONYM NAME.....GREAT OUTBURST MINE, MONARAT MINE, HUEY PIT, BUMBARGER PIT
MINING DISTRICT/AREA.....IRON RIDGE SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION - BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... GALAX, VA QUADRANGLE SCALE 1:24000
ELEVATION.....2580 FT (782 M)
UTM NORTHING...4063080 EASTING...506720 ZONE...+17
LATITUDE.....36-42-55N LONGITUDE.....080-55-29W
POSITION FROM NEAREST LOCALITY.....5.7 KM (3.6 MI) NORTH OF GALAX.
LOCATION COMMENTS.....0.15 KM (0.1 MI) SE OF STATE ROAD 607, 2.2 KM (1.3 MI) BY ROAD NNE OF JUNCTION WITH STATE ROAD 721. LOCATION IS FOR BUMBARGER PIT, HUEY PIT IS 0.6 KM (0.4 MI) TO THE SW (UTM +17, N 4062570, E 506430).
COMMODITIES PRESENT.....PYR1 CU FE ZN PB AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, CUBANITE, MACKINAWITE, ARSENOPYRITE, CHALCOCITE, COVELLITE, HEMATITE, GOETHITE.
GENERAL ANALYTICAL DATA.....AVG GRADE: 35% FE, 1.5% ZN, 0.5% CU, 0.1% PB, 25% S AND 37.9% GANGUE (WT%).
COMMODITY INFO COMMENTS.....ORE IS PREDOMINANTLY PYRRHOTITE
MAJOR.....PYR1 CU
MINOR.....FE
POTEN.....ZN PB
OCCUR.....AS
PRODUCTION.....M
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1789
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1789
OWNER (PRESENT/LAST).....ALLIED CHEMICAL CORPORATION
OPERATOR.....PULASKI MINING CO. OF GENERAL CHEMICAL CO.
MILL CAPACITY PER YR. (THOUS. UNITS)...190
YR APPLICABLE.....1962
ECONOMIC COMMENTS.....MILL ERECTED IN 1938.
EXPLORATION AND DEVELOPMENT COMMENTS.....AREA FIRST WORKED ABOUT 1789 FOR EXTRACTION OF IRON FROM GOSSAN; DURATION OF OPERATION UNKNOWN BUT APPARENTLY SHORT. FROM 1850 TO 1859, SUPERGENE COPPER ORE (SMUT) MINED BY WISTAR COPPER MINING CO.; MINE KNOWN AS THE GREAT OUTBURST. IN 1880, THE VIRGINIA MINING CO BEGAN MINING GOSSAN IRON ORE. BY 1900, THE GOSSAN WAS DEPLETED. IN 1905, GENERAL CHEMICAL CO. (LATER SUBSIDIARY OF ALLIED CHEMICAL CORP) ACQUIRED THE MINE AND OPERATED IT UNDER THE PULASKI MINING CO. FOR PYRRHOTITE (FOR ACID PRODUCTION) PRIMARILY AND ALSO FOR BY PRODUCT IRON. THE HUEY PIT WAS BEGUN IN 1905 OR SHORTLY THEREAFTER, THE BUMBARGER PIT WAS DEVELOPED SOMETIME AFTERWARDS. THE PITS WERE WORKED UNTIL 1925 WHEN GOSSAN (UNDERGROUND) MINE WAS OPENED.
DEPOSIT TYPE.....STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE, GOSSAN
DEPOSIT FORM.....POD/LENS
MAXIMUM THICKNESS.....5 UNITS...M
DEPOSIT SIZE.....MEDIUM
STRIKE.....N. 45 DEG. E.
DIP.....45 DEG. SE
DEPOSIT DESCRIPTION COMMENTS.....THICKNESS ABOVE MEASURED IN WALL; PROBABLY IN MIDDLE OF PIT, LENS WAS THICKER.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....HUEY PIT ABOUT 30 M DEEP, BUMBARGER PIT ABOUT 40 M DEEP. IN 1973, NUMEROUS OPEN TRENCHES AND PITS, SEVERAL FOUNDATIONS, HOIST BUILDING, AND EXTENSIVE DUMP WERE EVIDENT.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....MICACEOUS QUARTZITE, META-ARKOSE, CHLORITE SCHIST, QUARTZ-MUSCOVITE SCHIST, PHYLLITE (LOCALLY GRAPHITIC), SLATY METASILTSTONE
PERTINENT MINERALS (NOT ORE).....CHLORITE, QUARTZ, CALCITE, BIOTITE, MUSCOVITE, ACTINOLITIC-HORNBLENDE, ACTINOLITE-TREMOLITE, GARNET (SPESSARTINE), RUTILE, ILMENITE, GRAPHITE, COQUIMBITE, ROZENITE, COPIAPITE, PICKERINGITE, MELANTERITE, FERROHEXAHYDRITE, SZOMOLNIKITE, AND CHALCANTHITE.
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND, GOSSAN LEAD OVERTHRUST, FRIES OVERTHRUST, MAIN SULFIDE ZONE STRIKES N. 45 DEG. E. AND DIPS 30-60 DEG. SE.
SIGNIFICANT LOCAL STRUCTURES.....FOLIATION STRIKES NE, DIPS 15-30 DEG. SE.
SIGNIFICANT ALTERATION.....(ALMANDINE)-MEDIUM GRADE REGIONAL METAMORPHISM HAS CONVERTED PYRITIC MASS TO PYRRHOTITE DURING ARCADIAN (?) OROGENY.
PROCESS OF CONCENTRATION/ENRICHMENT.....SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GENERAL COMMENTS.....UNDERGROUND WORKINGS IN REGION KNOWN AS AND LISTED UNDER "GOSSAN MINE". MODERN DAY OPERATIONS LISTED UNDER GOSSAN HOWARD MINE. FOR REFERENCES CONSULT LISTINGS UNDER A FOREMENTIONED MINES AS WELL AS THOSE LISTED BELOW. GOSSAN LEAD INITIALLY KNOWN AS THE "NORTHERN LEAD" AND AS THE "COPPER LODE." NOTE: THIS MINE IS ERRONEOUSLY LISTED AS THE "IRON KING" MINE IN HENRY, D.K., CRAIG, J.R., AND GILBERT, M.C., 1979, ORE MINERALOGY OF THE GREAT GOSSAN LEAD, VIRGINIA: ECON. GEOL., V. 74, P. 645-656.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1789 DIREXPL EARLIEST MINING OF GOSSAN FOR IRON
NON-USGS WORK.....1850 DIREXPL WISTAR COPPER MINING CO.: MINING OF SUPERGENE COPPER.
NON-USGS WORK.....1880 DIREXPL VIRGINIA MINING CO.: MINING OF GOSSAN FOR IRON AND COPPER, LATER MINING OF PYRRHOTITE
REPORTS AVAILABLE.....WRIGHT AND RAMAN (1948), GENERAL CHEMICAL DIVISION (1962). NOTE REFERENCE LIST BELOW AND FOR GOSSAN MINE AND GOSSAN HOWARD MINE.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT HAWS AND CO.; REPRINTED IN PART UNDER THE COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....GAIR, J.E. (ED.), 1978, MASSIVE SULFIDES OF VIRGINIA FIELD TRIP GUIDEBOOK: INTN'L GEOL. CORRELATION PROGRAMME, PROJECT NO. 60, 112 P.
REFERENCE....GAIR, J.E. AND SLACK, J.F., 1978, STRATABOUND MASSIVE SULFIDE DEPOSITS OF THE U.S. APPALACHIANS: REVIEW OF STRATABOUND APPALACHIAN-CALEDONIAN SULFIDE DEPOSITS: IRELAND GEOL. SURVEY (IN PRESS).
REFERENCE....GOOD, R. S., 1980, GEOCHEMISTRY OF DUMPS AND DRAINAGE AT GOSSAN LEAD MINE, GALAX, VIRGINIA: VIRGINIA MINERALS, V. 26, N. 1, P. 9.
REFERENCE....WRIGHT, R.J. AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOL. SURV. OPEN FILE REPORT, 19 P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
FE	SML			1880-1900	ORE: 41-42% FE
FE	SML			1905-1925	
CU	SML			1850-1859	
PYR1	MED			1905-1925	
ORE SUL	ACC	5267.	MET TONS	1905-1962*	24-28% S; FE; *

SOURCE OF PRODUCTION INFORMATION.....POOLE (1973)
PRODUCTION COMMENTS.....* INCLUDES PRODUCTION FROM GOSSAN MINE, PROBABLY ABOUT 15% OF PRODUCTION CAME FROM HUEY AND BUMBARGER PITS.

RESERVES AND POTENTIAL RESOURCES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	18000.	MET TONS	1978	ZN, PB, CU, PYR1

SOURCE OF RESERVES AND RESOURCES INFORMATION.....GAIR, & SLACK (1978)
RESERVES AND RESOURCES COMMENTS.....COMBINED FIGURE FOR IRON RIDGE & BETTY BAKER MINES.

21. Kincannon Property Mine

MRDS-REV RECORD NUMBER.....297
MRDS RECORD NUMBER.....W030858
RECORD TYPE.....X1M
REPORT DATE.....80 03
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D.C.)
SITE NAME.....KINCANNON PROPERTY MINE
MINING DISTRICT/AREA.....LITTLE REED ISLAND SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2300 FT (701 M)
UTM NORTHING...4074010 EASTING...520630 ZONE...+17
LATITUDE.....36-48-49N LONGITUDE.....080-46-07W
POSITION FROM NEAREST LOCALITY.....1.85 KM (1.15 MI) SE OF RICHARDSON.
LOCATION COMMENTS.....APPROXIMATE LOCATION, NOT FIELD CHECKED. ABOUT 1.0 KM (0.6 MI) NW OF STATE ROAD 769, 1.3 KM (0.8 MI) NE OF JUNCTION WITH STATE ROAD 770. ADDITIONAL WORKINGS LOCATED NEAR CREEK TO SW AND NE.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, NATIVE COPPER, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE.
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS (PRIMARILY CHALCOCITE, ALSO NATIVE COPPER AND CUPRITE).
MAJOR.....CU
POTEN.....ZN PB
OCCUR.....PYR1 FE AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR

NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-CIVIL WAR
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL & COKE CO. (LEVINE DIXON/WALTER WOOD).
EXPLORATION AND DEVELOPMENT COMMENTS.....CURREY (1859) REPORTED THAT OPERATIONS WERE IN PROGRESS AND THE COMPANY WAS ATTEMPTING TO LOCATE PRIMARY CHALCOPYRITE FOR MINING.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
MAXIMUM WIDTH.....1.2 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 45 DEG. E.
DEPOSIT DESCRIPTION COMMENTS.....PRIMARY SULFIDES WERE EXPOSED IN ROADCUT ALONG STATE ROAD 769 (WRIGHT AND RAMAN, 1948, P. 10).
DESCRIPTION OF WORKINGS.....B
LENGTH OF WORKINGS.....79 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....WRIGHT AND RAMAN (1948) REPORT THREE ADITS AND INDICATE ONE PROSPECT PIT (FIG. 2). THEY REPORT NORTHERN ADIT AS 18.3 M LONG, ONE OF THE SOUTHERN ADITS AS 61.0 M OPEN UNTIL CAVE-IN, AND DO NOT REPORT THE LENGTH OF SECOND SOUTHERN ADIT.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....LIMONITIC QUARTZ-MUSCOVITE SCHIST, GNEISS
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, FRIES OVERTHRUST, GOSSAN LEAD OVERTHRUST, MAIN SULFIDE ZONE STRIKES N. 45 DEG. E. AND DIPS 30-60 DEG. SE.
SIGNIFICANT ALTERATION.....REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT
NON-USGS WORK.....DIREXPL TUNNELING CONDUCTED.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
SOURCE OF PRODUCTION INFORMATION.....CURREY (1859), WRIGHT AND RAMAN (1948)
PRODUCTION COMMENTS.....PROBABLY LIMITED PRODUCTION OF COPPER ORE WAS MADE IN LATE 1850'S.

RESERVES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	0.00000	MT	1948	SECONDARY CU ORE

SOURCE OF RESERVES INFORMATION.....WRIGHT AND RAMAN, 1948.

22. Kirkbridge Mine

MRDS-REV RECORD NUMBER.....296
MRDS RECORD NUMBER.....W030859
RECORD TYPE.....X1M
REPORT DATE.....80 03
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....KIRKBRIDE MINE
SYNONYM NAME.....KIRKBRID MINE
MINING DISTRICT/AREA.....SARAH ELLEN SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA QUADRANGLE SCALE 1:24000
ELEVATION.....2550 FT (777 M)
UTM NORTHING...4071000 EASTING...516800 ZONE...+17
LATITUDE.....36-47-11N LONGITUDE.....080-48-42W
POSITION FROM NEAREST LOCALITY.....2.7 KM (1.8 MI) NNW OF FIVE FORKS.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED, MINE WORKINGS PROBABLY EXTEND TO STREAMS TO NE AND SW. ON SE SLOPE OF RIDGE, ABOUT 0.8 KM (0.5 MI) NE OF EXTENSION OF STATE ROAD 744, 1.7 KM (1.1 MI) NW OF JUNCTION WITH STATE ROAD 705.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCEN TRATED ON SUPERGENE MINERALS (PRIMARILY COVELLITE).
MAJOR.....CU
POTEN.....ZN PB FE
OCCUR.....PYR1 AS
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1859
OWNER (PRESENT/LAST).....ALLIED CHEMICAL CO. (KIRKBRIDE-VAUGHAN TRACT).
OPERATOR.....KIRKBRIDE MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINING OPERATIONS BEGUN IN 1859 AND PROBABLY CEASED THAT YEAR OR IN 1860.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....3.0 UNITS...M
MAXIMUM THICKNESS.....0.9 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....3.0 UNITS...M
LENGTH OF WORKINGS.....27.4 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....CURREY (1859) REPORTED TOTAL DRIVAGE OF LEVELS AS 12.2 M AND TOTAL DEPTH OF SHAFTS AS 15.2 M.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST, QUARTZ-MUSCOVITE GNEISS.
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, FRIES OVERTHRUST, GOSSAN LEAD OVERTHRUST, PLAIN SULFIDE ZONE STRIKES N. 45 DEG. E. AND DIPS 30-60 DEG. SE.
SIGNIFICANT ALTERATION.....REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT OF COPPER ORES. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1859 DIREXPL KIRKBRIDE MINING CO.: OPENED MINE
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE CU	ACC	0.03000	TONS	1859	14% CU

SOURCE OF PRODUCTION INFORMATION.....CURREY (1859).

RESERVES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	750.000	TONS	1935	GOSSAN FE

SOURCE OF RESERVES INFORMATION.....ROSS (1935).
RESERVES COMMENTS.....PROBABLY INCLUDES SARAH ELLEN, WILDCAT, AND CRANBERRY CREEK SEGMENTS.

23. Leonard Mine

MRDS-REV RECORD NUMBER.....290
MRDS RECORD NUMBER.....W030861
RECORD TYPE.....X1M
REPORT DATE.....80 04
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....LEONARD MINE
SYNONYM NAME.....CLIFTON MINE, CLIFTON COPPER AND SILVER MINE
MINING DISTRICT/AREA.....IRON RIDGE SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... GALAX, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2600 FT (793 M)
UTM NORTHING...4061140 EASTING...505280 ZONE...+17
LATITUDE.....36-41-52N LONGITUDE.....080-56-27W
POSITION FROM NEAREST LOCALITY.....0.8 KM (0.5 MI) WEST OF HICKORY FLAT.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. ABOUT 0.2 KM (0.1 MI) SOUTH OF STATE ROAD 721, 0.8 KM (0.5 MI) SW OF JUNCTION WITH STATE ROAD 607.
COMMODITIES PRESENT.....CU FE ZN PB PYR1 AS

ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
GENERAL ANALYTICAL DATA.....AN EARLY ANALYSIS REPORTED PRESENCE OF NI AND AG (BOYD, 1881, P. 279), THOUGH THIS ANALYSIS WAS DOUBTED BY MANY. FONTAINE (1884, P. 10) REPORTED NO GOLD OR SILVER.
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS AND CHALCOPYRITE.
MAJOR.....CU FE
POTEN.....ZN PB
OCCUR.....PYR1 AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1789
OWNER (PRESENT/LAST).....WISTAR COPPER MINING CO. (?)
OPERATOR.....WISTAR COPPER MINING CO.(?)
EXPLORATION AND DEVELOPMENT COMMENTS.....THE MINE WAS POSSIBLY OPENED AROUND 1789 FOR RECOVERY OF IRON. DURING 1850'S POSSIBLE DEVELOPMENT MAY HAVE BEEN PERFORMED BY COOK & WISTAR CO.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
MAXIMUM THICKNESS.....3.7 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DIP.....SE
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST, CHLORITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, CHLORITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, FRIES OVERTHRUST, GOSSAN LEAD OVERTHRUST, MAIN SULFIDE ZONE STRIKES N. 45 DEG. E. AND DIPS 30-60 DEG. SE.
SIGNIFICANT ALTERATION.....REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT OF COPPER ORES. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GENERAL COMMENTS.....CURREY (1859) DOES NOT USE EITHER CLIFTON OR LEONARD NAMES, BUT DISCUSSES COOK AND WISTAR TRACT AS TO INCLUDE SOUTHERNMOST SECTION OF LODE. FIRST MENTION OF MINE IS BYBOYD (1881).
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROP. PAPER 179.
WORK DONE BY USGS.....1935 GEOLMAP J.V. LEWIS: UNPUBLISHED MAP
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT
NON-USGS WORK.....1789 DIREXPL GOSSAN MINED (?).
NON-USGS WORK.....1856 DIREXPL COOK & WISTAR (?): OPENED MINE.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....BOYD, E.M., 1881, RESOURCES OF SOUTH-WEST VIRGINIA: NEW YORK, JOHN WILEY & SONS, 321 P.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....FONTAINE, W.M., 1883-84, NOTES ON THE GEOLOGY AND MINERAL RESOURCES OF THE FLOYD, VA., PLATEAU: THE VIRGINIAS, V. 4, P. 167, 178-180, 185-192; V. 5, P. 8-12.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 .
PRODUCTION COMMENTS.....PRODUCTION WAS PROBABLY LIMITED.

24. Limeberry, F., Mine

MRDS-REV RECORD NUMBER.....289
MRDS RECORD NUMBER.....W030862
RECORD TYPE.....X1M
REPORT DATE.....80 04
INFORMATION SOURCE.....123
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 08
UPDATER.....MYERS, LESLEY L.
SITE NAME.....LINEBERRY, F., MINE
SYNONYM NAME.....LINEBERRY MINE, F. LIMEBERRY MINE
MINING DISTRICT/AREA.....CHESTNUT CREEK SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... GALAX, VA. (1984) QUADRANGLE SCALE 1:24000
ELEVATION.....2640 FT
UTM NORTHING...4064730 EASTING...508320 ZONE...+17
LATITUDE.....36-43-59N LONGITUDE.....080-54-21W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.65 KM S10E OF HEBRON
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN ARE FOR A COLLAPSED UNDERGRUND ENTRANCE AT SOUTHERN END OF WORKINGS. WORKINGS EXTEND 1200 FT N35E, THEN TURN N60E AND EXTEND AT LEAST 900 FT. LOCATION FIELD CHECKED MAY 9187.5 MI) TO THE NE.
COMMODITIES PRESENT.....CU FE ZN PB PYR1 AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
GENERAL ANALYTICAL DATA.....FE: 30%, S: 15%, CU: 0.3%, ZN: 0.3%, CO AND NI: LESS THAN 0.01% (KLINE AND BALLARD, 1949, P. 8-9.)
MAJOR.....CU FE
POTEN.....ZN PB
OCCUR.....PYR1 AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1800
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1789(?)
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL AND COKE CO. (FRANCIS LINEBERRY TRACT).
OPERATOR.....VIRGINIA IRON, COAL AND COKE CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....GOSSAN MINED FOR IRON AROUND 1789, SUPPLYING ORE TO THE BLAIR FORGE ON CHESTNUT CREEK. THE OPENING FOR IRON IS KNOWN LOCALLY AS THE "MONKEY GRAVE" FROM "MONGER'S GRAVE", NAMED FOR THE IRON MONGER WHO OPENED IT (CURREY, 1859). THE PROPERTY WAS OPENED FOR COPPER BY THE YARNELL MINING CO. IN THE MID-1850'S AND OPERATED UNTIL 1859(?). DURING THE 1890'S AND UNTIL 1908, THE MINE WAS AGAIN OPERATED FOR GOSSAN IRON. IN 1926, 13 EXPLORATORY HOLES WERE DRILLED BY GENERAL CHEMICAL CO. IN 1930, THE PROPERTY WAS CONTROLLED BY THE NEW YORK AND VIRGINIA MINING AND MINERAL CO. OF VIRGINIA (PARENT FIRM OF VIRGINIA IRON, COAL & COKE CO. (?)). IN 1947-1948, THE U.S. BUREAU OF MINES CONDCTED EXPLORATORY DRILLING, CONSISTING OF 18 HOLES, TOTALING 1626.5 M.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....3.4 UNITS...M
DEPTH TO BOTTOM.....127.0 UNITS...M
MAXIMUM THICKNESS.....38.6 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DIP.....30-45 DEG. SE.
DEPOSIT DESCRIPTION COMMENTS.....STRIKE OF THE VEIN BECOMES MORE EASTERLY IN NE SECTION. DEPTH TO TOP IS SHALLOWEST ENCOUNTERED AND DEPTH TO BOTTOM IS DEEPEST ENCOUNTERED IN U.S. BUREAU OF MINES DRILLING (HOLES H-8 AND H-1) (KLINE AND BALLARD, 1949).
DESCRIPTION OF WORKINGS.....B
LENGTH OF WORKINGS.....15.2 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....1859: CURREY REPORTED SIX SHAFTS, 15.2 M TOTAL. 1949: KLINE AND BALLARD REPORT THAT GOSSAN WAS MINED FOR ABOUT 366 M, WITH SEVERAL TUNNELS, PITS AND SHAFTS SUNK ALONG OUTCROP. 1987: SOUTHERN SHAFT CONNECTS WITH A SHALLOW, WIDE PIT. THE TRENCH BIFURCATES AT NORTHERN END OF SHALLOW PIT AND THEN REJOINS AT A DEEP OPEN PIT (40-50 FT DEEP). TRENCH THEN SWITCH DIRECTION TO TREND N60E. WORKINGS AFTER THIS CONSIST PRIMARILY OF SHALLOW CROSS-CUT TRENCHES.
HOST ROCK AGE.....LPREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST
AGE OF MINERALIZATION.....LPREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, 3 PHASES OF REGIONAL DEFORMATION.
SIGNIFICANT LOCAL STRUCTURES.....TWO S-SURFACES VISIBLE.
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS OF DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRATION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LPREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROP. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1900 DIREXPL GOSSAN MINED
NON-USGS WORK.....1926 DIREXPL GENERAL CHEMICAL CO. (ALLIED CHEM. CO.): CONDUCTED EXPLORATORY DRILLING.
NON-USGS WORK.....1948 DIREXPL U.S. BUREAU OF MINES: CONDUCTED EXPLORATORY DRILLING
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....KLINE, M.H., AND BALLARD, T.J., 1949, INVESTIGATION OF THE GREAT GOSSAN LEAD, CARROLL COUNTY, VA.: U.S. BUREAU OF MINES REPORT OF INVESTIGATIONS 4532, 39 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
REFERENCE....CORRIVEAU, M.P., 1956, MINERAL DRESSING STUDIES ON THE GREAT GOSSAN LEAD ORE FROM CARROLL COUNTY, VIRGINIA: VIRGINIA POLYTECHNIC INSTITUTE BULLETIN, ENGINEERING EXPERIMENT STATION SERIES NO. 113, V. 49, NO. 11, 79 P.
REFERENCE....CONLEY, JAMES F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33 P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE CU	SML			1859?	CU
ORE FE	SML			1890-1908	GOSSAN FE

RESERVES AND POTENTIAL RESOURCES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	4000.	TONS	1956	PYR1, SULFIDES AND INCLUDED GANGUE.

SOURCE OF RESERVES AND RESOURCES INFORMATION.....C.T. HOLLAND IN CORRIVEAU (1956, P. 15).
RESERVES AND RESOURCES COMMENTS.....ESTIMATE IS BASED ON A 1300 FT (396 M) SECTION.

25. Lineberry, J., Mine

MRDS-REV RECORD NUMBER.....288
MRDS RECORD NUMBER.....W030863
RECORD TYPE.....X1M
REPORT DATE.....80 04
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....LINEBERRY, J., MINE
SYNONYM NAME.....J. LIMEBERRY MINE
MINING DISTRICT/AREA.....CHESTNUT CREEK SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... GALAX, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2500 FT (762 M)
UTM NORTHING...4064410 EASTING...508290 ZONE...+17
LATITUDE.....36-43-38N LONGITUDE.....080-54-26W
POSITION FROM NEAREST LOCALITY.....1.8 KM (1.15 MI) SOUTH OF HEBRON.
LOCATION COMMENTS.....LOCATION PROBABLE, NOT FIELD CHECKED. FROM DESCRIPTION PROVIDED BY CURREY (1859), IT IS BELIEVED THIS MINE ADJOINS P. LINEBERRY TRACT TO THE NORTH AND IS LOCATED ON THE EASTERN BRANCH OF THE LODE.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
MAIN ORE MINERALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE
MINOR ORE MINERALS.....GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE.
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCEN TRATED ON SUPERGENE MINERALS.
MAJOR.....CU
POTEN.....ZN PB
OCCUR.....PYR1 FE AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1859 (?)
OWNER (PRESENT/LAST).....ALLIED CHEMICAL CO. (IRON RIDGE PROPERTY).
OPERATOR.....YARNELL MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WORKED BY YARNELL MINING CO. DURING LATE 1850'S.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....3.0 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 20 DEG. E.
DIP.....SE
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....5.5 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....CURREY (1859) REPORTED ONE SHAFT SUNK.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, FRIES OVERTHRUST, GOSSAN LEAD OVERTHRUST, MAIN SULFIDE ZONE STRIKES N. 45 DEG. E. AND DIPS 30-60 DEG. SE.
SIGNIFICANT ALTERATION.....REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT OF COPPER ORES. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1859 DIREXPL YARNELL MINING CO.: OPENED MINE.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V.1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....KUNE, M.H., AND BALLARD, T.J., 1949, INVESTIGATION OF THE GREAT GOSSAN LEAD, CARROLL COUNTY, VA.: U.S. BUREAU OF MINES REPORT OF INVESTIGATIONS 4532, 39 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)

26. McGrady, J. J., Prospect

MRDS-REV RECORD NUMBER.....285
MRDS RECORD NUMBER.....W030864
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....MCGRADY, J.J., PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION - BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... DUGSPUR, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-47- N LONGITUDE.....080-35- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN; 11 KM (7 MI) EAST OF HILLSVILLE.
LOCATION COMMENTS.....ACCORDING TO FONTAINE (1884), THE PROSPECT IS 11 KM (7 MI) EAST OF HILLSVILLE AND 8 KM (5 MI) SOUTH OF THE CARROLL PIKE (U.S. HWY. 221 (?)) ON BURKS FORK NEAR BUFFALO KNOB.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOPYRITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....PRE-1900
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....J.J. MCGRADY
ECONOMIC COMMENTS.....FONTAINE (1884) REPORTED NO WORKABLE AMOUNTS OF COPPER EVIDENT.
EXPLORATION AND DEVELOPMENT COMMENTS.....LITTLE DEVELOL MENT WAS EFFECTED IN LATTER HALF OF 19TH CENTURY.
DEPOSIT TYPE.....DISSEMINATED, METAMORPHIC
DEPOSIT FORM.....TABULAR
MAXIMUM WIDTH.....0.46 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....DISSEMINATED CHALCOPYRITE IN HORNBLENDE GNEISS. CUPRIFEROUS "VEIN" IS 18 INCHES WIDE.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....LITTLE WORK WAS PER FORMED ON THIS PROSPECT.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....HORNBLENDE GNEISS
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....HORNBLENDE GNEISS (METAGABBRO)
PERTINENT MINERALS (NOT ORE).....HORNBLENDE, QUARTZ, MICA
ORE CONTROL/LOCUS.....DIKE (?)
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW, BLUE RIDGE ANTICLINORIUM
SIGNIFICANT ALTERATION.....METAMORPHOSED
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....HORNBLENDE GNEISS
FORMATION NAME.....LYNCHBURG FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....HORNBLENDE GNEISS
GENERAL COMMENTS.....THIS MAY BE PART OF "NATIVE LEAD."
NON-USGS WORK.....DIREXPL INITIAL PROSPECTING
REFERENCE....FONTAINE, W.M., 1883-84, NOTES ON THE GEOLOGY AND MINERAL RESOURCES OF FLOYD, VA., PLATEAU: THE VIRGINIAS, V. 4, P. 167, 178-180, 185-192; V. 5, P. 8-12.
REFERENCE....ESPENSHADE, G.H., RANKIN, D.W., SHAW, K.W., AND NEUMAN, R.B., 1975, GEOLOGIC MAP OF THE EAST HALF OF WINSTON-SALEM QUADRANGLE, NORTH CAROLINA-VIRGINIA: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-B, 1 SHEET, SCALE 1: 250,000.
SOURCE OF PRODUCTION INFORMATION.....FONTAINE (1884, P. 11).

27. Sarah Ellen Mine

MRDS-REV RECORD NUMBER.....287
MRDS RECORD NUMBER.....W030865
RECORD TYPE.....X1M
REPORT DATE.....80 03
INFORMATION SOURCE.....123
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 08
UPDATER.....MYERS, LESLEY L.
SITE NAME.....SARAH ELLEN MINE
SYNONYM NAME.....VAUGHAN MINE, VAUGHN MINE
MINING DISTRICT/AREA.....SARAH ELLEN SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA. (1983) QUADRANGLE SCALE 1:24000
ELEVATION.....2580 FT
UTM NORTHING...4070610 EASTING...516430 ZONE...+17
LATITUDE.....36-46-50N LONGITUDE.....080-49-12W
ACCURACY.....ACC

POSITION FROM NEAREST LOCALITY.....2.5 KM (1.6 MI) N35W OF FIVE FORKS.
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN ARE FOR A COLLAPSED PORTAL AT THE NORTHERN OF THE WORKINGS. THESE WORKINGS EXTEND AT LEEAST 2300 FT S55W FROM THE PORTAL, AND PERHAPS AS MUCH AS 6000 FT (1.75 KM). LOCATION FIELD CHECKED APRIL 1987.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE.
COMMODITY INPO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS.
MAJOR.....CU
POTEN.....ZN PB FE
OCCUR.....PYR1 AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1856
OWNER (PRESENT/LAST).....ALLIED CHEMICAL CO. (KIRKBRIDE-VAUGHN TRACT)/VIRGINIA IRON, COAL & COKE CO. (VAUGHAN DOBYNS TRACT, R.A. HARMAN TRACT).
OPERATOR.....TENNESSEE AND VIRGINIA MINING CO.
ECONOMIC COMMENTS.....ORE WAS SHIPPED TO MAX MEADOWS AND THENCE TO BALTIMORE.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINING OPERATIONS BEGUN IN 1856 AND CEASED PROBABLY IN 1859.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....12.2 UNITS...M
MAXIMUM WIDTH.....22.9 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 65 DEG. E.
DIP.....30-50 DEG SE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....12.2 UNITS...M
LENGTH OF WORKINGS.....358.2 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....1859: CURREY REPORTED 304.9 M OF LEVELS AND 53.3 M OF SHAFTS. 1987: MUCH OF THE AREA HAS BEEN CLEAR-CUT, BUT NOT BULLDOZED. SMALL PITS, CROSS-CUT TRENCHES, AND POSSIBLE COLLAPSED SHAFTS ARE VISIBLE FROM THE COLLAPSED PORTAL TRENCHES, AND POSSIBLE COLLAPSED SHAFTS ARE VISIBLE FROM THE COLLAPSED PORTAL LOCATION ALMOST UP TO THE INTERSTATE. INTERSTATE 77 CUTS THROUGH THE ORIGINAL EXTENT OF THE SARAH ELLEN WORKINGS, CUTTING THEM INTO SMALLER SEGMENTS AND PROBABLY DESTROYING SOME.
HOST ROCK AGE.....LPREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST, QUARTZ-MUSCOVITE GNEISS, AMPHIBOLITE
AGE OF MINERALIZATION.....LPREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, 3 PHASES OF REGIONAL DEFORMATION.
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRATION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LPREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
GENERAL COMMENTS.....WEED (1911) REFERS TO THIS MINE AS THE VAUGHAN MINE, HOWEVER IT IS FELT THAT THE SARAH ELLEN, WHICH WAS ON THE VAUGHAN TRACT, ENCOM PASSED THOSE WORKINGS. A MR. HEISKELL AND A MR. VAUGHAN WERE IN CHARGE OF OPERATIONS IN THE NORTHERN AND SOUTHERN PARTS RESPECTIVELY (CURRY, 1859 (1880 REPRINT, P. 74). "ORE ZONE" VISIBLE IN DIRT ROAD LEADING UP THE HILL TO THE LOGGING OPERATIONS.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1856 DIREXPL TENNESSEE & VIRGINIA MINING CO.: OPENED MINE.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....CONLEY, JAMES F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33 P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE CU	ACC	0.30000	TONS	1856-1859	14% CU

SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)

RESERVES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	750.000	TONS	1935	GOSSAN FE

SOURCE OF RESERVES INFORMATION.....ROSS (1935).
RESERVES COMMENTS.....PROBABLY INCLUDES SARAH ELLEN, WILDCAT, AND CRANBERRY CREEK SEGMENTS.

28. Stone Prospect

MRDS-REV RECORD NUMBER.....286
MRDS RECORD NUMBER.....W030866
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....STONE PROSPECT
MINING DISTRICT/AREA.....DALTON HILL AREA/GOSSAN LEAD DISTRICT/ SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... SYLVATUS, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-48- N LONGITUDE.....080-46- W
POSITION FROM NEAREST LOCALITY.....ABOUT 2.5 KM (1.5 MI) SE OF EARLY.
LOCATION COMMENTS.....EXACT LOCATION UNKNOWN; NEAR THE DALTON HILL MINE.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE PYR
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, GOETHITE, PYRITE
NON-PRODUCER MAIN.....CU ZN PB
NON-PRODUCER MINOR.....PYR1 FE PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL & COKE CO. (?)
OPERATOR.....TENNESSEE AND VIRGINIA MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY PROSPECTED BY TENN. & VA. MINING CO. DURING THE PERIOD 1855-1859.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....6.7 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DEPOSIT DESCRIPTION COMMENTS.....DEPTH IS TO TOP OF CHALCOPY RITE ZONE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....6.7 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....CURREY (1859) REPORTS THAT ONE PROSPECT SHAFT WAS SUNK.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, FRIES OVERTHRUST
SIGNIFICANT ALTERATION.....REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT OF COPPER ORES. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GENERAL COMMENTS.....SEE DALTON HILL MINE.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT
NON-USGS WORK.....1855 DIREXPL TENN. & VA. MINING CO.: SANK SHAFT.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURRY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.

29. Sutphan Mine

MRDS-REV RECORD NUMBER.....317
MRDS RECORD NUMBER.....W030867
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....SUTPHAN MINE
SYNONYM NAME.....SUTPHIN MINE
MINING DISTRICT/AREA.....NATIVE LEAD/SOUTHERN SECTION - BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... DUGSPUR, VA. (?) QUADRANGLE SCALE 1:24000
LATITUDE.....36-48- N LONGITUDE.....080-35- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN

LOCATION COMMENTS.....LOCATED EAST OF HILLSVILLE.
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....CHALCOPYRITE, NATIVE COPPER, PYRITE
COMMODITY INFO COMMENTS.....NATIVE COPPER OCCURRED IN WEATHERED OUTCROP.
MAJOR.....CU
OCCUR.....PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1854
OWNER (PRESENT/LAST).....MEIGS COUNTY, TENN., AND VIRGINIA MINING CO.
OPERATOR.....MEIGS COUNTY, TENN., AND VIRGINIA MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY WAS ORIGINALLY IN THE POSSESSION OF JOHN S. SUTPHAN. MINE WAS INITIALLY WORKED IN 1854, WITH VERY LITTLE WORKING BEING DONE AFTER THAT.
DEPOSIT TYPE.....DISSEMINATED, METAMORPHIC
DEPOSIT FORM.....TABULAR
DEPTH TO TOP.....7.6 UNITS...M
MAXIMUM THICKNESS.....1.8 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 54-70 DEG. E
DIP.....SE
DEPOSIT DESCRIPTION COMMENTS.....DISSEMINATED GRAINS OF NATIVE COPPER OCCUR IN PODS QUARTZ AND EPIDOTE NEAR THE SURFACE; AT DEPTH THE DIKE CONTAINS CHALCOPYRITE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....7.6 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....ONE SHAFT SUNK (CURRY, 1859). ONE OR TWO OPEN PITS WERE NOTED BY FONTAINE (1884, P. 11).
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....AMPHIBOLE SCHIST
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....AMPHIBOLE SCHIST (METAGABBRO?)
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, HORNBLENDE, MAGNETITE.
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM
SIGNIFICANT ALTERATION.....METAMORPHOSED
PROCESS OF CONCENTRATION/ENRICHMENT.....METAMORPHISM
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....HORNBLENDE GNEISS
FORMATION NAME.....LYNCHBURG FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....HORNBLENDE GNEISS
GEOLOGY COMMENTS.....CURREY (1859) STATED THAT THE LEAD WAS 0.8 KM WIDE AND TRACEABLE FOR 26 KM.
GENERAL COMMENTS.....IT IS NOT KNOWN WHETHER THE GOLD MINE AND THE GARDINER MINE WERE ACTUALLY LATER WORKINGS OF THIS PROPERTY. THE NATIVE LEAD WAS ALSO CALLED THE TRAP LEAD.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1834 DIREXPL MEIGS CO., TENN., & VA. MINING CO.: OPENED MINE
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....FONTAINE, W.M., 1883-84, NOTES ON THE GEOLOGY AND MINERAL RESOURCES OF THE FLOYD, VA., PLATEAU: THE VIRGINIAS, V. 4, P. 167, 178-180, 185-192; V. 5, P. 8-12.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....ESPENSHADE, G.H., RANKIN, D.W., SHAW, K.W., AND NEUMAN, R.B., 1975, GEOLOGIC MAP OF THE EAST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA-VIRGINIA: U.S. GEOLOGICAL SURVEY MAP I-709-B, 1 SHEET, SCALE 1: 250,000.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE CU	ACC	0.03200	TONS	1854-1859	8% CU

SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)

30. Whitmore Mine

MRDS-REV RECORD NUMBER.....312
MRDS RECORD NUMBER.....W030868
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....WHITMORE MINE
MINING DISTRICT/AREA.....SOUTHERN LEAD/SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... FANCY GAP, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-42- N LONGITUDE.....080-38- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN, 10 KM (6 MI) SE OF HILLSVILLE.
LOCATION COMMENTS.....ACCORDING TO CURREY (1859), THE MINE IS 10 KM (6 MI) SE OF HILLSVILLE ALONG VOLUNTEER ROAD NEAR SNAKE CREEK.
COMMODITIES PRESENT.....CU PYR FE
ORE MATERIALS.....CHALCOPYRITE, PYRITE, GOETHITE
MAJOR.....CU
OCCUR.....PYR FE
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPENED PROBABLY IN 1850'S FOR SHORT DURATION
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND MASSIVE SULFIDE.
DEPOSIT SIZE.....SMALL
STRIKE.....N45 DEG. E
DEPOSIT DESCRIPTION COMMENTS.....CURREY (1859) REPORTED LARGE MASSES OF GOSSAN OUTCROP NEAR SNAKE CREEK.
DESCRIPTION OF WORKINGS.....B
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....GARNET-MUSCOVITE SCHIST, HORNBLENDE SCHIST
PERTINENT MINERALS (NOT ORE).....MUSCOVITE, GARNET, HORNBLENDE
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GENERAL COMMENTS.....SOUTHERN LEAD IS ALSO TERMED THE YELLOW SULPHURET LEAD.
NON-USGS WORK.....DIREXPL MINE OPENED.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....ESPENSHADE, G.H., RANKIN, D.W., SHAW, K.W., AND NEUMAN, R.B., 1975, GEOLOGIC MAP OF THE EAST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA-VIRGINIA: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-B, 1 SHEET, SCALE 1:250,000.
PRODUCTION COMMENTS.....NO PRODUCTION FIGURES ARE GIVEN, YET THERE WAS PROBABLY A SMALL AMOUNT.

31. Wildcat #2 Mine

MRDS-REV RECORD NUMBER.....1528
MRDS RECORD NUMBER.....W055386
RECORD TYPE.....X1M
REPORT DATE.....87 04
INFORMATION SOURCE.....13
FILE LINK ID.....1528
REPORTER.....MYERS, LESLEY L (SWEET, PALMER C)
REPORTER AFFILIATION.....VDMR
SITE NAME.....WILDCAT #2 MINE
MINING DISTRICT/AREA.....WILDCAT SEGMENT/GOSSAN LEAD DISTRICT/ SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER-OHIO
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA QUADRANGLE SCALE 1:24000
ELEVATION.....2480 FT
UTM NORTHING...4072630 EASTING...519080 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....0.8 KM (2700 FT) S 25 E OF EARLY
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN ARE FOR COLLAPSED PORTAL; WORKINGS EXTEND 300 FT N 60 E TO CREEK ALONG U.S. 52. TO REACH MINE PORTAL, GO 0.8 KM S OF EARLY ON U.S. 52 TO AN OUTCROP OF THE ORE ZONE (HEAVY YELLOW SULFUR STAINING), THEN GO 350 FT 560 W FROM THE HIGHWAY. LOCATION FIELD CHECKED APRIL 7, 1987.
COMMODITIES PRESENT.....CU ZN PB PYRL FE
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE
COMMODITY INFO COMMENTS.....COMMODITIES AND ORE MINERAL ASSUMED TO BE THE SAME AS THOSE AT CRANBERRY COPPER AND WILDCAT MINES.
OCCUR.....ZN PB PYRL FE
NON-PRODUCER MAIN.....CU
PRODUCTION.....U
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....TEXAS GULF (FOREST PRODUCTS DIVISION)
OPERATOR.....TENNESSEE AND VIRGINIA MINING COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....HAVE ASSUMED A HISTORY SIMILAR TO THAT FOR THE WILDCAT MINE.
DEPOSIT TYPE.....GOSSAN, STRATABOUND AND STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....SMALL
STRIKE.....N 65 E
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....HAVE NO LITERATURE ON THIS MINE, SO DESCRIPTION IS LIMITED TO WHAT WAS OBSERVED IN THE FIELD (APRIL 1987). COLLAPSED PORTAL OCCURS AT 2480 FT, WITH A SPOIL PILE NEARBY. MOST OF THE SPOIL IS HEMATITIC, BUT NO GOOD SAMPLES OF GOSSAN OR SULFIDES. 2 SMALL CIRCULAR PITS OCCUR ABOVE THE PORTAL, NEAR THE HILL'S CREST. ON TREND (N 65 E) FROM

PORTAL NEAR CREEK IS A POSSIBLE COLLAPSED SHAFT (WATER-FILLED) CIRCULAR PIT APPROXIMATELY 10 FT DEEP).
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST
AGE OF MINERALIZATION.....LATE PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, 3 PHASES OF REGIONAL DEFORMATION
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM (GARNET GRADE)
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRA TION DUE TO METAMORPHISM AND DEFORMATION, WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
GENERAL COMMENTS.....THE WORKINGS DESCRIBED HERE ARE DISTINCT FROM THE WILDCAT MINE WORKINGS TO THE SW AND FROM THE CRANBERRY MINE NE OF U.S. 52. I HAVE, THEREFORE, GIVEN THESE WORKINGS A SEPARATE MINE NAME. SEE DESCRIPTION OF WILDCAT MINE.
REFERENCE....CONLEY, J.F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33P.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION; KNOXVILLE, TENNESSEE, BECKETT, HAWS AND CO., REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, VOLUME 1, P.62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOL. SURVEY BULLETIN 455, 166P.
REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOL. SURVEY OPEN FILE REPORT, 21P.

32. Wildcat Mine

MRDS-REV RECORD NUMBER.....313
MRDS RECORD NUMBER.....W030869
RECORD TYPE.....X1M
REPORT DATE.....80 03
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....WILDCAT MINE
SYNONYM NAME.....WILD CAT MINE
MINING DISTRICT/AREA.....WILDCAT SEGMENT/GOSSAN LEAD DISTRICT/ SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2450 FT (747 M)
UTM NORTHING...4072470 EASTING...518710 ZONE...+17
LATITUDE.....36-47-59N LONGITUDE.....080-47-25W
POSITION FROM NEAREST LOCALITY.....0.9 KM (0.6 MI) SOUTH OF EARLY, WEST AND EAST OF WILDCAT CREEK.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. ABOUT 0.5 KM (0.3 MI) SW OF U.S. HWY 52, 0.6 KM (0.4 MI) NW OF JUNCTION WITH STATE ROAD 769. WORKINGS EXTEND WESTERLY ONTO RIDGE.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS (PRIMARILY COVELLITE AND CUPRITE).
MAJOR.....CU
POTEN.....ZN PB FE
OCCUR.....PYR1 AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1855
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL & COKE CO. (MANOAH SHOCKLEY).
OPERATOR.....TENNESSEE AND VIRGINIA MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WAS OPERATED BY THE TENNESSEE AND VIRGINIA MINING CO FROM 1855 TO 1859 AS A COPPER MINE.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....9.1 UNITS...M
MAXIMUM WIDTH.....6.1 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 65 DEG. E.
DIP.....45 DEG. SE
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....12.2 UNITS...M
LENGTH OF WORKINGS.....290 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....LENGTH OF WORKINGS INCLUDES TOTAL DRIVAGE OF LEVELS; 213 M; AND TOTAL DEPTH OF SHAFTS, 76 M (CURREY, 1859).
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST, QUARTZ-MUSCOVITE GNEISS
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, FRIES OVERTHRUST, GOSSAN LEAD OVERTHRUST, MAIN SULFIDE ZONE STRIKES N. 45 DEG. E. AND DIPS 30-60 DEG. SE.
SIGNIFICANT ALTERATION.....REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT OF COPPER ORES. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1855 DIREXPL TENN. & VA. MINING CO.: OPENED MINE.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)

RESERVES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE EST 750.000 TONS 1935 GOSSAN FE
SOURCE OF RESERVES INFORMATION.....ROSS (1935).
RESERVES COMMENTS.....PROBABLY INCLUDES SARAH ELLEN, WILDCAT, AND CRANBERRY CREEK SEGMENTS.

33. Wilkerson Tract Mine

MRDS-REV RECORD NUMBER.....314
MRDS RECORD NUMBER.....W030870
RECORD TYPE.....X1M
REPORT DATE.....80 04
INFORMATION SOURCE.....123
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 08
UPDATER.....MYERS, LESLEY L.
SITE NAME.....WILKERSON TRACT MINE
SYNONYM NAME.....M. WILKERSON TRACT MINE
MINING DISTRICT/AREA.....CHESTNUT CREEK SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 NEW RIVER/OHIO
LAND STATUS.....01
QUADRANGLE NAME..... GALAX, VA. (1984) QUADRANGLE SCALE 1:24000
ELEVATION.....2400 FT
UTM NORTHING...4064130 EASTING...507830 ZONE...+17
LATITUDE.....36-43-34N LONGITUDE.....080-54-40W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....2.3 KM S 5 DEG W OF HEBRON.
LOCATION COMMENTS.....LOCATION AND ELEVATION GIVEN ARE FOR THE MAJOR COLLAPSED SHAFT AT THE NORTHERN END OF THE MAJOR WORKINGS. SHALLOW PITS AND TRENCHES CONTINUE APPROX 0.5 KM N35E FROM SHAFT. MAJOR WORKINGS EXTEND 0.15 KM (400 FEET) S45W DOWN TO RAILROAD ARCADE. LOCATION FIELD CHECKED MAY 1987.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCENTRATED ON SUPERGENE MINERALS.
MAJOR.....CU
POTEN.....ZN PB
OCCUR.....PYR1 FE AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1857
PROPERTY IS ACTIVE.....I
OWNER (PRESENT/LAST).....ALLIED CHEMICAL CO. (IRON RIDGE PROPERTY).
OPERATOR.....YARNELL MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPERATED BY YARNELL MINING CO. FROM 1857 TO 1859.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
DEPTH TO TOP.....6.1 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 25 DEG. E.
DIP.....SE
DESCRIPTION OF WORKINGS.....B
LENGTH OF WORKINGS.....79.3 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....1859: CURREY REPORTS 61.0 M OF TUNNELS AND 18.3 M. OF SHAFTS, WITH THREE AIR SHAFTS. 1987: WORKINGS CONSIST OF COLLAPSED SHAFT AT 2400 FT., THEN A TRENCH GOING TO SW. TRENCH IS GENERALLY 35 FT WIDE AND 24 FT DEEP, ALTHOUGH IT

WIDENS TO THE SW. TRENCH STRIKE CURVES: IT BENDS FROM S30W AT THE PORTAL TO S60W AT ITS END NEAR THE RAILROAD GRADE. SEVERAL COLLAPSED SHAFTS OCCUR ALONG THE BOTTOM OF THE TRENCH. NE OF MAIN SHAFT ARE SHALLOW PITS ANDTRENCHES TRENDING N35E FOR APPOROXIMATELY 0.5 KM.
HOST ROCK AGE.....LPREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE-BIOTITE SCHIST AND GNEISS
AGE OF MINERALIZATION.....LPREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, BIOTITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, FRIES THRUST, THREE PHASES OF REGIONAL DEFORMATION.
SIGNIFICANT LOCAL STRUCTURES.....N20E, 50SE SCHISTOSITY
SIGNIFICANT ALTERATION.....LOW GRADE REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....EXHALATIONS FROM DISTAL VOLCANIC VENT(S) PRODUCED SULFIDES AS SUBMARINE PRECIPITATES. SOME FURTHER CONCENTRA TION DUE TO METAMORPHISM AND DEFORMATION WITH LATER SUPERGENE ENRICHMENT OF COPPER ORES.
FORMATION AGE.....LPREC
FORMATION NAME.....LYNCHBURG GROUP, ASHE FORMATION
GEOLOGY COMMENTS.....CURREY: THIS MINE WORKED THE WESTERN BRANCH OF A SPLIT IN THE MAIN SULFIDE ZONE, WITH THE J. LINEBERRY MINE WORKING THE EASTERN BRANCH.
GENERAL COMMENTS.....PROPERTY ENCOMPASSED 182 HA (450 ACRES) ACCORDING TO CURREY (1859).
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1857 DIREXPL YARNELL MINING CO.: OPENED MINE
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, N.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
REFERENCE....CONLEY, JAMES F., 1985, GEOLOGY OF THE SOUTHWESTERN VIRGINIA PIEDMONT: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 59, 33 P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE CU	ACC	0.05000	TONS	1857-1859	12% CU

SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)
PRODUCTION COMMENTS.....ORE PREDOMINANTLY COVELLITE.

34. Wolfpit Mine

MRDS-REV RECORD NUMBER.....315
MRDS RECORD NUMBER.....W030871
RECORD TYPE.....X1M
REPORT DATE.....80 03
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....WOLFPIT MINE
SYNONYM NAME.....WOLF PIT MINE
MINING DISTRICT/AREA.....WILDCAT SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2540 FT (774 M)
UTM NORTHING...4072320 EASTING...518390 ZONE...+17
LATITUDE.....36-47-54N LONGITUDE.....080-47-38W
POSITION FROM NEAREST LOCALITY.....1.2 KM (0.9 MI) SSW OF EARLY ON EAST BANK OF WOLFPIT CREEK.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. ABOUT 0.8 KM (0.5 MI) SW OF U.S. HWY. 52, 0.6 KM (0.4 MI) NW OF JUNCTION WITH STATE ROAD 769.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCEN-TRATED ON SUPERGENE MINERALS.
MAJOR.....CU
POTEN.....ZN PB FE
OCCUR.....PYR1 AS
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1850'S
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL & COKE CO. (ANN PHIPPS).
OPERATOR.....TENNESSEE AND VIRGINIA MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THIS MINE PROBABLY OPERATED DURING 1850'S, BUT IS NOT REFERENCED IN 19TH CENTURY REPORTS.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DESCRIPTION OF WORKINGS.....B
LENGTH OF WORKINGS.....135.7 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....WRIGHT AND RAMAN (1948) REPORT FOUR ADITS IN AREA; ONE IS CAVED (NOT INCLUDED IN LENGTH OF WORKINGS FIGURE) AND THE OTHER THREE ARE 47.3 M, 61.0 M, AND 27. 4 M IN LENGTH
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST, QUARTZ-MUSCOVITE GNEISS
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, FRIES OVERTHRUST, GOSSAN LEAD OVERTHRUST, MAIN SULFIDE ZONE STRIKES N. 45 DEG. E. AND DIPS 30-60 DEG. SE.
SIGNIFICANT ALTERATION.....REGIONAL METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT OF COPPER ORES. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GENERAL COMMENTS.....WEED (1911, P. 118) AND WATSON (1907, P. 514) ARE EARLIEST REFERENCES TO THIS MINE WHICH IS LOCATED ON THE ANN PHIPPS TRACT AND MAY ACTUALLY BE PART OF THE ANN PHIPPS WORKINGS. CURREY (1859) DOES NOT REFER TO THIS MINE.
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....DIREXPL TENN. & VA. MINING CO.: OPENED MINE
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.
SOURCE OF PRODUCTION INFORMATION.....WEED (1911)

RESERVES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	750.000	TONS	1935	GOSSAN FE

SOURCE OF RESERVES INFORMATION.....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
RESERVES COMMENTS.....PROBABLY INCLUDES SARAH ELLEN, WILDCAT, AND CRANBERRY CREEK SEGMENTS.

35. Yarnell Mine

MRDS-REV RECORD NUMBER.....316
MRDS RECORD NUMBER.....W030872
RECORD TYPE.....X1M
REPORT DATE.....80 04
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....YARNELL MINE
SYNONYM NAME.....YARNELL TRACT MINE
MINING DISTRICT/AREA.....IRON RIDGE SEGMENT/GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....CARROLL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... GALAX, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2300 FT (701 M)
UTM NORTHING...4063870 EASTING...507590 ZONE...+17
LATITUDE.....36-43-20N LONGITUDE.....080-54-54W
POSITION FROM NEAREST LOCALITY.....0.2 KM (0.15 MI) EAST OF CHESTNUT YARD.
LOCATION COMMENTS.....LOCATION PROBABLE, NOT FIELD CHECKED. FROM DESCRIPTION PROVIDED BY CURREY (1859) THIS MINE ADJOINS GREAT OUTBURST MINE (SEE IRON RIDGE MINE) ALONG A RIDGE LEADING FROM THE LATTER MINE. IT IS PRESUMED THE PROPERTY IS SOUTH OF CHESTNUT CREEK.
COMMODITIES PRESENT.....CU ZN PB PYR1 FE AS
ORE MATERIALS.....PYRRHOTITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, CHALCOCITE, COVELLITE, MALACHITE, CUPRITE, GOETHITE, CUBANITE, MACKINAWITE
COMMODITY INFO COMMENTS.....PAST MINING OPERATIONS CONCEN-TRATED ON SUPERGENE MINERALS.
MAJOR.....CU
POTEN.....ZN PB
OCCUR.....PYR1 FE AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1857(?)

OWNER (PRESENT/LAST).....ALLIED CHEMICAL CO. (IRON RIDGE PROPERTY)
OPERATOR.....YARNELL MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....YARNELL MINING CO. OPENED MINE AROUND 1857 (?), BUT MINED WAS CLOSED BY 1859 DUE TO LITIGATION.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND AND STRATIFORM MASSIVE SULFIDE.
DEPOSIT FORM.....POD/LENS
MAXIMUM WIDTH.....3.0 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 45 DEG. E.
DIP.....SE
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....30.5 UNITS...M
LENGTH OF WORKINGS.....76.2 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....ONE SHAFT WAS SUNK AND ONE TUNNEL WAS DRIVEN ACCORDING TO CURREY (1859).
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-MUSCOVITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
ORE CONTROL/LOCUS.....LENTICULAR TROUGHS
TECTONIC SETTING.....RIFT-RELATED, SPREADING RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, FRIES OVERTHRUST, GOSSAN LEAD OVERTHRUST, MAIN SULFIDE ZONE STRIKES N. 45 DEG. E. AND DIPS 30-60 DEG. SE.
SIGNIFICANT ALTERATION.....(ALMANDINE)-MEDIUM GRADE REGIONAL METAMORPHISM.
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT OF COPPER ORES. SULFIDES EMPLACED POSSIBLY AS A SUBMARINE PRECIPITATE RESULTING FROM EXHALATIONS FROM A VOLCANIC VENT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GENERAL COMMENTS.....PROPERTY ENCOMPASSED 20 HA (50 ACRES) ACCORDING TO CURREY (1859).
WORK DONE BY USGS.....1911 RECON W.H. WEED: BULL. 455.
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1948 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
NON-USGS WORK.....1857 DIREXPL YARNELL MINING CO.: OPENED MINE
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....HENRY, D.K., CRAIG, J.R., AND GILBERT, M.C., 1979, ORE MINERALOGY OF THE GREAT GOSSAN LEAD, VIRGINIA: ECONOMIC GEOLOGY, V. 74, NO. 3, P. 645-656.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P

CUMULATIVE PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEARS GRADE
ORE CU ACC 0.05000 TONS 1857-1858(?) 12% CU
SOURCE OF PRODUCTION INFORMATION.....CURREY (1859)

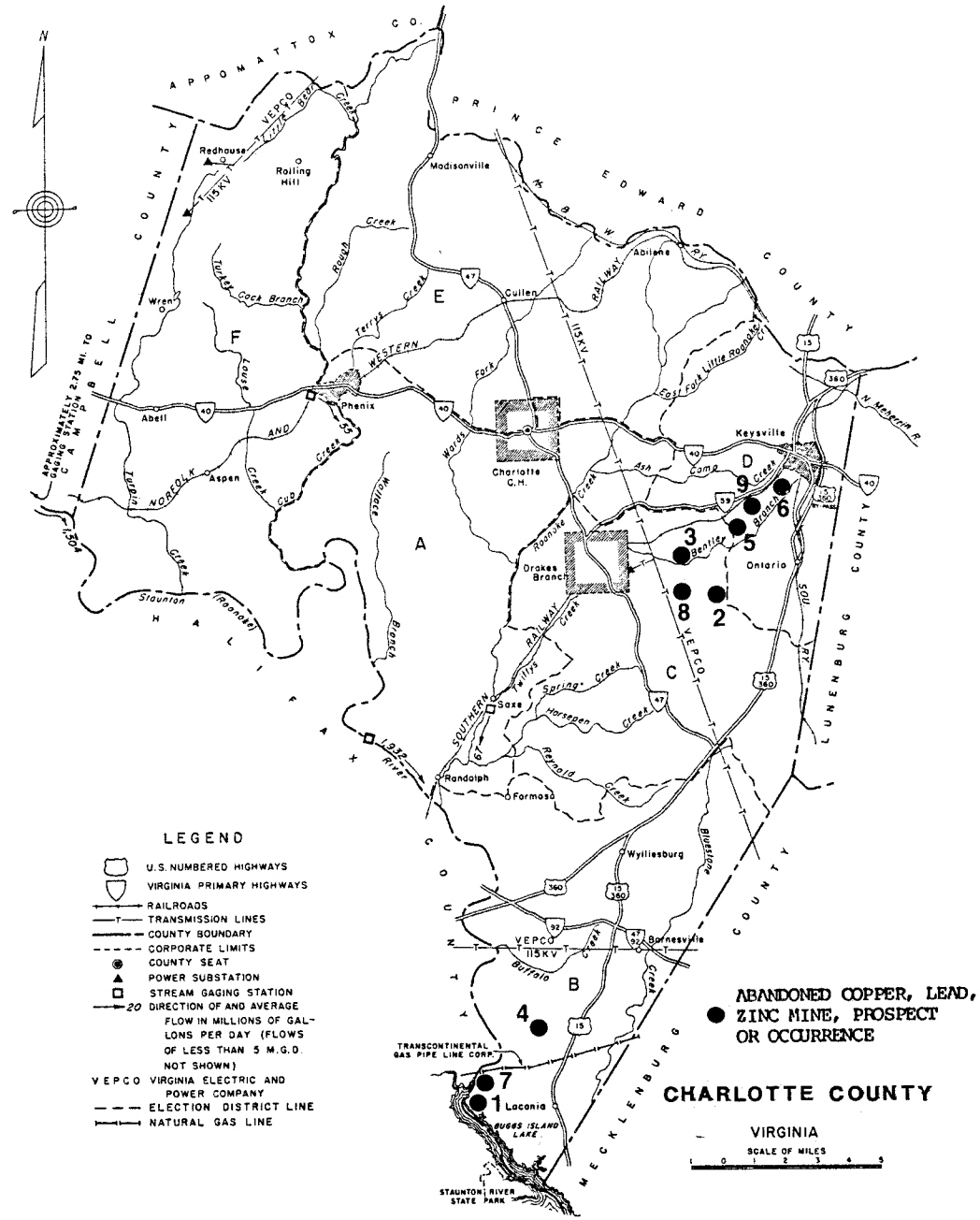
CHARLOTTE COUNTY

1. Barnes Mine

MRDS-REV RECORD NUMBER.....329
MRDS RECORD NUMBER.....W030873
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....BARNES MINE
SYNONYM NAME.....BARNES PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....CHARLOTTE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... BUFFALO SPRINGS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....325 FT
UTM NORTHING...4069210 EASTING...706780 ZONE...+17
POSITION FROM NEAREST LOCALITY.....4.0 KM (2.5 MI) NE OF AND ACROSS THE ROANOKE RIVER FROM DAYBURG.
LOCATION COMMENTS.....0.5 KM (0.3 MI) OFF THE NW SIDE OF A GRAVEL ROAD, 1.1 KM (0.7 MI) BY ROAD SW OF JUNCTION WITH STATE ROAD 632.
COMMODITIES PRESENT.....CU AG AU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE
GENERAL ANALYTICAL DATA.....ASSAY FROM IRON KING ASSAY CO. IN MARCH 1986 INDICATES <0.001 AU/TON AND <0.01 AG/TON
COMMODITY INFO COMMENTS.....SMALL AMOUNTS OF GOLD AND SILVER FOUND IN ORE MATERIAL.
NON-PRODUCER MAIN.....CU
NON-PRODUCER MINOR.....AG AU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1700(?)
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....BURRUS LAND & LUMBER CO.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LENS
MAXIMUM THICKNESS.....1.5 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 30 DEG. E.
DIP.....70-80 DEG SE
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....38.7 UNITS...M
LENGTH OF WORKINGS.....34.1 UNITS...M
OVERALL LENGTH.....25.6 UNITS...M
OVERALL WIDTH.....4.9 UNITS...M
OVERALL AREA OF WORKINGS.....125 UNITS...SQ M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1976, NUMEROUS HILLSIDE CUTS, A WATER-FILLED PIT, A PARTLY CAVED, 5 M-DEEP SHAFT AND A DUMP WERE NOTED. IN JUNE 1987, THE 6 FT X 9 FT WATER FILLED SHAFT, WAS ENCLOSED BY WIRE WITH U S GOVERNMENT SIGNS.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM, NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY STRIKES N. 30 E AND DIPS 70-80 DEG. SE.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
GENERAL COMMENTS.....18TH CENTURY MINING SAID TO ACCOUNT FOR UNDERGROUND EXCAVATIONS FOUND IN 1881.
NON-USGS WORK.....1700 DIREXPL REPORTEDLY COPPER WAS EXTRACTED IN PERIOD 1700-1750
NON-USGS WORK.....1881 DIREXPL SMALL AMOUNT OF PROSPECTING
NON-USGS WORK.....1898 DIREXPL WORKINGS CLEANED OUT AND MORE PROSPECTING DONE.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
SOURCE OF PRODUCTION INFORMATION.....LANEY (1917)
PRODUCTION COMMENTS.....THERE MAY HAVE BEEN SOME PRODUCTION DURING 18TH. CENTURY.

2. Crenshaw Prospect

MRDS-REV RECORD NUMBER.....325
MRDS RECORD NUMBER.....W030874
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D.C.)
SITE NAME.....CRENSHAW PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....CHARLOTTE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... DRAKES BRANCH, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....480 FT (146 M)
UTM NORTHING...4095410 EASTING...720120 ZONE...+17
LATITUDE.....36-58-51N LONGITUDE.....078-31-37W
POSITION FROM NEAREST LOCALITY.....6.7 KM (4.15 MI) EAST OF DRAKES BRANCH.
LOCATION COMMENTS.....0.8 KM (0.5 MI) OFF EAST SIDE OF FIRE ROAD, 0.3 KM (0.2 MI) BY ROAD NORTH OF REESES CREEK AND 2.6 KM (1.6 MI) BY ROAD NNE OF JUNCTION WITH STATE ROAD 623.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE, AZURITE, MALACHITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1915
OWNER (PRESENT/LAST).....HOERAER WALDORF CORP.
EXPLORATION AND DEVELOPMENT COMMENTS.....PROSPECT WORKED PRIOR TO 1915.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LENS (?)
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....QUARTZ VEIN NARROW, BUT WELL-DEFINED.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....IN 1976, AN 8 M DIAMETER PIT, A WATER-FILLED SHAFT, A SMALL TRENCH, AND A LARGE DUMP WERE SEEN.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONES (?)
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY STRIKES N. 55 DEG. E. AND DIPS 80 DEG. SE. A PROMINENT JOINT SURFACE STRIKES N. 70 DEG. W.
FORMATION AGE.....CAMB (?)



N
APPOMATTOX CO.
PRINCE EDWARD COUNTY
CAMPBELL COUNTY
HALIFAX COUNTY
LUNENBURG COUNTY
MECKLENBURG COUNTY
APPROXIMATELY 2.75 MI. TO GAGING STATION
Redhouse
Rolling Hill
Wren
Abell
Aspen
Phenix
Modisonville
Cullen
Abilene
Keysville
Ontario
Charlotte C.H.
Drakes Branch
Saxe
Randolph
Formosa
Wylliesburg
Barnesville
Laconia
VEPCO
115KV
Little Bear Creek
Turkey Cock Branch
Rough Creek
Terrys Creek
Louse Creek
Turpin Creek
Cub Creek
Wallace Branch
Wards Fork
Roanoke Creek
Ash Camp Creek
East Fork Little Roanoke Cr.
Bentley Branch
Twittys Creek
Spring Creek
Horsepen Creek
Reynold Creek
Buffalo Creek
Bluestone Creek
Staunton (Roanoke) River
Staunton River
N. Meherrin R.
SOUTHERN RAILWAY
NORFOLK AND WESTERN RAILWAY
SOU. RY.
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
TRANSCONTINENTAL GAS PIPE LINE CORP.
BUGGS ISLAND LAKE
STAUNTON RIVER STATE PARK
LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
VEPCO VIRGINIA ELECTRIC AND POWER COMPANY
ELECTION DISTRICT LINE
NATURAL GAS LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
CHARLOTTE COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5

FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL SEVERAL PROSPECT PITS SUNK ON QUARTZ VEIN.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
PRODUCTION COMMENTS.....IT IS DOUBTFUL IF THERE WHERE ANY PRODUCTION.

3. Daniel's Mine

MRDS-REV RECORD NUMBER.....328
MRDS RECORD NUMBER.....W030875
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....1987
UPDATER.....SWEET, P C
SITE NAME.....DANIEL'S MINE
SYNONYM NAME.....DANIEL'S PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....CHARLOTTE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... DRAKES BRANCH, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....460 FT (140 M)
UTM NORTHING...4096830 EASTING...718610 ZONE...+17
LATITUDE.....36-59-39N LONGITUDE.....078-32-37W
POSITION FROM NEAREST LOCALITY.....5.05 KM (3.15 MI) EAST OF DRAKES BRANCH.
LOCATION COMMENTS.....0.25 KM (0.15 MI) OFF WEST SIDE OF FIRE ROAD, 0.1 KM (0.05 MI) BY ROAD NORTH OF CROSSING OF TWITTYS CREEK AND 4.5 KM (2.8 MI) BY ROAD NORTH OF JUNCTION WITH STATE ROAD 623.
COMMODITIES PRESENT.....CU AU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE, COVELLITE, CUPRITES, GOLD
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE-1915
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....PULPWOOD COMPANY/TOWN OF DRAKES BRANCH
DEPOSIT TYPE.....VEIN/SHEAR ZONE
MAXIMUM THICKNESS.....1.2 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....PROBABLY EXTENSION OF VEIN AT MCNENY PROSPECT
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....IN 1976, A PARTIALLY CAVED, WATER-FILLED SHAFT AND SPREAD DUMP EVIDENT. NO OUTCROPS AROUND OLD MINE.
HOST ROCK AGE.....LPREC
HOST ROCK TYPE.....GREENSTONE SCHIST
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIOM
FORMATION AGE.....LPREC
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
FORMATION NAME.....VIRGILINA G
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL TWO PROSPECT PITS OR SHALLOW SHAFTS SUNK
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P. C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3,P. 25-34.
SOURCE OF PRODUCTION INFORMATION.....LANEY (1917)

4. Edison Ridge Occurrence

MRDS-REV RECORD NUMBER.....1707
MRDS RECORD NUMBER.....VA01707
RECORD TYPE.....X1M
REPORT DATE.....87 12
REPORTER.....SWEET, PALMER C.
REPORTER AFFILIATION.....VDMR
SITE NAME.....EDISON RIDGE OCCURRENCE
COUNTRY.....US STATE.....VA COUNTY.....CHARLOTE
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT PROVINCE
DRAINAGE AREA.....03010102 SOUTH ATLANTIC - GULF
LAND STATUS.....01
QUADRANGLE NAME..... CLOVER, VA (1981) QUADRANGLE SCALE 1:24000
ELEVATION.....505 FT
UTM NORTHING...4073110 EASTING...709570 ZONE...+17
ACCURACY.....ACC
COMMODITIES PRESENT.....CU AU
ORE MATERIALS.....CHALCOPYRITE, GOLD
OCCUR.....CU AU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
DEPOSIT DESCRIPTION COMMENTS.....NORTHEAST TRENDING QUARTZ VEIN WITH CHALCOPYRITE, COVELITE AND GOLD (?) MINERALIZATION.
HOST ROCK AGE.....CAM
HOST ROCK TYPE.....CHLORITE SCHIST
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
GEOLOGY COMMENTS.....CROSS-CUTTING QUARTZ VEIN (ONE FOOT) IS BOUNDED ON EAST SIDE BY WEATHERED CHLORITE SCHIST.
REFERENCE....BUCHANAN, T.E. 1987, PERSONAL COMMUNICATION

5. Gilliam Prospect

MRDS-REV RECORD NUMBER.....331
MRDS RECORD NUMBER.....W030876
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....GILLIAM PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....CHARLOTTE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... EUREKA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....460 FT (140 M)
UTM NORTHING...4097630 EASTING...720020 ZONE...+17
LATITUDE.....37-00-03N LONGITUDE.....078-31-39W
POSITION FROM NEAREST LOCALITY.....7.1 KM (4.4 MI) E OF DRAKES BRANCH.
LOCATION COMMENTS.....ABOUT 60M ESE OF TWITTYS CREEK; 1.3 KM (0.8 MI) OFF THE EAST SIDE OF A FIRE ROAD ABOUT 1.9 KM (1.2 MI) BY ROAD SOUTH OF ITS INTERSECTION WITH STATE HIGHWAY 59.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....U.S. GYPSUM CO.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT DESCRIPTION COMMENTS.....THE VEIN IS NARROW,PROBABLY 0.6 TO 1.2 M WIDE.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....SEVERAL OPEN TRENCHES, 1 TO 1.3 M WIDE AND 1.3 M DEEP, AND PILES OF QUARTZ WERE REPORTED IN 1976.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....IN VEINS, SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL SEVERAL SMALL PROSPECT TRENCHES DUG
NON-USGS WORK.....1976 RECON VA. DIV. OF MINERAL RE SOURCES: IN SPECTED SITE
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.

6. Grove Mine

MRDS-REV RECORD NUMBER.....330
MRDS RECORD NUMBER.....W030877
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....GROVE MINE
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....CHARLOTTE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... EUREKA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....565 FT (172 M)
UTM NORTHING...4099670 EASTING...722340 ZONE...+17
LATITUDE.....37-01-08N LONGITUDE.....078-30-03W
POSITION FROM NEAREST LOCALITY.....5.3 KM (3.3 MI) SE OF EUREKA.
LOCATION COMMENTS.....0.4 KM (0.25 MI) OFF SSE SIDE OF STATE ROAD 772, 0.5 KM (0.3 MI) BY ROAD EAST OF JUNCTION WITH

STATE HIGHWAY 59.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE, AZURITE, CHALCOPYRITE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1906
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1916
OWNER (PRESENT/LAST).....U.S. GYPSUM
DEPOSIT TYPE.....VEIN/SHEAR ZONE
MAXIMUM THICKNESS.....1.7 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 35 DEG E
DIP.....75 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....VEIN EXTENDED ON SURFACE ABOUT 0.4 KM.
DEPTH BELOW SURFACE.....49 UNITS...M
LENGTH OF WORKINGS.....198 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....3 SHAFTS SUNK (18,26, AND 49 M). IN 1976, AREA HAD BEEN LOGGED AND GRADED, BUT ONE CAVED SHAFT AND PORTIONS OF DUMPS EVIDENT.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE, GREENSTONE SCHIST (METABA SALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY STRIKES APPROXIMATELY NORTHEAST AND A DIP OF 80 DEG SE.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL A SHAFT AND SEVERAL PITS SUNK, BUT WORK ABANDONED BY JULY 1906.
NON-USGS WORK.....1916 DIREXPL THREE SHAFTS SUNK; ORE SHIPPED TO SMELTER IN WEST NORFOLK.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY, BULLETIN 14, 176 P.
REFERENCE....POOLE, J.L., 1974, NOTES ON SOME ABANDONED COPPER, LEAD, AND ZINC MINES IN THE PIEDMONT OF VIRGINIA: VIRGINIA MINERALS, V. 20, NO. 2, P. 10-14.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE	CU	EST	2.30000	MT	1916-1917	CU ORE

SOURCE OF PRODUCTION INFORMATION.....LANEY (1917)

7. MacLean Shaft Prospect

MRDS-REV RECORD NUMBER.....324
MRDS RECORD NUMBER.....W030878
RECORD TYPE.....X1M
REPORT DATE.....80 11
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....MACLEAN SHAFT PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....CHARLOTTE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... BUFFALO SPRINGS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....340 FT
UTM NORTHING...4069250 EASTING...706790 ZONE...+17
LATITUDE.....36-45- N LONGITUDE.....078-41- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....SHAFT IS A SHORT DISTANCE NORTH OF THE BARNES PROSPECT.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE?, CHALCOCITE?, MALACHITE?
COMMODITY INFO COMMENTS.....NO ORE MINERALS MENTIONED, BUT PROBABLY THE SAME AS THE BARNES PROSPECT.
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....DATE OF OPERATION UNKNOWN. NO PRODUCTION OCCURRED.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LENS
DEPOSIT SIZE.....SMALL
STRIKE.....N 25 E
DIP.....38 SE
DEPOSIT DESCRIPTION COMMENTS.....SHAFT IS ON SAME VEIN AS THE BARNES PROSPECT. THE VEIN IS NARROW AND AT THE SHAFT NOT STRONGLY MINERALIZED. JOINT HAS A STRIKE OF N 30 W IN THE 15 FT EXPOSURE NEWAR THE CAVED SHAFT. IN JUNE 1987, THE WATER FILLED SHAFT 10 FT X 15 FT WAS ENCIRCLED BY A WIRE FENCE WITH U S GOVERNMENT SIGNS
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....ONE SHAFT WAS DUG, DEPTH UNKNOWN.
HOST ROCK AGE.....CAMB?
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB?
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM, NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY STRIKES N30 DEG E AND DIPS 70-80 DEG SE
FORMATION AGE.....CAMB?
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB?
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
GEOLOGY COMMENTS.....GEOLOGY BASED ON THE BARNES PROSPECT.
NON-USGS WORK.....DIREXPL ? - DUG SHAFT
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.

8. McNeny Prospect

MRDS-REV RECORD NUMBER.....323
MRDS RECORD NUMBER.....W030879
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....MCNENY PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....CHARLOTTE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....20
QUADRANGLE NAME..... DRAKES BRANCH, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....425 FT (129.5 M)
UTM NORTHING...4095730 EASTING...718090 ZONE...+17
LATITUDE.....36-59-03N LONGITUDE.....078-32-59W
POSITION FROM NEAREST LOCALITY.....4.59 KM (2.85 MI) E OF DRAKES BRANCH.
LOCATION COMMENTS.....1.21 KM (0.75 MI) OFF THE W SIDE OF A FIRE ROAD ABOUT 2.9 KM (1.8 MI) BY ROAD NNE OF ITS INTERSECTION WITH STATE ROAD 623.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....TOWN OF DRAKES BRANCH, VA.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
MAXIMUM THICKNESS.....1.2 UNITS...M
STRIKE.....N 29 DEG E
DIP.....32 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....STRIKE AND DIP REFER TO SCHISTOSITY. EXPOSURE OF GREENSTONE SCHIST CONTAINS 0.64 TO 10 CM - THICK QUARTZ STRINGERS RUNNING PARALLEL TO THE SCHISTOSITY. THE VEIN FOLLOWS THE SCHISTOSITY, AND IS REPORTED TO PINCH AND SWELL, AND HAS A VARIABLE THICKNESS OF A FEW INCHES TO 1.2 M.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....45.7 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....2 CAVED, FLOODED SHAFTS, SEVERAL DUMP PILES, AND A SMALL OPEN CUT WERE REPORTED IN 1976. BOTH SHAFTS WERE SUNK ON THE SAME VEIN.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (META-BASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....GREENSTONE SCHIST (META-BASALT)
PERTINENT MINERALS (NOT ORE).....QUARTZ, CALCITE, EPIDOTE, CHLORITE, HEMATITE
ORE CONTROL/LOCUS.....IN QUARTZ VEIN
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL 2 PROSPECT SHAFTS SUNK
NON-USGS WORK.....1976 RECON VA. DIV. OF MINERAL RE SOURCES; INSPECTED SITE
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22 NO. 3, PP. 25-35.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14 176 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J. P. BELL CO., 618 P.
SOURCE OF PRODUCTION INFORMATION.....LANEY, 1917, P. 146.
PRODUCTION COMMENTS.....ORE REPORTEDLY CARRIED 2 TO 3 PERCENT COPPER

9. Wilson Prospect

MRDS-REV RECORD NUMBER.....327
MRDS RECORD NUMBER.....W030880
RECORD TYPE.....X1M

REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....WILSON PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....CHARLOTTE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... EUREKA, VA QUADRANGLE SCALE 1:24000
ELEVATION.....555 FT (169.1 M)
UTM NORTHING...4099020 EASTING...721210 ZONE...+17
LATITUDE.....37-00-47N LONGITUDE.....078-30-49W
POSITION FROM NEAREST LOCALITY.....4.75 KM (2.95 MI) SE OF EUREKA
LOCATION COMMENTS.....0.2 KM (0.1 MI) OFF THE W SIDE OF STATE ROAD 778 ABOUT 1.1 KM (0.7 MI) BY ROAD S OF ITS INTERSECTION WITH STATE ROAD 772.
COMMODITIES PRESENT.....CU
COMMODITY INFO COMMENTS.....MINERALIZATION NOT REPORTED.
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
PROPERTY IS ACTIVE.....I
OWNER (PRESENT/LAST).....U.S. GYPSUM CO.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT DESCRIPTION COMMENTS.....THE VEIN IS NARROW AND SHOWED CONSIDERABLE CU STAINING (LANEY, 1917, P. 146-147).
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....IN 1972, A 6M-DIAMETER WATER-FILLED PIT AND 2 SMALLER WATER-FILLED SHAFTS WERE REPORTED. BY 1976, THE PROPERTY HAD BEEN LOGGED, AND GRADED OVER, AND NO MINING EVIDENCE COULD BE FOUND (SWEET, 1976).
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (META-BASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....GREENSTONE SCHIST (META-BASALT)
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
GEOLOGY COMMENTS.....THIS PROSPECT APPEARS TO LIE ON THE SAME VEIN AS THE GILLIAM PROSPECT (LANEY, 1917).
GENERAL COMMENTS.....THE SITE HAD BEEN REPLANTED WITH 0.3 M-TALL SEEDLINGS AS OF 1976.
NON-USGS WORK.....DIREXPL DUG PROSPECT
NON-USGS WORK.....1976 RECON VA. DIV. OF MINERAL RESOURCES: INSPECTED SITE.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22 NO. 3, PP. 25-34.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.

CLARKE COUNTY

1. Frogtown Prospect

MRDS-REV RECORD NUMBER.....347
MRDS RECORD NUMBER.....W030881
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....FROGTOWN PROSPECT
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CLARKE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... ASHBY GAP, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....520 FT (159 M)
UTM NORTHING...4330900 EASTING...243900 ZONE...+18
LATITUDE.....39-05-29N LONGITUDE.....077-57-40W
POSITION FROM NEAREST LOCALITY.....3.7 KM (2.3 MI) NW OF FROGTOWN, NEAR THE TOP OF THE CLIFFS ON A NORTH BEND OF THE SHENANDOAH RIVER.
COMMODITIES PRESENT.....CU PB
COMMODITY INFO COMMENTS.....ORE MINERALS NOT REPORTED.
NON-PRODUCER MAIN.....CU
NON-PRODUCER MINOR.....PB
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 66 DEG E
DIP.....30 DEG NW
DEPOSIT DESCRIPTION COMMENTS.....DOLOMITE IS FRACTURED, CONTAINS CALCITE VEINLETS. SHAFT IN SHADY DOLOSTONE REPORTED TO HAVE TRACES OF COPPER AND LEAD MINERALIZATION, BUT MINERALOGY UNSPECIFIED
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....OPEN CUT AND OPEN SHAFT ABOUT 9 M (30 FT) DEEP AND 2 M (7 FEET) IN DIAMETER REPORTED IN EARLY 1978. DOWNSLOPE DUMP SHOWING NO MINERALIZATION ALSO REPORTED.
HOST ROCK AGE.....CAMB
HOST ROCK TYPE.....DOLOSTONE
PERTINENT MINERALS (NOT ORE).....CALCITE, DOLOMITE
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, MASSANUTTEN SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SLATE RIDGE ANTICLINE
FORMATION AGE.....CAMB
FORMATION NAME.....SHADY FORMATION
GEOLOGY COMMENTS.....NO MINERALIZATION WAS SEEN AROUND THE OLD SHAFT AND CUT NOR IN THE DUMP IN EARLY 1978.
NON-USGS WORK.....DIREXPL
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA; VIRGINIA DIVISION OF MINERAL RESOURCES, IN CONTRIBUTIONS TO VIRGINIA GEOLOGY - IV: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES MINERAL RESOURCES REPORT 7, 167 P.
PRODUCTION COMMENTS.....NO REPORTS OF PRODUCTION LOCATED.

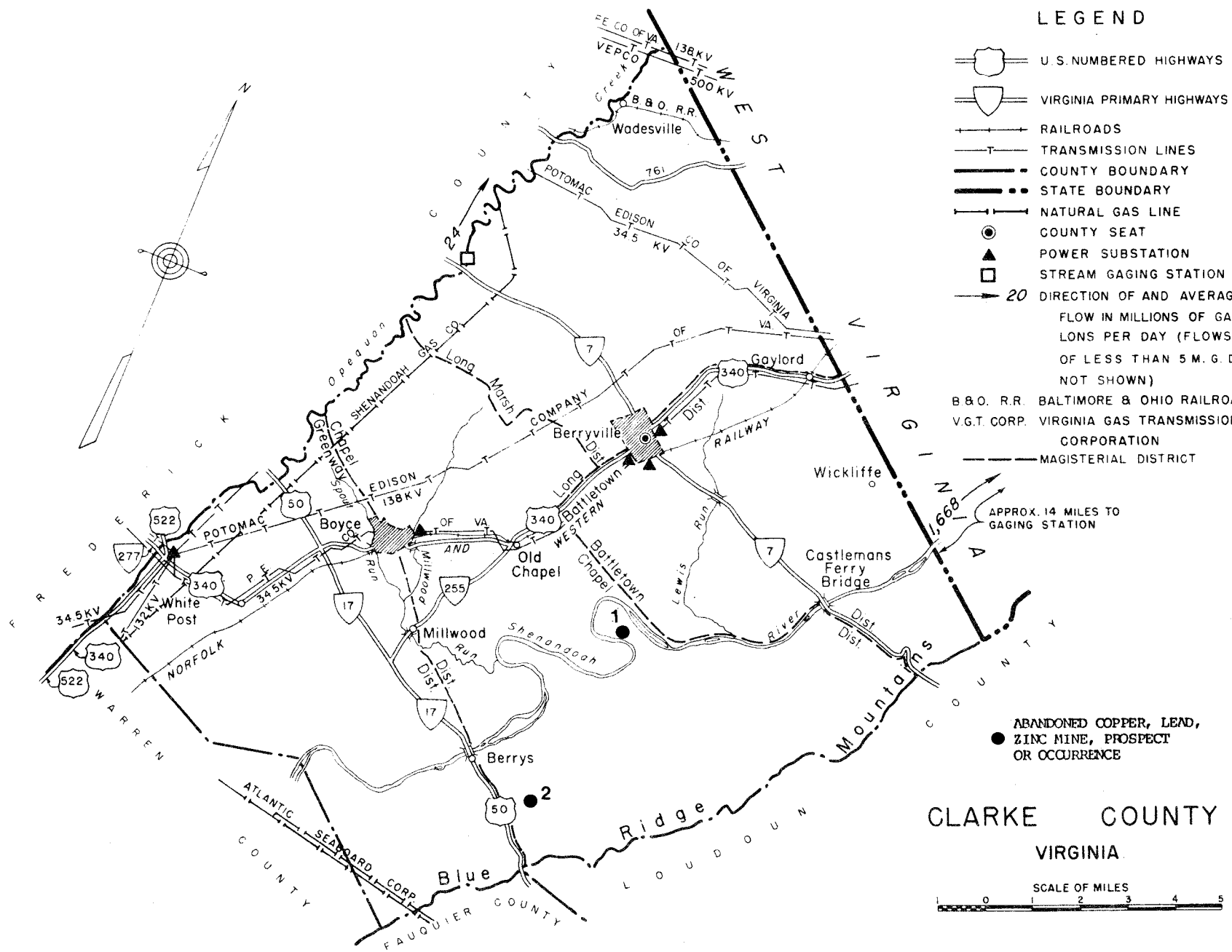
2. Paris Prospect

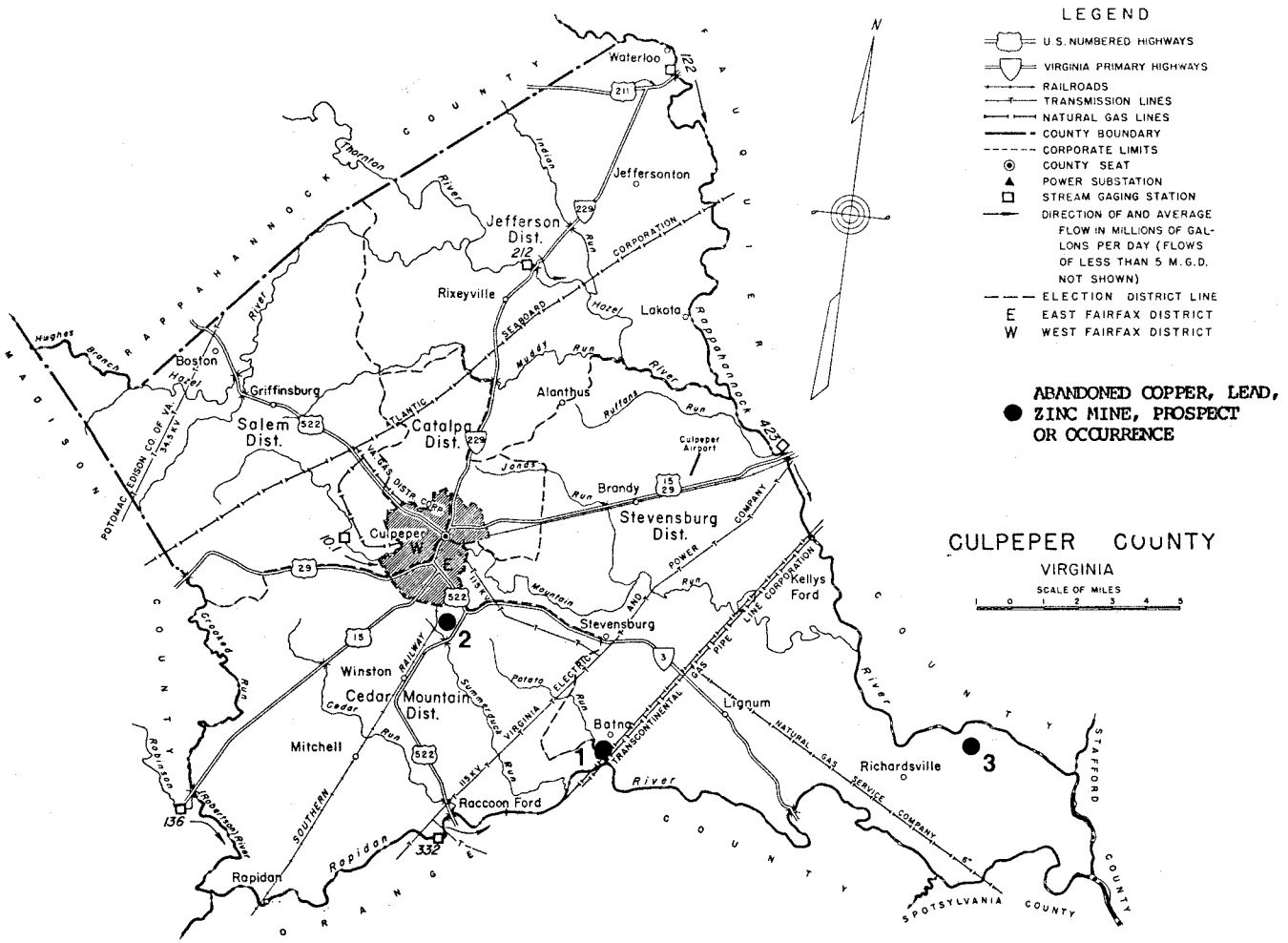
MRDS-REV RECORD NUMBER.....345
MRDS RECORD NUMBER.....W030882
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....PARIS PROSPECT
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....CLARKE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... ASHBY GA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1153 FT (352 M)
UTM NORTHING...4324210 EASTING...243030 ZONE...+18
LATITUDE.....39-01-52N LONGITUDE.....077-58-07W
POSITION FROM NEAREST LOCALITY.....2 MI (3.2 KM) NW OF PARIS, FAUQUIER CO.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....NATIVE COPPER, MALACHITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
DEPOSIT TYPE.....VOLCANIC, VEIN
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....NO MINERALIZATION EVIDENT IN 1978.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....NO EVIDENCE OF ANY PITS OF SHAFTS; NUMEROUS PIECES AND PILES OF BROKEN GREENSTONE ON TOP OF HILL (1978)
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT
AGE OF MINERALIZATION.....PREC
PERTINENT MINERALS (NOT ORE).....EPIDOTE
ORE CONTROL/LOCUS.....SEAMS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
GEOLOGY COMMENTS.....KEITH (1894) STATES NATIVE COPPER AND MALACHITE OCCUR IN SMALL SEAMS OF EPIDOTIC SCHIST (GREENSTONE). NO MINERALIZATION EVIDENT IN 1978.
NON-USGS WORK.....DIREXPL
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RES., LOCATED WORKINGS
REFERENCE....HALLADAY, C. R., 1977, TRACE ELEMENTS IN STREAM SEDIMENTS DERIVED FROM THE CATOCTIN FORMATION, NORTHERN VIRGINIA: VIRGINIA MINERALS, V. 23, N. 4, P. 34-39.
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN CONTRIBUTION TO VIRGINIA GEOLOGY - IV: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE....KEITH, A, 1894, HARPERS FERRY, VIRGINIA-WEST VIRGINIA-MARYLAND: U .S. GEOLOGICAL SURVEY, GEOLOGIC ATLAS, FOLIO 10.

CULPEPER COUNTY

1. Batna Mine

MRDS-REV RECORD NUMBER.....372
MRDS RECORD NUMBER.....W000408


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
STATE BOUNDARY
NATURAL GAS LINE
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
B.&O. R.R. BALTIMORE & OHIO RAILROAD
V.G.T. CORP. VIRGINIA GAS TRANSMISSION CORPORATION
MAGISTERIAL DISTRICT
APPROX. 14 MILES TO GAGING STATION
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
CLARKE COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
WEST VIRGINIA
FREDERICK COUNTY
WARREN COUNTY
LOUDOUN COUNTY
FAUQUIER COUNTY
Blue Ridge Mountains
Wadesville
Gaylord
Berryville
Wickliffe
Castlemans Ferry Bridge
Old Chapel
Millwood
Berrys
White Post
Boyce
Chapel
Greenway
Long Marsh
Battletown
Battletown Chapel
Lewis Run
Shenandoah River
Millwood Run
Spout Run
Opequon Creek
POTOMAC EDISON CO OF VIRGINIA
POTOMAC EDISON CO OF VA
SHENANDOAH GAS CO
VEPCO
FE CO OF VA
B.&O. R.R.
NORFOLK AND WESTERN RAILWAY
ATLANTIC SEABOARD CORP.
138KV
500 KV
34.5 KV
132KV
1,668
24
1
2


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
ELECTION DISTRICT LINE
E EAST FAIRFAX DISTRICT
W WEST FAIRFAX DISTRICT
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
CULPEPER COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
N
RAPPAHANNOCK COUNTY
FAUQUIER COUNTY
MADISON COUNTY
ORANGE COUNTY
STAFFORD COUNTY
SPOTSYLVANIA COUNTY
Waterloo
Jeffersonton
Jefferson Dist.
Rixeyville
Lakota
Boston
Griffinsburg
Salem Dist.
Catalpa Dist.
Alanthus
Culpeper Airport
Brandy
Stevensburg Dist.
Culpeper
Kellys Ford
Stevensburg
Winston
Cedar Mountain Dist.
Mitchell
Batna
Lignum
Richardsville
Raccoon Ford
Rapidan
Thornton River
Indian Run
Hazel River
Muddy Run
Ruffans Run
Jonds Run
Mountain Run
Potato Run
Summerduck Run
Cedar Run
Crooked Run
Robinson (Robertson) River
Hughes Branch
Rappahannock River
Rapidan River
Hazel River
POTOMAC EDISON CO. OF VA. 34.5 KV
ATLANTIC SEABOARD CORPORATION
VA. GAS DISTR. CORP.
115 KV VIRGINIA ELECTRIC AND POWER COMPANY
TRANSCONTINENTAL GAS PIPE LINE CORPORATION
NATURAL GAS SERVICE COMPANY 6"
SOUTHERN RAILWAY
1
2
3

RECORD TYPE.....X1M
DEPOSIT NUMBER.....HK-002
REPORT DATE.....72 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....80 01
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D.C.)
SITE NAME.....BATNA MINE
MINING DISTRICT/AREA.....CULPEPER BASIN
COUNTRY.....US STATE.....VA COUNTY.....CULPEPER
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
SECOND QUADRANGLE NAME...CULPEPER, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....250 FT (76 M)
UTM NORTHING...4253300 EASTING...247200 ZONE...+18
LATITUDE.....38-23-39N LONGITUDE.....077-53-40W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....NEAR BATNA, 4.7 KM (2.9 MI) SOUTH OF STEVENSBURG.
LOCATION COMMENTS.....LOCATION NOT FIELD CHECKED NOR ACCURATELY DESCRIBED IN LITERATURE.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOPYRITE, AZURITE, MALACHITE
COMMODITY INFO COMMENTS.....COPPER BEARING VEINS FILL FISSURES, AND ORE MATERIALS. ALSO OCCUR DISSEMINATED IN RED SANDSTONE AND SHALE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1800'S
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1800'S
ECONOMIC COMMENTS.....NOT CONSIDERED OF ECONOMIC IMPORTANCE.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WORKED PRIOR TO 1887 SEVERAL TIMES, BUT WITH NO SUCCESS.
DEPOSIT TYPE.....VEIN, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....MINERALS ARE VERY SMALL FISSURE FILLINGS DISSEMINATED IN VERY SMALL AMOUNTS.
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....RED SANDSTONE, SHALE
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
AGE OF MINERALIZATION.....TRI
PERTINENT MINERALS (NOT ORE).....PYRITE
TECTONIC SETTING.....BASIN, PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CULPEPER TRIASSIC BASIN
SIGNIFICANT LOCAL STRUCTURES.....MT. PONY STOCK
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION NAME.....DIABASE
FORMATION NAME.....BULL RUN SHALE, NEWARK GROUP
FORMATION NAME.....MANASSAS SANDSTONE, NEWARK GROUP
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE
GENERAL COMMENTS.....MUCH TIME AND MONEY HAVE BEEN WASTED TO WORK THE ROCKS THROUGH THE 1800'S, DUE TO THE FALSE IMPRESSION OF RICHNESS. RICH SPECIMENS DO OCCUR, BUT THEY ARE RARE.
GEOLOGICAL DESCRIPTIVE NOTES.....MALACHITE AND AZURITE STAIN THE ROCKS AT THE SURFACE.
NON-USGS WORK.....DIREXPL LIMITED MINING CONDUCTED
REFERENCE....ROBERTS, J.K., 1928, THE GEOLOGY OF THE VIRGINIA TRIASSIC: VIRGINIA GEOLOGICAL SURVEY BULLETIN 29, 205 P.
REFERENCE....ROGERS, W.B., 1884, A REPRINT OF ANNUAL REPORTS AND OTHER PAPERS, ON THE GEOLOGY OF THE VIRGINIAS: NEW YORK, D. APPLETON & CO., 832 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
SOURCE OF PRODUCTION INFORMATION.....WEED (1911), P. 92.
PRODUCTION COMMENTS.....PROBABLY A SMALL AMOUNT OF ORE WAS REMOVED THROUGHOUT THE 19TH CENTURY.
SOURCE OF RESERVES AND RESOURCES INFORMATION.....WEED REF.
RESERVES AND RESOURCES COMMENTS....."IN NO INSTANCE IS THE ORE IN SUFFICIENT QUANTITY TO WARRANT MINING."

2. Culpepper Prospect

MRDS-REV RECORD NUMBER.....361
MRDS RECORD NUMBER.....W000407
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HK-001
REPORT DATE.....72 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....80 01
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D. C.)
SITE NAME.....CULPEPER PROSPECT
MINING DISTRICT/AREA.....CULPEPER BASIN
COUNTRY.....US STATE.....VA COUNTY.....CULPEPER
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
SECOND QUADRANGLE NAME...CULPEPER, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....450 FT (137 M)
UTM NORTHING...4258000 EASTING...238400 ZONE...+18
LATITUDE.....38-26-02N LONGITUDE.....077-59-49W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....4.0 KM (2.5 MI) SOUTH OF CULPEPER
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED BY VDMR. ROBERTS (1928) REPORTS LOCALITY TO BE 2-2.5 MI SOUTH OF CULPEPER, 75-100 FT WEST OF SOUTHERN R.R. TRACKS.
COMMODITIES PRESENT.....CU FE
ORE MATERIALS.....CHALCOPYRITE, AZURITE, MALACHITE, HEMATITE VAR. SPECULARITE, LIMONITE
COMMODITY INFO COMMENTS.....HEMATITE IS PREDOMINANT ORE MINERAL.
OCCUR.....CU FE
NON-PRODUCER MAIN.....CU
NON-PRODUCER MINOR.....FE
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
DEPOSIT TYPE.....DISSEMINATED, PORPHYRY
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....ORE MINERALS OCCUR IN THE MATRIX OF THE CONGLOMERATE
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....IN 1920-1924 A SMALL SHALLOW PIT WAS EVIDENT
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....FERRUGINOUS DIABASE CONGLOMERATE
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
AGE OF MINERALIZATION.....TRI
PERTINENT MINERALS (NOT ORE).....PYRITE, CALCITE, EPIDOTE
TECTONIC SETTING.....BASIN, PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CULPEPER TRIASSIC BASIN
SIGNIFICANT LOCAL STRUCTURES.....MT. PONY STOCK
PROCESS OF CONCENTRATION/ENRICHMENT.....FROM SOLUTIONS ASSOCIATED WITH EMPLACEMENT OF MT. PONY STOCK.
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION NAME.....DIABASE
FORMATION NAME.....BORDER CONGLOMERATE, NEWARK GROUP
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE
GEOLOGICAL DESCRIPTIVE NOTES.....THE BORDER CONGLOMERATE IS PART OF THE NEWARK SERIES. THE PROSPECT IS A MINERALIZED ZONE IN THE TRAP PHASE OF THE BORDER CONG., NEAR OR AT THE METAMORPHOSED CONTACT OF THE CONG. WITH THE DIABASE.
NON-USGS WORK.....1917 DIREXPL SHALLOW PROSPECT PIT SUNK
NON-USGS WORK.....1924 GEOLMAP VA. GEOL. SURV.: MAPPED AREA
REFERENCE....ROBERTS, J.K., 1928, THE GEOLOGY OF THE VIRGINIA TRIASSIC: VIRGINIA GEOLOGICAL SURVEY BULLETIN 29, 205 P.
RESERVES AND RESOURCES COMMENTS....."NOTHING FURTHER THAN INVESTIGATION HAS BEEN DONE AT THIS LOCALITY, AND THE MATERIAL IS OF MINERALOLOGICAL IMPORTANCE ONLY." (ROBERTS REF.)

3. Ellis Mine

MRDS-REV RECORD NUMBER.....359
MRDS RECORD NUMBER.....W000414
RECORD TYPE.....X1M
DEPOSIT NUMBER.....GK-012
REPORT DATE.....72 05
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....ELLIS MINE
SYNONYM NAME.....ELEY MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....CULPEPER
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...RICHARDSVILLE SECOND QUAD SCALE 1:24000
ELEVATION.....270 FT (82 M)
UTM NORTHING...4254840 EASTING...264720 ZONE...+18
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....2.2 MI (3.5 KM) NE OF RICHARDSVILLE.
LOCATION COMMENTS.....0.85 MI (1.37 KM) OFF NE SIDE OF STATE ROAD 619, 0.8 MI (1.3 KM) BY ROAD EAST OF JUNCTION WITH STATE ROAD 701. ADDITIONAL TREND OF SEVERAL PITS FROM N4,255,510, E264, 940, ZONE 18.
COMMODITIES PRESENT.....AU CU
ORE MATERIALS.....NATIVE GOLD, AURIFEROUS PYRITE, CHALCOPYRITE.
COMMODITY INFO COMMENTS.....THE ORE IS HIGHLY PYRITIC AT DEPTH.
MAJOR.....AU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....E.W. PETTUS C/O M.W. SCOTT, MANALAPAN, F.L. LEASED BY ELLIS MINE HUNT CLUB.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE MINE WAS INTERMITTENTLY WORKED TO 1904, WITH THE GREATEST ACTIVITY AROUND 1877. AT THAT TIME THERE WERE 35 MEN EMPLOYED AND A 10-STAMP MILL WAS USED TO TREAT THE ORE.
DEPOSIT TYPE.....VEIN
DEPOSIT FORM.....LINEAR
DEPOSIT SIZE.....SMALL

DEPOSIT DESCRIPTION COMMENTS.....GOLD OCCURS IN A QUARTZ VEIN IN QUARTZ-SERICITE SCHIST. THE ORE FROM THE LOWER WORKINGS WAS HIGHLY PYRITIC BUT EASILY CONCENTRATED TO YIELD $175 PER TON. IN 1877 THERE WERE 200 TONS OF ORE ON THE DUMP.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....33.5 UNITS...M
LENGTH OF WORKINGS.....91.5 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, WATER-FILLED SHAFT, THREE CAVED PITS, AND DUMP PILES EVIDENT. IN 1877 THE MAIN SHAFT WAS 33.5 M (110 FT) DEEP, WHILE THE VEIN WAS DEVELOPED FOR 91.5 M (300 FT) ALONG ITS STRIKE. IN OCT., 1987, THE NUMEROUS CAVED SHAFTS WERE PARTIALLY FILLED WITH TREE SLASHINGS FROM FORMER LOGGING OPERATION ON SITE.
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
FORMATION NAME.....METAMORPHOSED SEDIMENTARY ROCKS.
GENERAL COMMENTS.....THE MINE WAS WORKED INTERMITTENTLY TO 1904, WITH THE GREATEST ACTIVITY AROUND 1877. AT THAT TIME WERE 35 MEN EMPLOYED, AND A 10 STAMP MILL WAS USED TO TREAT THE ORE. THE MAIN SHAFT WAS 110 FT. DEEP, WHILE THE VEIN WAS DEVELOPED FOR 300 FEET ALONG ITS STRIKE.
NON-USGS WORK.....1974 RECON VA DIV MIN RES: LOCATED SITE.
REFERENCE....LONSDALE, J.T., 1927, VA. GEOL. SURVEY BULL. 30, P. 78
REFERENCE....LUTTRELL, G.W., 1966, VA. MIN. RES. REPORT 7, P. 45-46
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	ACC	0.20000	TONS	1877	VALUED AT $175/TON

SOURCE OF PRODUCTION INFORMATION.....LONSDALE REFERENCE
PRODUCTION COMMENTS.....THE ABOVE FIGURE IS THE AMOUNT OF ORE ON THE DUMP FOR THAT YEAR.

CUMBERLAND COUNTY

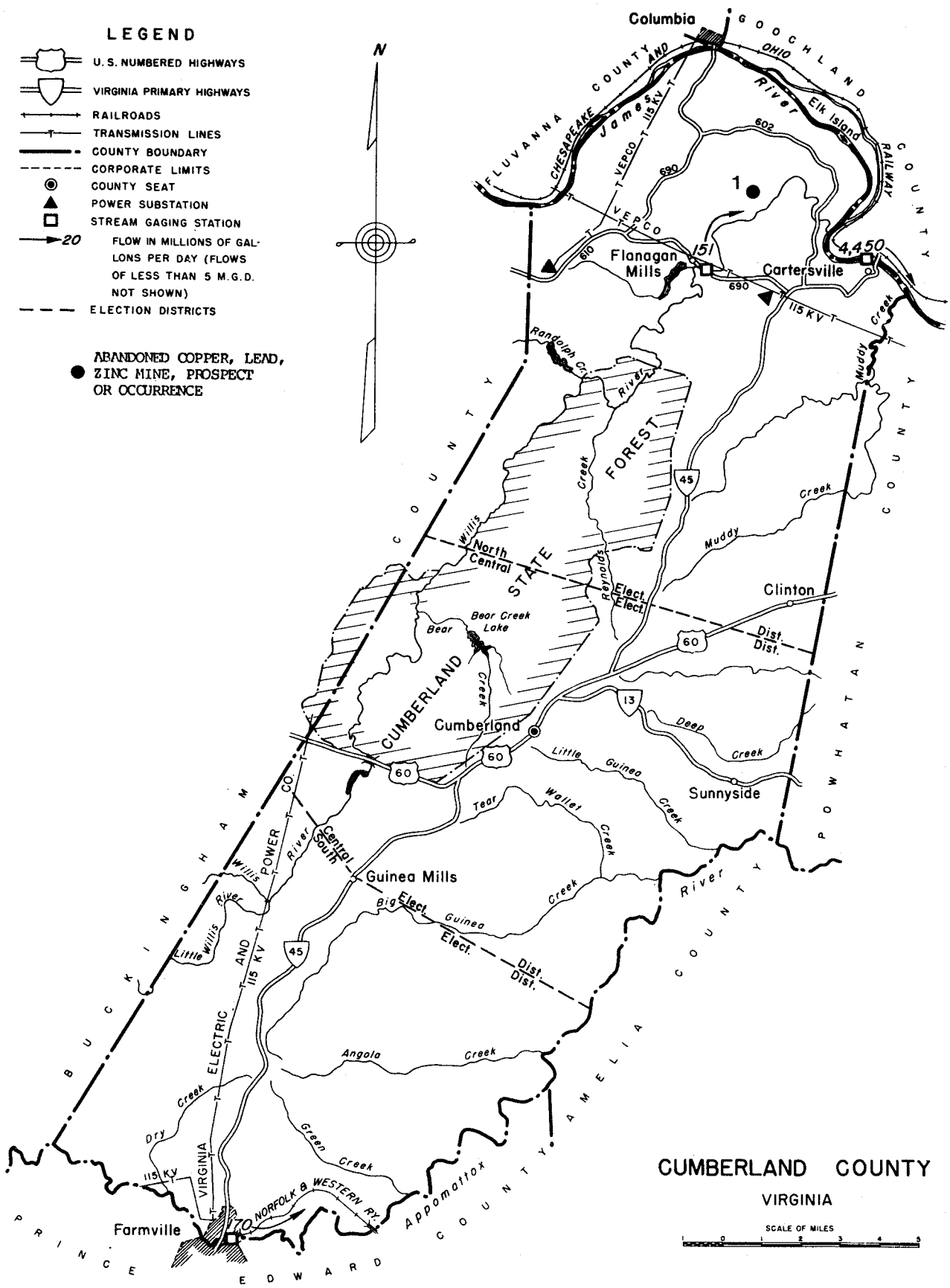
1. G. S. Dickey Prospect

MRDS-REV RECORD NUMBER.....389
MRDS RECORD NUMBER.....W030555
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1, 3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU (D.C. LE VAN), HARVEY R.
REPORTER AFFILIATION.....VDMR
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....DICKEY, G.S., PROSPECT
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....CUMBERLAND
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...LAKESIDE VILLAGE, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....270 FT (82 M)
UTM NORTHING...4175660 EASTING...751780 ZONE...+17
LATITUDE.....37-41-44N LONGITUDE.....078-08-40W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....ABOUT 4.5 KM (2.8 MI) NW OF LAKESIDE VILLAGE.
LOCATION COMMENTS.....0.6 KM (0.4 MI) OFF NW SIDE OF STATE ROAD 605 ABOUT 0.5 KM (0.3 MI) BY ROAD NW OF ITS CROSSING OF THE WILLIS RIVER.
COMMODITIES PRESENT.....AU AG ZN PB PYR CU
ORE MATERIALS.....NATIVE GOLD, SPHALERITE, GALENA, CHALCOPYRITE, PYRITE
MAIN ORE MINERALS.....NATIVE GOLD
MINOR ORE MINERALS.....SPHALERITE, GALENA, CHALCOPYRITE, PYRITE
NON-PRODUCER MAIN.....AU
NON-PRODUCER MINOR.....AG ZN PB PYR CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....E.A. AND EVERETT A. CARNES, JR.
EXPLORATION AND DEVELOPMENT COMMENTS.....SEVERAL PITS WERE SUNK IN PROSPECTING FOR GOLD.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, HILLSIDE CUT EVIDENT. SEVERAL PITS HAD BEEN DUG DURING PROSPECTING.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....SILICIFIED MYLONITE
AGE OF IGNEOUS ROCK.....PAL
IGNEOUS ROCK TYPE.....GRANODIORITE
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE (TO NW) , NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....SHEAR ZONE
FORMATION AGE.....PAL
FORMATION NAME.....HATCHER COMPLEX
IGNEOUS UNIT AGE.....PAL
IGNEOUS UNIT NAME.....COLUMBIA GRANODIORITE
GEOLOGY COMMENTS.....ORE MINERALS APPEAR TO BE OF LATER DEPOSITION THAN MOST OF THE QUARTZ (TABER, 1913).
NON-USGS WORK.....? DIREXPL ? - PROSPECTED SITE
NON-USGS WORK.....1974 RECON VA. DIV. OF MINERAL RE SOURCES: SITE INSPECTED.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.

FAIRFAX COUNTY

1. Chantilly Prospect "A"

MRDS-REV RECORD NUMBER.....411
MRDS RECORD NUMBER.....W000342
RECORD TYPE.....X1M
DEPOSIT NUMBER.....FI-003
REPORT DATE.....72 03
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBT. E. (LE VAN, D. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 07
UPDATER.....SWEET, P. C.
SITE NAME.....CHANTILLY PROSPECT "A"
MINING DISTRICT/AREA.....CULPEPER BASIN
COUNTRY.....US STATE.....VA COUNTY.....FAIRFAX
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
LAND STATUS.....30
QUADRANGLE NAME..... HERNDON, VA QUADRANGLE SCALE 1:24000
ELEVATION.....300 FT (91 M)
UTM NORTHING...4307020 EASTING...290200 ZONE...+18
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.3 KM (0.8 MI) SE OF CHANTILLY.
LOCATION COMMENTS.....JUST SOUTH OF US HWY 50. IN MARCH 1987, THIS PROSPECT IS COVERED BY ROAD IN FRONT OF DART CHANTILLY MALL.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOCITE, BORNITE
OCCUR.....CU
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
DISCOVERER.....R. S. CANNON
YEAR OF DISCOVERY.....1947
NATURE OF DISCOVERY.....B
DEPOSIT TYPE.....DISSEMINATED
DEPOSIT FORM.....BLANKET
MAXIMUM LENGTH.....1.8 UNITS...M
MAXIMUM WIDTH.....1.8 UNITS...M
MAXIMUM THICKNESS.....0.9 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N.-S.
DIP.....10 DEG. E.
DEPOSIT DESCRIPTION COMMENTS.....INFO. FROM CANNON MEMO. COPPER ORES ARE DISSEMINATED AS PELLETS IN CLASTIC SEDIMENTS
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....ARKOSE, SILTSTONE, SANDSTONE
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
TECTONIC SETTING.....BASIN, PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CULPEPER TRIASSIC BASIN
PROCESS OF CONCENTRATION/ENRICHMENT.....MAY HAVE BEEN EITHER RESULT OF INTRUSIVE DIABASE OR SEDIMENTATION PROCESSES
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION NAME.....DIABASE
FORMATION NAME.....MANASSAS SANDSTONE, NEWARK GROUP
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE
GEOLOGY COMMENTS.....ASSOCIATION WITH ORGANIC MATTER FAVORS SEDIMENTARY ORIGIN (CANNON, 1947)
REGIONAL TRENDS.....NORTHEAST-SOUTHWEST
MAJOR LITHOLOGIC/STRATIGRAPHIC UNITS...TRIASSIC SEDIMENTS
WORK DONE BY USGS.....1948 GEOCHEM USGS-C.MILTON, GOOD CU TEST
REPORTS AVAILABLE.....REPORT F-61 IN CU COMMODITY FILES BY CHARLES MILTON FOR R. S. CANNON 1-6-1948. (USGS FILES).
REFERENCE...LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE...CANNON, R.S., 1947, UNPUB. MEMO IN CU COMMODITY FILE: U.S. GEOLOGICAL SURVEY.
REFERENCE...DRAKE, A.A., JR., AND FROELICH, A.J., 1977, BEDROCK MAP OF FAIRFAX COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE MAP 77-523, 1 SHEET, SCALE 1:48,000.
REFERENCE....BERNSTEIN, L.R., 1980, MINERALS OF THE WASHINGTON D.C. AREA, DEPT. OF NATURAL RESOURCES, MARYLAND GEOLOGICAL SURVEY, EDUCATIONAL SERIES NO. 5, 148 P.
REFERENCE....SMOOT, J.P., AND ROBINSON, G.R., JR., 1987, BASE AND PRECIOUS METAL OCCURRENCES IN THE CULPEPPER BASIN, NORTHERN VIRGINIA: EARLY MESOZOIC BASINS WORKSHOP FIELDTRIP NO. 2, MASY 14, 1987, U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 87-252, 33 P.


LEGEND
U. S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
ELECTION DISTRICTS
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
N
Columbia
GOOCHLAND COUNTY
FLUVANNA COUNTY
CHESAPEAKE AND OHIO RAILWAY
James River
Elk Island
VEPCO
115 KV
602
690
610
1
Flanagan Mills
151
Cartersville
4,450
115 KV
Randolph Cr.
Muddy Creek
Creek
FOREST
STATE
CUMBERLAND
Willis
North Central
Reynolds
Elect. Elect.
Dist. Dist.
Clinton
Bear Creek Lake
Bear
Creek
Cumberland
Deep Creek
Little Guinea Creek
Sunnyside
Tear Wallet Creek
Central South
Guinea Mills
Big Guinea Creek
Elect. Elect.
Dist. Dist.
Little Willis River
Willis River
POWER CO.
AND
ELECTRIC
VIRGINIA
115 KV
Angola Creek
Dry Creek
Green Creek
NORFOLK & WESTERN RY.
Farmville
Appomattox River
BUCKINGHAM COUNTY
PRINCE EDWARD COUNTY
AMELIA COUNTY
POWHATAN COUNTY
45
60
13
CUMBERLAND COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5

LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
STATE BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
R.F.&P.R.R. RICHMOND FREDERICKSBURG AND POTOMAC RAILROAD
NAV. PROJ. 8 FT. AUTHORIZED NAVIGATION PROJECT AND CHANNEL DEPTH IN FEET
MAGISTERIAL DISTRICT LINE
HIGHWAY INTERCHANGE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
FAIRFAX COUNTY
VIRGINIA
SCALE OF MILES
0 1 2 3 4 5
MARYLAND
DISTRICT OF COLUMBIA
ARLINGTON COUNTY
LOUDOUN COUNTY
PRINCE WILLIAM COUNTY
Potomac River
5,870
APPROX 27 MILES TO GAGING STATION
6,930
35
9
20
16
8
Great Falls
Greenway
Dranesville
McLean
Herndon
Vienna
Oakton
FALLS CHURCH
ALEXANDRIA
FAIRFAX
Annandale
Springfield
Burke
Fairfax Station
Centreville
Clifton
Bull Run
Pleasant Valley
Dulles International Airport
National Airport
Lorton
Occoquan
Accotink
Fort Belvoir
MIL. RES.
Gunston Hall
Mount Vernon
Fort Hunt
Hunting Creek
GEO. WASHINGTON MEMORIAL PARKWAY
MT. VERNON MEMORIAL BLVD.
NAVIGATION 24 FT. PROJECT
NAV. PROJ. 5 FT.
NAV. PROJ. 6 FT.
Gunston Cove
Belmont Bay
Occoquan Bay
Difficult Run
Pimmit Run
Tripp Run
Accotink
Back Lick Run
Pohick Creek
Long Branch
Popes Head Creek
South Run
Mill Creek
Cub Run
Elklick Run
Flatlick Creek
Rocky Run
Bull Run
Occoquan
Dogue Cr.
Cameron Run
A.S. CORP.
TRANSCONTINENTAL GAS PIPE LINE CORP.
SEABOARD
ATLANTIC
SOUTHERN RY.
R.F.&P. R.R.
VIRGINIA ELECTRIC AND POWER COMPANY 3-230KV
VEPCO 1-500 KV & 2-230 KV
VEPCO 3-230 KV
2-230KV 1-115KV
115 KV
110KV
NATIONAL 230KV
DULLES INTER-NATIONAL AIRPORT ACCESS
Dranesville Dist.
Centreville Dist.
Providence Dist.
Annandale Dist.
Springfield Dist.
Lee Dist.
Mt. Vernon Dist.
1
2
3
4
5
6
7

RESERVES AND POTENTIAL RESOURCES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE SML 2 % WHERE FRESH
0.5 % OVERALL
SOURCE OF RESERVES AND RESOURCES INFORMATION...CANNON UNPUBLISH MEMO.

POTENTIAL RESOURCES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE SML

2. Chantilly Prospect "B"

MRDS-REV RECORD NUMBER.....409
MRDS RECORD NUMBER.....W000343
RECORD TYPE.....X1M
DEPOSIT NUMBER.....FI-004
REPORT DATE.....72 03
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBT. E. (LE VAN, D. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 07
UPDATER.....SWEET, P. C.
SITE NAME.....CHANTILLY PROSPECT "B"
MINING DISTRICT/AREA.....CULPEPER BASIN
COUNTRY.....US STATE.....VA COUNTY.....FAIRFAX
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
LAND STATUS.....01
QUADRANGLE NAME..... HERNDON, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....360 FT (110 M)
UTM NORTHING...4306440 EASTING...290460 ZONE...+18
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.8 KM (1.1 MI) 5.50 DEG. E. OF CHANTILLY.
LOCATION COMMENTS.....IN EXCAVATION OF TRANSCONTINENTAL GAS PIPELINE CO., 50 M (150 FT) SE OF TABSCOTT RD. (STATE ROAD 4646) JUST NE OF JUNCTION WITH STATE ROAD 4648 (LEE'S CORNER ROAD), 0.4 KM (0.3 MI) BY ROAD SE OF JUNCTION WITH STATE ROAD 4951, 0.2 KM (0.2 MI) SW OF JUNCTION WITH U.S. HWY 50, 0.2 KM (0.1 MI) NW OF JUNCTION WITH STATE ROAD 645.
COMMODITIES PRESENT.....CU AG
ORE MATERIALS.....MALACHITE, AZURITE
GENERAL ANALYTICAL DATA.....MINERALIZED ZONE: UPPER 3 FT: 5000 PPM CU, 10 PPM AG; LOWER 2 FT: 5000 PPM CU, 5 PPM AG; 2 FT MALACHITE-RICH ZONE: 20,000 PPM CU, 50 PPM AG; 1 FT MALACHITE-RICH ZONE: 10,000 PPM CU, 7 PPM AG; GRAB OF MIXED BEDROCK: 5000 PPM CU, 3 PPM AG (D'AGOSTINO AND HANSHAW, 1970).
COMMODITY INFO COMMENTS.....MALACHITE AND AZURITE WERE IDENTIFIED BY X-RAY ANALYSIS AND EXISTED ON LAMINAE AND JOINTS AS THIN COATINGS (0.8 MM THICK). ONE XL. OF CHALCOPYRITE WAS RECOVERED THROUGH HEAVY MINERAL SEPARATION OF A WHOLE ROCK SAMPLE.
OCCUR.....CU AG
NON-PRODUCER MAIN.....CU
NON-PRODUCER MINOR.....AG
PRODUCTION.....N
STATUS AND ACTIVITY.....1
DISCOVERER.....P. HANSHAW AND J. OWENS
YEAR OF DISCOVERY.....1968
NATURE OF DISCOVERY.....B
OWNER (PRESENT/LAST).....TRANSCONTINENTAL GAS PIPELINE CO.
ECONOMIC COMMENTS.....THIS IS ONLY AN OCCURRENCE IN AN URBANIZED AREA, AND THEREFORE IT IS DOUBTFUL IF IT WOULD EVER BE MINED.
DEPOSIT TYPE.....DISSEMINATED, VEIN
DEPOSIT FORM.....LINEAR
DEPTH TO BOTTOM.....1.5 UNITS...M
MAXIMUM THICKNESS.....1.5 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....THE MALACHITE WAS NOTED ONLY IN THE TRENCH AND COULD NOT BE TRACED, THEREFORE LITTLE IS KNOWN ABOUT THE DIMENSIONS AND ATTITUDE OF THE DEPOSIT.
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....FINE-GRAINED SILTY SANDSTONE
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
PERTINENT MINERALS (NOT ORE).....BARITE, PYRITE
ORE CONTROL/LOCUS.....BEDDING PLANES, JOINTS, FRACTURES
TECTONIC SETTING.....BASIN, PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CULPEPER TRIASSIC BASIN
SIGNIFICANT LOCAL STRUCTURES.....SOME FAULTS CUT ACROSS THE DIABASE NEAR CHANTILLY ACCORDING TO THE STATE MAP. DRAKE AND FROELICH (1977) INDICATE SEVERAL FAULTS IN THE VICINITY OF CHANTILLY.
PROCESS OF CONCENTRATION/ENRICHMENT.....MINERALIZED SOLUTIONS FROM IGNEOUS ACTIVITY PROBABLY ASCENDED UPDIP ALONG BEDDING PLANES OR ALONG JOINTS AND FRACTURES UNTIL ENCOUNTERING ORGANIC-RICH ROCK. SUBSEQUENT SUPERGENE ALTERATION HAS PRODUCED COPPER CARBONATES.
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION NAME.....DIABASE
FORMATION NAME.....MANASSAS SANDSTONE, NEWARK GROUP
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE
GENERAL COMMENTS.....THE MALACHITE BEARING SANDSTONE WAS NOTED OCT. 1968 IN A TRENCH EXCAVATION OF THE TRANS CONTINENTAL GAS PIPELINE CO. NO NAME WAS PREVIOUSLY APPLIED TO THIS OCCURRENCE. CHANTILLY PROSPECT "A" IS LOCATED 0.8 KM TO THE NNW.
GEOLOGICAL DESCRIPTIVE NOTES.....CU MINERALIZATION IN TRIASSIC OF EASTERN U. S. USUALLY SUGGESTS PARTIAL CONTROL OF PRIMARY ORE MINERALS BY FAULTS AT THIS LOCALE, HOWEVER, ONLY SUPERGENE MINERALS OCCUR, DEPOSITED MAINLY ALONG BEDDING PLANES.
REGIONAL TRENDS.....NORTHEAST-SOUTHWEST
MAJOR LITHOLOGIC/STATTIGRAPHIC UNITS...SANDSTONE AND DIABASE
COMMENTS (REGIONAL?).....SCHIST AND PHYLLITE OF UNKNOWN AGE UNDERLIE THE TRIASSIC SEDIMENTS.
WORK DONE BY USGS.....1968 GEOPHYS U.S.G.S. - X-RAY ANALYSES GAVE PERCENTS OF CU
REFERENCE....D'AGOSTINO, J.P. AND HANSHAW, P.M., 1970, MALACHITE- AND SPECULARITE-BEARING TRIASSIC SANDSTONE LOCALITIES NEAR CHANTILLY, VIRGINIA: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 700-C, P. C103-C106.
REFERENCE....DRAKE, A.A., JR., AND FROELICH, A.J., 1977, BEDROCK MAP OF FAIRFAX COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN FILE MAP 77-523, 1 SHEET, SCALE 1:48 000.
REFERENCE...SMOOT, J.P., AND ROBINSON, G.R JR., 1987, BASE AND PRECIOUS METAL OCCURRENCES IN THE CULPEPPER BASIN, NORTHERN VIRGINIA: EARLY MESOZOIC BASINS WORKSHOP FIELD TRIP NO. 2, MAY 14, 1987, U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 87-252, 33 P.

RESERVES AND POTENTIAL RESOURCES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE SML .5 TO 2 % CU FROM ANALYSES
SOURCE OF RESERVES AND RESOURCES INFORMATION.....D'AGOSTINO AND HANSHAW REFERENCE
RESERVES AND RESOURCES COMMENTS.....THE SURFICIAL MALACHITE ZONE COULD NOT BE TRACED VERY FAR SO IT IS NOT POSSIBLE TO ACCURATELY ESTIMATE THE RESERVES.

POTENTIAL RESOURCES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE SML .5 TO 2 % CU FROM ANALYSES

3. Fairfax Quarry Occurrence

MRDS-REV RECORD NUMBER.....431
MRDS RECORD NUMBER.....W000823
RECORD TYPE.....X1N
DEPOSIT NUMBER.....USGS FI-013, USBM 5105900001, VDMR 79-51
REPORT DATE.....72 08
INFORMATION SOURCE.....1
FILE LINK ID.....USBM, VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....80 07
UPDATER.....MEINTZER, ROBT. E. (SWEET, P. C.)
SITE NAME.....FAIRFAX QUARRY OCCURRENCE
SYNONYM NAME.....CENTREVILLE QUARRY
MINING DISTRICT/AREA.....CULPEPER BASIN
COUNTRY.....US STATE.....VA COUNTY.....FAIRFAX
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MANASSAS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....250 FT (76 M)
UTM NORTHING...4300250 EASTING...283800 ZONE...+18
LATITUDE.....38-49-35N LONGITUDE.....077-29-26W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....4.6 KM (3.5 MI) WSW OF CENTREVILLE.
LOCATION COMMENTS.....LOCATED IMMEDIATELY NORTH AND SOUTH OF U.S. HWY 29/211 JUST WEST OF STATE ROAD 621 (BULL RUN POST OFFICE ROAD) AT BULL RUN.
COMMODITIES PRESENT.....STN1 UNF CU AG
ORE MATERIALS.....DIABASE , BORNITE, CHALCOPYRITE, NATIVE SILVER
COMMODITY SUBTYPES.....TRADE NAME: TRAPROCK. PRODUCTS: ROADSTONE, ASPHALT STONE, AGGREGATE FOR CONCRETE BLOCKS, ETC.
GENERAL ANALYTICAL DATA.....LOS ANGELES LOSS (500 REV.): 20.0; ABSORPTION: 0.33; SPECIFIC GRAVITY: 3.00.
COMMODITY INFO COMMENTS.....CU AND AG ARE NOT PRESENT IN ECONOMIC CONCENTRATIONS. UNF IS U.S.G.S. NATURAL ROCK STANDARD, W-1.
MAJOR.....STN1
MINOR.....UNF
OCCUR.....CU AG
PRODUCTION.....L
STATUS AND ACTIVITY.....4
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1926
OWNER (PRESENT/LAST).....LUCK QUARRIES (CHARLES S. LUCK)
OPERATOR.....FAIRFAX QUARRIES, INC.
MILL CAPACITY PER YR. (THOUS. UNITS)...9.07
YR APPLICABLE.....1973
DEPOSIT TYPE.....IGNEOUS INTRUSIVE , SILL
DEPOSIT FORM.....IRREGULAR
DEPTH TO TOP.....3 UNITS...M
DEPOSIT SIZE.....LARGE
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....3 QUARRIES
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....DIABASE
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
PERTINENT MINERALS (NOT ORE).....DIABASE: AUGITE, LABRADORITE, BIOTITE, CHLORITE, MAGNETITE; QUARTZ, PREHNITE, APOPHYLLITE, LAUMONTITE, ACTINOLITE (BYSOLITE), EPIDOTE, THAUMASITE.

TECTONIC SETTING.....BASIN
SIGNIFICANT REGIONAL STRUCTURES.....CULPEPER (POTOMAC) TRIASSIC BASIN
SIGNIFICANT LOCAL STRUCTURES.....FAULTING
FORMATION AGE.....TRI
FORMATION NAME.....DIABASE
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE
GENERAL COMMENTS.....PRODUCTION FIGURES UNAVAILABLE. QUARRY INDICATED ON TOPO SHEET JUST S.W. OF BULLS RUN AS A QUARRY SYMBOL. U.S.G.S. STANDARD ROCK SAMPLE, W-1, IS THE DIABASE FROM THIS QUARRY (SEE U.S.G.S. BULL. 980).
SOURCE REFERENCE.....GOOCH AND OTHERS, 1960, P. 34.
WORK DONE BY USGS.....1977 GEOLMAP A.A. DRAKE, JR. & A.J. FROELICH: MAPPED AREA.
REFERENCE....SWEET, P.C., 1980, DIRECTORY OF THE MINERAL INDUSTRY-1979: VIRGINIA DIVISION OF MINERAL RESOURCES, 55 P.
REFERENCE....GOOCH, E.O., WOOD, R.S., AND PARROTT, W.T., 1960, SOURCES OF AGGREGATE USED IN VIRGINIA HIGHWAY CONSTRUCTION: VIRGINIA DIVISION OF MINERAL RESOURCES MINERAL RESOURCES REPORT 1, 65 P.
REFERENCE....MEDICI, J.C., 1972, MINERALS OF THE FAIRFAX QUARRY, CENTREVILLE, VIRGINIA: MINERALOGICAL RECORD, V. 3, NO. 4, P. 173-179.

4. Greenbriar Prospect

MRDS-REV RECORD NUMBER.....410
MRDS RECORD NUMBER.....W000344
RECORD TYPE.....X1M
DEPOSIT NUMBER.....FI-005
REPORT DATE.....72 04
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....80 01
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D. C.)
SITE NAME.....GREENBRIAR PROSPECT
MINING DISTRICT/AREA.....CULPEPER BASIN
COUNTRY.....US STATE.....VA COUNTY.....FAIRFAX
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MANASSAS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....355 FT (108 M)
UTM NORTHING...4304900 EASTING...291400 ZONE...+18
LATITUDE.....38-52-12N LONGITUDE.....077-24-16W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....4.0 KM (2.5 MI) N. 30 DEG. E. OF CENTREVILLE.
LOCATION COMMENTS.....LOCATED IN GREENBRIAR SUBDIVISION IN VICINITY OF STATE ROAD 4822, 0.3 KM (0.2 MI) EAST OF STATE ROAD 645 (STRINGFELLOW ROAD), 1.6 KM (1.0 MI) BY ROAD SOUTH OF U.S. HWY 50.
COMMODITIES PRESENT.....FE CU
ORE MATERIALS.....HEMATITE, MALACHITE
COMMODITY INFO COMMENTS.....HEMATITE OCCURS AS MASSIVE SPECULARITE WITHIN SILICEOUS ZONES, AS SCATTERED ROSETTES, AS DISSEMINATED COMPACT METALLIC AND RED HEMATITE AND AS FINE CRYSTALS. SMALL AMOUNTS OF MALACHITE OCCUR WITH HEMATITE OCCASIONALLY.
OCCUR.....FE CU
NON-PRODUCER MAIN.....FE
NON-PRODUCER MINOR.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
DISCOVERER.....P. HANSHAW
YEAR OF DISCOVERY.....1968
NATURE OF DISCOVERY.....B
ECONOMIC COMMENTS.....THIS OCCURRENCE IS NOW OVERLAIN BY HOUSES OF THE GREENBRIAR SUBDIVISION, AND WILL MOST PROBABLY NEVER BE INVESTIGATED ANY FURTHER.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE ONLY INFORMATION ABOUT THE ORE IS BASED ON EXPOSURES IN SEVERAL 3.7 M DEEP TRENCHES.
DEPOSIT TYPE.....REPLACEMENT , DISSEMINATED
DEPOSIT FORM.....BLANKET
DEPTH TO TOP.....0 FT. UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....IN ALTERED ZONE NEAREST DIABASE; MASSIVE, COARSELY CRYSTALLINE SPECULARITE OCCURS WITHIN SILICEOUS ZONES AS MUCH AS 0.6 M THICK AND AS SCATTERED ROSETTES. FARTHER AWAY HEMATITE CRYSTALS OCCUR WITH QUARTZ IN SOLID ROUNDED CLOTS.
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....HORNFELS
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
AGE OF MINERALIZATION.....TRI
ORE CONTROL/LOCUS.....DIABASE SILL
TECTONIC SETTING.....BASIN, PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CULPEPER TRIASSIC BASIN
SIGNIFICANT LOCAL STRUCTURES.....SILL OR FLOW
PROCESS OF CONCENTRATION/ENRICHMENT.....THERMAL FLUIDS FROM IGNEOUS INTRUSION
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION NAME.....DIABASE
FORMATION NAME.....HORNFELS
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE
GEOLOGY COMMENTS.....HORNFELS REPRESENTS METAMORPHOSED PORTION OF MANASSAS SANDSTONE, NEWARK GROUP.
GENERAL COMMENTS.....NO NAME PREVIOUSLY APPLIED TO THIS PROSPECT.
GEOLOGICAL DESCRIPTIVE NOTES.....HEMATITE NEAREST THE DIABASE OCCURS AS MASSIVE COARSELY CRYSTALLINE SPECULARITE WITHIN SILICEOUS ZONES AS MUCH AS 2 FT. THICK. IT ALSO OCCURS AS ROSETTES IN SCATTERED SEGREGATIONS.
REGIONAL TRENDS.....NORTHEAST-SOUTHWEST
MAJOR LITHOLOGIC/STATTIGRAPHIC UNITS...SANDSTONE AND DIABASE
WORK DONE BY USGS.....1968 DIREXPL U.S.G.S.-DISCOVERY OF ORE ZONE
REFERENCE....D'AGOSTINO, J.P. AND HANSHAW, P.M., 1970, MALACHITE-AND SPECULARITE-BEARING TRIASSIC SANDSTONE LOCALITIES NEAR CHANTILLY, VIRGINIA: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 700-C, P. C103-C106.
REFERENCE....DRAKE, A.A., JR., AND FROELICH, A.J., 1977, BEDROCK MAP OF FAIRFAX COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN FILE MAP 77-523, 1 SHEET, SCALE 1:48 000
REFERENCE...SMOOT, J.P., AND ROBINSON, G.R., JR., 1987, BASE AND PRECIOUS METAL OCCURRENCES IN THE CULPEPPER BASIN, NORTHERN VIRGINIA: EARLY MESOZOIC BASINS WORKSHOP FIELD TRIP NO. 2, MAY 14, 1987, U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 87-252, 33 P.

RESERVES AND POTENTIAL RESOURCES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE SML
SOURCE OF RESERVES AND RESOURCES INFORMATION.....D'AGOSTINO & HANSHAW REPORT
RESERVES AND RESOURCES COMMENTS.....PROBABLY ONLY SMALL AMOUNT OF LOW GRADE CU ORE

POTENTIAL RESOURCES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE SML

5. Jenkins Farm Prospect

MRDS-REV RECORD NUMBER.....412
MRDS RECORD NUMBER.....W000340
RECORD TYPE.....X1M
DEPOSIT NUMBER.....FI-001
REPORT DATE.....72 03
INFORMATION SOURCE.....1,2,3
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....JENKINS FARM PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....FAIRFAX
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
LAND STATUS.....01
QUADRANGLE NAME..... VIENNA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....340 FT (104 M)
UTM NORTHING...4317430 EASTING...298390 ZONE...+18
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.3 KM (0.8 MI) N. 60 DEG. W. OF BROWNS CHAPEL
LOCATION COMMENTS.....0.3 KM (0.2 MI) SW OF VA. HWY. 7 ON SW SIDE OF PINEY RUN, 1.3 KM (0.8 MI) BY ROAD NW OF JUNCTION WITH STATE ROAD 606 (SPRINGVALE ROAD) IN BROWNS CHAPEL. JUST SOUTHEAST OF THE INTERSECTION OF VA HWY. 7 AND TOWN ROAD 6208 (BISHOPSGATE WAY).
COMMODITIES PRESENT.....CU
ORE MATERIALS.....MALACHITE, PROBABLY CHALCOPYRITE
OCCUR.....CU
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....CIVIL WAR
NATURE OF DISCOVERY.....A
PRODUCTION YEARS.....1880
ECONOMIC COMMENTS.....THIS IS ONLY A SMALL SHOWING OF COPPER, AND WAS NEVER OF ENOUGH IMPORTANCE TO MINE.
EXPLORATION AND DEVELOPMENT COMMENTS.....LUTTRELL (1966) BELIEVES THIS MAY BE SITE REPORTED BY TYSON (1862).
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPTH TO TOP.....0 FT. UNITS...M
DEPTH TO BOTTOM.....9 UNITS...M*
MAXIMUM WIDTH.....30 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N-S
DIP.....70 DEG. E.**
DEPOSIT DESCRIPTION COMMENTS.....*AN ESTIMATE BASED ON THE VOLUME AT THE DUMP. **THESE FIGURES APPLY TO THE DIRECTION OF THE SCHISTOSITY OF THE SERPENTINE AND PHYLLITE.
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....IN 1947 THERE WERE A WATER-FILLED SHAFT 4.6 M IN DIAMETER AND A NUMBER OF OLD PITS IN A LINE NORTH OF THE SHAFT. IN DEC, 1987, THE SHAFT WAS A DEPRESSION, 40 FT BY 20 FT AND ABOUT 5 FT DEEP.
HOST ROCK AGE.....PRETRI ?
HOST ROCK TYPE.....SERPENTINE
AGE OF MINERALIZATION.....PRE-TRI?
PERTINENT MINERALS (NOT ORE).....MAGNETITE, LIMONITE, PYRITE, CHRYSOTILE, SERPENTINE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT ALTERATION.....SERPENTINITE GRADES INTO STRONGLY FOLIATED SOAPSTONE TO THE EAST AND WEST.
FORMATION AGE.....EPAL(?)
FORMATION AGE.....EPAL(?)
FORMATION NAME.....ULTRAMAFIC ROCKS
FORMATION NAME.....SCHIST

GEOLOGY COMMENTS.....JOINTING IS PROMINENT AND STRIKE E-W AND DIP ABOUT 45 DEGREES TO THE SOUTH.
GENERAL COMMENTS.....MINES REFERRED TO AS THEODORA MINE AND HOWARD MINE, WHOSE LOCATIONS ARE UNKNOWN, MAY BE SYNONOMOUS WITH WORKINGS HERE.
GEOLOGICAL DESCRIPTIVE NOTES.....CANNON FEELS CU IS PROBABLY RELATED TO THE PRE -TRIASSIC SERPENTINE, BUT IT MAY HAVE BEEN INTRODUCED DURING THE TRIASSIC MINERALIZATION OF THE AREA.
REGIONAL TRENDS.....NORTHEAST-SOUTHWEST
COMMENTS (REGIONAL?).....THE ROCKS IN THIS AREA WERE PREVIOUSLY MAPPED AS WISSAHICKON.
WORK DONE BY USGS.....1947 RECON R.S. CANNON: INSPECTED SITE
NON-USGS WORK.....DIREXPL SHAFT SUNK AND EXPLORATORY PITS DUG.
REFERENCE....CANNON, R. S., UNPUBLISHED FIELD NOTES ON CU DEPOSITS IN NORTH HALF FAIRFAX, VA. QUAD., 1947.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....TYSON, P.T., 1862, SECOND REPORT OF THE STATE AGRICULTURAL CHEMIST TO THE HOUSE OF DELEGATES OF MARYLAND, JANUARY 1862: ANNAPOLIS, SCHLEY AND COLE, P. 65-66.
REFERENCE....DRAKE, A.A., JR., AND FROELICH, A.J., 1977, BEDROCK MAP OF FAIRFAX COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN FILE MAP 77-523, 1 SHEET, SCALE 1:48 000.
PRODUCTION COMMENTS.....THERE MAY HAVE BEEN A CARLOAD OF ORE MINED IN 1880 IF THIS IS THE THEODORA MINE. OTH ERWISE THERE APPEARS TO HAVE BEEN NO PRODUCTION.

6. Spencer Farm Prospect

MRDS-REV RECORD NUMBER.....408
MRDS RECORD NUMBER.....W000341
RECORD TYPE.....X1M
DEPOSIT NUMBER.....FI-002
REPORT DATE.....72 03
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....80 01
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D. C.)
SITE NAME.....SPENCER FARM PROSPECT
MINING DISTRICT/AREA.....CULPEPER BASIN
COUNTRY.....US STATE.....VA COUNTY.....FAIRFAX
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
LAND STATUS.....01
QUADRANGLE NAME..... HERNDON, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....260 FT (79 M)
UTM NORTHING...4308800 EASTING...285500 ZONE...+18
LATITUDE.....38-54-14N LONGITUDE.....077-28-25W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....3.8 KM (2.4 MI) WNW OF CHANTILLY.
LOCATION COMMENTS.....150 M (500 FT) SE FROM END OF FARM LANE, 0.7 KM (0.4 MI) BY ROAD SOUTH OF JUNCTION WITH U.S. HWY. 50, 0.2 KM (0.1 MI) ESE OF JUNCTION WITH STATE ROAD 609 (PLEASANT VALLEY ROAD) IN PLEASANT VALLEY.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOCITE, MALACHITE
OCCUR.....CU
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....R. S. CANNON
YEAR OF DISCOVERY.....1947
NATURE OF DISCOVERY.....B
DEPOSIT TYPE.....VEINS
DEPOSIT FORM.....IRREGULAR VEINLETS
MAXIMUM LENGTH.....9 UNITS...M
MAXIMUM WIDTH.....3 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION IS RELATED TO THE CONTACT OF THE SEDIMENTARY ROCK AND DIABASE.
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....MUDSTONE, SILTSTONE, SANDSTONE
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
AGE OF MINERALIZATION.....TRI
PERTINENT MINERALS (NOT ORE).....CARBONATE GANGUE
ORE CONTROL/LOCUS.....ORE FORMED AT CONTACT OF SEDIMENTARY ROCK AND DIABASE
TECTONIC SETTING.....BASIN, PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CULPEPER TRIASSIC BASIN
PROCESS OF CONCENTRATION/ENRICHMENT.....WEATHERING CONCEN TRATES THE CU AS MALACHITE
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION NAME.....DIABASE SILL
FORMATION NAME.....BALLS BLUFF SILTSTONE, BULL RUN SHALE, NEWARK GROUP
IGNEOUS UNIT AGE.....TRI SILL
IGNEOUS UNIT NAME.....DIABASE
GENERAL COMMENTS.....NO VEGETATION GROWS IN THE AREA UNDERLAIN BY THE COPPER MINERALS.
GEOLOGICAL DESCRIPTIVE NOTES.....CHALCOCITE IS DISSEMINATED IN CARBONATE VEINLETS IN CLASTIC SEDIMENTARY ROCKS. THE SEDIMENTARY ROCKS ARE NEWARK SERIES MUDSTONES, SILTSTONES, AND ARKOSIC SANDSTONES.
REGIONAL TRENDS.....NORTHEAST-SOUTHWEST
MAJOR LITHOLOGIC/STATTIGRAPHIC UNITS...NEWARK SEDIMENTS
WORK DONE BY USGS.....1948 GEOCHEM USGS-C.MILTON; GOOD CU TEST.
REPORTS AVAILABLE.....REPORT F-61 IN CU COMMODITY FILES BY CHARLES MILTON FOR R. S. CANNON, 1-6-1948. (U.S.G.S. FILES).
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....CANNON, R. S. JR., UNPUB. MEMO IN CU COMMODITY FILE , U.S. GEOLOGICAL SURVEY.
REFERENCE....DRAKE, A.A., JR., AND FROELICH, A.J., 1977, BEDROCK MAP OF FAIRFAX COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN FILE MAP 77-523, 1 SHEET, SCALE 1:48 000.
REFERENCE.... SMOOT, J.P., AND ROBINSON, G.R., JR., 1987, BASE AND PRECIOUS METAL OCCURRENCES IN THE CULPEPPER BASIN, NORTHERN VIRGINIA: EARLY MESOZOIC BASINS WORKSHOP FIELD TRIP NO. 2, MAY 14, 1987, U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 87-252, 33 P.
PRODUCTION COMMENTS.....THIS IS ONLY AN OCCURRENCE OF CU, AND HAS NEVER BEEN MINED.

RESERVES AND POTENTIAL RESOURCES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE SML 2% CU OR BETTER
SOURCE OF RESERVES AND RESOURCES INFORMATION.....CANNON UNPUBLISHED MEMO
RESERVES AND RESOURCES COMMENTS.....CHUNKS OF UNWEATH ERED CHALCOCITE ORE USED TO DETERMINE GRADE OF CU.

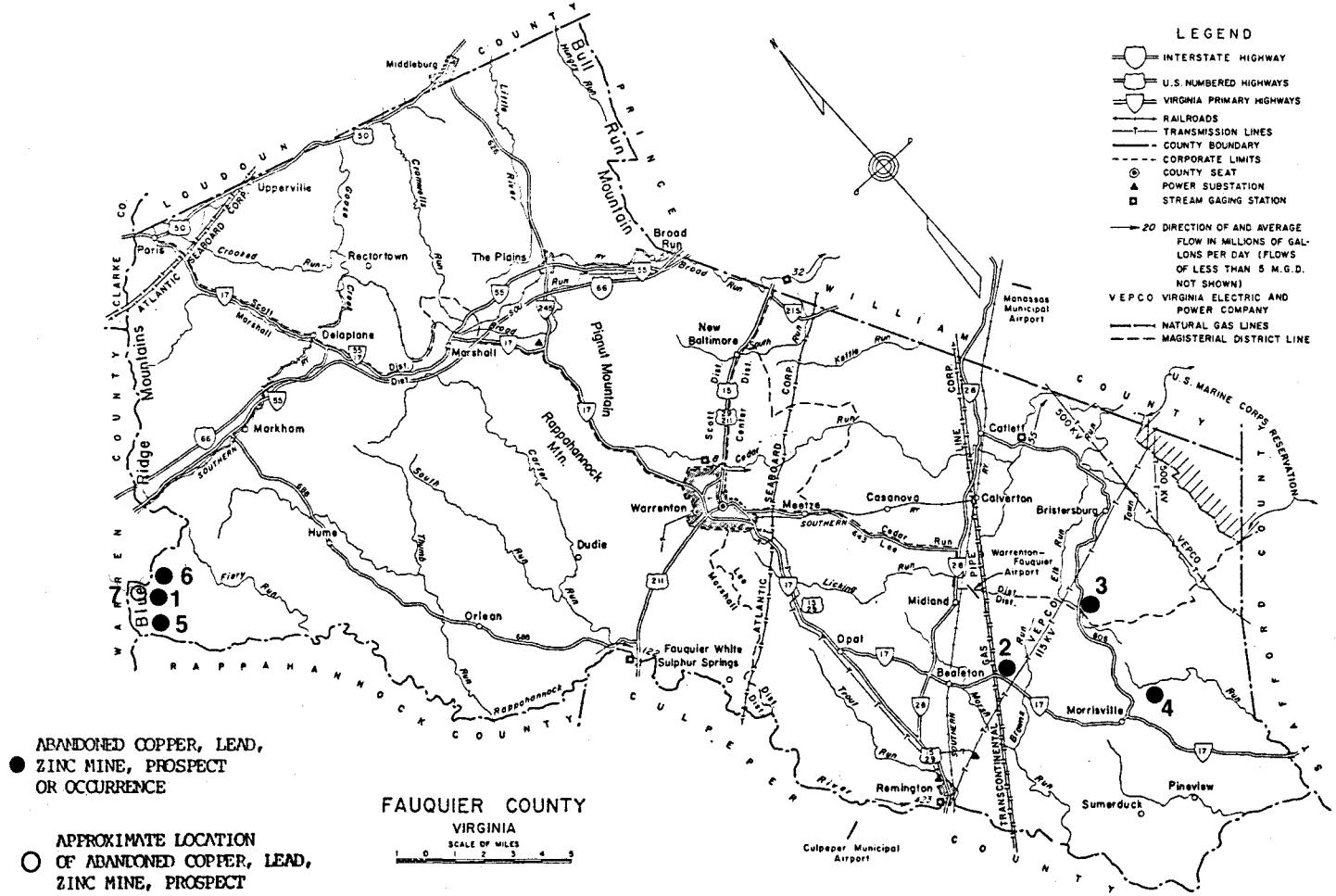
7. Theodora Copper Mine

MRDS-REV RECORD NUMBER.....1530
MRDS RECORD NUMBER.....W055389
RECORD TYPE.....X1M
REPORT DATE.....87 04
INFORMATION SOURCE.....13
FILE LINK ID.....1530
REPORTER.....SWEET, PALMER C
REPORTER AFFILIATION.....VDMR
SITE NAME.....THEODORA COPPER MINE
COUNTRY.....US STATE.....VA COUNTY.....FAIRFAX
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT PROVINCE
DRAINAGE AREA.....02070008 MID-ATLANTIC
LAND STATUS.....01 (1983)
QUADRANGLE NAME..... HERNDON QUADRANGLE SCALE 1:24000
ELEVATION.....315 FT
UTM NORTHING...4313770 EASTING...290000 ZONE...+18
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.35 MILES E OF DULLES INTERNATIONAL AIRPORT TERMINAL
COMMODITIES PRESENT.....CU AG
ORE MATERIALS.....CHALCOPYRITE
MAJOR.....CU
MINOR.....AG
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....1879 (?)
YEAR OF FIRST PRODUCTION.....1880
OPERATOR.....REV. J.B. NORTH
EXPLORATION AND DEVELOPMENT COMMENTS.....ON MARCH 22, 1880, ONE CARLOAD OF ORE HAD BEEN SHIPPED TO BALTIMORE AND 6 MEN WERE WORKING IN THE SHAFT AT THAT TIME. SMELTER WOULD BE ERECTED SOON. AT THIS TIME A "RICH VEIN OF SILVER" WAS REPORTEDLY DISCOVERED.
DEPOSIT TYPE.....CONTACT METASOMATIC
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....COPPER MINERALS IN FRACTURES AND VUGS
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....COPPER ORE FROM SHAFT; WHEN VISITED IN 3/87, SOME MINE DUMPS ARE PRESENT IN A SMALL PATCH OF WOODS. COPPER MINERALS MALACHITE AND CRYSOCOLLA ARE EVIDENT. AZURITE, EPIDOTE, AND LIBETHENITE ARE REPORTEDLY PRESENT ON THE DUMPS.
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....SANDSTONE AND SHALE
IGNEOUS ROCK TYPE.....DIABASE
PERTINENT MINERALS (NOT ORE).....EPIDOTE, HEMATITE, QUARTZ
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND CULPEPER TRIASSIC BASIN
SIGNIFICANT ALTERATION.....CONTACT METASOMATISM OF SHALE AND SANDSTONE BY DIABASE INTRUSION.
FORMATION AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE
REFERENCE....THE VIRGINIAS, 1880, COPPER VOL.1, NO.4, P.53
REFERENCE....BERNSTEIN, L.R., 1980, MINERALS OF THE WASHINGTON, D.C. AREA, DEPT. OF NATURAL RESOURCES, MARYLAND GEOL. SURVEY, EDUCATIONAL SERIES NO.5, 148P.
REFERENCE...SMOOT,J.P., AND ROBINSON,G.R.JR., 1987, BASE AND PRESIOUS METAL OCCURRENCES IN THE CULPEPPER BASIN, NORTHERN VIRGINIA: EARLY MESOZOIC BASINS WORKSHOP FIELD TRIP NO. 2, MAY 14, 1987, U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 87-252, 33 P.

FAUQUIER COUNTY

1. Ambler Mine

MRDS-REV RECORD NUMBER.....482
MRDS RECORD NUMBER.....W030883
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1 3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D.C.)
UPDATED.....82 06


LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
V E P C O VIRGINIA ELECTRIC AND POWER COMPANY
NATURAL GAS LINES
MAGISTERIAL DISTRICT LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
FAUQUIER COUNTY
VIRGINIA
SCALE OF MILES
Middleburg
Upperville
Paris
Rectortown
The Plains
Broad Run
Bull Run Mountain
Pignut Mountain
Rappahannock Min.
Ridge
Blue Ridge Mountains
Delaplane
Marshall
Markham
New Baltimore
Warrenton
Meetze
Casanova
Calverton
Bristersburg
Catlett
Hume
Orlean
Dudie
Fauquier White Sulphur Springs
Midland
Opal
Bealeton
Morrisville
Remington
Sumerduck
Pineview
Manassas Municipal Airport
Warrenton-Fauquier Airport
Culpeper Municipal Airport
U.S. MARINE CORPS RESERVATION
LOUDOUN COUNTY
PRINCE WILLIAM COUNTY
CLARKE CO.
WARREN COUNTY
RAPPAHANNOCK COUNTY
CULPEPER COUNTY
STAFFORD COUNTY
Rappahannock River
Crooked Run
Cromwell Run
Little Run
Scott Run
Cedar Run
Licking Run
Kettle Run
Fiery Run
Thumb Run
Trout Run
Broad Run
Cedar Run
Lee Run
Run
Creek
Mountain
Center
South
Dist.
Corp.
Line
Tunnel
Atlantic
Seaboard
Southern
Trans-Continental
Gas
500 KV
115 KV
1
2
3
4
5
6
7

UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....AMBLER MINE
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FAUQUIER
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FLINT HILL, VA QUADRANGLE SCALE 1:24000
ELEVATION.....1800 FT (549 M)
UTM NORTHING...4306510 EASTING...750620 ZONE...+17
LATITUDE.....38-52-25N LONGITUDE.....078-06-40W
POSITION FROM NEAREST LOCALITY.....11.2 KM (7.0 MI) NW OF HUME.
LOCATION COMMENTS.....0.6 KM (0.4 MI) SOUTH OF SUMMIT DRIVE, 0.5 KM (0.3 MI) BY ROAD WEST OF INTERSECTION WITH THE FAUQUIER-WARREN COUNTY LINE.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....NATIVE COPPER, BORNITE, MALACHITE
NON-PRODUCER MAIN.....CU
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1900(?)
NATURE OF DISCOVERY.....A
PROPERTY IS ACTIVE.....I
DEPOSIT TYPE.....VEIN/SHEAR ZONE (?), PORPHYRY (?)
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N55DEGE
DIP.....65DEGSE
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION OCCURRED AS IRREGULAR MASSES OF NATIVE COPPER AND BORNITE IN EPIDOTIZED BASALT. MALACHITE STAINING WAS ALSO PRESENT IN CONSIDERABLE AMOUNTS IN THE ROCK.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....12 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....ORIGINAL WORKINGS CONSISTED OF A 12-M (40-FT) SHAFT AND AN OPENCUT AND TUNNEL IN A ROCKY LEDGE KNOWN AS COTTAM ROCK. IN 1978 AN OPENCUT ON THE NORTH-NORTHWEST SLOPE OF RAVENSDEN ROCK COULD STILL BE SEEN AND THERE WAS ALSO A 6-M LONG (20-FT) TUNNEL ENDING IN A 2-M HIGH (7-F) OPENING WHICH CONTAINED WATER AND DEBRIS. A LARGE HILLSIDE DUMP CONTAINED SMALL AMOUNTS OF NATIVE COPPER AND MALACHITE STAINING.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, JASPER
ORE CONTROL/LOCUS.....SHEAR ZONES (?)
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....TRANSVERSE FAULTING; SCHISTOSITY STRIKES N55 DEG E AND DIPS 65 DEG SE; ONE PROMINENT JOINT STRIKES N 20 DEG. W
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
NON-USGS WORK.....1900 DIREXPL SEVERAL OPENINGS MADE (DATE APPROXIMATE)
NON-USGS WORK.....1978 RECON VA. DIV. MIN.RES: INSPECTED SITE
REFERENCE...HALLADAY, C.R., 1977, TRACE ELEMENTS IN STREAM SEDIMENTS DERIVEDM FROM THE CATOCTIN FORMATION, NORTHERN VIRGINIA: VIRGINIA MINERALS, V. 23, N. 4, P. 34-39.
REFERENCE....LUKERT, M.T. AND NUCKOLS, E.B., III, 1976, GEOLOGY OF THE LINDEN AND FLINT HILL QUADRANGES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, REPORT OF INVESTGATIONS 44, 83 P.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VA. DIV. MIN. RES. PUBLICATION 27, P. 39-52.
REFERENCE....WEED,W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
PRODUCTION COMMENTS.....NO PRODUCTION IS MENTIONED AND IT IS DOUBTED THAT THERE WAS ANY.

2. Bealton Prospect

MRDS-REV RECORD NUMBER.....458
MRDS RECORD NUMBER.....W000329
RECORD TYPE.....X1M
DEPOSIT NUMBER.....GJ-002
REPORT DATE.....72 04
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 12
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D.C.)
SITE NAME.....BEALETON PROSPECT
MINING DISTRICT/AREA.....CULPEPPER BASIN
COUNTRY.....US STATE.....VA COUNTY.....FAUQUIER
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MIDLAND, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....305 FT (93 M)
UTM NORTHING...4270700 EASTING...261850 ZONE...+18
LATITUDE.....38-33-17N LONGITUDE.....077-43-58W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 4.9 KM (3.1 MI) SSW OF MIDLAND
LOCATION COMMENTS.....POSITION APPROXIMATE, NOT FIELD CHECKED; DESCRIBED AS BEING LOCATED 2.25 MI SE OF BEALETON, 100 YDS. NORTH OF U.S. HWY 17.
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....CHALCOPYRITE, PYRITE
COMMODITY INFO COMMENTS.....THE MINERALS OCCUR IN A VERY BLUE AND HARD CALCAREOUS SHALE EITHER IN FISSURES OR DISSEMINATED THROUGH THE SHALE.
NON-PRODUCER MAIN.....CU
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1840
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....C.C. MILLER
EXPLORATION AND DEVELOPMENT COMMENTS.....THIS PROSPECT WAS FIRST INVESTIGATED IN 1840, SEVERAL TIMES SINCE, AND LAST IN 1916 (ROBERTS, 1928).
DEPOSIT TYPE.....VEIN, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....A SHALLOW SHAFT, PARTLY CAVED AND FILLED WITH WATER, WAS VISIBLE IN 1920.
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....BLUE CALCAREOUS SHALE
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
AGE OF MINERALIZATION.....POST TRI
PERTINENT MINERALS (NOT ORE).....CALCITE
TECTONIC SETTING.....BASIN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CULPEPER TRIASSIC BASIN
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION NAME.....DIABASE DIKE
FORMATION NAME.....BULL RUN SHALE (NEWARK GROUP)
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE DIKE
GENERAL COMMENTS.....THE LOCALITY WAS INVESTIGATED IN 1840, SEVERAL TIMES SINCE, AND LAST IN 1916 (ROBERTS REF.).
GEOLOGICAL DESCRIPTIVE NOTES.....THE LOCALITY IS BETWEEN TWO DIABASE DIKES OF CONSIDERABLE SIZE.
NON-USGS WORK.....1840 DIREXPL PROPERTY PROSPECTED
NON-USGS WORK.....1916 DIREXPL PROPERTY PROSPECTED
REFERENCE....LUTTRELL, G.W., BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: MINERAL RESOURCES REP. 7, 167 P.
REFERENCE....ROBERTS, J.K., 1928, THE GEOLOGY OF THE VIRGINIA TRIASSIC: VIRGINIA GEOLOGICAL SURVEY BULLETIN 29, 205 P.

ANNUAL PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE CU
SOURCE OF PRODUCTION INFORMATION.....ROBERTS REFERENCE.
PRODUCTION COMMENTS.....THERE WAS PROBABLY A SMALL AMOUNT OF SPECULATIVE MINING SINCE ROBERTS REF. MENTIONS "AT PRESENT THE SHALLOW SHAFT HAS PARTLY FALLEN IN AND IS FILLED WITH WATER".

3. Elk Run Prospect

MRDS-REV RECORD NUMBER.....459
MRDS RECORD NUMBER.....W000332
RECORD TYPE.....X1M
DEPOSIT NUMBER.....GJ-006
REPORT DATE.....72 04
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....80 01
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D.C.)
SITE NAME.....ELK RUN PROSPECT
MINING DISTRICT/AREA.....POTOMAC BASIN
COUNTRY.....US STATE.....VA COUNTY.....FAUQUIER
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MIDLAND, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....310 FT (95 M)
UTM NORTHING...4270450 EASTING...267230 ZONE...+18
LATITUDE.....38-33-14N LONGITUDE.....077-40-16W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....0.1 KM (0.06 MI) SOUTH OF ELK RUN
LOCATION COMMENTS.....LOCATION APPROXIMATE,PROSPECT NOT FIELD CHECKED.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOPYRITE, AZURITE, MALACHITE, CHRYSOCOLLA.
COMMODITY INFO COMMENTS.....THERE IS VERY LITTLE INFORMATION CONCERNING THIS PROSPECT.
OCCUR.....CU
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
ECONOMIC COMMENTS.....NOT CONSIDERED OF ECONOMIC VALUE IN 1857.
EXPLORATION AND DEVELOPMENT COMMENTS.....COMPANY ADVISED IN 1857 NOT TO WORK DEPOSIT
DEPOSIT TYPE.....DISSEMINATED, VEINS
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....SANDSTONE, DIABASE
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
PERTINENT MINERALS (NOT ORE).....PYRITE(?)

TECTONIC SETTING.....BASIN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CULPEPER TRIASSIC BASIN
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION NAME.....DIABASE DIKE
FORMATION NAME.....MANASSAS SANDSTONE (NEWARK GROUP)
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE DIKE
GENERAL COMMENTS.....LONSDALE'S (1927) ONLY REFERENCE TO THIS PROSPECT IS ON PLATE 1.
NON-USGS WORK.....1857 DIREXPL DEPOSIT PROSPECTED
REFERENCE....JACKSON, C.T., 1857, THE SO-CALLED COPPER MINE AT ELK RUN, FAUQUIER COUNTY, VIRGINIA: PROCEEDINGS OF THE BOSTON SOCIETY OF NATURAL HISTORY, V.6, P.183.
REFERENCE....LONSDALE, J.T., 1927, GEOLOGY OF THE GOLD-PYRITE BELT OF THE NORTH EASTERN PIEDMONT, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 30, 110 P.
REFERENCE....SMOOT, J.P., AND ROBINSON, G.R.JR., 1987, BASE AND PRECIOUS METAL OCCURRENCES IN THE CULPEPPER BASIN, NORTHERN VIRGINIA: EARLY MESOZOIC BASINS WORKSHOP FIELD TRIP NO. 2, MAY 14, 1987, U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 87-252, 33 P.
RESERVES AND RESOURCES COMMENTS.....THERE IS PROBABLY LITTLE COPPER OF ANY COMMERCIAL CONSEQUENCE.

4. Franklin Mine

MRDS-REV RECORD NUMBER.....457
MRDS RECORD NUMBER.....W000345
RECORD TYPE.....X1M
DEPOSIT NUMBER.....GK-001
REPORT DATE.....72 04
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 07
UPDATER.....SWEET, P. C.
SITE NAME.....FRANKLIN MINE
SYNONYM NAME.....DEEP RUN MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....FAUQUIER
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT PROVINCE
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MIDLAND, VA QUADRANGLE SCALE 1:24000
ELEVATION.....335 FT (102 M)
UTM NORTHING...4264710 EASTING...267970 ZONE...+18
LATITUDE.....38-30-09N LONGITUDE.....077-39-39W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.75 MI (2.82 KM) EAST OF MORRISVILLE.
LOCATION COMMENTS.....1350 FT (405 M) ALONG A DIRT ROAD OFF NORTH SIDE OF STATE ROAD 634, 1.55 MI (2.49 KM) BY ROAD EAST OF JUNCTION WITH STATE ROAD 806.
COMMODITIES PRESENT.....AU AG CU SE
ORE MATERIALS.....AURIFEROUS PYRITE, NATIVE GOLD, NATIVE SILVER, CHALOOPYRITE, CHALCOCITE
GENERAL ANALYTICAL DATA.....CREDNER REPORTED ORE VALUES VARIED FROM AS LOW AS $6 PER TON TO AS HIGH AS $30 PER TON.
COMMODITY INFO COMMENTS.....THE GANGUE MATERIAL IS QUARTZ, CHLORITE, ANKERITE, AND CALCITE. THE QUARTZ VEINS ARE MASSIVE AND OCCUR IN A MINERALIZED SHEAR ZONE IN SERICITIZED AND SILICIFIED QUARTZ DIORITE NEAR THE BORDER OF THE SOMERVILLE GRANITE. BANDS AND STREAKS OF SERICITE SCHIST BEND AROUND LENSES OF QUARTZ IN THE VEINS; IN PLACES THE VEINS GRADE INTO SILICIFIED REPLACEMENT BODIES. (LUTTRELL REF) SELENIUM HAS BEEN REPORTED, BUT NOT VERIFIED
MAJOR.....AU
OCCUR.....AG CU SE
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1825
NATURE OF DISCOVERY.....B
YEAR OF FIRST PRODUCTION.....1825
OWNER (PRESENT/LAST).....ASHBEY PANKEY,RICHMOND VA/ INTERSTATE SERVICE CORP
OPERATOR.....BREWSTER HELM
ECONOMIC COMMENTS.....IN 1936 THE GOVT. FROZE PRODUCTION OF GOLD MINING EQUIPMENT FOR DEFENSE PURPOSES, SO MINE WAS FORCED TO CLOSE DOWN. (FAUQUIER DEMOCRAT REF.)
EXPLORATION AND DEVELOPMENT COMMENTS.....IN 1935 THE MINE WAS CLOSED AFTER 7 DIAMOND DRILL HOLES FAILED TO JUSTIFY LARGE-SCALE OPERATIONS. CALLAHAN MINING CORP. DRILLED 4 CORE HOLES ON THE PROPERTY IN 1983-1984.
DEPOSIT TYPE.....QUARTZ VEINS
DEPOSIT FORM.....PINCH AND SWELL
DEPTH TO TOP.....15 UNITS...M
DEPTH TO BOTTOM.....88 UNITS...M
MAXIMUM WIDTH.....3 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N47DEGE
DIP.....ABT 70DEGSE
DEPOSIT DESCRIPTION COMMENTS.....THE 2 MAIN VEINS ARE CALLED FRANKLIN AND HOUSE VEINS. THE VEINS ARE PARALLEL, BUT 91.5 M (300 FT) APART, AND EACH WAS 1.8 TO 3 M (6 TO 10 FT) WIDE. THE GANGUE IS QUARTZ WITH DISSEMINATED IRON OXIDE, PYRITE, CHALCOPYRITE AND FREE GOLD.
DEPTH BELOW SURFACE.....15,46,88 UNITS...M
LENGTH OF WORKINGS.....609(?) UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....THE VEINS WERE DEVELOPED BY A 300 FT. SHAFT WITH LEVELS AND DRIFTS AT THE ABOVE MENTIONED DEPTHS. CREDNER REPORTED WORKINGS ON THE NORTHERN VEIN CONSISTED OF (1) A SHAFT 32 M (106 FT) DEEP WHICH CUT THE VEIN AT A DEPTH OF 18 M (60 FT), AND FROM THAT POINT THE SHAFT FOLLOWED THE VEIN DOWNWARD{ (2) AN AIR SHAFT, 15 M (50 FT) DEEP, TO VENTILATE THE LOWER PARTS OF THE MINE{ (3) ANOTHER SHAFT, FURTHER SOUTH, 18 M (60 FT) DEEP, FROM WHICH A CROSSCUT TO WARDS THE SOUTHERN LODE WAS STARTED BUT NOT FINISHED. THE OUTCROP OF THIS NORTHERN LODE HAD BEEN EXCAVATED FOR A DISTANCE OF 152 M (500 FT) AND AN AVERAGE DEPTH OF 8 M (25 FT). ON THE SOUTHERN LODE A SHAFT 12 M (40 FT) DEEP HAD BEEN SUNK OPPOSITE SHAFT NO. 3, OF THE NORTHERN VEIN. IN SINKING THIS SHAFT A POCKET WAS FOUND WHICH YIELDED $700 GOLD IN 3 DAYS. THE QUARTZ ON THE DUMP WAS STAMPED IN IRON HAND-MORTARS, WHICH YIELDED $1 TO $2 A DAY PER MAN. TAILINGS FROM THE MILL, 600 TO 700 TONS AT THE TIME OF CREDNER'S VISIT IN 1865, CONTAINED ON THE AVERAGE, $6 GOLD PER TON. PARK (1936) STATED THE WORKINGS CONSISTED OF A SHAFT 91.5 M (300 FT) DEEP, A 15-M LEVEL ABOUT 73 M (240 FT) LONG THAT WAS CAVED IN ITS WESTERN PART, A PUMPING STATION AT 25 M (81 FT) BELOW THE SHAFT COLLAR AND EXTENDS 11 M (36 FT) FROM THE SHAFT, A 46-M LEVEL CONTAINING 396 M (1300 FT) OF WORK INGS THAT WERE BEING ACTIVELY EXTENDED, AND A 88-M (290-FT) LEVEL CONTAINING 290 M (950 FT) OF DRIFTING WHICH WAS ALSO BEING EXTENDED.
HOST ROCK TYPE.....QUARTZ DIORITE, SERICITE SCHIST, MYLONITE(?)
IGNEOUS ROCK TYPE.....QUARTZ DIORITE, DIABASE
PERTINENT MINERALS (NOT ORE).....QUARTZ, SERICITE, ANKERITE
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT LOCAL STRUCTURES.....FAULTING(?)
PROCESS OF CONCENTRATION/ENRICHMENT.....THERMAL FLUIDS
FORMATION AGE.....(?)
FORMATION AGE.....(?)
FORMATION AGE.....TRI
FORMATION NAME.....SOMERVILLE GRANITE
FORMATION NAME.....METAMORPHOSED SEDIMENTARY ROCKS
FORMATION NAME.....DIABASE DIKE
IGNEOUS UNIT AGE.....(?)
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....SOMERVILLE GRANITE
IGNEOUS UNIT NAME.....DIABASE DIKE
GEOLOGY COMMENTS.....IN PLACES THE QTZ VEINS GRADE INTO SILICIFIED REPLACEMENT BODIES EVIDENCE OF MOVEMENT ALONG THE VEIN FISSURES IS SHOWN BY SHEARED AND SCHISTOSE NATURE OF INTRUSIVE ROCK NEAR THE VEINS. IN PLACES, QUARTZ OF THE VEINS IS BROKEN AND PARTLY RE-XLLIZED; SMALL KIDNEYS HAVE APPARENTLY BEEN ROLLED (PARK, 1936, P 31)
GENERAL COMMENTS.....1964 NEWSPAPER REFERENCE MENTIONS THAT J. B. HELM HOPED TO REOPEN THE MINE IN THE SPRING OF 1965, BUT NO FURTHER ACCOUNT MENTIONS WHETHER OR NOT HE EVER DID.
GEOLOGICAL DESCRIPTIVE NOTES.....COUNTRY ROCK IS ALTERED AND SHEARED.
REGIONAL TRENDS.....NORTHEAST-SOUTHWEST
MAJOR LITHOLOGIC/STRATIGRAPHIC UNITS...SCHIST, DIORITE, GRANITE
COMMENTS (REGIONAL?).....THE QTZ VEINS ARE IN A MINERALIZED SHEAR ZONE IN SERICITIZED AND SILICIFIED QTZ DIORITE.
NON-USGS WORK.....1825 DIREXPL MINE OPENED
NON-USGS WORK.....1933 DIREXPL FRANKLIN MINING AND MILLING CO FORMED BY INTERSTATE SERVICE CORP AND MR ANDREW A ZANGARA.
NON-USGS WORK.....1935 OTHER FRANKLIN MINING AND MILLING CO CLOSED MINE
NON-USGS WORK.....1964 DIREXPL BREWSTER HELM, UNSUCCESSFUL ATTEMPT TO REOPEN
REFERENCE....LUTTRELL, G W, 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....THE FAUQUIER DEMOCRAT, AUG. 20, 1964, P. 1
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....PARK, C F, JR, 1936, PRELIMINARY REPORT ON GOLD DEPOSITS OF THE VIRGINIA PIEDMONT: VIRGINIA GEOLOGICAL SURVEY BULLETIN 44, 42 P
REFERENCE....CREDNER, H., 1868, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VI, P. 371.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	ACC	1.00000	TONS	1902	TAILINGS

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE	ACC	100.000	TONS	1837 - 1877	VALUED AT $12/TON

SOURCE OF PRODUCTION INFORMATION.....LUTTRELL REFERENCE
PRODUCTION COMMENTS.....NO MENTION IN THE LITERATURE OF THE GRADE OF THE ORE, EXCEPT THAT MINERALIZED QUARTZ CONTAINED .15-.20 OZ. AU PER TON.

RESERVES AND POTENTIAL RESOURCES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	SML				

RESERVES AND RESOURCES COMMENTS.....THERE IS PROBABLY A SMALL AMOUNT OF AURIFEROUS ORE, BUT NOT ENOUGH FOR COMMERCIAL PRODUCTION.

RESERVES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	SML				

5. Manassas Gap Mine

MRDS-REV RECORD NUMBER.....485
MRDS RECORD NUMBER.....W030884
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1 3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....82 06
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....MANASSAS GAP MINE
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FAUQUIER
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FLINT HILL, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1010 FT (308 M)
UTM NORTHING...4305305 EASTING...749615 ZONE...+17
LATITUDE.....38-51-47N LONGITUDE.....078-07-24W
POSITION FROM NEAREST LOCALITY.....10.4 KM (6.5 MI) S OF FRONT ROYAL, OFF THE W SLOPE OF RAVENSDEN MOUNTAIN.
LOCATION COMMENTS.....UTM COORDINATES FOR EACH SHAFT: SHAFT #1 N 4305455, E 749580; SHAFT #2 N4305290, E749650; SHAFT #3 N4305195, E749590.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....NATIVE COPPER, CUPRITE, MALACHITE, CHALCOPYRITE ,BORNITE
MAJOR.....CU
PRODUCTION.....Y
STATUS AND ACTIVITY.....4
DISCOVERER.....MANASSAS GAP COPPER MINING CO.
YEAR OF DISCOVERY.....1853
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1854
OPERATOR.....MANASSAS GAP COPPER MINING CO.
DEPOSIT TYPE.....PORPHYRY
DEPOSIT FORM.....IRREGULAR
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION OCCURS DISSEMINATED IN BASALT WHICH IS EPIDOTIZED AND HAS FLAT,LENTICULAR STRAIN CRACKS FILLED WITH SERPENTINE, AND QUARTZ INTERMEDIATE ROCK DOTTED WITH SPECKS AND GLOBULES OF CUPRITE. COPPER MINERALIZATION ALSO OCCURS AS MASSES AND STAINS ALONG JOINTS.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....18.3 UNITS...M
LENGTH OF WORKINGS.....88.7 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....SHAFT 1 SUNK 4.3 M BELOW FLOOR OF A 4.9 M-DEEP OPEN CUT. ITS DRIFT RUNS S FOR 4.6 M THEN TURNS EASTWARD FOR ANOTHER 12.5 M; SHAFT 2 LIES SSE FROM #1, IS 18.3 M DEEP WITH A 58 M TUNNEL TRENDING S65 DEG E; SHAFT 3 IS SW OF #2 AND CONSISTS OF A 13.7 M TUNNEL W/COURSE S 70 DEG E.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, CALCITE, TOURMALINE, EPIDOTE
ORE CONTROL/LOCUS.....JOINTS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
PROCESS OF CONCENTRATION/ENRICHMENT.....PERCOLATION OF SURFACE WATER THROUGH ORE-BEARING ROCK
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
GEOLOGY COMMENTS.....ORE MINERALIZATION OCCURS IN MASSES AND SEAMS ALONG JOINT PLANES; IN SHAFT #2 AS SPECKS AND GLOBULES OF CUPRITE WHICH IS REPLACED BY CHALCOPYRITE AND BORNITE FARTHER DOWN THE SHAFT; IN SHAFT #1, GOOD ORE FOUND IN BUNCHES AND SEAMS.
NON-USGS WORK.....1853 DIREXPL MANASSAS GAP COPPER MINING COMPANY (CARTER COMPANY) 3 SHAFTS SUNK.
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INVESTIGATED
REPORTS AVAILABLE.....WHITNEY, J.D., 1854, THE METALLIC WEALTH OF THE UNITED STATES: PHILADELPHIA, LIPPINCOTT, GRAMBO AND CO., P. 320.
REFERENCE...HALLADAY, C.R., 1977, TRACE ELEMENTS IN STREAM SEDIMENTS DERIVED FROM THE CATOCTIN FORMATION, NORTHERN VIRGINIA: VIRGINIA MINERALS, V. 23, N. 4, P. 34-39.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VA. DIV. MIN. RES. PUBLICATION 27, P. 39-52.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA, J.P. BELL CO., 618 P.
REFERENCE....WEED, H.W., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES MINERAL RESOURCES REPORT 7, 167 P.

6. Mosby Prospect

MRDS-REV RECORD NUMBER.....483
MRDS RECORD NUMBER.....W030885
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....MOSBY PROSPECT
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FAUQUIER
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... LINDEN, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1730 FT (527 M)
UTM NORTHING...4307100 EASTING...751500 ZONE...+17
LATITUDE.....38-52-43N LONGITUDE.....078-06-03W
POSITION FROM NEAREST LOCALITY.....4.0 KM (2.5 MI) SW OF LINDEN; 0.5 KM (0 .3 MI) OFF E SIDE OF SUMMIT DR. ABOUT 1.9 KM (1.2 MI) BY ROAD E OF ITS INTERSECTION WITH HIGH KNOB DRIVE.
LOCATION COMMENTS.....1.3 KM (0.8 MI) SE OF SUMMIT OF HIGH KNOB; SE OF MOSBY SHELTER ON APPALACHIAN TRAIL
COMMODITIES PRESENT.....CU
COMMODITY INFO COMMENTS.....NO MINERALIZATION FOUND IN 1978, POSSIBLY COPPER PROSPECT.
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....PRE-1900
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....SITE REPORTEDLY WORKED PRIOR TO 1900.
DEPOSIT TYPE.....PROBABLY DISSEMINATED
STRIKE.....N43 DEG E
DIP.....68 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....STRIKE AND DIP REFER TO SCHISTOSITY OF LOCAL ROCK; MINOR MANGANESE STAIN IN DUMP
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....2.4 UNITS...M
OVERALL WIDTH.....2.4 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....PIT DISCOVERED BY P.C. SWEET IN 1978. DEPTH IS 1 M; SMALL RIM DUMP
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....SCHIST
PERTINENT MINERALS (NOT ORE).....MINOR MANGANESE STAIN
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINOREUM
SIGNIFICANT LOCAL STRUCTURES.....FRONT ROYAL FAULT
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
GEOLOGY COMMENTS.....FAULT IS STRIKE-SLIP ABOUT 3.2 KM (2 MI) N OF SITE, TRENDING EAST-WEST.
NON-USGS WORK.....DIREXPL
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION
PRODUCTION COMMENTS.....IT IS DOUBTFUL THERE WAS ANY PRODUCTION.

7. Phoenix Mine

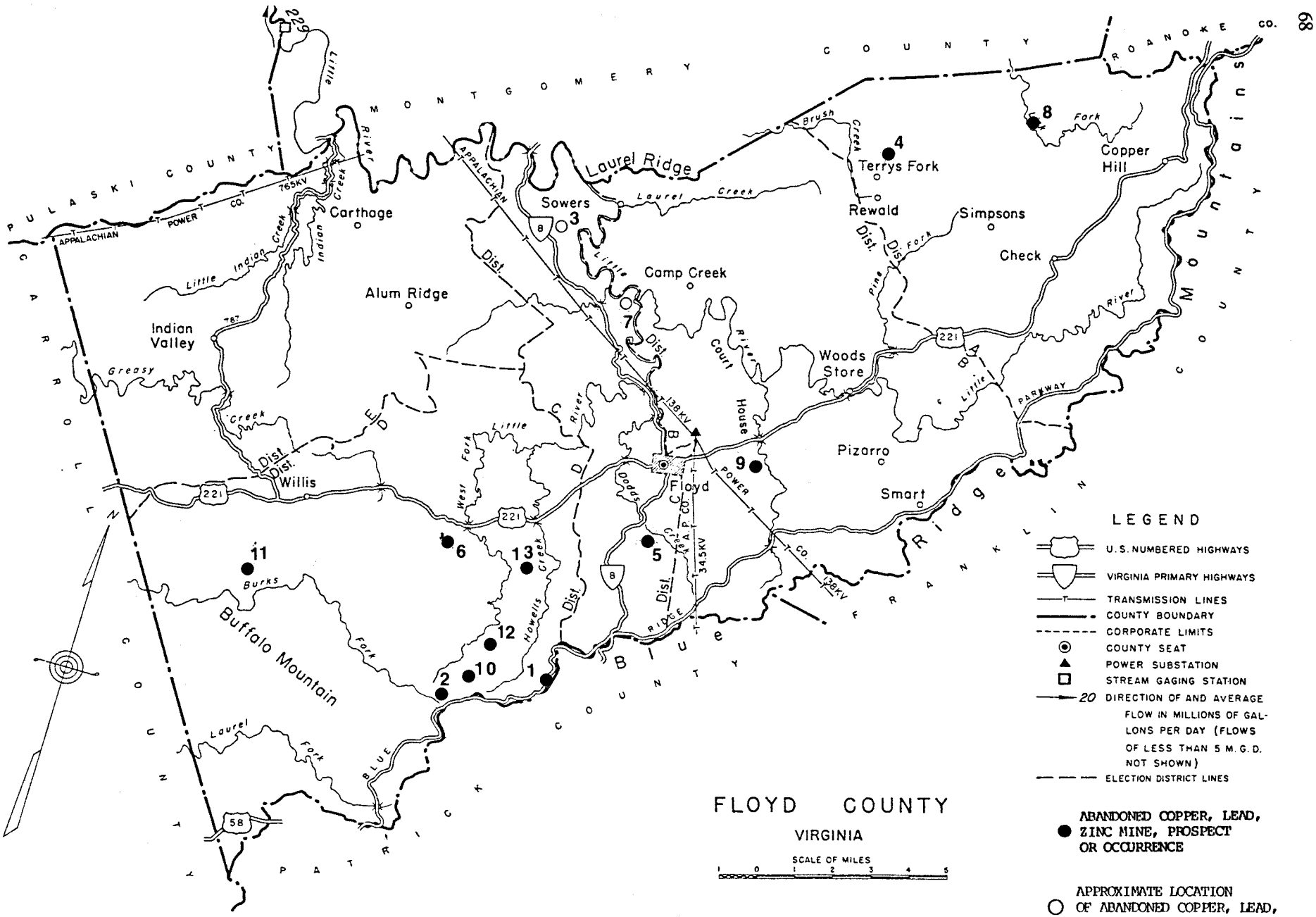
MRDS-REV RECORD NUMBER.....1708
MRDS RECORD NUMBER.....VA01708
RECORD TYPE.....X1M
REPORT DATE.....87 09
INFORMATION SOURCE.....13
REPORTER.....SWEET, PALMER C.
REPORTER AFFILIATION.....VDMR
SITE NAME.....PHOENIX MINE
COUNTRY.....US STATE.....VA COUNTY.....FAUQUIER
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE PROVINCE
DRAINAGE AREA.....02070007 MID ATLANTIC
LAND STATUS.....01
QUADRANGLE NAME..... LINDEN (1972) QUADRANGLE SCALE 1:24000
ELEVATION.....1800 FT
UTM NORTHING...4307000 EASTING...751000 ZONE...+17
ACCURACY.....EST UNDETERMINED
LOCATION COMMENTS.....LOCATED NEAR PRESENT FAUQUIER-WARREN COUNTY LINE

COMMODITIES PRESENT.....CU
NATURE OF DISCOVERY.....A
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....FRONT ROYAL FAULT
REFERENCE....SWEET, P.C., AND BE.., S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA, IN CONTRIBVUTIONS TO VIRGINIA GEOLOGY - IV: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE....AUSTIN, A.L., 1955, FAUQUIER, ONE OF THE NATION'S LEADING COPPER PRODUCERS: FAUQUIER DEMOCRAT NEWSPAPER, P. E4.

FLOYD COUNTY

1. Bear Bed Prospect

MRDS-REV RECORD NUMBER.....505
MRDS RECORD NUMBER.....W030886
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....BEAR BED PROSPECT
SYNONYM NAME.....LAUREL PROSPECT
MINING DISTRICT/AREA.....SOUTHERN LEAD/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...


FLOYD COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
ELECTION DISTRICT LINES
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
MONTGOMERY COUNTY
PULASKI COUNTY
ROANOKE CO.
CARROLL COUNTY
PATRICK COUNTY
FRANKLIN COUNTY
Laurel Ridge
Blue Ridge Mountains
Buffalo Mountain
Carthage
Sowers
Terrys Fork
Rewald
Simpsons
Copper Hill
Check
Camp Creek
Alum Ridge
Indian Valley
Woods Store
Pizarro
Smart
Floyd
Willis
APPALACHIAN POWER CO.
765KV
138KV
34.5KV
Little Indian Creek
Indian Creek
Greasy Creek
Laurel Creek
Brush Creek
Pine Fork
Little River
Court House
West Fork
Howells Creek
Dodds Creek
Burks Fork
Laurel Fork
BLUE RIDGE PARKWAY
Dist.
221
8
58
229
787
1
2
3
4
5
6
7
8
9
10
11
12
13

PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... WOOLWINE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2960 FT (902 M)
UTM NORTHING...4075570 EASTING...557060 ZONE...+17
LATITUDE.....36-49-34N LONGITUDE.....080-21-37W
POSITION FROM NEAREST LOCALITY.....2.4 MI (3.8 KM) SW OF TUGGLE GAP.
LOCATION COMMENTS.....AREA EXAMINED IN 1978 AND LOCATION HEREIN IS PROBABLE LOCATION OF PROSPECT
COMMODITIES PRESENT.....FE CU PYR PYR1
ORE MATERIALS.....PYRITE, LIMONITE (GOETHITE), PYRRHOTITE, MAGNETITE
NON-PRODUCER MAIN.....FE PYR
NON-PRODUCER MINOR.....CU PYR1
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....1880
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....MEIGS COUNTY, TENN. AND VA. MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....PROBABLE AREA OF OLD PROSPECT RELOCATED, FOUND TO BE COVERED WITH VEGETATION.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....LARGE AMOUNTS OF GOSSAN WERE PRESENT AND MAGNETITE WAS CONCENTRATED IN THE NORTHERN WALL OF THE VEIN.
DESCRIPTION OF WORKINGS COMMENTS.....NO EVIDENCE OR REPORTS OF WORKINGS.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-BIOTITE SCHIST
PERTINENT MINERALS (NOT ORE).....BIOTITE QUARTZ, HORNBLENDE
TECTONIC SETTING.....RIFT
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
NON-USGS WORK.....1978 RECON VA. DIV. MIN. RES., PROBABLE AREA DETERMINED.
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION
REFERENCE....CURREY, R.O., 1880, THE COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA: THE VIRGINIAS, V. 1, P. 80-81
REFERENCE....DIETRICH, R.V., 1959, GEOLOGY AND MINERAL RESOURCES OF FLOYD COUNTY OF THE BLUE RIDGE UPLAND, SOUTH WESTERN VIRGINIA: VIRGINIA POLYTECHNIC INSTITUTE ENGINEERING EXPERIMENT STATION SERIES, BULLETIN NO. 134, 160 P.

2. Belcher Prospect

MRDS-REV RECORD NUMBER.....513
MRDS RECORD NUMBER.....W030887
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....BELCHER PROSPECT
SYNONYM NAME.....WEDDLE PROSPECT, OLD COPPER MINE
MINING DISTRICT/AREA.....SOUTHERN LEAD/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... WILLIS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....3315 FT (1011 M)
UTM NORTHING...4072460 EASTING...554010 ZONE...+17
LATITUDE.....36-47-54N LONGITUDE.....080-23-41W
POSITION FROM NEAREST LOCALITY.....6.3 MI (10.1 KM) SE OF WILLIS.
LOCATION COMMENTS.....PROSPECT COVERED BY HOUSE
COMMODITIES PRESENT.....FE CU PYR1 PYR
ORE MATERIALS.....LIMONITE (GOETHITE), CHALCOCITE, PYRRHOTITE, PYRITE, CHALOPYRITE
MAJOR.....FE CU
MINOR.....PYR1 PYR
PRODUCTION.....Y
STATUS AND ACTIVITY.....4
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1859
OPERATOR.....C.H. THOMPSON
EXPLORATION AND DEVELOPMENT COMMENTS.....PROSPECT OWNED BY MEIGS COUNTY TENNESSEE, AND VIRGINIA MINING CO. DURING 1880'S. REOPENED BY C.H. THOMPSON IN 1930'S.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS (?)
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....NO MINERALIZATION EVIDENT IN 1978.
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....21 M SHAFT DRIVEN INTO GOSSAN IN 1859
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-BIOTITE SCHIST, HORNBLENDE SCHIST,CHLORITE -GARNET SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, BIOTITE, HORNBLENDE, CHLORITE, GARNET
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
NON-USGS WORK.....1859 DIREXPL
NON-USGS WORK.....1940 DIREXPL C.W. THOMPSON, MINE REOPENED
NON-USGS WORK.....1978 RECON VA. DIV. MIN. RES., SHAFT FILLED IN
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES: IN PREPARATION
REFERENCE....DIETRICH, R.V., 1959, GEOLOGY AND MINERAL RESOURCES OF FLOYD COUNTY OF THE BLUE RIDGE UPLAND, SOUTH WESTERN VIRGINIA: VIRGINIA POLYTECHNIC INSTITUTE ENGINEERING EXPERIMENT STATION SERIES, BULLETIN NO. 134, 160 P.

3. Black Run Prospect

MRDS-REV RECORD NUMBER.....493
MRDS RECORD NUMBER.....W030566
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU (D.C. LEVAN), HARVEY R.
SITE NAME.....BLACK RUN PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 LITTLE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FLOYD, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-58- N LONGITUDE.....080-22- W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 7 KM (4.5 MI) NW OF FLOYD; EXACT LOCATION NOT DETERMINED.
LOCATION COMMENTS.....IN THE STREAM BED OF BLACK RUN, WHICH EMPTIES INTO LITTLE RIVER, OFF NE SIDE OF STATE HIGHWAY 8.
COMMODITIES PRESENT.....AU PYR1 PB MO
ORE MATERIALS.....NATIVE GOLD, PYRRHOTITE, MOLYBDENITE, GALENA
MAIN ORE MINERALS.....NATIVE GOLD
MINOR ORE MINERALS.....PYRRHOTITE, MOLYBDENITE, GALENA
COMMODITY INFO COMMENTS.....OTHER OCCURRENIES INCLUDE MO
NON-PRODUCER MAIN.....AU
NON-PRODUCER MINOR.....PYR1 PB MO
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
DEPOSIT TYPE.....VEIN
MAXIMUM WIDTH.....1.2 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....VEIN WIDTH RANGES FROM 0.9 - 1.2 M; MINERALIZED QUARTZ VEIN.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS NOT LOCATED
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....MICA SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, MICA
TECTONIC SETTING.....RIFT
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE NOT LOCATED
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION
REFERENCE....SWEET, P.C., 1971, GOLD MINES AND PROSPECTS IN VIRGINIA: VIRGINIA MINERALS, V. 17, NO. 3, P. 25-33.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.

4. Brinton Mine

MRDS-REV RECORD NUMBER.....510
MRDS RECORD NUMBER.....W031215
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....BRINTON MINE
SYNONYM NAME.....UNITED STATES MINE
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... PILOT, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2640 FT (805 M)
UTM NORTHING...4101230 EASTING...566170 ZONE...+17
LATITUDE.....37-03-25N LONGITUDE.....080-15-21W
POSITION FROM NEAREST LOCALITY.....1.4 KM (0.9 MI) NE OF TERRY'S FORK.
LOCATION COMMENTS.....0.24 KM (0.15 MI) OFF THE SW SIDE OF STATE ROAD 790 ABOUT 0.5 KM (0.3 MI) BY ROAD WNW OF ITS INTERSECTION W/ STATE ROAD 659.
COMMODITIES PRESENT.....AS AU AG CU PYR
ORE MATERIALS.....ARSENOPYRITE, CUPRIFEROUS PYRITE, NATIVE COPPER
MAJOR.....AS
MINOR.....AU AG CU PYR

PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....1880
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1902
OWNER (PRESENT/LAST).....CHIPMAN CHEMICAL ENGINEERING CORP.
OPERATOR.....CHIPMAN CHEMICAL ENGINEERING CORPORATION OF BOUND BROOK, NEW JERSEY.
EXPLORATION AND DEVELOPMENT COMMENTS.....WHITE ARSENIC WAS PRODUCED FROM CRUDE ARSENOUS OXIDE FROM A CALCINER BY VOLATILIZATION IN A REVERBERATOR STARTING JANUARY 1903. FIRST REPORT OF ARSENOPYRITE WAS BY FONTAINE (1882) WHO REPORTED OCCURRENCE ON LAND OF MAJ. WM. GUERRANT OF PILOT, VA.
DEPOSIT TYPE.....VEIN
DEPOSIT FORM.....POD/LENS
MAXIMUM WIDTH.....4.3 UNITS...M
DEPOSIT DESCRIPTION COMMENTS.....ORE FOUND MAINLY IN VEINS, ONLY MINOR AMOUNTS IN COUNTRY ROCK. ARSENOPYRITE IS FINE TO MEDIUM GRAINED, IS DISSEMINATED IN QUARTZ-SERICITE SCHIST. MINERALIZATION RESULTS FROM SOLUTION INTRUSION.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....66 UNITS...M
LENGTH OF WORKINGS.....155 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1973, SITE REPORTED AS SEVERAL TRENCHES AND PITS ABOVE MINE AREA; SEVERAL WATER-FILLED PITS AND CONCRETE-LINED SHAFT NEAR BASE OF HILLSIDE TO THE NW; 3 LARGE CONICAL TAILINGS PILES; A LARGE DUMP AREA COMPOSED MOSTLY OF SMALL FRAGMENTS.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST (MYLONITE (?))
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, SCORODITE, APATITE, ZIRCON
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
FORMATION AGE.....PREC
FORMATION NAME.....VIRGINIA BLUE RIDGE COMPLEX
GEOLOGY COMMENTS.....DIETRICH (1959) DOES NOT DIFFERENTIATE UNITS OF THE "VIRGINIA BLUE RIDGE COMPLEX;" SCHIST MAY BE A MYLONITE.
NON-USGS WORK.....1902 DIREXPL U.S. ARSENIC MINES COMPANY; MUCH ORE PROCESSED.
NON-USGS WORK.....1917 DIREXPL CHIPMAN CHEMICAL ENGINEER ING CORPORATION OF BOUND BROOK, NEW JERSEY; DIS MANTLED PLANT IN 1919.
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZA TION IN THE BLUE RIDGE PROVINCE OF VIRGINIA, IN CONTRI BUTIONS TO VIRGINIA GEOLOGY - IV: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE....HESS, F.L., 1911, THE ARSENIC DEPOSITS OF BRINTON, VIRGINIA; U.S. GEOLOGICAL SURVEY BULLETIN 470, P. 205-211.
REFERENCE....DIETRICH, R.V., 1959, GEOLOGY AND MINERAL RESOURCES OF FLOYD COUNTY OF THE BLUE RIDGE SOUTHEASTERN VIRGINIA: VIRGINIA POLYTECHNIC INSTITUTE ENGINEERING EXPERIMENT STATION SERIES, BULLETIN NO. 134.
REFERENCE....FONTAINE, W.M., 1882, NOTES ON VIRGINIA GEOLOGY: THE VIRGINIAS, V. 3, NO. 7, P. 108-109.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
AS	EST	0.10000	TONS	1903-1919	99.75% AS203

SOURCE OF PRODUCTION INFORMATION.....DIETRICH (1959)
PRODUCTION COMMENTS.....ESTIMATED 75-100 TONS OF PROCESSED ARSENIC OF 99.75% AS203 WAS PRODUCED WHILE MINE OPERATED, AND SHIPPED IN 500 LB. KEGS.

RESERVES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
AS				1959	

RESERVES COMMENTS.....DIETRICH (1959). BELIEVES DEPOSIT WARRANTS FURTHER EXPLORATION, IF NEED FOR ARSENIC ARISES, HOWEVER GIVES NO ESTIMATE OF RESERVES.

5. Hilton Prospect

MRDS-REV RECORD NUMBER.....512
MRDS RECORD NUMBER.....W030888
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER, C.
SITE NAME.....HILTON PROSPECT
SYNONYM NAME.....HYLTON PROSPECT
MINING DISTRICT/AREA.....SOUTHERN LEAD/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... WILLIS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2720 FT (829 M)
UTM NORTHING...4079050 EASTING...551360 ZONE...+17
LATITUDE.....36-51-28N LONGITUDE.....080-25-26W
POSITION FROM NEAREST LOCALITY.....3.2 MI (5.1 KM) E OF WILLIS.
LOCATION COMMENTS.....SUPPOSED SITE COVERED BY BARN
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....PYRITE, PROBABLY CHALCOCITE
COMMODITY INFO COMMENTS.....SUPERGENE COPPER
NON-PRODUCER MAIN.....CU PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....LUTTRELL (1966) STATES 3 SHAFTS AND SEVERAL TRENCHES WERE SUNK. IN 1978 SUPPOSED SITE OF OLD SHAFT, ABOUT 8 M DEEP, HAD BEEN FILLED IN WITH TREE STUMPS AND COVERED BY A BARN
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DESCRIPTION OF WORKINGS.....B
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-BIOTITE SCHIST, VEIN QUARTZ
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....VEIN QUARTZ
PERTINENT MINERALS (NOT ORE).....QUARTZ, BIOTITE, LIMONITE (GOETHITE, LEPIDOCROCITE(?)
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GEOLOGY COMMENTS.....IN 1978 SEVERAL OUTCROPS OF VEIN QUARTZ OCCUR ON THE HILL NEAR THE BARN. NO MINERALIZATION WAS OBSERVED ON THE SITE.
NON-USGS WORK.....1978 RECON VA. DIV. MIN. RES., SUPPOSED SITE LOCATED
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZA TION IN THE BLUE RIDGE PROVINCE OF VIRGINIA, IN CONTRI BUTIONS TO VIRGINIA GEOLOGY - IV: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.

6. Hogan Prospect

MRDS-REV RECORD NUMBER.....498
MRDS RECORD NUMBER.....W030889
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....HOGAN PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FLOYD, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2350 (716 M)
UTM NORTHING...4082230 EASTING...560580 ZONE...+17
LATITUDE.....36-53-09N LONGITUDE.....080-19-13W
POSITION FROM NEAREST LOCALITY.....1.7 MI (2.7 KM) S OF FLOYD.
LOCATION COMMENTS.....ON HILLSIDE SOUTH OF DODD CREEK
COMMODITIES PRESENT.....CU FE PYR PYR1
ORE MATERIALS.....PYRITE, PYRRHOTITE, PROBABLY CHALCOCITE, MAGNETITE
COMMODITY INFO COMMENTS.....COPPER EXISTS AS SUPERGENE DEPOSIT
NON-PRODUCER MAIN.....CU FE PYR PYR1
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....A. HOGAN
EXPLORATION AND DEVELOPMENT COMMENTS.....IN 1883 A DEPOSIT OF MAGNETITE WAS DESCRIBED AT THIS PROPERTY. NO MINER ALIZATION OBSERVED IN 1978.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....MAGNETITE BODY 60 CM THICK BELIEVED TO HAVE PINCHED OUT AT A DEPTH OF 5 M.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....PROSPECT PITS. IN 1978, A SMALL TRENCH CUT VISIBLE IN HILLSIDE, BUT COVERED WITH EXTENSIVE GROWTH OF RHODODENDRON.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....MICA SCHIST
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GEOLOGY COMMENTS.....FRAGMENTS OF SCHIST SEEN IN AREA.
NON-USGS WORK.....1883 DIREXPL
NON-USGS WORK.....1978 RECON VA. DIV. MIN. EXPL., PROSPECT LOCAED
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZA TION IN THE BLUE RIDGE PROVINCE OF VIRGINIA, IN CONTRI BUTIONS TO VIRGINIA GEOLOGY - IV: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.

7. Lester McAlexander Mine

MRDS-REV RECORD NUMBER.....495
MRDS RECORD NUMBER.....W030568
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER (D.C. LEVAN), ROBERT E.
UPDATED.....87 12

UPDATER.....SWEET, PALMER C.
SITE NAME.....LESTER MCALEXANDER MINE
SYNONYM NAME.....LUSTER MCALEXANDER MINE
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... ALUM RIDGE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2200 FT (671 M)
UTM NORTHING...4093740 EASTING...552980 ZONE...+17
LATITUDE.....36-59-24N LONGITUDE.....080-24-17W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....4.5 MI (7.2 KM) NE OF ALUM RIDGE.
LOCATION COMMENTS.....JUST OFF WEST SIDE OF STATE ROAD 617 APPROX. 0.75 MI (1.21 KM) BY ROAD NORTH OF ITS INTERSEC TION WITH STATE HIGHWAY 8.
COMMODITIES PRESENT.....AU PB
ORE MATERIALS.....NATIVE GOLD, GALENA
MAIN ORE MINERALS.....NATIVE GOLD, GALENA
COMMODITY INFO COMMENTS.....GALENA REPORTED FROM PROSPECT, BUT NOT VERIFIED BY ANY INVESTIGATOR .
MAJOR.....AU
OCCUR.....PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1880
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....SWEET (1971) STATES THAT BEFORE 1882 GOLD-BEARING STREAM ALLUVIUM WAS FOUND; GOLD GRAINS RANGED FROM 5 TO 80 MG IN WGT.
DEPOSIT TYPE.....PLACER (GOLD), DISSEMINATED (GALENA)
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....GALENA IS SAID TO HAVE OCCURRED IN QUARTZ VEINS .
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....IN 1975 THERE WERE SCATTERED PIECES OF WHITE QUARTZ ON HILLSIDE AND IN STREAM.
HOST ROCK AGE.....QUAT
HOST ROCK TYPE.....ALLUVIUM
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....FRIES FAULT
FORMATION AGE.....PREC
FORMATION AGE.....QUAT
FORMATION NAME.....LITTLE RIVER GNEISS
FORMATION NAME.....ALLUVIUM
GEOLOGY COMMENTS.....GALENA REPORTED TO OCCUR IN QUARTZ VEINS IN AMPHIBOLE-RICH ROCKS.
NON-USGS WORK.....1880 DIREXPL
NON-USGS WORK.....1972 RECON VA. DIV. MIN. RES., PROSPECT LOCATED
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZA TION IN THE BLUE RIDGE PROVINCE OF VIRGINIA, IN CONTRI BUTIONS TO VIRGINIA GEOLOGY - IV: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE....SWEET, P.C., 1971, GOLD MINES AND PROSPECTS IN VIRGINIA: VIRGINIA MINERALS, V. 17, P. 26-33.
REFERENCE....DIETRICH, R.V., 1959, GEOLOGY AND MINERAL RESOURCES OF FLOYD COUNTY OF THE BLUE RIDGE UPLAND, SOUTH WESTERN VIRGINIA: VIRGINIA POLYTECHNIC INSTITUTE ENGINEERING EXPERIMENT STATION SERIES, BULLETIN NO. 134, 160 P.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.

8. Lick Fork Prospect

MRDS-REV RECORD NUMBER.....500
MRDS RECORD NUMBER.....W001172
RECORD TYPE.....X1M
DEPOSIT NUMBER.....5110
REPORT DATE.....73 01
INFORMATION SOURCE.....123
FILE LINK ID.....VDMR
REPORTER.....COURY, ANNY B.
UPDATED.....79 05
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....LICK FORK PROSPECT
SYNONYM NAME.....MACKUSICK MINE, FLAT RUN MINE, JOHN LIGHT'S MINE, VIRGINIA NICKEL CORP PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION - BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... CHECK QUADRANGLE SCALE 1:24000
ELEVATION.....1700 FT (518 M)
UTM NORTHING...4104060 EASTING...570730 ZONE...+17
LATITUDE.....37-04-55N LONGITUDE.....080-12-15W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....6.20 KM (3.85 MI) WEST OF COPPER HILL.
LOCATION COMMENTS.....ON THE BANK OF LICK FORK, 0.2 KM (0.1 MI) OFF EAST SIDE OF STATE ROAD 653, 2.34 KM (1.45 MI) BY ROAD NE OF ITS JUNCTION WITH STATE ROAD 660.
COMMODITIES PRESENT.....NI CO CU PYR1
ORE MATERIALS.....PYRRHOTITE-CHALCOPYRITE-PENTLANDITE; RARE SPHALERITE, AND SECONDARY VIOCARITE
GENERAL ANALYTICAL DATA.....WATSON (1907) REPORTS ASSAY OF: 1.75 % NI, FRACTION OF 1 % CU, AND 0.4 % CO.
NON-PRODUCER MAIN.....NI CO CU
NON-PRODUCER MINOR.....PYR1
COMMODITY SPECIALIST INFO.....CO
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1860 (?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-CIVIL WAR
OWNER (PRESENT/LAST).....WANDA W MACKUSICK ESTATE
OPERATOR.....BOSTON AND VIRGINIA NICKEL CO
EXPLORATION AND DEVELOPMENT COMMENTS.....SITE KNOWN AS OCCURRENCE OF PYRRHOTITE SINCE PRIOR TO CIVIL WAR. 1902-1907 DEVELOPED BY VIRGINIA NICKEL CORP. (FOR MERLY FIDELITY EXPLORATION CO). IN 1907, ACQUIRED BY INDUSTRIAL CHEMICAL CO, LATER CHANGED TO THE UNITED CHEMICAL AND NICKEL CORP, AFTERWARDS OWNED BY BOSTON AND VIRGINIA NICKEL CO, JAMES MCNAUGHT AND IN 1942 BY MS WANDA W MACKUSICK.
DEPOSIT TYPE.....LENS, MASSIVE SULFIDES
DEPOSIT FORM.....POD/LENS
DEPOSIT DESCRIPTION COMMENTS.....SEE ROSS (1935) FOR PETROGENE SIS AND FULL DESCRIPTION OF PETROLOGICAL AND MINERA LOGICAL RELATIONSHIPS.
DESCRIPTION OF WORKINGS.....B
LENGTH OF WORKINGS.....183 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....OPENINGS IN 4 PLACES MADE BY VA NICKEL CORP DURING VISITS 1972-1975, REMAINS OF FIVE PITS, A HILL SIDE EXCAVATION, SOME CONCRETE FOUNDATIONS, AND A DRAIN PIPE WERE OBSERVED.
HOST ROCK TYPE.....PYROXENITE, ANDESINE ANORTHOSITE
IGNEOUS ROCK TYPE.....GABBRO, PYROXENITE, DIABASE, ANDESINE ANORTHOSITE, GNEISSOID QUARTZ MONZONITE, GRANODI ORITE
PERTINENT MINERALS (NOT ORE).....ANDESINE, FELDSPAR (SPECIES NOT STATED), PYROXENE, QUARTZ, BIOTITE.
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....FRIES FAULT
FORMATION AGE.....PREC
FORMATION NAME.....VIRGINIA BLUE RIDGE COMPLEX
FORMATION NAME.....GABBRO-PYROXENITE DIKE
FORMATION NAME.....DIABASE DIKE
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....VIRGINIA BLUE RIDGE COMPLEX
IGNEOUS UNIT NAME.....GABBRO-PYROXENITE DIKE
IGNEOUS UNIT NAME.....DIABASE DIKE
GEOLOGY COMMENTS.....ROCK IN VICINITY IS GNEISSOID QUARTZ MONZONITE WHICH IS CUT BY A COMPOUND DIKE WHICH VARIES FROM A GABBRO TO A PYROXENITE WITH AN OUTER ZONE OF ANORTHOSITE. THE COMPOUND DIKE IS CUT BY A DIABASE DIKE. THE QUARTZ MONZONITE HAS BEEN ALTERED TO GRANODIORITE BY CONTACT METAMORPHISM. THE SULFIDES OCCUR AS LENSES IN THE PYROXENITE AND TO A SMALL EXTENT IN THE ANORTHOSITE. WATSON (1908) POINTS OUT THE CONSTANT ASSOCIATION OF COBALT WITH NICKEL IN THIS TYPE OF DEPOSIT.
GENERAL COMMENTS.....NO RECENT ASSAYS; 600 FT. OF UNDER GROUND WORKINGS AS OF 1907. IN 1975, ONLY SMALL AMOUNTS OF DUMP MATERIAL WERE PRESENT. ONLY IDENTIFIABLE SULFIDE WAS PYRRHOTITE. AREA IS OVERGROWN WITH VEGETATION.
GEOLOGICAL DESCRIPTIVE NOTES.....QUARTZ MONZONITE CUT BY A COMPOUND GABBROPYROXENITE DIKE IN WHICH ARE LENSES OF PYRRHOTITE-CHALCOPYRITE-PENTLANDITE, RARE SPHALERITE PRESENT AND SECONDARY VIOLARITE. WATSON(1908) POINTS OUT THE CONSTANT ASSOCIATION OF COBALT WITH NICKEL IN THIS TYPE OF ORE DEPOSIT
WORK DONE BY USGS.....1927 OTHER C S ROSS: ISSUED REPORT ON PETROGENESIS
NON-USGS WORK.....1860 DIREXPL DUG FOR PRODUCTION OF COPPERAS.
NON-USGS WORK.....1907 DIREXPL VA NICKEL CORP.: MADE 4 EXPLORATORY OPENINGS.
NON-USGS WORK.....1974 RECON VA DIV MIN RES: INSPECTED SITE
REFERENCE....WATSO, T.L., 1908, AM. INST. MINING METALL. ENGINEERS, TRANS. V. 38, P. 683-697
REFERENCE....ROSS, C S, 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U S GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....SWEET, P C AND BELL, S C, 1980, METALLIC MINERALIZA TION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION.
REFERENCE....DIETRICH, R V, 1959, GEOLOGY AND MINERAL RESOURCES OF FLOYD COUNTY OF THE BLUE RIDGE UPLAND, SOUTH WESTERN VIRGINIA: VIRGINIA POLYTECHNIC INSTITUTE BULLETIN, ENGINEERING EXPERIMENTAL STATION SERIES NO 134, 160 P.
SOURCE OF PRODUCTION INFORMATION.....ROSS (1935)
PRODUCTION COMMENTS.....A SMALL AMOUNT OF PYRHOTITE WAS PROBABLY MINED FOR COPPERAS PRIOR TO THE CIVIL WAR. THE REMAINING ORES HAVE NOT PROVEN ECONOMICALLY WORTHWHILE TO DATE.
SOURCE OF RESERVES AND RESOURCES INFORMATION.....UNPUBLISHED COBALT REPORT
RESERVES AND RESOURCES COMMENTS.....RESERVES UNKNOWN; PROBABLY SMALL

9. Powhatan Williams Prospect

MRDS-REV RECORD NUMBER.....507
MRDS RECORD NUMBER.....W030890
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)

SITE NAME.....POWHATAN WILLIAMS PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FLOYD, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2330 FT (710 M)
UTM NORTHING...4086170 EASTING...564580 ZONE...+17
LATITUDE.....36-55-16N LONGITUDE.....080-16-30W
POSITION FROM NEAREST LOCALITY.....4.2 KM (2.6 MI) ENE OF FLOYD.
LOCATION COMMENTS.....OFF S SIDE OF STATE ROAD 860, APPROXI MATELY 1.4 KM (0.9 MI) BY ROAD SE OF ITS INTERSECTION WITH U.S. HIGHWAY 221.
COMMODITIES PRESENT.....PYR CU PB
ORE MATERIALS.....PYRITE, GALENA, MALACHITE
NON-PRODUCER MAIN.....PYR
NON-PRODUCER MINOR.....CU PB
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1830
DEPOSIT TYPE.....VEIN
DEPOSIT SIZE.....SMALL
STRIKE.....N 30 DEG W
DEPOSIT DESCRIPTION COMMENTS.....REPORTED TO BE A TRUE FISSURE VEIN. VEIN DIPS 80 DEG ENE.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....9 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....DEEP CUT; SITE REPORTED GRASSED OVER IN 1978
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....SCHIST
PERTINENT MINERALS (NOT ORE).....MICA, LIMONITE, QUARTZ
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GEOLOGY COMMENTS.....VEIN REPORTED AS CELLULAR QUARTZ WITH LIMONITE IN PORE SPACES, OCCURRING IN MICA SCHIST. QUARTZ FRAGMENTS CONTAINING MINOR PYRITE AND STAINS OF LIMONITE AND MALACHITE WERE REPORTED IN 1972
GENERAL COMMENTS.....HOUSE WAS BUILT ON THE HILLSIDE AND CUT WHICH WAS FILLED IN AND GRADED OVER IN 1972.
NON-USGS WORK.....1830 DIREXPL EXCAVATED DEEP OPEN CUT.
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES: SITE INSPECTED.
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980 METALLIC MINERALIZA TION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION.
REFERENCE....FONTAINE, W.M., 1883, NOTES ON THE GEOLOGY AND MINERAL RESOURCES OF THE FLOYD, VIRGINIA, PLATEAU: THE VIRGINIAS, V. 4, P. 167, 178-180, 185-192; V. 5, P. 8-12.

10. Sutherland Prospect

MRDS-REV RECORD NUMBER.....515
MRDS RECORD NUMBER.....W031222
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....SUTHERLAND PROSPECT
SYNONYM NAME.....(FISHER, HYLTON, NOWLIN) MINE
MINING DISTRICT/AREA.....SOUTHERN LEAD/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... WILLIS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....3250 FT (991 M)
UTM NORTHING...4072940 EASTING...554940 ZONE...+17
LATITUDE.....36-48-09N LONGITUDE.....080-23-03W
POSITION FROM NEAREST LOCALITY.....10.4 KM (6.5 MI) SE OF WILLIS.
LOCATION COMMENTS.....AREA APPROXIMATELY 0.7 KM EAST OF SUMMIT OF JONES MTN.
COMMODITIES PRESENT.....FE CU PYR ZN PYR1
ORE MATERIALS.....PYRITE, LIMONITE, SPHALERITE, CHALCOPYRITE, PYRRHOTITE, MAGNETITE , ARSENOPYRITE (?)
GENERAL ANALYTICAL DATA.....DRILL HOLE CORE ANALYSIS INDICATED A COPPER CONTENT OF LESS THAN ONE PERCENT AND A ZINC CONTENT UP TO 1.8 PERCENT.
NON-PRODUCER MAIN.....FE
NON-PRODUCER MINOR.....CU PYR ZN PYR1
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1850 (?)
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....AMERICAN METALS CO.
OPERATOR.....THE NASSOG CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE PROPERTY WAS FIRST PROSPECTED AROUND 1850, WHEN IT WAS OWNED BY THE MEIGS COUNTY, TENNESSEE, AND VIRGINIA MINING CO. A SHAFT 18 M (60 FT) DEEP AND A TUNNEL 15 M (50 FT) LONG WERE OPENED. NO KNOWN PRODUCTION OCCURRED AND THE PROSPECT LAY IDLE UNTIL 1939 WHEN THE AMERICAN METALS CO. CONDUCTED A MAGNETOMETER SURVEY OF THE PROPERTY AND PUT DOWN ONE DRILL HOLE. IN 1940 THE NASSOG CO., UNDER MR. C.H. THOMPSON OF HOLLINS, VIRGINIA, PROSPECTED THE PROPERTY WITH NUMEROUS TEST PITS. IN 1943 THE U.S. BUREAU OF MINES OPENED THE CAVED TUNNEL AND SANK 14 DRILL HOLES. THE DRILLING OCCURRED IN FEBRUARY AND MARCH AND THE 14 HOLES TOTALED 278 M (913 FT).
DEPOSIT TYPE.....MASSIVE SULFIDE, GOSSAN
DEPOSIT FORM.....LENSES
MAXIMUM WIDTH.....6 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 76 DEG E
DIP.....45 DEG NW
DEPOSIT DESCRIPTION COMMENTS.....THE COUNTRY ROCK IS A QUARTZ-BIOTITE-GARNET SCHIST AND CONTAINS A MINERALIZED ZONE 6 M (20 FT) THICK WHICH DIVERGES INTO A SERIES OF SMALL STRINGERS AT ITS EAST END. THERE IS A GOSSAN CAP UP TO 17 M (55 FT) THICK OVERLYING THE PRIMARY ORE, AS INDICATED IN ONE USBM DRILL HOLE, THE GOSSAN'S COPPER CONTENT RANGED FROM 0.14 TO 0.94 PERCENT IN THIS HOLE. THE ORE CONSISTS OF SMALL MASSIVE SULFIDE LENSES AND BANDS. ABOUT 7 M (23 FT) OF HYPOGENE SULFIDE ORE WAS CUT AT 30.5 M (100 FT) BELOW THE SURFACE BY DRILL HOLE 5 OF THE AMERICAN METAL CO.: THE SAMPLE ACROSS THIS THICKNESS AVERAGED 1.78 PERCENT ZINC AND 0.62 PERCENT COPPER. TWO USBM DRILL HOLES ALSO INTERSECTED HYPOGENE SULFIDE ORE CONTAINING ABOUT ONE-HALF OF ONE PERCENT COPPER. NO SUPERGENE COPPER ZONE WAS DISCOVERED DURING THE DRILLING.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....18 UNITS...M
LENGTH OF WORKINGS.....15.4 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....A SHAFT 18 M (60 FT) DEEP AND A TUNNEL 15 M (50 FT) LONG WITH A WINZE AT THE END 3 M (10 FT) DEEP, AND NUMEROUS PITS WERE SUNK. A TOTAL OF 15 DRILL HOLES WERE PUT DOWN DURING PROSPECTING IN 1939 AND 1943. IN EARLY 1978, NUMEROUS FRAGMENTS OF QUARTZ AND BIOTITE SCHIST AS WELL AS PIECES OF LIMONITE GOSSAN WERE ALONG THE OLD FARM ROAD LEADING NORTH FROM STATE ROAD 605. THE AREA OF THE OLD SHAFT AND ADIT WAS VIRTUALLY INACCESSIBLE AS IT WAS COMPLETELY OVERGROWN WITH RHODODENDRONS.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-BIOTITE-GARNET SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, BIOTITE, GARNET, FELDSPAR
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND. BLUE RIDGE ANTICLINORIUM
SIGNIFICANT ALTERATION.....WEATHERING
PROCESS OF CONCENTRATION/ENRICHMENT.....GOSSAN
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GENERAL COMMENTS.....AREA VIRTUALLY INACCESSIBLE, OVER GROWN BY THICK RHODODENDRONS IN 1978
NON-USGS WORK.....DIREXPL MEIGS COUNTY, TENNESSEE AND VIRGINIA MINING CO.; PROSPECTING
NON-USGS WORK.....1939 GEOPHYS AMERICAN METALS COMPANY; MAGNETOMETER SURVEY, 1 HOLE DRILLED
NON-USGS WORK.....1943 DIREXPL U.S.B.M.; 14 HOLES DRILLED, 15 M ADIT OPENED
REFERENCE....SWEET, P.C. AND BELL, S.C.; 1980, METALLIC MINERALIZA` TION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION.
REFERENCE....GROSH, W.A., 1948 INVESTIGATION OF THE SUTHERLAND COPPER PROSPECT, FLOYD COUNTY, VA.: U.S. BUREAU OF MINES REPORT OF INVESTIGATIONS 4357, 2 P.
REFERENCE....CURREY, R.O., 1880, THE COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA: THE VIRGINIAS. VOL. 1, P. 81.
REFERENCE....FONTAINE, W.M., 1882, NOTES ON THE SULPHURET DEPOSITS OF VIRGINIA: THE VIRGINIAS, VOL. 3, P. 155:
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VDMR, MINERAL RESOURCES REPORT 7. 167 P.
REFERENCE....ESPENSHADE, G.H., 1963, GEOLOGY OF SOME COPPER DEPOSITS IN NORTH CAROLINA, VIRGINIA, AND ALABAMA: USGS BULL 1142-I, 150 P.

RESERVES AND POTENTIAL RESOURCES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE

DIETRICH,R.V., 1959, GEOLOGY AND MI

11. Taz Weeks Prospect

MRDS-REV RECORD NUMBER.....508
MRDS RECORD NUMBER.....W030891
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....TAZ WEEKS PROSPECT
MINING DISTRICT/AREA.....SOUTHERN LEAD/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... WILLIS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2850 FT (869 M)
UTM NORTHING...4075550 EASTING...545000 ZONE...+17
LATITUDE.....36-49-36N LONGITUDE.....080-29-43W
POSITION FROM NEAREST LOCALITY.....2.3 MI (3.7 KM) SSW OF WILLIS.
LOCATION COMMENTS.....OFF THE NW SIDE OF STATE ROAD 785
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....CHALCOCITE, PYRITE
NON-PRODUCER MAIN.....CU PYR

PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY HAS BEEN LOGGED IN THE LAST SEVERAL YEARS.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....IN 1943, THREE PITS AND SEVERAL TRENCHES WERE SEEN. IN 1978, ONLY SEVERAL TRENCH CUTS ALONG STRIKE AND A FEW CAVED PITS WERE PRESENT ON SITE.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-BIOTITE SCHIST
PERTINENT MINERALS (NOT ORE).....LIMONITE (GOETHITE)
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....BUFFALO MOUNTAIN CROSS STRUCTURE
SIGNIFICANT ALTERATION.....GOSSAN
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GEOLOGY COMMENTS.....EXPOSURE OF SCHIST IS PRESENT ALONG ROAD AND SOME FRAGMENTS OF BROWN GOSSAN NOTED ALONG ROAD.
NON-USGS WORK.....DIREXPL
NON-USGS WORK.....1978 RECON VA. DIV. MIN. RES., PROSPECT LOCATED
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MIN. RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.

12. Toncrae Mine

MRDS-REV RECORD NUMBER.....501
MRDS RECORD NUMBER.....W001171
RECORD TYPE.....X1M
DEPOSIT NUMBER.....5114
REPORT DATE.....73 01
INFORMATION SOURCE.....123
FILE LINK ID.....VDMR
REPORTER.....COURY, ANNY B.
UPDATED.....79 06
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....TONCRAE MINE
SYNONYM NAME.....TONCRAY MINE, TONCRAE-HOWARD MINE
MINING DISTRICT/AREA.....SOUTHERN LEAD/SOUTHERN SECTION - BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... WILLIS QUADRANGLE SCALE 1:24000
ELEVATION.....2800 FT (854 M)
UTM NORTHING...4075990 EASTING...555650 ZONE...+17
LATITUDE.....36-49-48N LONGITUDE.....080-22-33W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....9.9 KM (6.2 MI) ESE OF WILLIS
LOCATION COMMENTS.....0.5 KM (0.3 MI) OFF SOUTH SIDE OF STATE ROAD 605 ABOUT 2.6 KM (1.6 MI) BY ROAD SOUTH OF JUNCTION WITH STATE ROAD 726.
COMMODITIES PRESENT.....CU FE CO NI PYR1 PYR AG
ORE MATERIALS.....PYRRHOTITE, CHALCOPYRITE, PYRITE, LIMONITE, CHALCOCITE, COVELLITE
GENERAL ANALYTICAL DATA.....KINKEL (1960) REPORTS 120, 450, AND 900 PPM COBALT. ESPENSHADE (1944) REPORTS: 11 BEST CU ASSAYS, AVERAGE 5.11% CU, 0.23% CO; BEST CO ANALYSES AVERAGE 5.21% CU, 0.31% CO. DIETRICH (1959) REPORTS NI, LESS THAN 0.05%, CO, TRACE. (KINKEL, A R, 1960, WRITTEN COMMUNICATION TO J S VHAY; ESPENSHADE, G M, 1944, WRITTEN COMMUNICATION TO J S VHAY.
COMMODITY INFO COMMENTS.....MAIN ORE BODY CONSISTS OF MOSTLY PYRRHOTITE WITH SOME CHALCOPYRITE, PYRITE, AND MAGNETITE. OTHER MINERALS ARE PART OF GOSSAN.
MAJOR.....CU FE PYR1
MINOR.....PYR AG
POTEN.....CO NI
COMMODITY SPECIALIST INFO.....CO
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1800 (?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1800(?)
OWNER (PRESENT/LAST).....CHEVRON MINERALS
OPERATOR.....CHEVRON MINERALS
EXPLORATION AND DEVELOPMENT COMMENTS.....1935-1947: MR C H THOMPSON: CONDUCTED INTERMITTENT INVESTIGATION AND MINING; 1943: U S B M: DRILLED 666.8 M OF TEST HOLES AND CONDUCTED MINE DEVELOPMENT; 1954-1955: APPALACHIAN SULPHIDES, INC: CONDUCTED GEOPHYSICAL AND GEOCHEMICAL STUDY, DRILLED OVER 1525 M OF EXPLORATORY HOLES. CHEVRON MINERALS IS PRESENTLY CONDUCTING EXPLORATORY DRILLING (1979-1980).
DEPOSIT TYPE.....MASSIVE SULFIDE, DISSEMINATED SULFIDE, GOSSAN
DEPOSIT FORM.....FOLDED LENS
DEPTH TO BOTTOM.....91(?) UNITS...M
MAXIMUM THICKNESS.....15 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N10DEGE
DIP.....30DEGSE
PLUNGE.....GENTLY(?)
DIRECTION OF PLUNGE.....S(?)
DEPOSIT DESCRIPTION COMMENTS.....RECENT DRILLING SUGGESTS AN ANTICLINAL STRUCTURE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....48.8 UNITS...M
LENGTH OF WORKINGS.....259 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1975, SITE CONSISTED OF TRENCHES, PITS, AND CAVED SHAFTS, TWO OF WHICH ARE ABOUT 6 M DEEP IN AREA OF OLD GOSSAN WORKINGS; AND IN RECENT WORKINGS: SEVERAL SHAFTS, WASTE AND SLAG PILES, COLLAPSED BUILDING, AND SEVERAL FOUNDATIONS.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....GARNET-BIOTITE-MUSCOVITE-QUARTZ GNEISS
PERTINENT MINERALS (NOT ORE).....QUARTZ, BIOTITE, CARBONATES, AMPHIBOLES, FELDSPAR, GARNET, CHLORITE.
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....FOLIATION STRIKES N 15-25 DEG E AND DIP S 35-50 DEG SE.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GEOLOGICAL DESCRIPTIVE NOTES.....ORE OCCURS IN ALTERED AMPHIBOLITE DIKE THAT CUTS CAROLINA GNEISS, PYRRHOTITE, CHALCOPYRITE, PYRITE. SECONDARY CHALCOCITE IN "SMUT ORE"
NON-USGS WORK.....1800? DIREXPL MINING OF GOSSAN FOR IRON UNTIL ABOUT 1850, FOLLOWED BY MINING OF SMUT ORE FOR CU, 1854-1855.
NON-USGS WORK.....1905 DIREXPL NEW YORK AND VIRGINIA COPPER CO.: DEVELOPMENT OF PRIMARY SULFIDES UNTIL 1908.
NON-USGS WORK.....1938 DIREXPL AMERICAN METALS CO: DRILLING AND SELECTIVE MINING UNTIL 1941.
REPORTS AVAILABLE.....SEE GROSH, W A, 1948, INVESTIGATION OF THE TONCRAE-HOWARD COPPER DEPOSITS, FLOYD COUNTY, VA: U S BUR MINES, REP INV 4362, 4 P.
REFERENCE....DIETRICH, R V, 1959, GEOLOGY AND MINERAL RESOURCES OF FLOYD COUNTY OF THE BLUE RIDGE UPLAND, SOUTH WESTERN VIRGINIA: VIRGINIA POLYTECHNIC INSTITUTE BULLETIN, ENGINEERING EXPERIMENT STATION SERIES NO 134, 160 P.
REFERENCE....ESPENSHADE, G H, 1963, GEOLOGY OF SOME COPPER DEPOSITS IN NORTH CAROLINA, VIRGINIA, AND ALABAMA: U S GEOLOGICAL SURVEY BULLETIN 1142-I, 50 P.
REFERENCE....SWEET, P C AND BELL, S C, 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
CU	ACC	0.01970	MET TONS	1938	SMELTER OUTPUT
CU	ACC	0.23640	MET TONS	1944	SMELTER OUTPUT
CU	ACC	0.06360	MET TONS	1945	MINE RETURN
CU	ACC	0.00450	MET TONS	1947	MINE RETURN
AG	SML			1945	AG: 0.38 OZS PER TON.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE CU		0.14600	TONS	1938-1947;	AVERAGE 14.5% CU
ORE CU		1.92600	TONS	1938-1947;	AVERAGE 7% CU
ORE CU		2.10000	TONS	1938-1947;	LOWER GRADE CU
ORE CU		1.10000	TONS	1938-1947;	AVERAGE 6.66% CU AND 0.38 OZ OF SILVER PERTON
CU	ACC	0.32420	MET TONS	1938-1947	
ORE FE	SML			1800(?)-1850	LIMONITE
ORE CU	ACC	0.03200	TONS	1854-1855	SUPERGENE ORE
PYR1 ORE	ACC	2.50000	TONS	1905-1908	

SOURCE OF PRODUCTION INFORMATION.....ESPENSHADE (1963), SWEET AND BELL (1979)
PRODUCTION COMMENTS.....IRON ORE WAS MINED FROM THE GOSSAN AND SMELTED NEARBY FOR ABOUT 60 YEARS PROBABLY UNTIL ABOUT 1850

RESERVES AND POTENTIAL RESOURCES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	30.300	TONS		AVERAGE 3.5% CU

SOURCE OF RESERVES AND RESOURCES INFORMATION.....UNPUBLISHED REPORT BY R.J. WRIGHT, 1943, USGS
RESERVES AND RESOURCES COMMENTS.....ESPENSHADE, 1944, REPORTS IF AVERAGE COBALT CONTENT IS AROUND 0.2%, THEN 50 TO 60 TONS OF METALLIC COBALT MAY BE PRESENT WITHIN 75 FT. OF SURFACE . (ESPENSHADE, G M, 1944, WRITTEN COMMUNICATION TO J S VHAY).

13. Weddle Prospect

MRDS-REV RECORD NUMBER.....514
MRDS RECORD NUMBER.....W031223
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....WEDDLE PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....FLOYD
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... WOOLWINE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2720 FT (829 M)
UTM NORTHING...4078500 EASTING...556120 ZONE...+17
LATITUDE.....36-51-09N LONGITUDE.....080-22-14W
POSITION FROM NEAREST LOCALITY.....4.59 KM (2.85 MI) WNW OF TUGGLE GAP.
LOCATION COMMENTS.....1.9 KM W OF SUMMIT OF PANTHER KNOB; 0.4

KM (0.25 MI) OFF NE SIDE OF STATE ROAD 605 ABOUT 0.24 KM (0.15 MI) BY ROAD SE OF ITS INTERSECTION WITH STATE ROAD 726.
COMMODITIES PRESENT.....FE CU PYR
ORE MATERIALS.....PYRITE, PROBABLY CHALCOCITE, LIMONITE
MAIN ORE MINERALS.....PYRITE, CHALCOCITE (?), LIMONITE
NON-PRODUCER MAIN.....FE CU
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
DEPOSIT TYPE.....LENS
DEPOSIT FORM.....LENS
DEPOSIT SIZE.....SMALL (?)
DEPOSIT DESCRIPTION COMMENTS.....LENSES AND BANDS OF LIMONITE OCCUR IN SCHIST.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....SEVERAL DEPRESSIONS 5 M - 6 M IN DIAMETER ON SLOPE ON THE N SIDE OF THE STREAM FILLED WITH WHITE QUARTZ AND SCHIST BOULDERS REPORTED 1978.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-BIOTITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, BIOTITE
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GEOLOGY COMMENTS.....ON SOUTH SIDE OF NEARBY STREAM ARE NUMEROUS PILES OF BOULDER-SIZE PIECES OF WHITE QUARTZ STAINED RED-BLACK BY IRON-OXIDE.
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIV. OF MINERAL RESOURCES MINERAL RESOURCES REPORT 7, 167 P.

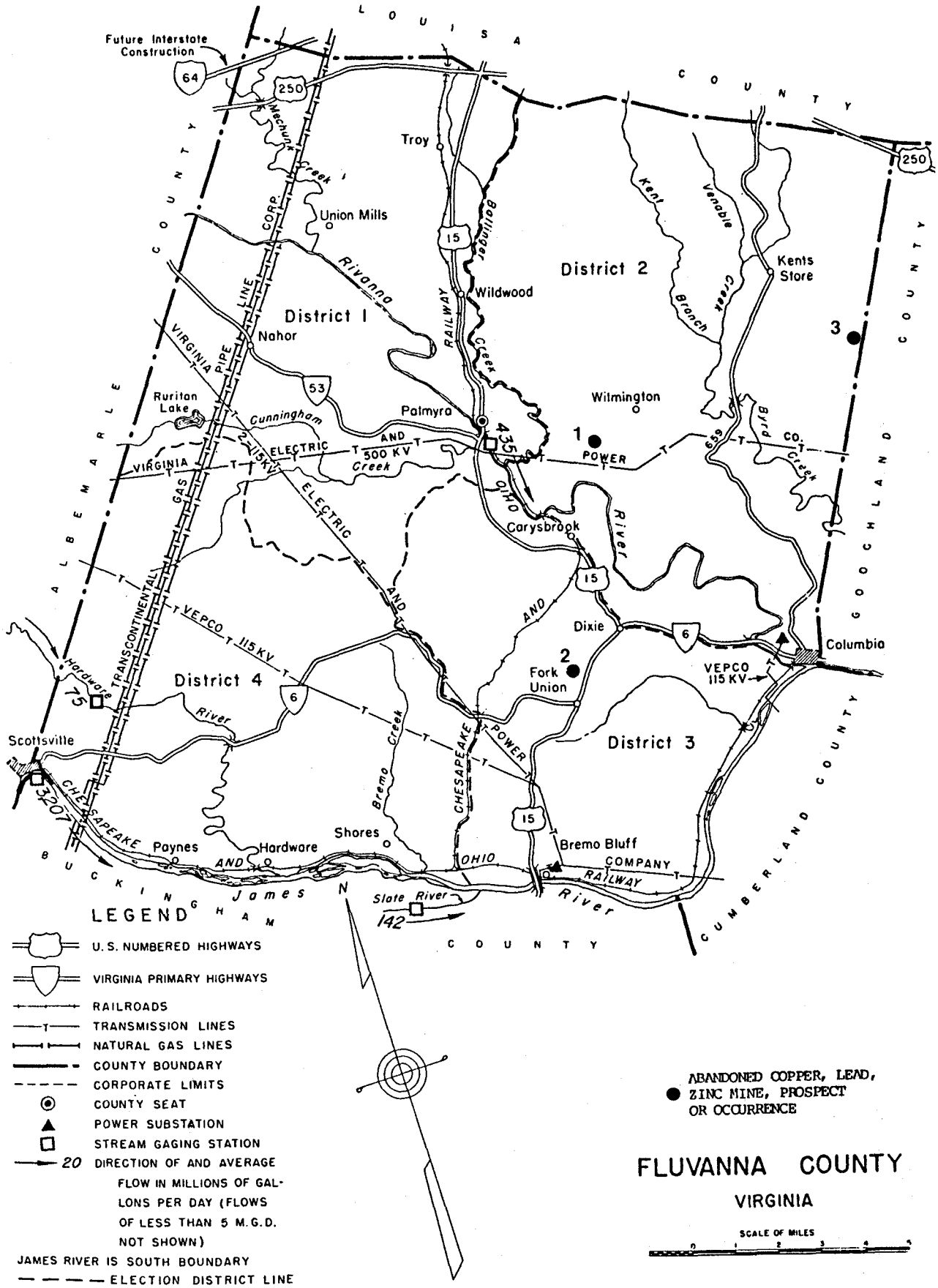
FLUVANNA COUNTY

1. Page Mine

MRDS-REV RECORD NUMBER.....533
MRDS RECORD NUMBER.....W030580
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU (D. C. LEVAN), HARVEY R.
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....PAGE MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....FLUVANNA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... COLUMBIA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....260 FT (79 M)
UTM NORTHING...4192390 EASTING...743960 ZONE...+17
LATITUDE.....37-50-53N LONGITUDE.....078-13-39W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 2.3 KM W OF WILMINGTON.
LOCATION COMMENTS.....0.40 KM (0.25 MI) NE OF THE INTERSECTION OF LONG ISLAND CREEK WITH STATE ROAD 601 ON THE SE SIDE OF THAT CREEK.
COMMODITIES PRESENT.....AU PB PYR
ORE MATERIALS.....NATIVE GOLD, GALENA, PYRITE
MAIN ORE MINERALS.....NATIVE GOLD, GALENA
MINOR ORE MINERALS.....PYRITE
MAJOR.....AU
OCCUR.....PB PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1856
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1856
EXPLORATION AND DEVELOPMENT COMMENTS.....8-STAMP MILL USED IN 1856: MILL IN RUINS BY 1865: PROSPECTED AGAIN IN 1895; INTERMITTENT PLACER WORKING HAS BEEN PERFORMED.
DEPOSIT TYPE.....VEIN
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....CAVED SHAFT 9.1M X 6M X 4M DEEP, 15.2M X 1.6M DEEP TRENCH CUT UP A HILL AND LARGE DUMP OF SLATE, AMPHIBOLE SCHIST, QUARTZ, PHYLLITE REPORTED 1974. SEVERAL TUNNELS AND SHAFTS WERE REPORTED TO HAVE BEEN SUNK DURING THE MINE'S OPERATION.
HOST ROCK AGE.....ORD
HOST ROCK TYPE.....SLATE, QUARTZ-SERICITE SCHIST, PHYLLITE
PERTINENT MINERALS (NOT ORE).....CHLORITE, CALCITE, QUARTZ, FELDSPAR, SERICITE
ORE CONTROL/LOCUS.....IN QUARTZ VEINS
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....LONG ISLAND SYNCLINE, NE-SW TREND
FORMATION AGE.....ORD
FORMATION NAME.....ARVONIA FORMATION
GEOLOGY COMMENTS.....PYRITE CRYSTALS UP TO 1 CM WIDE OCCUR IN VEINS; FLUID INCLUSIONS ARE COMMON IN SOME QUARTZ GRAINS.
NON-USGS WORK.....1856 DIREXPL
NON-USGS WORK.....1974 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED
REFERENCE....SWEET, P. C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 7, 271 P.
REFERENCE....WATSON, T. L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, J. P. BELL COMPANY, PRINTERS AND BINDERS, 618 P.
REFERENCE....HAMMETT, A.B.J., 1966, THE HISTORY OF GOLD: KERRVILLE, TEXAS, BRASWELL PRINTING CO., 107 P.
SOURCE OF PRODUCTION INFORMATION.....HAMMETT (1966)
PRODUCTION COMMENTS.....GOLD NUGGETS WORTH $20- TO $25 WERE FOUND ON THIS PROPERTY DURING THE EARLY DAYS OF OPERATION.

2. Snead Mine

MRDS-REV RECORD NUMBER.....523
MRDS RECORD NUMBER.....W030586
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER (D. C. LEVAN), ROBERT E.
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....SNEAD MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....FLUVANNA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... PALMYRA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....315 FT (96 M)
UTM NORTHING...4184760 EASTING...741590 ZONE...+17
LATITUDE.....37-46-48N LONGITUDE.....078-15-25W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.25 MI (2.01 KM) NNE OF FORK UNION.
LOCATION COMMENTS.....0.5 MI (0.8 KM) OFF NW SIDE OF U.S. HWY 15 ABOUT 0.85 MI (1.37 KM) BY ROAD WSW OF JUNCTION WITH VA. HWY 6 AT DIXIE.
COMMODITIES PRESENT.....AU AG ZN PB CU PYR
ORE MATERIALS.....NATIVE GOLD, ARGENTIFEROUS GALENA, SPHALERITE, CHALCOPYRITE, HEMIMORPHITE, PYRITE , PYROMORPHITE
MAIN ORE MINERALS.....NATIVE GOLD
MINOR ORE MINERALS.....ARGENTIFEROUS GALENA, SPHALERITE, CHALCOPYRITE, HEMIMORPHITE, PYRITE, PYROMORPHITE
MAJOR.....AU
OCCUR.....AG ZN CU PB PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1937
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1838
OWNER (PRESENT/LAST).....E. P. ALEXANDER
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPERATED 1837-1850, THEN AFTER CIVIL WAR SEVERAL ATEMPTS WERE MADE TO RE-OPEN. THE ORE WAS TREATED IN A PRIMITIVE STAMP MILL OPERATED BY WATER-POWER, AND MUCH OF THE GOLD IS SAID TO HAVE BEEN LOST IN THE TAILINGS. IN 1881 THE CHLORINATION PROCESS OF EXTRACTION WAS TRIED.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LINEAR
MAXIMUM WIDTH.....1.8 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DIP.....65 DEG E
DEPOSIT DESCRIPTION COMMENTS.....THE VEIN CONSISTS OF WHITE HARD QUARTZ, CONTAINING PYRITE, CHALCOPYRITE, GALENA, AND SPHALERITE, AS WELL AS IRON OXIDE, PYROMORPHITE, MALACHITE AND FREE GOLD.
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, TWO WATER-FILLED AND FIVE CAVED SHAFTS, ABOUT TWENTY CAVED PITS AND CUTS, REMAINS OF STONE WALLS OF PLANT, AND DUMPS EVIDENT. REPORTEDLY, EARLY WORKINGS CONSISTED OF A SHAFT 7.6 M (25 FT) DEEP, SEVERAL OPENCUTS ALONG THE OUTCROP, AND A TUNNEL.
HOST ROCK AGE.....PREC-ORD
HOST ROCK TYPE.....KNOTTED GARNETIFEROUS BIOTITE SCHIST, GRANODIORITE
AGE OF IGNEOUS ROCK.....PREC-CAMB
IGNEOUS ROCK TYPE.....GRANODIORITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, BIOTITE, GARNET, OLIGOCLASE, ORTHOCLASE, TOURMALINE
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....ARVONIA SYNCLINE, NE-SW TREND
FORMATION AGE.....ORD
FORMATION NAME.....ARVONIA FORMATION
IGNEOUS UNIT AGE.....PREC CAMB
IGNEOUS UNIT NAME.....ELLISVILLE GRANODIORITE
GEOLOGY COMMENTS.....MINE SITUATED ON CONTACT OF ARVONIA AND ELLISVILLE. QUARTZITE BED INFERRED THRU AREA.
NON-USGS WORK.....1837 DIREXPL GEORGE FISHER, JR. & CO., EXTRACTED GOLD ORE
NON-USGS WORK.....1881 DIREXPL ATTEMPTED TO REACTIVATE, SUCCESS MINIMAL


LOUISA COUNTY
ALBEMARLE COUNTY
GOOCHLAND COUNTY
CUMBERLAND COUNTY
BUCKINGHAM COUNTY
Future Interstate Construction
64
250
Mechunk Creek
Troy
Union Mills
Rivanna
Ballinger Creek
15
Wildwood
RAILWAY
District 1
District 2
District 3
District 4
Kent Branch
Venable Creek
Kents Store
3
Nahor
VIRGINIA PIPE LINE CORP.
53
Ruritan Lake
Cunningham Creek
Palmyra
435
Wilmington
1
POWER
659
Byrd Creek
VIRGINIA ELECTRIC AND POWER CO.
2-115 KV
500 KV
GAS
TRANSCONTINENTAL
Carysbrook
OHIO
River
Dixie
6
Columbia
VEPCO 115 KV
2
Fork Union
Hardware River
75
Scottsville
3207
CHESAPEAKE AND OHIO RAILWAY COMPANY
Bremo Creek
Bremo Bluff
Shores
Paynes
Hardware
James River
Slate River
142
LEGEND
U. S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
JAMES RIVER IS SOUTH BOUNDARY
ELECTION DISTRICT LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
FLUVANNA COUNTY
VIRGINIA
SCALE OF MILES
0 1 2 3 4 5

NON-USGS WORK.....1974 RECON VA. DIV. MIN. RES, LOCATED MINE
REFERENCE....SWEET, P. C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATIONS 19, 77 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY, BULLETIN 7, 271 P.
REFERENCE....HARPER'S MAGAZINE, 1865, THE NATURAL WEALTH OF VIRGINIA: NEW YORK, V. 32, NO. 187, P. 32-42.
REFERENCE....SMITH, J. W., MILICI, R. C., AND GREENBERG, S. S., 1964: GEOLOGY AND MINERAL RESOURCES OF FLUVANNA COUNTY VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 79, 62 P.
REFERENCE....CREDNER, H., 1869, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VII, P. 58.
SOURCE OF PRODUCTION INFORMATION.....TABER (1913)
PRODUCTION COMMENTS.....WORKED FOR 9 MOS. IN 1838 YIELDING $6,000

3. Tellurium

MRDS-REV RECORD NUMBER.....540
MRDS RECORD NUMBER.....W030588
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER (D.C. LEVAN), ROBERT E.
UPDATED.....87 12; 89
UPDATER.....SWEET, PALMER C.; GOOD, R.S.
SITE NAME.....TELLURIUM MINE
SYNONYM NAME.....FISHER MINE, HUGHES MINE, RED MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....FLUVANNA, GOOCHLAND
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... CALEDONIA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....435 FT (133 M)
UTM NORTHING...4192220 EASTING...754650 ZONE...+17
LATITUDE.....37-50-37N LONGITUDE.....078-06-22W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.65 MI (2.65 KM) NORTH OF CALEDONIA.
LOCATION COMMENTS.....ON NE AND SW SIDES OF FOREST ROAD 2956 ABOUT 0.55 MI (0.88 KM) BY ROAD NW OF ITS JUNCTION WITH STATE ROAD 605. ADDITIONAL SITE AT UTM N 4192420., E 755030. (ZONE, +17).
COMMODITIES PRESENT.....AU ZN PYR TE BI
ORE MATERIALS.....NATIVE GOLD, SPHALERITE, PYRITE, TETRADYMITE
MAIN ORE MINERALS.....NATIVE GOLD
MINOR ORE MINERALS.....SPHALERITE, PYRITE, TETRADYMITE
MAJOR.....AU
OCCUR.....ZN PYR TE BI
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....G.W. FISHER
YEAR OF DISCOVERY.....1832
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1834
OWNER (PRESENT/LAST).....A.S. BLOOM
OPERATOR.....TELLURIUM GOLD MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....VEINS WERE DISCOVERED AT THIS PLACE BY G.W. FISHER IN 1832. TWO YEARS LATER IT WAS LEASED BY FISHER AND SONS AND D.W.K. BOWLES. IN 1836, THEY ERECTED A PRIMITIVE 6-STAMP MILL, BELIEVED TO BE THE FIRST IN AMERICA, AND CONTINUED WORKING THE MINE UNTIL 1848 WHEN IT WAS PURCHASED BY COMMODORE STOCKTON: HE ERECTED A 40-STAMP MILL AND OPERATED ON AN EXPANDED SCALE UNTIt 1857 WHEN THE MILL WAS BURNED. THE PROPERTY WAS THEN SOLD, AND NO FURTHER MINING WAS CARRIED ON UNTIT 1880 WHEN A 10-STAMP MILL WAS ERECTED. A FEW YEARS LATER THE STAMP MILL WAS PULLED DOWN AND REPLACED BY SOME KIND OF A REVOLVING MILL, WHICH WAS USED TO TREAT ORES FROM THE GOLD HILL VEINS ON THE BOWLES TRACT, ADJOINING THE TELLURIUM ON THE NORTHEAST. IN 1890, TWO TREMAIN STEAM STAMPS WERE INSTALLED ON THE PROPERTY, BUT THEY WERE NEVER USED TO ANY EXTENT. IN 1909-1910, THE ARGUS GOLD MINING CORP. CLEANED OUT PART OF THE OLD WORKINGS, SANK A SHAFT, AND STARTED DRIVES IN EITHER DIRECTION ALONG THE VEIN, BUT THE MINE WAS SHUT DOWN BEFORE THE DRIVES HAD PROGRESSED MORE THAN A FEW FEET. FROM 1935 TO 1937 THE MINE WAS PROSPECTED AND DEVELOPED FURTHER BY THE TELLURIUM GOLD MINING CO. A 3-STAMP MILL WAS ERECTED DURING THIS TIME. IN 1988-1989 VIRGINIA GOLD MINES, LTD. OF QUEBEC CITY, CANADA CONTRACTED NORTH AMERICAN EXPLORATION TO DO FURTHER GEOCHEMICAL SOIL SURVEYING, GEOPHYSICAL SURVEYING, AND DIAMOND DRILLING.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LINEAR, LENS
MAXIMUM WIDTH.....1.8 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N64 DEG E
DIP.....45 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....TABER (1913) GIVES DETAILED REPORT OF TELLURIUM VEIN SYSTEM (BIG SANDSTONE, MIDDLE, LITTLE, WEST, HUGHES VEINS) .
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....45.6 UNITS...M
LENGTH OF WORKINGS.....457 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, NUMEROUS OPEN, WATER-FILLED AND CAVED SHAFTS, CAVED PITS, CONCRETE FOUNDATIONS AND AN OLD BUILDING WERE EVIDENT. THE DEEPEST WORKINGS OF THE FISHERS, CONFINED TO THE MIDDLE AND LITTTE VEINS, REACHED ONLY 20 M (65 FT). STOCKTON MOSTLY WORKED THE BIG SANDSTONE VEIN AND HIS DEEPEST SHAFT HAD A VERTICAL DEPTH OF 41.5 M (136 FT), AND HE WORKED THE VEIN ABOVE THIS LEVEL FOR 457 M (1500 FT) ALONG THE STRIKE. IN 1910 A 27 M (90 FT) SHAFT WAS SUNK AND A DRIFT WAS DRIVEN SOUTHWEST FOR 10.7 M (30 FT) FROM THE BOTTOM OF THE SHAFT. IN 1935-1937 THE HARRISON SHAFT SUNK IN 1910 WAS CLEANED OUT AND THE DRIFT EXTENDED TO 13.7 M (45 FT), AND A CROSS-CUT WAS RUN 5.2 M (17 FT) SOUTHEAST FROM A STATION JUST NORTHEAST OF THE BOTTOM OF THE SHAFT. SEVERAL OTHER SHAFTS WERE SUNK ON THE PROPERTY 4.6 TO 9.2 M (15 TO 30 FT) DEEP AND SHORT DRIFTS AND CROSS-CUTS WERE RUN FROM THESE. IN 1987 A LARGE CIRCULAR (15 FEET DIAMETER) SHAFT WAS OBSERVED IN ARKOSIC COUNTRY ROCK. THE SHAFT IS ABOUT 15 FT DEEP AND APPEARS TO BE DRIFTED TOWARD THE SOUTHEAST.
HOST ROCK AGE.....ORD
HOST ROCK TYPE.....METAQUARTZITE, GARNETIFEROUS QUARTZ-SERICITE SCHIST
AGE OF IGNEOUS ROCK.....EPAL
IGNEOUS ROCK TYPE.....GNEISS, HORNBLENDE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, OLIGOCLASE-ANDESINE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....SMALL LOCAL FAULTS
FORMATION AGE.....ORD
FORMATION AGE.....EPAL
FORMATION NAME.....ARVONIA FORMATION
FORMATION NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....LENSES OF QUARTZ APPEAR IN BOUDINAGE STRUCTURE. "IGNEOUS" ROCKS TO NORTH AND AS APO-APOPHYSES IN AREA (TABER, 1913) PROBABLY ARE AMPHIBOLE SCHISTS OF MAFIC PHASE AND METAMORPHOSED FELSITE OF CHOPAWAMSIC FORMATION.
GENERAL COMMENTS.....FIRST STAMP MILL IN OPERATION IN U.S., A 6-STAMP MILL, WAS PUT INTO OPERATION AT THE "FISHER MINE" IN 1836.
NON-USGS WORK.....1834 DIREXPL FISHERS AND D.W.K BOWLES, OPERATED FOR 14 YEARS
NON-USGS WORK.....1848 DIREXPL COMMODORE R.F. STOCKTON, INSTALLED 40-STAMPMILL
NON-USGS WORK.....1935 DIREXPL TELLURIUM GOLD MINING CO., WORKED UNTIL 1937
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....BROWN, C.B., 1937, OUTLINE OF THE GEOLOGY AND MINERAL RESOURCES OF GOOCHLAND COUNTY, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 48, 68 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY, BULLETIN 7, 271 P.
REFERENCE....CREDNER, H., 1868, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VI, P. 406.
REFERENCE....HAMMETT, A.B.J., 1966, THE HISTORY OF GOLD: KERRVILLE, TEXAS, BRASWELL PRINTING CO., 107 P.
REFERENCE....GOOD, R.S., FORDHAM, O.M., AND HALADAY, C.R., 1977, GEOCHEMICAL RECONNAISSANCE FOR GOLD IN THE CALEDONIA AND PENDLETON QUADRANGLES IN THE PIEDMONT OF CENTRAL VIRGINIA: VIRGINIA MINERALS, V. 23, N. 2, P. 13-22.

CUMULATIVE PRODUCTION

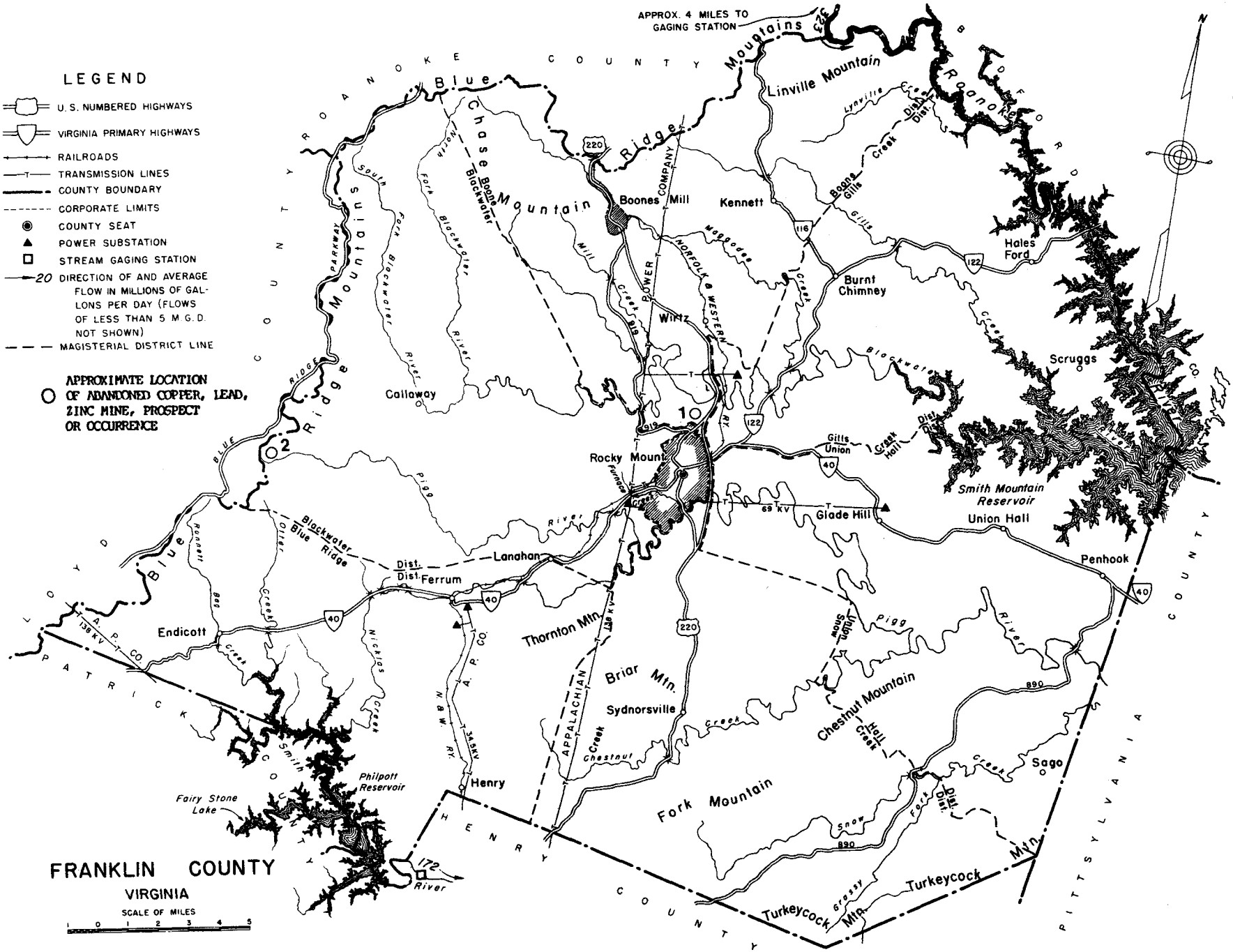
ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE AU	EST	1.50000	TONS	1834-1848	AU ($100 PER TON)
ORE AU	SML			1848-1857	AU ($75,000 PRODUCED)
ORE AU	SML			1857-1937	AU ($25,000 PRODUCED)

SOURCE OF PRODUCTION INFORMATION.....BROWN (1937)
PRODUCTION COMMENTS.....ESTIMATED PRODUCTION FROM 1834 TO 1848 WAS VALUED AT BETWEEN $130,000 TO $150,000.

FRANKLIN COUNTY

1. Grassy Hill Prospect

MRDS-REV RECORD NUMBER.....544
MRDS RECORD NUMBER.....W030892
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....GRASSY HILL PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....FRANKLIN
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 STAUNTON RIVER
QUADRANGLE NAME..... BOONES MILL, VA. (?) QUADRANGLE SCALE 1:24000
LATITUDE.....37-01- N LONGITUDE.....079-54- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN.
LOCATION COMMENTS.....ACCORDING TO FONTAINE (1883, P. 179), THE DEPOSIT OCCURS NORTHWEST OF ROCKY MOUNT ON THE


LEGEND
U. S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
MAGISTERIAL DISTRICT LINE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPROX. 4 MILES TO GAGING STATION
ROANOKE COUNTY
BEDFORD CO.
LOYD COUNTY
PATRICK COUNTY
HENRY COUNTY
PITTSYLVANIA COUNTY
Blue Ridge Mountains
Chase Mountain
Linville Mountain
Roanoke River
Boones Mill
Kennett
Hales Ford
Burnt Chimney
Scruggs
Wirtz
Callaway
Rocky Mount
Glade Hill
Union Hall
Smith Mountain Reservoir
Penhook
Lanahan
Ferrum
Endicott
Thornton Mtn.
Briar Mtn.
Sydnorsville
Chestnut Mountain
Sago
Fork Mountain
Turkeycock Mtn.
Henry
Philpott Reservoir
Fairy Stone Lake
FRANKLIN COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5

SOUTHEAST SIDE OF GRASSY HILL.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....PRE-1776
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....FONTAINE (1883) REPORTS SEEING PROSPECT PITS WHICH POSSIBLY DATE FROM PRE-REVOLUTIONARY WAR DAYS.
DEPOSIT TYPE.....VEIN/SHEAR ZONE (?), DISSEMINATED (?)
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....ONLY SHALLOW DEPRESSIONS SEEN IN 1882.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....SERPENTINITE (METAPYROXENITE)
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....GABBRO
PERTINENT MINERALS (NOT ORE).....CHLORITE, SERPENTINE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, SMITH RIVER ALLOCTHON
FORMATION AGE.....PREC
FORMATION NAME.....GABBRO
GEOLOGY COMMENTS.....BORNITE OCCURS PRIMARILY IN CHLORITE ZONES NEAR CONTACT WITH MORE SIALIC MATERIAL.
GENERAL COMMENTS.....FONTAINE (1883) CONSIDERED THIS DEPOSIT TO BE IDENTICAL IN TYPE TO THE COPPER DEPOSITS IN THE GLADES DISTRICT, AMHERST CO.
NON-USGS WORK.....DIREXPL DEPOSIT PROSPECTED.
REFERENCE....FONTAINE, W.M., 1883-84, NOTES ON THE GEOLOGY AND MINERAL RESOURCES OF THE FLOYD, VA., PLATEAU: THE VIRGINIAS, V. 4, P. 167, 178-180, 185-192; V. 5, P. 8-12.

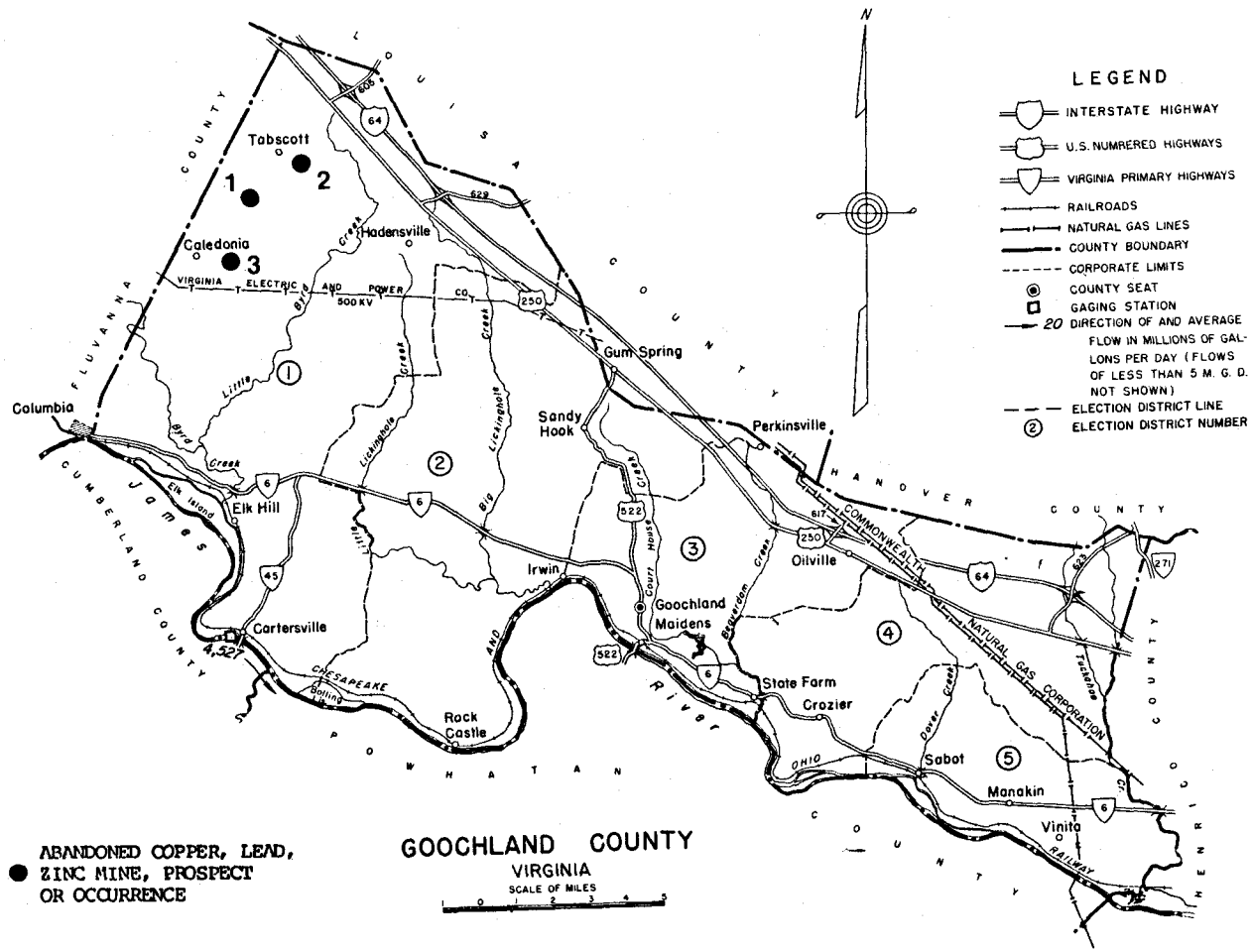
2. Howell Mine

MRDS-REV RECORD NUMBER.....543
MRDS RECORD NUMBER.....W030893
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....HOWELL MINE
SYNONYM NAME.....FERRUM PROSPECT
MINING DISTRICT/AREA.....SOUTHERN LEAD/SOUTHERN SECTION-BLUE RIDGE PROVINCE.
COUNTRY.....US STATE.....VA COUNTY.....FRANKLIN
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....03 ROANOKE RIVER
QUADRANGLE NAME..... ENDICOTT, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-57- N LONGITUDE.....080-11- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN; 13 KM (8 MI) WEST OF FERRUM.
LOCATION COMMENTS.....ACCORDING TO LUTTRELL (1966), THE PROSPECT IS LOCATED NEAR THE CREST OF THE BLUE RIDGE, 13 KM (8 MI) WEST OF FERRUM AND 2.4 KM (1.5 MI) SW OF POSEY JONES STORE (ON STATE ROAD 640 ?)
COMMODITIES PRESENT.....FE CU ZN PYR1 PYR AS
ORE MATERIALS.....CHALCOPYRITE, SPHALERITE, PYRRHOTITE, PYRITE, GOETHITE, ARSENOPYRITE (?).
COMMODITY INFO COMMENTS.....''WHITE SULPURET'' ALSO REPORTED; COULD BE EITHER MARCASITE OR ARSENOPYRITE, PROBABLY THE LATTER.
MAJOR.....FE CU
OCCUR.....ZN PYR1 PYR AS?
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....1820
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1820
EXPLORATION AND DEVELOPMENT COMMENTS.....GOSSAN MINED IN 1820 FOR IRON ORE FOR THE LITTLE RIVER FURNACE OPERATED BY COL. LEWIS. THIS OPERATION WAS SHORT LIVED DUE TO COPPER CONTAMINATION OF THE IRON. THE MINE WAS DEVELOPED IN 1854 FOR EXTRACTION OF COPPER ORE.
DEPOSIT TYPE.....GOSSAN, STRATA-BOUND MASSIVE SULFIDE
MAXIMUM THICKNESS.....0.30 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N50 DEG. E
DIP.....35 DEG. SE
DEPOSIT DESCRIPTION COMMENTS.....THICKNESS REFERS TO SEAM OF CHALCOPYRITE (FONTAINE, 1883)
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....12.2 UNITS...M
LENGTH OF WORKINGS.....73.2 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....DEVELOPED BY OPEN CUTS, 12.2 M SHAFT, AND 61.0 M ADIT
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....QUARTZ-BIOTITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, CHLORITE
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW, BLUE RIDGE ANTICLINORIUM
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ALTERATION OF IRON AND COPPER ORES.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GEOLOGY COMMENTS.....THIS IS THE NORTHERN TERMINUS OF CURREY'S (1859) "SOUTHERN LEAD."
NON-USGS WORK.....1820 DIREXPL IRON ORE MINED.
NON-USGS WORK.....1854 DIREXPL COPPER ORE MINED.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....FONTAINE, W.M., 1882, NOTES ON THE SULPHURET DEPOSITS OF VIRGINIA: THE VIRGINIAS, V. 3, NO. 10, P. 154-155.
REFERENCE....FONTAINE, W.M., 1883-84, NOTES ON THE GEOLOGY AND MINERAL RESOURCES OF THE FLOYD, VA., PLATEAU: THE VIRGINIAS, V. 4, P. 167, 178-180, 185-192; V. 5, P. 8-12.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
PRODUCTION COMMENTS.....NO REPORT OF COPPER PRODUCTION.

GOOCHLAND COUNTY

1. Moss Mine

MRDS-REV RECORD NUMBER.....596
MRDS RECORD NUMBER.....W030611
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER (D.C. LEVAN), ROBERT E.
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....MOSS MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....GOOCHLAND
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...CALEDONIA, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....440 FT (134 M)
UTM NORTHING...4192730 EASTING...756430 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.5 MI (2.4 KM) SW OF TABSCOTT
LOCATION COMMENTS.....0.2 MI (0.3 KM) OFF SE SIDE OF STATE ROAD 605, 0.85 MI (1.37 KM) BY ROAD SW OF JUNCTION WITH STATE ROAD 681.
COMMODITIES PRESENT.....AU ZN PB V CU PYR TE
ORE MATERIALS.....NATIVE GOLD, GALENA, SPHALERITE, VANADINITE, CHALCOPYRITE, COVELLITE, PYRITE, PYROMORPHITE, TETRADYMITE. MARCASITE
GENERAL ANALYTICAL DATA.....IN 1835 SAMPLES FROM TWO SHAFTS WERE ASSAYED AT $105 PER TON. IN 1904 THE ORE ASSAYED $15 PER TON FROM THE NUMBER 1 SHAFT. ORE FROM THE SECOND SHAFT AVERAGED $150 PER TON. THE TAILINGS INDICATED AN AVERAGE OF $2 PER TON. GRAB SAMPLE FROM DUMP WAS ASSAYED BY IRON KING ASSAY, HUMBOLDT, AZ IN APRIL, 1985 - RESULTS AG - 0.6 OZ/TON.
MAIN ORE MINERALS.....NATIVE GOLD
MINOR ORE MINERALS.....GALENA, SPHALERITE, VANADINITE, CHALCOPYRITE, COVELLITE PYRITE, PYROMORPHITE, TETRADYMITE , MARCASITE
COMMODITY INFO COMMENTS.....VANADINITE OCCURRENCE.
MAJOR.....AU
OCCUR.....ZN PB V CU PYR TE CU PYR TE
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....JOHN MOSS
YEAR OF DISCOVERY.....1835
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1836
OWNER (PRESENT/LAST).....GENERAL COMMONWEALTH CORP.
OPERATOR.....MOSS MINING CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....DEPOSIT WAS DISCOVERED BY JOHN MOSS IN 1835. THE RICHMOND MINING CO. OPERATED THE MINE FROM 1836 TO 1838. IT WAS REOPENED IN 1891 BY G.H. MANNING WHO SANK THE MANNING SHAFT. A 3-STAMP MILL WAS ERECTED TO AID IN TESTING THE ORE. IN 1893 THE MINE WAS LEASED BY A MR. STEVENS, WHO SANK THE OLD STEVENS SHAFT. FROM 1902 TO 1904 THE TELLURIC GOLD MINING CO. OPERATED THE MINE, ADDING ANOTHER BATTERY OF 3 STAMPS TO THE MILL. IN 1931 J.C. WILLIAMS, SR., AND OTHERS, OPERATED THE MINE AND ERECTED A 3-STAMP MILL FOR TESTING THE ORE. WORK LASTED UNTIL 1933 WHEN LACK OF CAPITAL FORCED CLOSURE. THE MOSS MINING CO. OPERATED THE MINE IN 1936, ERECTING A MILL THAT UTILIZED A JAW CRUSHER, BALL MILL, CLASSIFIER, DENVER MINERAL JIG, CORDUROY BLANKETS, FLOTATION UNIT, CONCENTRATE TANK, AMALGAM DRUM, AND AMALGAMATING PLATES. THE MINE HAS NOT BEEN OPERATED SINCE 1936. NO AVAILABLE ORE EXISTS ABOVE 46 M LEVEL BETWEEN NOS. 1 AND 2 SHAFTS EXCEPT IN PILLARS AND BENCHES.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
MAXIMUM WIDTH.....0.8 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 60 DEG E
DIP.....45 DEG SE
DEPTH BELOW SURFACE.....70 UNITS...M
LENGTH OF WORKINGS.....130 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, TEN CAVED PITS, COVERED DUMPS, OLD BUILDING CONTAINING AN OLD JIG AND CONCRETE FOUNDATIONS SEEN. FROM 1836 TO 1838 THE MINE WAS DEVELOPED BY TWO INCLINED SHAFTS, 9.5 AND 15 M (31 AND 50 FT) DEEP, CONNECTED AT THE 9-M (30-FT)


LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M. G. D. NOT SHOWN)
ELECTION DISTRICT LINE
② ELECTION DISTRICT NUMBER
N
Tabscott
Caledonia
Hadensville
Columbia
Elk Hill
Cartersville
Rock Castle
Gum Spring
Sandy Hook
Irwin
Goochland
Maidens
Perkinsville
Oilville
State Farm
Crozier
Sabot
Manakin
Vinita
FLUVANNA COUNTY
CUMBERLAND COUNTY
HANOVER COUNTY
HENRICO COUNTY
JAMES RIVER
POWHATAN
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
GOOCHLAND COUNTY
VIRGINIA
SCALE OF MILES

LEVEL BY A DRIFT 21 M (70 FT) LONG. IN 1891 THE MANNING SHAFT, OR NO. 1 SHAFT, WAS SUNK TO A DEPTH OF 14.6 M (48 FT)? IN 1893 THE SHAFT WAS FURTHER DEEPENED TO 22 M (72 FT), AND THE OLD STEVENS SHAFT WAS SUNK ABOUT 21 M (70 FT) SOUTHWEST OF NO. 1 AND THE TWO SHAFTS WERE CONNECTED BY A DRIFT ON THE 22-M LEVEL. FROM 1902 TO 1904 THE NO. 1 SHAFT WAS DEEPENED TO 36 M (118 FT)? AT THE 19-M LEVEL A SET OF 3 DRIFTS, ONE DIRECTLY OVER THE OTHER, IN LIEU OF STOPING, WAS RUN FOR A TOTAL DISTANCE OF 87 M (285 FT) ALONG THE VEIN. A SECOND OLD SHAFT, WHICH MAY HAVE BEEN THE OLD STEVENS SHAFT, WAS SUNS TO 40 M ON THE INCLINE, AND DRIFTS WERE RUN 18 M (60 FT) IN EACH DIRECTION ON THE VEIN AT A DEPTH OF 33.5 M (110 FT)? THE LAST 6 M (20 FT) OF EACH DRIFT WAS STOPED TO A HEIGHT OF 6 M (20 FT) ABOVE THE FLOOR OF THE DRIFT. IN 1931 A DRAINAGE SHAFT 21 M (70 FT) IN BACK OF THE VEIN WAS SUNK ON A 45 DEG INCLINE TO A DEPTH OF 40 M (132 FT) SOLELY FOR DRAINING THE UPPER PORTIONS OF THE OLD WORKINGS TO PERMIT THEIR RETIMBERING. THE NO. 1 SHAFT WAS RECONDITIONED AND SUNK TO A DEPTH OF 46 M (150 FT) ON THE INCLINE. AT THE 46-M LEVEL DRIFTS WERE RUN 32 M (105 FT) NORTHEAST AND 53 M (173 FT) SOUTHWEST. NO. 2 SHAFT,63 M (208 FT) SOUTHWEST OF NO. 1 AT THE SURFACE ALONG THE STRIKE OF THE VEIN, WAS SUNK TO A DEPTH OF 32 M (106 FT) ON THE INCLINE. DURING 1936, NO. 2 SHAFT WAS SUNK TO A DEPTH OF 70 M (228 FT) ON THE INCLINE, PASSING THROUGH SEVERAL OLD DRIFTS. IN NO. 2 SHAFT DRIFTS WERE RUN AT THE 27-M (90 FT) LEVEL 21 M (69 FT) NORTHEAST AND 17 M (55 FT) SOUTHWEST. AT THE 38 -M (125-FT) LEVEL A DRIFT WAS RUN 6 M (20 FT) NORTH EAST. AT THE 70-M LEVEL DRIFTS WERE EXTENDED ABOUT 4.6 M (15 FT) IN EACH DIRECTION. IN LATE 1984, AN ATTEMPT WAS MADE TO REOPEN THE OLD NO. 2 INCLINED SHAFT. THE RAILS FOR THE MINE CARS WERE UNCOVERED AS WELL AS AN ADJACENT INCLINED SHAFT. TIMBERS WERE ALSO OBSERVED IN THE SHAFT BEFORE IT CAVED IN AGAIN.

HOST ROCK AGE.....ORD
HOST ROCK TYPE.....GARNETIFEROUS QUARTZ-SERICITE SCHIST, HORNBLENDE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, SERICITE, FELDSPAR, TOURMALINE, MARCASITE (SECONDARY), GARNET
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....FAULTING (ONE FAULT SHOWS 1M VERTICAL DISPLACEMENT)
FORMATION AGE.....ORD
FORMATION NAME.....ARVONIA FORMATION
GEOLOGY COMMENTS.....COPPER SULFIDES BECOME MORE ABUNDANT ON 69.5 M LEVEL.
NON-USGS WORK.....1836 DIREXPL RICHMOND MINING CO., FIRST OPERATOR (TO 1838)
NON-USGS WORK.....1902 DIREXPL TELLURIC GOLD MINING CO., IMPROVED SITE (TO 1904)
NON-USGS WORK.....1936 DIREXPL MOSS MINING CO, IMPROVED SITE
REPORTS AVAILABLE.....SWEET, P.C., 1971, GOLD MINES AND PROSPECTS IN VIRGINIA: VIRGINIA MINERALS, VOL. 17, NO. 3, P. 25-33. WATSON, T.L., 1907, GOLD AND SILVER, IN MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, J.P. BELL CO. P. 549-567.
REFERENCE....PARDEE, J.T. AND PARK, C.F., 1948, GOLD DEPOSITS OF THE SOUTHERN PIEDMONT: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 213, 152 P.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERALRESOURCES, PUBLICATION 19, 77 P.
REFERENCE....BROWN, C.B., 1937, OUTLINE OF THE GEOLOGY AND MINERAL RESOURCES OF GOOCHLAND COUNTY, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 48, 68 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....HAMMETT, A.B.J., 1966, THE HISTORY OF GOLD: KERRVILLE, TEXAS, BRASWELL PRINTING CO., 107 P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
				1891	AU
ORE	AU	SML		1893	AU ($10,000 WORTH)
ORE	AU	SML		1931	AU ($906.30 WORTH, ALSO PART OF 1932)
ORE	AU	ACC 0.17200	TONS	1936	AU ($19.62 PER TON)

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE	AU	SML		1891,1893	AU
ORE	AU	SML		1931-1932	AU
ORE	AU	SML		1936	

SOURCE OF PRODUCTION INFORMATION.....BROWN (1937); SWEET, P.C., 1971, GOLD MINES AND PROSPECTS IN VIRGINIA: VIRGINIA MINERALS, V. 17, NO. 3, P. 27-28
PRODUCTION COMMENTS.....A SMALL AMOUNT OF AU ORE WAS PRODUCED IN 1891.

2. Waller Mine

MRDS-REV RECORD NUMBER.....573
MRDS RECORD NUMBER.....W030622
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER (D.C. LEVAN), ROBERT E.
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....WALLER MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....GOOCHLAND
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...CALEDONIA, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....415 FT (127 M)
UTM NORTHING...4193910 EASTING...759090 ZONE...+17
LATITUDE.....37-51-28N LONGITUDE.....078-03-18W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....0.55 MI (0.88 KM) ESE OF TABSCOTT.
LOCATION COMMENTS.....0.2 MI (0.3 KM) OFF NE SIDE OF STATE ROAD 603 ABOUT 0.5 MI (0.8 KM) BY ROAD SE OF JUNCTION WITH STATE ROAD 605.
COMMODITIES PRESENT.....AU CU PYR
ORE MATERIALS.....NATIVE GOLD, AURIFEROUS PYRITE, CHALCOPYRITE, BORNITE
MAIN ORE MINERALS.....NATIVE GOLD, AURIFEROUS PYRITE
MINOR ORE MINERALS.....CHALCOPYRITE, BORNITE
MAJOR.....AU
OCCUR.....CU PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....COLE & WOOLFORK (?) (PLACER GOLD)
YEAR OF DISCOVERY.....1831
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1831
OWNER (PRESENT/LAST).....F.R. WHITESEL
OPERATOR.....GOOCHLAND GOLD MINES HOLDING CORP.
EXPLORATION AND DEVELOPMENT COMMENTS.....COLE AND WOOLFORK DISCOVERED MINE IN 1831, DURING WHICH YEAR THEY CARRIED ON SURFACE WASHINGS FOR SEVERAL MONTHS. VEINS WERE DISCOVERED BY MOSS IN 1832, AND A VEIN 1.8 M (6 FT) THICK IS SAID TO HAVE BEEN OPENED BY THE FISHERS AND WORKED UNTIL THE LAND WAS PURCHASED BY WM. K. SMITH? LATER IT WAS SOLD TO RICHARDS WHO WORKED THE MINE 12 MONTHS AND THEN SOLD IT TO AN ENGLISH COMPANY. AFTER TWO YEARS, DURING WHICH IT IS SAID TO HAVE BEEN BADLY MANAGED, THE PROPERTY WAS DIVIDED AND SOLD IN TWO PARTS. SINCE THAT TIME ONLY THE WESTERN PART OF THE OLD ESTATE HAS BEEN KNOWN AS THE WALLER MINE. IN 1865, TURNER, HUGHES & CO. SANK A SHAFT AND DID SOME DEVELOPMENT WORK. IN 1876, THE PROPERTY WAS WORKED FOR 30 DAYS. IN 1910, A COMPANY SANK A SHAFT 22 M (72 FT) DEEP, AND DROVE CROSSCUTS NORTHWEST AT-14 AND 18 M (45 AND 60 FT) DEPTHS. IN THE LOWER CROSSCUT THE VEIN WAS FOUND, BUT A DRIFT STARTED SOUTHEAST SOON RAN INTO OLD WORKINGS. IN 1911 ANOTHER SHAFT WAS SUNK. THE GOOCHLAND GOLD MINES HOLDING CORP. DEVELOPED THE MINE STARTING IN 1930 UNTIL AT LEAST THE SUMMER OF 1933. THE COHN SHAFT WAS SUNKIN 1932.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LINEAR
MAXIMUM WIDTH.....1.8 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 58 DEG E
DIP.....45 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....ABOVE REFERS TO WALLER VEIN. IN ADDITION THERE WAS THE GOOCHLAND VEIN, MINED IN THE EARLY WORKINGS. ALSO THERE IS MENTION OF TELLURIUM VEIN.
DEPTH BELOW SURFACE.....91 UNITS...M
LENGTH OF WORKINGS.....184 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....ABOVE REFERS TO COHN SHAFT AND WORKINGS. IN 1974, THREE WATER-FILLED SHAFTS, SIX CAVED PITS, AND DUMPS WERE EVIDENT. A SHAFT WAS SUNK TO AN UNKNOWN DEPTH IN 1865. IN 1910 A SHAFT WAS SUNK TO A DEPTH OF 22 M (72 FT) AND CROSSCUTS WERE DRIVEN NORTHWEST AT THE 14 AND 18 M (45 AND 60 FT) DEPTHS. A SHORT CROSSCUT WAS ALSO DRIVEN SOUTHEAST FROM THE LOWER LEVEL. ANOTHER SHAFT WAS SUNK IN 1911. THE COHN SHAFT WAS 91 M (300 FT) DEEP, AT WHICH DEPTH A CROSSCUT EXTENDS 160 FT (49 M) N 37 DEG W. AT 24 M (80 FT) FROM THE SHAFT DRIFTS RUN 18 M (60 FT) NORTHEAST AND 26 M (84 FT) SOUTHWEST. ANOTHER SHAFT WAS SUNK TO A DEPTH OF 20 M (65 FT). AT THE 12.5 M (41 FT) LEVEL A CROSSCUT WAS DRIVEN 4 M (14 FT) NORTHWEST, WHERE IT ENTERED OLD WORKINGS WHICH WERE CLEANED OUT AND RETIMBERED FOR A CONSIDERABLE DISTANCE IN EACH DIRECTION. AT THE 20 M LEVEL DRIFTS WERE RUN ON THE VEIN FOR 32 M (105 FT) SOUTHWEST AND 3.7 M (12 FT) NORTHEAST.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....HORNBLENDE SCHIST, HORNBLENDE GNEISS
PERTINENT MINERALS (NOT ORE).....QUARTZ, OLIGOCLASE, LIMONITE, KAOLINITE, ALBITE-OLIGOCLASE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....FRACTURING STRIKING N 50 DEG E AND DIPPING 65 DEG NW SEEN IN COHN WORKINGS.
FORMATION AGE.....PAL
FORMATION NAME.....HATCHER COMPLEX
GEOLOGY COMMENTS.....MINE IS PROBABLY VERY NEAR THE ARVONIA-HATCHER CONTACT AND THE ROCK PROBABLY REPRESENTS A MIGMATITE.
WORK DONE BY USGS.....1948 RECON PARDEE, J.T. & PARK, C.F.; USGS PROF. PAPER 213.
NON-USGS WORK.....1832 DIREXPL MESSRS. FISHER: OPENED VEINS.
NON-USGS WORK.....1930 DIREXPL GOOCHLAND GOLD MINES HOLDING CORP.: PARTIALLY REDEVELOPED.
NON-USGS WORK.....1974 RECON VA. DIV. MIN. RES: SITE LOCATED.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF

MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....BROWN, C.B., 1937, OUTLINE OF THE GEOLOGY AND MINERAL RESOURCES OF GOOCHLAND COUNTY, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 48, 68 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....CREDNER, H., 1868, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VI, P. 406.
REFERENCE....GOOD, R.S., FORDHAM, O.M., AND HALLADAY, C.R., 1977, GEOCHEMICAL RECONNAISSANCE FOR GOLD IN THE CALEDONIA AND PENDLETON QUADRANGLES IN THE PIEDMONT OF CENTRAL VIRGINIA: VIRGINIA MINERALS, V. 23, N. 2, P. 13-22.
REFERENCE....HAMMETT, A.B.J., 1966, THE HISTORY OF GOLD: KERRVILLE, TEXAS, BRASWELL PRINTING CO., 107 P.
SOURCE OF PRODUCTION INFORMATION.....BROWN (1937).
PRODUCTION COMMENTS.....TOTAL PRODUCTION IS ESTIMATED AT $60,000 TO $75,000.

3. Young American Mine

MRDS-REV RECORD NUMBER.....572
MRDS RECORD NUMBER.....W030623
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER (D.C. LEVAN), ROBERT E.
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....YOUNG AMERICAN MINE
SYNONYM NAME.....GILMER MINE, GILMORE MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....GOOCHLAND
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...CALEDONIA, VA SECOND QUAD SCALE 1:24000
ELEVATION.....390 FT (119 M)
UTM NORTHING...4190010 EASTING...756240 ZONE...+17
LATITUDE.....37-49-24N LONGITUDE.....078-05-20W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.0 MI (1.6 KM) EAST OF CALEDONIA.
LOCATION COMMENTS.....1.05 MI (1.69 KM) DOWN A DRIVEWAY OFF EAST SIDE OF STATE ROAD 605 ABOUT 0.6 MI (1.0 KM) BY ROAD NE OF JUNCTION WITH STATE ROAD 610. ADDITIONAL WORKINGS AT UTM N 4189900., E 756390 (ZONE +17).
COMMODITIES PRESENT.....AU CU AG PYR TE BI
ORE MATERIALS.....NATIVE GOLD, AURIFEROUS PYRITE, CHALCOPYRITE, TETRADYMITE, SYLVANITE
GENERAL ANALYTICAL DATA.....THE SULPHUR VEIN CARRIED GOLD VALUES FROM A FEW CENTS TO $24 PER TON, AVERAGING ABOUT $5 PER TON. THE ORE FROM THE HOUSE VEIN AVERAGED $5 TO $10 PER TON.
MAIN ORE MINERALS.....NATIVE GOLD
MINOR ORE MINERALS.....AURIFEROUS PYRITE, CHALCOPYRITE, TETRADYMITE, SYLVANITE
MAJOR.....AU
OCCUR.....CU AG PYR TE BI
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....MR. ALDRICH
YEAR OF DISCOVERY.....1869
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1869
OWNER (PRESENT/LAST).....IRMA REID ROSE
GEOLOGY COMMENTS.....IN DEPTH REPORT OF THE GEOLOGY/MINERALOGY MAY BE FOUND IN TABER (1913).
NON-USGS WORK.....1869 DIREXPL MR. ALDRICH: MINOR MILLING OF ORE.
NON-USGS WORK.....1909 DIREXPL YOUNG AMERICAN CO: EXPANDED DEVELOPMENTS.
NON-USGS WORK.....1974 RECON VA. DIV. MIN. RES.: LOCATED SITE
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....BROWN, C.B., 1937, OUTLINE OF THE GEOLOGY AND MINERAL RESOURCES OF GOOCHLAND COUNTY, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY, BULLETIN48, 68 P.
REFERENCE....TABER, S., 1913, GEOLOGY OF THE GOLD BELT IN THE JAMES RIVER BASIN, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 7, 271 P.
REFERENCE....HAMMETT, A.B.J., 1966, THE HISTORY OF GOLD: KERRVILLE, TEXAS, BRASWELL PRINTING CO., 107 P.
REFERENCE....GOOD, R.S., FORDHAM, O.M., AND HALLADAY, C.R., 1977, GEOCHEMICAL RECONNAISSANCE FOR GOLD IN THE CALEDONIA AND PENDLETON QUADRANGLES IN THE PIEDMONT OF CENTRAL VIRGINIA: VIRGINIA MINERALS, V. 23, N.2, P. 13-22.

CUMULATIVE PRODUCTION

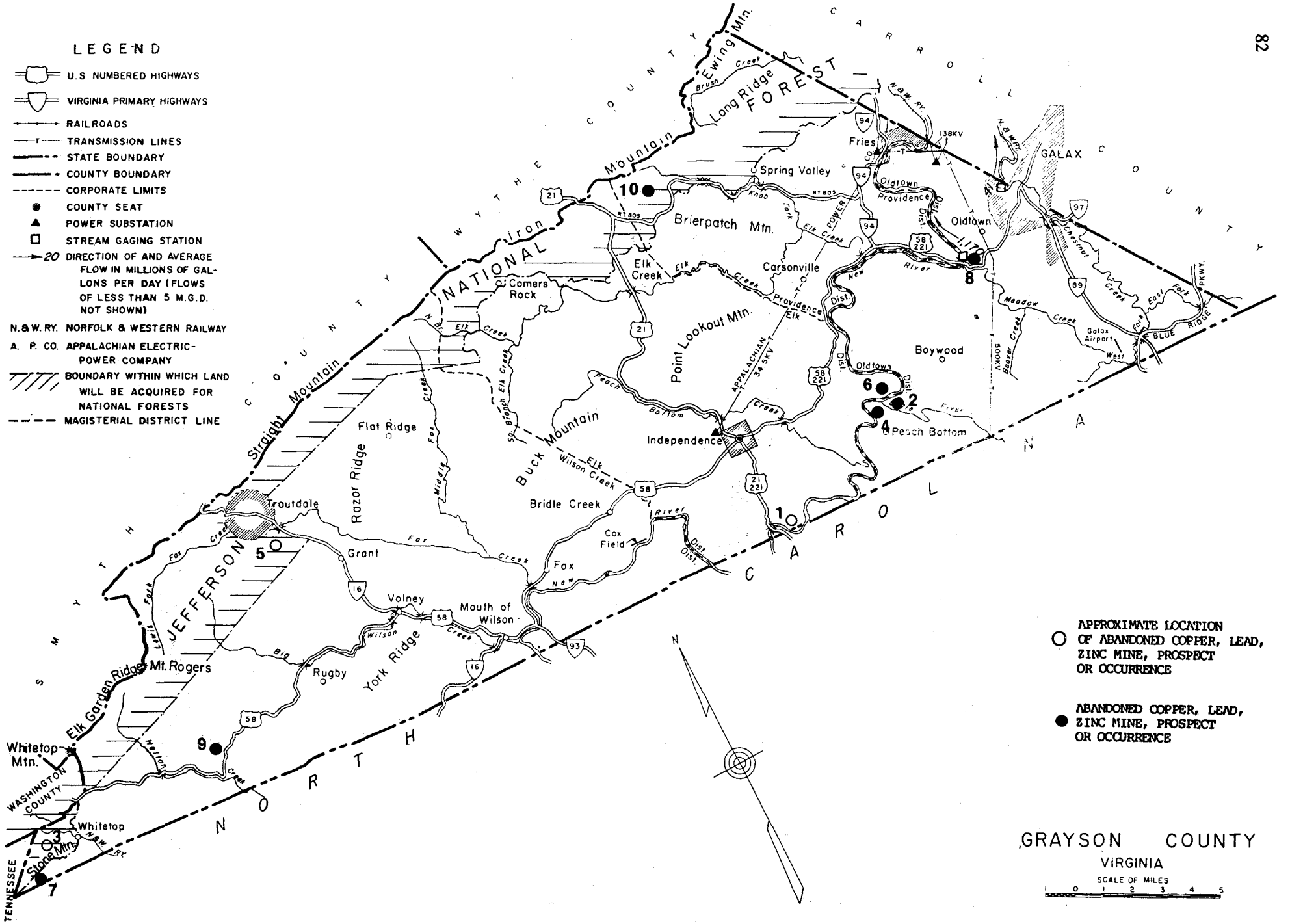
ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE	AU	SML		1880-1883	AU
ORE	AU	AVG	1.50000 TONS	1910-1913	AU

SOURCE OF PRODUCTION INFORMATION.....TABER (1913)
PRODUCTION COMMENTS.....NO FIGURES EXIST FOR 19TH CENTURY WORK.

GRAYSON COUNTY

1. Austin Prospect

MRDS-REV RECORD NUMBER.....615
MRDS RECORD NUMBER.....W030894
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....AUSTIN PROSPECT
MINING DISTRICT/AREA.....GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....GRAYSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... SPARTA WEST, N.C.-VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-35- N LONGITUDE.....081-08- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....ACCORDING TO CURREY (1859), THIS PROSPECT IS LOCATED 3 MI (4.8 KM) SOUTH OF INDEPENDENCE. A LOCATION NEAR SPURLIN FORD; APPROXIMATELY AT UTM N 4047500., E487500; WOULD BE ON STRIKE WITH THE LEAD.
COMMODITIES PRESENT.....FE CU PYR1
ORE MATERIALS.....CHALCOPYRITE, PYRRHOTITE, GOETHITE
COMMODITY INFO COMMENTS.....ORE MINERALS WERE NOT DESCRIBED BY CURREY (1859).
NON-PRODUCER MAIN.....FE CU
NON-PRODUCER MINOR.....PYR1
PRODUCTION.....N
STATUS AND ACTIVITY.....1
OPERATOR.....YOUNG AMERICAN CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WAS DISCOVERED IN 1869 BY MR. ALDRICH, WHO BUILT A SMALL STAMP MILL AND SANK A SHAFT ON THE HOUSE VEIN. PLACER MINING WAS CARRIED OUT FROM 1871 TO 1874 ON RANSOME CREEK (LUCK BRANCH) INVOLVING SLUICE AND ROCKER WASHING. IN 1880 THE TAGUS GOLD MINING CO. BEGAN DEVELOPMENT WORK AND CONTINUED OPERATIONS FOR THREE YEARS. ABOUT 100 TONS OF ORE FOUND ON THE SURFACE WERE HAULED TO THE BELZORO MILL AND STAMPED, YIELDING $5 PER TON. THE HOUSE VEIN WAS DEVELOPED AND STOPED DOWN TO WATER LEVEL FOR A DISTANCE OF APPROXIMATELY 183 M (600 FT) ALONG STRIKE, AND SOME SMALL LENSES OF QUARTZ, PARALLELING THE HOUSE VEIN ABOUT 31 M (100 FT) TO THE WEST, WERE EXPOSED BY AN ADIT AND MINED. THE SULPHUR VEIN, ABOUT 274 M (900 FT) WEST OF THE HOUSE VEIN, WAS EXPLORED, SEVERAL SMALL SHAFTS SUNK, AND MUCH OF THE VEIN ABOVE WATER LEVEL STOPED OUT. A 4-FOOT BRYAN MILL WAS INSTALLED TO CRUSH THE ORE. FROM 1885 TO 1909 THE MINE PASSED THROUGH SEVERAL HANDS, AND WHILE SOME DEVELOPMENT ATTEMPTS WERE MADE, VERY LITTLE PRODUCTION OCCURRED. IN 1893 A CYANIDE PLANT WAS IN OPERATION. THE YOUNG AMERICAN CO. TOOK OVER OPERATIONS IN 1909, ERECTED A NEW BUILDING EQUIPPED WITH A CRUSHER, FEEDER, SLOW-SPEED LANE MILL, PLATES AND TWO CONCENTRATING TABLES. THIS MILL OPERATED UNTIL 1912, BUT ONLY 1500 TONS OF ORE WERE MILLED. DEVELOPMENT WORK WAS DONE CHIEFLY ON THE SULPHUR VEIN.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, PLACER
DEPOSIT FORM.....LINEAR, LENS, IRREGULAR
MAXIMUM WIDTH.....1.8 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 30 DEG E
DIP.....40 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....ABOVE DESCRIBES SULPHUR VEIN; HOUSE VEIN TO HAVE AVERAGED 1.5-1.8 M WIDE, STRIKES N 22 DEG E. BOTH VEINS DESCRIBED AS STRINGER LODES. DEVELOPMENT IN 1909 WAS ON SULPHUR VEIN. THE SULPHUR VEIN IS APPROXIMATELY 230 M (755 FT) WEST OF THE HOUSE VEIN.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....30 UNITS...M
LENGTH OF WORKINGS.....152 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, SIX WATER-FILLED AND CAVED SHAFTS, ABOUT TWENTY WATER-FILLED AND CAVED PITS AND TRENCH CUTS, CONCRETE FOUNDATIONS, AND DUMPS WERE EVIDENT. THE SULPHUR VEIN WAS DEVELOPED BY THE SULPHUR AND H. V. SHAFTS AND SEVERAL AIR SHAFTS. THE SULPHUR SHAFT WAS 24 M (80 FT) DEEP VERTICALLY AND THEN FOLLOWS THE VEIN ON AN INCLINE FOR AN ADDITIONAL 13 M (42 FT), MAKING THE TOTAL DEPTH BELOW THE SURFACE 30.5 M (100 FT)? THE H. V. SHAFT WAS 55 M (83 FT) DEEP, 104 M (340 FT) NORTHEAST OF THE SULPHUR SHAFT. BOTH SHAFTS HAD NUMEROUS DRIFTS FOLLOWING THE VEIN AND ITS STRINGERS, INCLUDING ONE DRIFT WHICH CONNECTS BOTH SHAFTS. MOST OF THE ORE ABOVE THIS DRIFT HAS BEEN STOPED OUT. THE HOUSE VEIN WAS DEVELOPED BY A NUMBER OF SHAFTS, TUNNELS, OPEN CUTS, AND PITS?
HOST ROCK AGE.....ORD
HOST ROCK TYPE.....HORNBLENDE-BIOTITE-CHLORITE-MAGNETITE GNEISS, QUARTZ-SERICITE-FELDSPAR GNEISS, QUARTZ-SERICITE-FELDSPAR SCHIST.
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
FORMATION AGE.....ORD
FORMATION NAME.....ARVONIA FORMATION


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
N.&W.RY. NORFOLK & WESTERN RAILWAY
A. P. CO. APPALACHIAN ELECTRIC POWER COMPANY
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
MAGISTERIAL DISTRICT LINE
WYTHE COUNTY
CARROLL COUNTY
GALAX
GRAYSON COUNTY
SMYTH COUNTY
WASHINGTON COUNTY
TENNESSEE
NORTH CAROLINA
JEFFERSON NATIONAL FOREST
Iron Mountain
Straight Mountain
Elk Garden Ridge
Mt. Rogers
Whitetop Mtn.
Stone Mtn.
Ewing Mtn.
Long Ridge
Brierpatch Mtn.
Point Lookout Mtn.
Buck Mountain
Razor Ridge
York Ridge
Flat Ridge
Troutdale
Grant
Volney
Rugby
Mouth of Wilson
Bridle Creek
Cox Field
Independence
Peach Bottom
Baywood
Oldtown
Providence
Carsonville
Comers Rock
Spring Valley
Fries
Galax Airport
Fox Creek
Wilson Creek
Elk Creek
Peach Bottom Creek
Meadow Creek
Chestnut Creek
New River
Big Wilson Creek
Whitetop
Elk Garden
Mt. Rogers
Brierpatch Mtn.
Point Lookout Mtn.
Buck Mountain
Razor Ridge
York Ridge
Flat Ridge
Troutdale
Grant
Volney
Rugby
Mouth of Wilson
Bridle Creek
Cox Field
Independence
Peach Bottom
Baywood
Oldtown
Providence
Carsonville
Comers Rock
Spring Valley
Fries
Galax Airport
Fox Creek
Wilson Creek
Elk Creek
Peach Bottom Creek
Meadow Creek
Chestnut Creek
New River
Big Wilson Creek
Whitetop
Elk Garden
Mt. Rogers
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
GRAYSON COUNTY
VIRGINIA
SCALE OF MILES
0 1 2 3 4 5

YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....MRS. AUSTIN
EXPLORATION AND DEVELOPMENT COMMENTS.....DEPOSIT POSSIBLY MINED FOR IRON ORE AROUND 1800, THE ORE BEING SMELTED AT THE PINE HOPE IRON FORGE AND FURNACE. DURING THE 1850'S, THE DEPOSIT WAS PROSPECTED FOR COPPER.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT SIZE.....SMALL (?)
STRIKE.....NE-SW
HOST ROCK AGE.....PREC
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, GOSSAN LEAD OVERTHRUST, FRIES FAULT.
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
WORK DONE BY USGS.....1972 GEOLMAP D.W. RANKIN: MISC. GEOL. INV. MAP I-709-A.
NON-USGS WORK.....DIREXPL DEPOSIT PROSPECTED POR COPPER.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL.72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....RANKIN, D.W., ESPENSHADE, G.H., AND NEUMANN, R.B., 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA, VIRGINIA, AND TENNESSEE: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-A, 1 SHEET, SCALE 1:250,000.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
PRODUCTION COMMENTS.....THERE MAY HAVE BEEN EARLY (1800) IRON PRODUCTION.

2Cox,H,Prospect

MRDS-REV RECORD NUMBER.....619
MRDS RECORD NUMBER.....W030895
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....COX, H., PROSPECT
MINING DISTRICT/AREA.....GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....GRAYSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SPARTA EAST, N.C.-VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2480 FT (756 M)
UTM NORTHING...4050620 EASTING...494600 ZONE...+17
LATITUDE.....36-36-10N LONGITUDE.....081-03-37W
POSITION FROM NEAREST LOCALITY.....1.7 KM (1.05 MI) NE OF PEACH BOTTOM (POSSIBLE LOCATION)
LOCATION COMMENTS.....LOCATION APPROXIMATE NOT FIELD CHECKED. THIS LOCATION IS LOCATED ALONG SULFIDE ZONE MAPPED BY STOSE AND STOSE (1957) AND AS IT IS ALONG THE LITTLE RIVER COULD POSSIBLY BE THE COX OR FULTON PROSPECT DESCRIBED BY CURREY (1859) OR NEITHER. ABOUT 140 M (460 FT) NE OF DIRT ROAD, 1.5 KM (0.95 MI) NW OF JUNCTION WITH STATE ROAD 626, 0.2 KM (0.1 MI) NE OF JUNCTION WITH STATE ROAD 629.
COMMODITIES PRESENT.....CU PYR1
ORE MATERIALS.....CHALCOPYRITE, PYRRHOTITE
NON-PRODUCER MAIN.....CU
NON-PRODUCER MINOR.....PYR1
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....MR. HAYWOOD COX
EXPLORATION AND DEVELOPMENT COMMENTS.....DEPOSIT PROSPECTED DURING 1850'S.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DESCRIPTION OF WORKINGS COMMENTS.....THE WORKINGS ARE NOT DESCRIBED.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....SCHIST
PERTINENT MINERALS (NOT ORE).....CARBONATES
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, GOSSAN LEAD OVERTHRUST, FRIES FAULT
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1972 GEOLMAP D.W. RANKIN: MISC. GEOL. INV. MAP I-709-A.
NON-USGS WORK.....DIREXPL DEPOSIT PROSPECTED.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....RANKIN, D.W., ESPENSHADE, G.H., AND NEUMANN, R.B., 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA, VIRGINIA, AND TENNESSEE: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-A, 1 SHEET, SCALE 1:250,000.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.

3. Douglas Land Company Property Prospect

MRDS-REV RECORD NUMBER.....621
MRDS RECORD NUMBER.....W030896
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....DOUGLAS LAND COMPANY PROPERTY PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....GRAYSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....06 HOLSTON RIVER
QUADRANGLE NAME..... GRAYSON, TENN.-N.C.-VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-36- N LONGITUDE.....081-38- W
POSITION FROM NEAREST LOCALITY.....UNKNOWN.
LOCATION COMMENTS.....EXACT LOCATION UNDETERMINED.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOPYRITE, MALACHITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....1905
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....DOUGLAS LAND COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....IN 1978, NONE OF THE RESIDENTS, WHO LIVED IN THE AREA AT THE TIME, COULD RECALL ANY SUCH PROSPECT.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....GREEN SCHIST (METABASALT (?)
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT (?)
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
FORMATION AGE.....PREC
FORMATION NAME.....MT ROGERS VOLCANIC GROUP
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....MT. ROGERS VOLCANIC GROUP
GEOLOGY COMMENTS.....GEOLOGY ONLY BRIEFLY DESCRIBED IN WATSON (1907). LOCALITY REPORTEDLY NOT FAR FROM CONTACT WITH RHYOLITE PORPHYRY.
NON-USGS WORK.....1907 RECON LOCATED ORE MINERALS.
NON-USGS WORK.....1978 RECON VA. DIV. MIN. RES., UNABLE TO RELOCATE.
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES,IN PREPARATION.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.

4. Fulton Prospect

MRDS-REV RECORD NUMBER.....622
MRDS RECORD NUMBER.....W030897
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P.C.)
SITE NAME.....FULTON PROSPECT
MINING DISTRICT/AREA.....GOSSAN LEAD DISTRICT/SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....GRAYSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SPARTA EAST, N.C.-VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2440 (744 M)
UTM NORTHING...4050350 EASTING...494240 ZONE...+17
LATITUDE.....36-36-02N LONGITUDE.....081-03-52W
POSITION FROM NEAREST LOCALITY.....1.2 KM (0.8 MI) NORTH OF PEACH BOTTOM
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. THIS LOCATION PERTAINS TO A SULFIDE PROSPECT MAPPED BY STOSE AND STOSE (1957); IT IS POSSIBLY THE FULTON PROSPECT OR THE H. COX PROSPECT OR NEITHER. IT IS 200 M (650 FT) NW OF END OF FARM LANE, 0.6 KM (0.4 MI) NW OF JUNCTION WITH STATE ROAD 629, 0.8 KM (0.5 MI) NW OF JUNCTION WITH STATE ROAD 626. CURREY (1859) DESCRIBED PROSPECT AS BEING ON THE LITTLE RIVER AND 3 MI EAST OF OLD PINE HOPE FURNACE, ON PEACH BOTTOM CREEK.
COMMODITIES PRESENT.....CU PYR1
ORE MATERIALS.....CHALCOPYRITE, PYRRHOTITE

NON-PRODUCER MAIN.....CU
NON-PRODUCER MINOR.....PYR1
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....MR. FULTON
EXPLORATION AND DEVELOPMENT COMMENTS.....DEPOSIT PROSPECTED DURING 1850'S.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DESCRIPTION OF WORKINGS COMMENTS.....THE WORKINGS ARE NOT DESCRIBED.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....SCHIST
PERTINENT MINERALS (NOT ORE).....CARBONATES
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, GOSSAN LEAD OVERTHRUST, FRIES FAULT
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1972 GEOLMAP D.W. RANKIN: MISC. GEOL. INV. MAP I-709-A.
NON-USGS WORK.....DIREXPL DEPOSIT PROSPECTED.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....RANKIN, D.W., ESPENSHADE, G.H., AND NEUMANN, R.B., 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA, VIRGINIA, AND TENNESSEE: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-A, 1 SHEET, SCALE 1:250,000.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.

5. Greer Place Prospect

MRDS-REV RECORD NUMBER.....625
MRDS RECORD NUMBER.....W030898
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....GREER PLACE PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....GRAYSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... TROUT DALE, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-41- N LONGITUDE.....081-26- W
POSITION FROM NEAREST LOCALITY.....REPORTED (WATSON, 1907) TO BE 1 MI (1.6 KM) SSE OF TROUT DALE.
LOCATION COMMENTS.....UNABLE TO BE RELOCATED.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOPYRITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....PRE-1907
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....IN 1978 NONE OF THE OLDER RESIDENTS OF THE AREA WERE FAMILIAR WITH ANY OLD COPPER PROSPECT IN THE AREA.
DEPOSIT TYPE.....DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DESCRIPTION OF WORKINGS COMMENTS.....NO WORKINGS LOCATED OR REFERENCED.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....RHYOLITE PORPHYRY
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....RHYOLITE PORPHYRY
PERTINENT MINERALS (NOT ORE).....QUARTZ, FELDSPAR
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....STONE MOUNTAIN FAULT
FORMATION AGE.....PREC
FORMATION NAME.....MOUNT ROGERS FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....MOUNT ROGERS FORMATION
GEOLOGY COMMENTS.....CHALCOPYRITE OCCURRED AS SMALL GRAINS AND LARGE GRANULAR MASSES IN RHYOLITE PORPHYRY.
NON-USGS WORK.....1978 RECON VA. DIV. MIN. RES., UNABLE TO LOCATE.
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....RANKIN, D.W., ESPENSHADE, G.H., AND NEUMAN, R.B., 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA, VIRGINIA, AND TENNESSEE: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-A, 1 SHEET, SCALE 1:250,000.

6. Hampton Mine

MRDS-REV RECORD NUMBER.....626
MRDS RECORD NUMBER.....W030899
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....HAMPTON MINE
MINING DISTRICT/AREA.....GOSSAN LEAD DISTRICT SOUTHERN SECTION-BLUE RIVER PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....GRAYSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SPARTA EAST, N.C.-VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2560 FT (780 M)
UTM NORTHING...4051350 EASTING...494360 ZONE...+17
LATITUDE.....36-36-34N LONGITUDE.....081-03-47W
POSITION FROM NEAREST LOCALITY.....3.5 KM (2.2 MI) WEST OF BAYWOOD.
LOCATION COMMENTS.....400 METERS (1300 FT) NORTH OF STATE ROAD 715, 0.8 KM (0.5 MI) SOUTH OF JUNCTION WITH STATE ROAD 624 AT BOYER FERRY, ABOUT 2.9 KM (1.8 MI) EAST OF JUNCTION WITH STATE ROAD 693.
COMMODITIES PRESENT.....CU PYR1 FE
ORE MATERIALS.....CHALCOPYRITE, PYRRHOTITE, GOETHITE, MALACHITE
MAJOR.....CU
MINOR.....FE
OCCUR.....PYR1
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-CIVIL WAR
OWNER (PRESENT/LAST).....O.N. SHUMAKER
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPENED DURING 1850'S TO PRODUCE COPPER. IN 1880'S-1890'S (?) THE MINE WAS OPERATED FOR IRON, SMELTING BEING PERFORMED AT FORGE LOCATED AT RUTHERFORD MILL.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....A 30 M ADIT (NOW FLOODED) AND A SHAFT WERE DRIVEN.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, GOSSAN LEAD OVERTHRUST, FRIES FAULT
FORMATION AGE.....PREC
IGNEOUS UNIT NAME.....LYNCHBURG FORMATION
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1943 RECON R.J. WRIGHT & N.D. RAMAN: OPEN-FILE REPORT.
WORK DONE BY USGS.....1972 GEOLMAP D.W. RANKIN: MISC. GEOL. INV. MAP I-709-A.
NON-USGS WORK.....DIREXPL ANDREW HAMPTON: MINED COPPER ORE.
NON-USGS WORK.....DIREXPL MINED GOSSAN IRON.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: BULL. 72.
REFERENCE....CURREY, R.O., 1859, A GEOLOGICAL VISIT TO THE VIRGINIA COPPER REGION: KNOXVILLE, TENN., BECKETT, HAWS AND CO.; REPRINTED IN PART UNDER COPPER AND IRON REGION OF THE FLOYD-CARROLL-GRAYSON PLATEAU OF THE BLUE RIDGE IN VIRGINIA, ETC.: THE VIRGINIAS, 1880, V. 1, P. 62-64, 69-71, 74-77, 80-81, 95.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.
REFERENCE....WRIGHT, R.J., AND RAMAN, R.D., 1948, THE GOSSAN LEAD, CARROLL COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT, 21 P.

CUMULATIVE PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEARS GRADE
FE SML 1880'S(?) GOSSAN FE
SOURCE OF PRODUCTION INFORMATION.....STOSE & STOSE (1957).
PRODUCTION COMMENTS.....CU PRODUCTION WAS PROBABLY MINIMAL.

7. Marion Miller Prospect

MRDS-REV RECORD NUMBER.....1533
MRDS RECORD NUMBER.....W055391
RECORD TYPE.....X1M
REPORT DATE.....87 02
INFORMATION SOURCE.....53
FILE LINK ID.....1533

REPORTER.....SWEET, PALMER C
REPORTER AFFILIATION.....VDMR
SITE NAME.....MARION MILLER PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....GRAYSON
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE PROVINCE
DRAINAGE AREA.....05050001 OHIO
LAND STATUS.....00 (1959)
QUADRANGLE NAME..... GRAYSON (1959) QUADRANGLE SCALE 1:24000
ELEVATION.....3820 FT
UTM NORTHING...4049200 EASTING...440120 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....2.6 MILES S 70 W OF WHITETOP
COMMODITIES PRESENT.....AU CU
ORE MATERIALS.....GOLD, CHALCOPYRITE, BORNITE, MALACHITE
MAJOR.....AU CU
PRODUCTION.....S
STATUS AND ACTIVITY.....2
DISCOVERER.....MARION MILLER
YEAR OF DISCOVERY.....1905
EXPLORATION AND DEVELOPMENT COMMENTS.....MR. MILLER DUG 2 PROSPECT PITS ON THE NORTHWESTERN BRANCH OF BIG HORSE CREEK.
DEPOSIT TYPE.....LODE (VEIN) ?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....VUGGY, IRON-STAINED QUARTZ FLOAT PRESENT ON HILLSIDES AND IN CREEK BED.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....AROUND 1905, MILLER PANNED GOLD FROM BIG HORSE CREEK AND DUG 2 PROSPECT PITS ON THE NW BRANCH OF BIG HORSE CREEK. PROSPECT PITS SEEN IN THE LAST 20 YEARS NOW SLOPES HAVE BEEN TIMBERED AND NOTHING IS PRESENT.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....MEDIUM-GRAINED GREENSTONES, RHYOLITES, SLATY PHYLLITES
FORMATION AGE.....LATE PREC
FORMATION NAME.....MOUNT ROGERS
REFERENCE....SWEET, P.C. AND LOVETT, J.A., 1985, VDMR VIRGINIA MINERALS, VOL.31, NO.4, P.41-52.
REFERENCE....RANKIN, D.W. AND OTHERS, 1972, GEOLOGIC MAP OF THE W HALF OF WINSTON SALEM QUADRANGLE, NORTH CAROLINA, VIRGINIA AND TENNESSEE, U.S. GEOL. SURVEY MISCELLANEOUS INVESTIGATIONS MAP I-709-A.
REFERENCE....PHILLIPS, VAUGHAN, 1985, PERSONAL COMMUNICATIONS

8. Meadow Creek Prospect

MRDS-REV RECORD NUMBER.....630
MRDS RECORD NUMBER.....W030900
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....MEADOW CREEK PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....GRAYSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... GALAX, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2320 FT (707 M)
UTM NORTHING...4055120 EASTING...502250 ZONE...+17
LATITUDE.....36-38-36N LONGITUDE.....080-58-29W
POSITION FROM NEAREST LOCALITY.....1.85 KM (1.15 MI) SW OF OLDTOWN.
LOCATION COMMENTS.....50 M EAST OF U.S. HWY 58/221, 175 M (500 FT) SE OF JUNCTION WITH STATE ROAD 634. GOSSAN OUTCROP LOCATED 0.8 KM (0.5 MI) TO THE SW.
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....CHALCOPYRITE, PYRITE
NON-PRODUCER MAIN.....CU
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....SHAFT SUNK IN PAST APPARENTLY IN SEARCH OF GOLD. SITE USED AS A STONE QUARRY; NO DEVELOPMENT WORK CONDUCTED ON SULFIDES.
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....AN EXPLORATORY SHAFT WAS SUNK FOR GOLD(?)
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....SCHIST, AMPHIBOLITE
PERTINENT MINERALS (NOT ORE).....CARBONATES
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, GOSSAN LEAD OVERTHRUST
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GENERAL COMMENTS.....THE ONLY REFERENCE TO THIS PROSPECT IS ROSS (1935, P. 83-84.)
WORK DONE BY USGS.....1935 RECON C.S. ROSS: PROF. PAPER 179.
WORK DONE BY USGS.....1966 GEOL. MAP D.W. RANKIN: MISC GEOL. INV. MAP I-709-B.
NON-USGS WORK.....DIREXPL SINGLE SHAFT SUNK
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV: BULL. 72.
REFERENCE....ESPENSHADE, G.H., RANKIN, D.W., SHAW, K.W., AND NEUMAN, R.B., 1975, GEOLOGIC MAP OF THE EAST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA-VIRGINIA: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-B, 1 SHEET, SCALE 1:250,000.
REFERENCE....ROSS, C.S., 1935, ORIGIN OF THE COPPER DEPOSITS OF THE DUCKTOWN TYPE IN THE SOUTHERN APPALACHIAN REGION: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 179, 165 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P.

9. Osborne Prospect

MRDS-REV RECORD NUMBER.....1534
MRDS RECORD NUMBER.....W055392
RECORD TYPE.....X1M
REPORT DATE.....86 03
INFORMATION SOURCE.....531
FILE LINK ID.....1534
REPORTER.....SWEET, PALMER C
REPORTER AFFILIATION.....VDMR
SITE NAME.....OSBORNE PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....GRAYSON
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE PROVINCE
DRAINAGE AREA.....05050001 OHIO
LAND STATUS.....01 (1978)
QUADRANGLE NAME..... PARK (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....3520 FT
UTM NORTHING...4051160 EASTING...453210 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.0 MILE S 80 W OF THE INTERSECTION OF STATE ROAD 797 WITH U.S. HIGHWAY 58.
COMMODITIES PRESENT.....AU CU
ORE MATERIALS.....GOLD, COPPER
NON-PRODUCER MAIN.....AU CU
PRODUCTION.....N
DISCOVERER.....PETTY OSBORNE
YEAR OF DISCOVERY.....LATE 1800'S
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....MR. OSBORNE DUG A SMALL PROSPECT PIT FOR COPPER; VERY FINE GOLD WAS ALSO PRESENT. EARLY 1900'S, DOUGLAS LAND COMPANY DUG A HILLSIDE TRENCH, SEARCHING FOR GOLD AND COPPER
DEPOSIT TYPE.....LODE (VEIN) ?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....VUGGY, IRON-OXIDE STAINED VEIN QUARTZ, 0.25 TO 2 INCHES THICK WAS FOUND ON THE DUMP.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....IN 1985, THERE WAS A SMALL TRENCH CUT INTO THE HILLSIDE AND AN OVERGROWN DUMP. TRENCH IS 30 X 12' AND 6' DEEP AND TRENDS N 20 E
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....PHYLLITE, QUARTZ - FELDSPAR GNEISS
PERTINENT MINERALS (NOT ORE).....QUARTZ
FORMATION AGE.....LATE PREC
FORMATION NAME.....MOUNT ROGERS
REFERENCE....RANKIN, D.W. AND OTHERS, 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON SALEM QUADRANGLE, NORTH CAROLINA, VIRGINIA AND TENNESSEE, U.S. GEOL. SURVEY MISCELLANEOUS INVESTIGATIONS MAP I-709-A.
REFERENCE....SWEET, P.C. AND LOVETT, J.A., 1985, VIRGINIA DIVISION OF MINERAL RESOURCES, VIRGINIA MINERALS, VOL.31, NO.4, P.41-52.
REFERENCE....GREER, ALEX, 1985, PERSONAL COMMUNICATIONS
REFERENCE....OSBORNE, CARL, 1985, PERSONAL COMMUNICATIONS

10. Vaught, F., Mine

MRDS-REV RECORD NUMBER.....627
MRDS RECORD NUMBER.....W031261
RECORD TYPE.....X1N
DEPOSIT NUMBER.....54C-1
REPORT DATE.....87 02
INFORMATION SOURCE.....135
FILE LINK ID.....627
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 02
UPDATER.....LOVETT, JAMES A.
SITE NAME.....VAUGHT, F., MINE
SYNONYM NAME....."SHAFT MINE"
MINING DISTRICT/AREA.....GOSSAN LEAD DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....GRAYSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....05050001 OHIO/NEW RIVER
LAND STATUS.....01 (1986)
QUADRANGLE NAME..... SPEEDWELL, VA. (1968) QUADRANGLE SCALE 1:24000
ELEVATION.....3140 FT
UTM NORTHING...4067520 EASTING...488240 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....APPROXIMATELY 4.6 MILES S 30 E FROM SPEEDWELL ON THE SOUTH SLOPE OF IRON MOUNTAIN
LOCATION COMMENTS.....SOUTH OF PERKINS KNOB, 1.05 MILES S 75 E FROM THE INTERSECTION OF STATE ROADS 805 AND 857; 1000 FT N 87 W FROM THE END OF STATE ROAD 857.
COMMODITIES PRESENT.....BA F QTZ PB
ORE MATERIALS.....BARITE, FLOURITE, QUARTZ, GALENA
COMMODITY INFO COMMENTS.....EDMUNDSON (1938) REPORTS BARITE, FLOURITE AND SECONDARY QUARTZ. SMALL CLUSTERS AND CUBES OF GALENA IDENTIFIED FROM DUMP SAMPLES COLLECTED IN 1986.
MAJOR.....BA
OCCUR.....F QTZ PB
PRODUCTION.....S

STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1927
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....
OWNER (PRESENT/LAST).....CALLAHAN, WILLIAM H. (1986)
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY WAS FIRST PROSPECTED IN 1927 BY A SHALLOW TRENCH, WHICH WAS LATER ENLARGED TO AN OPEN CUT. A SHAFT WAS DUG IN 1928. 20 TONS OF BARITE WERE RECOVERED FROM THE OPEN CUT AND A LARGER BODY WAS REPORTED TO HAVE BEEN DISCOVERED LATER IN THE SHAFT.
DEPOSIT TYPE.....LENS
DEPOSIT FORM.....IRREGULAR
MAXIMUM THICKNESS.....4 UNITS...FT
DEPOSIT SIZE.....SMALL
DIP.....60 DEG S
DEPOSIT DESCRIPTION COMMENTS.....BARITE OCCURRED AS LENSES IN THE OPEN CUT AND IN THE SHAFT. THE BARITE LENS IN THE OPEN CUT WAS A SOLID MASS 1.2M (4 FT) WIDE WHICH YIELDED 20 TONS OF BARITE. BEDROCK DOES NOT CROP OUT IN THE OPEN CUT, BUT WEATHERED PINK PEGMATITE WAS ENCOUNTERED IN THE SHAFT, CONTAINING ABUNDANT BARITE, FLUORITE, AND SECONDARY QUARTZ. BARITE COLLECTED ON THE MICA DUMP WAS MASSIVE WITH CLUSTERS OF FINE GRAINED CRYSTALS, OCCASSIONALLY VUGGY AND IRON STAINED. FLOAT PIECES OF BARITE ARE UP TO 10 INCHES THICK.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....15 UNITS...M
OVERALL LENGTH..... UNITS...
OVERALL WIDTH..... UNITS...
DESCRIPTION OF WORKINGS COMMENTS.....ONE OPEN CUT 18.3 M (60 FT) LONG, 4.6 M (15 FT) WIDE, AND 3.7 M (12 FT) DEEP. A SHAFT, 15 M (50 FT) DEEP, WAS SUNK NEAR THE SOUTHEASTERN END OF THE OPEN CUT AND IT HAD A DRIFT TO THE EAST. FIELD EXAMINATION CONDUCTED 8/12/86: CAVED SHAFT OR LARGEST PIT IS APPROXIMATELY 20 FT WIDE AND 7 FT DEEP, LIES AT THE SOUTHERN END OF A N 10 W TRENDING TRENCH THAT IS APPROXIMATELY 60 FT LONG, 20 FT WIDE AND 6 TO 10 FT DEEP. SMALL PITS, TRENCHES AND DUMPS WERE FOUND TO THE WEST AND SOUTH OF THE MAIN TRENCH.
HOST ROCK AGE.....PREC-QUAT
HOST ROCK TYPE.....GRANITE GNEISS, PEGMATITE, CLAY RESIDUUM
AGE OF IGNEOUS ROCK.....LATE PREC
IGNEOUS ROCK TYPE.....GRANITE GNEISS, PINK PEGMATITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, FLUORITE
ORE CONTROL/LOCUS.....E-W TRENDING NORMAL FAULT
TECTONIC SETTING.....OROGEN; STONE MOUNTAIN BLOCK OF THE BLUE RIDGE THRUST SHEETS/SHADY VALLEY THRUST SHEET
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM; E-W TRENDING STONE MOUNTAIN THRUST FAULT FAMILY
SIGNIFICANT LOCAL STRUCTURES.....E-W TRENDING NORMAL FAULT
FORMATION AGE.....QUAT
FORMATION AGE.....PREC
FORMATION NAME.....RESIDUAL CLAY
FORMATION NAME.....CRANBERRY GNEISS
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CRANBERRY GNEISS OF ELK PARK PLUTONIC GROUP
GEOLOGY COMMENTS.....DEPOSIT OCCURS AT LEAST IN PART IN A PEGMATITE WITHIN THE GNEISS. GEOLOGY BASED ON MAP BY RANKIN, ESPENSHADE, AND NEUMAN, 1972, USGS MISC. GEOL. INVESTIGATIONS MAP I-709-A.
GENERAL COMMENTS.....THIS IS THE LARGEST AND MOST EXTENSIVELY DEVELOPED PROSPECT/MINE IN THE NORTHERN GRAYSON COUNTY - FALLVILLE AREA.
REFERENCE....EDMUNDSON, R.S., 1938, BARITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 53, 85 P.
REFERENCE....STOSE & STOSE, 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA:VIRGINIA GEOLOGICAL SURVEY BULLETIN 72, 233 P.
REFERENCE....RANKIN, ESPENSHADE AND NEWMAN, 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON SALEM QUADRANGLE, NORTH CAROLINA, VIRGINIA AND TENNESSEE, U.S.G.S MISCELLANEOUS INVESTIGATIONS MAP I-709-A.

CUMULATIVE PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEARS GRADE
ORE BA EST 0.02000 TONS 1927-PRE1938 GOOD QUALITY
SOURCE OF PRODUCTION INFORMATION.....EDMUNDSON (1938)
PRODUCTION COMMENTS.....THE DATE PRODUCTION STOPPED IS UNKNOWN, BUT WAS BEFORE 1938. IT IS UNCERTAIN IF ANY BARITE WAS PRODUCED FROM THE SHAFT.
SOURCE OF RESERVES INFORMATION.....EDMUNDSON (1938)
RESERVES COMMENTS.....EDMUNDSON RECOMMENDED ADDITIONAL PROSPECTING TO ASCERTAIN THE SIZE OF THE DEPOSIT, UNCERTAIN IF THIS WAS DONE.

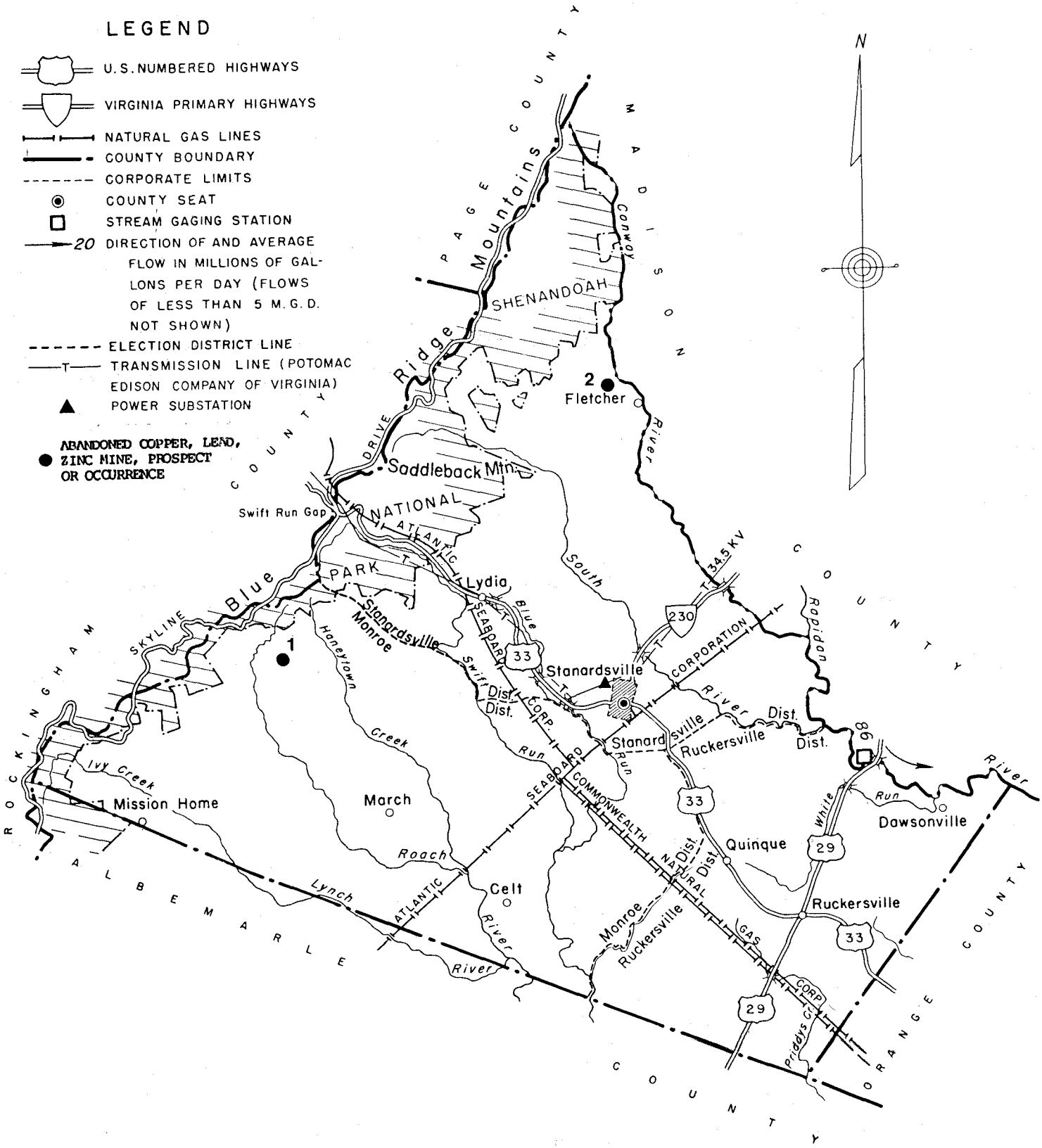
GREENE COUNTY

1. Hightop Mine

MRDS-REV RECORD NUMBER.....644
MRDS RECORD NUMBER.....W030901
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....HIGHTOP MINE
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....GREENE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SWIFT RUN GAP, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2160 FT (659 M)
UTM NORTHING...4243340 EASTING...712650 ZONE...+17
LATITUDE.....38-18-53N LONGITUDE.....078-34-04W
POSITION FROM NEAREST LOCALITY.....5.23 KM (3.25 MI) S OF SWIFT RUN GAP AND ON A SPUR 2.9 KM (1.8 MI) S OF HIGHTOP MTN.
LOCATION COMMENTS.....SEVERAL ADITS ASSOCIATED WITH THE MINE ARE CUT IN TO THE TOP OF SLATER'S MOUNTAIN ABOUT 3.2 KM TO THE SOUTH UTM COORDINATES OF THESE ADITS ARE: N 4240300.,E 714150.; N 4240295., E714380.; N 4240640., E 714240.; ALL IN ZONE +17.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....NATIVE COPPER, CUPRITE, BORNITE, MALACHITE, AZURITE, CHALCOPYRITE, CHALCOCITE
COMMODITY INFO COMMENTS.....MALACHITE AND AZURITE STAINS WERE MOST ABUNDANT MINERALIZATION SEEN IN 1974, BUT CHALCOCITE, BORNITE, AND CHALCOPYRITE ARE ALSO PRESENT. MINOR MALACHITE STAINING WAS ONLY MINERALIZATION OBSERVED IN ADITS ON TOP OF SLATERS MOUNTAIN.
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE-WW1
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1905(?)
OWNER (PRESENT/LAST).....WILLIAM M. THOMAS
OPERATOR.....HIGHTOP COPPER COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....IN 1944, THERE WAS AN UNSUCCESSFUL ATTEMPT TO REOPEN THE MINE.
DEPOSIT TYPE.....PORPHYRY, VEIN
DEPOSIT FORM.....POD/LENS, IRREGULAR
MAXIMUM THICKNESS.....1.5 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION OCCURS ALONG VEINLETS AND FRACTURE SURFACES. LARGE DUMP CONTAINS EPIDOTIZED BASALT, W/QUARTZ STRINGERS AND JASPER. SOME ORE OCCURS IN LENTICLES COMPOSED OF EPIDOTE PENETRATED BY QUARTZ VEINLETS CONTAINING DISSEMINATED BORNITE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....27 UNITS...M
LENGTH OF WORKINGS.....80 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....DEVELOPED WORKINGS CONSISTED OF STRIPPED LEDGES, OPEN CUTS, A SHAFT WITH A CROSSCUT, A TUNNEL, AND ADITS INTO TOP OF SLATERS MTN. IN 1905. SHAFT WATER-FILLED IN 1906. SWEET AND BELL (1980) NOTED TWIN ADIT ENTRANCES 2 M TO 3 M IN DIAMETER PRESENT IN FACE OF THE MOUNTAIN OVERLOOKING BACON HOLLOW TO THE WEST; REMAINS OF A CAVED SHAFT 9 M IN DIAMETER AND 6 M DEEP, SEVERAL SMALL PITS AND CONCRETE FOUNDATIONS, AND A LARGE DUMP. 3 ADITS IN THE TOP OF SLATERS MOUNTAIN, THE LONGEST OF WHICH IS 18 M.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....AMYGDALOIDAL METABASALT
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....AMYGDALOIDAL METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, JASPER
ORE CONTROL/LOCUS.....FRACTURES
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
SIGNIFICANT ALTERATION.....HYDROMETAMORPHISM, EPIDOTIZATION
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
NON-USGS WORK.....1905 DIREXPL HIGHTOP COPPER CO.
NON-USGS WORK.....1944 OTHER UNSUCCESSFUL ATTEMPT TO REOPEN.
NON-USGS WORK.....1974 RECON VA. DIV. OF MINERAL RESOURCES; SITE INSPECTED.
REFERENCE....SWEET, P.C., AND BELL, P.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA, IN CONTRIBUTIONS TO VIRGINIA GEOLOGY - IV: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE....PHALEN, W.C., 1906, COPPER DEPOSITS NEAR LURAY, VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 285, 506 P.
REFERENCE....WEED, WALTER H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.

2. Sims Mine

MRDS-REV RECORD NUMBER.....642
MRDS RECORD NUMBER.....W030902
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1 3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....82 08
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....SIMS MINE
SYNONYM NAME.....BOOTENS GAP MINE, TUNNEL TRACT MINE, PIEDMONT COPPER CO. MINE.
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....GREENE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE



GREENE COUNTY

VIRGINIA

SCALE OF MILES

1 0 1 2 3 4 5

DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FLETCHER, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1220 FT (372 M)
UTM NORTHING...4252030 EASTING...723420 ZONE...+17
LATITUDE.....38-23-26N LONGITUDE.....078-26-31W
POSITION FROM NEAREST LOCALITY.....1.6 MI (2.6 KM) NNW OF KINDERHOOK, VA
LOCATION COMMENTS.....ON THE SOUTHEAST FLANK OF THE BLUE RIDGE MOUNTAINS: 1.8 KM (1.1 MI) WNW OF CAMP SHILOH AND ABOUT 0.8 KM (0.5 MI) WSW OF THE OLD FLETCHER STORE AT THE INTERSECTION OF STATE ROAD 667 AND STATE ROAD 675.
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....NATIVE COPPER, CUPRITE, CHALCOPYRITE, PYRITE, MALACHITE
MAJOR.....CU
OCCUR.....PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-WW1
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-WW1
OPERATOR.....PIEDMONT COPPER CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....IN EARLY 1978, OLD TRENCH (CAVED ADIT (?)) TRENDING N 35 DEG W, CAVED SHAFT, TRENCH, AND TWO DUMPS LOCATED.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR, POD/LENS
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....ORE MINERALS OCCUR AS DISSEMINATIONS AND MASSES ASSOCIATED WITH EPIDOTIZED ROCK AND QUARTZ LENSES A LONG SHEAR ZONES.
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....TRENCH (CAVED ADIT?), 23 M LONG, 6 M WIDE, 2 M DEEP; SHAFT (?) 6 M DIAMETER, 2 M DEEP; TRENCH 12M X 4M X 1M DEEP. WEED (1911) MENTIONS 9M SHAFT AND 8M CROSSCUT AT 9M DEPTH.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONES OR JOINTING
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
FORMATION NAME.....SWIFT RUN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
GEOLOGY COMMENTS.....MALACHITE WAS ONLY OBSERVED COPPER MINERAL ON DUMPS IN 1978.
NON-USGS WORK.....DIREXPL PIEDMONT COPPER CO., SOME MINING (?).
NON-USGS WORK.....1978 RECON VA. DIV. MIN. RES, LOCATED EXCAVATIONS.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VA. DIV. MIN. RES. PUBLICATION 27, P. 39-52.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....ALLEN, R.M., JR., 1963, GEOLOGY AND MINERAL RESOURCES OF GREENE AND MADISON COUNTIES: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 78, 102 P.

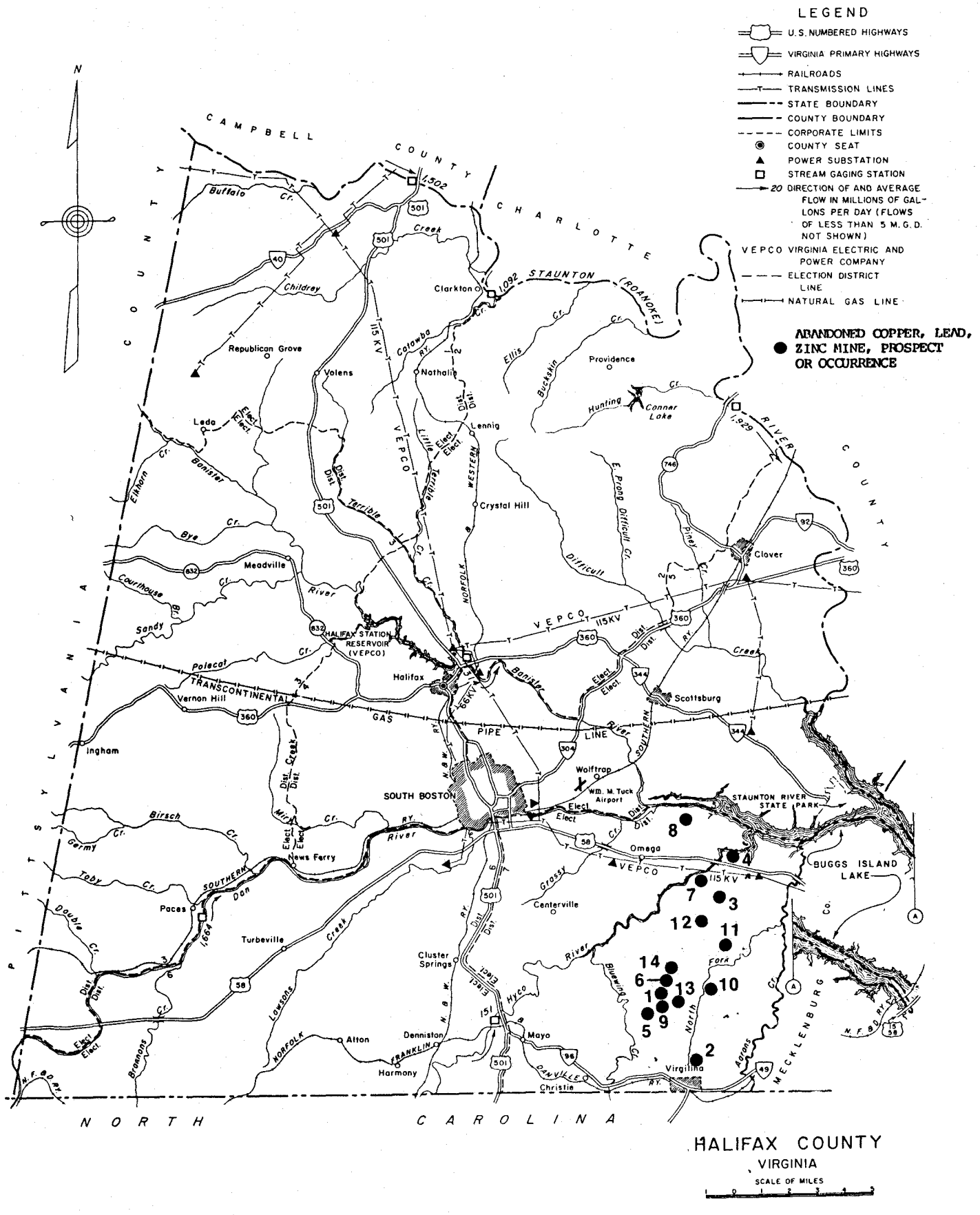
HALIFAX COUNTY

1. Abbot Prospect

MRDS-REV RECORD NUMBER.....671
MRDS RECORD NUMBER.....W030903
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....ABBOTT PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... VIRGILINA, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....520 FT (159 M)
UTM NORTHING...4052360 EASTING...698480 ZONE...+17
LATITUDE.....36-35-53N LONGITUDE.....078-46-52W
POSITION FROM NEAREST LOCALITY.....2.50 KM (1.55 MI) WEST OF RED BANK.
LOCATION COMMENTS.....0.2 KM (0.1 MI) OFF SOUTH SIDE OF STATE ROAD 602, 0.2 KM (0.1 MI) BY ROAD EAST OF JUNCTION WITH STATE ROAD 737.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1917
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....F. NAGLE
DEPOSIT TYPE.....VEIN/SHEAR ZONE (?)
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....IN 1976, 3X2M SHALLOW PIT AND A SMALL DUMP WERE LOCATED.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONES (VEINS IN AREA STRIKE N 5-10 DEG E)
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....PREVAILING SCHISTOSITY STRIKES N 10-20 DEG E AND DIPS 70-80 DEG E.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL PROSPECT PITS DUG.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGIINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 5, 22 P.

2. Anaconda Mine

MRDS-REV RECORD NUMBER.....650
MRDS RECORD NUMBER.....W030904
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....ANACONDA MINE
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... VIRGILINA, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....515 FT (157 M)
UTM NORTHING...4048060 EASTING...699760 ZONE...+17
LATITUDE.....36-33-32N LONGITUDE.....078-46-05W
POSITION FROM NEAREST LOCALITY.....1.85 KM (1.15 MI) NNE OF VIRGILINA.
LOCATION COMMENTS.....0.04 KM (0.025 MI) OFF ESE SIDE OF STATE ROAD 734, 0.08 KM (0.05 MI) BY ROAD SOUTH OF JUNCTION WITH STATE ROAD 735.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOCITE, TETRAHEDRITE/TENNANTITE, MALACHITE
GENERAL ANALYTICAL DATA.....5-10 CM STREAK OF 15% CU, REMAINDER OF SHOOT 4% CU.
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....4
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1906 (?)
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LENS
MAXIMUM THICKNESS.....0.61 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....ORE SHOOT HAS MAXIMUM THICKNESS OF OF 0.46 M.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....42.7 UNITS...M
LENGTH OF WORKINGS.....61 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1976, ONLY A 6 M DIAMETER DUMP EVIDENT.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE
ORE CONTROL/LOCUS.....SHEAR ZONES (VEINS IN AREA STRIKE N 5-10 DEG E.)
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....PREVAILING SCHISTOSITY STRIKES N 10-20 DEG E AND DIPS 70-80 DEG E.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
GEOLOGY COMMENTS.....THOUGH WEED (1911) STATES ORES FROM DISTRICT ARE FREE FROM ARSENIC AND ANTIMONY, HE LATER REPORTS THE ORE MINERALS OF THE ANACONDA MINE TO BE A MIXTURE OF GLANCE (CHALCOCITE) AND GRAY COPPER (EITHER TETRAHEDRITE OR TENNANTITE) IN QUARTZ.
GENERAL COMMENTS.....THIS MINE UNDERWENT ONLY LIMITED DEVELOPMENT.
SOURCE REFERENCE.....WEED (1911)
NON-USGS WORK.....DIREXPL MINED AND SHIPPED ORE.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
VEPCO VIRGINIA ELECTRIC AND POWER COMPANY
ELECTION DISTRICT LINE
NATURAL GAS LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
N
CAMPBELL COUNTY
CHARLOTTE COUNTY
PITTSYLVANIA COUNTY
MECKLENBURG CO.
NORTH CAROLINA
STAUNTON (ROANOKE) RIVER
Clarkton
Republican Grove
Volens
Nathalie
Providence
Conner Lake
Leda
Lennig
Crystal Hill
Clover
Meadville
HALIFAX STATION RESERVOIR (VEPCO)
Halifax
Scottsburg
Vernon Hill
Ingham
SOUTH BOSTON
Wolftrap
Wm. M. Tuck Airport
STAUNTON RIVER STATE PARK
BUGGS ISLAND LAKE
Omega
News Ferry
Paces
Turbeville
Centerville
Cluster Springs
Alton
Denniston
Harmony
Mayo
Virgilina
Christie
TRANSCONTINENTAL GAS PIPE LINE
VEPCO 115KV
1,502
1,092
1,929
1,664
1,51
HALIFAX COUNTY
VIRGINIA
SCALE OF MILES

PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 5, 22 P.
SOURCE OF PRODUCTION INFORMATION.....WEED (1911)
PRODUCTION COMMENTS.....7 CARLOADS OF 3-12% CU ORE WERE PRODUCED IN APPROXIMATELY 1906.

3. Baynham Prospect

MRDS-REV RECORD NUMBER.....651
MRDS RECORD NUMBER.....W030905
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....BAYNHAM PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... OMEGA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....515 FT (157 M)
UTM NORTHING...4058270 EASTING...700860 ZONE...+17
LATITUDE.....36-39-02N LONGITUDE.....078-45-11W
POSITION FROM NEAREST LOCALITY.....5.5 KM (3.4 MI) SE OF OMEGA.
LOCATION COMMENTS.....0.9 KM (0.55 MI) OFF NORTH SIDE OF STATE ROAD 601, 0.6 KM (0.4 MI) BY ROAD ESE OF JUNCTION WITH STATE ROAD 794.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1900
NATURE OF DISCOVERY.....A
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LENS (?)
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....IN 1976, THERE WERE TWO CAVED PITS ABOUT 3.7 M DEEP AND A SMALL DUMP.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, CHLORITE
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....PREVAILING SCHISTOSITY STRIKES N.10-20 DEG. E. AND DIPS 70-80 DEG E.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL LIMITED PROSPECTING CONDUCTED LONG BEFORE 1917.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 5, 22 P.
SOURCE OF PRODUCTION INFORMATION.....LANEY (1917)

4. Chappel Prospect

MRDS-REV RECORD NUMBER.....670
MRDS RECORD NUMBER.....W030906
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....CHAPPELL PROSPECT
SYNONYM NAME.....CHAPPEL PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... BUFFALO SPRINGS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....360 FT (110 M)/335 FT. (102 M)
UTM NORTHING...4060590 EASTING...701080 ZONE...+17
LATITUDE.....36-40-17N LONGITUDE.....078-44-60W
POSITION FROM NEAREST LOCALITY.....2.7 KM (1.7 MI) WNW OF AARONS CREEK NEAR THE BANK OF THE HYCO RIVER.
LOCATION COMMENTS.....0.55 KM (0.35 MI) DOWN A PRIVATE DRIVE OFF WEST SIDE OF STATE ROAD 853, 0.6 KM (0.4 MI) BY ROAD NE OF JUNCTION WITH U.S. HWY 58. ADDITIONAL SITE UTM N 4060730, E 701080 (ZONE, +17).
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE
POTEN.....CU
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1911
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....LANEY (1917) STATED THIS MAY BE A FAVORABLE PROSPECT, BUT WOULD REQUIRE MORE DEVELOPMENT TO DETERMINE.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....PROBABLY LENS
MAXIMUM THICKNESS.....1.5 UNITS...M
DEPOSIT SIZE.....SMALL(?)
STRIKE.....N 5 DEG W
DIP.....VERTICAL
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....26.5 UNITS...M
LENGTH OF WORKINGS.....38 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....SHAFT NO. 1 (NEAREST RIVER): 16.8 M DEEP, SHAFT NO 2 (SOUTH OF NO. 1): 26.5 M DEEP. IN 1976, THE TWO SHAFTS, SEVERAL SMALL CAVED PITS, A LARGE TRENCH AND SEVERAL DUMPS WERE NOTED.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY STRIKES N-S AND DIPS 65 DEG. E.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL SUNK TWO SHAFTS AND ONE PROSPECT PIT.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
SOURCE OF PRODUCTION INFORMATION.....LANEY (1917)

5. Dorothy Mine

MRDS-REV RECORD NUMBER.....652
MRDS RECORD NUMBER.....W030907
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....DOROTHY MINE
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... VIRGILINA, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....455 FT (139 M)
UTM NORTHING...4051440 EASTING...697260 ZONE...+17
LATITUDE.....36-35-24N LONGITUDE.....078-47-42W
POSITION FROM NEAREST LOCALITY.....3.8 KM (2.35 MI) WSW OF RED BANK.
LOCATION COMMENTS.....ON THE WEST SIDE OF "VIRGILINA RIDGE" AND 0.20 KM (0.15) OFF EAST SIDE OF STATE ROAD 738, 1.3 KM (0.8 MI) BY ROAD SOUTH OF JUNCTION WITH STATE ROAD 602.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....4
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-1907
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....30 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....TWO SHAFTS SUNK (18 M AND 30 M). IN 1976, ONE WATER-FILLED SHAFT, A WATER-FILLED PIT, TWO SHALLOW PITS AND NUMEROUS SMALL DUMPS WERE PRESENT.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY SOUTH OF PITS STRIKES N 8 DEG. E. 9 M WEST, 20-CM-WIDE VEIN OF QUARTZ HAS N-S STRIKE.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)

NON-USGS WORK.....DIREXPL TWO SHAFTS SUNK, ORE SHIPPED.
NON-USGS WORK.....1976 RECON VA. DIV. MIN RES.: INSPECTED SITE.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1979, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3 P. 25-34.
REFERENCE....WATSON, T.L., 1907, THE MINERAL RESOURCES OF VIRGINIA: LYNCHBURG,VIRGINIA, J.P. BELL CO., 618 P.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 5, 22 P.
SOURCE OF PRODUCTION INFORMATION.....WATSON (1907)
PRODUCTION COMMENTS.....ONE CARLOAD OF ORE REPORTED SHIPPED WITH ADDITIONAL CARLOADS ON DUMP (POSSIBLY SHIPPED).

6. Esther May Prospect

MRDS-REV RECORD NUMBER.....669
MRDS RECORD NUMBER.....W030908
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....ESTHER MAY PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... VIRGILINA, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....535 FT (163 M)
UTM NORTHING...4052460 EASTING...698450 ZONE...+17
LATITUDE.....36-35-56N LONGITUDE.....078-46-53W
POSITION FROM NEAREST LOCALITY.....2.6 KM (1.6 MI) WEST OF RED BANK.
LOCATION COMMENTS.....41 M OFF SOUTH SIDE OF STATE ROAD 602, 91 M BY ROAD EAST OF JUNCTION WITH STATE ROAD 737.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE
OCCUR.....CU
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....PRE-1917
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....J.W. FONTAINE
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....PROBABLY CONTINUATION OF VEIN FROM SEABOARD MINE.
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....SINCE LANEY'S (1917) REPORT ADDITIONAL WORK PERFORMED AT SITE. IN 1976, A SMALL WATER-FILLED SHAFT WITH RIM DUMP NOTED.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL SHALLOW PIT DUG.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 5, 22 P.
SOURCE OF PRODUCTION INFORMATION.....LANEY (1917)

7. High Hill Mine

MRDS-REV RECORD NUMBER.....653
MRDS RECORD NUMBER.....W030909
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....HIGH HILL MINE
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... OMEGA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....455 FT (139 M)
UTM NORTHING...4059280 EASTING...700270 ZONE...+17
LATITUDE.....36-39-36N LONGITUDE.....078-45-34W
POSITION FROM NEAREST LOCALITY.....4.6 KM (2.85 MI) ESE OF OMEGA.
LOCATION COMMENTS.....1.35 KM (0.85 MI) ALONG A WOODS ROAD OFF NE SIDE OF STATE ROAD 601, 0.4 KM (0.25 MI) BY ROAD NW OF JUNCTION WITH STATE ROAD 794. MILL SITE AT UTM N4059450., E700240. (ZONE +17).
COMMODITIES PRESENT.....CU AG AU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE, AZURITE, COVELLITE, ARGENTITE
GENERAL ANALYTICAL DATA.....AVG ORE: 2% CU, 1 OZ AG PER TON (IN 1904 CONCENTRATES CARRIED $4 PER TON IN GOLD)
COMMODITY INFO COMMENTS.....MINUTE QUANTITIES OF SUPERGENE NATIVE COPPER AND NATIVE SILVER HAVE BEEN OBSERVED.
MAJOR.....CU
MINOR.....AG
OCCUR.....AU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1900
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1899
OWNER (PRESENT/LAST).....VIRGINIA ROCKS & MINERALS CORP.
OPERATOR.....VIRGINIA COPPER CO., LTD.
EXPLORATION AND DEVELOPMENT COMMENTS.....U.S.B.M. CONDUCTED 695.4 M OF DIAMOND DRILLING AND 258 M OF LINEAR TRENCHING. OWNER OF PROPERTY DURING WORK BY U.S.B.M. WAS VIRGINIA ROCKS & MINERALS CORP.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....PINCH AND SWELL
MAXIMUM LENGTH.....4.8 UNITS...KM
MAXIMUM THICKNESS.....4.6 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 6 DEG. W
DEPOSIT DESCRIPTION COMMENTS.....DEPTH TO BOTTOM IN EXCESS OF 101 M. THE WESTERN VEIN IS REFERRED TO AS THE HIGH HILL VEIN AND IS THE MOST EXTENSIVE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....107 UNITS...M
LENGTH OF WORKINGS.....703 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....12 SHAFTS SUNK ALONG DEPOSIT. IN 1976 SEVERAL LARGE CAVED PITS, SHAFTS AND TRENCHES WERE SEEN. ONE SHAFT OF 6 M DIAMETER WAS ABOUT 12 M DEEP. MILL AND DUMP REMAINS WERE ALSO PRESENT. 12 SHAFTS AND ONE TUNNEL WERE OPENED ON THE HIGH HILL VEIN, THE DEEPEST SHAFT WAS AT LEAST 112 M (367 FT). THE AVERAGE AMOUNT OF SHAFT SINKING WAS 350 M (1,149 FT), WITH 703 M (2,306 FT) OF LEVELS, AS OF 1906.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, CALCITE, EPIDOTE, CHLORITE, HEMATITE, SERICITE, ALBITE, ORTHOCLASE
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY OF ROCK IS N 15 DEG E. AND DIPS 80 DEG SE.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
GEOLOGY COMMENTS.....MORE GANGUE QUARTZ THAN NORMAL FOR AREA.
SOURCE REFERENCE.....LANEY (1917)
NON-USGS WORK.....1899 DIREXPL A.W. GRAHAM & W.T. HARRIS: SUNK 14 PITS AND SHAFTS, SELLING TO VIRGINIA COPPER CO., LTD. IN 1900, WHO CONDUCTED FURTHER WORK UNTIL CLOSING DOWN IN 1904.
NON-USGS WORK.....1907 DIREXPL VIRGINIA COPPER CO., LTD: RE-OPENED MINE BUT CLOSED SAME YEAR.
NON-USGS WORK.....1942 DIREXPL U.S. BUR. MINES: CONDUCTED EXTENSIVE EXPLORATIONS BY CLEANING OUT SOME SHAFTING AND CONDUCTING DIAMOND-DRILL OPERATIONS AND DIGGING TRENCHES.
REPORTS AVAILABLE.....WATSON, T.L., 1907, COPPER, IN MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, PP. 491-519.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....NEWBERRY, A.W., ROOS, A., ROBERTSON, A.F., DAHNERS, L.A. AND COHEN, C.J., 1948, INVESTIGATION OF THE VIRGILINA COPPER DISTRICT, VIRGINIA AND NORTH CAROLINA: U.S. BUREAU OF MINES, REPORT OF INVESTIGATIONS 4384, 12 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 5, 22 P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE CU/AG	EST	9.00000	MT	1899-1905	3% CU, AG
CU	EST	0.27000	MT	1899-1905	
AG	EST	1.10000	KG	1899-1904	
AG	SML			1904-1905	

SOURCE OF PRODUCTION INFORMATION.....NEWBERRY AND OTHERS (1948), WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
SOURCE OF POTENTIAL RESOURCES INFORMATION.....NEWBERRY AND OTHERS (1948)
POTENTIAL RESOURCES COMMENTS.....VEINS PERSIST BEYOND WORKINGS LATERALLY AND VERTICALLY

8. Kay Prospect

MRDS-REV RECORD NUMBER.....662
MRDS RECORD NUMBER.....W030910
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 07
UPDATER.....SWEET, P. C.
SITE NAME.....KAY PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... OMEGA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....350 FT (107 M)
UTM NORTHING...4062860 EASTING...698620 ZONE...+17
LATITUDE.....36-41-33N LONGITUDE.....078-46-37W
POSITION FROM NEAREST LOCALITY.....3.7 KM (2.3 MI) NE OF OMEGA.
LOCATION COMMENTS.....0.2 KM (0.1 MI) OFF WEST SIDE AND 1.3 KM (0.8 MI) DOWN PRIVATE ROAD TO THE DAN RIVER HUNTING CLUB OFF NORTH SIDE OF STATE ROAD 730, 1.4 KM (0.9 MI) BY ROAD ENE OF JUNCTION WITH STATE ROAD 876.
COMMODITIES PRESENT.....CU AG AU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE, AZURITE, CUPRITE
GENERAL ANALYTICAL DATA.....ASSAY FROM IRON KING ASSAY CO (SEP 1985) INDICATES: 0.005 OZ AU/TON; 0.25 OZ AG/TON. ASSAYS OF SELECTED ORE: 4-30% CU, 1-7 OZ AG AND AS HIGH AS 0.05 OZ AU PER TON
NON-PRODUCER MAIN.....CU
NON-PRODUCER MINOR.....AG AU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1916
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....ARMY CORPS OF ENGINEERS/KAY MINE SMELTING CO.
OPERATOR.....KAY MINE SMELTING CO.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, PORPHYRY
DEPOSIT FORM.....IRREGULAR
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....IN 1976, TWO PROMINENT OPENINGS, A SMALL CAVED PIT, AND DUMPS WERE EVIDENT.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT), CHLORITIC SLATE, METASANDSTONE
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT, META-TUFF (?)
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY STRIKES N. 6 TO 12 DEG. E. AND DIPS 57-75 DEG SE.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (LOWER MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (LOWER MEMBER)
GEOLOGY COMMENTS.....PROSPECT OCCURS AT CONTACT OF LOWER AND MIDDLE MEMBERS OF FORMATION.
GENERAL COMMENTS.....VEINS AT THIS PROSPECT ARE NOT AS WELL-DEFINED AS ELSEWHERE.
SOURCE REFERENCE.....LANEY (1917)
NON-USGS WORK.....DIREXPL KAY MINE SMELTING CO.: SUNK TWO SHALLOW SHAFTS AND SEVERAL PITS.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 5, 22 P.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
SOURCE OF PRODUCTION INFORMATION.....LANEY (1917)

9. Littlejohn Prospect

MRDS-REV RECORD NUMBER.....655
MRDS RECORD NUMBER.....W030911
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....LITTLEJOHN PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... VIRGILINA, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....500 FT (152 M)/520 FT (159 M)
UTM NORTHING...4051640 EASTING...697960 ZONE...+17
LATITUDE.....36-35-30N LONGITUDE.....078-47-14W
POSITION FROM NEAREST LOCALITY.....3.1 KM (1.9 MI) WSW OF RED BANK.
LOCATION COMMENTS.....NORTHERNMOST SHAFT IS 1.0 KM (0.6 MI) SSW FROM THE JUNCTION OF STAT ROADS 602 AND 737. SOUTHERNMOST SHAFT LOCATED 0.5 KM (0.35 MI) TO THE SOUTH (UTM N4050980., E698030., ZONE +17).
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOCITE, BORNITE, MALACHITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1917
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....LITTLEJOHN COPPER CO.
OPERATOR.....LITTLEJOHN COPPER CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....LITTLEJOHN COPPER CO. DEVELOPMENT WORK. BEGUN PRIOR TO 1917.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....PINCH AND SWELL (?)
DEPOSIT SIZE.....SMALL (?)
DEPOSIT DESCRIPTION COMMENTS.....VEINS ARE NARROW.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....30 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1976, TWO PARTIALLY CAVED SHAFTS AND ASSOCIATED DUMPS EVIDENT.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST, TUFFACEOUS GREEN STONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY STRIKES ALMOST N-S AND DIPS ALMOST VERTICALLY
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL LITTLEJOHN COPPER CO.: SANK 3 PROSPECT SHAFTS.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 5, 22 P.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
SOURCE OF PRODUCTION INFORMATION.....LANEY (1917)

10. Morong Prospect

MRDS-REV RECORD NUMBER.....661
MRDS RECORD NUMBER.....W030912
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....MORONG PROSPECT
SYNONYM NAME.....MOTHER LODE PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... VIRGILINA, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....465 FT (142 M)
UTM NORTHING...4052470 EASTING...700130 ZONE...+17
LATITUDE.....36-35-55N LONGITUDE.....078-45-46W
POSITION FROM NEAREST LOCALITY.....1.0 KM (0.6 MI) NW OF RED BANK.
LOCATION COMMENTS.....0.4 KM (0.25 MI) OFF NORTH SIDE OF STATE ROAD 602, 0.8 KM (0.5 MI) BY ROAD WEST OF JUNCTION WITH STATE ROAD 734.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOPYRITE, MALACHITE
COMMODITY INFO COMMENTS.....BORNITE OR CHALCOCITE MINERALIZATION NOT OBSERVED BY LANEY (1917) OR SWEET (1976).
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1917
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....J.G. MORONG
OPERATOR.....J.G. MORONG
EXPLORATION AND DEVELOPMENT COMMENTS.....LANEY (1917) CONSIDERS THIS PROSPECT TO BE "OF VERY DOUBTFUL VALUE."
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....PINCH AND SWELL
MAXIMUM THICKNESS.....1 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N-S

DIP.....VERTICAL
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....46 UNITS...M
LENGTH OF WORKINGS.....9 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1976, SHAFT WAS CAVED TO DEPTH OF 4 M. A 9 M LONG TUNNEL IS LOCATED 91 M NW OF SHAFT; THE TUNNEL IS 2.4 M HIGH. TWO SMALL DUMPS PRESENT.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....TUFFACEOUS GREENSTONE SCHIST (METABA SALT TUFF)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT TUFF
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY STRIKES N 3-5 DEG E AND DIP S 65-90 DEG SE.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION
GEOLOGY COMMENTS.....PROSPECT LOCATED IN LOWER MEMBER OF AARON FORMATION.
NON-USGS WORK.....DIREXPL J.G. MORONG: SHAFT AND TUNNEL DRIVEN.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS,AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 5, 22 P.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
SOURCE OF PRODUCTION INFORMATION.....LANEY (1917)

11. Pandora Prospect

MRDS-REV RECORD NUMBER.....660
MRDS RECORD NUMBER.....W030913
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....PANDORA PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... VIRGILINA, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....485 FT (148 M)
UTM NORTHING...4054670 EASTING...701010 ZONE...+17
LATITUDE.....36-37-06N LONGITUDE.....078-45-08W
POSITION FROM NEAREST LOCALITY.....2.6 KM (1.6 MI) NORTH OF RED BANK.
LOCATION COMMENTS.....0.1 KM (0.05 MI) OFF EAST SIDE OF STATE ROAD 734, 2.35 KM (1.45 MI) BY ROAD NORTH OF JUNCTION WITH STATE ROAD 736.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE, CUPRITE, MALACHITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1900
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....REGARDED BY LANEY (1917) AS A PROSPECT OF DOUBTFUL VALUE.
DEPOSIT TYPE.....PORPHYRY
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL (?)
DEPOSIT DESCRIPTION COMMENTS.....NO QUARTZ VEIN OBSERVED IN VICINITY BY EITHER LANEY (1917) OR SWEET (1976)
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....IN 1976, A PIT (2M DEEP) WITH SURROUNDING DUMP WERE EVIDENT. PIT PROBABLY REPRESENTS CAVED, SHALLOW PROSPECT SHAFT.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST, EPIDOSITE (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, ALBITE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY HAS A N-S STRIKE AND ESSENTIALLY A VERTICAL DIP.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL SHALLOW SHAFT SUNK DURING LATE 1800'S OR EARLY 1900'S.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 5, 22 P.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
SOURCE OF PRODUCTION INFORMATION.....LANEY (1917)

12. Pontiac Mine

MRDS-REV RECORD NUMBER.....657
MRDS RECORD NUMBER.....W030914
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....PONTIAC MINE
SYNONYM NAME.....PONTIAC PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... OMEGA, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....475 FT (144.8 M)
UTM NORTHING...4056110 EASTING...699530 ZONE...+17
LATITUDE.....36-37-53N LONGITUDE.....078-46-06W
POSITION FROM NEAREST LOCALITY.....5.72 KM (3.55 MI) SE OF OMEGA.
LOCATION COMMENTS.....SW AND N OF THE INTERSECTION OF STATE ROADS 737 AND 733 (2SITES). UTM COORDINATES OF THE SECOND SITE ARE N 4056645., E 699625., ZONE +17.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOPYRITE, BORNITE, CHALCOCITE, MALACHITE, AZURITE, COVELLITE, CUPRITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-WW1
NATURE OF DISCOVERY.....A
OPERATOR.....PONTIAC MINING CO.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
MAXIMUM THICKNESS.....1.5 UNITS...M
STRIKE.....N 22 DEG E
DIP.....55 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....2 SEPARATE VEINS WERE PROSPECTED. GLASCOCK VEIN WIDTH VARIES FROM 1 TO 2 M; THE TUCK VEIN VARIES FROM ABOUT 9 CM TO 1 M IN WIDTH. CU MINERALIZATION IS THE SAME FOR BOTH VEINS, EXCEPT THE TUCK VEIN HAS LESS CHALCOPYRITE.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....61.9 UNITS...M
LENGTH OF WORKINGS.....21.3 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....THE TUCK SHAFT LIES ABOUT 550 M SSW OF THE GLASSCOCK SHAFT, AND WAS REPORTED IN 1976 AS A 3M-DIAMETER FLOODED SHAFT WITH A LOW RIM DUMP. IN SEPTEMBER, 1987, THE SAFT IN THE FIELD HAS BEEN FILLED IN AND GRADED OVER SMOOTH. ONLY SCATTERED PIECES OF COUNTRY ROCK REMAIN ON THE SURFACE.ABOUT 55M S80 DEG W OF THIS IS ANOTHER FLOODED SHAFT 5M IN DIAMETER WITH A 2M-HIGH RIM DUMP OF DARK GREEN GREENSTONE SCHIST. THE OLD GLASSCOCK SHAFT IS NOW FLOODED, 3M IN DIAMETER, AND HAS LITTLE MINERALIZATION AT ITS RIM DUMP. 2 DRIFTS WERE RUN FROM THE GLASSCOCK SHAFT AT A DEPTH OF 26.2M EXTENDING 15.2M S AND 6.1M NORTH AT THIS LEVEL. THE SHAFT WAS REPORTEDLY 61.9M DEEP (LANEY, 1917, P. 150).
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (META-BASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....GREENSTONE SCHIST (META-BASALT)
PERTINENT MINERALS (NOT ORE).....EPIDOTE, QUARTZ, CHLORITE, CALCITE, HEMATITE
ORE CONTROL/LOCUS.....IN VEINS
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....1903 DIREXPL PONTIAC MINING CO.; ABANDONED PROSPECT.
NON-USGS WORK.....1976 RECON VA. DIV. OF MINERAL RE SOURCES; INSPECTED SITE.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, VOL. 22 NO. 3 PP. 25-34.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 5, 22 P.

13. Seaboard Mine

MRDS-REV RECORD NUMBER.....656
MRDS RECORD NUMBER.....W030915
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR

REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....SEABOARD MINE
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... VIRGILINA, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....470 FT (143 M)
UTM NORTHING...4051650 EASTING...698840 ZONE...+17
LATITUDE.....36-35-29N LONGITUDE.....078-46-38W
POSITION FROM NEAREST LOCALITY.....2.15 KM (1.35 MI) WSW OF RED BANK.
LOCATION COMMENTS.....0.8 KM (0.5 MI) OFF SW SIDE OF STATE ROAD 602, 0.9 KM (0.55 MI) BY ROAD EAST OF JUNCTION WITH STATE ROAD 737.
COMMODITIES PRESENT.....CU AG AU
ORE MATERIALS.....BORNITE, CHALCOCITE, MALACHITE
GENERAL ANALYTICAL DATA.....MILL CONCENTRATES: 23.85% CU, 2.85 OZ AG AND 0.02 OZ AU PER TON. HAND PICKED ORE: 7.45% CU, 1.50 OZ AG AND 0.01 OZ AU PER TON.
MAJOR.....CU
MINOR.....AG
OCCUR.....AU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....MR. WILLIAMS (?)
YEAR OF DISCOVERY.....1899
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1902
OWNER (PRESENT/LAST).....R.G. LASSITER
OPERATOR.....SEABOARD COPPER CO.
ECONOMIC COMMENTS.....50-TON MILL ERECTED IN 1907.
EXPLORATION AND DEVELOPMENT COMMENTS.....BUREAU OF MINES CEASED WORK AFTER REACHING A DEPTH OF 9.8M IN SHAFT #2. RECONNAISANCE OF SITE WAS CONDUCTED BY VA. DIV. MIN. RES. IN 1976.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....PINCH AND SWELL
MAXIMUM THICKNESS.....2.4 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 5-10 DEG W
DIP.....80 DEG E
DEPOSIT DESCRIPTION COMMENTS.....VEIN THICKNESS ABOVE PER LANEY (1917), NEWBERRY AND OTHERS (1948) ONLY SAW A MAXIMUM THICKNESS OF 0.46 M.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....107 UNITS...M
LENGTH OF WORKINGS.....183 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....3 SHAFTS SUNK (34 M, 107M, 32M). IN 1976 REMAINS OF THE MILL AND CONCENTRATING PLANT, 10 CAVED AND WATER-FILLED PITS AND SHAFTS AND SEVERAL LARGE DUMP PILES WERE EVIDENT.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....GREENSTONE SCHIST (METABASALT)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, CALCITE, CHLORITE, ALBITE, HEMATITE.
ORE CONTROL/LOCUS.....SHEAR ZONES, FRACTURES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY STRIKES N 4 DEG. E., A SYNOROGENIC REVERSE FAULT DIPPING TO THE EAST IS SITUATED ABOUT 125M TO THE EAST.
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
GEOLOGY COMMENTS.....LANEY (1917) NOTED A SMALL FAULT IN THE SOUTH END OF THE 61M LEVEL.
SOURCE REFERENCE.....LANEY (1917, P. 102).
NON-USGS WORK.....1899 DIREXPL MR. WILLIAMS: SHAFTS 1 & 2 SUNK.
NON-USGS WORK.....1902 DIREXPL SEABOARD COPPER CO.: PREVIOUS SHAFTS DEEPENED AND ADDITIONAL SHAFT SUNK; MILL ERECTED.
NON-USGS WORK.....1942 DIREXPL U.S. BUREAU OF MINES: 280M OF HAND TRENCHING AND BEGAN REHABILITATION OF SHAFT #2.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 5, 22 P.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
REFERENCE....NEWBERRY, A.W., ROOS, A., ROBERTSON, A.F., DAHNERS, L.A., AND COHEN, C.J., 1948, INVESTIGATION OF THE VIRGILINA COPPER DISTRICT, VIRGINIA AND NORTH CAROLINA: U.S. BUREAU OF MINES REPORT OF INVESTIGATIONS 4384, 12 P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
CON CU	ACC	0.07000	MET TONS	1907	23.85% CU/2.89 OZ AG, .002 OZ AU PER TON

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE CU/AG	ACC	1.99500	MET TONS	1902-1907	CU, AG; 2ND GRADE ORE
CU	EST	0.01800	MET TONS	1902-1907	
AG	SML			1902-1907	

SOURCE OF PRODUCTION INFORMATION.....LANEY (1917), SWEET (1976)

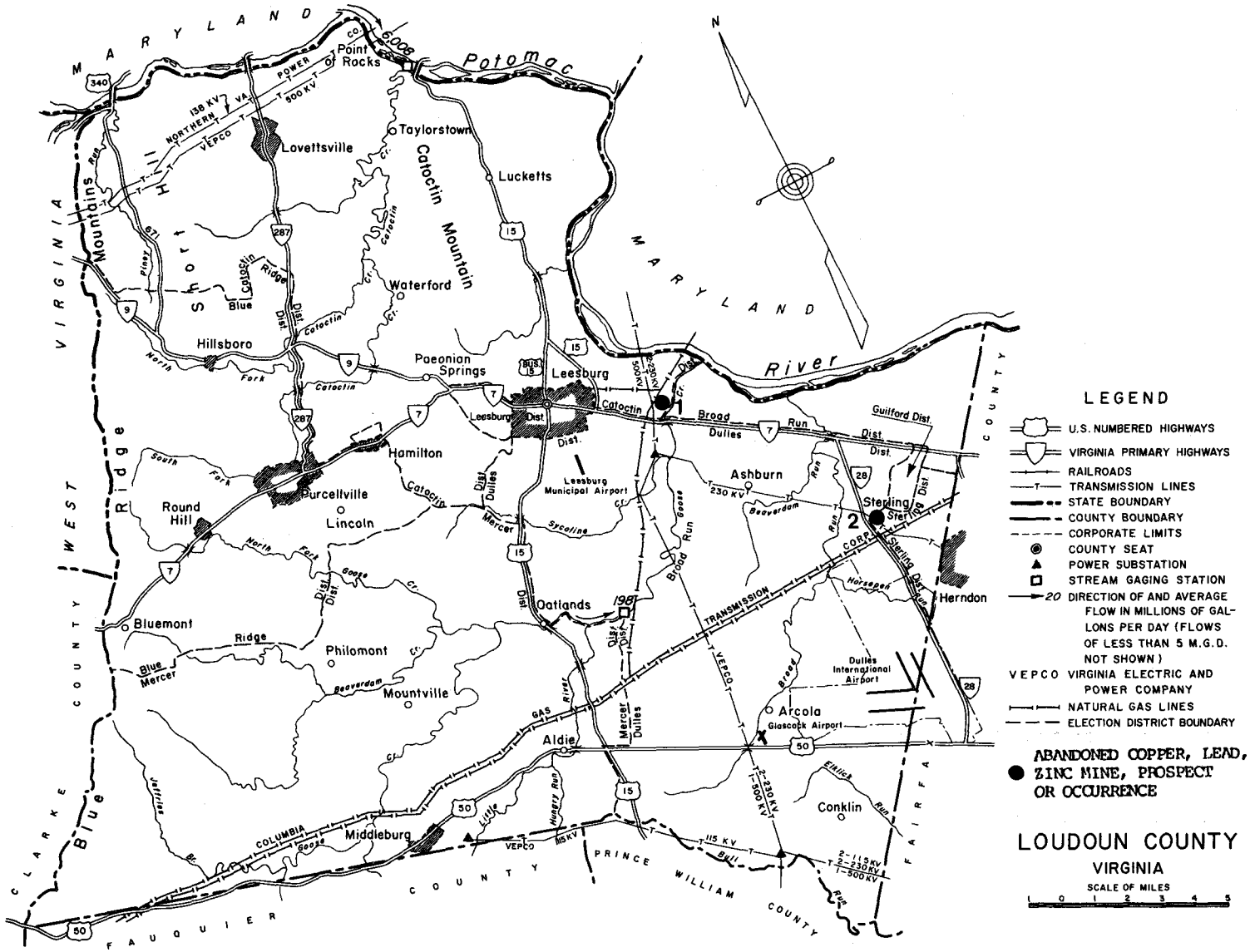
14. Wall Mine

MRDS-REV RECORD NUMBER.....646
MRDS RECORD NUMBER.....W030916
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....WALL MINE
SYNONYM NAME.....WALL PROSPECT
MINING DISTRICT/AREA.....VIRGILINA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....HALIFAX
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... VIRGILINA, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....520 FT (159M)
UTM NORTHING...4053650 EASTING...698770 ZONE...+17
LATITUDE.....36-36-34N LONGITUDE.....078-46-39W
POSITION FROM NEAREST LOCALITY.....2.7 KM (1.7 MI) NW OF RED BANK.
LOCATION COMMENTS.....69M (225 FT) OFF ESE SIDE OF STATE ROAD 737, 0.6 KM (0.4 MI) BY ROAD NNE OF JUNCTION WITH STATE ROAD 736.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....BORNITE, CHALCOCITE, AZURITE, MALACHITE
GENERAL ANALYTICAL DATA.....VEIN CARRIES FROM 0.2-3.% CU (WEED, 1911).
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1911
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....HALIFAX MINING CO.
OPERATOR.....HALIFAX MINING CO.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....PINCH AND SWELL (?)
MAXIMUM THICKNESS.....1.7 UNITS...M
DEPOSIT SIZE.....SMALL (?)
STRIKE.....N 12 DEG W
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....41 UNITS...M
LENGTH OF WORKINGS.....27 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....DRIFTS NORTH AND SOUTH, 15M AND 12M RESPECTIVELY, WERE DRIVEN FROM BOTTOM OF SHAFT. IN 1976, SHAFT WAS ALMOST COMPLETELY FILLED WITH DEBRIS AND WAS SURROUNDED BY A DUMP AREA. IN SEPTEMBER, 1987, THE SHAFT WAS COMPLETELY FILLED AND THE DUMP IS NON-EXISTENT; ONE-HALF OF THE SITE IS PRESENTLY PLOWED FOR USE AS A GARDEN.
HOST ROCK AGE.....CAMB (?)
HOST ROCK TYPE.....TUFFACEOUS GREENSTONE SCHIST (METABASALT TUFF)
AGE OF IGNEOUS ROCK.....CAMB (?)
IGNEOUS ROCK TYPE.....METABASALT TUFF
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, CALCITE, CHLORITE
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....VIRGILINA SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY STRIKES N. 25 DEG. E AND HAS A VERTICAL DIP. A SYNOROGENIC REVERSE FAULT IS LOCATED ABOUT 300 M TO THE EAST (DIPPING EAST).
FORMATION AGE.....CAMB (?)
FORMATION NAME.....AARON FORMATION (MIDDLE MEMBER)
IGNEOUS UNIT AGE.....CAMB (?)
IGNEOUS UNIT NAME.....AARON FORMATION (MIDDLE MEMBER)
NON-USGS WORK.....DIREXPL HALIFAX MINING CO.: SANK 41M SHAFT.
NON-USGS WORK.....1976 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....KREISA, R.D., 1980, GEOLOGY OF OMEGA, SOUTH BOSTON, CLUSTER SPRINGS, AND VIRGILINA QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 5, 22 P.
REFERENCE....LANEY, F.B., 1917, THE GEOLOGY AND ORE DEPOSITS OF THE VIRGILINA DISTRICT OF VIRGINIA AND NORTH CAROLINA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 14, 176 P.
REFERENCE....SWEET, P.C., 1976, ABANDONED COPPER MINES AND PROSPECTS IN THE VIRGILINA DISTRICT, VIRGINIA: VIRGINIA MINERALS, V. 22, NO. 3, P. 25-34.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
SOURCE OF PRODUCTION INFORMATION.....LANEY (1917), WEED (1911)
PRODUCTION COMMENTS.....PRODUCTION IS DOUBTFUL, ALTHOUGH A SMALL AMOUNT OF CU MAY HAVE BEEN PRODUCED.

LOUDOUN COUNTY

1. Goose Creek Mine

MRDS-REV RECORD NUMBER.....738
MRDS RECORD NUMBER.....W030917


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
VEPCO VIRGINIA ELECTRIC AND POWER COMPANY
NATURAL GAS LINES
ELECTION DISTRICT BOUNDARY
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
LOUDOUN COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
MARYLAND
Potomac River
Point of Rocks
Lovettsville
Taylorstown
Lucketts
Catoctin Mountain
Waterford
Hillsboro
Paeonian Springs
Leesburg
Hamilton
Purcellville
Round Hill
Lincoln
Bluemont
Philomont
Mountville
Oatlands
Aldie
Middleburg
Ashburn
Sterling
Herndon
Arcola
Conklin
Leesburg Municipal Airport
Dulles International Airport
Glascock Airport
Short Hill Mountains
Blue Ridge
VIRGINIA
WEST
CLARKE COUNTY
FAUQUIER COUNTY
PRINCE WILLIAM COUNTY
FAIRFAX COUNTY
NORTHERN VA. POWER CO.
VEPCO
TRANSMISSION CORP.
COLUMBIA GAS
Broad Run
Dulles
Guilford Dist.
Sterling Dist.
Mercer Dist.
Catoctin Dist.
Blue Ridge Dist.
Goose Cr.
Beaverdam Run
Horsepen Run
Elklick Run
Bull Run
Hungry Run
Little Goose
Jeffries Br.
Piney Run
Sycoline Cr.
North Fork
South Fork
Blue Mercer Ridge
6008
198
1
2

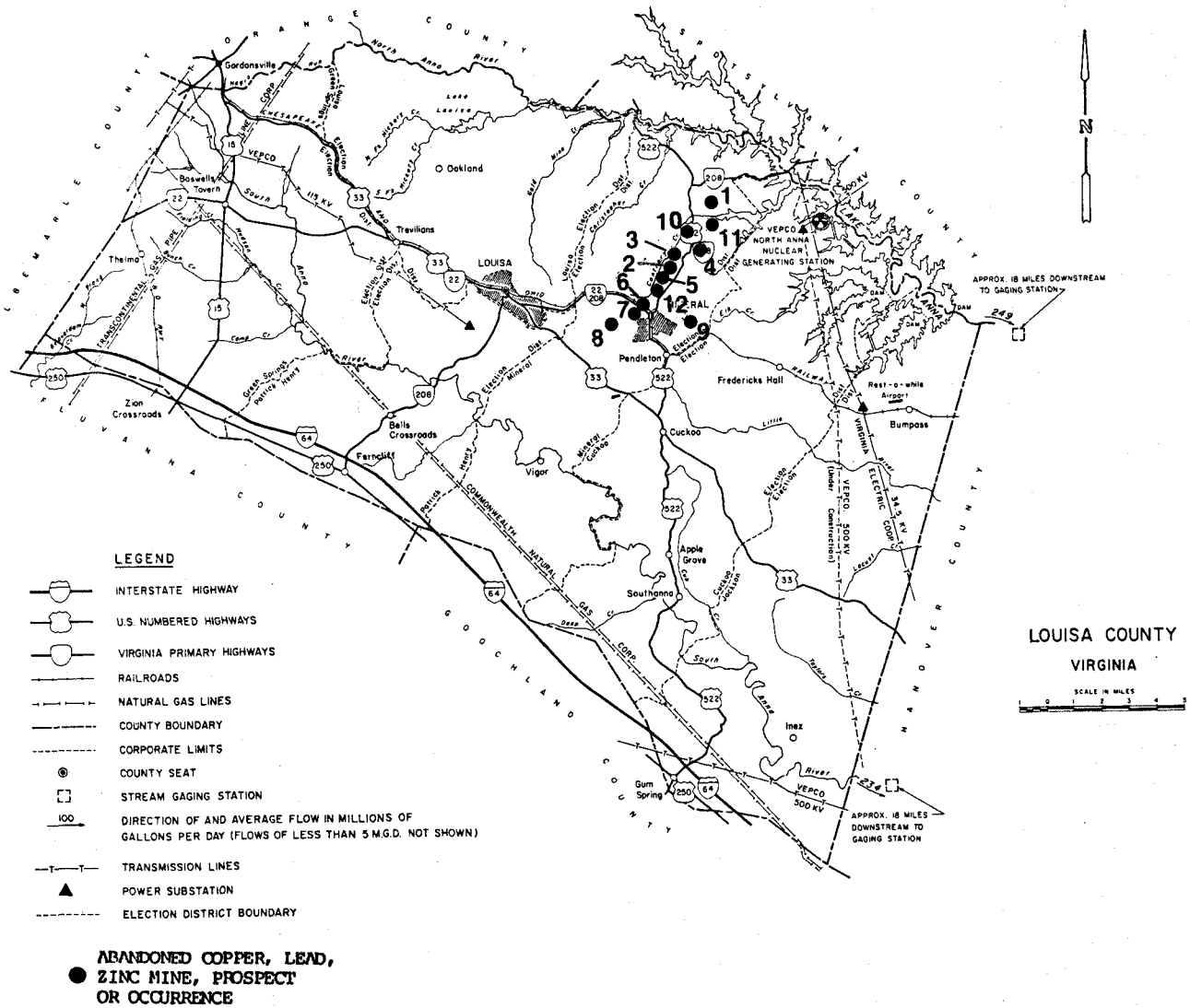
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
UPDATED.....87 07
UPDATER.....SWEET, P. C.
SITE NAME.....GOOSE CREEK MINE
SYNONYM NAME.....EAGLE MINE
MINING DISTRICT/AREA.....CULPEPER BASIN
COUNTRY.....US STATE.....VA COUNTY.....LOUDOUN
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
LAND STATUS.....01
QUADRANGLE NAME..... LEESBURG, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....280 FT
UTM NORTHING...4329960 EASTING...283280 ZONE...+18
POSITION FROM NEAREST LOCALITY.....3.7 KM (2.3 MI) SE OF CITY LIMITS OF LEESBURG.
LOCATION COMMENTS.....0.6 KM (0.4 MI) ESE FROM END OF PRIVATE ROAD, 3.0 KM (1.9 MI) BY ROAD SE OF SOUTHERN JUNCTION WITH BYPASS U.S. HWY 15.
COMMODITIES PRESENT.....CU AG
ORE MATERIALS.....AZURITE, CHALCOPYRITE, CUPRITE, NATIVE SILVER
GENERAL ANALYTICAL DATA.....CARBONATE ORE: 20-80% CU, 20 OZ/TON AG.
COMMODITY INFO COMMENTS.....REPORT OF SILVER MAY HAVE BEEN FOR PROMOTIONAL PURPOSES ONLY.
MAJOR.....CU
OCCUR.....AG
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....1890'S
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1883
OWNER (PRESENT/LAST).....EAGLE MINING CO.
OPERATOR.....EAGLE MINING CO.
ECONOMIC COMMENTS.....THIS DEPOSIT PROBABLY HAS LITTLE ECONOMIC IMPORTANCE.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WAS DEVELOPED IN 1883 BY MEANS OF SEVERAL SHAFTS AND A DRIFT. REPORTEDLY THERE WAS EXPLORATORY WORK FOR COPPER, SILVER AND NICKEL IN THE 1960'S.
DEPOSIT TYPE.....DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 38 E
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....9.1 UNITS...M
LENGTH OF WORKINGS.....60 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....THREE SHAFTS WERE SUNK (6.1, 7.6, & 9.1 M) AND ONE DRIFT (37.2 M). IN MARCH 1987, THERE WAS A 10 FT X 12 FT WATER FILLED SHAFT PRESENT.
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....SHALE
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
AGE OF MINERALIZATION.....TRI
PERTINENT MINERALS (NOT ORE).....QUARTZ, CALCITE, EPIDOTE
ORE CONTROL/LOCUS.....JOINT SURFACES (FOR CARBONATES)
TECTONIC SETTING.....BASIN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CULPEPER (POTOMAC) TRIASSIC BASIN
SIGNIFICANT LOCAL STRUCTURES.....BELMONT STOCK
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION NAME.....DIABASE
FORMATION NAME.....BULL RUN SHALE, NEWARK GROUP
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE
GEOLOGY COMMENTS.....DEPOSIT IS LOCATED IN THE BULL RUN SHALE NEAR THE CONTACT WITH THE BELMONT STOCK (?) DIABASE.
GENERAL COMMENTS.....WISE'S (1884) REPORT APPEARS TO BE AN EXERCISE IN OVERSTATEMENT.
SOURCE REFERENCE.....WISE (1884, P. 192)
WORK DONE BY USGS.....1894 GEOLMAP A. KEITH: ISSUED GEOL. ATLAS FOLIO 10.
WORK DONE BY USGS.....1911 RECON W.H. WEED: ISSUED BULL. 455.
NON-USGS WORK.....1883 DIREXPL EAGLE MINING CO.: OPENED MINE.
NON-USGS WORK.....1924 GEOLMAP VA. GEOL. SURV. ISSUED BULL. 29.
NON-USGS WORK.....1966 GEOLMAP VA. DIV. MIN. RES.: ISSUED REP. INV. 11.
REFERENCE....ROBERTS, J.K., 1928, THE GEOLOGY OF THE VIRGINIA TRIASSIC: VIRGINIA GEOLOGICAL SURVEY BULLETIN 29, 205 P.
REFERENCE....TOEWE, E.C., 1966, GEOLOGY OF THE LEESBURG QUAD RANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 11, 52 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....WISE, F.N., 1884, THE COPPER ORES OF LOUDOUN COUNTY, VA.: THE VIRGINIAS, V. 5, NO. 12, P. 192.
SOURCE OF PRODUCTION INFORMATION.....ROBERTS (1928, P. 135).

2. Sterling Copper Occurrence

MRDS-REV RECORD NUMBER.....1549
MRDS RECORD NUMBER.....W055408
RECORD TYPE.....X1M
REPORT DATE.....87 04
INFORMATION SOURCE.....13
FILE LINK ID.....1549
REPORTER.....SWEET, PALMER C
REPORTER AFFILIATION.....VDMR
SITE NAME.....STERLING COPPER OCCURRENCE
COUNTRY.....US STATE.....VA COUNTY.....LOUDOUN
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT PROVINCE
QUADRANGLE NAME..... STERLING (1980) QUADRANGLE SCALE 1:24000
ELEVATION.....280 FT
UTM NORTHING...4320000 EASTING...289180 ZONE...+18
ACCURACY.....ACC
LOCATION COMMENTS.....ROADCUT, ON E SIDE OF VIRGINIA HIGHWAY 28 APPROXIMATELY 500 FT N OF ITS INTERSECTION WITH STATE ROAD 625.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....MALACHITE, CHRYSOCOLLA
OCCUR.....CU MN
PRODUCTION.....N
STATUS AND ACTIVITY.....1
DEPOSIT DESCRIPTION COMMENTS.....OCCURRENCE OF COPPER MINERALIZATION
DESCRIPTION OF WORKINGS.....S
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....SILTSTONE AND SHALE
IGNEOUS ROCK TYPE.....DIABASE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND CULPEPER TRIASSIC BASIN
FORMATION AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE
REFERENCE....BERNSTEIN, L.R., 1980, MINERALS OF THE WASHINGTON, D.C. AREA, DEPARTMENT OF NATURAL RESOURCES, MARYLAND GEOLOGICAL SURVEY, EDUCATIONAL SERIES NO.5, 148P.

1. Allah Copper Mine

MRDS-REV RECORD NUMBER.....773
MRDS RECORD NUMBER.....W000476
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-033
REPORT DATE.....72 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....82 01
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....ALLAH COOPER MINE
SYNONYM NAME.....VALCOOPER MINE, ALI COOPER MINE, ALLEY-COOPER MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...LAKE ANNA WEST, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....290 FT (88 M)
UTM NORTHING...4217670 EASTING...249180 ZONE...+18
LATITUDE.....38-04-26N LONGITUDE.....077-51-34W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....5.88 KM (3.65 MI) WEST OF GLENORA.
LOCATION COMMENTS.....1.0 KM (0.6 MI) OFF SW SIDE OF STATE ROAD 652, 0.2 KM (0.1 MI) BY ROAD NW OF JUNCTION WITH STATE HIGHWAY 208.
COMMODITIES PRESENT.....AU AG PB ZN PYR
ORE MATERIALS.....SPHALERITE, GALENA, PYRITE, CHALCOPYRITE, NATIVE GOLD
COMMODITY INFO COMMENTS.....THE GANGUE IS QUARTZ ANDMAG-NETITE.
MAJOR.....AU PB ZN
MINOR.....AG
OCCUR.....PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1907
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-1907
YEAR OF LAST PRODUCTION.....1916 (?)
PRODUCTION YEARS.....PRE-1916
OWNER (PRESENT/LAST).....PANAMINAS, INC.
OPERATOR.....NEW JERSEY ZINC CO.
ECONOMIC COMMENTS.....WATER FOR MILLING IS AVAILABLE IN THE VICINITY.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WAS FIRST OPERATED FOR GOLD AND SILVER. WATSON STATES THE SILVER CONTENT WAS REPORTED TO BE UNUSUALLY LARGE. BOYD-SMITH MINES, INC. OBTAINED THE PROPERTY IN 1915 AND STARTED LEAD AND ZINC MINING. AN INCLINED SHAFT WAS SUNK AND A 50-TON PER DAY GRAVITY CONCENTRATION MILL WAS ERECTED. VIRGINIA LEAD AND ZINC CORP. ACQUIRED THE PROPERTY IN 1916 AND CLOSED THE MINE BUT KEPT THE MILL RUNNING UNTIL 1918 BY SHIPPING ORE FROM THE NEARBY VALZINCO MILL. THE SURFACE PLANT AND MILL BUILDINGS WERE DESTROYED BY A FOREST FIRE IN 1923. VENTURES LTD. SECURED THE MINE SITE IN 1929 AND SOLD IT TO ITS SUBSIDIARY COMPANY, PANAMINAS INC. IN 1942. A 198 M (650 FT) HOLE WAS DIAMOND DRILLED IN 1943 BY THE U.S. BUREAU OF MINES TO TEST THE ORE ZONE DOWN DIP FROM THE LOWEST MINE LEVEL. NO MINERALIZATION


ORANGE COUNTY
ALBEMARLE COUNTY
SPOTSYLVANIA COUNTY
HANOVER COUNTY
GOOCHLAND COUNTY
FLUVANNA COUNTY
Gordonsville
North Anna River
Lake Louisa
Oakland
Trevilians
LOUISA
Baskervills Tavern
Thelma
Zion Crossroads
Bells Crossroads
Ferncliff
Vigor
Pendleton
Fredericks Hall
Cuckoo
Bumpass
Rest-a-while Airport
Apple Grove
Southanna
Inez
Gum Spring
VEPCO NORTH ANNA NUCLEAR GENERATING STATION
APPROX. 18 MILES DOWNSTREAM TO GAGING STATION
APPROX. 18 MILES DOWNSTREAM TO GAGING STATION
VEPCO 500 KV
VEPCO 500 KV (Under Construction)
34.5 KV
Rivanna River
Green Springs Batesville Trevilians
Commonwealth Natural Gas Co.
Louisa Dist.
Election Dist.
Mineral Election Dist.
Cuckoo Election Dist.
Louisa Election Dist.
Trevilians Election Dist.
Gordonsville Election Dist.
Shadwell Election Dist.
Jefferson Election Dist.
Green Springs Election Dist.
Courthouse Election Dist.
Cuckoo Election Dist.
Apple Grove Election Dist.
Southanna Election Dist.
Gum Spring Election Dist.
Transmission Lines
Railroad
1
2
3
4
5
6
7
8
9
10
11
12
N
LOUISA COUNTY
VIRGINIA
SCALE IN MILES
0 1 2 3 4 5
LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
STREAM GAGING STATION
100 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
TRANSMISSION LINES
POWER SUBSTATION
ELECTION DISTRICT BOUNDARY
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE

WAS FOUND WHERE THE HOLE WAS EXPECTED TO INTERSECT THE ORE ZONE (ABOUT 46 M (150 FT) BELOW THE LOWEST KNOWN MINE WORKINGS) AND NO FURTHER DRILLING WAS DONE. THE COMPLETE LOG OF THE DIAMOND DRILL HOLE CAN BE FOUND IN GROSH (1949). NEW JERSEY ZINC PROS PECTED IN 1967.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LINEAR VEIN
DEPOSIT SIZE.....SMALL
STRIKE.....NE
DIP.....SE
DEPOSIT DESCRIPTION COMMENTS.....THE COUNTRY ROCK IS A QUARTZ-SERICITE SCHIST WITH FOLIATIONS REGIONALLY STRIKING N 30-35 DEG E AND DIPPING STEEPLY TO THE SOUTHEAST. THE VEIN IS THOUGHT TO BE A SULFIDE FILLING OF A FRACTURE ZONE THAT ALSO STRIKES NORTHEAST AND DIPS SOUTHEAST, CUTTING THE SCHISTOSITY AT A SHARP ANGLE.
DEPTH BELOW SURFACE.....107 UNITS...M
LENGTH OF WORKINGS.....366 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS COMPRISED AN INCLINED SHAFT 107 M (350 FT) DEEP WITH 6 WORKING LEVELS AT 15 M (50 FT) INTERVALS. THE UNDERGROUND DEVELOPMENT TOTALED APPROXIMATETY 366 M (1200 FT)? IN 1974, A WATER-FILLED SHAFT, WATER-FILLED PITS, CONCRETE FOUNDATIONS OF PLANT SITE, AND DUMPS WERE EVIDENT. GROSH (1949) HAS A MINE MAP SHOWING THE WORKINGS.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....BIOTITE-SERICITE-QUARTZ-HORNBLENDE GNEISS & SCHIST
PERTINENT MINERALS (NOT ORE).....PYRITE, MAGNETITE, QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....A FRACTURE ZONE THOUGHT TO BE PRESENT . FOLIATION STRIKES N 30-35 DEG E AND DIPS STEEPLY TO SE.
PROCESS OF CONCENTRATION/ENRICHMENT.....SULFIDE FILLING OF FRACTURE ZONE
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GENERAL COMMENTS.....OPENED FIRST AS AU AND AG MINE. INCLINED SHAFT SUNK AND 50-TON GRAVITY CONCENTRATION MILL ERECTED IN 1915 BY BOYD-SMITH MINES, INC. PRODUCTION STOPPED IN 1916, BUT VA. LEAD AND ZINC CORP. OPERATED THE MINE UNTIL 1918 TO TREAT ORE FROM THE VALZINCO MINE.
GEOLOGICAL DESCRIPTIVE NOTES.....FRACTURE ZONE STRIKES NORTHEASTWARD AND CUTS THE SCHISTOSITY AT A SHARP ANGLE.
REGIONAL TRENDS.....N. 30-35 DEG. E., DIPPING STEEPLY SOUTH EAST
NON-USGS WORK.....1915 DIREXPL BOYD-SMITH MINES, INC: SUNK SHAFT AND ERECTED MILL.
NON-USGS WORK.....1943 DIREXPL USBM: DIAMOND DRILLING, NEGATIVE RESULTS.
NON-USGS WORK.....1974 RECON VA DIV MIN RES: INSPECTED SITE.
REFERENCE....GROSH, W A, 1949, INVESTIGATION OF THE ALLAH COOPER LEAD-ZINC MINE, LOUISA COUNTY, VA: U S BUREAU OF MINES REPORT OF INVESTIGATIONS 4604, 6 P.
REFERENCE....POOLE, J L, 1974, NOTES ON SOME ABANDONED COPPER, LEAD, AND ZINC MINES IN THE PIEDMONT OF VIRGINIA: VIRGINIA MINERALS, V 20, NO 2, P 9-14.
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....WATSON, T.L., 1907, GOLD AND SILVER, IN MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, J.P. BELL CO., P. 549-567.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VDMR, IN. RES. REPT. 7, 167 P.
SOURCE OF PRODUCTION INFORMATION.....GROSH (1949)
PRODUCTION COMMENTS.....NO EXACT PRODUCTION FIGURES GIVEN

2. Arminus Mine

MRDS-REV RECORD NUMBER.....780
MRDS RECORD NUMBER.....W000459
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-016
REPORT DATE.....72 06
INFORMATION SOURCE.....12
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....ARMINIUS MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...MINERAL , VA SECOND QUAD SCALE 1:24000
ELEVATION.....440 FT (134 M)
UTM NORTHING...4213600 EASTING...245630 ZONE...+18
LATITUDE.....38-02-11N LONGITUDE.....077-53-54W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....2.9 KM (1.8 MI) NNE OF MINERAL
LOCATION COMMENTS.....1.05 KM (0.65 MI) ON DIRT ROAD WEST OF JUNCTION WITH U S HWY 522, 2.2 KM (1.4 MI) NE OF JUNCTION WITH STATE ROAD 618 IN MINERAL
COMMODITIES PRESENT.....ZN PB CU PYR FE AS SN
ORE MATERIALS.....PYRITE, CHALCOPYRITE, SPHALERITE, GALENA, PYRRHOTITE, MAGNETITE, ARSENOPYRITE, TETRAHEDRITE, MARCASITE, MACKINAWITE, ILMENITE
GENERAL ANALYTICAL DATA.....PYRITE: 85%, SPHALERITE: 8%, MAGNETITE: 3%, CHALCOPYRITE: 1%, GALENA: 1%
COMMODITY INFO COMMENTS.....DEPOSIT DIFFERS FROM OTHER DEPOSITS DUE TO SIGNIFICANT AMOUNT OF MAGNETITE CONTAINED
MAJOR.....PYR FE
MINOR.....CU
POTEN.....ZN PB
OCCUR.....AS SN
PRODUCTION.....M
STATUS AND ACTIVITY.....6
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1834
PRODUCTION YEARS.....ITEM 1 = 1834, ITEM 2 = 1865-1921, ITEM 3 = 1847-1877
OWNER (PRESENT/LAST).....NEW JERSEY ZINC CO. IN 1987 PROOERTY WAS SOLD BY GULF AND WESTERN (OWNERS OF NEW JERSEY ZINC) TO W.B. GILMAN LOGGING OF ASHLAND, VA.
OPERATOR.....ARMINIUS CHEMICAL CO
EXPLORATION AND DEVELOPMENT COMMENTS.....GOSSAN MINED FOR IRON ORE BEGINNING IN 1834; ORE WAS SMELTED AT ROUGH AND READY FURNACE. COPPER MINING BEGAN IN 1847, FIRST BY VIRGINIA CENTRAL COPPER MINES CO AND LATER BY THE ARMINIUS COPPER MINES CO. PYRITE RECOVERY BEGAN IN 1865 BY A NY CO WHICH MINED PYRITE AND COPPER UNTIL 1877. MINE PURCHASED IN 1883 BY W H ADAMS WHO OPERATED IT UNTIL 1894, WHEN THE MINE WAS PURCHASED AND SUBSEQUENTLY OPERATED BY THE ARMINIUS CHEMICAL CO SINCE 1877, ONLY PYRITE WAS MINED. THE MINE WAS CLOSED IN 1921. THE BUREAU OF MINES CONDUCTED A GEOPHYSICAL SURVEY IN THE AREA DURING THE MID-1940'S. IN 1953 NEW JERSEY ZINC CO PURCHASED THE MINE AND CONDUCTED GEOPHYSICAL & GEOCHEMICAL EXPLORATION AND DIAMOND DRILLING.
DEPOSIT TYPE.....STRATA-BOUND & STRATIFORM MASSIVE SULFIDE, GOSSAN
DEPOSIT FORM.....POD/LENS
MAXIMUM LENGTH.....213 UNITS...M
MAXIMUM THICKNESS.....18.6 UNITS...M
DEPOSIT SIZE.....MEDIUM
STRIKE.....N 20 DEG E
DIP.....60-65 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....THIS IS LARGEST MASSIVE SULFIDE DEPOSIT IN MINERAL DISTRICT OF LOUISA COUNTY (COX AND OTHERS, 1979). DEPOSIT IS CLASSIFIED AS A DISTAL SYNGENETIC VOLCANOGENIC DEPOSIT SIMILAR IN NATURE TO BESSHI-TYPE DEPOSITS OF JAPAN AND KIESLAGER DEPOSITS OF GERMANY.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....321 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....FOUR STEEPLY INCLINED SHAFTS WERE DRIVEN; THE MAIN SHAFT HAVING EIGHT WORKING LEVELS. IN 1973, THREE SMALL BUILDINGS WERE SEEN, ONE OF WHICH HAD SERVED AS THE HOIST BUILDING. THE SHAFT WAS COVERED. SETTLING PONDS WERE PRESENT JUST NORTH OF THE MINE AND THE DUMP SURROUNDED THE MINE ON THREE SIDES.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....PYRITIC QUARTZ-SERICITE SCHIST, PYRITIC QUARTZITE, AMPHIBOLITIC SCHIST, METAPELITE, METAFELSITE
AGE OF IGNEOUS ROCK.....EPAL
IGNEOUS ROCK TYPE.....METAFELSITE
AGE OF MINERALIZATION.....EPAL
PERTINENT MINERALS (NOT ORE).....QUARTZ, BIOTITE, GARNET, HORNBLENDE, CHLORITE, SERICITE, CALCITE, BARITE, CASSITERITE, GAHNITE.
ORE CONTROL/LOCUS.....ELONGATE TROUGHS
TECTONIC SETTING.....EUGEOSYNCLINE (PIEDMONT)
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....FOLIATION STRIKES N 20 DEG E AND DIPS 60-65 DEG SE.
PROCESS OF CONCENTRATION/ENRICHMENT.....FROM VOLCANIC EMANATIONS.
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
IGNEOUS UNIT AGE.....EPAL
IGNEOUS UNIT NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....TWO MAJOR SULFIDE TYPES PRESENT: 1) COMPACT MASSIVE PYRITIC VARIETY CONTAINING MINOR INTERSTITIAL SPHALERITE, CHALCOPYRITE, AND GALENA; AND 2) DISSEMINATED PYRITE VARIETY IN WHICH PYRITE CONSTITUTES LESS THAN HALF THE VOLUME THE REMAINDER RANGING FROM DOMINANTLY SPHALERITE TO DOMINANTLY GANGUE. ORE HAS UNDERGONE A THOROUGH RECRYSTALLIZATION, BUT RETAINS FINE SCALE BANDING. TWO CORE LOGS ARE DELINEATED IN GAIR (1978).
GEOLOGICAL DESCRIPTIVE NOTES.....HOST ROCKS CONTAIN BIOTITE, HORNBLENDE AND GARNET AND STRIKE N 20 DEG E AND DIP 60-65 DEG SE.
NON-USGS WORK.....1834 DIREXPL GOSSAN MINED FOR IRON, ADDITIONALLY SUPERGENE COPPER MINED BEGINNING 1847.
NON-USGS WORK.....1867 DIREXPL PYRITE MINING BEGUN
NON-USGS WORK.....1953 DIREXPL NEW JERSEY ZINC CO: CONDUCTED EXPLORATION & DIAMOND DRILLING.
REPORTS AVAILABLE.....USBM REP INV 4116.
REFERENCE....COX, L.J., 1979, MINERALOGY AND PETROGENESIS OF THE ARMINIUS DEPOSIT, LOUISA COUNTY, VIRGINIA: UNPUB LISHED M.S. THESIS, VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY.
REFERENCE....COX, L.J., CRAIG, J.R., AND KAZDA, R.F., 1979, THE ARMINIUS: A VOLCANOGENIC MASSIVE SULFIDE DEPOSIT IN THE MINERAL DISTRICT, LOUISA CO., VIRGINIA (ABS.): GEOLOGI CAL SOCIETY OF AMERICA ABSTRACTS WITH PROGRAMS, V.

11, NO. 4, P. 175.
REFERENCE....GAIR, J E (ED), 1978, MASSIVE SULFIDES OF VIRGINIA FIELD TRIP GUIDEBOOK: INTERNATIONAL GEOLOGICAL CORRELA TION PROGRAMME, PROJECT NO 60, 112 P
REFERENCE....POOLE, J L, 1973, IRON SULFIDE MINES IN VIRGINIA: VIRGINIA MINERALS, V 19, NO 3, P 29-33

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
CU	SML			1847-1877	
PYR	MED			1865-1921	
ORE PYR	EST	1800.	MET TONS	1865-1921	

SOURCE OF PRODUCTION INFORMATION.....COX AND OTHERS (1979),
PRODUCTION COMMENTS.....ORE PRODUCTION (ITEM 2) WAS SPORADIC AS MINE WAS SOLD SEVERAL TIMES.

3. Boyd-Smith Mine

MRDS-REV RECORD NUMBER.....789
MRDS RECORD NUMBER.....W000458
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-015
REPORT DATE.....72 06
INFORMATION SOURCE.....12
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 08
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....BOYD-SMITH MINE
SYNONYM NAME.....GROOME MINE, SMITH MINE, LENNIG MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...MINERAL , VA SECOND QUAD SCALE 1:24000
ELEVATION.....330 FT (100 M)
UTM NORTHING...4214550 EASTING...246230 ZONE...+18
LATITUDE.....38-02-42N LONGITUDE.....077-53-30W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....3.95 KM (2.45 MI) NNE OF MINERAL.
LOCATION COMMENTS.....30 M (100 FT) SW OF DIRT ROAD, 0.6 KM (0.4 MI) NW OF JUNCTION WITH US HWY 522. JUNCTION IS 4.0 KM (2.5 MI) BY ROAD NNE OF JUNCTION WITH STATE ROAD 618 IN MINERAL.
COMMODITIES PRESENT.....ZN PB CU PYR FE
ORE MATERIALS.....PYRITE, SPHALERITE, CHALCOPYRITE, GALENA, PYRRHOTITE, MAGNETITE, GOETHITE, CHALCOCITE
COMMODITY INFO COMMENTS.....GOSSAN WAS MINED FOR ORE IN 1845.
MAJOR.....PYR
MINOR.....CU FE
OCCUR.....ZN PB
PRODUCTION.....M
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1845
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....ABOUT 1845
PRODUCTION YEARS.....ITEM 1 = EARLY 1880'S, ITEM 2 = AROUND 1845
OWNER (PRESENT/LAST).....BOYD-SMITH MINES, INC (E I DU PONT DE MEMOURS AND CO
OPERATOR.....BOYD-SMITH MINES, INC
ECONOMIC COMMENTS.....COMPETITION FROM THE GULF STATES AND SPAIN CLOSED THE PYRITE MINES IN VIRGINIA.
EXPLORATION AND DEVELOPMENT COMMENTS.....GOSSAN MINED IN 1845 FOR IRON, BUT DURATION OF MINING NOT RECORDED. IN 1880 MESSRS CHAS LENNIG AND BOYD SMITH MINED PYRITE AND COPPER, APPARENTLY CEASING PRODUCTION IN 1884. MINE OWNED AND OPERATED BY US FIDELITY & GUARANTEE CO DURING PERIOD, 1886-1906. IN 1913, BOYD-SMITH MINES BOUGHT MINE AND BEGAN OPPERATING IT IN 1915. THE MINE WAS CLOSED IN 1922. IN 1946, USBM SANK A 121 M DIAMOND-BIT HOLE AND CONDUCTED GEOPHYSICAL AND GEOCHEMICAL SURVEYS.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE, GOSSAN
DEPOSIT FORM.....POD/LENS
STRIKE.....N. 20-35 DEG E
DIP.....STEEPLY TO SE
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....91 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1906, THERE WERE 3 SHAFTS (DEEPEST WAS 91 M), 5 WORKING LEVELS AND A MILL. IN 1973, 2 CAVED SHAFTS, ONE WOODEN STRUCTURE, SEVERAL FOUNDATIONS, A WASTE DUMP AND THE FORMER TAILINGS POND WERE ALL THAT REMAINED OF THE OPERATION.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST, BIOTITE GNEISS, CHLORITE SCHIST, GRANITE GNEISS.
AGE OF IGNEOUS ROCK.....EPAL
IGNEOUS ROCK TYPE.....METAFELSITE (?)
AGE OF MINERALIZATION.....EPAL
PERTINENT MINERALS (NOT ORE).....QUARTZ, FELDSPAR, AMPHIBOLE, BIOTITE, CHLORITE, SERICITE, ALMANDINE.
TECTONIC SETTING.....EUGEOSYNCLINE (PIEDMONT)
PROCESS OF CONCENTRATION/ENRICHMENT.....FROM VOLCANIC EMANATIONS
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
IGNEOUS UNIT AGE.....EPAL
IGNEOUS UNIT NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....CORE LOG DELINEATED IN HICKMAN (1947)
GEOLOGICAL DESCRIPTIVE NOTES.....GEOLOGY SIMILAR TO THE ARMINIUS MINE
REGIONAL TRENDS.....NORTHEAST-SOUTHWEST
NON-USGS WORK.....1845 DIREXPL GROOME MINE: GOSSAN MINED FOR IRON.
NON-USGS WORK.....1880 DIREXPL LENNIG AND SMITH: PRODUCED PYRITE & COPPER.
NON-USGS WORK.....1946 DIREXPL US BUREAU OF MINES: CONDUCTED EXPLORATION AND DRILLING.
REPORTS AVAILABLE.....U.S. BUREAU MINES R.I. 4116 (1947)
REFERENCE....GAIR, J E (ED), 1978, MASSIVE SULFIDES OF VIRGINIA FIELD TRIP GUIDEBOOK: INTERNATIONAL GEOLOGICAL CORRELA TION PROGRAM, PROJECT NO 60, 112 P
REFERENCE....HICKMAN, R C, 1947, PYRITES, MINERAL, LOUISA COUNTY, VA: US BUREAU OF MINES REPORT OF INVESTIGATIONS 4116, 3 P.
REFERENCE....LUTTRELL, G W, 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPT 7, 167 P
REFERENCE....POOLE, J L, 1973, IRON SULFIDE MINES IN VIRGINIA: VIRGINIA MINERALS, V 19, NO 3, 29-33.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
CU	SML			1880-1906	NO PRODUCTION IN 1885
PYR	MED			1880-1922	NO PRODUCTION: IN 1885, 1907-1914

SOURCE OF PRODUCTION INFORMATION.....LUTTRELL (1966), GAIR (1978)
PRODUCTION COMMENTS.....ITEM 1 PRODUCED SPORADICALLY FROM EARLY 1880'S TO 1922.

4. Cofer Prospect

MRDS-REV RECORD NUMBER.....768
MRDS RECORD NUMBER.....W031306
RECORD TYPE.....X1M
DEPOSIT NUMBER.....USBM-5110900001
REPORT DATE.....79 08
INFORMATION SOURCE.....12
FILE LINK ID.....VDMR, USBM
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....COFER PROSPECT
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MINERAL, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....400 FT (122 M)
UTM NORTHING...4215070 EASTING...247690 ZONE...+18
LATITUDE.....38-03-00N LONGITUDE.....077-52-31W
POSITION FROM NEAREST LOCALITY.....5.2 KM (3.2 MI) NE OF MINERAL.
LOCATION COMMENTS.....0.2 KM (0.1 MI) NW OF STATE ROAD 720, 0.95 KM (0.6 MI) NE OF JUNCTION WITH U.S. HWY 522.
COMMODITIES PRESENT.....ZN PB CU AU AG PYR AS
ORE MATERIALS.....PYRITE, SPHALERITE, CHALCOPYRITE, GALENA, ARSENOPYRITE, TETRAHEDRITE-TENNANTITE, PYRRHOTITE, BISMUTH, MACKINAWITE, MOLYBDENITE, GUDMUNDITE, ELECTRUM, DIGENITE, CHALCOCITE, COVELLITE, MARCASITE, MAGNETITE, HEMATITE, RUTILE, ILMENITE, COSALITE, KOBELLITE, BOULANGERITE, BORNITE
GENERAL ANALYTICAL DATA.....PYRITE: 30-90%, SPHALERITE: 5-69%, CHALCOPYRITE: LESS THAN 5%, GALENA: LESS THAN 5%, AND ARSENOPYRITE: LESS THAN 3%.
COMMODITY INFO COMMENTS.....TETRAHEDRITE-TENNANTITE IS ARGENTIFEROUS, ELECTRUM IS 50% AU AND 50% AG. ALL MINOR ORE MINERALS OCCUR IN TRACE QUANTITIES
NON-PRODUCER MAIN.....ZN PB CU
NON-PRODUCER MINOR.....AU AG PYR AS
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....NEW JERSEY ZINC CO.
YEAR OF DISCOVERY.....1950'S
NATURE OF DISCOVERY.....F
OWNER (PRESENT/LAST).....PIEDMONT MINERAL ASSOCIATES (CALLAHAN MINING CORP.)
OPERATOR.....PIEDMONT MINERAL ASSOCIATES (CALLAHAN MINING CORP.)
EXPLORATION AND DEVELOPMENT COMMENTS.....DEPOSIT IS ON A STAND-BY STATUS.
DEPOSIT TYPE.....STRATA-BOUND & STRATIFORM MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS (SUBPARALLEL LENSES)
MAXIMUM THICKNESS.....10 UNITS...M
DEPOSIT SIZE.....SMALL (?)
STRIKE.....NE-SW
DEPOSIT DESCRIPTION COMMENTS.....MAX. THICKNESS ABOVE IS FOR ONE LENS. THERE ARE 4 LENSES.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....110 UNITS...M
LENGTH OF WORKINGS.....500 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....DRIFTS LOCATED AT 60 AND 110 M LEVELS. IN 1977, SHAFT ENTRANCE WITH LARGE DUMP OF EXCAVATED SULFIDES EVIDENT.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST/PHYLLITE & GNEISS, QUARTZ-SERICITE-BIOTITE SCHIST & GNEISS, METAGRAY WACKE (METAFELSITES & METAPELITES)
AGE OF IGNEOUS ROCK.....EPAL
IGNEOUS ROCK TYPE.....METAFELSITE, METAVOLCANIC ROCK, AMPHIBOLITES (OF BASALTIC COMPOSITION)
AGE OF MINERALIZATION.....EPAL
PERTINENT MINERALS (NOT ORE).....QUARTZ, BIOTITE, MUSCOVITE, FELDSPAR, GAHNITE.
ORE CONTROL/LOCUS.....ELONGATE TROUGHS
TECTONIC SETTING.....EUGEOSYNCLINE (PIEDMONT)
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT ALTERATION.....HIGH TEMPERATURE, LOW TO MEDIUM GRADE METAMORPHISM.

PROCESS OF CONCENTRATION/ENRICHMENT.....FROM VOLCANIC EMANATIONS
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
IGNEOUS UNIT AGE.....EPAL
IGNEOUS UNIT NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....MINERALOGY SIMILAR TO JAPANESE VOLCANOGENIC DEPOSITS. CORE LOG DELINEATED IN GAIR (1978)
GENERAL COMMENTS.....PIEDMONT MINERAL ASSOCIATES INCLUDES NEW JERSEY ZINC CO. AND CALLAHAN MINING CORP.
SOURCE REFERENCE.....MILLER (1978)
NON-USGS WORK.....1950 DIREXPL NEW JERSEY ZINC CO.: LOCATED DEPOSIT
NON-USGS WORK.....1975 DIREXPL PIEDMONT MINERAL ASSOCIATES: CONDUCTED EXPLORATORY DRILLING AND MINING TO EVALUATE.
REPORTS AVAILABLE.....MILLER, J.W., JR., 1978, THE ORE MINERALOGY OF THE COFER PROPERTY, LOUISA COUNTY, VIRGINIA: A VOLCANOGENIC MASSIVE SULFIDE DEPOSIT: UNPUBLISHED M.S. THESIS, VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY.
REFERENCE....GAIR, J.E., (ED.), 1978, MASSIVE SULFIDES OF VIRGINIA FIELD TRIP GUIDEBOOK: INTERNATIONAL GEOLOGICAL CORRELATION PROGRAMME, PROJECT NO. 60, 112 P.
REFERENCE....HODDER, R.W., KAZDA, R.F., AND BOJTOS, P., 1977, AN EXAMPLE OF BASE METAL MASSIVE SULFIDE DEPOSITS FROM WITHIN A TURBIDITE SUCCESSION OF THE VIRGINIA PIEDMONT (ABS.): MINING ENGINEERING, V. 29, NO. 1, P. 83.
REFERENCE....MILLER, J.W., CRAIG, J.R. AND KAZDA, R.F., 1978, VOLCANOGENIC SULFIDES OF THE MINERAL DISTRICT, LOUISA CO., VIRGINIA (ABS.): GEOLOGICAL SOCIETY OF AMERICA: ABSTRACTS WITH PROGRAMS, V. 10, NO. 7, P. 457
REFERENCE....MILLER, J.W., CRAIG, J.R. AND KAZDA, R.F., 1979, METAMORPHOSED VOLCANOGENIC ORES OF THE COFER DEPOSIT, MINERAL DISTRICT, LOUISA CO., VIRGINIA (ABS.): GEOLOGICAL SOCIETY OF AMERICA: ABSTRACTS WITH PROGRAMS, V. 11, NO. 4, P. 205-206.

5. Cooper Mine

MRDS-REV RECORD NUMBER.....763
MRDS RECORD NUMBER.....W000461
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-018
REPORT DATE.....72 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 07
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....COOPER MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...MINERAL , VA SECOND QUAD SCALE 1:24000
ELEVATION.....415 FT (127 M)
UTM NORTHING...4213140 EASTING...245430 ZONE...+18
LATITUDE.....38-01-55N LONGITUDE.....077-54-01W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....2.49 KM (1.55 MI) NNE OF MINERAL
LOCATION COMMENTS.....0.6 KM (0.4 MI) OFF NW SIDE OF U S HWY 522 ABOUT 1.85 KM (1.15 MI) BY ROAD NE OF JUNCTION WITH STATE ROAD 667.
COMMODITIES PRESENT.....AU PYR CU
ORE MATERIALS.....NATIVE GOLD , PYRITE, CHALCOPYRITE
MAJOR.....AU
OCCUR.....PYR. CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
NATURE OF DISCOVERY.....A
YEAR OF LAST PRODUCTION.....1903
PRODUCTION YEARS.....PRE-1903
EXPLORATION AND DEVELOPMENT COMMENTS.....WORK SUSPENDED IN 1903.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR (STRINGERS)
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....DEPOSIT CONTAINS THIN QUARTZ STRINGERS WHICH IN TURN CONTAIN SOME ADMIXED CALCITE WITH PYRITE, AND A LITTtE CHALCOPYRITE, IN QUARTZ-SERICITE AND CHLORITE SCHIST.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....30 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....DEVELOPMENT CONSISTED OF 30 M SHAFT ON AN INCLINE OF 56 DEG S 80 DEG E, AND NUMEROUS PITS. IN 1974, ABOUT TWENTY CAVED PITS, TWO CAVED SHAFTS AND LARGE DUMPS EVIDENT.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST, CHLORITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, CALCITE, PYRITE, CHALCOPYRITE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
NON-USGS WORK.....DIREXPL DEVELOPED BY SHAFT AND TUNNEL
NON-USGS WORK.....1974 RECON VA DIV MIN RES: INSPECTED SITE
REFERENCE....WATSON, T.L., 1907, MIN. RES. OF VA., P. 558
REFERENCE....LUTTRELL, G.W., 1966, VA. MIN. RES. REPORT 7, P. 36.
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P
REFERENCE....CLINE, J.H., WATSON, T.t., AND WRIGHT, F.J., 1921{ A GEOLOGIC MAP OF THE GOLD-PYRITE BELT IN LOUISA AND SPOTSYLVANIA COUNTIES, VIRGINIA: VA. DIV. MIN. RES.
SOURCE OF PRODUCTION INFORMATION.....WATSON REF.
PRODUCTION COMMENTS.....NO PRODUCTION FIGURES GIVEN, BUT IT WAS PROBABLY SMALL.

6. Hemmer Mine

MRDS-REV RECORD NUMBER.....756
MRDS RECORD NUMBER.....W000466
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-023
REPORT DATE.....72 06
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....HEMMER MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...MINERAL , VA. SECOND QUAD SCALE 1:24000
ELEVATION.....420 FT (127 M)
UTM NORTHING...4211780 EASTING...244630 ZONE...+18
LATITUDE.....38-01-11N LONGITUDE.....077-54-32W
ACCURACY.....ACC-LOCATION WITHIN 50 METERS.
POSITION FROM NEAREST LOCALITY.....0.9 KM (0.6 MI) NORTH OF MINERAL
LOCATION COMMENTS.....ABOUT 0.4 KM (0.3 MI) NE OF EXTENSION OF STATE ROAD 746, 0.2 KM (0.1 MI) NORTH OF JUNCTION WITH STATE HWY. 22.
COMMODITIES PRESENT.....ZN PB CU AU AG PYR PYR1
ORE MATERIALS.....PYRITE, SPHALERITE, GALENA, CHALCOPYRITE, PYRRHOTITE, GOLD, SILVER
MAJOR.....CU PYR
MINOR.....PYR1
OCCUR.....ZN PB AU AG
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1882
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-1882
OWNER (PRESENT/LAST).....NEW JERSEY ZINC CO. (MINERAL RIGHTS)
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE FIRST OPERATED IN LATE 1800'S AS COPPER MINE, THEN AS A PYRITE MINE. IN 1958, PROPERTY WAS EXPLORED BY NEW JERSEY ZINC CO.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE, GOSSAN, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
MAXIMUM WIDTH.....18.1 UNITS...M
MAXIMUM THICKNESS.....0.15 UNITS...M
DEPOSIT SIZE.....SMALL (?)
DEPOSIT DESCRIPTION COMMENTS.....THICKNESS IS MAXIMUM FOR A SINGLE BAND IN ZONE.
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....FONTAINE (1882) DESCRIBED WORKINGS TO INCLUDE A DEEP SHAFT AND SEVERAL GALLERIES.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....FERRUGINOUS QUARTZ-SERICITE SCHIST, SERICITE METAQUARTZITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, CHLORITE, MUSCOVITE (SERICITE)
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, COLUMBIA SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....FROM VOLCANIC EXHALATIONS
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GENERAL COMMENTS.....EARLY HISTORY OF THE MINE IS NOT KNOWN. THE PROPERTY WAS DIAMOND DRILLED IN 1958 BY THE N. J. ZINC CO.
GEOLOGICAL DESCRIPTIVE NOTES.....IN LINE OF STRIKE WITH THE BOYD SMITH AND ARMINIUS MINES.
NON-USGS WORK.....DIREXPL DEEP SHAFT SUNK, MINING CONDUCTED
NON-USGS WORK.....1958 DIREXPL NEW JERSEY ZINC CO.: DIAMOND DRILLED PROPERTY.
REFERENCE....CLINE, J.H., WATSON, T.L., AND WRIGHT, F.J., 1921, A GEOLOGIC MAP OF THE PYRITE-GOLD BELT IN LOUISA AND SPOTSYLVANIA COUNTIES, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY, 1 P. , SCALE 1:63 360.
REFERENCE....FONTAINE, W.M., 1882, NOTES ON THE SULPHURET DEPOSITS OF VIRGINIA: THE VIRGINIAS, V.3, NO. 10, P. 154-155.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
SOURCE OF PRODUCTION INFORMATION.....FONTAINE (1882)
PRODUCTION COMMENTS.....AMOUNT OF PRODUCTION NOT KNOWN

7. Hunter Prospect

MRDS-REV RECORD NUMBER.....757
MRDS RECORD NUMBER.....W000467
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-024
REPORT DATE.....72 06

INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....HUNTER PROSPECT
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...MINERAL , VA. SECOND QUAD SCALE 1:24000
ELEVATION.....425 390 FT (118 M)
UTM NORTHING...4211200 EASTING...244280 ZONE...+18
LATITUDE.....38-00-51N LONGITUDE.....077-54-46W
ACCURACY.....ACC WITHIN 100 METERS
POSITION FROM NEAREST LOCALITY.....0.5 KM (0.3 MI) NW OF MINERAL.
LOCATION COMMENTS.....ABOUT 125 M (400 FT) SW OF VA. HWY. 22, 0.5 KM (0.3 MI) BY ROAD NW OF JUNCTION WITH U.S. HWY. 522 IN MINERAL. NOTED THAT IT IS LOCATED BETWEEN THE JULIA AND HEMMER MINES.
COMMODITIES PRESENT.....ZN PB CU AU AG PYR PYR1
ORE MATERIALS.....PYRITE, SPHALERITE, GALENA, CHALCOPYRITE, PYRRHOTITE, NATIVE GOLD, NATIVE SILVER
COMMODITY INFO COMMENTS.....GOLD AND SILVER ARE DISSEMINATED IN THE HOST ROCK.
OCCUR.....ZN PB CU
NON-PRODUCER MAIN.....ZN PB CU
NON-PRODUCER MINOR.....AU AG PYR PYR1
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....NEW JERSEY ZINC CO. (MINERAL RIGHTS)
OPERATOR.....NEW JERSEY ZINC CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....DEPOSIT APPARENTLY PROSPECTED PRIOR TO DRILLING BY FREEPORT SULPHUR CO., THIS MAY HAVE BEEN AN EXTENSION OF THE KENT PROSPECT LOCATED ABOUT 150 M NNE.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS (?)
MAXIMUM THICKNESS.....0.15 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....THICKNESS IS FOR MASSIVE SULFIDE BANDS
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....IN 1957, OLD PITS AND THREE CAVED PROSPECT SHAFTS WERE EVIDENT.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....FERRUGINOUS QUARTZ-SERICITE SCHIST, SERICITE METAQUARTZITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE (SERICITE)
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, COLUMBIA SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....FROM VOLCANIC EXHALATIONS (?)
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GEOLOGICAL DESCRIPTIVE NOTES.....SIMILAR TO AND IN LINE OF STRIKE WITH THE ARMINIUS AND BOYD SMITH MINES.
NON-USGS WORK.....DIREXPL EXPLORATORY SHAFTS AND PITS DUG
NON-USGS WORK.....1952 DIREXPL FREEPORT SULPHUR CO.: DRILLED ONE HOLE
NON-USGS WORK.....1958 DIREXPL NEW JERSEY ZINC CO.: DRILLED GEOCHEMICAL ANOMALY.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.

8. Julia Mine

MRDS-REV RECORD NUMBER.....774
MRDS RECORD NUMBER.....W000472
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-029
REPORT DATE.....72 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 08
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D. C.)
SITE NAME.....JULIA MINE
SYNONYM NAME.....JULIAN MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...MINERAL , VA. SECOND QUAD SCALE 1:24000
ELEVATION.....430 FT (130 M)
UTM NORTHING...4210680 EASTING...243210 ZONE...+18
LATITUDE.....38-00-34N LONGITUDE.....077-55-29W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.5 KM (0.9 MI) WEST OF MINERAL.
LOCATION COMMENTS.....OFF SW SIDE OF STATE ROAD 645, 1.3 KM (0.8 MI) BY ROAD SW OF JUNCTION WITH STATE HWY. 22.
COMMODITIES PRESENT.....ZN PB CU PYR FE
COMMODITY INFO COMMENTS.....THE ORE IS SIMILAR TO THAT AT THE ARMINIUS MINE.
MAJOR.....PYR
MINOR.....FE
OCCUR.....ZN PB CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1892(?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1911
PRODUCTION YEARS.....1911
OWNER (PRESENT/LAST).....HEMMER HEIRS
OPERATOR.....HEMMER HEIRS
ECONOMIC COMMENTS.....MINE WAS FIRST AND ONLY TO USE A ROD AND BALL MILL AS OPPOSED TO JIGGING EQUIPMENT.
EXPLORATION AND DEVELOPMENT COMMENTS.....TWO SHAFTS (15 M & 20 M) SUNK IN 1892 BY WASHINGTON PYRITE CO. ON PROPERTY BELIEVED TO BE THE JULIA MINE. HEMMER HEIRS REPORTEDLY REOPENED MINE IN 1910 DEEPENING A SHAFT TO 33 M AND SHIPPING ORE IN 1911. MINE WAS IDLE UNTIL 1917, WHEN UNKNOWN PARTIES REOPENED MINE, SANK SEVERAL NEW SHAFTS AND SHIPPED ORE. IN 1950'S, NEW JERSEY ZINC CO. EXPLORED PROPERTY.
DEPOSIT TYPE.....STRATA-BOUND & STRATIFORM MASSIVE SULFIDE; GOSSAN
DEPOSIT FORM.....POD/LENS
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....IN 1890'S TWO "VEINS" DESCRIBED; ONE BEING SIMILAR TO ARMINIUS "VEIN." GOSSAN MARKED ON SURFACE FORNEARLY 606 M.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....33 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....TWO SHAFTS DRIVEN IN 1892 (15 & 20 M), ONE SHAFT DRIVEN TO 33 M IN 1910. MANY SHAFTS DRIVEN IN 1917, BUT DEPTHS NOT REPORTED. IN 1973, AREA WAS OVERGROWN WITH SEVERAL SHALLOW TRENCHES AND PITS, A CAVED SHAFT, CONCRETE FOUNDATIONS AND LOW DUMPS EVIDENT. MOST OF AREA USED FOR GARBAGE DUMP.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST, PHYLLITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE
TECTONIC SETTING.....EUGEOSYNCLINE (PIEDMONT)
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....FOLIATION STRIKES N20-30 DEG.E. AND DIP S 50 DEG. SW.
PROCESS OF CONCENTRATION/ENRICHMENT.....FROM VOLCANIC EMANATIONS.
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....PROBABLY ON THE SAME MINERALIZED ZONE AS THE ARMINIUS MINE.
GEOLOGICAL DESCRIPTIVE NOTES.....PYRITE ORE BODY STRIKES N. 20-30 DEG. E. AND DIPS 50 DEG. SW. PROBABLY ON THE SAME MINERALIZED ZONE AS THE ARMINIUS MINE.
NON-USGS WORK.....1892 DIREXPL WASHINGTON PYRITE CO.: CONDUCTED EARLIEST MINE DEVELOPMENT.
NON-USGS WORK.....1917 DIREXPL UNKNOWN OPERATOR RE-ESTABLISHED OPERATIONS.
NON-USGS WORK.....1953? DIREXPL NEW JERSEY ZINC CO.: EXPLORATION THROUGH DRILLING PROGRAM.
REPORTS AVAILABLE.....POOLE, J.W., 1973, ABANDONED MINE AND PROSPECT DATA (JULIA MINE) : VIRGINIA DIVISION OF MINERAL RESOURCES, UNPUBLISHED REPORT.
REFERENCE....CRAIG, J.R., MILLER, J.W., COX, L.J., KAZDA, R.F., 1978, ORES OF THE MINERAL DISTRICT, IN GAIR, J.E. (ED.), MASSIVE SULFIDES OF VIRGINIA FIELD TRIP GUIDEBOOK: INTERNATIONAL GEOLOGICAL CORRELATION PROGRAMME, PROJECT NO. 60, P. 26-31.
REFERENCE....PARKER, E.W., 1893, SULPHUR, IN U.S. GEOLOGICAL SURVEY MINERAL RESOURCES OF THE UNITED STATES, CALENDAR YEAR 1891: P. 564-571.
REFERENCE....PHALEN, W.C., 1911, SULPHUR AND PYRITE, IN U.S. GEOLOGICAL SURVEY MINERAL RESOURCES OF THE UNITED STATES, CALENDAR YEAR 1909, PART 2, NON-METALS: P. 685-696.
REFERENCE....WATSON, T.L., 1920, VIRGINIA, IN SMITH, P.S., SULPHUR, PYRITES, AND SULPHURIC ACID; IN U.S. GEOLOGICAL SURVEY, MINERAL RESOURCES OF THE UNITED STATES, 1917, PART 2 - NONMETALS: P. 53-55.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
				1918	HIGH GRADE ORE
ORE PYR	SML			1911	4-5 CARLOADS HIGH GRADE ORE

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE PYR	EST	13.700	MET TONS	1911,1918	

SOURCE OF PRODUCTION INFORMATION.....WATSON (1920), CRAIG AND OTHERS (1978), POOLE (1973)
PRODUCTION COMMENTS.....EXACT PRODUCTION FIGURES AND YEARS UNKNOWN. IN 1911 FOUR TO FIVE CARLOADS OF PYRITE WERE SHIPPED. SOME HIGH GRADE PYRITE ORE WAS PRODUCED IN 1918.

9. Stockton Mine

MRDS-REV RECORD NUMBER.....766
MRDS RECORD NUMBER.....W000471
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-028
REPORT DATE.....72 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 07
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....STOCKTON MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT

COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...MINERAL , VA SECOND QUAD SCALE 1:24000
ELEVATION.....380 FT (116 M)
UTM NORTHING...4210780 EASTING...246780 ZONE...+18
LATITUDE.....38-00-40N LONGITUDE.....077-53-03W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....2.1 KM (1.3 MI) EAST OF MINERAL
LOCATION COMMENTS.....0.36 KM (0.23 MI) OFF SE SIDE OF STATE ROAD 703, 0.56 KM (0.35 MI) BY ROAD NNE OF JUNCTION WITH STATE ROAD 618.
COMMODITIES PRESENT.....AU PYR CU ZN PB
ORE MATERIALS.....NATIVE GOLD, AURIFEROUS PYRITE, CHALCOPYRITE, SPHALERITE, GALENA
MAJOR.....AU
OCCUR.....PYR CU ZN PB
PRODUCTION.....S
STATUS AND ACTIVITY.....4
NATURE OF DISCOVERY.....A
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....ON FISHER LODE
DESCRIPTION OF WORKINGS COMMENTS.....TWO WATER-FILLED PITS, THREE CAVED PITS, AND COVERED DUMP SEEN IN 1974.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....SCHIST
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GENERAL COMMENTS.....THERE IS ALMOST NO INFORMATION AVAILABLE CONCERNING THIS MINE. DEPOSIT APPEARS AS SYMBOL ON CLINE, WATSON, AND WRIGHT'S 1921 "GEOLOGIC MAP OF THE PYRITE-GOLD BELT IN LOUISA AND SPOTSYLVANIA COS., VA.
NON-USGS WORK.....1974 RECON VA DIV MIN RES: INSPECTED SITE.
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION, 19, 77 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAt AND RELATED ORE DEPOSITS OF VIRGINIA: VDMR, MIN. RES. REPT. 7, 167 P.
REFERENCE....PARDEE{ J.T., AND PARK, C.F., 1948, GOLD DEPOSITS OF THE SOUTHERN PIEDMONT: USGS PP 213, 152 P.
REFERENCE....CLINE, J.H., WATSON, T.t., AND WRIGHT, F.J., 1921{ A GEOLOGIC MAP OF THE GOLD-PYRITE BELT IN LOUISA AND SPOTSYLVANIA COUNTIES, VIRGINIA: VA. DIV. MIN. RES.
PRODUCTION COMMENTS.....THERE IS NO MENTION OF PRODUCTION.

10. Sulphur Mine

MRDS-REV RECORD NUMBER.....790
MRDS RECORD NUMBER.....W000457
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-014
REPORT DATE.....72 06
INFORMATION SOURCE.....123
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....SULPHUR MINE
SYNONYM NAME.....CRENSHAW MINE, VICTORIA FURNACE, SULPHUR
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...MINERAL , VA SECOND QUAD SCALE 1:24000
ELEVATION.....350 FT (107 M)
UTM NORTHING...4216330 EASTING...247160 ZONE...+18
LATITUDE.....38-03-41N LONGITUDE.....077-52-55W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....6.1 KM (3.8 MI) NE OF MINERAL
LOCATION COMMENTS.....0.4 KM (0.3 MI) SW OF U S HWY 522 BRIDGE OVER CONTRARY CREEK
COMMODITIES PRESENT.....ZN PB CU PYR FE
ORE MATERIALS.....PYRITE, PYRRHOTITE, CHALCOPYRITE, SPHALERITE, GALENA, GOETHITE, MAGNETITE, HEMATITE, NATIVE COPPER, CUPRITE
COMMODITY SUBTYPES.....POD/LENS
GENERAL ANALYTICAL DATA.....MINE CONCENTRATE FROM MILL WAS 42-48% SULFUR
COMMODITY INFO COMMENTS.....IRON WAS A MAJOR PRODUCT ONLY DURING 1800'S, WHEN GOSSAN WAS MINED
MAJOR.....PYR FE
MINOR.....CU
POTEN.....ZN PB
PRODUCTION.....M
STATUS AND ACTIVITY.....6
DISCOVERER.....MR MAYBERRY (?)
YEAR OF DISCOVERY.....1834(?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1882 *
PRODUCTION YEARS.....PRE 1922
OWNER (PRESENT/LAST).....GLATFELTER (?)
OPERATOR.....SULPHUR MINING AND RAILROAD CO
ECONOMIC COMMENTS.....THE MINE WAS CONNECTED WITH THE CHESAPEAKE AND OHIO RAILWAY AT MINERAL CITY BY A BROAD-GAUGE STEAM ROAD BUILT IN 1884.
EXPLORATION AND DEVELOPMENT COMMENTS.....* YEAR PYRITE WAS FIRST MINED, GOSSAN WAS MINED FOR IRON FROM 1834 TO 1877. FOR HISTORY OF OWNERS SEE KATZ (1961).
DEPOSIT TYPE.....STRATA-BOUND, STRATIFORM MASSIVE SULFIDE, GOSSAN
DEPOSIT FORM.....LENS-IRREGULAR
MAXIMUM LENGTH.....210 UNITS...M
MAXIMUM THICKNESS.....15 UNITS...M
DEPOSIT SIZE.....MEDIUM
STRIKE.....N 25 DEG E
DIP.....65 DEG SE
PLUNGE.....5 DEG
DIRECTION OF PLUNGE.....NE
DEPOSIT DESCRIPTION COMMENTS.....PROBABLY SEVERAL LENSES
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....226 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....11 SHAFTS WERE SUNK OVER PERIOD OF OPERATION. THE MILL WAS DISMANTLED AND REMOVED ON CLOSURE OF MINE. DURING THE MID TO LATE 1970'S FEDERAL FUNDS THROUGH THE STATE WATER CONTROL BOARD WERE USED TO CLEAN UP THE MINE TRAILINGS IN AND ALONG CONTRARY CREE. SEWAGE SLUDGE ALONG WITH AN ABUNDANCE OF LIME AND STRAW WAS USED DURING RECLAMATION AND REVEGETATION OF THE AREA.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST, CHLORITE-KYANITE SCHIST, MAGNETITE SCHIST, MARBLE
AGE OF IGNEOUS ROCK.....EPAL
IGNEOUS ROCK TYPE.....AMPHIBOLITE (METABASALT)
AGE OF MINERALIZATION.....EPAL
PERTINENT MINERALS (NOT ORE).....QUARTZ, ILMENITE, GAHNITE, CALCITE, ANKERITE, KYANITE, STAUROLITE, ALMANDINE, EPIDOTE, CLINOZOISITE, ALLANITE, SCHORL, ZIRCON, TREMOLITE, ACTINOLITE, HORNBLENDE, ANTHOPHYLLITE, SERPENTINE, CHLORITOID, PLAGIOCLASE, TALC, BIOTITE, MUSCOVITE
ORE CONTROL/LOCUS.....ELONGATE TROUGHS
TECTONIC SETTING.....EUGEOSNCLINE (PIEDMONT)
SIGNIFICANT ALTERATION.....HIGH TEMPERATURE LOW TO MEDIUM GRADE METAMORPHISM.
PROCESS OF CONCENTRATION/ENRICHMENT.....FROM VOLCANIC EMANATIONS
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
IGNEOUS UNIT AGE.....EPAL
IGNEOUS UNIT NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....ROCK TYPES REPRESENT METAFELSICS, METAVOLCANICS, AND METAPELITES
GENERAL COMMENTS.....THE GOSSAN OR LIMONITE CAP WAS FIRST MINED AND FURNACED PRIOR TO THE CIVIL WAR IN THE OLD VICTORIA FURNACE WHICH WAS CLOSED IN 1877. PYRITE MINING BEGAN IN 1882. IN 1906 3 OF THE 8 SHAFTS WERE WORKING. THE MINE WAS WORKED CONTINUOUSLY UNTIL 1922, MILL DISMANTLED AND REMOVED. COPPER RECOVERED LARGELY FROM GROUND WATER BY SPRAYING IRON PLATES WITH WATER
REGIONAL TRENDS.....NORTHEAST-SOUTHWEST
NON-USGS WORK.....1834 DIREXPL MR MAYBERRY: ERECTED VICTORIA FURNACE IN 1840. 1834 WAS FIRST IRON PRODUCTION
NON-USGS WORK.....1882 DIREXPL SULPHUR MINES CO OF VA: COMMENCED MINING OF PYRITE
NON-USGS WORK.....1920 OTHER SULPHUR MINING & RAILROAD CO: MINE ABANDONED
REFERENCE....LUTTRELL, G.W., 1966, VA. MIN. RES. REPORT 7, P. 125.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA, P. 201-202
REFERENCE....KATZ, A S, 1961, THE MINERALOGY OF THE SULPHUR MINE, MINERAL, VIRGINIA; INCLUDING A HISTORY OF THE PROPERTY: UNPUBLISHED M S THESIS, UNIVERSITY OF VIRGINIA, 104 P
REFERENCE....KINKEL, A R, JR, 1967, THE ORE KNOB COPPER DEPOSIT, NORTH CAROLINA, AND OTHER MASSIVE SULFIDE DEPOSITS OF THE APPALACHIANS: U S GEOLOGICAL SURVEY PROFESSIONAL PAPER 558, 58 P.
REFERENCE....POOLE, J.L., 1973, IRON SULFIDE MINES IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES VIRGINIA MINERALS, VOL. 19, NO. 3, P. 29-33.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE PYR	MED				ORE CONCENTRATES AVG. 42 % SULPHUR
ORE FE	SML				
CU	SML				$7000 IN RESIDUE ANNUALLY

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE PYR	EST	900.000	MET TONS	1882-1920	

SOURCE OF PRODUCTION INFORMATION.....KATZ (1961), GAIR (1978)
PRODUCTION COMMENTS.....EXACT PRODUCTION WAS UNKNOWN, BUT PYRITE ORE PRODUCTION WAS LARGE. MINOR GOSSAN IRON PRODUCED EARLIER

11. Tinder Mine

MRDS-REV RECORD NUMBER.....771
MRDS RECORD NUMBER.....W000477
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-034
REPORT DATE.....72 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.

UPDATED.....79 07
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....TINDER MINE
SYNONYM NAME.....TINDER FLAT S MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...LAKE ANNA WEST, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....270 FT (82 M)
UTM NORTHING...4216660 EASTING...248020 ZONE...+18
LATITUDE.....38-03-52N LONGITUDE.....077-52-20W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....6.84 KM (4.25 MI) NE OF MINERAL
LOCATION COMMENTS.....ON NORTH SIDE OF CONTRARY CREEK 0.72 KM (0.45 MI) EAST OF US HWY 522 BRIDGE OVER CONTRARY CREEK.
COMMODITIES PRESENT.....AU AG PB ZN SB
ORE MATERIALS.....AURIFEROUS PYRITE, ARGENTIFEROUS GALENA, SPHALERITE, BOULANGERITE , NATIVE GOLD
MAJOR.....AU
MINOR.....AG
OCCUR.....PB ZN SB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1830 (?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1830 (?)
PRODUCTION YEARS.....1830-1865.
EXPLORATION AND DEVELOPMENT COMMENTS.....PLACERS WERE MINED SPORADICALLY FROM THE 1830'S TO 1895. IN 1865 A QUARTZ VEIN HAD BEEN OPENED BY A SHAFT 13.7 M DEEP.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, PLACERS
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....BESIDES THE PLACER DEPOSITS A QUARTZ VEIN 1 M (3 FT) WIDE WAS OPENED.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....13.7 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, NUMEROUS WATER-FILLED PITS AND COVERED DUMPS WERE EVIDENT. IN 1865 A SHAFT 13.7 M (45 FT) DEEP HAD BEEN SUNK.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GENERAL COMMENTS.....THESE DEPOSITS WERE PERHAPS THE BEST KNOWN AND MOST PRODUCTIVE SOURCE OF PLACER GOLD IN THE EARLY DAYS OF VIRGINIA GOLD MINING. PLACERS WERE MINED SPORADICALLY FROM THE 1830'S TO 1895. A 45-FT. SHAFT WAS SUNK ON THE QUARTZ VEIN IN 1865.
NON-USGS WORK.....1830 DIREXPL DEVELOPMENT OF PLACER DEPOSIT FIRST, THEN DEVELOPMENT OF VEIN IN 1865.
NON-USGS WORK.....1895 OTHER PLACER BOTTOMS TESTED FOR FURTHER DEVELOPMENT, BUT NONE CARRIED OUT.
NON-USGS WORK.....1974 RECON VA DIV MIN RES: INSPECTED SITE.
REFERENCE....WATSON, T. L., 1907, MINERAL RESOURCES OF VA., P. 558.
REFERENCE....LUTTRELL, G. W., 1966, VA. MIN. RES. REPORT 7, P. 131.
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P
REFERENCE....CREDNER, H., 1869, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VII, P. 9
REFERENCE....SILLIMAN, B., 1837, REMARKS ON THE GOLD MINES AND ON PARTS OF THE GOLD REGION OF VIRGINIA: AMER. JOUR. SCI. AND ARTS, VOL. 32, P. 98-130.
SOURCE OF PRODUCTION INFORMATION.....LUTTRELL (1966)

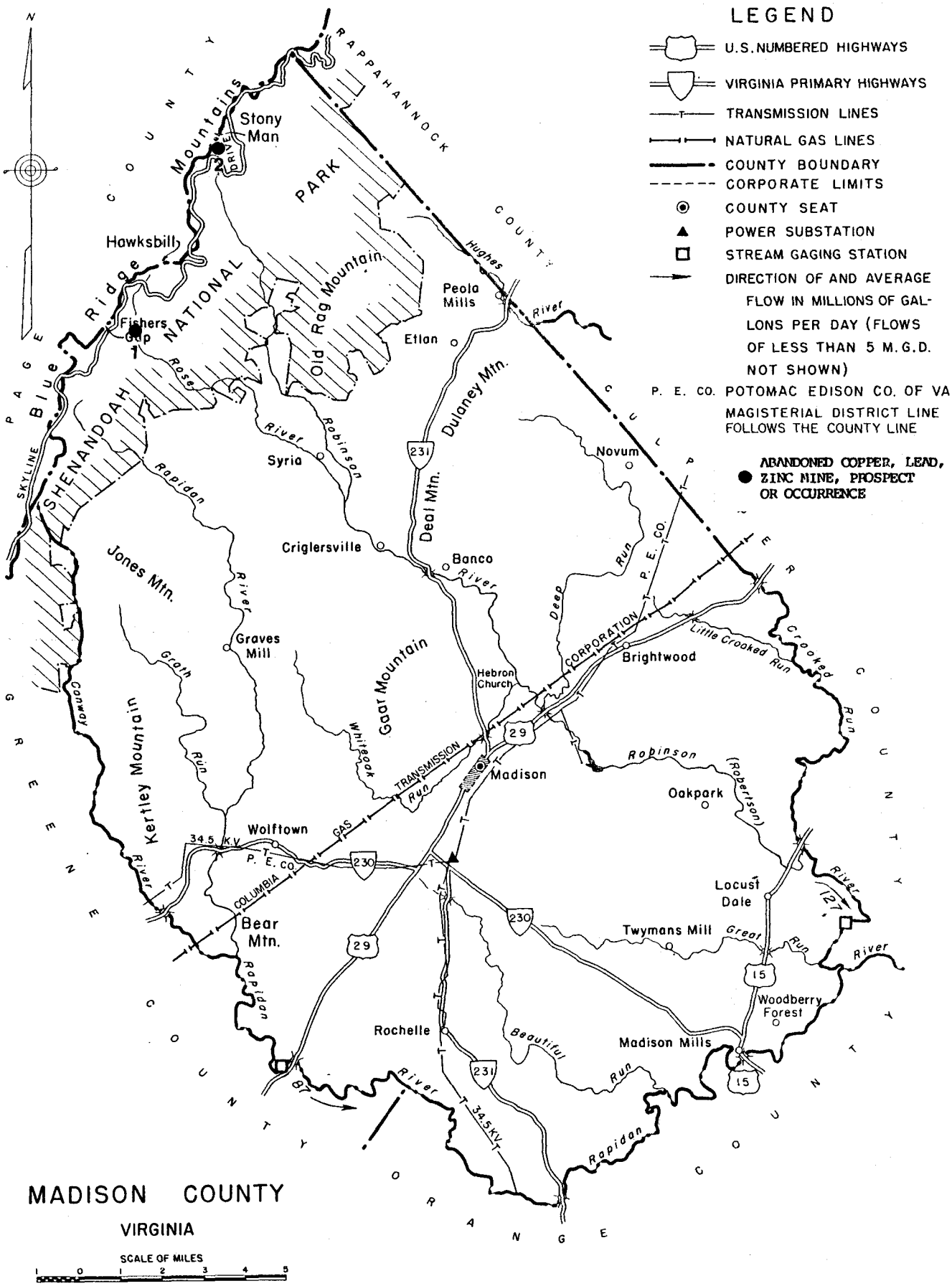
12. Walton Mine

MRDS-REV RECORD NUMBER.....762
MRDS RECORD NUMBER.....W000462
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-019
REPORT DATE.....72 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....82 01
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....WALTON MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...MINERAL , VA SECOND QUAD SCALE 1:24000
ELEVATION.....395 FT (120 M)
UTM NORTHING...4212810 EASTING...245180 ZONE...+18LATITUDE.....38-01-45N LONGITUDE.....077-54-11WACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....2.1 KM (1.3 MI) NORTH OF MINERAL.
LOCATION COMMENTS.....0.56 KM (0.35 MI) OFF NW SIDE OF US HWY 522, 1.4 KM (0.9 MI) BY ROAD NE OF JUNCTION WITH STATE ROAD 667.
COMMODITIES PRESENT.....AU PB ZN PYR SB
ORE MATERIALS.....PYRITE, CHALCOPYRITE, GALENA, SPHALERITE, GOLD, BOULANGERITE
COMMODITY INFO COMMENTS.....SAID TO HAVE PRODUCED VERY RICH ORE.
MAJOR.....AU
MINOR.....PYR
OCCUR.....PB ZN SB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
NATURE OF DISCOVERY.....A
PRODUCTION YEARS.....AROUND 1840
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE DEVELOPED IN FIRST HALF OF 19TH CENTURY. OWNED BY WALTON MINING CO IN 1836. INVOLVED IN LAND LITIGATION IN FIRST DECADE OF 20TH CENTURY.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....POD/LENS
DEPOSIT DESCRIPTION COMMENTS.....ON STRIKE WITH ARMINIUS MINE. THE VEIN CONTAINED IN A GANGUE OF QUARTZ,RICH POCKETS OF PYRITE, CHALCOPYRITE, GALENA, SPHALERITE AND FREE GOLD.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....46 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, A WATER-FILLED SHAFT, THREE CAVED PITS, AND DUMPS WERE SEEN. MINE CONSISTED OF NUMEROUS PITS AND A 46 M (150 FT) SHAFT.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST, CHLORITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GENERAL COMMENTS.....DEVELOPMENT CONSISTS OF A 150-FT SHAFT, FILLED IN 1865, AND NUMEROUS PITS. DURING ITS PERIOD OF OPERATION AROUND 1840 IT IS REPORTED TO HAVE BEEN ONE OF THE BEST PRODUCERS IN THE AREA.
GEOLOGICAL DESCRIPTIVE NOTES.....THIS MINE LIES ON LINE OF STRIKE OF THE ARMINIUS MINE, AND THE GEOLOGY IS THE SAME.
NON-USGS WORK.....1974 RECON VA DIV MIN RES: INSPECTED SITE
REFERENCE....LUTTRELL, G.W., 1966, VA. MIN. RES. REPORT 7, P. 139.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VA., P. 558
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P
REFERENCE....CREDNER, H., 1869, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VII, P. 9.
SOURCE OF PRODUCTION INFORMATION.....LUTTRELL REF.
PRODUCTION COMMENTS.....NO PRODUCTION FIGURES GIVEN, BUT REPORTED TO HAVE BEEN ONE OF THE BEST PRODUCERS IN REGION.

MADISON COUNTY

1. Dark Hollow Mine

MRDS-REV RECORD NUMBER.....806
MRDS RECORD NUMBER.....W030918
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....87 07
UPDATER.....SWEET, P. C.
SITE NAME.....DARK HOLLOW MINE
SYNONYM NAME.....BLUE RIDGE COPPER CO. MINE
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....MADISON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....45
QUADRANGLE NAME..... BIG MEADOWS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2240 FT (683 M)
UTM NORTHING...4267280 EASTING...725840 ZONE...+17
LATITUDE.....38-31-38N LONGITUDE.....078-24-34W
POSITION FROM NEAREST LOCALITY.....2.3 KM (1.5 MI) EAST OF BIG MEADOWS AND 1.3 KM (0.8 MI) SE OF FISHERS GAP.
LOCATION COMMENTS.....IN SHENANDOAH NATIONAL PARK.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....NATIVE COPPER, CUPRITE, CHALCOPYRITE, AZURITE, MALACHITE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....LATE 1840'S
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1850
OPERATOR.....BLUE RIDGE COPPER CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....WITH THE COPPER BOOM IN THE LATE 1840'S,THE MINER'S LODE COPPER CO ACQUIRED THE 5000 ACRE DARK HOLLOW TRACT. IN 1850, ORE WAS TRANSPORTED BY DONKEY TO THE FURNACE SPRING SMELTING PLANT NORTH OF STONY MAN.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LINEAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....COPPER MINERALIZATION OCCURS IN A GANGUE OF QUARTZ, CALCITE, EPIDOTE, AND SERPENTINE IN JOINT PLANES IN EPIDOTIZED CATICTIN GREENSTONE NEAR ITS CONTACT WITH INTRUSIVE MASS OF


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
P. E. CO. POTOMAC EDISON CO. OF VA.
MAGISTERIAL DISTRICT LINE FOLLOWS THE COUNTY LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
N
RAPPAHANNOCK COUNTY
CULPEPER COUNTY
PAGE COUNTY
GREENE COUNTY
ORANGE COUNTY
SHENANDOAH NATIONAL PARK
Blue Ridge Mountains
Stony Man
Hawksbill
Fishers Gap
Old Rag Mountain
Peola Mills
Etlan
Dulaney Mtn.
Deal Mtn.
Syria
Novum
Criglersville
Banco
Jones Mtn.
Graves Mill
Gaar Mountain
Hebron Church
Brightwood
Madison
Oakpark
Kertley Mountain
Wolftown
Bear Mtn.
Locust Dale
Twymans Mill
Woodberry Forest
Rochelle
Madison Mills
Hughes River
Rose River
Robinson River
Rapidan River
Deep Run
Little Crooked Run
Crooked Run
Robinson (Robertson)
Great Run
Beautiful Run
Whiteoak Run
Grath Run
Conway River
Rapidan River
SKYLINE DRIVE
P. E. CO.
CORPORATION
TRANSMISSION
GAS
COLUMBIA
34.5 K.V.
34.5KV
231
29
230
15
127
87
MADISON COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5

SYENITE. NATIVE COPPER ALSO OCCURS AS DISEMMINATIONS IN THE GREENSTONE.
DESCRIPTION OF WORKINGS.....U
LENGTH OF WORKINGS.....21 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS LIE CLOSE TO METABASALT-SYENITE CONTACT. IN 1973, THE REMAINS OF ONE SMALL PIT AND A CONCRETE FOUNDATION WERE OBSERVED AT THE MINE SITE. EARLIER REPORTS INDICATE A 13 M INCLINED SHAFT WAS SUNK AND A FEW TONS OF ORE REMOVED. A 12M DRIFT RUNS IN A NE DIRECTION FROM THE BOTTOM OF THIS SHAFT. OLDEST SHAFT LOCATED 30M ABOVE THE MOUTH OF THE OTHER AT A POINT ABOUT 75M ABOVE THE CONFLUENCE OF TWO MAIN HEADWATER BRANCHES OF THE ROBINSON RIVER. TWO DRIFTS RUN FROM THE OLDEST SHAFT. ONE RUNS N. 12 DEG. W. FOR 6M, THE OTHER S 12 DEG. E FOR 3M. A THIRD SHAFT WAS BEGUN IN 1904 LOCATED NW OF AND UPHILL FROM THE OLDEST SHAFT.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT, EPIDOSITE
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT, SYENITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, CALCITE, EPIDOTE, SERPENTINE
ORE CONTROL/LOCUS.....JOINTING
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
PROCESS OF CONCENTRATION/ENRICHMENT.....PERCOLATION OF SURFACE WATERS.
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
FORMATION NAME.....PEDLAR FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
IGNEOUS UNIT NAME.....PEDLAR FORMATION
GEOLOGY COMMENTS.....ORE IS CONFINED TO THE METABASALT AND IS NOT OBSERVED IN THE SYENITE. ASSOCIATED SERPENTINE IS ASBESTIFORM. OCCURRENCE OF THE ORE IS RELATED TO THE JOINT PLANES.
NON-USGS WORK.....1902 DIREXPL BLUE RIDGE COPPER CO.: 3 SHAFTS SUNK.
NON-USGS WORK.....1973 RECON VA. DIV. OF MINERAL RE SOURCES: SITE LOCATED.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....WEED, H.W., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....POLLOCK, G. F., 1960, SKYLAND, CHESAPEAKE BOOK CO., 283P.
SOURCE OF PRODUCTION INFORMATION.....WEED (1911)

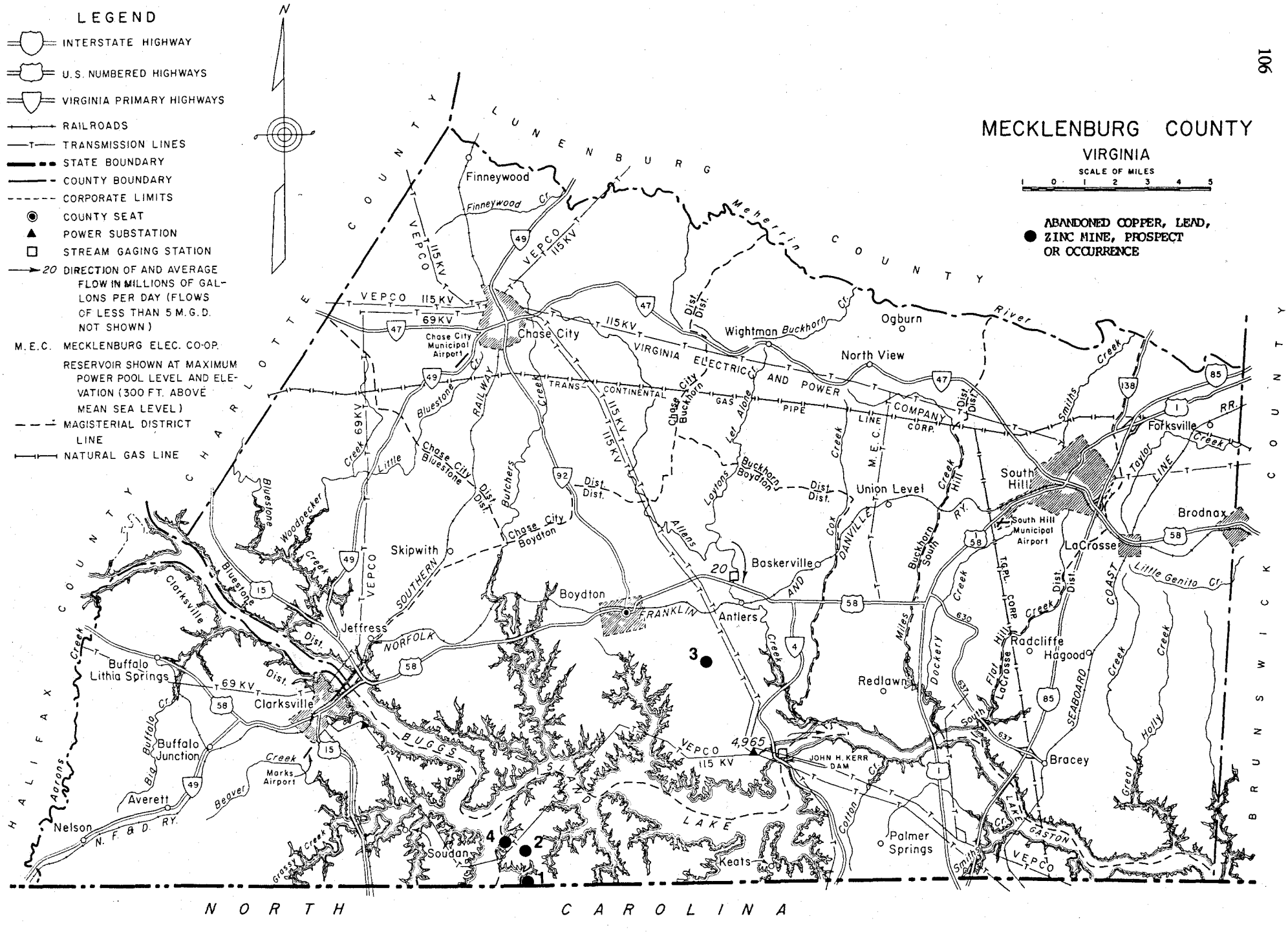
2. Stoney Man Mine

MRDS-REV RECORD NUMBER.....805
MRDS RECORD NUMBER.....W030919
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 07
UPDATER.....SWEET,P. C./TRIMBLE, DAVID, C.
SITE NAME.....STONEY MAN MINE
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....MADISON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....45
QUADRANGLE NAME..... OLD RAG MTN., VA. QUADRANGLE SCALE 1:24000
ELEVATION.....3980 FT (1213 M)
UTM NORTHING...4275140 EASTING...728810 ZONE...+17
LATITUDE.....38-35-50N LONGITUDE.....078-22-22W
POSITION FROM NEAREST LOCALITY.....2.3 MI (3.7 KM) NW OF IDA.
LOCATION COMMENTS.....IN SHENANDOAH NATIONAL PARK, ON STONEY MAN NATURE TRAIL
COMMODITIES PRESENT.....CU
ORE MATERIALS.....NATIVE COPPER, CUPRITE, AZURITE, MALACHITE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1850
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1850
OWNER (PRESENT/LAST).....SHENANDOAH NATIONAL PARK
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WAS OPENED IN THE 1850'S AND WAS WORKED AGAIN IN THE EARLY 1900'S. THE ORE WAS HAULED TO FURNACE SPRINGS FOR SMELTING. IN 1850, MINER'S LODE COPPER CO. ACQUIRED THE 5371 ACRE STONY MAN TRACT.
DEPOSIT TYPE.....PORPHYRY, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION OCCURRED AS DISSEMINATED PARTICLES AND IRREGULAR SEGREGATIONS IN JOINTS AND FRACTURES OF THE CATOCTIN GREENSTONE. THESE OPENINGS WERE FILLED WITH WHITE QUARTZ AND ADJACENT GREENSTONE WAS EPIDOTIZED. ORE APPEARS TO BE CONFINED TO ZONES IN THE ROCK WHICH HAVE BEEN THOROUGHLY EPIDOTIZED BUT IS NOT AN INVARIABLE AC COMPANIMENT OF EPIDOTIZATION.
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....ORIGINAL WORKINGS CONSISTED OF AN 18-M (60-FT) DEEP SHAFT AND AN OPENCUT, 15 TO 18 M (50 TO 60 FT) LONG, 3 TO 4.6 M (10 TO 15 FT) WIDE, AND UP TO 9 M (30 FT) DEEP. IN 1973 THERE WERE SEVERAL PITS, 1.5 M (5 FT) BY 3 M (10 FT) AND 1 M (3 FT) DEEP. THE ONLY MINERALIZATION SEEN IN 1973 WAS MALACHITE AND AZURITE STAINING ON FRACTURE AND JOINT SURFACES.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT, EPIDOSITE
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT, GRANODIORITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE, ACTINOLITE ASBESTOS
ORE CONTROL/LOCUS.....JOINTS AND FRACTURES
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
FORMATION AGE.....PREC
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
FORMATION NAME.....PEDLAR FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
IGNEOUS UNIT NAME.....PEDLAR FORMATION
GEOLOGY COMMENTS.....TWO WELL-DEFINED JOINT SETS, ONE STRIKING N20E WITH STEEP SE DIP, OTHER STRIKING N60W WITH STEEP NE DIP. IN 1973, NO PRIMARY MINERALIZATION EVIDENT, MALACHITE AND MINOR AZURITE OBSERVED ON FRACTURE AND JOINT SURFACES.
GENERAL COMMENTS.....SOME OF GREENSTONE MATERIAL IN THE DUMP HAS PROBABLY BEEN CRUSHED AND USED AS ROADSTONE ON THE NEARBY TRAILS.
WORK DONE BY USGS.....1911 RECON W.H. WEED, LOCATED AND DESCRIBED.
NON-USGS WORK.....1850 DIREXPL
NON-USGS WORK.....1900 DIREXPL
NON-USGS WORK.....1973 RECON VA. DIV. MIN. RES; LOCATED.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VA. DIV. MIN. RES. PUBLICATION 27, P. 39-52.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....ALLEN, R.M., JR., 1963, GEOLOGY AND MINERAL RESOURCES OF GREENE AND MADISON COUNTIES: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 78, 102 P.
REFERENCE....ALLEN, R.M., JR., 1967, GEOLOGY AND MINERAL RESOURCES OF PAGE COUNTY: VA. DIV. MIN. RES. BULL. 81, 78 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, J.P. BELL CO., 618 P.
REFERENCE....PHALEN, W.C., 1906, COPPER DEPOSITS NEAR LURAY, VIRGINIA: USGS BULL. 285-B, PP. 140-145.
REFERENCE....POLLOCK, G.F., 1960, SKYLAND, CHESAPEAKE BOOK CO., 283 P.

MECKLENBURG COUNTY

1. Burwell Prospect

MRDS-REV RECORD NUMBER.....809
MRDS RECORD NUMBER.....W031209
RECORD TYPE.....X1M
REPORT DATE.....79 11
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 07
UPDATER.....SWEET, P. C.
SITE NAME.....BURWELL PROSPECT
MINING DISTRICT/AREA.....HAMME TUNGSTEN
COUNTRY.....US STATE.....VA COUNTY.....MECKLENBURG
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03010102 SOUTH ATLANTIC-GULF
LAND STATUS.....01
QUADRANGLE NAME..... TUNGSTEN, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....300 FT (91 M)
UTM NORTHING...4047380 EASTING...727870 ZONE...+17
LATITUDE.....36-32-47N LONGITUDE.....078-27-16W
POSITION FROM NEAREST LOCALITY.....3.5 KM (2.2 MI) NNE OF TUNGSTEN, N. C.
LOCATION COMMENTS.....1.6 KM (1.0 MI) NORTH ALONG RIDGE FROM END OF PRIVATE ROAD, 1.0 KM (0.6 MI) BY ROAD NW FROM JUNCTION WITH N.C. STATE ROAD, 3.0 KM (1.9 MI) BY ROAD SE OF JUNCTION WITH N.C. EXTENSION OF VA STATE ROAD 825. VEIN SYSTEM AND WORKINGS CONTINUE SOUTHEAST ALONG RIDGE FOR 0.9 KM (0.6 MI).
COMMODITIES PRESENT.....W PB ZN CU AG BI PYR
ORE MATERIALS.....HUBNERITE, GALENA, SPHALERITE, CHALCOPYRITE, SCHEELITE, TETRAHEDRITE, PYRITE, BINDHEIMITE, TUNGSTITE, CUPROTUNGSTITE
GENERAL ANALYTICAL DATA.....SAMPLES FROM USBM DRILL HOLES 37 & 40 AND TRENCHES 134-138 SHOWED 0% WO3 WITH PYRITE, CHALCOPYRITE, AND GALENA (MCINTOSH, 1948).
COMMODITY INFO COMMENTS.....VEIN MINERALIZATION IS SPORADIC. GALENA CONTAINS SMALL AMOUNTS OF BISMUTH, TELLURIUM, AND SILVER.
NON-PRODUCER MAIN.....W
NON-PRODUCER MINOR.....PB ZN CU AG BI PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2


MECKLENBURG COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
M.E.C. MECKLENBURG ELEC. CO-OP. RESERVOIR SHOWN AT MAXIMUM POWER POOL LEVEL AND ELEVATION (300 FT. ABOVE MEAN SEA LEVEL)
MAGISTERIAL DISTRICT LINE
NATURAL GAS LINE
N
LUNENBURG COUNTY
CHARLOTTE COUNTY
HALIFAX COUNTY
BRUNSWICK COUNTY
NORTH CAROLINA
Finneywood
Chase City
Chase City Municipal Airport
Wightman
Ogburn
North View
Union Level
South Hill
South Hill Municipal Airport
Forksville
Brodnax
LaCrosse
Radcliffe
Hagood
Bracey
Redlawn
Baskerville
Antlers
Boydton
Skipwith
Jeffress
Clarksville
Buffalo Lithia Springs
Buffalo Junction
Averett
Nelson
Soudan
Keats
Palmer Springs
JOHN H. KERR DAM
Marks Airport
VIRGINIA ELECTRIC AND POWER COMPANY
TRANS-CONTINENTAL GAS PIPE LINE CORP.
VEPCO 115 KV
69 KV
SOUTHERN RAILWAY
NORFOLK
FRANKLIN
DANVILLE
SEABOARD COAST LINE RR.
BUGGS ISLAND LAKE
LAKE GASTON
N. F. & D. RY.
Meherrin River
Buckhorn Cr.
Finneywood Cr.
Bluestone Cr.
Little Bluestone
Woodpecker Creek
Clarksville Dist.
Chase City Dist.
Chase City Boydton
Butchers Creek
Allens Creek
Lawtons Creek
Let Alone Creek
Buckhorn Boydton
Cox Creek
Miles Creek
Dockery Creek
Smiths Creek
Taylor Creek
Little Genito Cr.
Great Holly Creek
Cotton Cr.
Grassy Creek
Beaver Creek
Big Buffalo Cr.
Aarons Creek
Flat Hill Creek
Hill Creek
Buckhorn South
T.G.P.L. CORP.
M.E.C.
4,965
20
1
2
3
4

YEAR OF DISCOVERY.....1943
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....SOUTHERN AGGREGATES CORP. (R.G. LASSITER)
OPERATOR.....SOUTHERN AGGREGATES CORP. (R.G. LASSITER)
EXPLORATION AND DEVELOPMENT COMMENTS.....PRESENCE OF WOLFRAMITE FIRST REPORTED IN DISTRICT IN 1901, BUT INTENSIVE EXPLORATION NOT BEGUN UNTIL 1942. DISCOVERY OF BURWELL VEIN NOT DELINEATED; HOWEVER IN 1943 VEINS PROSPECTED BY SOUTHERN AGGREGATES CORP. BY SURFACE MINING TECHNIQUES. IN 1943, U.S. BUREAU OF MINES EXPLORED SOUTHERN PORTION OF VEIN SYSTEM BY TRENCHING AND DRILLING. IN 1944, SOUTHERN AGGREGATES CORP. CARRIED OUT EXPLORATORY DRILLING PROGRAM.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LINEAR, PINCH AND SWELL
DEPTH TO BOTTOM.....44.8 UNITS...M
MAXIMUM LENGTH.....300 UNITS...M
MAXIMUM WIDTH.....2.4 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NW
DIP.....70 DEG NE
DEPOSIT DESCRIPTION COMMENTS.....WIDTH AND DEPTH BASED ON USBM DATA (MCINTOSH, 1948) AND LENGTH BASED ON MAP BY ESPENSHADE (1947, PLATE 1). NORTHERN MOST VEIN STRIKES ALMOST E-W.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS CONFINED TO EXPLORATORY TRENCHING. IN 1973, TRENCH (24 M X 8 M X 6 M DEEP) EVIDENT ON NORTHERN-MOST VEIN.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....GRANODIORITE
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....GRANODIORITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, SERICITE, FLUORITE, RHODOCHROSITE (?)
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....HOMOCLINE, NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....SPEWMARROW SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....MAGMATIC DIFFERENTIATION/HYDROTHERMAL
FORMATION AGE.....PREC
FORMATION NAME.....ALBITE GRANODIORITE
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....ALBITE GRANODIORITE
GEOLOGY COMMENTS.....GRANODIORITE SHOWN ON GEOLOGIC MAP OF VIRGINIA (1963) AS "REDOAK GRANITE." IGNEOUS ORIGIN OF GRANODIORITE IS QUESTIONABLE (PARKER, 1963).
GENERAL COMMENTS.....VEINS EXPLORED BY USBM (MCINTOSH, 1948) PROBABLY EQUIVALENT TO BARREN QUARTZ VEINS AS SHOWN BY PARKER (1963). QUARTZ-HUBNERITE VEINS LOCATED TO NW OF AREA.
SOURCE REFERENCE.....MCINTOSH (1948)
WORK DONE BY USGS.....1943 GEOLMAP G.H. ESPENSHADE: BULLETIN ISSUED.
WORK DONE BY USGS.....1949 GEOLMAP J.M. PARKER: BULLETIN ISSUED.
NON-USGS WORK.....1943 DIREXPL SOUTHERN AGGREGATES CORP.: EXP. SURFACE MINING
NON-USGS WORK.....1943 DIREXPL U.S. BUREAU OF MINES: TRENCHING & DRILLING.
NON-USGS WORK.....1973 RECON VA. DIV. MIN. RES.: SITE INSPECTED.
REFERENCE....ESPENSHADE, G.H., 1947, TUNGSTEN DEPOSITS OF VANCE COUNTY, NORTH CAROLINA, AND MECKLENBURG COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 948-A, 17 P.
REFERENCE....LAURENCE, R.A., 1968, ORE DEPOSITS OF THE SOUTHERN APPALACHIANS, IN RIDGE, J.D. (ED), ORE DEPOSITS OF THE UNITED STATES, 1933 -1967, VOL. I: NEW YORK, AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, P. 155-168.
REFERENCE....MCINTOSH, F.K., 1948, INVESTIGATION OF THE HAMME TUNGSTEN DISTRICT, VANCE COUNTY, N.C., AND MECK LENBURG COUNTY, VA.: U.S. BUREAU MINES REPORT OF INVESTIGATIONS 4380, 6 P.
REFERENCE....PARKER, J.M., III, 1963, GEOLOGIC SETTING OF THE HAMME TUNGSTEN DISTRICT, NORTH CAROLINA AND VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 1122-G, 69 P.

2. Kimball Prospect

MRDS-REV RECORD NUMBER.....808
MRDS RECORD NUMBER.....W031207
RECORD TYPE.....X1M
REPORT DATE.....79 11
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....KIMBALL PROSPECT
MINING DISTRICT/AREA.....HAMME TUNGSTEN
COUNTRY.....US STATE.....VA COUNTY.....MECKLENBURG
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... TUNGSTEN, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....375 FT (114 M)
UTM NORTHING...4048280 EASTING...728230 ZONE...+17
LATITUDE.....36-33-16N LONGITUDE.....078-27-00W
POSITION FROM NEAREST LOCALITY.....4.75 KM (2.95 MI) NNE OF TUNGSTEN, N.C.
LOCATION COMMENTS.....300 M (1000 FT) EAST OF ROAD, 0.2 KM (0.1 MI) BY ROAD SOUTH OF JUNCTION WITH STATE ROAD 825, 0.8 KM (0.5 MI) SW OF JUNCTION WITH STATE ROAD 719.
COMMODITIES PRESENT.....W PB ZN CU PYR
ORE MATERIALS.....HUBNERITE, GALENA, SPHALERITE, CHALCOPYRITE, SCHEELITE, TETRAHEDRITE, PYRITE, BINDHEIMITE, TUNGSTITE, CUPROTUNGSTITE
COMMODITY INFO COMMENTS.....VEIN MINERALIZATION IS SPORADIC.
NON-PRODUCER MAIN.....W
NON-PRODUCER MINOR.....PB ZN CU PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1943
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....SOUTHERN AGGREGATES CORP. (R.G. LASSITER)
OPERATOR.....SOUTHERN AGGREGATES CORP. (R.G. LASSITER)
EXPLORATION AND DEVELOPMENT COMMENTS.....PRESENCE OF WOLFRAMITE FIRST REPORTED IN DISTRICT IN 1901, BUT INTENSIVE EXPLORATION NOT BEGUN UNTIL 1942. KIMBALL VEIN EXPLORED BY SOUTHERN AGGREGATES CORP. USING SURFACE MINING METHODS IN 1943 AND FURTHER EXPLORED BY DRILLING IN 1944. NO ADDITIONAL WORK HAS BEEN CONDUCTED.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LINEAR, PINCH AND SWELL
MAXIMUM LENGTH.....518 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NW
DIP.....40-50 DEG NE
DEPOSIT DESCRIPTION COMMENTS.....THIS IS ONE OF THE MOST PERSISTENT VEINS IN LENGTH IN REGION.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....EXPLORATORY SURFACE MINING CONDUCTED. IN 1973, A TRENCH, 84 M X 11 M X 3 M DEEP, WAS EVIDENT.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....GRANODIORITE
AGE OF IGNEOUS ROCK.....PAL
IGNEOUS ROCK TYPE.....GRANODIORITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, SERICITE, FLUORITE, RHODOCHROSITE (?)
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....HOMOCLINE, NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....SPEWMARROW SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....MAGMATIC DIFFERENTIATION/HYDROTHERMAL
FORMATION AGE.....PAL
FORMATION NAME.....ALBITE GRANODIORITE
IGNEOUS UNIT AGE.....PAL
IGNEOUS UNIT NAME.....ALBITE GRANODIORITE
GEOLOGY COMMENTS.....GRANODIORITE SHOWN ON GEOLOGIC MAP OF VIRGINIA (1963) AS "REDOAK GRANITE." IGNEOUS ORIGIN OF GRANODIORITE IS QUESTIONABLE (PARKER, 1963).
WORK DONE BY USGS.....1943 GEOLMAP G.H. ESPENSHADE: BULLETIN ISSUED.
WORK DONE BY USGS.....1949 GEOLMAP J.M. PARKER, III: BULLETIN ISSUED

NON-USGS WORK.....1943 DIREXPL SOUTHERN AGGREGATES CORP.: CONDUCTED EXPLORATORY MINING.
NON-USGS WORK.....1973 RECON VA. DIV. MIN. RES.: INSPECTED SITE
REFERENCE....ESPENSHADE, G.H., 1947, TUNGSTEN DEPOSITS OF VANCE COUNTY, NORTH CAROLINA, AND MECKLENBURG COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 948-A, 17 P.
REFERENCE....LAURENCE, R.A., 1968, ORE DEPOSITS OF THE SOUTHERN APPALACHIANS, IN RIDGE, J.D., (ED.), ORE DEPOSITS OF THE UNITED STATES, 1933-1967, VOL. I: NEW YORK, AMERERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, P. 155-168.
REFERENCE....PARKER, J.M., III, 1963, GEOLOGIC SETTING OF THE HAMME TUNGSTEN DISTRICT, NORTH CAROLINA AND VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 1122-G, 69 P.

3. Stith Mine

MRDS-REV RECORD NUMBER.....1550
MRDS RECORD NUMBER.....W055412
RECORD TYPE.....X1M
REPORT DATE.....87 02
INFORMATION SOURCE.....531
FILE LINK ID.....1550
REPORTER.....SWEET, PALMER C
REPORTER AFFILIATION.....VDMR
SITE NAME.....STITH MINE
SYNONYM NAME.....OLD STERLING, MORATOCK COPPER, ENGLISH
COUNTRY.....US STATE.....VA COUNTY.....MECKLENBURG
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT PROVINCE
DRAINAGE AREA.....03010106 SOUTH ATLANTIC-GULF
LAND STATUS.....01 (1968)
QUADRANGLE NAME..... BASKERVILLE (1968) QUADRANGLE SCALE 1:24000
ELEVATION.....290 FT
UTM NORTHING...4058640 EASTING...737350 ZONE...+17
ACCURACY.....ACC
LOCATION COMMENTS.....0.85 MILES NORTH OF STATE ROAD 615 ALONG MINES CREEK
COMMODITIES PRESENT.....CU AU AG
ORE MATERIALS.....CUPRITE, CHALCOCITE, MALACHITE
GENERAL ANALYTICAL DATA.....1.82 OZ AG/TON AND 0.006 OZ AU/TON (BARRINGER RESOURCES-1984); 0.056 OZ AG/TON AND 7.24 OZ AG/TON (IRON KING ASSAY, INC. 1984).
COMMODITY INFO COMMENTS.....J.D. BOUSHALL, LETTER IN 1942, REPORTED A DEBRIS FILLED SHAFT AND THAT THE MINE CARRIED A SUPERIOR GRADE OF COPPER COMBINED WITH SILVER.
MAJOR.....CU AG
MINOR.....AU

PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE 1733
YEAR OF FIRST PRODUCTION.....1733
YEAR OF LAST PRODUCTION.....1919 (?)
OWNER (PRESENT/LAST).....CHAMPION INTERNATIONAL CORPORATION
STRIKE.....N 10 E
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....IN EARLY 1984, 2 WATER-FILLED SHAFTS (12 FT ACROSS), SEVERAL SHALLOW PITS AND TRENCHES (UP TO 70 FT LONG), A LARGE CREEKSIDE DUMP.
HOST ROCK AGE.....CAMB
HOST ROCK TYPE.....PHYLLITES, GREENSTONE, TUFFS
PERTINENT MINERALS (NOT ORE).....QUARTZ, CHLORITE, EPIDOTE, MICA
FORMATION AGE.....CAMB
REFERENCE....SWEET, P.C. AND LOVETT, J.A., 1985, VIRGINIA MINERALS, VOL.31, NO. 4, P.42-51.
REFERENCE....SHORT, SHELTON P., 1984, PERSONAL COMMUNICATION
REFERENCE....TURPIN, E., 1938, THE OLD MINE'S SECRET; NEW YORK, THE MACMILLAN COMPANY, 303P.
REFERENCE....DABNEY, V., 1971, VIRGINIA-THE NEW DOMINION: DOUBLEDAY & COMPANY, INC., GARDEN CITY, NEW YORK, 629 P.

4. Taylor Prospect

MRDS-REV RECORD NUMBER.....807
MRDS RECORD NUMBER.....W031208
RECORD TYPE.....X1M
REPORT DATE.....79 11
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 07
UPDATER.....SWEET, P. C.
SITE NAME.....TAYLOR PROSPECT
MINING DISTRICT/AREA.....HAMME TUNGSTEN
COUNTRY.....US STATE.....VA COUNTY.....MECKLENBURG
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03010102 SOUTH ATLANTIC-GULF
LAND STATUS.....01
QUADRANGLE NAME..... TUNGSTEN, VA.-N.C. QUADRANGLE SCALE 1:24000
ELEVATION.....335 FT 7 M)
UTM NORTHING...4049090 EASTING...727610 ZONE...+17
LATITUDE.....36-33-43N LONGITUDE.....078-27-24W
POSITION FROM NEAREST LOCALITY.....5.5 KM (3.4 MI) NNE OF TUNGSTEN, N.C.
LOCATION COMMENTS.....110 M (360 FT) SW OF PRIVATE ROAD, 0.5 KM (0.3 MI) BY ROAD NW OF STATE ROAD 825, 0.3 KM (0.2 MI) WSW OF JUNCTION WITH STATE ROAD 719.
COMMODITIES PRESENT.....W PB ZN CU PYR
ORE MATERIALS.....HUBNERITE, GALENA, SPHALERITE, CHALCOPYRITE, SCHEELITE, TETRAHEDRITE, PYRITE, PYROMORPHITE, BINDHEIMITE, TUNGSTITE, CUPROTUNGSTITE
GENERAL ANALYTICAL DATA.....200 LB. SAMPLE ANALYZED AS: 0.65% WO3, 0.05-0.1% PBO, TR. MOO, 0.01-0.03 CUO, 0.01 AG. CONCENTRATES ASSAYING 69% WO3 COULD BE EXPECTED.
COMMODITY INFO COMMENTS.....VEIN MINERALIZATION IS SPOTTY.
NON-PRODUCER MAIN.....W
NON-PRODUCER MINOR.....PB ZN CU PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1943
NATURE OF DISCOVERY.....B
OWNER (PRESENT/LAST).....MS. G. N. TAYLOR
EXPLORATION AND DEVELOPMENT COMMENTS.....PRESENCE OF WOLFRAMITE FIRST REPORTED IN DISTRICT IN 1901, BUT INTENSIVE EXPLORATION NOT BEGUN UNTIL 1942. DISCOVERY OF TAYLOR VEIN NOT DELINEATED; HOWEVER IN 1944-1945, THE U.S. BUREAU OF MINES CONDUCTED EXTENSIVE TRENCHING AND DRILLING TO EVALUATE DEPOSIT.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LINEAR, PINCH AND SWELL
DEPTH TO BOTTOM.....13.4 UNITS...M
MAXIMUM LENGTH.....171 UNITS...M
MAXIMUM WIDTH.....0.5 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NEARLY N
DIP.....42-45 DEG E
DEPOSIT DESCRIPTION COMMENTS.....BELOW 13.4 M DEPTH, ONLY NARROW STRINGERS WERE FOUND. POSSIBLE EXTENSION LOCATED 122 M NORTH OF VEIN.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....VEIN UNCOVERED BY TRENCHING FOR 171 M, ADDITIONALLY, 732 M OF CROSS-TRENCHING AND TWO PITS WERE DUG. 414 M OF EXPLORATORY DRILLING CONDUCTED. IN 1973, SEVERAL TRENCHES AND A DUMP WERE EVIDENT.
HOST ROCK AGE.....PAL
HOST ROCK TYPE.....GRANODIORITE
AGE OF IGNEOUS ROCK.....PAL
IGNEOUS ROCK TYPE.....GRANODIORITE
PERTINENT MINERALS (NOT ORE).....QUARTZ, SERICITE, FLUORITE, RHODOCHROSITE (?)
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....HOMOCLINE, NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....SPEWMARROW SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....MAGMATIC DIFFERENTIATION/HYDROTHERMAL
FORMATION AGE.....PAL
FORMATION NAME.....ALBITE GRANODIORITE
IGNEOUS UNIT AGE.....PAL
IGNEOUS UNIT NAME.....ALBITE GRANODIORITE
GEOLOGY COMMENTS.....GRANODIORITE SHOWN ON GEOLOGIC MAP OF VIRGINIA (1963) AS "REDOAK GRANITE." IGNEOUS ORIGIN OF GRANODIORITE IS QUESTIONABLE (PARKER, 1963).
SOURCE REFERENCE.....ARGYLE (1946)
WORK DONE BY USGS.....1943 GEOLMAP G.H. ESPENSHADE: BULLETIN ISSUED.
WORK DONE BY USGS.....1949 GEOLMAP J.M. PARKER, III: BULLETIN ISSUED.
NON-USGS WORK.....1944 DIREXPL U.S. BUREAU OF MINES: AREA TRENCHED AND DRILLED.
NON-USGS WORK.....1973 RECON VA. DIV. MIN. RES.: SITE INSPECTED.
REFERENCE....ARGYLE, B.E., 1946, EXPLORATION OF THE MECKLENBURG COUNTY, VA., TUNGSTEN AREA: U.S. BUREAU OF MINES REPORT OF INVESTIGATIONS 3857, 5 P.
REFERENCE....ESPENSHADE, G.H., 1947, TUNGSTEN DEPOSITS OF VANCE COUNTY, NORTH CAROLINA, AND MECKLENBURG COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 948-A, 17 P.
REFERENCE....LAURENCE, R.A., 1968, ORE DEPOSITS OF THE SOUTHERN APPALACHIANS, IN RIDGE, J.D., (ED.), ORE DEPOSITS OF THE UNITED STATES, 1933-1967, VOL. I: NEW YORK, AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, P. 155-168.
REFERENCE....PARKER, J.M., III, 1963, GEOLOGIC SETTING OF THE HAMME TUNGSTEN DISTRICT, NORTH CAROLINA AND VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 1122-G, 69 P.

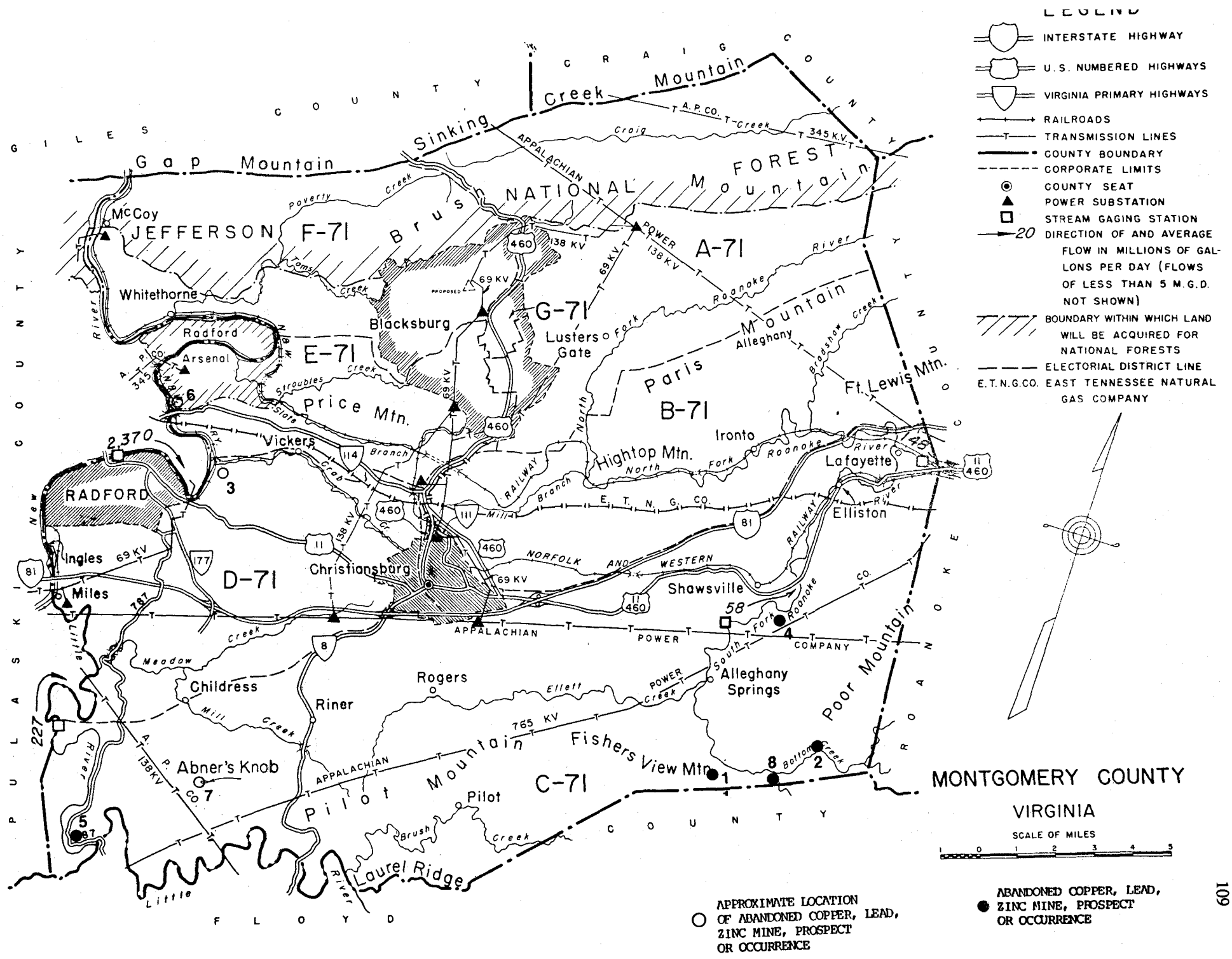
MONTGOMERY COUNTY

1. Alleghany Springs Prospect

MRDS-REV RECORD NUMBER.....822
MRDS RECORD NUMBER.....W031307
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....ALLEGHANY SPRINGS PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....MONTGOMERY
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....03 ROANOKE RIVER
QUADRANGLE NAME..... PROBABLY PILOT, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....37-06- N LONGITUDE.....080-15- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....FONTAINE (1883),P. 190-191) DESCRIBED THE DEPOSIT AS BEING 2.5 MI (4.0 KM) SOUTH OF ALLEGHANY SPRINGS.
COMMODITIES PRESENT.....ZN PB AG
ORE MATERIALS.....SPHALERITE, ARGENTIFEROUS GALENA
GENERAL ANALYTICAL DATA.....AG: 16 OZ/TON (FONTAINE, 1883).
NON-PRODUCER MAIN.....ZN PB
NON-PRODUCER MINOR.....AG
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....1880'S
NATURE OF DISCOVERY.....A
ECONOMIC COMMENTS.....WATSON (1905) DID NOT CONSIDER THE MONTGOMERY COUNTY DEPOSITS AS WORKABLE.
EXPLORATION AND DEVELOPMENT COMMENTS.....DEPOSIT APPARENTLY NEVER DEVELOPED.
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT
DEPOSIT SIZE.....SMALL(?)
DEPOSIT DESCRIPTION COMMENTS.....ORE MINERALS OCCUR AS LUMPS OR PARTICLES DISPERSED THROUGHOUT ROCKS.
HOST ROCK AGE.....CAMB
HOST ROCK TYPE.....DOLOSTONE, LIMESTONE
PERTINENT MINERALS (NOT ORE).....CALCITE, DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, FRIES FAULT, CHRISTIANSBURG FAULT
FORMATION AGE.....CAMB
FORMATION NAME.....ROME FORMATION
GEOLOGY COMMENTS.....ACCORDING TO DIETRICH (1954), THE ONLY CARBONATES IN THE AREA ARE IN THE ROME FORMATION, AS THE SHADY FORMATION DOES NOT CROP OUT.
NON-USGS WORK.....1953 GEOLMAP VA. ENG. EXPT. STAT.: MAPPED AREA
REFERENCE....DIETRICH, R.V., 1954, GEOLOGY OF THE PILOT MOUNTAIN AREA, VIRGINIA: BULLETIN OF THE VIRGINIA POLYTECHNIC INSTITUTE, ENGINEERING EXPERIMENT STATION SERIES NO. 91, V. 47, NO. 4, 32 P.
REFERENCE....FONTAINE, W.M., 1883-84, NOTES ON THE GEOLOGY AND MINERAL RESOURCES OF THE FLOYD, VA., PLATEAU: THE VIRGINIAS, V. 4, P. 167, 178-180, 185-192; V. 5, P. 8-12.

2. Camp Kiwanianna Prospect

MRDS-REV RECORD NUMBER.....819
MRDS RECORD NUMBER.....W031203
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....CAMP KIWANIANNA PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....MONTGOMERY
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE


LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
ELECTORIAL DISTRICT LINE
E.T.N.G.CO. EAST TENNESSEE NATURAL GAS COMPANY
MONTGOMERY COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
GILES COUNTY
CRAIG COUNTY
PULASKI COUNTY
ROANOKE COUNTY
FLOYD COUNTY
Gap Mountain
Sinking Creek Mountain
Brush Mountain
Paris Mountain
Price Mtn.
Hightop Mtn.
Ft. Lewis Mtn.
Poor Mountain
Pilot Mountain
Fishers View Mtn.
Laurel Ridge
JEFFERSON NATIONAL FOREST
F-71
A-71
G-71
E-71
B-71
D-71
C-71
McCoy
Whitethorne
Radford
Arsenal
Blacksburg
Lusters Gate
Vickers
RADFORD
Ingles
Miles
Christiansburg
Ironto
Lafayette
Elliston
Shawsville
Alleghany Springs
Childress
Riner
Rogers
Abner's Knob
Pilot
APPALACHIAN POWER COMPANY
NORFOLK AND WESTERN RAILWAY
E.T.N.G.CO.
A.P.CO.
345 K.V.
138 KV
69 KV
765 KV
2,370
227
58
145
460
114
111
11
81
177
8
1
2
3
4
5
6
7
8

DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... CHECK, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1660 FT (506 M)
UTM NORTHING...4107910 EASTING...570920 ZONE...+17
LATITUDE.....37-07-00N LONGITUDE.....080-12-06W
POSITION FROM NEAREST LOCALITY.....2.35 KM (1.45 MI) NE OF PIEDMONT.
LOCATION COMMENTS.....200 M (600 FT) EAST OF STATE ROAD 637 ON NORTH SIDE OF BOTTOM CREEK, 2.1 KM (1.3 MI) NE OF JUNCTION WITH STATE ROAD 607 IN PIEDMONT. SECOND MINERALIZED ZONE IS 400 M (1300 FT) NE AT UTM N 4108130., E 571210.
COMMODITIES PRESENT.....ZN CU AS AU PYR
ORE MATERIALS.....PYRITE, CHALCOPYRITE, SPHALERITE, ARSENOPYRITE, POSSIBLY NATIVE GOLD
COMMODITY INFO COMMENTS.....DIETRICH (1954) STATES THAT THE DEPOSIT HAS SIMILAR MINERALOGY TO THE TICES MILL PROSPECT, THE SECOND ZONE OF MINERALIZATION IS PREDOMINANTLY PYRITIC.
NON-PRODUCER MAIN.....ZN CU
NON-PRODUCER MINOR.....AS AU PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....THIS DEPOSIT HAS PROBABLY NOT BEEN THOROUGHLY PROSPECTED.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, REPLACEMENT, DISSEMINATED
PLUNGE.....SOUTH
DESCRIPTION OF WORKINGS COMMENTS.....NO WORKINGS WERE DESCRIBED
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOSTONE, DOLOSTONE BRECCIA, PYRITIFEROUS COARSE-GRAINED SANDSTONE
PERTINENT MINERALS (NOT ORE).....QUARTZ, DOLOMITE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, FRIES FAULT, POOR MOUNTAIN THRUST
SIGNIFICANT LOCAL STRUCTURES.....DRAG SYNCLINE
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION
NON-USGS WORK.....1953 GEOLMAP VA. ENG. EXP. STA: ISSUED SER. NO. 91.
REFERENCE....DIETRICH, R.V., 1954, GEOLOGY OF THE PILOT MOUNTAIN AREA, VIRGINIA: BULLETIN OF THE VIRGINIA POLYTECHNIC INSTITUTE, ENGINEERING EXPERIMENT STATION SERIES NO. 91, V. 47, NO. 4, 32 P

3. Cloyd Prospect

MRDS-REV RECORD NUMBER.....821
MRDS RECORD NUMBER.....W031308
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....CLOYD PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....MONTGOMERY
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... RADFORD NORTH, VA. (?) QUADRANGLE SCALE 1:24000
LATITUDE.....37-12- N LONGITUDE.....080-30- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....ACCORDING TO WATSON (1905), DEPOSIT IS LOCATED 8 MI (13 KM) SW OF BLACKSBURG ON THE NEW RIVER.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1905
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....CLOYD
ECONOMIC COMMENTS.....CURRIER (1935) STATES THAT, "OCCURRENCES OF LEAD AND ZINC IN MONTGOMERY COUNTY CONSTITUTE MEAGER SHOWINGS AND DO NOT YET WARRANT SERIOUS CONSIDERATION."
EXPLORATION AND DEVELOPMENT COMMENTS.....WATSON (1905) DOES NOT DELINEATE THE EXTENT OF DEVELOPMENT.
HOST ROCK AGE.....CAMB
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, PULASKI FAULT, BLACKSBURG SYNFORM, KLIPPE
FORMATION AGE.....CAMB
FORMATION AGE.....CAMB
FORMATION NAME.....ROME FORMATION
FORMATION NAME.....ELBROOK FORMATION
GEOLOGY COMMENTS.....FORMATIONS NOTED ABOVE COULD BE POSSIBLE HOST ROCKS.
GENERAL COMMENTS.....WATSON (1905, 1907) AND CURRIER (1935) ONLY MENTION THE EXISTENCE OF THIS PROSPECT. THE PROSPECT MAY BE THE SAME AS THE PEPPERS FERRY MINE.
NON-USGS WORK.....DIREXPL SITE PROSPECTED.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.

4. Langhorne and Wills Prospects

MRDS-REV RECORD NUMBER.....1715
MRDS RECORD NUMBER.....VA01715
RECORD TYPE.....X1M
REPORT DATE.....88 04
INFORMATION SOURCE.....13
REPORTER.....GOOD, RICHARD S. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....LANGHORNE AND WILLS PROSPECTS
SYNONYM NAME.....BONYS RUN PROSPECTS
MINING DISTRICT/AREA.....ROANOKE RIVER
COUNTRY.....US STATE.....VA COUNTY.....MONTGOMERY
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001
QUADRANGLE NAME..... ELLISTON (1972) QUADRANGLE SCALE 1:24000
ELEVATION.....1750 FT
UTM NORTHING...4112220 EASTING...567400 ZONE...+17
LATITUDE.....37-09-20N LONGITUDE.....080-14-28W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.1 MILE SSE OF SHAWSVILLE
LOCATION COMMENTS.....0.25 MI EAST ON PRIVATE ROAD FROM ROUTE 609 TO PADLOCKED CABLE GATE, THEN ABOUT 620 FEET NW UP TRAIL TO TWO 10-15 FOOT DEEP CUTS IN BEDROCK. OTHER WORKINGS INCLUDE SMALL ADIT ALONG PRIVATE ROAD 0.15 MI EAST OF ROUTE 609. PRIVATE ROAD LEADING TO WORKINGS IS 0.5 MILE NORTH OF INTERSECTION WITH 634 AND 0.4 MILE NORTH OF BONYS RUN CHURCH. ADDITIONAL WORKINGS ABOUT MILE AND HALF TO SE (SEE GENERAL COMMENTS).
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA, SMITHSONITE, HEMIMORPHITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PB
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1900
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....MADISON MYRE, ELLISTON, VIRGINIA
EXPLORATION AND DEVELOPMENT COMMENTS.....THE LANGHORNE PROPERTY WAS PROSPECTED BY OPEN PITS AROUND 1880 AND ADDITIONAL PROSPECTING CONDUCTED ON ADJOINING WILLS PROPERTY ABOUT 1905. RECENT PROSPECTING APPARENTLY WAS DONE IN 1960'S OR 1970'S OR THE OLD PROSPECTS WERE RE-EXAMINED BY AN UNKNOWN COMPANY, POSSIBLE NEW JERSEY ZINC.
DEPOSIT FORM.....DISSEMINATED; LENS
STRIKE.....N 35 E
DIP.....75 SE
DEPOSIT DESCRIPTION COMMENTS.....SCATTERED, RARE, DISSEMINATED DARK RED AND YELLOW SPHALERITE IRREGULAR MASSES UP TO 5 CM AND 1-3 MM DISSEMINATIONS OF FRESH GALENA IN GRAY DOLOMITE. WHITE AND GREY SHALE EXPOSED AT END OF ONE CUT. DOLOMITE IS FRACTURED AND CONTORTED IN CONTACT WITH SHALE.
DESCRIPTION OF WORKINGS COMMENTS.....TWO OPEN CUTS IN BEDROCK 15-20 FEET LONG AT END OF STEEP TRAIL ABOUT 620 FEET NW FROM PRIVATE ROAD. CUTS APPEAR FRESH AND TRAIL IS RECENT. OTHER WORKING IS AN ADIT ALONG PRIVATE ROAD ABOUT 15 FEET INTO SOUTH SIDE OF RAVINE. ADIT FLOOR CONTAINS 1-2 FEET OF WATER AND ADIT WALLS HAVE BEEN CONVERTED TO DRIPSTONE AND TUFA COVERED WITH MOSS. ROCK AT ENTRANCE IS N 25 W 70 SW.
HOST ROCK AGE..... CAMBRIAN
HOST ROCK TYPE.....DOLOMITE
IGNEOUS ROCK TYPE.....NONE KNOWN
AGE OF MINERALIZATION..... CAMBRIAN TO POST CAMBRIAN
PERTINENT MINERALS (NOT ORE).....DOLOMITE
TECTONIC SETTING.....MIDGEOSYLNCINE
SIGNIFICANT REGIONAL STRUCTURES.....PULASKI THRUST FAULT, POOR MOUNTAIN THRUST, CHRISTIANSBURG FENSTER
SIGNIFICANT ALTERATION.....OXIDATION OF ZINC SULFIDE
FORMATION AGE..... EARLY CAMBRIAN
FORMATION NAME.....ROME
GEOLOGY COMMENTS.....ROME SHALE 0.1 MILE WEST OF ADIT IS N-S AND 55 E SHALES ARE PURPLISH RED, BLACK AND GRAY.
GENERAL COMMENTS.....WATSON (1905, P. 74) MENTIONS PROSPECTS ON SW PART OF POOR MOUNTAIN AT ELEVATIONS OF 2000-2500 FEET 2.5 MILES SE OF SHAWSVILLE OR ABOUT 1.5 MILES FARTHER TO SE. THESE PROSPECTS SHOWED ONLY TRACES OF MINERALIZATION. THIN STRINGERS OF GALENA IN SHALEY BANDS OF LIMESTONE (ROME FORMATION) AND WERE LARGELY INACCESSIBLE AT TIME OF WATSON'S VISIT. THIS AREA OF WORKINGS NOT FIELD CHECKED. WATSON NOTED AVERAGE ATTITUDE (OF ROME FORMATION) AS N 30 3 / 65-75 SE.
REFERENCE....WATSON, T.L. ,1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: GEOLOGICAL SURVEY OF VIRGINIA, BULLETIN 1, 233P.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES MINERAL RESOURCES REPORT 7, P.74.

5. Little River Prospect

MRDS-REV RECORD NUMBER.....823
MRDS RECORD NUMBER.....W031204
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....LITTLE RIVER PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....MONTGOMERY
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER

LAND STATUS.....01
QUADRANGLE NAME..... INDIAN VALLEY, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2000 FT (610 M)
UTM NORTHING...4094070 EASTING...541650 ZONE...+17
LATITUDE.....36-59-37N LONGITUDE.....080-31-55W
POSITION FROM NEAREST LOCALITY.....1.5 KM (0.9 MI) WNW OF COPPER VALLEY.
LOCATION COMMENTS.....IN ROADCUT NW OF STATE ROAD 787, 0.9 KM (0.55 MI) SW OF JUNCTION WITH STATE ROAD 600.
COMMODITIES PRESENT.....PYR CU FE
ORE MATERIALS.....PYRITE, GOETHITE, POSSIBLY COVELLITE
NON-PRODUCER MAIN.....PYR
NON-PRODUCER MINOR.....CU FE
PRODUCTION.....N
STATUS AND ACTIVITY.....1
DISCOVERER.....R.V. DIETRICH
YEAR OF DISCOVERY.....1952
NATURE OF DISCOVERY.....B
EXPLORATION AND DEVELOPMENT COMMENTS.....GOSSAN OBSERVED DURING MAPPING OF AREA. NO ADDITIONAL EXPLORATORY WORK ACCOMPLISHED.
DEPOSIT TYPE.....GOSSAN
MAXIMUM THICKNESS.....4.6 UNITS...M
DEPOSIT DESCRIPTION COMMENTS.....AS NO DRILLING OR GEOPHYSI CAL WORK WAS CONDUCTED THE SIZE OF THE BODY IS UNKNOWN.
HOST ROCK AGE.....CAMB
HOST ROCK TYPE.....LIMONITE-CEMENTED, FINE-GRAINED SANDSTONE BRECCIA ; FINE-GRAINED SANDSTONE; SHALE
ORE CONTROL/LOCUS.....PILOT MOUNTAIN-FISHERS VIEW THRUST FAULT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, PILOT MOUNTAIN-FISHERS VIEW THRUST FAULT (HOLSTON MOUNTAIN FAULT), FRIES FAULT
SIGNIFICANT LOCAL STRUCTURES.....PILOT MOUNTAIN ANTICLINE
FORMATION AGE.....CAMB
FORMATION AGE.....ECAMB
FORMATION NAME.....ROME FORMATION
FORMATION NAME.....HARPERS FORMATION
GEOLOGY COMMENTS.....GOSSAN OCCURS BETWEEN HAMPTON AND ROME STRATA IN THE PILOT MTN. THRUST ZONE.
WORK DONE BY USGS.....1971 GEOLMAP D.W. RANKIN: MISC. GEOL. INV. MAP I-709-B
NON-USGS WORK.....1953 GEOLMAP VA. ENG. EXP. STA: SERIES NO. 91.
REFERENCE....DIETRICH, R.V., 1954, GEOLOGY OF THE PILOT MOUNTAIN AREA, VIRGINIA: BULLETIN OF THE VIRGINIA POLYTECHNIC INSTITUTE, ENGINEERING EXPERIMENT STATION SERIES NO. 91, V. 47, NO. 4, 32 P.
REFERENCE....ESPENSHADE, G.H., RANKIN, D.W., SHAW, K.W., AND NEUMAN, R.B., 1975, GEOLOGIC MAP OF THE EAST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA-VIRGINIA: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-B, 1 SHEET, SCALE 1:250,000.

6. Peppers Ferry Mine

MRDS-REV RECORD NUMBER.....824
MRDS RECORD NUMBER.....W031310
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 12
UPDATER.....GOOD, RICHARD S.
SITE NAME.....PEPPERS FERRY "MINE" (?)
SYNONYM NAME.....PEPPER PROSPECT; CLOYD PROSPECT (?)
MINING DISTRICT/AREA.....AUSTINVILLE LEAD ZINC
COUNTRY.....US STATE.....VA COUNTY.....MONTGOMERY
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001 NEW RIVER
QUADRANGLE NAME..... NORTH RADFORD (1984) QUADRANGLE SCALE 1:24000
ELEVATION.....1800 FT
UTM NORTHING...4113280 EASTING...539900 ZONE...+17
LATITUDE.....37-10-01N LONGITUDE.....080-33-02W
ACCURACY.....EST: LOCATION GIVEN IS FOR SMALL CAVE. THIS IS PROBABLY NOT LOCATION OF "MINE".
POSITION FROM NEAREST LOCALITY.....0.66 MI WSW OF CENTERVILLE
LOCATION COMMENTS.....0.25 MI NORTH OF PEPPER (FORMERLY PEPPER FERRY) RR CROSSING EAST SIDE OF NEW RIVER, DRIVE ALONG RR TRACK NORFOLK AND WESTERN 1300 FEET. CUT IS ABOUT 100 FEET ABOVE TRACK LEVEL ON RADFORD ARMY AMMUNITION PLANT PROPERTY.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....PROBABLY SPHALERITE, GALENA
COMMODITY INFO COMMENTS.....LEAD, ONLY, IS MENTIONED BY THE VIRGINIAS (1882); ZINC AND SPHALERITE IS SUPPOSITIONAL.
OCCUR.....ZN
NON-PRODUCER MAIN.....PB
PRODUCTION.....U
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1861
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-CIVIL WAR
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPERATED TO A LIMITED EXTENT ON ONE POD OF HIGH-GRADE ORE ONLY. ONE MAIN POD OF LEAD ORE SAID TO BE 1500 POUNDS WAS FOUND IN BRECCIATED DOLOMITE AND MINERALIZATION WAS NOTED FOR ONE MILE NE OF FERRY (THE VIRGINIAS, 1882, P. 174).
DEPOSIT TYPE.....REPLACEMENT, VEIN, DISSEMINATED
DEPOSIT FORM.....POD/LENS, IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 45 DEG E
DIP.....23 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....WHITE BANDED, CRUSTED CAVERNOUS, PISOLITIC MATERIAL PROVED TO BE CALCITE FROM X-RAY EXAMINATION. LOCATION OF THE GALENA DEPOSIT REMAINS UNCERTAIN.
DESCRIPTION OF WORKINGS.....S
LENGTH OF WORKINGS.....>30 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....ADIT (?)/CAVE 30 FEET HORIZONTALLY INTO CLIFF ALONG RR CUT. ABOUT 3' HIGH, GRAY THICK BEDDED LIMESTONE WITH WHITE 1 FOOT BED OF DOLOMITE. THIS MAY BE THE SAME AS THE CLOYD PROSPECT. NO GALENA WAS NOTED IN PLACE OR IN RUBBLE AT ENTRANCE.
HOST ROCK AGE..... CAMBIAN
HOST ROCK TYPE.....LIMESTONE
AGE OF MINERALIZATION..... PALEOZOIC
PERTINENT MINERALS (NOT ORE).....DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BELMONT SYNFORM, PRICE MOUNTAIN WINDOW, PULASKI THRUST FAULT
SIGNIFICANT LOCAL STRUCTURES.....MAX MEADOWS FAULT
FORMATION AGE.....CAMB
FORMATION AGE.....CAMB
FORMATION NAME.....ELBROOK FORMATION
FORMATION NAME.....ROME FORMATION (?)
GEOLOGY COMMENTS.....THIS OCCURRENCE MAY BE A BLOCK OF ROME CAUGHT UP IN THE ELBROOK DURING THRUSTING. THE CAVE DESCRIBED DID NOT SHOW ANY LEAD MINERALIZATION AND STALACTITIC AND PISOLITIC SAMPLES SUGGESTING OXIDIZED ZINC MINERALIZATION PROVED TO BE CALCITE. THE VIRGINIAS' (1882) REPORT MAKES NOTE OF COAL IN THE AREA WHICH IS POSSIBLY IN THE PRICE FORMATION, EXPOSED IN THE PRICE MOUNTAIN WINDOW. ONE OF THE FORMATIONS NOTED ABOVE IS PROBABLY THE HOST FORMATION. BARTHOLOMEW AND LOWRY (1979) DESCRIBE THE GEOLOGY OF THE QUADRANGLE IMMEDIATELY ADJACENT TO THE EAST.
GENERAL COMMENTS.....THIS IS PROBABLY ONE OF NUMEROUS CAVES AND SOLUTION CAVITIES IN CARBONATE CATACLASTIC BLOCKS CAUGHT UP IN THRUST BRECCIATION, NOT AN EXPLORATION ADIT.
NON-USGS WORK.....DIREXPL MINE OPENED.
REFERENCE....THE VIRGINIAS, 1882, THE LEAD MINE AT PEPPER'S FERRY: V. 111, NO. 11, P. 174.
REFERENCE....BARTHOLOMEW, M.J., AND LOWRY, W.D., 1979, GEOLOGY OF THE BLACKSBURG QUADRANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 14, 1 SHEET WITH TEXT, SCALE 1:24,000.
REFERENCE....SCHULTZ, ARTHUR P., 1986, MAX MEADOWS TECTONIC BRECCIA AT PEPPER, VIRGINIA, GEOLOGICAL SOCIETY OF AMERICA CENTENNIAL FIELD GUIDE, SOUTHEASTERN SECTION.
REFERENCE....SCHULTZ, A.P. AND BARTHOLOMEW, M.J., GEOLOGY OF RADFORD NORTH AND STAFFORDSVILLE QUADRANGLES, VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION (IN PREPARATION).
REFERENCE....SCHULTZ, A.P. 1983, BROKEN FORMATION OF THE PULASKI THRUST SHEET NEAR PULASKI, VIRGINIA, PH.D. DISSERTATION, VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY, BLACKSBURG, VIRGINIA.
PRODUCTION COMMENTS.....PRODUCTION WAS PROBABLY SMALL.

7. Pilot Knob Prospect

MRDS-REV RECORD NUMBER.....827
MRDS RECORD NUMBER.....W031311
RECORD TYPE.....X1M
REPORT DATE.....80 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....PILOT KNOB PROSPECT
SYNONYM NAME.....ABNERS KNOB PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....MONTGOMERY
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... RINER, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....37-02- N LONGITUDE.....080-29- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN; ABOUT 5.5 KM (3.4 MI) SW OF RINER.
LOCATION COMMENTS.....FONTAINE (1883, P. 190) DESCRIBES PROSPECT AS BEING HIGH UP ON PILOT (ABNERS) KNOB. THE KNOB IS NOW DESIGNATED CALFEE KNOB BY THE U.S.G.S. FIELD CHECKED. COULD NOT LOCATE PROSPECT IN 1988 (R.S. GOOD). NOTED DEPRESSION OR PIT ABOUT HALFWAY UP THE NORTHEAST SLOPE AND PITS ON THE EAST SIDE; CUT(?) IN ROME FORMATION ON THE NORTH SIDE OF CALFEE KNOB ON C.E. WILLIAMS PROPERTY.S
COMMODITIES PRESENT.....PB ZN CU
ORE MATERIALS.....GALENA, SPHALERITE, CHALCOPYRITE
NON-PRODUCER MAIN.....PB
NON-PRODUCER MINOR.....ZN CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1882(?)
NATURE OF DISCOVERY.....A
ECONOMIC COMMENTS.....FONTAINE (1883, P. 190) DID NOT CONSIDER PROSPECT TO BE ECONOMICAL VALUE.
EXPLORATION AND DEVELOPMENT COMMENTS.....DEPOSIT PROSPECTED AROUND 1880'S.
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT

DEPOSIT FORM.....IRREGULAR
MAXIMUM THICKNESS.....0.30 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 63 DEG E
DIP.....70 DEG NW
DEPOSIT DESCRIPTION COMMENTS.....NO DISTINCT VEINS NOTED. THICKNESS IS FOR MINERALIZED ZONE OF DOLOSTONE.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....18.3 UNITS...M
LENGTH OF WORKINGS.....18.3 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....AN 18.3 M (60 FT) SHAFT WAS NOTED IN 1883; PROBABLY ONLY A PROSPECT SHAFT.
HOST ROCK AGE.....CAMB
HOST ROCK TYPE.....DOLOSTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, PILOT MOUNTAIN-FISHERS VIEW THRUST FAULT
FORMATION AGE.....CAMB
FORMATION AGE.....CAMB
FORMATION NAME.....ROME FORMATION
FORMATION NAME.....UNICOI FORMATION
GEOLOGY COMMENTS.....A NAPPE OF UNICOI FORMATION OVERLIES THE ROME FORMATION ON CALFEE KNOB. THE MINERALIZATION IS POSSIBLY RELATED TO THE FAULT CONTACT OF THE TWO FORMATIONS.
NON-USGS WORK.....1882 DIREXPL EXPLORATORY SHAFT DRIVEN.
NON-USGS WORK.....195 GEOLMAP VA. ENG. EXP. STA: ISSUED REPORT NO. 91
REFERENCE....DIETRICH, R.V., 1954, GEOLOGY OF THE PILOT MOUNTAIN AREA, VIRGINIA: BULLETIN OF THE VIRGINIA POLYTECHNIC INSTITUTE, ENGINEERING EXPERIMENT STATION SERIES NO. 91, V. 47, NO. 4, 32 P.
REFERENCE....FONTAINE, W.M., 1883-84, NOTES ON THE GEOLOGY AND MINERAL RESOURCES OF THE FLOYD, VA., PLATEAU: THE VIRGINIAS, V. 4, P. 167, 178-180, 185-192; V. 5, P. 8-12.

8. Tices Mill Prospect

MRDS-REV RECORD NUMBER.....825
MRDS RECORD NUMBER.....W031205
RECORD TYPE.....X1M
REPORT DATE.....80 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....TICES MILL PROSPECT
SYNONYM NAME.....PIEDMONT PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....MONTGOMERY
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....03 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... CHECK, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1660 FT (506 M)
UTM NORTHING...4106040 EASTING...569240 ZONE...+17
LATITUDE.....37-05-60N LONGITUDE.....080-13-15W
POSITION FROM NEAREST LOCALITY.....PRIMARILY 0.2 KM (0.1 MI) SW OF PIEDMONT TO 0.6 KM (0.4 MI) NE OF PIEDMONT.
LOCATION COMMENTS.....GOSSAN LOCATED 120 M (400 FT) SSE OF EASTERN END OF STATE ROAD 637 BRIDGE OVER GOOSE CREEK AT PIEDMONT AND EXTENDS SW FOR 0.2 KM (0.1 MI) FROM GOOSE CREEK. OTHER LOCALITY AT UTM N 4106290., E 569910. NOT FIELD CHECKED.
COMMODITIES PRESENT.....CU ZN AU PYR AS
ORE MATERIALS.....PYRITE, CHALCOPYRITE, SPHALERITE, ARSENOPYRITE
COMMODITY INFO COMMENTS.....MINOR GOLD CONTENT REPORT (DIETRICH, 1959, P. 13).
NON-PRODUCER MAIN.....CU ZN
NON-PRODUCER MINOR.....AU PYR AS
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1952
NATURE OF DISCOVERY.....A
ECONOMIC COMMENTS.....DIETRICH (1959) FEELS THIS DEPOSIT WARRANTS FURTHER EXPLORATION.
EXPLORATION AND DEVELOPMENT COMMENTS.....OCCURRENCE HAS BEEN PROSPECTED IN THE PAST BY MEANS OF AN ADIT, A SHAFT, EXPLORATORY PITS, AND AN "ILLADVISED" DRILL HOLE (DIETRICH, 1959).
DEPOSIT TYPE.....GOSSAN, MASSIVE SULFIDE
STRIKE.....NE
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....1.5 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS CONSIST OF SEVERAL PROSPECT PITS, A 1.5 M (5 FT) SHAFT AND A SHORT ADIT.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOSTONE, DOLOMITIC SANDSTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE
ORE CONTROL/LOCUS.....FAULT ZONE, DOLOSTONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, FRIES FAULT (POOR MOUNTAIN THRUST)
SIGNIFICANT LOCAL STRUCTURES.....POOR MOUNTAIN ANTICLINE
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION
NON-USGS WORK.....DIREXPL SHAFT AND ADIT DRIVEN, NO MINING.
REFERENCE....DIETRICH, R.V., 1954, GEOLOGY OF THE PILOT MOUNTAIN AREA, VIRGINIA : BULLETIN OF THE VIRGINIA POLYTECHNIC INSTITUTE, ENGINEERING EXPERIMENT STATION SERIES NO. 91, V. 47, NO. 4, 32 P.
REFERENCE....DIETRICH, R.V., 1959, GEOLOGY AND MINERAL RESOURCES OF FLOYD COUNTY OF THE BLUE RIDGE UPLAND, SOUTH WESTERN VIRGINIA: BULLETIN OF THE VIRGINIA POLYTECHNIC INSTITUTE, ENGINEERING EXPERIMENT STATION SERIES NO. 134, V. 52, NO. 12, 160 P.

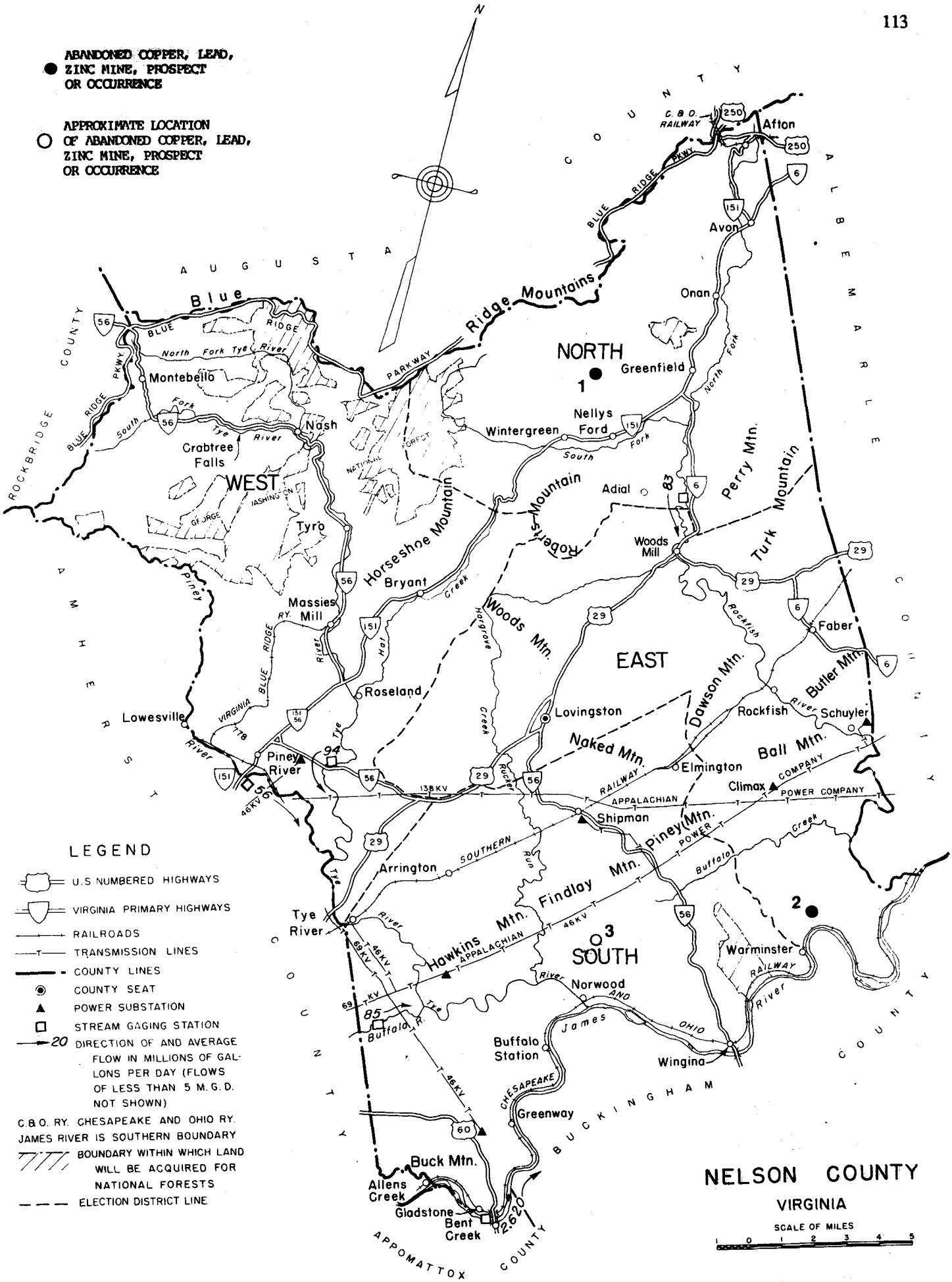
NELSON COUNTY

1. Allen Mines

MRDS-REV RECORD NUMBER.....839
MRDS RECORD NUMBER.....W030920
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....ALLEN MINES
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....NELSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 JAMES RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SHERANDO, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1580 FT (482 M)
UTM NORTHING...4198600 EASTING...686120 ZONE...+17
LATITUDE.....37-55-04N LONGITUDE.....078-52-58W
POSITION FROM NEAREST LOCALITY.....4.0 KM (2.5 MI) NNE OF WINTERGREEN.
LOCATION COMMENTS.....ON SE SIDE OF CRAWFORD KNOB.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOPYRITE, MALACHITE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....POST-CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1885
OWNER (PRESENT/LAST).....WINTERGREEN CORP.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
MAXIMUM THICKNESS.....0.3 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N. 75 DEG. E
DIP.....30 DEG SE
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....IN 1978, SIX TUNNEL OPENINGS AND A LARGE SPREAD OUT DUMP NOTED.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT (GREENSTONE SCHIST, GREENSTONE PHYLLITE), EPIDOSITE
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ (IRON-STAINED)
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SCHISTOSITY: STRIKE-N75 DEG. E, DIP-30 DEG SE; MAIN JOINT. STRIKE-N42 DEG E, DIP 74 DEG NW.
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
NON-USGS WORK.....1885 DIREXPL MINE OPERATED 1885 TO 1905
NON-USGS WORK.....1978 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....BARTHOLOMEW, M.J., 1977, GEOLOGY OF GREENFIELD AND SHERANDO QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 4, 43 P.
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, IN PREPARATION.
SOURCE OF PRODUCTION INFORMATION.....SWEET AND BELL (1980)

2. Dolan Property Prospect

MRDS-REV RECORD NUMBER.....838
MRDS RECORD NUMBER.....W030921
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....DOLAN PROPERTY PROSPECT
MINING DISTRICT/AREA.....SCOTTSVILLE BASIN
COUNTRY.....US STATE.....VA COUNTY.....NELSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
QUADRANGLE NAME..... HOWARDSVILLE, VA. QUADRANGLE SCALE 1:24000
UTM NORTHING...4175380 EASTING...703770 ZONE...+17
POSITION FROM NEAREST LOCALITY.....1.3 MILES NE OF WARMINSTER
LOCATION COMMENTS.....ESPENSHADE (1954, P. 145) DESCRIBES OCCURRENCE AS BEING ON THE DOLAN PROPERTY IN TRIASSIC ROCKS SOUTHWEST OF THE ROCKFISH RIVER.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....MALACHITE, BORNITE
GENERAL ANALYTICAL DATA.....1930 - ASSAYS SHOWED 1.29 OZ AU/TON AND 3.67 OZ AG/TON; 1985 - ASSAY OF 0.12 OZ AG/TON BY IRON KING ASSAY, HUMBOLDT, AZ.
OCCUR.....CU
NON-PRODUCER MAIN.....CU


ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
N
AUGUSTA COUNTY
ALBEMARLE COUNTY
ROCKBRIDGE COUNTY
AMHERST COUNTY
BUCKINGHAM COUNTY
APPOMATTOX COUNTY
Blue Ridge Mountains
BLUE RIDGE PKWY
C. & O. RAILWAY
Afton
Avon
Onan
NORTH
Greenfield
Nellys Ford
Wintergreen
Adial
Woods Mill
Perry Mtn.
Turk Mountain
Roberts Mountain
Horseshoe Mountain
Bryant
Massies Mill
Roseland
Lowesville
Piney River
Tye River
Arrington
Lovingston
Woods Mtn.
EAST
Dawson Mtn.
Naked Mtn.
Rockfish
Faber
Butler Mtn.
Schuyler
Ball Mtn.
Elmington
Climax
Shipman
Piney Mtn.
Findlay Mtn.
Hawkins Mtn.
SOUTH
Norwood
Buffalo Station
Wingina
Warminster
Greenway
Buck Mtn.
Allens Creek
Gladstone
Bent Creek
Montebello
Nash
Crabtree Falls
WEST
Tyro
Piney River
Buffalo R.
Buffalo Creek
Rockfish River
Hargrove Creek
Hat Creek
Tye River
North Fork Tye River
South Fork Tye River
Piney River
Buffalo Creek
James River
Rucker Run
APPALACHIAN POWER COMPANY
SOUTHERN RAILWAY
CHESAPEAKE AND OHIO RAILWAY
VIRGINIA BLUE RIDGE RY.
138 KV
46 KV
69 KV
LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY LINES
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
C.&O. RY. CHESAPEAKE AND OHIO RY. JAMES RIVER IS SOUTHERN BOUNDARY
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
ELECTION DISTRICT LINE
NELSON COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5

PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....DOLAN
ECONOMIC COMMENTS.....IT IS DOUBTFUL IF THIS OCCURRENCE IS OF ANY ECONOMIC MERIT.
EXPLORATION AND DEVELOPMENT COMMENTS.....IT IS IMPROBABLE THAT THIS OCCURRENCE HAS BEEN FULLY PROSPECTED. THE PROPERTY WAS PREVIOUSLY PROSPECTED IN THE 1920'S BY A CHICAGO CO. IN 1929, ANACONDA LOOKED AT THE PROPERTY AND, IN 1930, C.O. TERWILLIGER OPENED A 400 FOOT TRENCH. SOLID COUNTRY ROCK (GREENSTONE) RANT 3.872% CU. DUMP ROCK WAS CRUSHED IN THE LATE 1930'S FOR ROAD MATERIAL BY THE HWY. DEPT.
DEPOSIT TYPE.....DISSEMINATED (?)
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL (?)
HOST ROCK AGE.....TRI
PERTINENT MINERALS (NOT ORE).....QUARTZ, CALCITE
TECTONIC SETTING.....BASIN, PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, SCOTTSVILLE BASIN, TRIASSIC BORDER FAULTS
FORMATION AGE.....TRI
FORMATION NAME.....NEWARK GROUP
GEOLOGY COMMENTS.....ESPENSHADE (1954) DOES NOT REPORT THE TYPE OF HOST ROCK.
WORK DONE BY USGS.....1942 GEOLMAP G.H. ESPENSHADE: ISSUED BULL. 1008.
NON-USGS WORK.....1965 GEOLMAP VA. DIV. MIN. RES: ISSUED REPT. INV. 15.
REFERENCE....ERN, E.H., 1968, GEOLOGY OF THE BUCKINGHAM QUADRANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 15, 45 P.
REFERENCE....ESPENSHADE, G.H., 1954, GEOLOGY AND MINERAL DEPOSITS OF THE JAMES RIVER-ROANOKE RIVER MANGANESE DISTRICT, VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 1008, 155 P.

3. Joe Creek Mine

MRDS-REV RECORD NUMBER.....834
MRDS RECORD NUMBER.....W030923
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....JOE CREEK MINE
COUNTRY.....US STATE.....VA COUNTY.....NELSON
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 JAMES RIVER
QUADRANGLE NAME..... SHIPMAN, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....37-40- N LONGITUDE.....078-48- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN.
LOCATION COMMENTS.....FURCRON (1935, P. 109) DESCRIBES MINE AS BEING ON JOE CREEK AT NORWOOD IN CATOCTIN GREEN STONE. ACCORDING TO THIS DESCRIPTION THE WORKINGS WOULD PROBABLY AROUND 2.8 KM (1.7 MI) NORTH OF NORWOOD.
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....BORNITE, PYRITE
MAJOR.....CU
OCCUR.....PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....4
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....A SHAFT WAS SUNK WHICH WAS BLOCKED BY 1925.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL
STRIKE.....NE
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....A SHAFT WAS SUNK.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT (GREENSTONE)
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM, TRIASSIC BASIN BORDER FAULT
SIGNIFICANT LOCAL STRUCTURES.....TRANSVERSE FAULTING
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
NON-USGS WORK.....DIREXPL SHAFT SUNK
NON-USGS WORK.....1929 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 39.
REFERENCE....FURCRON, A.S., 1935, JAMES RIVER IRON AND MARBLE BELT, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 39, 124 P.
SOURCE OF PRODUCTION INFORMATION.....FURCRON (1935, P. 109)
PRODUCTION COMMENTS.....A SMALL AMOUNT OF ORE WAS PROBABLY PRODUCED.

ORANGE COUNTY

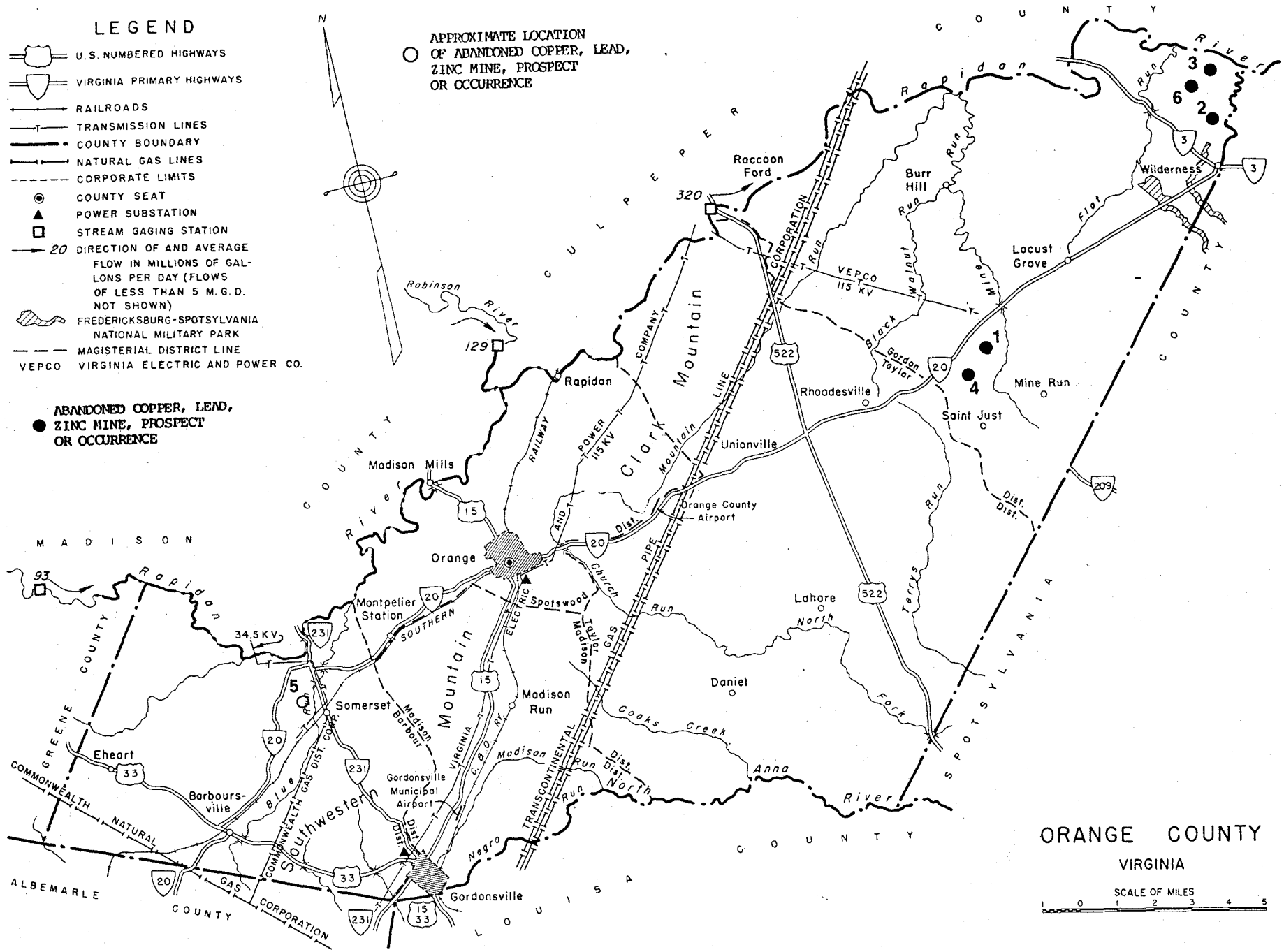
1. Dickey Tract Mine

MRDS-REV RECORD NUMBER.....893
MRDS RECORD NUMBER.....W030528
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER (D.C. LE VAN), ROBT. E.
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....DICKEY TRACT MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....ORANGE
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
QUADRANGLE NAME...MINE RUN, VA QUAD SCALE 1:24000
ELEVATION.....375 FT (114 M)
UTM NORTHING...4240540 EASTING...249650 ZONE...+18
LATITUDE.....38-16-48N LONGITUDE.....077-51-43W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....3.30 KM (2.05 MI) NW OF MINE RUN.
LOCATION COMMENTS.....0.08 KM (0.05 MI) OFF NE SIDE OF STATE ROAD 692, 0.88 KM (0.55 MI) BY ROAD SE OF JUNCTION WITH STATE HWY. 20.
COMMODITIES PRESENT.....AU CU PYR
ORE MATERIALS.....NATIVE GOLD, CHALCOPYRITE, PYRITE
MAIN ORE MINERALS.....NATIVE GOLD
MINOR ORE MINERALS.....CHALCOPYRITE, PYRITE
MAJOR.....AU
OCCUR.....CU PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1880'S
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-1900
OWNER (PRESENT/LAST).....A.E. FISHER
OPERATOR.....LUCKY HUNDRED MINERAL AND MINING CORP.
EXPLORATION AND DEVELOPMENT COMMENTS.....GOLD RUN MINING CO. OPERATED PROPERTY SOMETIME AFTER 1883 UNTIL SELLING TO PIEDMONT MINING AND METALLURGICAL CORP. IN 1907. THE LATTER OPERATED UNTIL 1910.
DEPOSIT TYPE.....PLACER, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR (PLACER)
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....MOST OF AREA WAS COVERED BY BEAVER POND, THOUGH SOME DUMPS REMAINED VISIBLE IN 1974 . IN 1987, THE DAM TO THE BEAVER POND HAD BEEN BROKEN THROUGH AND THE POND WAS GROWN UP WITH BRUSH, ETC.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....SCHIST, GRANODIORITE
AGE OF IGNEOUS ROCK.....EPAL
IGNEOUS ROCK TYPE.....GRANODIORITE
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
IGNEOUS UNIT AGE.....EPAL
IGNEOUS UNIT NAME.....ELLISVILLE GRANODIORITE
GEOLOGY COMMENTS.....GEOLOGY OF DEPOSIT POORLY DESCRIBED IN LITERATURE. ELLISVILLE GRANODIORITE IS LONSDALE'S (1927) LOCUST GROVE GRANITE.
GENERAL COMMENTS.....AS THIS TRACT WAS PART OF THE LARGER TRACT PURCHASED BY PIEDMONT MINING & METALLURGICAL CORP ALONG WITH MORE IMPORTANT GRASTY TRACT, DESCRIPTIONS OF DICKEY TRACT OFTEN INCLUDED UNDER GRASTY TRACT.
NON-USGS WORK.....DIREXPL GOLD RUN MINING CO.: SANK SHAFT (PRIOR TO 1906)
NON-USGS WORK.....1957 DIREXPL LUCKY HUNDRED MINERAL AND MINING CORP: PLACER EXPLORATION.
NON-USGS WORK.....1974 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....SWEET, P.C., 1975, ROAD LOG TO SOME ABANDONED GOLD MINES OF THE GOLD-PYRITE BELT, NORTHEASTERN VIRGINIA: VIRGINIA MINERALS, V. 21, NO. 1, P. 1-9
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....LONSDALE, J.T., 1927, GEOLOGY OF THE GOLD-PYRITE BELT OF THE NORTH EASTERN PIEDMONT, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY, BULLETIN 30, 110 P.

CUMULATIVE PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEARS GRADE
AU SML 1907-1910
SOURCE OF PRODUCTION INFORMATION.....SWEET (1975)

2. Greenwood Prospect

MRDS-REV RECORD NUMBER.....892
MRDS RECORD NUMBER.....W000423
RECORD TYPE.....X1M
DEPOSIT NUMBER.....GK-021
REPORT DATE.....72 05
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 07
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....GREENWOOD PROSPECT
SYNONYM NAME.....LAIRD PROPERTY PROSPECT
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....ORANGE
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
NATURAL GAS LINES
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
FREDERICKSBURG-SPOTSYLVANIA NATIONAL MILITARY PARK
MAGISTERIAL DISTRICT LINE
VEPCO VIRGINIA ELECTRIC AND POWER CO.
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
N
ORANGE COUNTY
VIRGINIA
SCALE OF MILES
0 1 2 3 4 5
Raccoon Ford
Rapidan
Wilderness
Burr Hill
Locust Grove
Rhoodesville
Mine Run
Saint Just
Unionville
Rapidan
Madison Mills
Orange
Montpelier Station
Somerset
Madison Run
Eheart
Barboursville
Gordonsville Municipal Airport
Gordonsville
Lahore
Daniel
Orange County Airport
Clark Mountain
Southwestern Mountain
Robinson River
Rapidan River
Anna River
Negro Run
Cooks Creek
North Fork
Terrys Run
Church Run
Blue Run
Flat Run
Mine Run
Walnut Run
Block Run
Gordon Taylor
Spotswood Trail
Madison Barbour
Dist. Dist.
VEPCO 115 KV
POWER 115 KV
34.5 KV
TRANSCONTINENTAL PIPE LINE
COMMONWEALTH NATURAL GAS CORPORATION
COMMONWEALTH GAS DIST. CORP.
ELECTRIC AND GAS COMPANY
SOUTHERN RAILWAY
VIRGINIA C & O RY.
MADISON COUNTY
GREENE COUNTY
ALBEMARLE COUNTY
LOUISA COUNTY
SPOTSYLVANIA COUNTY
CULPEPER COUNTY
ORANGE COUNTY
320
129
93
522
20
15
231
33
209

LAND STATUS.....01
QUADRANGLE NAME...CHANCELLORSVILLE, VA QUAD SCALE 1:24000
ELEVATION.....275 FT (84 M)
UTM NORTHING...4247180 EASTING...261930 ZONE...+18
LATITUDE.....38-20-35N LONGITUDE.....077-43-26W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....2.66 KM NW OF WILDERNESS CORNER.
LOCATION COMMENTS.....ALONG A TRIBUTARY OF WILDERNESS RUN, 1.37 KM (0.85 MI) DOWN A WOODS ROAD OFF EAST SIDE OF STATE ROAD 667, 0.8 KM (0.5 MI) BY ROAD NE OF JUNCTION WITH STATE HWY.
COMMODITIES PRESENT.....AU PB CU
ORE MATERIALS.....NATIVE GOLD, GALENA, CHALCOPYRITE
NON-PRODUCER MAIN.....AU
NON-PRODUCER MINOR.....PB CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....L KING & C B KING, JR
OPERATOR.....MELBA MINING CO (P G BENEDUM INTERESTS)
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY WAS DEVELOPED IN 1934-1935 BY THE MELBA MINING CO. WORKINGS CONSIST OF A SHAFT WITH TWO CROSSCUTS DRIVEN EASTWARD AND WESTWARD AND PITS. NO WELL-DEFINED MINERALIZED ZONE WAS POUND AND THE PROPERTY WAS ABANDONED EARLY IN SEPTEMBER 1935.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....POD/LENS, IRREGULAR
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....96.6 UNITS...M
LENGTH OF WORKINGS.....122 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....96.6 M SHAFT SUNK, TWO 61 M CROSSCUTS DRIVEN AT 91 M LEVEL. FOUR LARGE PITS, TWO HILLSIDE CUTS, REMAINS OF PLANT EQUIPMENT, AND SCATTERED QUARTZ EVIDENT IN 1974.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-BIOTITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, PYRITE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GENERAL COMMENTS.....PROSPECT ABANDONED IN SEPT 1935.
NON-USGS WORK.....1934 DIREXPL MELBA MINING CO: INSUFFICIENT GOLD LOCATED FOR CONTINUED OPERATION.
NON-USGS WORK.....1974 RECON VA DIV MIN RES: SITE INSPECTED
REFERENCE....PARDEE, J T AND PARK, C F, JR, 1948, GOLD DEPOSITS OF THE SOUTHERN PIEDMONT: US GEOL SURV PROF PAPER 213, 156 P
REFERENCE....LUTTRELL, G.W., 1966, VA. MIN. RES. REPORT 7, P. 58
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P
PRODUCTION COMMENTS.....NO RECORD OF ANY PRODUCTION, SO NOT KNOWN IF IT EVER PRODUCED OR NOT. HOWEVER, PARDEE AND PARK (1948) STATE THAT THE RESULTS OF THE DEVELOPMENT WORK WERE DISCOURAGING; NO DEFINED ZONE OF MINERALIZATION AND LITTLE GOLD.

3. Melville Mine

MRDS-REV RECORD NUMBER.....885
MRDS RECORD NUMBER.....W00C419
RECORD TYPE.....X1M
DEPOSIT NUMBER.....GK-017
REPORT DATE.....72 05
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....87 07
UPDATER.....SWEET,P.C./TRIMBLE, DAVID, C.
SITE NAME.....MELVILLE MINE
SYNONYM NAME.....RAPIDAN MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....ORANGE
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
QUADRANGLE NAME...CHANCELLORSVILLE , VA QUAD SCALE 1:24000
ELEVATION.....300 FT (91 M)
UTM NORTHING...4249140 EASTING...261930 ZONE...+18
LATITUDE.....38-21-38N LONGITUDE.....077-43-29W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 3 MI. N.W. OF THE WILDERNESS STORE ON THE FREDRICKSBURG-CULPEPER HIGHWAY.
LOCATION COMMENTS.....91 M (300 FT) OFF WEST SIDE OF STATE ROAD 667 EXTENDED, 3.6 KM (2.3 MI) BY ROAD NORTH OF JUNCTION WITH STATE HWY 3.
COMMODITIES PRESENT.....AU ZN PB CU PYR PYR1 AS
ORE MATERIALS.....NATIVE GOLD, AURIFEROUS PYRITE, SPHALERITE, GALENA, CHALCOPYRITE, ARSENOPYRITE
COMMODITY INFO COMMENTS.....THE SHEAR ZONE HAS BEEN PROSPECTED FROM THE RAPIDAN RIVER TO MORE THAN 1000 FT. SOUTH OF THE MINE AREA. GOLD IS CONTAINED IN THE PYRITE.
MAJOR.....AU
OCCUR.....ZN PB CU PYR AS
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1865
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1800'S
OWNER (PRESENT/LAST).....S F COOKE, JR
OPERATOR.....RAPIDAN GOLD CORP.
ECONOMIC COMMENTS.....FLOTATION MILL CAPABLE OF HANDLING MAXIMUM OF 75 T PER DAY ERECTED. MILL RECOVERS MORE THAN 90 PER CENT OF GOLD.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE MINE WAS ORIGINALLY WORKED IN THE 1800'S. IN 1922, EXPERIMENTS WERE CONDUCTED AT MINE TO DETERMINE BEST ORE TREATMENT PROCEDURE. UNDERGROUND WORK WAS DISCONTINUED IN NOV 1935 AND THE MINE WAS LAST WORKED IN 1938. CALLAHAN MINING CORP. DRILLED 4 CORE HOLES ON THE PROPERTY IN 1982. IN 1980, T.A. HOUSTON, CONSULTANT DRILLED 2 CORE HOLES ON THE PROPERTY WITH DEPTHS OF 200 FT AND 186 FT.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, REPLACEMENT
DEPOSIT FORM.....LENS
DEPTH TO TOP.....0 FT. UNITS...M
MAXIMUM THICKNESS.....18.3 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 30 DEG. E
DIP.....85 DEG E
PLUNGE.....35 DEG
DIRECTION OF PLUNGE.....NE
DEPOSIT DESCRIPTION COMMENTS.....THE GOLD WAS SAID TO BE ENCLOSED IN COARSE-GRAINED PYRITE IN QUARTZ VEINS AND LENSES THAT OCCUR ALONG A MINERALIZED SHEAR ZONE 18.3 M (60 FT) WIDE IN CHLORITIC QUARTZ-bIOTITE SCHIST? SEE PARDEE AND PARK FOR A DETAILED DESCRIPTION OF THE DEPOSIT.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....33.5 & 67.1 UNITS...M
LENGTH OF WORKINGS.....549 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....CREDNER REPORTED A SHAFT 52 M (72 FT) DEEP HAD BEEN FILLED IN WITH DEBRIS AND A DETERIORATING STAMP-MILL WERE PRESENT IN 1865. IN 1971, ONE CAVED SHAFT, NUMEROUS CAVED PITS, DUMPS, CONCRETE POUNDATIONS, BRICK ROASTING-STACK AND SEVERAL LARGE (42 INCHES IN DIAMETER AND 14 INCHES THICK) GRANITE, WHEEL-SHAPED STONES, USED IN CHILEAN MILLS TO CRUSH ORE, WERE SEEN. THE MINE CONTAINED TWO SHAFTS 38 AND 73 M (125 AND 240 FT) DEEP. A LEVEL AT THE 33.5-M (110-FT) LEVEL CONNECTED THE TWO SHAFTS, AND A 61-M (200-FT) LEVEL HAD BEEN DRIVEN FROM THE DEEPER SHAFT. THE TOTAL LENGTH OF THE DRIFTS ACCESSIBLE IN 1935 WAS ABOUT 549 M (1800 FT)?
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-BIOTITE-CHLORITE SCHIST, QUARTZ-SERICITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, ANKERITE, SERICITE, PYRRHOTITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NORTHEAST-SOUTHWEST, COLUMBIA SYNCLINE TO THE EAST.
SIGNIFICANT LOCAL STRUCTURES.....SMALL FAULTS IN THE MINE WORKINGS . SCHISTOSITY OF SCHIST STRIKES N40DEGE AND DIPS 700 EG NW
PROCESS OF CONCENTRATION/ENRICHMENT.....DOWNWARD MOVING SOLUTIONS . HAVE NOT AFFECTED DEEPER ORES.
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....READY ACCESS FOR SOLUTIONS AFFORDED BY FAULTS AND FRACTURES . QUARTZ-CHLORITE SCHIST BECOMES MORE SERICITIZED AS THE MINERALIZED ZONE IS ENCOUNTERED AND BECOMES MORE SILICIFIED
NON-USGS WORK.....1800S DIREXPL DETAILS OF WORKINGS UNKNOWN
NON-USGS WORK.....1934 DIREXPL RAPIDAN GOLD CORP: SANK 2 SHAFTS, MINED, MILLED, AND SHIPPED GOLD ORE.
NON-USGS WORK.....1974 RECON VA DIV MIN RES: INSPECTED SITE.
REFERENCE....PARDEE, J.T., AND PARK, C.F., 1948, U.S.G.S. PROF. PAPER 213, PP 57-59, PL 20.
REFERENCE....PARK, C F, JR, 1936, PRELIMINARY REPORT ON GOLD DEPOSITS OF THE VIRGINIA PIEDMONT: VIRGINIA GEOL SURV BULL 44, 42 P
REFERENCE....LONSDALE, J.T., 1927, VA. GEOL. SURVEY BULL. 30, P. 82.
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P
REFERENCE....SWEET, P.C., 1971, GOLD MINES AND PROSPECTS IN VIRGINIA: VIRGINIA MINERALS, VOL. 17, NO. 3, P. 25-35.
REFERENCE....CREDNER, H., 1968, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VI, P. 371.
REFERENCE....SWEET, P.C., 1975, ROAD LOG TO SOME ABANDONED GOLD MINES OF THE GOLD-PYRITE BELT, NORTHEASTERN VIRGINIA: VIRGINIA MINERALS, VOL. 21, NO. 1, P. 1-9.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
AU	ACC	0.52900	TOZ	1934	VALUED AT $18,489

SOURCE OF PRODUCTION INFORMATION.....PARDEE AND PARK REFERENCE
PRODUCTION COMMENTS.....NO EARLY RECORDS OF PRODUCTION.

4. Old Tinder Mine

MRDS-REV RECORD NUMBER.....875
MRDS RECORD NUMBER.....W030530
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER (D.C. LEVAN), ROBT. E.
UPDATED.....81 10
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....OLD TINDER MINE
SYNONYM NAME.....CHICAGO-VIRGINIA TRACT
MINING DISTRICT/AREA.....GOLD-PYRITE BELT

COUNTRY.....US STATE.....VA COUNTY.....ORANGE
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
QUADRANGLE NAME...MINE RUN, VA QUAD SCALE 1:24000
ELEVATION.....430 FT (131 M)
UTM NORTHING...4240350 EASTING...249370 ZONE...+18
LATITUDE.....38-16-41N LONGITUDE.....077-51-55W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....3.3 KM (2.05 MI) NW OF MINE RUN.
LOCATION COMMENTS.....0.24 KM (0.15 MI) OFF SW SIDE OF STATE ROAD 692, 0.88 KM (0.55 MI) BY ROAD SE OF JUNCTION WITH STATE HWY 20.
COMMODITIES PRESENT.....AU CU PYR
ORE MATERIALS.....NATIVE GOLD, CHALCOPYRITE, PYRITE
MAIN ORE MINERALS.....NATIVE GOLD
MINOR ORE MINERALS.....CHALCOPYRITE, PYRITE
MAJOR.....AU
OCCUR.....CU PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1870'S
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1879
OWNER (PRESENT/LAST).....A.E. FISHER
OPERATOR.....PIEDMONT MINING AND METALLURGICAL CORP.
EXPLORATION AND DEVELOPMENT COMMENTS.....PIEDMONT MINING & METALLURGICAL CO. APPARENTLY CONCENTRATED ON GRASTY AND DICKEY TRACTS AS NO RECORDED WORK AT OLD TINDER SITE.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL (?)
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....THREE SHAFTS SUNK DURING PERIOD 1879-1883. IN 1974, RECONNAISSANCE BY VA. DIV. MIN. RES. DISCLOSED THREE CAVED SHAFTS, A CAVED PIT AND COVERED DUMPS.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....SCHIST, GRANODIORITE
AGE OF IGNEOUS ROCK.....EPAL
IGNEOUS ROCK TYPE.....GRANODIORITE
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
IGNEOUS UNIT AGE.....EPAL
IGNEOUS UNIT NAME.....ELLISVILLE GRANODIORITE
GEOLOGY COMMENTS.....GEOLOGY OF DEPOSIT POORLY DESCRIBED IN LITERATURE. ELLISVILLE GRANODIORITE IS LONSDALE'S (1927) LOCUST GROVE GRANITE.
GENERAL COMMENTS.....AS THIS TRACT WAS PART OF THE LARGER TRACT PURCHASED BY PIEDMONT MINING & METALLURGICAL CORP. ALONG WITH MORE IMPORTANT GRASTY TRACT, DESCRIPTIONS OF OLD TINDER, OFTEN INCLUDED UNDER GRASTY TRACT.
NON-USGS WORK.....1879 DIREXPL CHICAGO-VIRGINIA GOLD MINING CO.: OPERATED UNTIL 1881
NON-USGS WORK.....1881 DIREXPL AMERICAN GOLD MINING CO.: OPERATED UNTIL 1883
NON-USGS WORK.....1907 DIREXPL PIEDMONT MINING & METALLURGICAL CO.: BOUGHT THIS TRACT ALONG WITH DICKEY AND GRASTY TRACTS, OPERATED UNTIL 1910.
REFERENCE....LONSDALE, J.T., 1927, GEOLOGY OF THE GOLD-PYRITE BELT OF THE NORTH EASTERN PIEDMONT, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 30, 110 P.
REFERENCE....SWEET, P.C., 1975, ROAD LOG TO SOME ABANDONED GOLD MINES OF THE GOLD-PYRITE BELT, NORTHEASTERN VIRGINIA: VIRGINIA MINERALS, V. 21, NO. 1, P. 1-9.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA, J.P. BELL CO., 618 P.
SOURCE OF PRODUCTION INFORMATION.....SWEET (1975), WATSON (1907)

5. Taylors Prospect

MRDS-REV RECORD NUMBER.....871
MRDS RECORD NUMBER.....W030922
RECORD TYPE.....X1M
REPORT DATE.....80 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....TAYLORS PROSPECT
SYNONYM NAME.....SOMERSET PROSPECT
MINING DISTRICT/AREA.....BARBOURSVILLE BASIN
COUNTRY.....US STATE.....VA COUNTY.....ORANGE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
QUADRANGLE NAME..... GORDONSVILLE, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....38-13- N LONGITUDE.....078-14- W
POSITION FROM NEAREST LOCALITY.....1.2 KM (0.75 MI) NW OF SOMERSET
LOCATION COMMENTS.....EXACT LOCATION UNKNOWN.
COMMODITIES PRESENT.....CU PYR
ORE MATERIALS.....CHALCOPYRITE, PYRITE
COMMODITY INFO COMMENTS.....ORE IN MASSES UP TO 2 CM IN LENGTH.
OCCUR.....CU PYR
NON-PRODUCER MAIN.....CU
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....1835
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....AN ATTEMPT WAS MADE TO DEVELOP A MINE AROUND 1835, BUT FAILED DUE TO PAUCITY OF ORE.
DEPOSIT TYPE.....DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....TRI-JUR
HOST ROCK TYPE.....RED SANDSTONE, RED SHALE
AGE OF MINERALIZATION.....TRI
TECTONIC SETTING.....BASIN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, TRIASSIC-JURASSIC BORDER FAULT, BARBOURSVILLE BASIN (OUTLIER OF CULPEPER BASIN)
FORMATION AGE.....TRI-JUR
FORMATION NAME.....BULL RUN FORMATION (CATHARPIN CREEK MEMBER)
GENERAL COMMENTS.....THOUGH ROBERTS (1928) DOES NOT SO STATE, THE PROSPECT NEAR SOMERSET DISCUSSED BY HIM IS PROBABLY THE SAME AS TAYLORS MINE OF ROGERS (1884, P. 87-88).
NON-USGS WORK.....1835 DIREXPL ATTEMPT TO DEVELOP MINE.
REFERENCE....ROBERTS, J.K., 1928, THE GEOLOGY OF THE VIRGINIA TRIASSIC: VIRGINIA GEOLOGICAL SURVEY BULLETIN 29, 205 P.
REFERENCE....ROGERS, W.B., 1884, A REPRINT OF ANNUAL REPORTS AND OTHER PAPERS, ON THE GEOLOGY OF THE VIRGINIAS: NEW YORK, D. APPLETON AND CO., 832 P.
REFERENCE....LEE, K.Y., 1980, TRIASSIC-JURASSIC GEOLOGY OF THE SOUTHERN PART OF THE CULPEPER BASIN AND THE BARBOURSVILLE BASIN: U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 80-468, 9 P.

6. Vaucluse Mine

MRDS-REV RECORD NUMBER.....891
MRDS RECORD NUMBER.....W000421
RECORD TYPE.....X1M
DEPOSIT NUMBER.....GK-019
REPORT DATE.....72 05
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBT. E. (LE VAN, D.C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 07
UPDATER.....SWEET, P. C.
SITE NAME.....VAUCLUSE MINE
SYNONYM NAME.....GRIMES MINE, GRYMES MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....ORANGE
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
QUADRANGLE NAME...CHANCELLORSVILLE, VA QUAD SCALE 1:24000
ELEVATION.....300 FT (91 M)
UTM NORTHING...4248390 EASTING...261560 ZONE...+18
LATITUDE.....38-21-14N LONGITUDE.....077-43-44W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....3.8 KM (2.4 MI) NW OF WILDERNESS CORNER.
LOCATION COMMENTS.....0.24 KM (0.15 MI) ALONG A WOODS ROAD OFF WEST SIDE OF STATE ROAD 667 EXTENDED, 2.7 KM (1.7 MI) BY STATE ROAD 667 NNE OF JUNCTION WITH STATE HWY 3.
COMMODITIES PRESENT.....AU PYR CU PB
ORE MATERIALS.....NATIVE GOLD, AURIFEROUS PYRITE, MARCASITE, CHALCOPYRITE, GALENA
MAJOR.....AU
OCCUR.....PYR CU PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1832
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1832
OWNER (PRESENT/LAST).....A P GAYLE AND GOODWIN BROS LUMBER CO
OPERATOR.....VIRGINIA MINING CORP
ECONOMIC COMMENTS.....IN 1930'S TOTAL DIRECT MINING, MILLING, AND MARKETING EXPENSE PER TON WAS $4.56
EXPLORATION AND DEVELOPMENT COMMENTS.....WHEN FIRST WORKED, MINE OPERATED ON PLACERS AND DECOMPOSED SURFACE PARTS OF THE MINERALIZED ZONES. IN 1844, LIBERTY MINING CO. OF LONDON PURCHASED MINE AND BEGAN UNDERGROUND DEVELOPMENT. 6 SHAFTS AND 50-TON MILL OPERATED FROM 1854 TO CIVIL WAR. HENRY FORD PURCHASED PROPERTY IN 1933-34 AND MOVED MACHINERY TO HIS MUSEUM IN DEARBORN, MICH. MINE PURCHASED BY RAPIDAN GOLD CORP IN 1934 AND SOLD TO V-M CORP. IN 1935, V-M CORP. DEEPENED WORKINGS AND CARRIED OUT DIAMOND DRILLING BELOW 90 M. V-M CORP. CLOSED AND SOLD MINE AT AUCTION IN DEC. 1938. TOTAL DIAMOND DRILLING AMOUNTED TO ABOUT 1370 M. IN 1865 CREDNER REPORTED A ROASTING HOUSE, WITH 4 STILL UNUSED REVERBERATORY FURNACES, A CRUSHING HOUSE WITH 6 PAIRS OF ROLLERS, AND 2 ENGINES (ONE OF WHICH WAS 180 HORSEPOWER), A STAMP-MILL WITH 30 STAMPS AND A WHOLE ROW OF SHAKING TABLES IN EXCELLENT SHAPE ON SITE. CALLAHAN MINING CORP DRILLED 2 CORE HOLES ON THIS PROPERTY IN 1982.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, PLACER
DEPOSIT FORM.....POD/LENS
MAXIMUM LENGTH.....61.0 UNITS...M
MAXIMUM THICKNESS.....15.2 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N40-60 DEG. E
DIP.....80 DEG. NW - 80 DEG. SE
PLUNGE.....NE
DIRECTION OF PLUNGE.....30-70 DEG.
DEPOSIT DESCRIPTION COMMENTS.....AVG THICKNESS: 1.2 M, AVG LENGTH: 15.2 M SOME PODS CUT ACROSS SCHISTOSITY.

LENSES CONFORM TO FLUTING IN SHEAR ZONE
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....92.9 UNITS...M
LENGTH OF WORKINGS.....662 UNITS...M **
DESCRIPTION OF WORKINGS COMMENTS.....** THIS FIGURE INCLUDES BOTH DRIFTS AND CROSSCUTS. IN 1974, TWO LARGE OPEN PITS, NUMEROUS SMALL CAVED PITS, CONCRETE FOUNDATIONS, AND COVERED DUMPS WERE SEEN. ADDITIONAL WORKINGS AT 15.2 M, 33.5 M, AND 61.6 M. IN 1865 CREDNER REPORTED SEVERAL SHAFTS HAD BEEN SUNK AND TWO OPEN CUTS, EACH 24 M (80 FT) DEEP, 91.5 M (300 FT) LONG, AND 7.6 M (25 FT) WIDE, HAD BEEN OPENED. THE VAUCLUSE SHAFT WAS 67 M (220 FT) DEEP WITH LEVELS AT 15.2, 33.5, AND 61.3 M (50, 110, AND 201 FT). THE 33.5 M LEVEL CONTAINED AT LEAST 84 M (275 FT) OF WORKINGS AND THE 61.3 M LEVEL CONTAINED 267 M (876 FT) OF DRIFTS AND CROSS CUTS IN JANUARY OF 1936.

HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE-CHLORITE SCHIST
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
PERTINENT MINERALS (NOT ORE).....QUARTZ, CALCITE, ANKERITE, SERICITE, BIOTITE, CHLORITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NORTHEAST-SOUTHWEST TREND, COLUMBIA SYNCLINE
SIGNIFICANT LOCAL STRUCTURES.....SHEAR ZONE UP TO 12 M WIDE. STRIKE AND DIP OF SHEAR ZONE IS ABOUT SAME AS SCHISTOSITY, N40-60DEGE, 80 DEG NW THRU VERTICAL TO 80 DEG SE.
PROCESS OF CONCENTRATION/ENRICHMENT.....MINERAL SOLUTIONS AS REPLACEMENT AND IN UPPER PART OF DEPOSIT, SECONDARY ENRICHMENT.
FORMATION AGE.....EPAL
FORMATION AGE.....TRI
FORMATION NAME.....CHOPAWAMSIC FORMATION
FORMATION NAME.....DIKE
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIKE
GEOLOGY COMMENTS.....THE QUARTZ BODIES LIE ALONG THE WALLS OF THE SHEAR ZONE; SHEAR ZONE CONTINUOUS, BUT INDIVIDUAL ORE BODIES ARE NOT. SOME POST-ORE MOVEMENT INDICATED. DIABASE DIKE LOCATED ABOUT 0.4 KM TO THE SOUTH.
GENERAL COMMENTS.....A LARGE PART OF VIRGINIA'S GOLD PRODUCTION BETWEEN 1833 AND 1860 PROBABLY CAME FROM THE VAUCLUSE MINE. THE MINE WAS FIRST OPERATED AS A PLACER MINE. THIS SAME SHEAR ZONE AS AT MELVILLE MINE ABOUT 1.5 KM TO NE.
GEOLOGICAL DESCRIPTIVE NOTES.....THIS MINE IS ON THE SAME SHEAR ZONE AS THE MELVILLE MINE.
NON-USGS WORK.....1832 DIREXPL UNKNOWN ORGANIZATION (LIBERTY MINING CO BEGINNING 1844): DEVELOPED PLACER AND UPPER WORKINGS
NON-USGS WORK.....1935 DIREXPL VIRGINIA MINING CORP: DEVELOPED LOWER WORKINGS AND CONDUCTED EXPLORATORY DRILLING.
NON-USGS WORK.....1974 RECON VA DIV MIN RES: INSPECTED SITE.
REFERENCE....BASS, C E, 1940, THE VAUCLUSE GOLD MINE, ORANGE COUNTY, VIRGINIA: ECONOMIC GEOLOGY, V 35, P 79-91
REFERENCE....PARDEE, J T AND PARK, C F, JR, 1948, GOLD DEPOSITS OF THE SOUTHERN PIEDMONT: US GEOLOGICAL SURVEY PROFESIONAL PAPER 213, 12 P.
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P
REFERENCE....LONSDALE, J.T., 1927, GEOLOGY OF THE GOLD-PYRITE BELT OF THE NORTH EASTERN PIEDMONT, VIRGINIA: VGS BULL 30, 110 P.
REFERENCE....CREDNER, H., 1868, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VI, P. 371.
REFERENCE....SWEET, P.C., 1971, GOLD MINES AND PROSPECTS IN VIRGINIA: VIRGINIA MINERALS, VOL. 17, NO. 3, P. 25-33.
REFERENCE....PARK, C.F., JR., 1936, PRELIMINARY REPORT ON GOLD DEPOSITS OF THE VIRGINIA PIEDMONT: VGS bULL 44, 42 P.
REFERENCE....WATSON, T.L., 1907, GOLD AND SILVER, IN MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, J.P. BELL CO., P. 549-567.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE AU	ACC	0.55600	TOZ	1853	AMOUNT IS FOR ONLY AN 80 DAY PERIOD IN 1853

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
AU	ACC	4.30530	TOZ	1935-1938	
ORE	ACC	26.452	TONS	1935 - 1938	ORE GROSS VALUE OF $143,760
ORE AU	SML			1832-1860	AU 0.4 TOZ/TON

SOURCE OF PRODUCTION INFORMATION.....BASS (1940)
PRODUCTION COMMENTS.....DIRECT MINING, MILLING, AND SHIPPING COST PER TON FROM 1935 TO 1938 WAS $4.56. IN DECEMBER, 1853, THE MILL WAS CRUSHING 50 TONS A DAY AND THE AVERAGE VALUE OF THE ORE WAS ESTIMATED TO BE $8 PER TON.

RESERVES AND POTENTIAL RESOURCES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	SML			1972	

SOURCE OF RESERVES AND RESOURCES INFORMATION.....BASS (1940)
RESERVES AND RESOURCES COMMENTS.....THERE IS PROBABLY A SMALL AMOUNT OF ORE AT THE SITE. ALL KNOWN COMMERCIAL BODIES ABOVE 91 M LEVEL ARE EXHAUSTED, HOWEVER CORE DRILLING BELOW THIS LEVEL INDICATE SAME GEOLOGICAL/MINERALOGICAL CONDITIONS BELOW

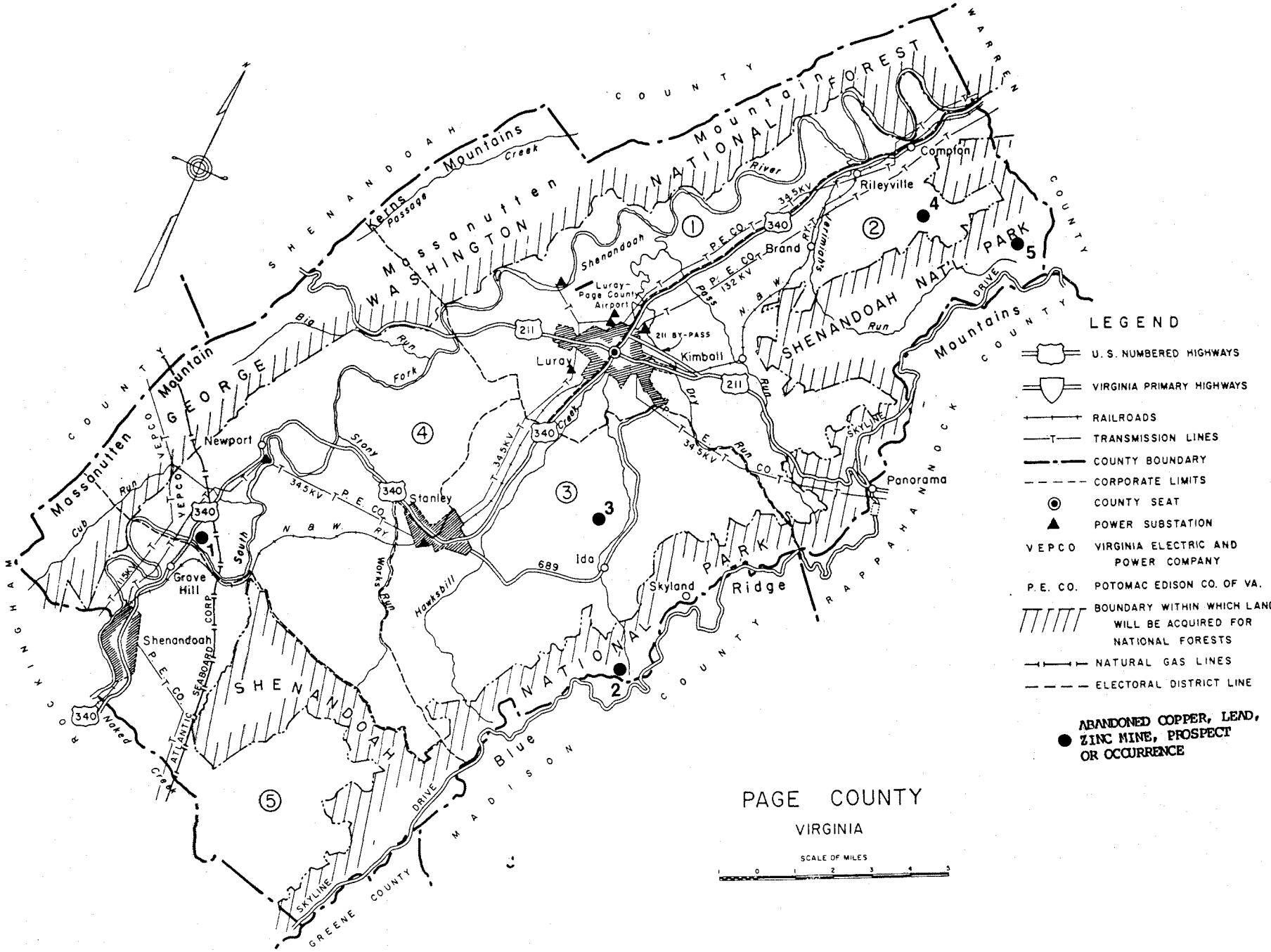
PAGE COUNTY

1. Grove Hill Prospect

MRDS-REV RECORD NUMBER.....913
MRDS RECORD NUMBER.....W031313
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....12
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....GROVE HILL PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/SHENANDOAH
COUNTRY.....US STATE.....VA COUNTY.....PAGE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... STANLEY, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....900 FT (274 M)
UTM NORTHING...4267790 EASTING...708170 ZONE...+17
LATITUDE.....38-32-10N LONGITUDE.....078-36-42W
POSITION FROM NEAREST LOCALITY.....0.8 KM (0.5 MI) NORTH OF GROVE HILL.
LOCATION COMMENTS.....ON EAST SIDE OF U.S. HWY 340, 0.15 KM (0.10 MI) BY ROAD SOUTH OF JUNCTION WITH STATE ROAD 613 AND 0.1 KM (0.05 MI) NORTH OF BRIDGE OVER SOUTH FORK OF SHENANDOAH RIVER.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....1955(?)
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....OCCURRENCE HAS NOT BEEN PROSPECTED.
DEPOSIT TYPE.....STRATA-BOUND, REPLACEMENT, DISSEMINATED, VEIN/SHEAR ZONE.
DEPOSIT FORM.....IRREGULAR
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....(RECRYSTALLINE) DOLOSTONE, GOUGE, TECTONIC (FAULT) DOLOSTONE BRECCIA.
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE
ORE CONTROL/LOCUS.....BEDDING PLANE FAULT, SHEAR ZONE
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, MASSANUTTEN SYNCLINORIUM, STANLEY FAULT, ANTICLINAL CROSS-WARP (NW-SE)
SIGNIFICANT LOCAL STRUCTURES.....ANTICLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHERMAL (TELETHERMAL) EMPLACEMENT POST-FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....SPHALERITE IS ASSOCIATED WITH A MINOR BEDDING-PLANE FAULT, WITH DISSEMINATED CRYSTALS REPLACING THIN GOUGE AND LARGER CRYSTALS IN VEIN DOLOMITE CEMENTING FRACTURED BEDS.
REFERENCE....ALLEN, R.M., JR., GEOLOGY AND MINERAL RESOURCES OF PAGE COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 81, 78 P.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZATION OF THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

2. Hawksbill Mountain Prospect

MRDS-REV RECORD NUMBER.....908
MRDS RECORD NUMBER.....W030928
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....HAWKSBILL MOUNTAIN PROSPECT
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....PAGE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....45
QUADRANGLE NAME..... BIG MEADOWS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....3500 FT (107 M)
UTM NORTHING...4270570 EASTING...727320 ZONE...+17
LATITUDE.....38-33-23N LONGITUDE.....078-23-29W
POSITION FROM NEAREST LOCALITY.....ABOUT 6 KM (4 MI) NE OF BIG MEADOWS WAYSIDE IN THE VICINITY OF HAWKSBILL MOUNTAIN AND HAWKSBILL GAP .
LOCATION COMMENTS.....MINE NOT LOCATED IN 1978. UTM AND ELEVATION ARE APPROXIMATE; SHENANDOAH NATIONAL PARK.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....MALACHITE
COMMODITY INFO COMMENTS.....ORE MINERALIZATION REPORTED ALONG APPALACHIAN TRAIL.
OCCUR.....CU


PAGE COUNTY
VIRGINIA
SCALE OF MILES
LEGEND
U. S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
VEPCO VIRGINIA ELECTRIC AND POWER COMPANY
P. E. CO. POTOMAC EDISON CO. OF VA.
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
NATURAL GAS LINES
ELECTORAL DISTRICT LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
SHENANDOAH COUNTY
WARREN COUNTY
RAPPAHANNOCK COUNTY
MADISON COUNTY
GREENE COUNTY
ROCKINGHAM COUNTY
Massanutten Mountain
Kerns Mountains
Massanutten Mountain
GEORGE WASHINGTON NATIONAL FOREST
SHENANDOAH NAT'L PARK
SHENANDOAH NATIONAL PARK
Blue Ridge Mountains
Compton
Rileyville
Brand
Kimball
Luray
Luray-Page County Airport
211 BY-PASS
Newport
Stanley
Ida
Skyland
Panorama
Grove Hill
Shenandoah
Passage Creek
Shenandoah River
Big Run
Fork
Stony Creek
Cub Run
South Fork
Hawksbill
Works Run
Dry Run
Pass Run
Jerimiahs Run
Naked Creek
Skyline Drive
N. & W. RY.
P. E. CO.
VEPCO
ATLANTIC SEABOARD CORP.
34.5KV
132 KV
115KV
689
340
211
1
2
3
4
5

PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1900
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....U.S. GOVERNMENT
EXPLORATION AND DEVELOPMENT COMMENTS.....REPORTEDLY WORKED IN THE 1800'S, 18.3M SHAFT SUNK
DEPOSIT TYPE.....POSSIBLY DISSEMINATED
DEPOSIT SIZE.....SMALL
DEPTH BELOW SURFACE.....18.3 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....NO EVIDENCE OF OLD SHAFT REPORTED 1978. MANY GREENSTONE ROCKSLIDES ON NE SIDE OF HAWKSBILL MTN. WERE REPORTED 1978. WATER-FILLED SHAFT REPORTED 1911.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....EPIDOTIZED METABASALT, CHLORITIC SLATE
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....EPIDOTIZED METABASALT
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....NORMAL FAULT ABOUT 1 KM NNE OF AREA TRENDING S 40 DEG E.
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
GEOLOGY COMMENTS.....SWIFT RUN FORMATION (PREC); A SERICITE SHALE QUARTZITE AND CONGLOMERATE; LIES ABOUT 0.5 KM TO THE NW.
NON-USGS WORK.....DIREXPL
NON-USGS WORK.....1979 RECON VA. DIV. OF MINERAL RESOURCES SHAFT NOT LOCATED.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VA. DIV. MIN. RES. PUBLICATION 27, P. 39-52.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES, U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
PRODUCTION COMMENTS.....ACTUAL PRODUCTION IS UNLIKELY.

3. Ida Mine

MRDS-REV RECORD NUMBER.....924
MRDS RECORD NUMBER.....W030860
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1 3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....82 08
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....IDA MINE
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....PAGE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... BIG MEADOWS, VA QUADRANGLE SCALE 1:24000
ELEVATION.....1510 FT (460 M)
UTM NORTHING...4275690 EASTING...724120 ZONE...+17
LATITUDE.....38-36-12N LONGITUDE.....078-25-35W
POSITION FROM NEAREST LOCALITY.....2.4 KM (1.5 MILES) SE OF CAVETOWN, 0.56 KM (0.35 MI) OFF THE W SIDE OF STATE ROAD 689 ABOUT 0.89 KM (0.55 MI) BY ROAD SOUTH OF ITS INTERSECTION WITH STATE ROAD 668.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....MALACHITE, AZURITE, NATIVE COPPER
COMMODITY INFO COMMENTS.....NATIVE COPPER REPORTED IN 1911; NOT IN 1973 WHEN MALACHITE AND AZURITE WERE REPORTED IN QUARTZ VEINLETS.
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....VIRGINIA CONSOLIDATED COPPER CO. (?)
YEAR OF DISCOVERY.....1900
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1902
YEAR OF LAST PRODUCTION.....1904
OPERATOR.....VIRGINIA CONSOLIDATED COPPER COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....VIRGINIA CONSOLIDATED COPPER COMPANY WORKED THE MINE FROM 1902-1905. AN INCLINED SHAFT WAS SUNK WITH DRIFTS AT 3 LEVELS.
DEPOSIT TYPE.....VEIN
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION OCCURS WITH QUARTZ VEINLETS AND AS FILMS AND SPECKS IN ZONES OF CLOSE JOINTING IN THE EPIDOTIZED CATOCTIN GREENSTONE. ORE OCCURRENCE DIMINISHES AT DEPTH. ORE CONFINED TO ZONES OF SHEETED, SOFTENED ROCK. WEED (1911) REPORTS PRODUCTION OF A FEW TONS OF ORE CONTAINING MALACHITE, AZURITE AT 9 M LEVEL
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....94 UNITS...M
LENGTH OF WORKINGS.....116 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....94 METER INCLINED SHAFT WITH DRIFTS AT THREE LEVELS: 1 AT 24.4 M EXTENDED E FOR 18.3 MI; THE SECOND AT 36.6 M DRIVEN W FOR 51.8 M; THE LOWEST DRIFT OF 85.3 M DRIVEN 45.7 M. IN 1973, THE ABANDONED SITE CONSISTED OF A 2 M HIGH DUMP, AND THE CAVED SHAFT ABOUT 8 M DEEP, 6 M IN DIAMETER, AND WATER-FILLED.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....AMYGDALOIDAL METABASALT, EPIDOSITE
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....AMYGDALOIDAL METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, CHLORITE, FELDSPAR, SERPENTINE ASBESTOS, EPIDOTE, JASPER
ORE CONTROL/LOCUS.....JOINTS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
PROCESS OF CONCENTRATION/ENRICHMENT.....PERCOLATION OF SURFACE WATERS THROUGH COPPER-BEARING ROCKS
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
GEOLOGY COMMENTS.....QUARTZ, CHALCOPYRITE AND FELDSPAR INDICATE A HYDROTHERMAL ORIGIN. FISSURED, CRUSHED ROCK ALONG JOINTS IS REPORTED AS DECOMPOSED, SOFT, AND DISTINGUISHED BY QUARTZ FILLING.
NON-USGS WORK.....1905 DIREXPL VIRGINIA CONSOLIDATED COPPER COMPANY EXTENSIVELY DEVELOPED THE MINE.
NON-USGS WORK.....1973 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VA. DIV. MIN. RES. PUBLICATION 27, P. 39-52.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....ALLEN, R.M., JR., 1967, GEOLOGY AND MINERAL RESOURCES OF PAGE COUNTY: VA. DIV. MIN. RES. BULL. 81, 78 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, J.P. BELL CO., 618 P.
PRODUCTION COMMENTS.....SEVERAL TONS OF ORE REPORTED SHIPPED.

4. Mine Run Prospect

MRDS-REV RECORD NUMBER.....915
MRDS RECORD NUMBER.....W030924
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....MINE RUN PROSPECT
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....PAGE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... BENTONVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1040 FT (317 M)
UTM NORTHING...4293250 EASTING...730160 ZONE...+17
LATITUDE.....38-45-35N LONGITUDE.....078-21-04W
POSITION FROM NEAREST LOCALITY.....3 KM (2 MI) SE OF COMPTON
LOCATION COMMENTS.....ON NW SIDE OF STATE ROAD 662 ABOUT 0.40 KM (0.25 MI) SW OF ITS INTERSECTION W/STATE ROAD 705.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....MALACHITE, CHALCOCITE
GENERAL ANALYTICAL DATA.....A FIRE ASSAY WAS PERFORMED ON A SAMPLE BY IRON KING ASSAY, HUMBOLDT, AZ, RESULT INDICATED 0.34 OZ AG/TON AND AU WAS NIL.
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1910
NATURE OF DISCOVERY.....4
EXPLORATION AND DEVELOPMENT COMMENTS.....PROSPECTING OCCURRED BETWEEN 1910 AND 1920 ACCORDING TO LOCAL RESIDENTS.
DEPOSIT TYPE.....PROBABLY DISSEMINATED, PORPHYRY
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....NO MINERALIZATION SEEN IN 1978. ONLY FRAGMENTS OF TUFFACIOUS SLATE AND GREENSTONE WERE PRESENT IN 1978.
DESCRIPTION OF WORKINGS COMMENTS.....SHAFT DESCRIBED AS SHALLOW, AND WAS REPORTED FILLED IN 1978. ONLY A SMALL AMOUNT OF PROSPECTING WAS DONE, AS EVIDENCED BY A SMALL DUMP REPORTED IN 1967.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....TUFFACEOUS, SLATEY METABASALT
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....TUFFACEOUS, SLATEY METABASALT
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....VAUGHN FAULT ZONE
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
GEOLOGY COMMENTS.....VAUGHN FAULT ZONE IS AN OVERTHRUST FAULT RUNNING NE-SW ALONG THE WEST SLOPE OF BROADUS MTN. IN THE WEVERTON FORMATION. LAVA FLOWS ARE ALTERED AND THIN.
NON-USGS WORK.....DIREXPL SHALLOW SHAFT SUNK, ORGANIZATION UNKNOWN.
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VDMR, PUB. 27, P. 39-52.
REFERENCE....ALLEN, R. M., JR., 1967, GEOLOGY AND MINERAL RESOURCES OF PAGE COUNTY: VIRGINIA DIVISION OF MINERAL

RESOURCES BULLETIN 81, 78 P.
REFERENCE....MORRILL, P., 1972, VIRGINIA MINES AND MINERALS: ROCKS AND MINERALS MAGAZINE, VOL. 47, NO. 6, P. 369-371.

5. Richards Mine

MRDS-REV RECORD NUMBER.....1718
MRDS RECORD NUMBER.....VA01718
RECORD TYPE.....X1M
REPORT DATE.....87 09
INFORMATION SOURCE.....13
REPORTER.....SWEET, PALMER C.
REPORTER AFFILIATION.....VDMR
SITE NAME.....RICHARDS MINE
COUNTRY.....US STATE.....VA COUNTY.....PAGE
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE PROVINCE
DRAINAGE AREA.....02070005 MID ATLANTIC
LAND STATUS.....45
QUADRANGLE NAME..... BENTONVILLE (1972)_ QUADRANGLE SCALE 1:24000
UTM NORTHING...4294000 EASTING...434000 ZONE...
ACCURACY.....EST UNDETERMINED
LOCATION COMMENTS.....IN THE BLUE RIDGE
COMMODITIES PRESENT.....CU
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....1880'S
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1882
EXPLORATION AND DEVELOPMENT COMMENTS.....1882 - UNKNOWN ORGANIZATION MINED AND SHIPPED ORE TO BALTIMORE FOR SMELTING
DESCRIPTION OF WORKINGS COMMENTS.....NO WORKINGS LOCATED IN 1978
SIGNIFICANT REGIONAL STRUCTURES.....NE - SW TREND
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VA: DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE....THE VIRGINIAS, VOL. 3, P. 44.

PATRICK COUNTY

1. Epperson Prospect

MRDS-REV RECORD NUMBER.....1556
MRDS RECORD NUMBER.....W055416
RECORD TYPE.....X1M
REPORT DATE.....87 02
INFORMATION SOURCE.....35
FILE LINK ID.....1556
REPORTER.....SWEET, PALMER C
REPORTER AFFILIATION.....VDMR
SITE NAME.....EPPERSON PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....PATRICK
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT PROVINCE
DRAINAGE AREA.....03010103
LAND STATUS.....01 (1968)
QUADRANGLE NAME..... MEADOWS OF DAN (1968) QUADRANGLE SCALE 1:24000
ELEVATION.....2360 FT
UTM NORTHING...4054700 EASTING...551100 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.5 MILES NE OF KIBLER
LOCATION COMMENTS.....ON THE RIDGE BETWEEN HICKORY COVE AND HOOKERS CREEK.
COMMODITIES PRESENT.....CU FE AU AG
ORE MATERIALS.....CHALCOPYRITE, BORNITE, MALACHITE, PYRITE, GOLD, SILVER
OCCUR.....CU FE AU AG
PRODUCTION.....U
STATUS AND ACTIVITY.....1
DEPOSIT TYPE.....LODE (VEIN)
DEPOSIT DESCRIPTION COMMENTS.....QUARTZ VEIN 3 FT THICK EXPOSED FOR 30 FT. COUNTRY ROCK STRIKES N 80 E AND DIPS STEEPLY TO THE SE.
HOST ROCK AGE.....LATE PREC
HOST ROCK TYPE.....QUARTZ-MICA TO GREENSTONE SCHIST
IGNEOUS ROCK TYPE.....QUARTZ
FORMATION AGE.....LATE PREC
FORMATION NAME.....LYNCHBURG
REFERENCE....GOOCH, E.O., 1959, INTERVIEW-VDMR COUNTY FILES
REFERENCE....SWEET, P.C., 1977, INTERVIEW-VDMR COUNTY FILES
REFERENCE....EPPERSON, G., 1977, LETTER-VDMR COUNTY FILES
REFERENCE....SWEET, P.C. AND LOVETT, J.A., 1985, VIRGINIA MINERALS, VOL.31, NO. 4, P.41-52.

2. Jefferson Peak Prospect

MRDS-REV RECORD NUMBER.....931
MRDS RECORD NUMBER.....W030925
RECORD TYPE.....X1M
REPORT DATE.....80 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....JEFFERSON PEAK PROSPECT
MINING DISTRICT/AREA.....SOUTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....PATRICK
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....03 ROANOKE RIVER
QUADRANGLE NAME..... LAUREL FORK, VA. (?) QUADRANGLE SCALE 1:24000
LATITUDE.....36-39- N LONGITUDE.....080-35- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN.
LOCATION COMMENTS.....FONTAINE (1884) DESCRIBED PROSPECT AS BEING 18 MI (29 KM) SW OF SUTHERLAND PROSPECT IN FLOYD CO. AND 14 MI (23 KM) FROM STUART.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CHALCOPYRITE, MALACHITE
OCCUR.....CU
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
YEAR OF DISCOVERY.....1883
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....ONLY THE INITIAL REPORT BY FONTAINE (1884) IS AVAILABLE; IT IS DOUBTFUL IF FULL-SCALE DEVELOPMENT TOOK PLACE.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, METAMORPHIC
DEPOSIT FORM.....IRREGULAR
MAXIMUM THICKNESS.....6.1 UNITS...M
DEPOSIT SIZE.....SMALL (?)
DESCRIPTION OF WORKINGS COMMENTS.....FONTAINE (1884) DOES NOT DESCRIBE THE WORKINGS.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....CHLORITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, CHLORITE, CALCITE
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, ARARAT RIVER SYNCLINORIUM
FORMATION AGE.....PREC
FORMATION NAME.....LYNCHBURG FORMATION
GEOLOGY COMMENTS.....THIS SECTION OF THE LYNCHBURG FORMATION IS DELINEATED AS THE ALLIGATOR BACK FORMATION BY ESPENSHADE AND OTHERS (1975).
WORK DONE BY USGS.....1966 RECON D.W. RANKIN: RECON MAPPING (MAP I -709-B)
REFERENCE....CONLEY, J.F., 1978, GEOLOGY OF THE PIEDMONT OF VIRGINIA-INTERPRETATIONS AND PROBLEMS, IN CONTRIBUTIONS TO VIRGINIA GEOLOGY-III: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 7, P. 115-149.
REFERENCE....ESPENSHADE, G.H., RANKIN, D.W., SHAW, K.W., AND NEUMAN, R.B., 1975, GEOLOGIC MAP OF THE EAST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA-VIRGINIA: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-B, 1 SHEET, SCALE 1:250,000.
REFERENCE....FONTAINE,W.M., 1883-84, NOTES ON THE GEOLOGY AND MINERAL RESOURCES OF THE FLOYD, VA., PLATEAU: THE VIRGINIAS, V. 4, P. 167, 178-180, 185-192; V. 5, P. 8-12.
PRODUCTION COMMENTS.....IT IS DOUBTFUL WHETHER THIS PROSPECT PRODUCED.

PITTSYLVANIA COUNTY

1. Hamner Mine

MRDS-REV RECORD NUMBER.....941
MRDS RECORD NUMBER.....W031293
RECORD TYPE.....X1N
REPORT DATE.....80 08
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 10
UPDATER.....GOOD, RICHARD S.
SITE NAME.....HAMNER MINE
MINING DISTRICT/AREA.....JAMES RIVER ROANOKE RIVER MANGANESE IRON BARITE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....PITTSYLVANIA
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....03010101 ROANOKE RIVER
LAND STATUS.....01
QUADRANGLE NAME..... ALTAVISTA, VA. (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....460 FT
UTM NORTHING...4103540 EASTING...644750 ZONE...+17
LATITUDE.....37-06-50N LONGITUDE.....079-22-15W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1 MILE ESE OF LEESVILLE (630 & 43 INTERSECTION) ON EAST BANK OF ROANOKE RIVER.
LOCATION COMMENTS.....0.45 MILE NW ON ROUTE 924 FROM INTERSECTION WITH R 638: TRACK LEADS SOUTH FOR 1190 FEET FROM ROAD AND LEADS TO MINE (ABOUT 1/4 MILE TO SOUTH). POWER LINE WHICH INTERSECTS ROUTE 924 ALSO LEADS TO WORKINGS WHICH CROSS POWER LINE BUT THERE IN NO TRACK ALONG IT.
COMMODITIES PRESENT.....BA CU
ORE MATERIALS.....BARITE
COMMODITY INFO COMMENTS.....WAS ONE OF LARGEST IN CAMPBELL COUNTY BUT NO PRODUCTION FIGURES ARE AVAILABLE.
MAJOR.....BA
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1800'S
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1800'S
OWNER (PRESENT/LAST).....WYLIE CONNER, ALTAVISTA (?)
EXPLORATION AND DEVELOPMENT COMMENTS.....BARITE WAS BOATED ON THE STAUNTON RIVER TO ALTAVISTA FOR SHIPMENT TO LYNCHBURG. LATER BARITE CONCENTRATE WAS HAULED HALF A MILE TO VIRGINIAN RAILWAY (NOW NORPOLK AND WESTERN). TENCHES BY POWER SHOVELS AND AS VERTICAL SHAFTS BY HAND METHODS. SEVERAL SHALLOW TEST PITS

PATRICK COUNTY
VIRGINIA

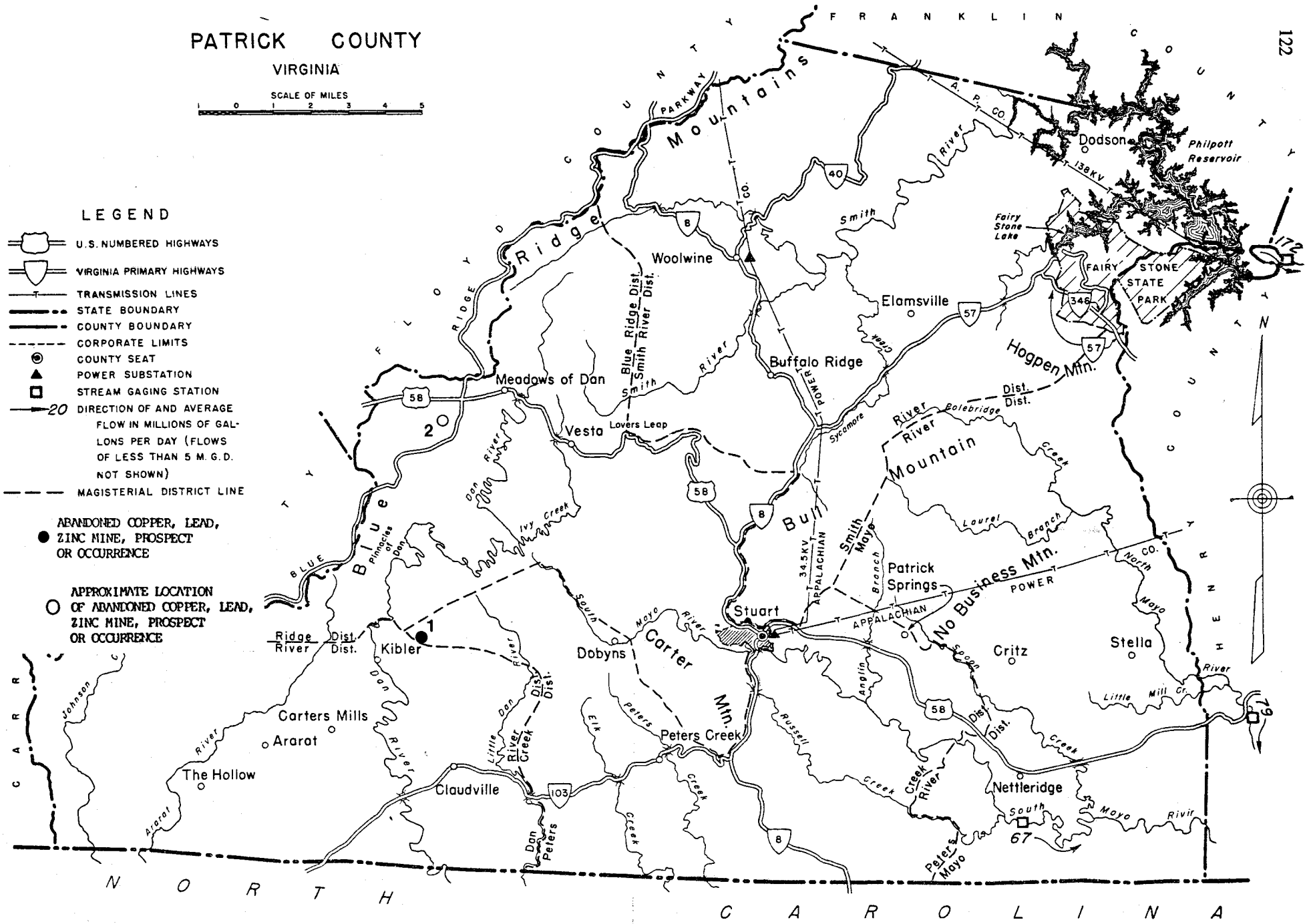
SCALE OF MILES
1 0 1 2 3 4 5

LEGEND

- U.S. NUMBERED HIGHWAYS
- VIRGINIA PRIMARY HIGHWAYS
- TRANSMISSION LINES
- STATE BOUNDARY
- COUNTY BOUNDARY
- CORPORATE LIMITS
- COUNTY SEAT
- POWER SUBSTATION
- STREAM GAGING STATION
- 20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M. G. D. NOT SHOWN)
- MAGISTERIAL DISTRICT LINE

● ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE

○ APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE



LEGEND

U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
● COUNTY SEAT
▲ POWER SUBSTATION

□ STREAM GAGING STATION
N.F.&D. NORFOLK, FRANKLIN & DANVILLE RY.
→20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
VEPCO VIRGINIA ELECTRIC AND POWER COMPANY
A.P.CO. APPALACHIAN POWER CO.
—— ELECTION DISTRICT BOUNDARY

PITTSYLVANIA COUNTY
VIRGINIA

SCALE OF MILES
1 0 1 2 3 4 5

● ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE

WERE ALSO DUG AND WHEN EDMUNDSON VISITED THE SITE (1939?) SEVERAL TONS OF BARITE WERE READY FOR SHIPMENT. THIS MINE WAS ONE OF THE LARGEST IN THE CAMPBELL-PITTSYLVANIA COUNTIES AREA BUT NO PRODUCTION FIGURES ARE AVAILABLE. MUCH OF THE MATERIAL WAS BOATED ON THE STAUNTON RIVER TO ALTAVISTA FOR SHIPMENT. IN LATER YEARS, THE BARITE WAS HAULED HALF A MILE AND SHIPPED ON THE VIRGINIAN RAILWAY.
DEPOSIT TYPE.....METAMORPHIC STRATIFORM
DEPOSIT FORM.....LENSES AND PODS; SOME VEINS OF BARITE.
MAXIMUM LENGTH.....700 UNITS...FT
MAXIMUM WIDTH.....50-100 UNITS...FT
DEPOSIT SIZE.....SMALL
STRIKE.....N 30 DEG E; N 45 DEG E
DIP.....68 DEG SE; 75 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....DIP IS VARIABLE TO NEAR VERTICAL. BARITE OCCURS IN RESIDUAL CLAYS AND AS VEINS AND REPLACEMENT MASSES IN BLOCKS OF MARBLE FOUND IN THE RESIDUUM. MICA SCHISTS FORM THE WALL ROCK AND CONTAINS ABUNDANT MAGNETITE GRAINS. STRIKE AND DIP VARYS LOCALLY. THE CLAY IS DERIVED FROM MARBLE OF THE MOUNT ATHOS FORMATION. OLD WORKINGS SHOW THE ORE BODY TO BE QUITE EXTENSIVE, AT LEAST 100 FT (30.5 M) WIDE BY 700 FT (213.4 M) LONG AND PROBABLY LONGER.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....40 UNITS...FT
LENGTH OF WORKINGS.....800(?) UNITS...FT
OVERALL LENGTH.....800 UNITS...FT
OVERALL WIDTH.....50-100 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....ONE LARGE OPEN CUT, ORIGINALLY 800 LONG, TRENDING N30E INTO A NARROW RIDGE. WAS 300 FEET WIDE, NOW MODIFIED BY POWER SHOVELS INTO BENCHES, AND FURTHER REWORKED AND FILLED DURING POWER LINE CONSTRUCTION. ONE SHAFT IS 30 FEET DEEP ANOTHER 40 FEET AND WATER FILLED; SHAFTS NOW CAVED AND INACCESSIBLE. THERE ARE MANY PITS ON BOTH SIDES. MAIN CUT 5-10 FEET DEEP, 10 FEET WIDE; ORE AND WASTE PILE NOW OVERGROWN.
HOST ROCK AGE..... LATE PRECAMBRIAN
HOST ROCK TYPE.....CLAYS OF MT ATHOS MARBLE; MAGNETITE BEARING MICA SCHIST.
AGE OF MINERALIZATION..... LATE PRECAMBRIAN; PALEOZOIC REMOBILIZATION
PERTINENT MINERALS (NOT ORE).....PYRITE, CHALCOPYRITE, MAGNETITE, MALACHITE.
ORE CONTROL/LOCUS.....CLAY RESIDUUM
TECTONIC SETTING.....SMITH RIVER ALLOCTHON
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, SMITH RIVER ALLOCHTHON JAMES RIVER SYNCLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....FAULTING?
SIGNIFICANT ALTERATION.....MARBLE ALTERATION TO CLAY
FORMATION AGE..... LATE PRECAMBRIAN
FORMATION NAME.....MT. ATHOS MARBLE MEMBER, ALLIGATOR BACK FORMATION, LYNCHBURG GROUP
GEOLOGY COMMENTS.....GRAY MICA SCHIST WHICH WEATHERS BROWN AND PALE BROWN MASSIVE BARITE IN GRAY POR PHYROBLASTIC (MAGNETITE) MICA SCHISTS WERE NOTED DURING 1987 VISIT. NO SECONDARY COPPER MINERALS SEEN.
GENERAL COMMENTS.....EXPOSURES VERY POOR AND OVERGROWN EXCEPT POR MICA SCHIST ON NW WALL AT POWER LINE CUT. DUMP PILE COVERED.
NON-USGS WORK.....DIREXPL ? - DUG TUNNELS, SHAFTS, OPEN CUTS, MINED
REFERENCE....EDMUNDSON, R.S., 1938, BARITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 53, 85 P.
REFERENCE....WATSON, T.L., 1907, SULPHATES, IN MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, PP. 305-327.
REFERENCE....ECONOMIC GEOLOGY FILE-VIRGINIA DIVISION OF MINERAL RESOURCES.

PRINCE WILLIAM COUNTY

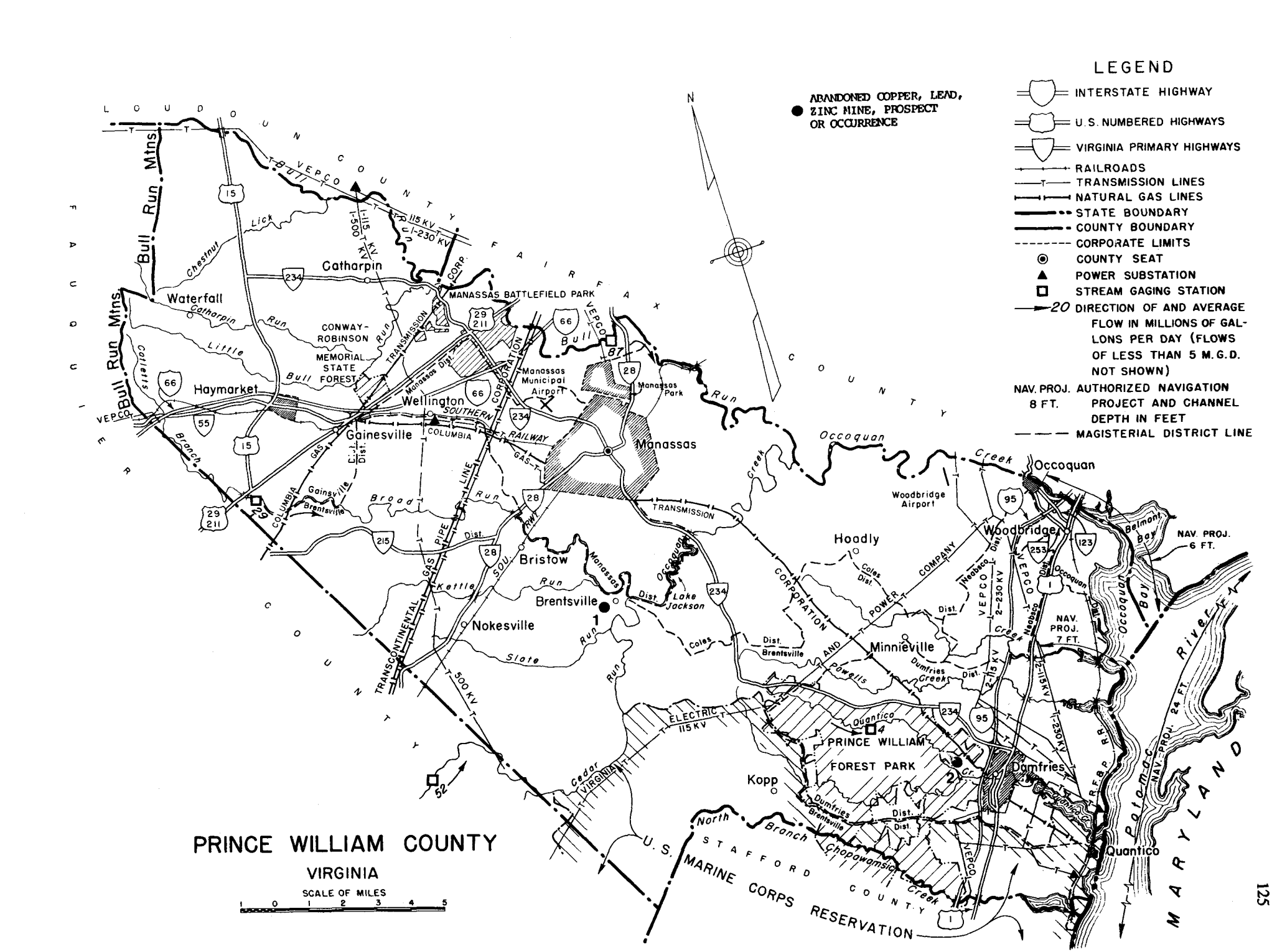
1. Brentsville Prospect

MRDS-REV RECORD NUMBER.....994
MRDS RECORD NUMBER.....W000324
RECORD TYPE.....X1M
DEPOSIT NUMBER.....FJ-002
REPORT DATE.....72 04
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....87 07
UPDATER.....SWEET,P.C./MEINTZER, ROBT. E. (LE VAN, D.C.)
SITE NAME.....BRENTSVILLE PROSPECT
MINING DISTRICT/AREA.....CULPEPER BASIN
COUNTRY.....US STATE.....VA COUNTY.....PRINCE WILLIAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
SECOND QUADRANGLE NAME...INDEPENDENT HILL, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....250 FT (76 M)
UTM NORTHING...4284920 EASTING...282600 ZONE...+18
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....IN BRENTSVILLE
LOCATION COMMENTS.....LOCATION IS 200 M SE OF THE OLD COURTHOUSE.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....MALACHITE, AZURITE
COMMODITY INFO COMMENTS.....NO DIABASE DIKES WERE FOUND IN THE AREA. DEPOSITS ARE SMALL AND LOW-GRADE.
OCCUR.....CU
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO ACTIVE PROSPECTING HAS BEEN CONDUCTED.
DEPOSIT TYPE.....FISSURE DEPOSITS
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS COMMENTS.....VISITED THE SITE IN JUNE 1987. BELIEVE PROSPECT TO BE ON MACHEN PROPERTY. ONLY SMALL BITS OF TRIASSIC SHALE WERE SEEN IN THE FIELD.
HOST ROCK AGE.....TRI
HOST ROCK TYPE.....SHALE, SANDSTONE
PERTINENT MINERALS (NOT ORE).....QUARTZ, CLAY MINERALS
TECTONIC SETTING.....BASIN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CULPEPER TRIASSIC BASIN
FORMATION AGE.....TRI
FORMATION AGE.....TRI
FORMATION NAME.....BULL RUN SHALE (NEWARK GROUP)
FORMATION NAME.....MANASSAS SANDSTONE (NEWARK GROUP)
GENERAL COMMENTS.....CU OCCURS A FEW HUNDRED FT. SE. OF THE OLD COURTHOUSE NEAR BRENTSVILLE AND IN A NEARBY SANDSTONE QUARRY.
NON-USGS WORK.....1920 GEOLMAP VA. GEOL. SURV.: MAPPED AREA
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....ROBERTS, J.K., 1928, THE GEOLOGY OF THE VIRGINIA TRIASSIC: VIRGINIA GEOLOGICAL SURVEY BULLETIN 29, 205 P.

RESERVES AND POTENTIAL RESOURCES
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE SML
SOURCE OF RESERVES AND RESOURCES INFORMATION.....ROBERTS (1928)
RESERVES AND RESOURCES COMMENTS.....THE AMOUNT OF MINERAL MATTERIN THE SHALE IS QUITE LOW."

2. Cabin Branch Mine

MRDS-REV RECORD NUMBER.....969
MRDS RECORD NUMBER.....W000349
RECORD TYPE.....X1M
DEPOSIT NUMBER.....FJ-007
REPORT DATE.....72 04
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 07
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....CABIN BRANCH MINE
SYNONYM NAME.....DUMFRIES MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....PRINCE WILLIAM
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...QUANTICO, VA SECOND QUAD SCALE 1:24000
ELEVATION.....60 FT (18 M)
UTM NORTHING...4271980 EASTING...295420 ZONE...+18
LATITUDE.....38-34-29N LONGITUDE.....077-20-54W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....2.4 KM (1.5 MI) NW OF DUMFRIES.
LOCATION COMMENTS.....ON QUANTICO CREEK
COMMODITIES PRESENT.....PYR ZN PB CU AU AG
ORE MATERIALS.....PYRITE, PYRRHOTITE, CHALCOPYRITE, GALENA, SPHALERITE
COMMODITY SUBTYPES.....SOURCE OF SULFUR.
COMMODITY INFO COMMENTS.....ANALYSES SHOWED SMALL AMOUNTS OF GOLD AND SILVER, BUT THESE WERE NOT RECOVERED. THE ORE WAS DIVIDED INTO THREE CLASSES, LUMP, SPALL, AND FINE.
MAJOR.....PYR
OCCUR.....ZN PB CU AU AG
PRODUCTION.....M
STATUS AND ACTIVITY.....6
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1889
OPERATOR.....AMERICAN AGRICULTURAL CHEM. CO.
ECONOMIC COMMENTS.....THE MINE WAS CONNECTED BY A NARROW GAUGE RAILROAD WITH THE R. F. & P. RAILWAY AND WITH WATER SHIPPING FACILITIES AT BARROW SIDING ABOUT 6 MI. FROM THE MINE.
EXPLORATION AND DEVELOPMENT COMMENTS.....DEVELOPMENT WAS BY 3 SHAFTS, 2 OF WHICH WERE VERTICAL AND THE THIRD INCLINED (NO. 2 SHAFT). A LARGE MILL WAS OPERATED AT ONE TIME, BUT WAS LATER SCRAPPED.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
MAXIMUM LENGTH.....300 UNITS...M
MAXIMUM THICKNESS.....3 UNITS...M
DEPOSIT SIZE.....MEDIUM
STRIKE.....N. 10-20 DEG. E.
DIP.....*
DEPOSIT DESCRIPTION COMMENTS.....NO. 1 AND NO. 2 SHAFTS CAUGHT THE ORE NEAR THE SURFACE, WHILE NO. 3 (SITUATED DOWN DIP) CAUGHT THE ORE SEVERAL HUNDRED FEET UNDER GROUND. *MARKED VARIATION IN DIP DUE TO ROLLING.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....300 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, NUMEROUS CAVED PITS, CONCRETE FOUNDATIONS, AND DUMP PILES SEEN.


LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
NAV. PROJ. 8 FT. AUTHORIZED NAVIGATION PROJECT AND CHANNEL DEPTH IN FEET
MAGISTERIAL DISTRICT LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
N
LOUDOUN COUNTY
FAIRFAX COUNTY
FAUQUIER COUNTY
STAFFORD COUNTY
MARYLAND
Bull Run Mtns.
Catharpin
Waterfall
Haymarket
Gainesville
Wellington
Manassas
Manassas Park
Manassas Municipal Airport
Bristow
Brentsville
Nokesville
Hoadly
Woodbridge
Occoquan
Woodbridge Airport
Minnieville
PRINCE WILLIAM FOREST PARK
Quantico
Kopp
Dumfries
CONWAY-ROBINSON MEMORIAL STATE FOREST
MANASSAS BATTLEFIELD PARK
U.S. MARINE CORPS RESERVATION
Bull Run
Occoquan Creek
Broad Run
Kettle Run
Slate Run
Cedar Run
North Branch Chopawamsic Creek
Dumfries Creek
Powells Creek
Neabsco Creek
Belmont Bay
Occoquan Bay
Potomac River
NAV. PROJ. 6 FT.
NAV. PROJ. 7 FT.
NAV. PROJ. 24 FT.
VEPCO
TRANSMISSION
GAS PIPE LINE
RAILWAY
TRANSCONTINENTAL GAS PIPE LINE
SOUTHERN RAILWAY
COLUMBIA GAS
C. & O. R.R.
RF&P R.R.
PRINCE WILLIAM COUNTY
VIRGINIA
SCALE OF MILES
0 1 2 3 4 5

HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....BIOTITE-CHLORITE-ACTINOLITE SCHIST
AGE OF IGNEOUS ROCK.....EPAL
IGNEOUS ROCK TYPE.....GREENSTONE VOLCANICS
PERTINENT MINERALS (NOT ORE).....HORNBLENDE, CHLORITE, BIOTITE, EPIDOTE, GARNET, QUARTZ, TOURMALINE, CALCITE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NORTHEAST-SOUTHWEST, COLUMBIA-QUANTICO SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....HIGH TEMPERATURE FLUID REPLACEMENT.
FORMATION AGE.....EPAL
FORMATION AGE.....ORD
FORMATION AGE.....PREC ?
FORMATION NAME.....CHOPAWAMSIC FORMATION
FORMATION NAME.....QUANTICO FM, SLATE
FORMATION NAME.....GREENSTONE, PROBABLY ALTERED BASALT
IGNEOUS UNIT AGE.....EPAL
IGNEOUS UNIT NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....FELSIC MATERIAL FOUND LESS THAN 1.5 KM FROM ORE BODY. PRESENCE OF TOURMALINE IN GANGUE SUGGESTS MAGNATIC ORIGIN. GREENSTONE VOLCANICS REPRESENT LOW GRADE METAMORPHOSIS OF ANDESITE FLOWS.
GEOLOGICAL DESCRIPTIVE NOTES.....PYRITE PROBABLY REPLACED THE SCHIST. PYRITE FOLLOWS THE STRUCTURE OF THE ORIGINAL ROCKS, BUT IN SOME CASES HAS ITSELF BEEN FOLDED SUBSEQUENT TO FORMATION.
MAJOR LITHOLOGIC/STATTIGRAPHIC UNITS...SCHIST
NON-USGS WORK.....1889 DIREXPL MINE OPENED
NON-USGS WORK.....1908 DIREXPL STEADY PRODUCTION FIRST BEGUN
NON-USGS WORK.....1919 DIREXPL LAST YEAR OF STEADY PRODUCTION
NON-USGS WORK.....1920 OTHER MINE ABANDONED
REFERENCE....LONSDALE, J. T., 1927, VA. GEOL. SURVEY BULL. 30, PP. 10, 85-89.
REFERENCE....WATSON, T. L., 1907, "MINERAL RESOURCES OF VA.", PP. 202-204.
REFERENCE....MIXON, R B, SOUTHWICK, D L, AND REED, J C, JR, 1972, GEOLOGIC MAP OF THE QUANTICO QUADRANGLE, PRINCE WILLIAM AND STAFFORD COUNTIES, VIRGINIA, AND CHARLES COUNTY, MARYLAND: US GEOLOGICAL SURVEY GQ-1044, 1 SHEET, SCALE 1:24 000.
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
PYR	ACC	207.262	LT	1908-1920	

SOURCE OF PRODUCTION INFORMATION.....LONSDALE (1927)
PRODUCTION COMMENTS.....APPROXIMATE VALUE OF THE PRODUCTION FIGURE IS $1.2 MILLION

RESERVES AND POTENTIAL RESOURCES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
PYR ORE	SML				

POTENTIAL RESOURCES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
PYR ORE	SML				

POTENTIAL RESOURCES COMMENTS.....PROBABLY NOT ALL THE ORE WAS REMOVED FROM THE AREA, BUT IT MAY NOT BE ECONOMICALLY FEASIBLE TO DO FURTHER MINING.

PULASKI COUNTY

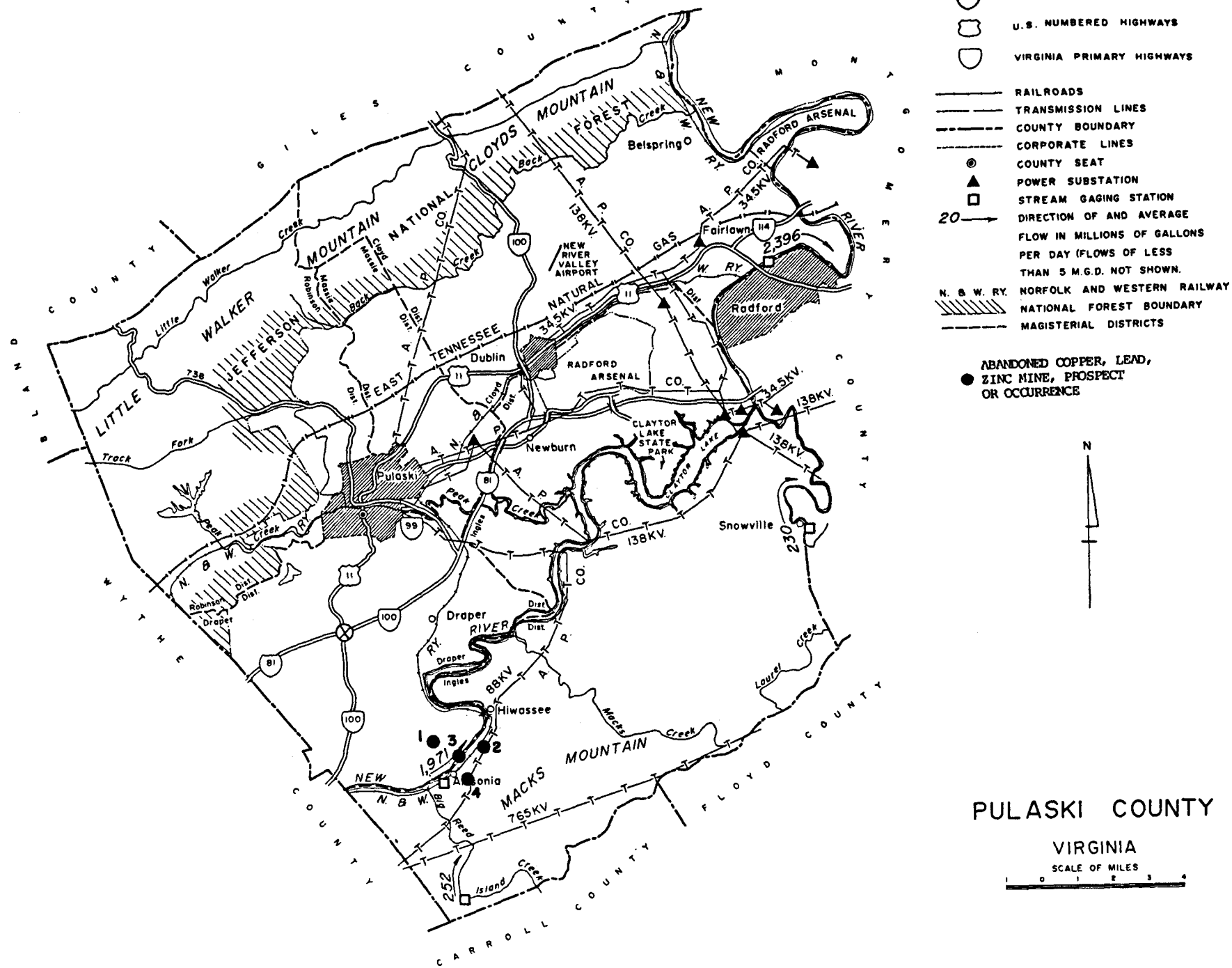
1. Delton Zinc and Iron Mines

MRDS-REV RECORD NUMBER.....1001
MRDS RECORD NUMBER.....W031314
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....123
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 10
UPDATER.....GOOD, RICHARD S.
SITE NAME.....DELTON ZINC AND IRON MINES
SYNONYM NAME.....CLARK'S BANK MINES; ARBUCKLE MINE.
MINING DISTRICT/AREA.....AUSTINVILLE LEAD ZINC IRON DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....PULASKI
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... HIWASSEE, VA. (1977) QUADRANGLE SCALE 1:24000
ELEVATION.....2060 FT (628 M)
UTM NORTHING...4089200 EASTING...522800 ZONE...+17
LATITUDE.....36-57-02N LONGITUDE.....080-44-37W
ACCURACY.....ACC MIDWAY BETWEEN TWO ADJACENT LARGE PITS.
POSITION FROM NEAREST LOCALITY.....0.85 MI NW OF ALLISONIA, 0.15 MILE WEST OF ROUTE 663.
LOCATION COMMENTS.....REACHED BE FARM TRACK IN MEADOW WEST FROM ROUTE 653 FOR 0.3 MILE TRACK ENDS, PITS ARE 0.1 MI FARTHER IN WOODS. FARM TRACK IS ABOUT 0.5 MILES SOUTH OF JUNCTION WITH R. 609 ON 653 AND LEADS SW FROM FARM GATE.
COMMODITIES PRESENT.....ZN PB FE
ORE MATERIALS.....HEMIMORPHITE, SMITHSONITE, GOETHITE (LIMONITIC CLAY), GALENA, SPHALERITE.
GENERAL ANALYTICAL DATA.....FE 52.5%; 40% ZN, 0.5% PB, 5% FE (1902-1903); IN 1898 3.12 TONS OF ROCK YIELD 1 TON CONCENTRATE, ASSAYED AT 48% ZN, 16% PB. 10 TONS OF ROCK YIELD 2.45 TONS CONCENTRATE, ASSAYED AT 40.52% ZN, 16.05 PB, 2.75% FE, 20.54 S, 1.8 O Z. AG PER TON.
COMMODITY INFO COMMENTS.....8000 TONS OF ZINC ORE 1902-1903 40 % ZN 0.5% PB 5% FE PRODUCTION OF FE UNKNOWN. PRODUCTION IN 1940'S UNKNOWN. DEPOSIT WORKED FOR OXIDIZED ORES; FRESH ROCK SHOWED LITTLE SULFIDE MATERIAL.
MAJOR.....ZN FE
MINOR.....PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1880'S (?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1880'S
YEAR OF LAST PRODUCTION.....1940'S
OWNER (PRESENT/LAST).....C.H. SMITH, JR. AND M. R. BRUIN
ECONOMIC COMMENTS.....SEPARATING AND CONCENTRATING MILL LOCATED AT DELTON SMELTING WAS ACCOMPLISHED AT PULASKI.
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPERTATED FOR IRON PRIOR TO 1887; BERTHA MINERAL CO. MINED FOR ZINC 1902-1903; MINE OPERATED DURING 1940'S, PRODUCTION THEN WAS SMALL, NOT KNOW. SEPARATION AND CONCENTRATION DONE AT DELTON (NO LONGER SHOWN ON TOPOGRAPHIC MAP) AND SMELTING WAS DONE AT PULASKI.
DEPOSIT TYPE.....WEATHERING RESIDUAL, DISSEMINATED, VEIN
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 85 DEG W, N 30 DEG. W
DIP.....32 DEG NE, 50 DEG. NE
DEPOSIT DESCRIPTION COMMENTS.....ONLY CLAY ZONE WAS MINED FOR IRON AND OXIDIZED ZONE MINED FOR ZINC. STRIKES AND DIPS ARE FOR BEDS EAST AND WEST, RESPECTIVELY, OF LOCAL FAULT.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....>100 UNITS...FT
LENGTH OF WORKINGS.....600 UNITS...FT
OVERALL LENGTH.....600 UNITS...FT
OVERALL WIDTH.....>300 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....TWO LARGE PITS 80-100 FT DEEP, SHAFTS AND DRIFTS WERE RUN FROM THE SIDES AND BOTTOMS OF THE PITS. PITS ARE NOW FILLED WITH MATURE TREES (PINE, TULIP). THERE IS NO WATER IN PITS EXCEPT DURING HEAVY RAINS.
HOST ROCK AGE..... CAMBRIAN
HOST ROCK TYPE.....DOLOSTONE, DOLOSTONE BRECCIA
AGE OF MINERALIZATION..... LATE PALEOZOIC REMOBILATION (?)
PERTINENT MINERALS (NOT ORE).....BARITE, GOETHITE, CALCITE, PYRITE, DOLOMITE
ORE CONTROL/LOCUS.....FRACTURES AND BRECCIATION, METEORIC WATER CIRCULATION; ORIGINALLY METAL-RICH BRINES.
TECTONIC SETTING.....0.5 KM SE OF MAJOR THRUST FAULT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, HIWASSEE (LASWELL) FAULT, POWHATAN THRUST
SIGNIFICANT LOCAL STRUCTURES.....PART OF NNW TRENDING DELTON TRANVERSE FAULT
SIGNIFICANT ALTERATION.....OXIDATION OF MOST OF PB AND ZN SULFIDES
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT
FORMATION AGE.....CAMB
FORMATION AGE.....CAMB
FORMATION NAME.....SHADY FORMATION
FORMATION NAME.....ROME FORMATION (NEARBY DOMINANT FORMATION)
GEOLOGY COMMENTS.....DOLOMITE IS DARK GRAY, VERY FINE GRAINED, GENERALLY EVEN BEDDED, HAS BLOCKY WEATHERING AND IS HIGHLY FRACTURED IN PLACES. OTHER ZONES ARE 2-3 FEET THICK WITH VUGS OF OXIDIZED ORE. BROWN STALACTITIC VUGGY, PISOLITIC HEMIMORPHITE WITH GOETHITE AND BARITE COLLECTED FROM VEINS IN UMBER DURING 1987 VISIT.
GENERAL COMMENTS.....LITHOLOGY IS THAT OF SHADY FORMATION BUT AREA WAS MAPPED AS ROME FORMATION BY MCDOWELL (1968). MAY BE WINDOW IN VERY THIN LOW ANGLE ALLOCHONOUS SHEET. WOULD APPEAR TO BE COEVAL WITH STRATABOUND AUSTINVILLE ZINC LEAD DEPOSITS. DISSEMINATED PYRRITE WAS SOURCE OF "UMBER" ORIGINALLY WORKED FOR IRON.
NON-USGS WORK.....DIREXPL MINE OPERATED FOR IRON PRIOR TO 1887.
NON-USGS WORK.....1902 DIREXPL BERTHA MINERAL CO.: OPERATED FOR ZINC.
NON-USGS WORK.....DIREXPL OPERATED IN 1940'S.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....MCCREATH, A.S., AND D'INVILLIERS, E.V., 1887, THE NEW RIVER - CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HARRISBURG, PA., HARRISBURG PUBLISHING CO., 171 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL, 618 P.
REFERENCE....MCDOWELL, R.C., 1968, STRUCTURAL GEOLOGY OF THE MACKS MOUNTAIN AREA, VIRGINIA: P.H.D. DISSERTATION, VIRGINIA POLYTECHNIC INSTITUTE, 144 P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE ZN	ACC	8.00000	TONS	1902-1903	
ORE ZN	SML			1940'S	
CONC ZN	SML			1902-1903	

SOURCE OF PRODUCTION INFORMATION.....WATSON (1907, P. 449, 531)


INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LINES
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN.
N. & W. RY. NORFOLK AND WESTERN RAILWAY
NATIONAL FOREST BOUNDARY
MAGISTERIAL DISTRICTS
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
N
GILES COUNTY
MONTGOMERY COUNTY
BLAND COUNTY
WYTHE COUNTY
CARROLL COUNTY
FLOYD COUNTY
LITTLE WALKER MOUNTAIN
JEFFERSON NATIONAL FOREST
CLOYDS MOUNTAIN
EAST TENNESSEE NATURAL GAS
MACKS MOUNTAIN
NEW RIVER
RADFORD ARSENAL
NEW RIVER VALLEY AIRPORT
CLAYTOR LAKE STATE PARK
Belspring
Fairlawn
Radford
Dublin
Newburn
Pulaski
Snowville
Draper
Hiwassee
Ansonia
2,396
1,971
230
252
138KV.
34.5KV.
88KV
765KV
Little Walker Creek
Back Creek
Track Fork
Peak Creek
Draper Ingles
Mackes Creek
Laurel Creek
Island Creek
Big Reed
Robinson
Massie
Cloyd
Dist.
738
11
100
81
99
114
1
2
3
4
PULASKI COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4

2. Flannigan Mine

MRDS-REV RECORD NUMBER.....1004
MRDS RECORD NUMBER.....W031315
RECORD TYPE.....X1N
REPORT DATE.....80 06
INFORMATION SOURCE.....135
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 10
UPDATER.....GOOD, RICHARD S.
SITE NAME.....FLANNIGAN MINE
SYNONYM NAME.....*FLANAGAN MINE*
MINING DISTRICT/AREA.....AUSTINVILLE LEAD ZINC IRON DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....PULASKI
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... HIWASSEE, VA. (1977) QUADRANGLE SCALE 1:24000
ELEVATION.....1890 FT
UTM NORTHING...4089260 EASTING...524600 ZONE...+17
LATITUDE.....36-56-03N LONGITUDE.....079-43-26W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.05 MI NE OF ALLISONIA FROM CHURCH ON R. 693.
LOCATION COMMENTS.....TAKE DIRT ROAD SE FROM 693 TO #86 FE PIGMENT MINE, HOOVER COLOR CORPORATION. SITE OF SHAFT, NOW FILLED IN, IS 200 FEET ALONG DIRT ROAD ON *EAST (LEFT) SIDE AT FORK IN DIRT ROAD*, ON SE SIDE OF R.R. BED.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA
MAJOR.....ZN PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1870'S
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1880 (?)
OWNER (PRESENT/LAST).....HENDERSON FLANNIGAN
OPERATOR.....HENDERSON FLANNIGAN
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPENED BY A TUNNEL AROUND 1880, BUT APPARENTLY CLOSED SHORTLY THEREAFTER.
DEPOSIT TYPE.....STRATABOUND
DEPOSIT FORM.....IRREGULAR
MAXIMUM LENGTH.....330+ UNITS...FT
DEPOSIT SIZE.....SMALL (?)
STRIKE.....NE
DIP.....30 DEG. NW
DEPOSIT DESCRIPTION COMMENTS.....ORE SAID TO BE AT CONTACT OF "WHITE SILICEOUS LIMESTONE AND BLUE AND WHITE LAMELLATED WAVY LIMESTONE" (BOYD, 1881), PROBABLY SHADY DOLOMITE OVER ROME LIMESTONE AND RED BEDS. SHAFT FILLED IN. NO EXPOSURE AT SHAFT SITE.
DESCRIPTION OF WORKINGS.....U
LENGTH OF WORKINGS.....3305 UNITS...FT
OVERALL LENGTH.....330 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....A 91.5 M (300 FT) ADIT WAS DRIVEN. TUNNEL TOWARD AND BENEATH RIVER, SAID TO HAVE CLOSED BECAUSE OF FLOODING (J.K. HOOVER, 1987, PERSONAL COMMUNICATION).

HOST ROCK AGE..... CAMBRIAN
HOST ROCK TYPE.....LIMESTONE/DOLOMITE
AGE OF MINERALIZATION..... LATE PALEOZOIC (?)
PERTINENT MINERALS (NOT ORE).....PYRITE, BARITE, CALCITE.
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....LASWELL THRUST FAULT; HIWASSEE THRUST FAULT
SIGNIFICANT LOCAL STRUCTURES.....DELTON FAULT: NNW TRANVESRS, *WEST SIDE UP.*
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION
FORMATION NAME.....ROME
GEOLOGY COMMENTS.....ALSO SEE ESPENSHADE, G.H., AND OTHERS, 1975, GEOLOGIC MAP OF THE EAST HALF OF THE WINSTON-*SALEM QUADRANGLE, NORTH CAROLINA - VIRGINIA: U.S.* GEOLOGIC SURVEY MISCELLANEO US GEOLOGIC INVESTIGA TIONS MAP I-709-B, 1 SHEET, SCALE 1:250,000
WORK DONE BY USGS.....1975 OTHER R.B. NEUMAN: COMPILED MISC. GEOL. INV. MAP I-709-B.
NON-USGS WORK.....1933 GEOLMAP VA. GEOL. SURV: ISSUED GEO. *MAP OF VALLEY.*
REFERENCE....MCDOWELL, R.C., 1968, STRUCTURAL GEOLOGY OF MACKS MOUNTAIN AREA, VIRGINIA: UNPUBLISHED PH.D. DISSERTA TION, VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY.
REFERENCE....BOYD, C.R., 1881, RESOURCES OF SOUTH-WEST VIRGINIA: *NEW YORK, JOHN WILEY AND SONS*, 321 P.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....MCCREATH, A.S., AND D'INVILLIERS, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HAR *RISBURG, PA., HARRISBURG PUBLISHING CO.*, 171 P.
REFERENCE....HOOVER, D., 1987, HOOVER COLOR CORPORATION, PERSONAL COMMUNICATION

REFERENCE....LUTTRELL, G.W., 1966, BASE AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA, VIRGINIA DIVISION OF *MINERAL RESOURCES REPORT NO. 7, 167 P.*

ANNUAL PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE ZN EST 0.15000 TONS 1880 ZN
SOURCE OF PRODUCTION INFORMATION.....BOYD, (1881, P. 40)

3. Forney Prospect

MRDS-REV RECORD NUMBER.....1002
MRDS RECORD NUMBER.....W031316
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 12
UPDATER.....GOOD, RICHARD S.
SITE NAME.....FORNEY PROSPECT
SYNONYM NAME.....SHIRLEY GULCH PROSPECT
MINING DISTRICT/AREA.....AUSTINVILLE LEAD ZINC AND IRON DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....PULASKI
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... HIWASSEE, VA. (1977) QUADRANGLE SCALE 1:24000
ELEVATION.....1940
UTM NORTHING...4088900 EASTING...523760 ZONE...+17
LATITUDE.....36-56-52N LONGITUDE.....080-44-00W
ACCURACY.....ACC, LOCATION IS FOR ADITS ON NORTH SIDE OF RIVER
POSITION FROM NEAREST LOCALITY.....0.6 MI NNE OF ALLISONIA ON NW SIDE OF NEW RIVER.
LOCATION COMMENTS.....ADITS ARE 0.25 MI NE OF R 653 ALONG PRIVATE ROAD FOR RIVER-SIDE HOUSES; PRIVATE ROAD STARTS AT 90 DEG TURN IN R 653, NEAR SITE OF OLD FERRY. WORKINGS ON SE SIDE OF RIVER KNOWN AS SHIRLEY GULCH MINE.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PB
PRODUCTION.....U
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1900
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1900 (?)
OWNER (PRESENT/LAST).....D.S. FORNEY
EXPLORATION AND DEVELOPMENT COMMENTS.....AROUND 1900, D.S. FORNEY DROVE AN ADIT INTO THE SLOPE ON THE NORTHERN *SIDE OF THE RIVER AND SANK A SHAFT ON THE SOUTHERN* SIDE. OTHER ADITS ADDED AND DIAMOND DRILLING DONE IN 1925. A COFFER DAM WAS CONSTRUCTED AND SHOWINGS OF PB-ZN MINERALIZATION WERE REVEALED IN RIVER BED.
DEPOSIT TYPE.....STRATABOUND, DISSEMINATED, REPLACEMENT
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....NE
DIP.....45-50 DEG SW
DEPOSIT DESCRIPTION COMMENTS.....DIP IS FOR DOLOSTONE ON NORTH SIDE OF RIVER. DARK GREENISH GRAY AND LIGHT GRAY SPHALERITE OCCUR WITH WHITE DOLOMITE.
DESCRIPTION OF WORKINGS.....U
DESCRIPTION OF WORKINGS COMMENTS.....ON NORTH SIDE OF RIVER FIVE EXPLORATION ADITS CAN BE SEEN, THREE OF WHICH ARE ACCESSIBLE; ONE ADIT EXTENDS MORE THAN 50 FEET. PROSPECTS 50-75 FEET ABOVE FLOOD PLAIN, SHAFT ON SOUTH SIDE OF RIVER WAS NOT LOCATED.
HOST ROCK AGE.....CAMB
HOST ROCK TYPE.....DOLOMITE
AGE OF MINERALIZATION.....- LATE PALEOZOIC (?)
PERTINENT MINERALS (NOT ORE).....PYRITE, QUARTZ, BARITE, CALCITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....HIWASSEE (LASWELL), AND POWATAN THRUST FAULTS.
SIGNIFICANT LOCAL STRUCTURES.....NNW TRENDING DELTON TRANSVERSE FAULT.
SIGNIFICANT ALTERATION.....ZINC MINERALS OXIDIZED
PROCESS OF CONCENTRATION/ENRICHMENT.....METAL RICH BRINES IN COLLAPSE BRECCIA (?)
FORMATION AGE.....CAMB
FORMATION AGE.....CAMB
FORMATION NAME.....SHADY FORMATION
FORMATION NAME.....ROME FORMATION
GEOLOGY COMMENTS.....DOLOMITE BRECCIA CEMENTED BY DOLOMITE AND CALCITE. PURPLISH SHALE OUTCROPS LOWER DOWN THE SLOPE ABOUT HALF WAY BETWEEN THE ADIT AND ALLISONIA. THE SHALE DIPS SSE 45-50 DEG.
GENERAL COMMENTS.....FOR "FORNEY'S MINE," SEE "FALLING CLIFF MINE."
WORK DONE BY USGS.....1943 RECON R.L. MILLER & C.H. BEHRE: FIELD REPORT
WORK DONE BY USGS.....1975 OTHER R.B. NEUMAN: COMPILED MISC. GEOL. INV. MAP I-709-B.
NON-USGS WORK.....1900 DIREXPL D.S. FORNEY: DROVE AN ADIT AND A SHAFT.
NON-USGS WORK.....1925 DIREXPL DIAMOND DRILLING
NON-USGS WORK.....1933 GEOLMAP VA. GEOL. SURV.: ISSUED GEOL. MAP OF VALLEY
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA:

REFERENCE....MCDOWELL, R.C., 1968, STRUCTURAL GEOLOGY OF MACK MOUNTAIN AREA, VIRGINIA: UNPUBLISHED PH.D. DISSERTATION, VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY.
REFERENCE....BOYD, C.R., 1881, RESOURCES OF SOUTHWEST VIRGINIA: NEW YORK, WILEY AND SONS, 321 P.
PRODUCTION COMMENTS.....SOME ORE FROM PROSPECT WORKINGS MAY HAVE BEEN SHIPPED.

4. Graham and Robinson Mine

MRDS-REV RECORD NUMBER.....1003
MRDS RECORD NUMBER.....W031317
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....GRAHAM AND ROBINSON MINE
MINING DISTRICT/AREA.....ALLISONIA DISTRICT
COUNTRY....US STATE.....VA COUNTY.....PULASKI
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... HIWASSEE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2060 FT (628 M)
UTM NORTHING...4087800 EASTING...524090 ZONE...+17
LATITUDE.....36-56-16N LONGITUDE.....080-43-46W
POSITION FROM NEAREST LOCALITY.....0.7 KM (0.45 MI) ESE OF ALLISONIA.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. 125 M (400 FT) SSE OF FORK IN DIRT ROAD, 1.1 KM (0.7 MI) BY ROAD SE FROM JUNCTION WITH STATE ROAD 693, 2.4 KM (1.5 MI) BY ROAD SW OF JUNCTION WITH STATE ROAD 777 SOUTH OF HIWASSEE.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA
MAJOR.....ZN PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1880 (?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1880'S
OWNER (PRESENT/LAST).....GRAHAM & ROBINSON
OPERATOR.....GRAHAM & ROBINSON
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE PROBABLY OPERATED BRIEFLY IN EARLY 1880'S.
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL (?)
STRIKE.....NE
DIP.....30 DEG. NW
DESCRIPTION OF WORKINGS.....B
LENGTH OF WORKINGS.....24 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....AN ADIT 60-80 FT (18-24 M) LONG DRIVEN.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOSTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, HIWASSEE (LASWELL) FAULT, HOLSTON MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....TRANSVERSE FAULT
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION
WORK DONE BY USGS.....1975 OTHER R.B. NEUMAN: COMPILED MISC. GEOL. INV. MAP I-709-B.
NON-USGS WORK.....1933 GEOLMAP VA. GEOL. SURV.: ISSUED GEO. MAP OF VALLEY.
REFERENCE....BOYD, C.R., 1881, RESOURCES OF SOUTH-WEST VIRGINIA: NEW YORK, JOHN WILEY AND SONS, 321 P.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....ESPENSHADE, G.H. AND OTHERS, 1975, GEOLOGIC MAP OF THE EAST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA-VIRGINIA: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-B, 1 SHEET, SCALE 1:250,000.
REFERENCE....MCCREATH, A.S., AND D'INVILLIERS, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HARRISBURG, PA., HARRISBURG PUBLISHING CO., 171 P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE PB	EST	0.08000	TONS	1880'S	SHIPPED TO NEW YORK
ORE ZN	SML			1880'S	

SOURCE OF PRODUCTION INFORMATION.....MCCREATH AND D'INVILLIERS (1887, P. 24)

RAPPAHANNOCK COUNTY

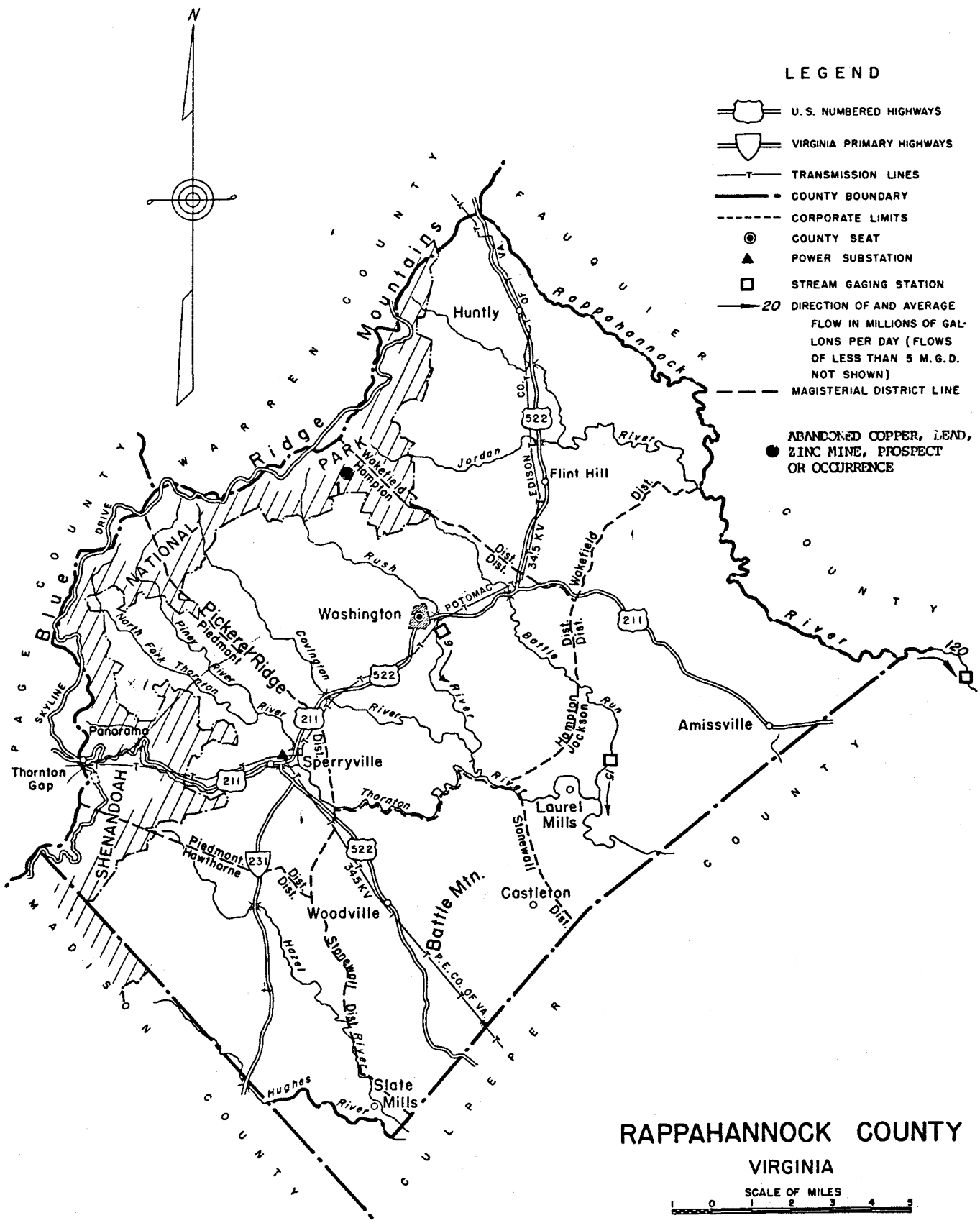
1. Mount Marshall Prospect

MRDS-REV RECORD NUMBER.....1728
MRDS RECORD NUMBER.....VA01728
RECORD TYPE.....X1M
REPORT DATE.....87 08
INFORMATION SOURCE.....2
REPORTER.....SWEET, PALMER C.
REPORTER AFFILIATION.....VDMR
SITE NAME.....MOUNT MARSHAL PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....RAPPAHANNOCK
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE PROVINCE
DRAINAGE AREA.....02080103 MID ATLANTIC
LAND STATUS.....45
QUADRANGLE NAME..... CHESTER GAP, VA (1967) QUADRANGLE SCALE 1:24000
ELEVATION.....2050 FT
UTM NORTHING...4294200 EASTING...743900 ZONE...+17
ACCURACY.....EST WITHIN 500 METERS
LOCATION COMMENTS.....FOUR MILES NORTH-NORTHWEST OF WASHINGTON, VA, ON JOHN MILLER FARM. NOT LOCATED IN FIELD.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....MALACHITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1930 (?)
NATURE OF DISCOVERY.....A
DEPOSIT TYPE.....COPPER STAIN
DEPOSIT DESCRIPTION COMMENTS.....SECONDARY COPPER ALONG FACTURES (?)
DESCRIPTION OF WORKINGS.....S
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....GREENSTONE
PROCESS OF CONCENTRATION/ENRICHMENT.....ORE ENRICHED BY OXIDATION
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
REFERENCE....FILE MEMO, 1930 (RAPPAHANNOCK CO.) INVESTIGATION OF THE COPPER PIT ON MT. MARSHALL, RAPPAHANNOCK CO.

ROANOKE COUNTY

1. Martin and Wertz Mine

MRDS-REV RECORD NUMBER.....344
MRDS RECORD NUMBER.....VA0344
RECORD TYPE.....X1M
REPORT DATE.....87 12
INFORMATION SOURCE.....13
REPORTER.....GOOD, RICHARD S. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....MARTIN AND WERTZ MINE
SYNONYM NAME.....MARTIN PROSPECT
MINING DISTRICT/AREA.....AUSTINVILLE LEAD ZINC
COUNTRY.....US STATE.....VA COUNTY.....ROANOKE, CITY OF
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....03010101
QUADRANGLE NAME..... GARDEN CITY (1984) QUADRANGLE SCALE 1:24000
ELEVATION.....1100 FT (TO 1200 FT)
UTM NORTHING...4122440 EASTING...589460 ZONE...+17
ACCURACY.....EST: COORDINATES ARE FOR GRANDIN COURT SCHOOL
POSITION FROM NEAREST LOCALITY.....NEAR GRANDIN COURT SCHOOL, BRAMBLETON AVENUE, CITY OF ROANOKE.
LOCATION COMMENTS.....FIELD CHECK FAILED TO VERIFY LOCATION OF WORKINGS.
COMMODITIES PRESENT.....PB ZN
ORE MATERIALS.....SPHALERITE, GALENA
MAJOR.....ZN
PRODUCTION.....S
YEAR OF DISCOVERY.....PRE 1840
YEAR OF LAST PRODUCTION.....1885
EXPLORATION AND DEVELOPMENT COMMENTS.....SOME PROSPECTING DONE BEFORE 1840 BUT MINE WAS PRINCIPALLY WORKED IN 1885 AND SHORTLY THEREAFTER.
DEPTH TO BOTTOM.....7.1 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE
DIP.....30 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....DOLOMITE DARK GRAY, NEARLY BLACK, CRUSHED AND RECEMENTED WITH CALCITE OR DOLOMITE; INTERBEDDED WITH THINLY LAMINATED, PURPLISH RED SHALE (WATSON, 1905, P. 72)
DESCRIPTION OF WORKINGS COMMENTS.....SEVERAL SHAFTS AND A PIT 46 X 6 METERS (TREND N 20 DEG E) WERE DUG. WATSON (1905) NOTED ABOUT SIX SHALLOW OPENINGS (FILLED WITH WATER) ALONG A SMALL STREAM.
HOST ROCK AGE..... CAMBRIAN
HOST ROCK TYPE.....DARK GRAY ,FINELY CRYSTALLINE DOLOMITE.
PERTINENT MINERALS (NOT ORE).....PYRITE
SIGNIFICANT REGIONAL STRUCTURES.....PULASKI FAULT
FORMATION AGE..... CAMBRIAN
FORMATION NAME.....ROME
GEOLOGY COMMENTS.....LIMESTONE AND SHALE ARE CONFORMABLE WITH AVERAGE DIP OF 30 DEG SE SHALE JOINTS: N55E AND N20W; LIMESTONE JOINTS N20E AND N10W, SHALE IS CLOSELY JOINTED AND RECEMENTED WITH CALCITE OR DOLOMITE. (WATSON, 1905, P. 72)
GENERAL COMMENTS.....VERY LITTLE WAS NOTED BY WATSON (1905) WHO RECORDED "SOME HALF-DOZEN SMALL OPENINGS IN LIMESTONE SCATTERED OVER ABOUT THREE ACRES...ALONG A SMALL STREAM WHICH HAS CARVED A MODERATE VALLEY OUT OF THE LIMESTONE. THE DEEPEST OPENING (WAS) NOT MORE THAN 25 FEET IN DEPTH AND ITS SURFACE NOT MORE THAN A FEW FEET ABOVE STREAM LEVEL... THE DUMP PILES WERE CLEANED OF ORE AND THE OPENINGS WERE FILLED WITH WATER."
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WEST VIRGINIA, VIRGINIA GEOLOGICAL SOCIETY BULLETIN 43, 122 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA, VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.


N
LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
MAGISTERIAL DISTRICT LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
RAPPAHANNOCK COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
Huntly
Flint Hill
Washington
Amissville
Laurel Mills
Castleton
Woodville
Slate Mills
Sperryville
Panorama
Thornton Gap
Blue Ridge Mountains
Pickerel Ridge
Battle Mtn.
Rappahannock River
Hampton
Wakefield
Piedmont
Hawthorne
Stonewall
Jackson
Jordan
Rush
Covington
Piney River
North Fork Thornton River
Thornton River
Battle Run
Hazel River
Hughes River
Dist.
POTOMAC
EDISON CO. OF VA.
34.5 KV
P.E. CO. OF VA.
SKYLINE DRIVE
522
211
231
120
15
9

ROANOKE COUNTY
VIRGINIA
SCALE OF MILES
0 1 2 3 4 5
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
LEGEND
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
A. P. Co. APPALACHIAN POWER COMPANY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
MAGISTERIAL DISTRICT LINE
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M. G. D. NOT SHOWN)
INTERSTATE HIGHWAY
APPROX. 7 MILES TO GAGING STATION
ROANOKE PIPE LINE COMPANY

REFERENCE....BARTHOLOMEW, MERVIN J., 1981, GEOLOGY OF THE ROANOKE AND STEWARTSVILLE QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 43, 23 P.

ROCKBRIDGE COUNTY

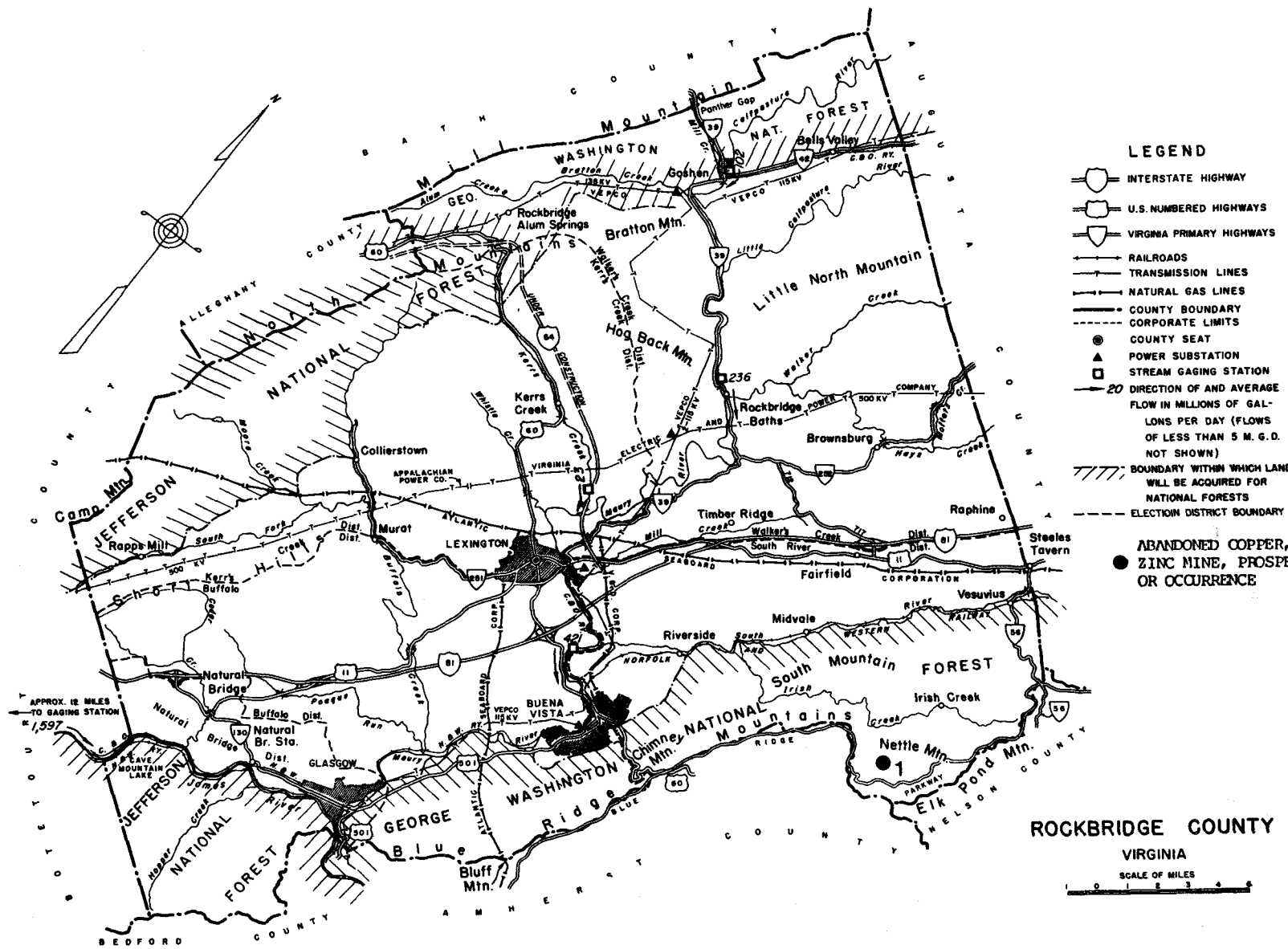
1. Yankee Horse Gold Prospect

MRDS-REV RECORD NUMBER.....1730
MRDS RECORD NUMBER.....VA01730
RECORD TYPE.....X1M
REPORT DATE.....88 04
INFORMATION SOURCE.....23
REPORTER.....GOOD, RICHARD (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....YANKEE HORSERIDGE GOLD PROSPECT
SYNONYM NAME.....GOOD GOLD PROSPECT
MINING DISTRICT/AREA.....IRISH CREEK
COUNTRY.....US STATE.....VA COUNTY.....ROCKBRIDGE
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02080202
LAND STATUS.....01
QUADRANGLE NAME..... MONTEBELLO (1965) QUADRANGLE SCALE 1:24000
ELEVATION.....2540 FT
UTM NORTHING...4186400 EASTING...658955 ZONE...+17
LATITUDE.....37-48-47N LONGITUDE.....079-11-37E
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.7 MILES NE OF IRISH GAP (BLUE RIDGE PARKWAY) ON NW FLANK OF YANKEE HORSE RIDGE.
LOCATION COMMENTS.....CAN BE REACHED BY FOUR WHEEL DRIVE FOREST ROAD (ACCESS TO PADLOCKED GATE BY PERMISSION FROM OWENS-ILLINOIS) GATED ENTRANCE EAST OF STATE 605 AT JUNCTION OF NETTLE CREEK AND SPRING BRANCH. TRACK NOT ON MAP. CAN ALSO BE REACHED BY TRACK SHOWN ON 1965 TOPOGRAPHIC MAP FROM R. 605 ALONG NORTH BANK OF NETTLE CREEK. THIS TRACK NOT PASSABLE BEYOND ABOUT 0.75 MILE. ACCESS IS ALSO PADLOCKED. PROSPECT TRENCH IS ABOUT 700 FEET SE OF NETTLE CREEK UP A STEEP SLOPE ON THE NW FLANK OF YANKEE HORSE RIDGE, ON A SPUR ABOUT 1000 FEET SW FROM THE JUNCTION OF NETTLE CREEK AND WIGWAM CREEK.
COMMODITIES PRESENT.....AU SN PB ZN TH
ORE MATERIALS.....PYRITE, ARSENOPYRITE, GOLD, CASSITERITE (?)
COMMODITY SUBTYPES.....AG, AS
GENERAL ANALYTICAL DATA.....03 OZ/TON AU, 8.72 OZ/TON AG; 0.05 OZ/ TON AU, 0.30 OZ/TON AG; 0.17 OZ/TON AU, 0.24 OZ/TON AG
PRODUCTION.....N
DISCOVERER.....R.S. GOOD
YEAR OF DISCOVERY.....1983
NATURE OF DISCOVERY.....E
OWNER (PRESENT/LAST).....OWENS-ILLINOIS FORST PRODUCTS
DEPOSIT TYPE.....GREISEN (?)
DEPOSIT SIZE.....SMALL
STRIKE.....NE
DIP.....SE (?)
DEPOSIT DESCRIPTION COMMENTS.....BEDROCK ASSAYS FOR GOLD WERE 0.03 OZ/TON AU, 8.72 TO 0.17 OZ./TON AU AND 0.24 OZ/ TON AG (NORTHEAST GEOCHEMICAL AND ASSAY COMPANY, YARMOUTH, MAINE). TRENCHING BY A MAJOR MINING COMPANY FAILED TO REVEAL A CLEAR CUT MINERALIZED ZONE WITH ORE GRADE VALUES BUT SCATTERED, IRREGULAR GOLD AND SILVER ASSAYS. SHALLOW DRILLING WITH ONE VERTICAL HOLE HAD VERY POOR CORE RECOVERY IN MYLONITE ZONE.
DESCRIPTION OF WORKINGS COMMENTS.....THE INITIAL GEOCHEMICAL ANOMALY WAS FROM A SINGLE SOIL TRAVERSE WHICH SHOWED TIN, ZINC, AND LEAD. FOLLOW UP GEOCHEMISTRY INDICATED THORIUM, URANIUM, ARSENIC, FLUORINE, LITHIUM AND RUBIDIUM ANOMALIES. SOIL SAMPLING FOR PRECIOUS METALS SHOWED 14 OUT OF 39 SOIL SAMPLES > 0.01 PPM AU AND THREE HIGHLY ANOMALOUS SOIL SAMPLES: 0.326, 0.470 AND 0.512 PPM GOLD (NORTHEAST GEOCHEMICAL AND ASSAY COMPANY, YARMOUTH, MAINE). SHALLOW TRENCHING TO THREE FEET BELOW SURFACE SHOWED BEDROCK OF FELSIC MYLONITE, SOME FRAGMENTS NOT IN PLACE, WITH DISSEMINATED PYRITE, HEMATITE, GOETHITE PATCHES AND CASTES OF CRYSTALS SUGGESTING TETRAHEDRA AND CUBES; MOSTLY SCATTERED, RARE, HEMATITIC BOXWORKS.
HOST ROCK AGE.....GRENVILLE
HOST ROCK TYPE.....QUARTZ MONZONITE MYLONITE, ALASKITE
AGE OF IGNEOUS ROCK..... LATE PRECAMBRIAN
IGNEOUS ROCK TYPE.....PHYDODACITE DIKES PRESENT; CATOCTIN METABASALT DIKES PRESENT
AGE OF MINERALIZATION.....LATE PRECAMBRIAN (?) WITH TACONIC REMOBILIZATION
PERTINENT MINERALS (NOT ORE).....HEMATITE, GOETHITE, JAROSITE, BEUDANTITE (?), BLUE QUARTZ, SMOKY QUARTZ
TECTONIC SETTING.....ALLOCTHONOUS THRUST LOBE OF IMBRICATELY FAULTED PRECAMBRIAN CHARNOUKITES AND GRAULITE GNEISS
SIGNIFICANT LOCAL STRUCTURES.....ANASTOMOSING THIN MYLONITES NEAR SE - DIPPING CATACLASTIC ZONE
SIGNIFICANT ALTERATION.....SERKITE - CHLORITE; OXIDATION OF SULFIEDS, ARSENIDES
GEOLOGY COMMENTS.....MINERALIZATION IS VERY SPARSE, SCATTERED, DISSEMINATED; ASSOCIATION WITH MYLONITE MAY BE COINCIDENTAL; SOURCE OF MINERALIZATION MAY BE CROSSNORE AGE 637 M.V. FLUORITE -BEARING BIOTITE GRANITE PLUTON NEARBY DESCRIBED BY HUDSON (1981). SOIL GEOCHEMISTRY SHOWED ANOMALOUS GOLD, SILVER, ARSENIC, LEAD, ZINC, TIN, RUBIDIUM, THORIUM (GOOD UNPUBLISHED DATA).
GENERAL COMMENTS.....ACCORDING TO LOCAL RESIDENTS HUBBARD, A PROSPECTOR AT THE TURN OF THE CENTURY (1900) IS SAID TO HAVE WORKED A GOLD PROSPECT AT THE HEADWATER OF NETTLE CREEK (HERBERT CLARK, PERSONAL COMMUNICATION). NO MINE WAS LOCATED BY WRITER BUT A SHOWING OF ARSENOPYRITE-PYRRHOTITE-WHITE FLUORITE-CHALCOPYRITE WAS NOTED ON SE BANK OF NETTLE CREEK - FT FROM YANKEE HORSE RIDGE PROSPECT.
REFERENCE....GOOD, R.S., IN PREPARATION, GEOCHEMICAL AND GEOLOGICAL RECONNAISSANCE FOR TIN AND GOLD IN IRISH CREEK TIN DISTRICT, ROCKBRIDGE COUNTY, VIRGINIA, VDMR.
REFERENCE....HUDSON, T.A., 1981, GEOLOGY OF THE IRISH CREEK TIN DISTRICT, VIRGINIA BLUE RIDGE: UNPUBLISHED M.S. THESIS, UNIVERSITY OF GEORGIA, 114 P.
REFERENCE....FORDHAM, O.M. JR., 1978, STREAM SEDIMENT GEOCHEMISTRY OF THE IRISH CREEK TIN DISTRICT, ROCKBRIDGE COUNTY IN CRONTRIBUTIONS TO VIRGINIA GIOLOGY III: VDMR PUBL. 7, P. 75-85.
REFERENCE....EVANS, N.A. AND GOOD, R.S., IN PREPARATION, GEOCHRONOLOGY OF A XENOLITHIC GRANITE PLUTON, NETTLE CREEK, ROCKBRIDGE COUNTY, VIRGINIA.

ROCKINGHAM COUNTY

1. Armentrout Prospect

MRDS-REV RECORD NUMBER.....1046
MRDS RECORD NUMBER.....W031319
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....12
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....ARMENTROUT PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/EDOM
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SINGERS GLEN, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1300 FT (396 M)
UTM NORTHING...4269000 EASTING...684780 ZONE...+17
LATITUDE.....38-33-08N LONGITUDE.....078-52-46W
POSITION FROM NEAREST LOCALITY.....2.9 KM (1.8 MI) EAST OF SINGERS GLEN.
LOCATION COMMENTS.....ON WEST BANK OF JOES CREEK, 150 M (550 FT) WEST OF STATE ROAD 780, 2.1 KM (1.3 MI) SE OF JUNCTION WITH STATE ROAD 752. NORTHERN OUTCROP AT UTM N 4269160., E 684820.; SOUTHERN OUTCROP AT UTM N 4268770., E 684650.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, PYRITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....ARMENTROUT
OPERATOR.....TRI-STATE ZINC, INC
DEPOSIT TYPE.....STRATA-BOUND, REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR
MAXIMUM LENGTH.....213 UNITS...M
MAXIMUM WIDTH.....30 UNITS...M
MAXIMUM THICKNESS.....3.0 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....EXPOSURES ARE IN 3 OUTCROP AREAS WIDELY SPACED ALONG A 335 M STRIKE LENGTH. CENTRAL AND SOUTHERN OUTCROPS PART OF WEAKLY AND ERRATICALLY MINERALIZED BEDDED BRECCIA; MINERALIZED WIDTH OF 6.1 M TO 12.2 M IS INDICATED (NOTE: DATA ABOVE IS FOR BRECCIA BED). NORTHERN OUTCROP IS EVIDENTLY UNRELATED, IS SLIGHTLY OFF STRIKE AND 18.3 M STRATIGRAPHICALLY LOWER. BRECCIA MOST CLOSELY RESEMBLES THE "SHATTER" BRECCIAS OF THE EAST TENNESSEE ZINC DISTRICT.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....TECTONIC (TRANSVERSE) DOLOSTONE BRECCIA, (RECRYSTALLINE) DOLOSTONE.
AGE OF MINERALIZATION.....JUR (?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE
ORE CONTROL/LOCUS.....BRECCIA BED, FRACTURES
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, LITTLE NORTH MOUNTAIN FAULT, ANTICLINAL CROSS-WARP (NW-SE TREND)
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT....PROBABLE HYDROTHERMAL (TELETHERMAL) EMPLACEMENT POST FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....SPHALERITE OCCURS AS TRANSLUCENT, YELLOW TO RED CRYSTALS (UP TO 2.5 CM) IN WHITE VEIN DOLOMITE CEMENTING A BRECCIA. BRENT (1960) INDICATES A DIKE ABOUT 2.4 KM TO THE WEST, AND DEFINES IT AS AN OLIVINE DIABASE.
NON-USGS WORK.....1950 DIREXPL TRI-STATE ZINC, INC: CONDUCTED DIAMOND EXPLORATORY DRILLING IN EARLY 1950'S.


LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
NATURAL GAS LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M. G. D. NOT SHOWN)
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
ELECTIOIN DISTRICT BOUNDARY
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
ROCKBRIDGE COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
BATH COUNTY
AUGUSTA COUNTY
ALLEGHANY COUNTY
BOTETOURT COUNTY
AMHERST COUNTY
NELSON COUNTY
BEDFORD COUNTY
Mill Mountain
North Mountains
Short Hills
Little North Mountain
South Mountain
Blue Ridge
Mountains
Panther Gap
Bells Valley
Goshen
Rockbridge Alum Springs
Bratton Mtn.
Hog Back Mtn.
Kerrs Creek
Collierstown
Rockbridge Baths
Brownsburg
Timber Ridge
Raphine
Steeles Tavern
Fairfield
Vesuvius
Midvale
Riverside
Irish Creek
Nettle Mtn.
Elk Pond Mtn.
Chimney Mtn.
Bluff Mtn.
Camp Mtn.
Rapps Mill
Murat
LEXINGTON
BUENA VISTA
GLASGOW
Natural Bridge
Natural Br. Sta.
CAVE MOUNTAIN LAKE
APPROX. 12 MILES TO GAGING STATION
1,597
236
1

ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE

REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 76, 174 P.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD- FLUORITE MINERALIZATION OF THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

2. Armstrong-Kiser Prospect

MRDS-REV RECORD NUMBER.....1055
MRDS RECORD NUMBER.....W031320
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....ARMSTRONG-KISER PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/EDOM
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SINGERS GLEN, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1540 FT (470 M)
UTM NORTHING...4270270 EASTING...684670 ZONE...+17
LATITUDE.....38-33-49N LONGITUDE.....078-52-50W
POSITION FROM NEAREST LOCALITY.....3.3 KM (2.05 MI) ENE OF SINGERS GLEN.
LOCATION COMMENTS.....0.2 KM (0.1 MI) WEST OF END OF FARM ROAD, 0.6 KM (0.4 MI) BY ROAD SW OF JUNCTION WITH STATE ROAD 753, 0.6 KM (0.4 MI) SE OF JUNCTION WITH STATE ROAD 785. ADDITIONAL LOCALITY JUST NORTH OF FARM ROAD 0.5 KM (0.3 MI) SW OF JUNCTION WITH STATE ROAD 753 (UTM N 4270260., E 685020.)
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, PYRITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DETAILED PROSPECTING CONDUCTED.
DEPOSIT TYPE.....STRATA-BOUND, REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL (?)
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....SEDIMENTARY DOLOSTONE BRECCIA
AGE OF MINERALIZATION.....JUR (?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE
ORE CONTROL/LOCUS.....FRACTURE ZONE, BRECCIA POD
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, LITTLE NORTH MOUNTAIN FAULT, ANTICLINAL CROSS-WARP (NW-SE TREND)
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYROTHERMAL (TELETHERMAL) EMPLACEMENT POST-FAULTING
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....DARK SPHALERITE OCCURS NEAR BASE OF FRACTURE AND LIGHT SPHALERITE OCCURS NEAR THE TOP.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZATION IN THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

3. Bowers- Campbell Mine

MRDS-REV RECORD NUMBER.....1029
MRDS RECORD NUMBER.....W031321
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....BOWERS-CAMPBELL MINE
SYNONYM NAME.....SHACKLETT MINE, BOWERS-GARBER PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/TIMBERVILLE
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... TIMBERVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1160 FT (352 M)
UTM NORTHING...4281250 EASTING...691870 ZONE...+17
LATITUDE.....38-39-39N LONGITUDE.....078-47-42W
POSITION FROM NEAREST LOCALITY.....2.95 KM (1.8 MI) NW OF TIMBERVILLE.
LOCATION COMMENTS.....ENTRANCE TO MINE ON SW SIDE OF STATE ROAD 881, 3.1 KM (1.9 MI) BY ROAD NW OF JUNCTION WITH STATE HWY. 42 IN TIMBERVILLE.
COMMODITIES PRESENT.....ZN DOL LST PB PYR
ORE MATERIALS.....SPHALERITE, SMITHSONITE, DOLOSTONE, LIMESTONE, GALENA, PYRITE
GENERAL ANALYTICAL DATA.....ORE: 3% ZN; CONCENTRATE: ABOUT 61% ZN (BRENT, 1960); DOLOSTONE: (ANALYSIS OF BEEKMANTOWN NEAR MT. CRAWFORD (38 KM SE)): 53% CACO3, 40% MGCO3 (EDMUNDSON, R.S., 1945, INDUSTRIAL LIMESTONES AND DOLOMITES IN VIRGINIA: NORTHERN AND CENTRAL PARTS OF SHENANDOAH VALLEY: VIRGINIA GEOL. SURV. BULL. 65, P. 100.
COMMODITY INFO COMMENTS.....MINE OPERATED INITIALLY AS ZINC MINE. AFTER TERMINATION OF ZINC-MINING OPERATIONS, TAILINGS USED FOR AGSTONE. TAILINGS NOW USED FOR LIME.
MAJOR.....ZN DOL
MINOR.....LST
OCCUR.....PB PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....8
YEAR OF DISCOVERY.....1894(?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1957
OWNER (PRESENT/LAST).....TIMBERVILLE LIME CO.
OPERATOR.....TIMBERVILLE LIME CO.
MILL CAPACITY PER YR. (THOUS. UNITS)...204.
YR APPLICABLE.....1960
ECONOMIC COMMENTS.....CAPACITY WAS FOR ZN MINING. TOTAL MINING & MILLING COSTS (1960): $1.704 PER TON.
EXPLORATION AND DEVELOPMENT COMMENTS.....AN UNKNOWN AMOUNT OF WORK WAS PERFORMED BETWEEN 1894 AND 1900 ON SHACKLETT PROPERTY. IN 1949, CARL STEHLE OF NEW YORK BECAME INTERESTED IN PROPERTY AND HAD RESISTIVITY SURVEY RUN BY F.W. LEE. DURING THIS PERIOD. IN 1950 TRI-STATE ZINC CO. CONDUCTED DIAMOND-DRILLING PROGRAM ANDBEGAN MINING IN 1957. IN 1963, ZINC MINING OPERATIONS WERE ABANDONED. IN 1963, FRED K. BETTS, III, QUARRY OPERATED AT SITE SELLING TAILINGS FOR AGRICULTURAL LIME, CLOSING OPERATIONS IN 1964. TIMBERVILLE LIME CO. BEGAN A SIMILAR OPERATION IN 1965 AND IS PRESENTLY OPERATING.
DEPOSIT TYPE.....REPLACEMENT, STRATA-BOUND, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR, LENS
DEPTH TO BOTTOM.....240 UNITS...M
MAXIMUM LENGTH.....300 UNITS...M
MAXIMUM WIDTH.....60 UNITS...M
DEPOSIT SIZE.....MEDIUM
STRIKE.....N 34 DEG E
DIP.....ALMOST VERTICAL
DIRECTION OF PLUNGE.....SOUTH
DEPOSIT DESCRIPTION COMMENTS.....DEPOSIT DATA IS FOR SULFIDE DEPOSIT
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....144 UNITS...M
LENGTH OF WORKINGS.....1318 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....ZINC MINING OPERATIONS WERE UNDERGROUND USING A SPIRAL SHAFT WHICH IS FULL OF WATER AND THE OPENING OF WHICH WAS BLASTED SHUT. THE AGSTONE OPERATION IS ON THE SURFACE.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....(RECRYSTALLINE) DOLOSTONE, TECTONIC (CHATTER) DOLOSTONE BRECCIA, LIMESTONE, CARBONACEOUS JASPEROID.
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE, QUARTZ, CALCITE, GREENOCKITE
ORE CONTROL/LOCUS.....FAULT ZONE, BRECCIATED ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, NORTH MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE, BEDDING THRUST FAULTING (OFFSET = 30 M). DOLOSTONE STRIKES N34 DEG. E AND DIPS 27 DEG. SE.
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHERMAL (TELETHERMAL) EMPLACEMENT POST-FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....AEROMAGNETIC AND GRAVITY STUDIES OF REGION SUGGEST EXISTENCE OF MAJOR ANTICLINAL CROSS-FOLD IN NW-SE DIRECTION. FOR MINERAL PARAGENESIS SEE HERBERT AND YOUNG (1956).
NON-USGS WORK.....1894 DIREXPL INITIAL PROSPECTING OF AREA.
NON-USGS WORK.....1949 DIREXPL C. STEHLE: RENEWED EXPLORATION & ZN-MINING.
NON-USGS WORK.....1963 OTHER TIMBERVILLE LIME CO: TERMINATION OF MINING AND COMMENCEMENT OF AGSTONE OPERATION.
REPORTS AVAILABLE.....POOLE, J.L., 1972, BOWERS-CAMPBELL MINE: VIRGINIA DIVISION OF MINERAL REPORT, UNPUBLISHED SITE INSPECTION REPORT. STEPHENSON, R.C., 1949, GEOLOGIC REPORT ON THE SHENANDOAH ZINC-LEAD PROSPECTS NEAR TIMBERVILLE, ROCKINGHAM CO., VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, OPEN FILE REPORT, 41 P.; STEPHENSON, R.C., 1950, SUPPLEMENTAL GEOLOGIC REPORT ON THE SHENANDOAH ZINC-LEAD PROSPECTS NEAR TIMBERVILLE, ROCKINGHAM COUNTY, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, OPEN FILE REPORT, 21 P.; GOOD, R.S., AND ALLEN, G.C., 1972, GEOCHEMICAL RECONNAISSANCE FOR ZINC, LEAD, AND COPPER IN THE STAUNTON QUADRANGLE, VIRGINIA: VA. DIV. MIN. RES. REPORT OF INV. 31, 47 P.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.
REFERENCE....HAYES, L.G., 1960, THE BOWER'S CAMPBELL MINE - TRI-STATES BOOT-SHAPED ZINC DEPOSIT: MINING ENGINEERING - AIME, VOL. 12, NO. 9, P. 997-1000. ENGINEERS REPRINT NO. 60AU77, 9 P.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.

REFERENCE....LAURENCE, R.A., 1968, ORE DEPOSITS OF THE SOUTHERN APPALACHIANS, IN RIDGE, J.D. (ED.), ORE DEPOSITS OF THE UNITED STATES, 1933-1967, VOL. 1: NEW YORK, AMERICAN INSTITUTE OF MINING, METALLURGICAL AND PETROLEUM ENGINEERS, P. 155-168.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
DOL	SML			1963-1964	AGRICULTURAL LIMESTONE
ORE ZN	SML			1957-1963	3% ZN
CONC ZN	SML			1957-1963	
ZN	SML			1957-1963	

SOURCE OF PRODUCTION INFORMATION.....BRENT (1960)
PRODUCTION COMMENTS.....ZINC PRODUCED IN ALL YEARS (1957-1963) HOWEVER, ONLY FOR ONE MONTH IN 1958 AND SEVEN MONTHS IN 1963. DOLOSTONE PRODUCTION INCLUDES MINOR INTERMIXED LIMESTONE.

4. Howard Showalter Prospect

MRDS-REV RECORD NUMBER.....1033
MRDS RECORD NUMBER.....W031322
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....HOWARD SHOWALTER PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/TIMBERVILLE
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... TIMBERVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1260 FT (384 M)
UTM NORTHING...4278280 EASTING...689640 ZONE...+17
LATITUDE.....38-38-05N LONGITUDE.....078-49-17W
POSITION FROM NEAREST LOCALITY.....3.95 KM (2.45 MI) WEST OF TIMBERVILLE.
LOCATION COMMENTS.....0.3 KM (0.2 MI) EAST OF FARM ROAD, 0.6 KM (0.4 MI) BY ROAD SSW OF JUNCTION WITH STATE ROAD 792, 0.9 KM (0.55 MI) WEST OF JUNCTION WITH STATE ROAD 789.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, PYRITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....HOWARD SHOWALTER
EXPLORATION AND DEVELOPMENT COMMENTS.....SMALL PROSPECT PIT INDICATES LIMITED EXPLORATION PRIOR TO 1968.
DEPOSIT TYPE.....STRATABOUND, REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL(?)
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....SMALL PROSPECT EVIDENT IN 1968.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....TECTONIC (TRANSVERSE) DOLOSTONE BRECCIA, SEDIMENTARY DOLOSTONE BRECCIA
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE
ORE CONTROL/LOCUS.....BRECCIA POD
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, NORTH MOUNTAIN FAULT, ANTICLINAL CROSS-WARP (NW-SE TREND)
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHERMAL (TELETHERMAL) EMPLACEMENT POST-FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION.
GEOLOGY COMMENTS.....BRECCIA MAY BE TRACED ABOUT 30 M N 70 DEG. E ACROSS LOCAL STRIKE. LIGHT YELLOW SPHALERITE OCCURS IN VEIN DOLOMITE.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZATION IN THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

5. Minnick Prospect

MRDS-REV RECORD NUMBER.....1032
MRDS RECORD NUMBER.....W031323
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....MINNICK PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/NEW MARKET
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... NEW MARKET, VA QUADRANGLE SCALE 1:24000
ELEVATION.....1110 FT (338 M)
UTM NORTHING...4278160 EASTING...700700 ZONE...+17
LATITUDE.....38-37-52N LONGITUDE.....078-41-40W
POSITION FROM NEAREST LOCALITY.....2.8 KM (1.7 MI) SW OF NEW MARKET.
LOCATION COMMENTS.....JUST NW OF SOUTHBOUND LANE OF I.S. HWY. 81 2.4 KM (1.5 MI) BY ROAD SW OF CENTER OF INTERCHANGE 67 (JUNCTION WITH VA. HWY. 260) WEST OF NEW MARKET.
COMMODITIES PRESENT.....ZN CU PYR
ORE MATERIALS.....SPHALERITE, CHALCOPYRITE, PYRITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....CU PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1913?
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....MINNICK
OPERATOR.....NEW JERSEY ZINC CO.
DEPOSIT TYPE.....STRATA-BOUND, REPLACEMENT, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
MAXIMUM THICKNESS.....0.6 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....SPHALERITE OCCURS IN BED OF RECRYSTALLINE DOLOSTONE. INTENSELY MINERALIZED AREAS APPARENTLY LOCALIZED AT SMALL CROSS-FLEXURES.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....PROSPECT PITS EVIDENT IN EARLY 1950'S.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....(RECRYSTALLINE) DOLOSTONE
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....QUARTZ, DOLOMITE, CALCITE
ORE CONTROL/LOCUS.....CONCENTRATION APPEARS TO BE DUE TO CROSS-FLEXURES AND JOINTING.
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, MASSANUTTEN SYNCLINORIUM, ANTICLINAL CROSS-WARP (NW-SE TREND)
SIGNIFICANT LOCAL STRUCTURES.....PROBABLE EXTENSION OF SHORT MTN. SYNCLINE (TO NE); MAYLAND ANTICLINE TO NW.
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHERMAL (TELETHERMAL) EMPLACEMENT POST-FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....BROWN SPHALERITE OCCURS AS MASSIVE TABULAR CRYSTALS LYING IN THE BEDDING OF A RECRYSTALLINE DOLOSTONE.
GENERAL COMMENTS.....I.S. HWY. 81 CONSTRUCTED JUST UPHILL SINCE REPORT OF HERBERT AND YOUNG (1956).
NON-USGS WORK.....1913 DIREXPL NEW JERSEY ZINC CO.: DUG PROSPECT PITS AND DRILLED THREE CHURN DRILL HOLES; APPARENTLY NEGATIVE RESULTS.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZATION OF THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

6. Mole Hill Prospects

MRDS-REV RECORD NUMBER.....1031
MRDS RECORD NUMBER.....W031324
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....2
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....MOLE HILL PROSPECTS-INCLUDES THE WENGER ULRICH, AND KNICELY PROPERTIES.
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... BRIDGEWATER, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1522 FT (464 M)
UTM NORTHING...4258090 EASTING...678325 ZONE...+17
LATITUDE.....38-27-19N LONGITUDE.....078-57-23W
POSITION FROM NEAREST LOCALITY.....6.4 KM (4.0 MI) DUE WEST OF HARRISONBURG'S CITY LIMITS.
LOCATION COMMENTS.....1.2 KM (0.75 MI) DUE WEST OF DALE ENTERPRISE. 1.6 KM (1.0 MI) SOUTHEAST OF HINTON. 0.7 KM (0.45 MI) SOUTHWEST ON STATE ROAD 734 FROM ITS INTERSECTION WITH U.S. ROUTE 33, 100 M (328 FT) NORTH OF ROAD IS THE ULRICH PROPERTY. THE WENGER PROPERTY IS 0.64 KM (0.4 MI) NORTHEAST OF ULRICH PROPERTY, ABOUT 40 M DOWNSTREAM FROM A FARM POND. THE KNICELY PROPERTY IS 470 M (1542 FT) SOUTH BY SOUTHWEST OF THE ULRICH PROPERTY ON THE NORTHWEST SIDE OF MOLE HILL, ABOUT 120 M (394 FT) WEST OF A JEEP TRAIL.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA?
COMMODITY INFO COMMENTS.....GALENA WAS REPORTED BY LOCAL RESIDENTS TO HAVE BEEN FOUND IN THE PITS TO THE EAST OF MOLE HILL.
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PB?
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....ULRICH, WENGER, AND KNICELY
EXPLORATION AND DEVELOPMENT COMMENTS.....LOCATIONS OF OCCURRENCES ON THE THREE PROPERTIES ARE ALONG GULLIES. SEVERALS PITS WERE DUG ON THE EAST SIDE OF

MOLE HILL. SPHALERITE WAS FOUND, AND GALENA WAS REPORTED FOUND IN THE PITS.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....SPHALERITE IS FOUND IN VEINS IN A DOLOMITE BRECCIA.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....SEVERAL PITS WERE DUG.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....DOLOMITE, LIMESTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE, LIMESTONE, QUARTZ, CHERTY QUARTZ.
ORE CONTROL/LOCUS.....VEINS WITHIN BRECCIA
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....HARRISONBURG SYNCLINE, OLIVINE BASALT PLUG OF MOLE HILL
FORMATION AGE.....EORD
FORMATION NAME.....MIDDLE BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....MOLE HILL IS AN OLIVINE BASALT PLUG.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZATION OF THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

7. Showalter Prospect

MRDS-REV RECORD NUMBER.....1048
MRDS RECORD NUMBER.....W031325
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....1 3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....SHOWALTER PROSPECT
SYNONYM NAME.....SNAPP CREEK PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/EDOM
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SINGERS GLEN, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1500 FT (457 M)
UTM NORTHING...4265350 EASTING...680290 ZONE...+17
LATITUDE.....38-31-13N LONGITUDE.....078-55-55W
POSITION FROM NEAREST LOCALITY.....3.95 KM (2.45 MI) SSW OF SINGERS GLEN.
LOCATION COMMENTS.....JUST NW OF STATE ROAD 752, 1.6 KM (1.0 MI) BY ROAD NE OF JUNCTION WITH STATE ROAD 763.
COMMODITIES PRESENT.....PB PYR
ORE MATERIALS.....GALENA, PYRITE
NON-PRODUCER MAIN.....PB
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....EARLY 1860'S
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....EARLY 1860'S?
OWNER (PRESENT/LAST).....MAX SHOWALTER
EXPLORATION AND DEVELOPMENT COMMENTS.....PROSPECT WAS WORKED DURING THE CIVIL WAR FOR LEAD.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, REPLACEMENT
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....RELATIONSHIP OF SULFIDE TO BRECCIA UNKNOWN. VEINS SEVERAL INCHES THICK.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....15 UNITS...M
OVERALL WIDTH.....15 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....PROSPECT PIT EVIDENT IN 1981.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....DOLOSTONE BRECCIA, (RECRYSTALLINE) DOLOSTONE
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE, QUARTZ
ORE CONTROL/LOCUS.....BRECCIA ZONE (?), FRACTURES
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, NORTH MOUNTAIN FAULT, ANTICLINAL CROSS-WARP (NW-SE TREND)
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHERMAL (TELETHERMAL) EMPLACEMENT POST FAULTING
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....THIS DEPOSIT OCCURS IN LOWERMOST BEEKMANTOWN. UPPER HORIZONS OF BEEKMANTOWN ALONG THIS BELT CONTAIN BOWERS-CAMPBELL MINE, ARMENTROUT PROSPECT AND VETTER PROSPECT TO THE NORTHEAST. AN OLIVINE DIABASE DIKE IS MAPPED BY BRENT (1960) ABOUT 3.2 KM TO THE NE.
NON-USGS WORK.....DIREXPL PROSPECT PIT DUG.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZATION OF THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

8. Smith Property Prospect

MRDS-REV RECORD NUMBER.....1054
MRDS RECORD NUMBER.....W031326
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....2
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....SMITH PROPERTY PROSPECT
SYNONYM NAME.....RED BARREL PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... TIMBERVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1190 FT (363 M)
UTM NORTHING...4282930 EASTING...695660 ZONE...+17
LATITUDE.....38-40-31N LONGITUDE.....078-45-03W
POSITION FROM NEAREST LOCALITY.....(2.6 MI) NORTH 30 DEG EAST OF THE CENTER OF TIMBERVILLE.
LOCATION COMMENTS.....0.4 KM (0.25 MI) NORTH ON STATE ROUTE 42 FROM ITS INTERSECTION WITH STATE ROUTE 615, 80 M (262 FT) EAST OF ROAD.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....SMITH
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY WAS EXTENSIVELY PROSPECTED BY AN OPEN CUT, BUT HAS BEEN IDLE SINCE AROUND 1966-1967.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, DISSEMINATED
MAXIMUM THICKNESS.....0.9 UNITS...M
DEPOSIT SIZE.....SMALL
DIP.....65 DEG NW
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....OPEN CUT WAS DUG
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....DOLOMITE, LIMESTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE, LIMESTONE, QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, HARRISONBURG SYNCLINE
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE, MAYLAND ANTICLINE
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZATION OF THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

9. Turner Prospect

MRDS-REV RECORD NUMBER.....1049
MRDS RECORD NUMBER.....W031327
RECORD TYPE.....X1M
REPORT DATE.....80 07
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....TURNER PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/TIMBERVILLE
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... TIMBERVILLE, VA. QUADRANGLE SCALE 1:24000
UTM NORTHING...4279950 EASTING...691250 ZONE...
POSITION FROM NEAREST LOCALITY.....2.8 KM (1.75 MI) WNW OF TIMBERVILLE.
LOCATION COMMENTS.....LUTTRELL'S LOCATION PUTS THE PROSPECT LOCATION SOUTH OF THE INTERSECTION OF STATE ROAD 789 AND STATE ROAD 790. NO LOCAL RESIDENTS LIVING IN THE VICINITY HAVE EVER HEARD OF THIS PROSPECT.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....TURNER
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT
HOST ROCK AGE.....ORD
HOST ROCK TYPE.....DOLOSTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, NORTH MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE
FORMATION AGE.....ORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....MINERALIZATION OCCURS IN UPPER BEEKMANTOWN ON TREND WITH ZIGLER PROSPECT, BOWERS-CAMPBELL MINE, AND VETTER PROPERTY PROSPECT.
GENERAL COMMENTS.....LITTLE PUBLISHED INFORMATION IS AVAILABLE ON THIS PROSPECT.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL

RESOURCES BULLETIN 76, 174 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.

10. Vetter Prospect

MRDS-REV RECORD NUMBER.....1051
MRDS RECORD NUMBER.....W031328
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....VETTER PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/TIMBERVILLE
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... TIMBERVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1120 FT (341 M)
UTM NORTHING...4277920 EASTING...690020 ZONE...+17
LATITUDE.....38-37-53N LONGITUDE.....078-49-01W
POSITION FROM NEAREST LOCALITY.....3.65 KM (2.3 MI) WEST OF TIMBERVILLE.
LOCATION COMMENTS.....140 M (450 FT) SE OF STATE ROAD 789, 0.9 KM (0.55 MI) BY ROAD SW OF JUNCTION WITH STATE ROAD 792.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, PYRITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1950'S
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....VETTER
EXPLORATION AND DEVELOPMENT COMMENTS.....EXPLORATORY DRILLING CONDUCTED DURING PERIOD 1950-1954.
DEPOSIT TYPE.....STRATA-BOUND, REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR
DEPTH TO TOP.....30.2 UNITS...M
DEPTH TO BOTTOM.....142.7 UNITS...M
MAXIMUM LENGTH.....122 UNITS...M
MAXIMUM WIDTH.....38 UNITS...M
DEPOSIT SIZE.....SMALL (?)
DESCRIPTION OF WORKINGS COMMENTS.....NO WORKINGS. DEPOSIT EXPLORED BY DRILLING ONLY.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....TECTONIC (CHATTER) DOLOSTONE BRECCIA, (RECRYSTALLINE) DOLOSTONE
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE
ORE CONTROL/LOCUS.....BRECCIA POD, SHEAR ZONE
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, NORTH MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE, DOLOSTONE STRIKES NE, BEDDING PLANE FAULT AT 142.7 M BELOW SURFACE.
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHER MAL (TELETHERMAL) EMPLACEMENT POST-FAULTING
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....AEROMAGNETIC AND GRAVITY STUDIES OF REGION SUGGEST EXISTENCE OF MAJOR ANTICLINAL CROSS-FOLD IN NW-SE DIRECTION.
GENERAL COMMENTS.....HERBERT AND YOUNG (1956) FEEL INSUFFICIENT DRILLING WAS ACCOMPLISHED ON DEPOSIT, ESPECIALLY AS NO DETERMINATION OF A BRECCIA BODY BELOW THE BEDDING-PLANE FAULT WAS MADE.
NON-USGS WORK.....DIREXPL SEVERAL DRILL HOLES SUNK IN EARLY 1950'S.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
SOURCE OF PRODUCTION INFORMATION.....HERBERT AND YOUNG (1956)

11. Wiseland Prospect

MRDS-REV RECORD NUMBER.....1043
MRDS RECORD NUMBER.....W031374
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....WISELAND PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/HARRISONBURG
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... HARRISONBURG, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1470 FT (448 M)
UTM NORTHING...4260760 EASTING...696180 ZONE...+17
LATITUDE.....38-28-32N LONGITUDE.....078-45-04W
POSITION FROM NEAREST LOCALITY.....10.7 KM (6.65 MI) ENE OF HARRISONBURG.
LOCATION COMMENTS.....0.1 KM (0.05 MI) SOUTH OF STATE ROAD 722, 0.8 KM (0.5 MI) BY ROAD EAST OF JUNCTION WITH STATE ROAD 620. ON PRIVATE PROPERTY WITHIN PURCHASE BOUNDARY OF LEE DISTRICT, GEORGE WASHINGTON NATIONAL FOREST.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO PROSPECTING HAS BEEN DONE AT THIS LOCALITY.
DEPOSIT TYPE.....STRATA-BOUND, REPLACEMENT, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....(RECRYSTALLINE) DOLOSTONE
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, STAUNTON FAULT, ANTICLINAL CROSS-WARP (NW-SE TREND), MAS-SANUTTEN SYNCLINORIUM.
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHER-MAL (TELETHERMAL) EMPLACEMENT POST-FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....SMALL SPHALERITE CRYSTALS OCCUR IN UPPER BEEKMANTOWN RECRYSTALLINE DOLOSTONE IN HANGING WALL OF STAUNTON FAULT.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZA-TION OF THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

12. Zigler Prospect

MRDS-REV RECORD NUMBER.....1050
MRDS RECORD NUMBER.....W031329
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....ZIGLER PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/TIMBERVILLE
COUNTRY.....US STATE.....VA COUNTY.....ROCKINGHAM
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... TIMBERVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1240 FT (378 M)
UTM NORTHING...4282960 EASTING...692940 ZONE...+17
LATITUDE.....38-40-34N LONGITUDE.....078-46-56W
POSITION FROM NEAREST LOCALITY.....4.2 KM (2.6 MI) NNW OF TIMBERVILLE.
LOCATION COMMENTS.....0.8 KM (0.5 MI) SE OF STATE ROAD 614, 1.8 KM (1.1 MI) BY ROAD NNW OF JUNCTION WITH STATE ROAD 791 IN MECHANICSVILLE. UTM GRID LOCATION IS FOR PROSPECT NO. 2. PROSPECT NO. 1, 180 M SOUTHWEST (UTM N 4282810., E 692860.); PROSPECT NO. 3, 250 M NORTHEAST (UTM N 4283180., E 693060.)
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, HEMIMORPHITE, PYRITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1949(?)
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....HOWARD ZIGLER
OPERATOR.....CARL STEHLE
EXPLORATION AND DEVELOPMENT COMMENTS.....EXPLORATION OF PROPERTY CONDUCTED IN 1949-1950 UNDER AUSPICES OF CARL STEHLE OF NEW YORK. RESISTIVITY SURVEY, GEOLOGIC MAPPING AND EXPLORATORY DIAMOND DRILLING CONDUCTED.
DEPOSIT TYPE.....STRATA-BOUND, REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....STEPHENSON (1950) BELIEVES MINERALIZATION CAN BE EXPLAINED BEST AS ELONGATE, RAKING ORE SHOOTS DEVELOPED IN ONE OR MORE BRECCIATED BEDS.
DESCRIPTION OF WORKINGS COMMENTS.....DRILL HOLES SUNK AT PROSPECTS NO. 1 (32.9 M) AND NO. 2 (91.5 M).
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....TECTONIC (CHATTER) DOLOSTONE (AND SOME LIMESTONE) BRECCIA, (RECRYSTALLINE) DOLOSTONE, CAR-BONACEOUS JASPEROLD
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE, QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, NORTH MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE(=TIMBERVILLE SYNCLINE OF STEPHENSON (1949,

1950); DOLOSTONE STRIKES N. 30-45 DEG. E. AND DIPS 24-30 DEG. SE.
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHERMAL (TELETHERMAL) EMPLACEMENT POST FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....MAJOR ANTICLINAL CROSS-FOLD IN NW-SE DIRECTION POSTULATED BY STEPHENSON (1949, 1950) AND HERBERT AND YOUNG (1956).
NON-USGS WORK.....1949 GEOPHYS F.W. LEE: RESISTIVITY SURVEY CONDUCTED.
NON-USGS WORK.....1949 GEOLMAP R.C. STEPHENSON: PREPARED GEOLOGIC REPORT.
NON-USGS WORK.....1950 DIREXPL C. STEHLE: 2 DIAMOND DRILL HOLES SUNK.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
REFERENCE....STEPHENSON, R.C., 1949, GEOLOGIC REPORT ON THE SHENANDOAH ZINC-LEAD PROSPECTS NEAR TIMBERVILLE, ROCKINGHAM CO., VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, OPEN-FILE REPORT, 41 P.
REFERENCE....STEPHENSON, R.C., 1950, SUPPLEMENTAL GEOLOGIC REPORT ON THE SHENANDOAH ZINC-LEAD PROSPECTS NEAR TIMBERVILLE, ROCKINGHAM COUNTY, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, OPEN-FILE REPORT, 21 P.

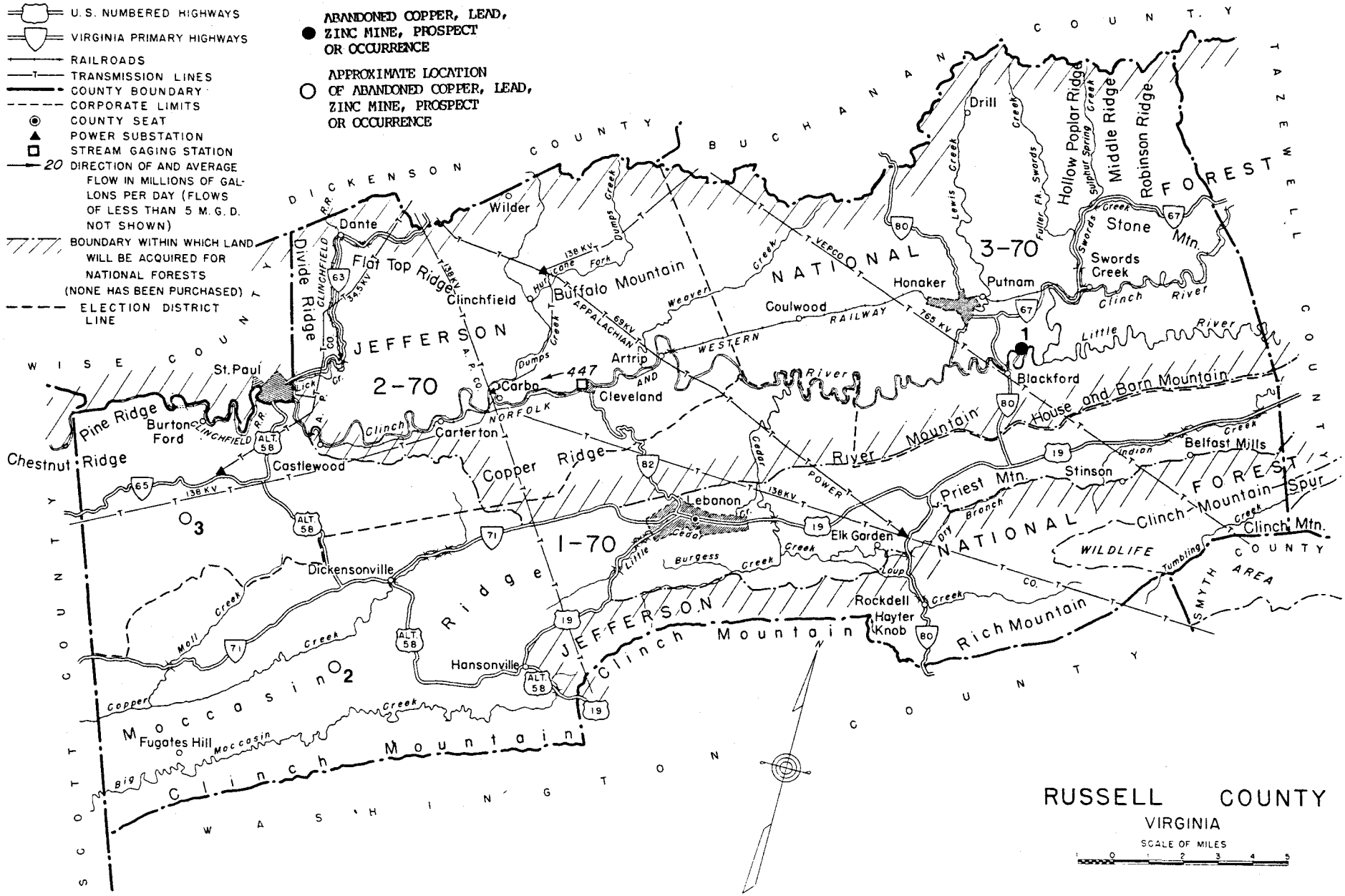
RUSSELL COUNTY

1. McGraw Mine

MRDS-REV RECORD NUMBER.....1059
MRDS RECORD NUMBER.....K001646
RECORD TYPE.....X1N
DEPOSIT NUMBER.....16
REPORT DATE.....73 09
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....FAGAN, JAMES M.
UPDATED.....80 10
UPDATER.....TRIMBLE, DAVID C.; (SWEET, P. C.)
SITE NAME.....MCGRAW MINE
MINING DISTRICT/AREA.....RUSSELL-TAZEWELL COUNTIES BARITE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....RUSSELL
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....06 CLINCH RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...HONAKER, VA 6684 SECOND QUAD SCALE 1:24000
ELEVATION.....2020 FT (616 M)
UTM NORTHING...4095340 EASTING...416475 ZONE...+17
LATITUDE.....37-00-08N LONGITUDE.....081-56-19W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 3.6 KM (2.25 MI) SOUTHEAST OF HONAKER.
LOCATION COMMENTS.....ABOUT 0.8 KM (0.5 MI) NORTHEAST OF BLACKFORD, ON THE EAST SIDE OF A LARGE MEANDER IN CLINCH RIVER.
COMMODITIES PRESENT.....BA FE CU PYR
ORE MATERIALS.....BARITE, LIMONITE, CHALCOPYRITE, MALACHITE, PYRITE
MAJOR.....BA
OCCUR.....FE CU PYR
PRODUCTION.....Y
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....AFTER 1880
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....AFTER 1880
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WAS WORKED SOMETIME BETWEEN 1880 AND 1908.
DEPOSIT TYPE.....VEIN-REPLACEMENT(EDMUNDSON, 1938, P.72)
DEPOSIT FORM.....IRREGULAR?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....BARITE OCCURS AS VEINS AND REPLACEMENT MASSES IN DOLOMITE. THE SOUTHEAST WALL OF THE OPEN CUT IS A FINE GRAINED DOLOMITE STRIKING N70DEGE AND DIPPING 30DEGSE. SOME CLEAVAGE FRAGMENTS OF BARITE ARE 3 IN (76 MM) WIDE AND ARRANGED RADIALLY IN THE FORM OF A ROSETTE.
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS CONSIST OF AN OPEN CUT ABOUT 30.5 M (100 FT) LONG, 15 M (50 FT) WIDE, AND 9 M (30 FT) DEEP, AND SEVERAL SMALLER OPENINGS 91.5 M (300 FT) TO THE NORTHEAST. NEAR THE NORTHEASTERN END OF THE LARGE OPEN CUT IS A DEEP SHAFT, NOW WATER-FILLED. THE DUMP, 30.5 M (100 FT) LONG, 6 M (20 FT) WIDE, AND 2.4 M (8 FT) HIGH, IS COMPOSED OF IRREGULAR FRAGMENTS OF DOLOMITE CONTAINING THIN VEINS AND REPLACEMENT MASSES OF BARITE. IT IS ESTIMATED THAT AT LEAST 20 PERCENT OF THE DUMP MATERIAL IS BARITE.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....DOLOMITE
PERTINENT MINERALS (NOT ORE).....CHERT
ORE CONTROL/LOCUS.....VEINS
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....COPPER RIDGE SYNCLINE, HONAKER FAULT, COPPER CREEK FAULT.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
NON-USGS WORK.....? DIREXPL ? -DUG OPEN CUTS, SHAFT, MINED.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIV. MINERAL RESOURCES, MINERAL RESOURCES REPT. 6, 164 P.
REFERENCE....EDMUNDSON, R.S., 1938, BARITE DEPOSITS OF VIRGINIA: VIRGINIA GEOL. SURVEY BULL. 53, 85 P.
SOURCE OF PRODUCTION INFORMATION.....EDMUNDSON, R.S., 1938, VA. GEOL. SURVEY BULL. 53.
SOURCE OF RESERVES AND RESOURCES INFORMATION.....EDMUNDSON (1938)
RESERVES AND RESOURCES COMMENTS.....A FEW REPLACEMENT MASSES OF BARITE WERE NOTED IN THE BEDROCK, BUT THERE ARE NOT SUFFICIENT CONCENTRATIONS OF BARITE TO WARRANT FUTURE DEVELOPMENT. HOWEVER, IT IS POSSIBLE THAT THE BARITE IN THE DUMP COULD BE PROFITABLY RECOVERED BY HAND METHODS.

2. Osborn Mine

MRDS-REV RECORD NUMBER.....1081
MRDS RECORD NUMBER.....W031331
RECORD TYPE.....X1M
REPORT DATE.....80 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....OSBORN MINE
COUNTRY.....US STATE.....VA COUNTY.....RUSSELL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....06 CLINCH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MOLL CREEK, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2000 FT (610 M)
UTM NORTHING...4073140 EASTING...387220 ZONE...+17
LATITUDE.....36-47-57N LONGITUDE.....082-15-51W
POSITION FROM NEAREST LOCALITY.....3.4 KM (2.1 MI) NORTH OF TUMBEZ.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. ABOUT 0.4 KM (0.25 MI) NNW FROM END OF PRIVATE ROAD, 0.3 KM (0.2 MI) BY ROAD ENE OF JUNCTION WITH STATE ROAD 679, 1.0 KM (0.6MI) BY ROAD SE OF JUNCTION WITH STATE ROAD 678 ALONG COPPER CREEK.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA, HEMIMORPHITE, SMITHSONITE
COMMODITY INFO COMMENTS.....CONCENTRATION OF GALENA DECREASED WITH DEPTH, WHILE SPHALERITE INCREASED.
MAJOR.....ZN
MINOR.....PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1900
NATURE OF DISCOVERY.....B
YEAR OF FIRST PRODUCTION.....1899
OPERATOR.....LACY-BUTLER CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....L.D. CRAWFORD OPENED AROUND 1899, THEN OPTIONED IT TO THE BERTHA MINERAL CO. AFTER 6 MONTHS, L.D. CRAWFORD RE-ASSUMED THE OPTION AND WORKED THE MINE. AT A LATER DATE, H.H. KAYLOR WORKED THE MINE FOR LEAD AND ZINC. IN 1926, ST. JOSEPH LEAD AND ZINC PROSPECTED THE PROPERTY WITH 7 DIAMOND-BIT EXPLORATORY HOLES AND SHIPPED ONE CARLOAD OF ORE. FROM 1930 ON, THE PROPERTY WAS NOT WORKED UNTIL 1940 WHEN THE LACY-BUTLER CO. CONCENTRATED ZINC-LEAD CARBONATE ORE FROM THE DUMPS.
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT, SECONDARY ENRICHMENT
DEPOSIT SIZE.....SMALL
STRIKE.....N. 75 DEG. E
DIP.....45 DEG. SE.
DEPOSIT DESCRIPTION COMMENTS.....A MASS OF CARBONATE ORE AT A DEPTH OF 183 M BELOW THE SURFACE (WOODWARD, 1938, P. 68).
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....19.2 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS CONSISTED OF A LARGE OPEN PIT AND SEVERAL TUNNELS AND DRIFTS.
HOST ROCK AGE.....CAMB
HOST ROCK TYPE.....MAGNESIAN LIMESTONE, DOLOMITIC LIMESTONE
PERTINENT MINERALS (NOT ORE).....CALCITE, DOLOMITE, FLUORITE, GREENOCKITE
ORE CONTROL/LOCUS.....BEDDING PLANES
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, COPPER CREEK FAULT, COPPER RIDGE SYNCLINE
SIGNIFICANT ALTERATION.....OXIDATION OF ORES
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT
FORMATION AGE.....LCAMB
FORMATION AGE.....CAMB
FORMATION NAME.....NOLICHUCKY SHALE
FORMATION NAME.....MARYVILLE LIMESTONE
NON-USGS WORK.....1899 DIREXPL L.D. CRAWFORD: OPENED MINE
NON-USGS WORK.....1900 DIREXPL BERTHA MINERAL CO.: OPERATED MINE
NON-USGS WORK.....1940 DIREXPL LACY-BUTLER CO.: MILLED DUMP MATERIALS
REFERENCE....MARTIN, A.J., 1941, GOLD, SILVER, COPPER, LEAD, AND ZINC IN THE EASTERN STATES (MINE REPORT) IN U.S. BUREAU OF MINES, MINERALS YEARBOOK REVIEW OF 1940: P. 315-324.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.
REFERENCE....WOODWARD, H.P., 1938, OUTLINE OF THE GEOLOGY AND


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS (NONE HAS BEEN PURCHASED)
ELECTION DISTRICT LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
WISE COUNTY
DICKENSON COUNTY
BUCHANAN COUNTY
TAZEWELL COUNTY
SCOTT COUNTY
WASHINGTON COUNTY
SMYTH COUNTY
JEFFERSON NATIONAL FOREST
3-70
2-70
1-70
1
O1
O2
O3
Drill
Hollow Poplar Ridge
Middle Ridge
Robinson Ridge
Stone Mtn.
Swords Creek
Honaker
Putnam
Wilder
Dante
Flat Top Ridge
Clinchfield
Buffalo Mountain
Coulwood
Blackford
House and Born Mountain
Belfast Mills
Stinson
Priest Mtn.
Clinch Mountain Spur
Clinch Mtn.
WILDLIFE AREA
Elk Garden
Lebanon
Rockdell
Hayter Knob
Rich Mountain
Clinch Mountain
Ridge
Dickensonville
Hansonville
Fugates Hill
Moccasin Mountain
Big Clinch Mountain
St. Paul
Pine Ridge
Chestnut Ridge
Burton Ford
Castlewood
Carterton
Copper Ridge
Carbo
Cleveland
Artrip
River Mountain
Little River
Clinch River
Swords Creek
Dumps Creek
Lick Creek
Moll Creek
Copper Creek
Moccasin Creek
Burgess Creek
Dry Branch
Tumbling Creek
Indian Creek
Lewis Creek
Fuller Fk. Swords Creek
Sulphur Spring Creek
Cane Fork
Weaver Creek
Cedar Creek
Little Cedar Creek
Loup Creek
Coal Co. R.R.
Clinchfield R.R.
A.C.L. R.R.
Norfolk and Western Railway
Appalachian Power Co.
Virginia Electric and Power Co.
138 KV
69 KV
34.5 KV
765 KV
447
ALT. 58
63
65
67
71
80
82
19
RUSSELL COUNTY
VIRGINIA
SCALE OF MILES
0 1 2 3 4 5

MINERAL RESOURCES OF RUSSELL COUNTY, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 49, 91 P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
				1928	1 CARLOAD
CONC ZN	SML			1940	
CONC PB	SML			1940	

SOURCE OF PRODUCTION INFORMATION.....WOODWARD (1938), MARTIN (1941)
PRODUCTION COMMENTS.....L.D. CRAWFORD SHIPPED 7 CARLOADS OF ORE AROUND 1900 AND ST. JOSEPH LEAD AND ZINC CO. SHIPPED 1 CARLOAD IN 1928.

3. Pat Keith Prospect

MRDS-REV RECORD NUMBER.....1066
MRDS RECORD NUMBER.....W031330
RECORD TYPE.....X1M
REPORT DATE.....80 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....PAT KEITH PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....RUSSELL
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....06 CLINCH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MOLL CREEK, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2000 FT
LATITUDE.....36-49- N LONGITUDE.....082-21- W
POSITION FROM NEAREST LOCALITY.....ABOUT 3.5 KM (2.2 MI) WEST OF LAWSONS STORE.
LOCATION COMMENTS.....EXACT LOCATION UNKNOWN, NOT FIELD CHECKED. WOODWARD (1938) DESCRIBES AS BEING 4 MI NW OF MASONS STORE AT THE HEAD OF SINKING CREEK ON THE NORTHWEST SLOPE OF COPPER RIDGE.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA
NON-PRODUCER MAIN.....ZN PB
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1918 (?)
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....PAT KEITH
EXPLORATION AND DEVELOPMENT COMMENTS.....THE DEPOSIT WAS PROSPECTED AROUND 1918 AND AGAIN IN 1930, BUT NO DEVELOPMENT OF THE SITE WAS EVER MADE.
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT
DEPOSIT SIZE.....SMALL(?)
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....A SHALLOW SURFACE PIT WAS EVIDENT IN 1938.
HOST ROCK AGE.....LCAMB
HOST ROCK TYPE.....DOLOSTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, HONAKER FAULT, COPPER RIDGE SYNCLINE
FORMATION AGE.....LCAMB
FORMATION AGE.....CAMB
FORMATION NAME.....COPPER RIDGE DOLOSTONE
FORMATION NAME.....MARYVILLE LIMESTONE
NON-USGS WORK.....1918 DIREXPL DEPOSIT PROSPECTED.
NON-USGS WORK.....1930 DIREXPL DEPOSIT PROSPECTED.
NON-USGS WORK.....1938 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 49.
REFERENCE....COOPER, B.N., 1945, INDUSTRIAL LIMESTONES AND DOLOMITES IN VIRGINIA: CLINCH VALLEY DISTRICT: VIRGINIA GEOLOGICAL SURVEY BULLETIN 66, 259 P.
REFERENCE....WOODWARD, H.P., 1938, OUTLINE OF THE GEOLOGY AND MINERAL RESOURCES OF RUSSELL COUNTY, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 49, 91 P.

SCOTT COUNTY

1. Bowman Mine

MRDS-REV RECORD NUMBER.....1098
MRDS RECORD NUMBER.....W031332
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....12
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....BOWMAN MINE
SYNONYM NAME.....BOWMAN-GRAVES MINE, ARCADIA MINE, GRAVES PROSPECT
MINING DISTRICT/AREA.....ARCADIA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SCOTT
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....06 HOLSTON RIVER
LAND STATUS.....01
QUADRANGLE NAME..... INDIAN SPRINGS, TENN. - VA. QUADRANGLE SCALE 1:24,000
ELEVATION.....1530 FT (466 M)
UTM NORTHING...4051020 EASTING...369540 ZONE...+17
LATITUDE.....36-35-51N LONGITUDE.....082-27-31W
POSITION FROM NEAREST LOCALITY.....3.4 KM (2.1 MI) NE OF BLOOM INGDALE, TENN.
LOCATION COMMENTS.....JUST SOUTH OF STATE ROAD 704, 0.5 KM (0.3 MI) EAST OF JUNCTION WITH STATE ROAD 693. OLD BOWMAN SHAFT LOCATED 500 M ESE AT UTM N 4050810., E 370150.
COMMODITIES PRESENT.....ZN CU PYR
ORE MATERIALS.....SPHALERITE, CHALCOPYRITE, PYRITE
COMMODITY INFO COMMENTS.....GALENA HAS NOT BEEN REPORTED.
MAJOR.....ZN
OCCUR.....CU PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1900?
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1918
OWNER (PRESENT/LAST).....JOHN RUBEN BROWDER/ROBT. SHIVELY
OPERATOR.....AMERICAN STEEL CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....AROUND 1900 LIMITED PROSPECTING WAS ACCOMPLISHED AROUND THE WESTERN OPENING. IN 1905, A MR. GRAVES DEVELOPED THE WESTERN END INCLUDING SINKING A 26.5 M SHAFT, BUT PRODUCED NO ORE. MR. FRANK BOWMAN BEGAN WORKING THE EAST END OF THE DEPOSIT IN 1906 AND WORKED AT INTERVALS UNTIL 1917, INCLUDING A 38.1 M SHAFT. IN 1918, HE ERECTED A SMALL MILL AND PRODUCED 25 T OF ZINC CONCENTRATE. IN 1942-1943, THE AREA WAS SURVEYED BY THE U.S. GEOLOGICAL SURVEY. IN 1964, THE AMERICAN STEEL CO. OF CLEVELAND, OHIO, BEGAN MINING OPERATIONS, BUT CLOSED DOWN PRIOR TO SHIPMENT OF ANY ORE DUE TO LAND LITIGATIONS.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LINEAR
MAXIMUM WIDTH.....0.9 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 77 DEG. W
DIP.....VERTICAL
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....38.1 UNITS...M
LENGTH OF WORKINGS.....82.9 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....THREE SHAFTS HAVE BEEN SUNK BY THE VARIOUS DEVELOPERS (18.3, 26.5, AND 38.1 M). IN ADDITION SEVERAL PROSPECT PITS AND TRENCHES HAVE BEEN DUG.
HOST ROCK AGE.....LCAMB
HOST ROCK TYPE.....THICK-BEDDED DOLOSTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE, QUARTZ
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....SALTVILLE FAULT , NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....REVERSE STRIKE FAULT
FORMATION AGE.....LCAMB
FORMATION AGE.....LCAMB
FORMATION NAME.....COPPER RIDGE DOLOSTONE
FORMATION NAME.....HONAKER FORMATION (UPPER LIMESTONE MEMBER)
GEOLOGY COMMENTS.....THE HONAKER FORMATION IS REPRESENTED BY A COMPACT DOLOMITIC LIMESTONE AND MAY BE THE NOLICHUCKY FORMATION.
WORK DONE BY USGS.....1943 RECON C.H. BEHRE, JR., & J. RODGERS: OPEN-FILE REPORT
WORK DONE BY USGS.....1945 RECON I. GLADSTONE, V.E. NELSON, D.F. KENT: OPEN-FILE REPORT
NON-USGS WORK.....1905 DIREXPL MR. GRAVES: DEVELOPED WESTERN END.
NON-USGS WORK.....1906 DIREXPL FRANK BOWMAN: BEGAN DEVELOPMENT OF EASTERN END.
NON-USGS WORK.....1964 DIREXPL AMERICAN STEEL CO: ATTEMPTED TO MINE.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....BEHRE, C.H., JR., AND RODGERS, J., 1943, BOWMAN-GRAVES (ARCADIA) ZINC PROJECT: U.S. GEOLOGICAL SURVEY FIELD REPORT, 2 P.
REFERENCE....GLADSTONE, I., NELSON, V.E., AND KENT, D.F., 1945, THE ARCADIA ZINC AREA, SCOTT COUNTY, VIRGINIA: U.S. GEOLOGICAL SURVEY PRELIMINARY REPORT, 2 P.
REFERENCE....SECRIST, M.H., 1924, ZINC DEPOSITS OF EAST TENNESSEE: TENNESSEE DIVISION OF GEOLOGY BULLETIN 31, 165 P.

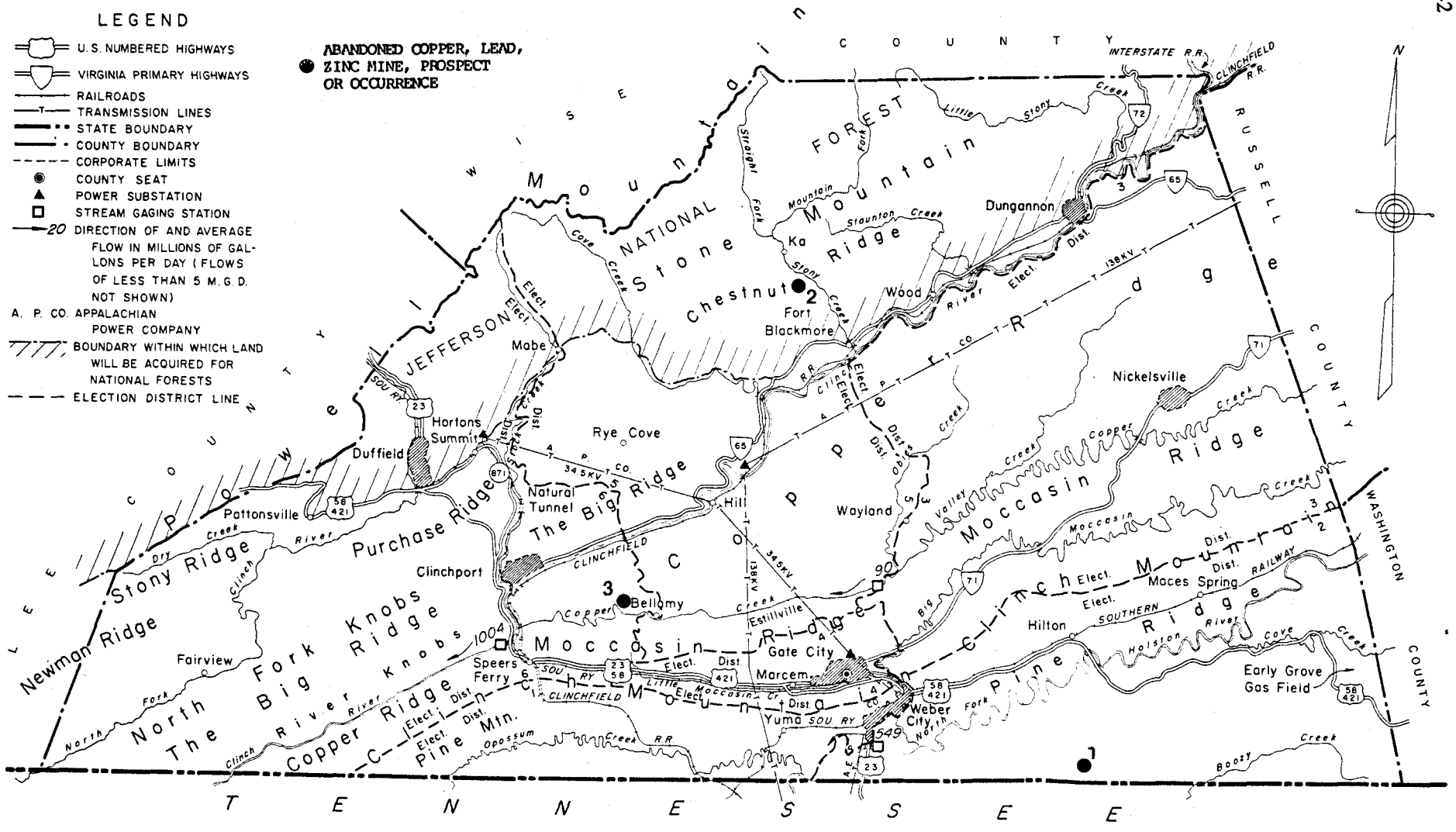
CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
CONC ZN	ACC	0.02500	TONS	1918-1919	ZN
ORE ZN	SML			1906-1917 1918-1919	ZN, MILLED IN
ORE ZN	SML			1964	ZN, NEVER SHIPPED

SOURCE OF PRODUCTION INFORMATION.....SECRIST (1924), VA. DIV. MIN. RES. FILES.
PRODUCTION COMMENTS.....A SMALL AMOUNT OF ZN ORE PRODUCED IN 1964 WAS NEVER SHIPPED.

2. Brickey Prospect

MRDS-REV RECORD NUMBER.....1090
MRDS RECORD NUMBER.....W031333
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....2
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....BRICKEY PROSPECT
SYNONYM NAME.....HAGAN PROPERTY PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....SCOTT
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....06 CLINCH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FORT BLACKMORE, VA. QUADRANGLE SCALE


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
A. P. CO. APPALACHIAN POWER COMPANY
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
ELECTION DISTRICT LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
LEE COUNTY
WISE COUNTY
RUSSELL COUNTY
WASHINGTON COUNTY
TENNESSEE
Powell Mountain
Stone Mountain
JEFFERSON NATIONAL FOREST
Chestnut Ridge
Ka Ridge
Dungannon
Wood
Fort Blackmore
Mabe
Nickelsville
Horton Summit
Duffield
Rye Cove
Pattonsville
Natural Tunnel
Hill
Wayland
Moccasin Ridge
Stony Ridge
Purchase Ridge
The Big Ridge
Clinchport
Bellamy
Estillville
Gate City
Maces Spring
Hilton
Marcem
Speers Ferry
Fairview
Newman Ridge
North Fork Knobs
The Big Knobs
Copper Ridge
Pine Mtn.
Yuma
Weber City
Early Grove Gas Field
Moccasin Ridge
Powell River
Clinch River
Copper Creek
Moccasin Creek
Stony Creek
Little Stony Creek
Straight Fork
Mountain Fork
Staunton Creek
Wood River
Dry Fork
North Fork
Opossum Creek
Boozy Creek
Holston River
Big Moccasin Creek
Valley Creek
Dist.
Elect.
CLINCHFIELD R.R.
SOUTHERN RAILWAY
INTERSTATE R.R.
138 KV
345 KV
A. P. CO.
1004
1549
90
SCOTT COUNTY
VIRGINIA
SCALE OF MILES
0 1 2 3 4 5

1:24000
ELEVATION.....1400 FT (427 M)
UTM NORTHING...4073370 EASTING...357200 ZONE...+17
LATITUDE.....36-47-50N LONGITUDE.....082-36-02W
POSITION FROM NEAREST LOCALITY.....3.25 KM (2.0 MI) NW OF FORT BLACKMORE; 0.35 KM (0.2 MI) WEST OF LANO.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. PROPERTY IS WITHIN PURCHASE BOUNDARY OF JEFFERSON NATIONAL FOREST. ABOUT 225 M (800 FT) WEST OF STATE ROAD 728 0.2 KM (0.1 M) NW OF JUNCTION WITH STATE ROAD 619 IN LANO.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
NON-PRODUCER MAIN.....ZN
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....WW I
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....BRICKEY
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY PROSPECTED APPARENTLY DURING WW I BY MEANS OF EXCAVATION AND THE DRILLING OF A 44.2M 45 DEG HOLE (VERTICAL DEPTH = 31.3 M).
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL (?)
STRIKE.....N 63 DEG. E (?)
DIP.....70 DEG. NW (?)
DEPOSIT DESCRIPTION COMMENTS.....DRILL HOLE DID NOT INTERSECT MINERALIZATION BELOW PROSPECT PIT.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....SURFACE PIT ABOUT 7.6 M (25 FT) DEEP WAS PRESENT IN 1916.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOSTONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, CLINCHPORT FAULT
FORMATION AGE.....ECAMB
FORMATION NAME.....ROME FORMATION
GEOLOGY COMMENTS.....TO THE WEST SHALE IS ADJACENT TO THE DOLOSTONE.
GENERAL COMMENTS.....THE ONLY REFERENCE TO THIS PROSPECT IS A REPORT IN THE FILES OF THE VIRGINIA DIVISION OF MINERAL RESOURCES.
NON-USGS WORK.....DIREXPL PROSPECTED BY TRENCHING AND DRILLING
REFERENCE....BUTTS, CHARLES, 1933, GEOLOGIC MAP OF THE APPALACHIAN VALLEY IN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY, 1 SHEET, SCALE: 1: 250,000.

3. Lane Prospect

MRDS-REV RECORD NUMBER.....1092
MRDS RECORD NUMBER.....K001599
RECORD TYPE.....X1M
REPORT DATE.....73 09
INFORMATION SOURCE.....12
FILE LINK ID.....TVA , VDMR
REPORTER.....FAGAN, JAMES M.
UPDATED.....80 06
UPDATER.....MEINTZER, ROBT. E. (SWEET, P. C.)
SITE NAME.....LANE PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....SCOTT
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....06 CLINCH RIVER
LAND STATUS.....01
QUADRANGLE NAME...CLINCHPORT, VA. QUAD SCALE 1:24000
ELEVATION.....1340 FT (409 M)
UTM NORTHING...4058490 EASTING...348710 ZONE...+17
LATITUDE.....36-39-43N LONGITUDE.....082-41-34W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1 MILE WEST OF BELLAMY; 3 MILES EAST-SOUTHEAST OF CLINCHPORT
LOCATION COMMENTS.....75 M (250 FT) NORTH OF STATE ROAD 627, 0.8 KM (0. 5 MI) BY ROAD SE OF JUNCTION WITH STATE ROAD 644.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE, SMITHSONITE, HEMIMORPHITE
COMMODITY INFO COMMENTS.....MINOR ORE MINERALS ARE OF LITTLE IMPORTANCE. NO GALENA WAS NOTED.
OCCUR.....ZN
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....WORLD WAR 2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....J.S. BROWN (KINGSPORT, TENN.)
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY WAS EXAMINED BY THE U.S.G.S. DURING 1942/43 AS REQUESTED BY THE WAR PRODUCTION BOARD. BROWN PROSPECTED THE DEPOSIT BY BLASTING IN 1943.
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT
MAXIMUM LENGTH.....91.5 UNITS...M
MAXIMUM WIDTH.....200 UNITS...FT
MAXIMUM THICKNESS.....1.2 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 75 DEG.E
DIP.....55 DEG SE
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....PROPERTY HAS BEEN PROSPECTED BY BLASTING.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....ROME FM.
PERTINENT MINERALS (NOT ORE).....DOLOMITE, BARITE, CALCITE, PYRITE
ORE CONTROL/LOCUS.....UPPER DOLOSTONE BED
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....E-W TREND, CLINCHPORT FAULT, COPPER CREEK FAULT
SIGNIFICANT LOCAL STRUCTURES.....BELLAMY FAULT, TEAR FAULTING
SIGNIFICANT ALTERATION.....POROUS, GOSSANLIKE MATERIAL OF LIMONITE AND SILICIFIED DOLOMITE FILLED FRACTURES
FORMATION AGE.....ECAMB
FORMATION NAME.....ROME FORMATION
GEOLOGY COMMENTS.....THICKNESS OF MASSIVE GRAY DOLOSTONE MEMBER IS 7.6 M. THIS MEMBER HAS SHALES AND SILTSTONES ABOVE AND BELOW.
WORK DONE BY USGS.....1943 GEOLMAP RODGERS AND OTHERS, MAP
WORK DONE BY USGS.....1968 COMPILE WEDOW, REPORT
NON-USGS WORK.....1943 DIREXPL J.S. BROWN: PROSPECTED PROPERTY.
NON-USGS WORK.....1962 GEOLMAP VA. DIV. MIN. RES.: ISSUED REP. INV. 5.
REFERENCE....RODGERS, JOHN, AND KENT, D.F., 1943, UNPUBLISHED REPORT, U.S. GEOLOGICAL SURVEY.
REFERENCE....BEHRE, C.H., JR., AND RODGERS, JOHN, 1943, UNPUBLISHED REPORT, U.S. GEOLOGICAL SURVEY.
REFERENCE....BRENT, W.B., 1963, GEOLOGY OF THE CLINCHPORT QUADRANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 5, 47 P.

RESERVES AND POTENTIAL RESOURCES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	2.29700	MET TONS	1943	2% ZN
ZN	EST	0.04600	MET TONS	1943	

SOURCE OF RESERVES AND RESOURCES INFORMATION.....BEHRE AND RODGERS (1943), RODGERS AND KENT (1943).
RESERVES AND RESOURCES COMMENTS.....THOUGH ADEQUATE PROSPECTING HAS NOT BEEN CONDUCTED, RODGERS AND KENT (1943) DO NOT FEEL THE PROSPECT IS ENCOURAGING.

RESERVES

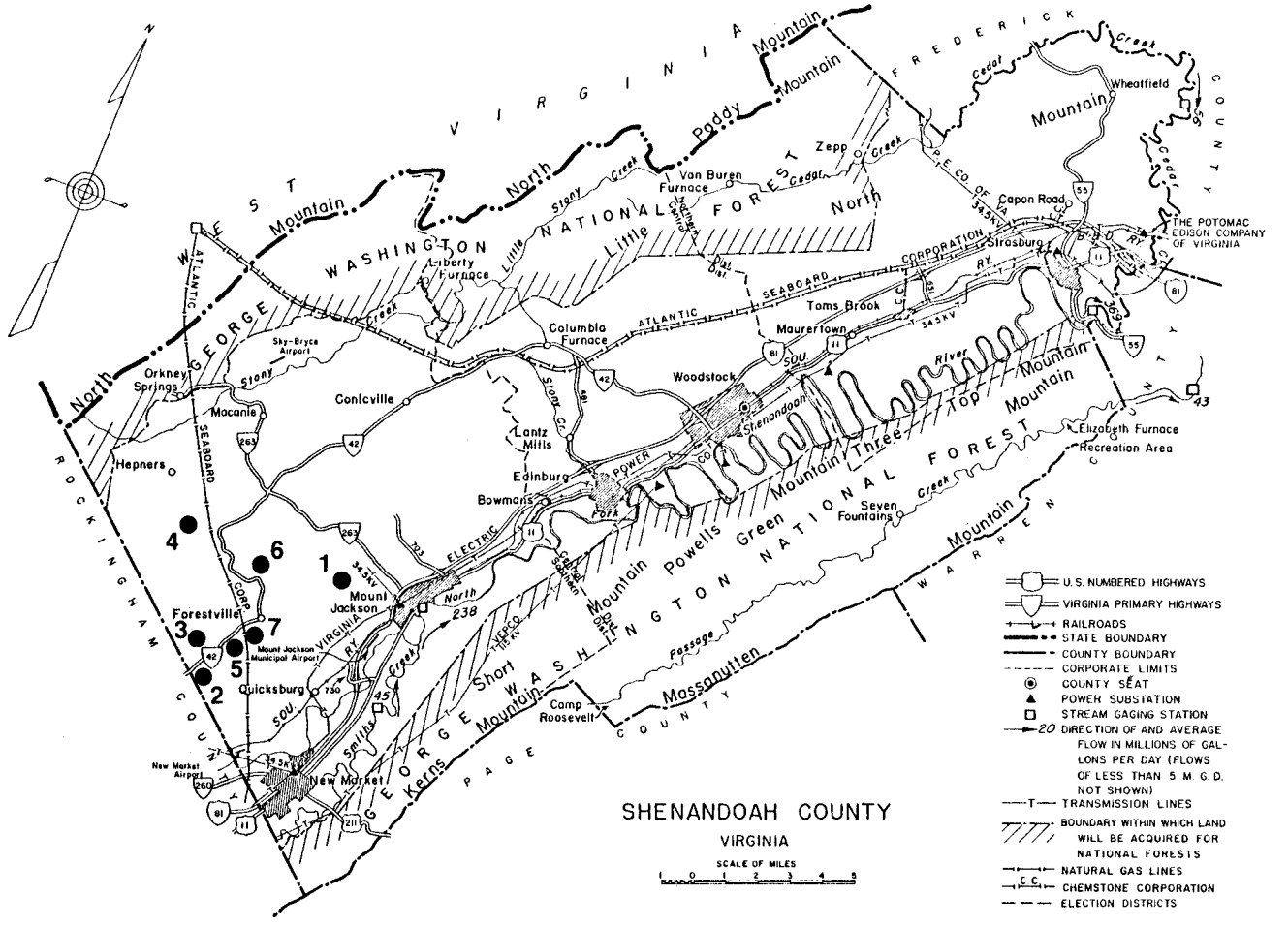
ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE	EST	2.29700	MET TONS	1943	2% ZN
ZN	EST	0.04600	MET TONS	1943	

SOURCE OF RESERVES INFORMATION.....BEHRE AND RODGERS (1943), RODGERS AND KENT (1943).
RESERVES COMMENTS.....THESE FIGURES ARE CONSIDERED TO REPRESENT THE MINIMUM RESERVES.

SHENANDOAH COUNTY

1. Bowman Prospect

MRDS-REV RECORD NUMBER.....1155
MRDS RECORD NUMBER.....W031334
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....12
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....BOWMAN PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/RINKERTON
COUNTRY.....US STATE.....VA COUNTY.....SHENANDOAH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... NEW MARKET, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....980 FT (299 M)
UTM NORTHING...4291240 EASTING...701780 ZONE...+17
LATITUDE.....38-44-55N LONGITUDE.....078-40-40W
POSITION FROM NEAREST LOCALITY.....3.1 (1.9 MI) WEST OF MT. JACKSON.
LOCATION COMMENTS.....800 M (2600 FT) SW OF STATE ROAD 764, 0.2 KM (0.1 MI) BY ROAD SE OF JUNCTION WITH STATE ROAD 614.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, PYRITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1950(?)
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....BOWMAN
OPERATOR.....NEW JERSEY ZINC CO.
DEPOSIT TYPE.....REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 62 DEG E
DIP.....36 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....BRECCIA ZONE. NO PIT FOUND IN 1987; MINOR SPHALERITE SEEN IN FLOAT.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....SURFACE EXPOSURE CONSISTS OF A FEW BLOCKS AROUND A SMALL PIT (HERBERT AND YOUNG, 1956). PIT NOT EVIDENT IN 1968 (SCHERFFIUS, 1969).
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....TECTONIC (CHATTER) DOLOSTONE BRECCIA (MAY BE FAULTED CHATTER BRECCIA)
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE
ORE CONTROL/LOCUS.....BRECCIA POD
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, LITTLE NORTH MOUNTAIN FAULT, ANTICLINAL CROSS-WARP (NW-SE TREND)


SHENANDOAH COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M. G. D. NOT SHOWN)
TRANSMISSION LINES
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
NATURAL GAS LINES
CHEMSTONE CORPORATION
ELECTION DISTRICTS
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
WASHINGTON NATIONAL FOREST
GEORGE WASHINGTON NATIONAL FOREST
Mount Jackson
Forestville
Quicksburg
New Market
Orkney Springs
Hepners
Macanie
Conicville
Columbia Furnace
Woodstock
Maurertown
Toms Brook
Strasburg
Edinburg
Lantz Mills
Bowmans
Seven Fountains
Camp Roosevelt
Elizabeth Furnace Recreation Area
Wheatfield
Capon Road
Liberty Furnace
Van Buren Furnace
Zepp
Sky-Byrce Airport
Mount Jackson Municipal Airport
New Market Airport
THE POTOMAC EDISON COMPANY OF VIRGINIA
ROCKINGHAM COUNTY
PAGE COUNTY
WARREN COUNTY
FREDERICK COUNTY
VIRGINIA
West Virginia
North Mountain
Paddy Mountain
Cedar Mountain
Short Mountain
Kerns Mountain
Massanutten Mountain
Three Top Mountain
Powells Green Mountain
Passage Creek
Stony Creek
Little North Fork
Cedar Creek
Smiths Creek
North Fork
Shenandoah River
Seaboard Atlantic Coast Line Ry.
Virginian Ry.
Southern Ry.
Norfolk & Western Ry.
Chesapeake & Ohio Ry.
Hercules Powder Co.
Chemstone Corporation
Slusser Co.
Cedar Springs
Columbia Furnace
Edinburg Power Co.
Shenandoah Power Co.
Potomac Edison Co. of Va.
34.5 KV
69 KV
115 KV
238
263
42
11
81
55
211
260
45
730

SIGNIFICANT LOCAL STRUCTURES.....RINKERTON ANTICLINE, SAUMSVILLE FAULT, LINVILLE CREEK SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT....PROBABLE HYDROTHER MAL (TELETHERMAL) EMPLACEMENT POST-FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....SPHALERITE SEEN IN FLOAT PIECES AS A REPLACEMENT OF DOLOMITE RHOMBS IN CARBONACEOUS JASPER MASSES. RINKERTON ANTICLINE (YOUNG AND RADER, 1974) REPRESENTS FLEXURES IN HANGING WALL OF SAUMSVILLE FAULT, WHICH TERMINATES TO SOUTHEAST IN LINVILLE CREEK SYNCLINE (BRENT, 1960).
NON-USGS WORK.....DIREXPL NEW JERSEY ZINC CO: CONDUCTED EXPLORATORY DRILLING DURING EARLY 1950'S.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.
REFERENCE....HERBERT, P. JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZA TION OF THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S.THESIS, CORNELL UNIVERSITY.
REFERENCE....YOUNG, R.S. AND RADER, E.K., 1974, GEOLOGY OF THE WOODSTOCK, WOLF GAP, CONICVILLE, AND EDINBURG QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, REPORT OF INVESTIGATIONS 35, 69 P.

2. Bushong Property Prospect

MRDS-REV RECORD NUMBER.....1110
MRDS RECORD NUMBER.....W031335
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....2
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 12
UPDATER.....SWEET, PALMER C.
SITE NAME.....BUSHONG PROPERTY PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....SHENANDOAH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... NEW MARKET, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1350 FT (412 M)
UTM NORTHING...4284090 EASTING...696880 ZONE...+17
LATITUDE.....38-41-07N LONGITUDE.....078-44-11W
POSITION FROM NEAREST LOCALITY.....3.6 KM (2.25 MI) SOUTHWEST OF FORESTVILLE
LOCATION COMMENTS.....0.8 KM (0.5 MI) EAST ON STATE ROAD 728 FROM ITS INTERSECTION WITH STATE ROAD 42, 130 M (426 FT) NORTH OF ROAD, NEAR THE CREST OF TIMBER RIDGE.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....BUSHONG
EXPLORATION AND DEVELOPMENT COMMENTS.....TRENCHING AND DRILLING HAS BEEN DONE BY AN UNKNOWN COMPANY.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL
STRIKE.....N70E
DEPOSIT DESCRIPTION COMMENTS.....SPHALERITE OCCURS WITHIN CRACKLE BRECCIA. THE APPROXIMATE LOCATION OF THE PROSPECT WAS COVERED BY A NEWLY CONSTRUCTED BRICK HOUSE IN 1987.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....TRENCHING AND DRILLING TOOK PLACE.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....DOLOMITE
PERTINENT MINERALS (NOT ORE).....DOLOMITE
ORE CONTROL/LOCUS.....VEINS IN DOLOMITE CRACKLE BRECCIA
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GENERAL COMMENTS.....NOT MUCH INFORMATION AVAILABLE ON THIS PROSPECT.
NON-USGS WORK.....DIREXPL ? - DUG TRENCHES
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZA TION OF THE SHENADOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

3. Martin Mine

MRDS-REV RECORD NUMBER.....1102
MRDS RECORD NUMBER.....W031336
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....1 3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....MARTIN MINE
SYNONYM NAME.....WINE MINE, GORDON PROSPECT, GORDON MINE
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/TIMBERVILLE
COUNTRY.....US STATE.....VA COUNTY.....SHENANDOAH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... TIMBERVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....360 M
UTM NORTHING...4286100 EASTING...695265 ZONE...+17
LATITUDE.....38-42-15N LONGITUDE.....078-45-14W
POSITION FROM NEAREST LOCALITY.....0.9 KM (0.6 MI) SSE OF MOORES STORE.
LOCATION COMMENTS.....75 M (250 FT) SE OF FARM ROAD, 0.2 KM (0.1 MI) BY ROAD SW OF JUNCTION WITH STATE ROAD 728, 0.8 KM (0.5 MI) BY ROAD SE OF JUNCTION WITH STATE ROAD 614 IN MOORES STORE.
COMMODITIES PRESENT.....PB ZN PYR
ORE MATERIALS.....GALENA, SPHALERITE, SMITHSONITE, PYRITE
COMMODITY INFO COMMENTS.....GALENA IS THE CHIEF ORE MINERAL, WITH MINOR SPHALERITE AND PYRITE.
MAJOR.....PB
OCCUR.....ZN PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE-1860
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1861(?)
OWNER (PRESENT/LAST).....GORDON
OPERATOR.....AMERICAN ZINC CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....GALENA POSSIBLY EXTRACTED DURING CIVIL WAR. MINING AGREEMENT RECORDED IN 1893. IN 1929 AND 1930 HARFORD TALC & QUARTZ CO. OF BEL AIR, MD. AND LEVERING BROS. OF BALTIMORE CLEANED OUT TWO EXISTING WORKINGS. IN 1950'S, NEW JERSEY ZINC CO. AND AMERICAN ZINC CO. CONDUCTED EXPLORATORY DRILLING.
DEPOSIT TYPE.....STRATA-BOUND, REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 50 DEG E
DIP.....28 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....BRECCIA DESCRIBED BY ODER (1955) AS CITED IN HERBERT AND YOUNG (1956) AS A SMALL PITCHING PIPE. IRREGULAR MASSES IN VEIN DOLOMITE AND AS THIN FRACTURE FILLINGS FOR GALENA AND IN DOLOMITE CEMENT AND AS REPLACEMENT OF OUTER SURFACES OF DOLOSTONE BLOCKS FOR SPHALERITE.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....24 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....TWO SHALLOW SHAFTS A SHORT DRIFT AND A CROSSCUT WERE DRIVEN (1890'S (?)). AN UNDERGROUND STREAM ENCOUNTERED IN DRIFTING FLOODED MINE, CAUSING CESSATION OF OPERATIONS. IN 1981, TWO SMALL MOUNDS OF BRECCIA WERE SEEN, PROBABLY THE REMAINS OF THE TWO SHAFTS.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....(RECRYSTALLINE) DOLOSTONE, TECTONIC (CHATTER) DOLOSTONE BRECCIA.
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE, QUARTZ
ORE CONTROL/LOCUS.....BRECCIA POD, SHEAR ZONES
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, NORTH MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE. DOLOSTONE STRIKES N50 DEG. E AND DIPS 28 DEG. SE. TIMBERVILLE SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHER MAL (TELETHERMAL) EMPLACEMENT POST FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....AEROMAGNETIC AND GRAVITY STUDIES OF REGION SUGGEST EXISTENCE OF MAJOR ANTICLINAL CROSS-FOLD IN NW-SE DIRECTION. FOR MINERAL PARAGENESIS SEE HERBERT AND YOUNG (1956).
NON-USGS WORK.....DIREXPL POSSIBLY MINED FOR PB DURING CIVIL WAR.
NON-USGS WORK.....1929 DIREXPL HARFORD TALC & QUARTZ CO./ LEVERING BROS.: CLEANED OUT WORKINGS.
NON-USGS WORK.....1950 DIREXPL NEW JERSEY ZINC CO./AMERICAN ZINC CO.: EXPLORATORY DRILLING.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
REFERENCE....STEPHENSON, R.C., 1949, GEOLOGIC REPORT ON THE SHENANDOAH ZINC-LEAD PROSPECTS NEAR TIMBERVILLE, ROCKINGHAM CO., VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, OPEN-FILE REPORT, 41 P.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZA TION IN THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
PB	SML			1890'S	

SOURCE OF PRODUCTION INFORMATION.....HERBERT & YOUNG (1956)

4. Runion Prospect

MRDS-REV RECORD NUMBER.....1731
MRDS RECORD NUMBER.....W031337
RECORD TYPE.....X1M
REPORT DATE.....88 01
INFORMATION SOURCE.....135

REPORTER.....GOOD, RICHARD S. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....RUNION PROSPECT
MINING DISTRICT/AREA.....TIMBERVILLE
COUNTRY.....US STATE.....VA COUNTY.....SHENANDOAH
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02070006
LAND STATUS.....01
QUADRANGLE NAME..... ORISNEY SPRINGS (1972) QUADRANGLE SCALE 1:24000
ELEVATION.....1400 FT
UTM NORTHING...4291120 EASTING...491100 ZONE...+17
LATITUDE.....38-45-02N LONGITUDE.....078-48-04W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....0.8 MILE SSE OF HEPNERS, 2.2 MI WNW OF GETZ CORNER
LOCATION COMMENTS.....1.5 MILES SOUTH ALONG ROUTE 726 FROM HEPNERS (ORKNEY SPRINGS QUADRANGLE) TO UNNAMED STREAM "PEAVY RUN", (TIMBERVILLE QUADRANGLE) CROSSING R.726, GO NORTH ALONG STREAM 0.3 MILE TO FORK IN STREAM WITH EARTH DAM AND SMALL LAKE ON NW. TAKE NE BRANCH FOR 100 FEET TO SMALL PILE OF GRAY SANDSTONE ON NORTH BANK OF NE BRANCH. PROSPECT LARGELY COVERED, NO PIT APPARENT NOW.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPALERITE, GALENA, CHALCOPYRITE
COMMODITY SUBTYPES.....CU, U (?)
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....A.V. HEYL, JR
YEAR OF DISCOVERY.....1960
EXPLORATION AND DEVELOPMENT COMMENTS.....MINERALIZATION MAY HAVE BEEN FIRST NOTICED BY STERLING RUNION IN 1948 (RICHARD RUNION, PERSONAL COMMUNICATION, 1988)
DEPOSIT FORM.....VEINLETS, IRREGULAR
STRIKE.....NE
DIP.....NW
DEPOSIT DESCRIPTION COMMENTS.....VEINLETS OF ANKERITE WITH SPHALERITE, GALENA, PYRITE AND POSSIBLY CHALCOPYRITE (HEYL, 1960 WRITTEN COMMUNICATION, IN LUTTRELL (1966))
DESCRIPTION OF WORKINGS COMMENTS.....SMALL, SHALLOW PROSPECT PITS ARE REPORTED TO HAVE BEEN MADE IN 1950'S. ONE PIT BY SIDE OF STREAM NOW COVERED BY LOOSE ROCK.
HOST ROCK AGE..... MISSISSIPPIAN
HOST ROCK TYPE.....GRAY SANDSTONE WITH CARBONACEOUS TRASH AND HEMATITE
IGNEOUS ROCK TYPE.....NONE REPORTED IN SHENANDOAH COUNTY BUT EOCENE BASALT DIKES CUT DEVONIAN ROCKS IN WESTERN VALLEY AND RIDGE
AGE OF MINERALIZATION..... MISSISSIPPIAN, POST-MISSISSIPPIAN (?)
PERTINENT MINERALS (NOT ORE).....ANKERITE, HEMATITE, PYRITE
ORE CONTROL/LOCUS.....ROLL-TYPE FRONT WITH CARBON REDUCTION (?)
TECTONIC SETTING.....MIOGEOSYLINE; DELTA
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, SUPIN LICK SYNCLINE, LITTLENORTH MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....NE-SW TREND, SUPIN LICK SYNCLINE, LITTLE NORTH MOUNTAIN FAULT
PROCESS OF CONCENTRATION/ENRICHMENT.....REDUCTION BY CARBON (?)
FORMATION AGE.....- MISSISSIPPIAN
FORMATION AGE.....DEVONIAN
FORMATION NAME.....POCONO
FORMATION NAME.....HAMPSHIRE FORMATION
GEOLOGY COMMENTS.....OCCURRENCE, NOW CONCEALED, LIES JUST ABOVE DEVONIAN HAMPSHIRE RED SHALES WHICH DIP GENTLY TO NW. GRAY TO GREENISH GRAY MICACEOUS SANDSTONE CONTAINS BROKEN COAL FRAGMENTS AND HAS SPOTTY HEMATITE STAINS SUGGESTIVE OF ROLL-FRONT TYPE OF DEPOSITION. NO SULFIDE MINERALIZATION NOTED FROM FIELD CHECK.
GENERAL COMMENTS.....LOCATION IS ON PRIVATE PROPERTY WITHIN PURCHASE BOUNDARY OF GEORGE WASHINGTON NATIONAL FOREST.
REFERENCE....LUTTRELL, G.W., 1966, BASE AND PRECIOUS METAL AND RELATED ORE DEPOSITS OF VIRGINIA, VIRGINIA DIVISION OF MINERAL RESOURCES REPORT NUMBER 7, 167 P.
REFERENCE....HEYL, A.V., 1960, WRITTEN COMMUNICATION TO G.W. LUTTRELL.
REFERENCE....RUNION, RICHARD, (1988), PERSONAL COMMUNICATION

5. Timberville Mine

MRDS-REV RECORD NUMBER.....1103
MRDS RECORD NUMBER.....W017362
RECORD TYPE.....X1M
REPORT DATE.....76
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....WEEKS, ROBERT
UPDATED.....79 08
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D. C.)
SITE NAME.....TIMBERVILLE MINE
SYNONYM NAME.....WEATHERHOLTZ PROPERTY MINE
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/TIMBERVILLE
COUNTRY.....US STATE.....VA COUNTY.....SHENANDOAH
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... NEW MARKET QUADRANGLE SCALE 1:24000
ELEVATION.....1290 FT (393 M)
UTM NORTHING...4284410 EASTING...696860 ZONE...+17
LATITUDE.....38-41-18N LONGITUDE.....078-44-12W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....7.2 KM (4.5 MI) NW OF NEW MARKET.
LOCATION COMMENTS.....0.3 KM (0.2 MI) NW OF RIGHT ANGLE BEND IN STATE ROAD 728, 1.3 KM (0.8 MI) BY ROAD EAST OF JUNCTION WITH STATE HWY. 42 SOUTH OF FORESTVILLE. WORKINGS EXTEND TO UTM N42 84490., E696880.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE, SMITHSONITE
GENERAL ANALYTICAL DATA.....ASSAY DATA PER USBM AS CITED IN HERBERT AND YOUNG (1956): 8.90-28.50% ZN, ORE EXTRACTED AVERAGED 4.89% & 7.28% ZN IN 1949 & 1950,RESPECTIVELY. (HERBERT & YOUNG, 1956)
MAJOR.....ZN
PRODUCTION.....S
STATUS AND ACTIVITY.....4
DISCOVERER.....THOMAS M. WISE
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1949
PROPERTY IS ACTIVE.....I
OWNER (PRESENT/LAST).....TIMBERVILLE MINING CO.
OPERATOR.....TIMBERVILLE MINING CO.
ECONOMIC COMMENTS.....ORE PROCESSED AT MASCOT, TENN.
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY WAS PROSPECTED BY THOMAS M. WISE IN THE EARLY 1900'S. TIMBERVILLE MINING DEVELOPED AND OPERATED MINE FROM 1948 TO 1950, SHIPPING ORE TO AMERICAN ZINC CO. OF TENNESEE FOR REFINING ORE. THE U.S. BUREAU OF MINES DRILLED 3 SHALLOW HOLES IN 1949. ST JOE AMERICAN CORP. DRILLED 4 HOLES IN AUG-SEPT. 1982. THE CORE IS STORED AT THE DIVISION OF MINERAL RESOURCES IN CHARLOTTESVILLE ,VA
DEPOSIT TYPE.....REPLACEMENT, STRATA-BOUND, VEIN/SHEAR ZONE
DEPTH TO BOTTOM.....24 UNITS...M
MAXIMUM LENGTH.....2.4 UNITS...KM
MAXIMUM WIDTH.....1.2 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N.40 DEG.E.
DIP.....70-80 DEG. NW.
DEPOSIT DESCRIPTION COMMENTS.....HORIZON CAN BE TRACED THROUGH SCATTERED OUTCROPS FOR ABOUT 2.4 KM NE OF SHAFT. THIS EXTENSION INCLUDES ZIRKLE PROPERTY PROSPECT. DEPTH TO BOTTOM IS AT LEAST 24 M. VEIN IN A FAULT THAT DIPS AT A LOW ANGLE TO THE BEDDING.
DESCRIPTION OF WORKINGS.....S
DEPTH BELOW SURFACE.....24 UNITS...M
LENGTH OF WORKINGS.....30 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....THREE SHAFTS SUNK.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....(RECRYSTALLINE) DOLOSTONE, TECTONIC (CHATTER) BRECCIA
AGE OF MINERALIZATION.....LPAL(?)
PERTINENT MINERALS (NOT ORE).....PYRITE, GREENOCKITE, DOLOMITE, BARITE, UNKNOWN MINERAL, MILKY QUARTZ, GYPSUM
ORE CONTROL/LOCUS.....BRECCIA POD, SHEAR ZONE
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, LITTLE NORTH MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE, MAYLAND ANTICLINE, DOLOSTONE STRIKES N.40 DEG.E. AND DIPS 70-80 DEG. NW.
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHER MAL (TELETHERMAL) EMPLACEMENT POST-FAULTING.
FORMATION AGE.....EORD BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....AEROMAGNETIC AND GRAVITY STUDIES OF REGION SUGGEST EXISTENCE OF MAJOR ANTICLINAL CROSSPOLD IN NW-SE DIRECTION. FOR MINERAL PARAGENE SIS, SEE HERBERT AND YOUNG (1956). NO GALENA.
NON-USGS WORK.....DIREXPL THOMAS M. WISE: PROSPECTED PROPERTY IN EARLY 1900'S.
NON-USGS WORK.....1948 DIREXPL TIMBERVILLE MINING CO.: DEVELOPED AND OPERATED MINE.
NON-USGS WORK.....1949 DIREXPL U.S.B.M.: SUNK 3 SHALLOW EXPLORATORY HOLES.
REPORTS AVAILABLE.....U.S. BUREAU OF MINES OPEN FILE REPORT 91.1618.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY BULLETIN 70, 58 P.
REFERENCE....LAURANCE, R.A., 1968, ORE DEPOSITS OF THE SOUTHERN APPALACHIANS, IN RIDGE, J.D., ED., ORE DEPOSITS OF THE UNITED STATES, 1933-1967, V. 1: NEW YORK, AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, P. 155-168.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....STEPHENSEN, R.C., 1949, GEOLOGIC REPORT ON THE SHENANDOAH ZINC-LEAD PROSPECTS NEAR TIMBERVILLE, ROCKINGHAM CO., VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, OPEN-FILE REPORT, 41 P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE ZN	ACC	0.09160	MET TONS	1949	4.89% ZN
ORE ZN	ACC	0.04350	MET TONS	1950	7.28% ZN
ZN	ACC	0.00448	MET TONS	1949	
ZN	ACC	0.00317	MET TONS	1950	
CON	ACC	0.00611	MET TONS	1949	60.59% ZN
CON	ACC	0.00504	MET TONS	1950	60.10% ZN

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE ZN	ACC	0.13500	MET TONS	1949-1950	5.66% ZN
CON ZN	ACC	0.01120	MET TONS	1949-1950	60.3% ZN
ZN	ACC	0.00633	MET TONS	1949-1950	

SOURCE OF PRODUCTION INFORMATION.....HERBERT AND YOUNG (1956)

6. Tusing Prospect

MRDS-REV RECORD NUMBER.....1130
MRDS RECORD NUMBER.....W031338
RECORD TYPE.....X1M
REPORT DATE.....79 09
INFORMATION SOURCE.....12
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....TUSING PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/MT. CLIFTON
COUNTRY.....US STATE.....VA COUNTY.....SHENANDOAH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... NEW MARKET, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1160 FT (354 M)
UTM NORTHING...4289760 EASTING...697290 ZONE...+17
LATITUDE.....38-44-11N LONGITUDE.....078-43-49W
POSITION FROM NEAREST LOCALITY.....2.5 KM (1.5 MI) NNW OF FORESTVILLE.
LOCATION COMMENTS.....ON EAST SIDE OF FARM ROAD, 0.3 KM (0.2 MI) BY ROAD SW OF JUNCTION WITH STATE ROAD 728, 0.8 KM (0.5 MI) BY ROAD NE OF JUNCTION WITH VA. HWY. 42.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, PYRITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....TUSING
EXPLORATION AND DEVELOPMENT COMMENTS.....EXTENT OF PROSPECTING UNKNOWN.
DEPOSIT TYPE.....STRATA-BOUND, REPLACEMENT, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....POOR OUTCROPS. SPHALERITE OCCURS IN BED OF RECRYSTALLINE DOLOSTONE.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....(RECRYSTALLINE) DOLOSTONE
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....FLUORITE, DOLOMITE
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, NORTH MOUNTAIN FAULT, ANTICLINAL CROSS-WARP (NW-SE TREND)
SIGNIFICANT LOCAL STRUCTURES.....SAUMSVILLE FAULT
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHERMAL (TELETHERMAL) EMPLACEMENT POST-FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....SPHALERITE OCCURS AS DISSEMINATIONS IN BED OF RECRYSTALLINE DOLOSTONE.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
REFERENCE....SCHERFFIUS, W.E., 1969, ZINC-LEAD-FLUORITE MINERALIZATION OF THE SHENANDOAH VALLEY, NORTH-CENTRAL VIRGINIA: UNPUBLISHED M.S. THESIS, CORNELL UNIVERSITY.
REFERENCE....YOUNG, R.S. AND RADER, E.K., 1974, GEOLOGY OF THE WOODSTOCK, WOLF GAP, CONICVILLE, AND EDINBURG QUADRANGLES, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, REPORT OF INVESTIGATIONS 35, 69 P.

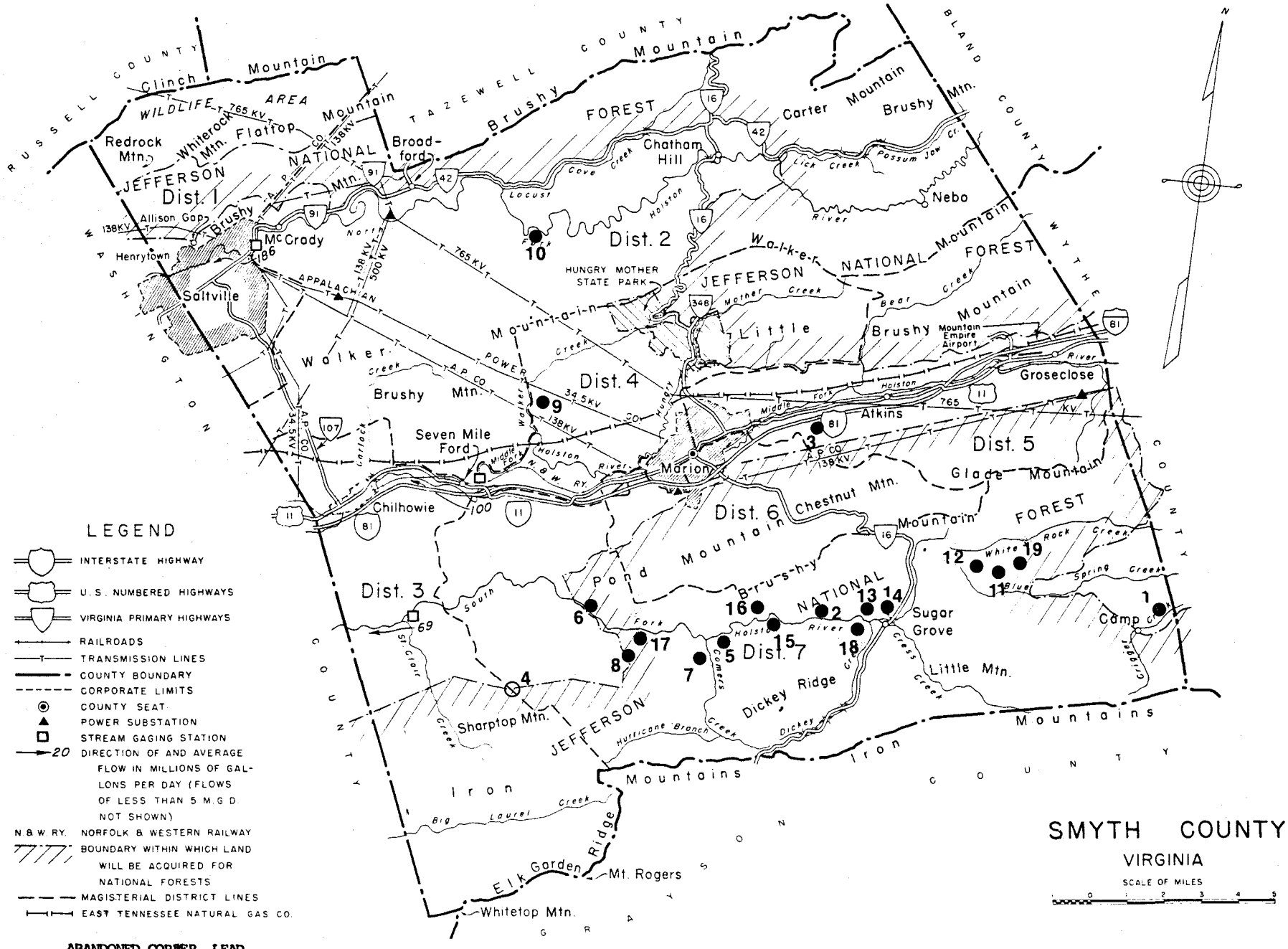
7. Zirkle Prospect

MRDS-REV RECORD NUMBER.....1101
MRDS RECORD NUMBER.....W031339
RECORD TYPE.....X1M
REPORT DATE.....79 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (LE VAN, D. C.)
SITE NAME.....ZIRKLE PROSPECT
MINING DISTRICT/AREA.....SHENANDOAH VALLEY/TIMBERVILLE
COUNTRY.....US STATE.....VA COUNTY.....SHENANDOAH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... NEW MARKET, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1290 FT (393 M)
UTM NORTHING...4285740 EASTING...697600 ZONE...+17
LATITUDE.....38-42-00N LONGITUDE.....078-43-40W
POSITION FROM NEAREST LOCALITY.....7.6 KM (4.7 MI) NW OF NEW MARKET.
LOCATION COMMENTS.....0.4 KM (0.25 MI) ESE FROM END OF PRIVATE ROAD, 0.5 KM (0.3 MI) BY ROAD EAST OF JUNCTION WITH STATE HWY 42, 1.9 KM (1.2 MI) BY ROAD SE OF JUNCTION WITH STATE ROADS 614 & 767 IN FORESTVILLE. ADDITIONAL WORKINGS AT UTM N 4285920., E 697665.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, SMITHSONITE, PYRITE
COMMODITY INFO COMMENTS.....ORE MINERALOGY NEARLY IDENTICAL TO THAT AT TIMBERVILLE MINE.
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1950(?)
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....CHARLES ZIRKLE
EXPLORATION AND DEVELOPMENT COMMENTS.....THE ZIRKLE PROPERTY WAS PROSPECTED BY BLAST HOLES DURING EARLY 1950'S OVER A LENGTH OF ABOUT 500 M.
DEPOSIT TYPE.....STRATA-BOUND, REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR, LINEAR
MAXIMUM LENGTH.....122 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DIP.....60-65 DEG NW
DEPOSIT DESCRIPTION COMMENTS.....DEPOSIT IS NORTHERN EXTENSION OF THAT AT THE TIMBERVILLE MINE AND IS NEARLY IDENTICAL TO IT IN MINERALOGY AND TYPE. MINERALIZED RECRYSTALLINE DOLOSTONE SHOWS 270 M AND 550 M TO THE NORTH.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....SEVERAL HOLES BLASTED OPEN IN 1950'S.
HOST ROCK AGE.....EORD
HOST ROCK TYPE.....(RECRYSTALLINE) DOLOSTONE, TECTONIC (CHATTER) BRECCIA
AGE OF MINERALIZATION.....JUR(?)
PERTINENT MINERALS (NOT ORE).....GREENOCKITE, DOLOMITE
ORE CONTROL/LOCUS.....BRECCIA POD, SHEAR ZONE
TECTONIC SETTING.....GEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, LITTLE NORTH MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....LINVILLE CREEK SYNCLINE, MAYLAND ANTICLINE, DOLOSTONE STRIKES NE AND DIPS 60-65 DEG. NW, ONE SMALL FLEXURE (CROSS-FRACTURE).
PROCESS OF CONCENTRATION/ENRICHMENT.....PROBABLE HYDROTHERMAL (TELETHERMAL) EMPLACEMENT POST-FAULTING.
FORMATION AGE.....EORD
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....AEROMAGNETIC AND GRAVITY STUDIES OF REGION SUGGEST EXISTENCE OF MAJOR ANTICLINAL CROSS-FOLD IN NW-SE DIRECTION. FOR MINERAL PARAGENESIS, SEE HERBERT AND YOUNG (1956).
NON-USGS WORK.....DIREXPL PROSPECTED BY SEVERAL BLAST HOLES DURING EARLY '50'S.
REFERENCE....HERBERT, P., JR., AND YOUNG, R.S., 1956, SULFIDE MINERALIZATION IN THE SHENANDOAH VALLEY OF VIRGINIA: VIRGINIA DIVISION OF GEOLOGY, BULLETIN 70, 58 P.
REFERENCE....BRENT, W.B., 1960, GEOLOGY AND MINERAL RESOURCES OF ROCKINGHAM COUNTY: VIRGINIA DIVISION OF MINERAL RESOURCES, BULLETIN 76, 174 P.

SMYTH COUNTY

1. Bennington Prospect

MRDS-REV RECORD NUMBER.....1178
MRDS RECORD NUMBER.....W031340
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 D-3
REPORT DATE.....80 06
INFORMATION SOURCE.....135
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 03
UPDATER.....LOVETT, JAMES A.
SITE NAME.....BENNINGTON PROSPECT
MINING DISTRICT/AREA.....CEDAR SPRINGS LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....05050001 CRIPPLE CREEK/NEW RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... CEDAR SPRINGS, VA. (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....2510 FT
UTM NORTHING...4073510 EASTING...473890 ZONE...+17
LATITUDE.....36-49- N LONGITUDE.....081-18- W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....12.4 MILES S 80 E FROM MARION, 1.2 MILE S 5 DEG W FROM CEDAR SPRINGS (DOT SMYTH COUNTY HIGHWAY MAP, 1981).
LOCATION COMMENTS.....CURRIER (1935) STATES THIS PROSPECT IS ON NEWLAND CREEK (NOW BLUE SPRING CREEK), WEST OF DAVIS PROPERTY. PROPERTY OWNERS ASSISTED WITH DIRECTIONS TO THE SMALL PROSPECT. IT IS 4,950 FEET S 38 DEG E FROM THE INTERSECTION OF STATE ROADS 614 AND 675 SOUTHWEST OF CEDAR SPRINGS, 500 FEET N 59 DEG E FROM BENCH MARK BM N1 (2470') EAST OF STATE ROAD 675, ON THE SOUTH FLANK OF A NORTHEAST TRENDING RIDGE. AREA WAS EXTENSIVELY TRAVERSED, NORTH AND SOUTH OF BLUE SPRING CREEK. LUTHER VAUGHT (PERSONAL COMMUNICATION, 1988) STATED ADDITIONAL PROSPECTING WAS DONE SOUTH OF BLUE SPRING CREEK. NO ADDITIONAL WORKINGS OR INDICATIONS OF PROSPECTION WAS FOUND.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
COMMODITY INFO COMMENTS.....IRON OXIDE STAINING ON BROWN WEATHERED SPHALERITE ALONG RIM OF SOME SMALL FRACTURES IN DOLOMITE FOUND ON DUMP.
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....UNKNOWN
YEAR OF DISCOVERY.....EARLY 1900'S
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....BENNINGTON
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DEVELOPMENT OF PROSPECT RECORDED IN LITERATURE, NO HISTORY KNOWN ABOUT BY LOCAL RESIDENTS.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; VEIN (?), REPLACEMENT (?).


SMYTH COUNTY
VIRGINIA
SCALE OF MILES
0 1 2 3 4 5
LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
N.&W.RY. NORFOLK & WESTERN RAILWAY
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
MAGISTERIAL DISTRICT LINES
EAST TENNESSEE NATURAL GAS CO.
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
Dist. 1
Dist. 2
Dist. 3
Dist. 4
Dist. 5
Dist. 6
Dist. 7
JEFFERSON NATIONAL FOREST
WILDLIFE AREA
HUNGRY MOTHER STATE PARK
Clinch Mountain
Brushy Mountain
Walker Mountain
Pond Mountain
Chestnut Mtn.
Glade Mountain
Little Brushy Mountain
Sharptop Mtn.
Dickey Ridge
Little Mtn.
Iron Mountains
Elk Garden Ridge
Mt. Rogers
Whitetop Mtn.
Redrock Mtn.
Whiterock Mtn.
Flattop Mountain
Broadford
Chatham Hill
Carter Mountain
Nebo
Saltville
McCrady
Henrytown
Allison Gap
Seven Mile Ford
Chilhowie
Marion
Atkins
Groseclose
Sugar Grove
Camp Creek
Mountain Empire Airport
RUSSELL COUNTY
TAZEWELL COUNTY
BLAND COUNTY
WYTHE COUNTY
SMYTH COUNTY
GRAYSON COUNTY
765 KV
138 KV
500 KV
34.5 KV
APPALACHIAN POWER CO.
A.P. CO.
N.&W. RY.

DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 70 DEG E
DEPOSIT DESCRIPTION COMMENTS.....MOST LIKELY, MINERALIZATION OCCURRED AS OPEN SPACE FILLING IN FRACTURED DOLOMITE/LIMESTONE. ROCK ON THE DUMP IS IRREGULAR, BEDDED, FRACTURED AND SLIGHTLY BRECCIATED.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....45 UNITS...FT
OVERALL WIDTH.....15 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....NO DESCRIPTION OF THE WORKINGS FOUND IN THE LITERATURE. SMALL PROSPECT ON HILLSIDE IS ABOUT 30 FEET LONG, 10 FEET WIDE, AND 5 FEET DEEP, CUT IN A N 15 DEG W DIRECTION (PERPENDICU LAR TO STRIKE) AND SMALL OUTSLOPE DUMP. NO OTHER WORKING FOUND NORTH OR SOUTH OF BLUE SPRING CREEK. FIELD EXAMINATION CONDUCTED 2/17/88.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE/LIMESTONE
ORE CONTROL/LOCUS.....FRACTURES IN THE DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING VALLEY AND RIDGE
SIGNIFICANT LOCAL STRUCTURES.....THRUST FAULTING OF FOLDED STRATA
PROCESS OF CONCENTRATION/ENRICHMENT.....FRACTURE FILLING
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....DOLOMITE IS LIGHT TO MEDIUM GRAY, FINE GRAINED, MASSIVE TO IRREGULAR BEDDED, FRACTURED WITH THIN VEINS OF CALCITE AND WHIT DOLOMITE (?) WITH IRON OXIDE STAINING. STRIKE IS N 71 DEG E, DIP IS 56 DEG SE.
WORK DONE BY USGS.....1972 GEOLMAP R.B. NEUMAN: MISC. GEOL. INV. MAP I-709-A.
NON-USGS WORK.....1934 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 43.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....RANKIN, D.W., ESPENSHADE, G.H., AND NEUMAN, R.B., 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA, VIRGINIA, AND TENNESSEE: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-A, 1 SHEET, SCALE 1:250,000.

2. Calhoun Prospect

MRDS-REV RECORD NUMBER.....1181
MRDS RECORD NUMBER.....W031341
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 C-4
REPORT DATE.....80 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 03
UPDATER.....LOVETT, JAMES A.
SITE NAME.....CALHOUN PROSPECT
MINING DISTRICT/AREA.....RYE VALLEY LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... ATKINS, VA. (1969) QUADRANGLE SCALE 1:24000
ELEVATION.....2570 FT
UTM NORTHING...4069900 EASTING...459570 ZONE...+17
LATITUDE.....36-46-35N LONGITUDE.....081-27-09W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....5.3 MILES S 40 DEG E FROM MARION, 2.2 MILES N 87 DEG 2 FROM SUGAR GROVE (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....1050 FEET N 16 DEG W FROM THE INTERSEC TION OF STATE ROADS 670 AND 601 AT TEAS, 500 FEET S 49 DEG E FROM THE INTERSECTION OF STATE ROADS 601 AND 719, ABOUT 250 FEET WEST OF THE CREEK AND 40 FEET ABOVE THE CREEK LEVEL.
COMMODITIES PRESENT.....ZN MN QTZ DOL
ORE MATERIALS.....SPHALERITE, SMITHSONITE, PSILOMELANE, MANGANITE, HEMIMORPHITE, QUARTZ, DOLOMITE
COMMODITY INFO COMMENTS.....NO GALENA REPORTED
OCCUR.....QTZ DOL
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....MN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....VIRGINIA LEAD AND ZINC COMPANY
YEAR OF DISCOVERY.....1904
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....W.D. EARNEST
OPERATOR.....VIRGINIA LEAD AND ZINC CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THIS PROPERTY WAS PROSPECTED IN 1904 BY VIRGINIA LEAD & ZINC CO. WHICH SUNK A SHAFT AND DUG TWO PITS. DURING WWI ADDI TIONAL PROSPECTING WAS PERFORMED IN SEARCH FOR MANGANESE.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; VEIN (?), REPLACEMENT (?) IN BRECCIA ZONE, WEATHERING RESIDUAL.
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL (?)
STRIKE.....N 65 DEG. E
DIP.....80 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION OCCURS AS OPEN SPACE FILLING AND RPLACEMENT (?) BETWEEN CRUSHED FRAGMENTS OF DOLOMITE/LIMESTONE, FORMING BRECCIA ORE. ZINC ORE AS IRREGULAR MASSES OF YELLOW, CRYSTALLIZED SPHALERITE SIMILAR TO THAT OCCURING AT CEDAR SPRINGS.
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....A SHAFT WAS SUNK FOR SULFIDE EXPLORATION AND SEVERAL PITS WERE DUG FOR SULFIDE AND MANGANESE EXPLORATION. FIELD DATE COLLECTED 2/88: GEOLOGY IS LIGHT TO DARK GRAY DOLOMITE, BRECCIATED AND STRONGLY FRACTURED, WITH QUARTZ (CHERT), CALCITE, WHITE DOLOMITE AND MINOR LIGHT BROWN SPHALERITE ALONG FRACTURES, STRIKING N 62 DEG E, DIPPING 64 DEG SE.
HOST ROCK AGE.....ECAMB-QUAT
HOST ROCK TYPE.....DOLOSTONE BRECCIA (SHATTER-TYPE), CLAY RESIDUUM
PERTINENT MINERALS (NOT ORE).....MILKY QUARTZ, DOLOMITE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, VALLEY AND RIDGE
SIGNIFICANT LOCAL STRUCTURES.....FAULTING, ANTICLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....MANGANESE: WEATHER ING RESIDUAL.
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION
NON-USGS WORK.....1904 DIREXPL VIRGINIA LEAD & ZINC CO.: PROSPECTED AREA.
NON-USGS WORK.....1917 DIREXPL PROPERTY PROSPECTED FOR MANGANESE.
NON-USGS WORK.....1934 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 43.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA : VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....MILLER, R.L., 1944, GEOLOGY AND MANGANESE DEPOSITS OF THE GLADE MOUNTAIN DISTRICT, VIRGINIA: VIRGINIA GEO LOGICAL SURVEY BULLETIN 61, 150 P.
REFERENCE....STOSE, G.W., MISER, H.D., KATZ, F.J., AND HEWETT, D.F., 1919, MANGANESE DEPOSITS OF THE WEST FOOT OF THE BLUE RIDGE, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 17, 166 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.

3. Henderlite Mine

MRDS-REV RECORD NUMBER.....1158
MRDS RECORD NUMBER.....W031269
RECORD TYPE.....X1B
DEPOSIT NUMBER.....55 C-2
REPORT DATE.....80 10
INFORMATION SOURCE.....135
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....87 09
UPDATER.....LOVETT, JAMES A.
SITE NAME.....HENDERLITE MINE
MINING DISTRICT/AREA.....SMYTH COUNTY BARITE BELT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 HOLSTON RIVER
LAND STATUS.....01 (1986)
QUADRANGLE NAME..... ATKINS, VA. (1969) QUADRANGLE SCALE 1:24000
ELEVATION.....2350 FT (716 M)
UTM NORTHING...4078610 EASTING...458700 ZONE...+17
LATITUDE.....36-51-18N LONGITUDE.....081-27-37W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....3.35 MILES NORTHEAST OF DOWNTOWN MARION.
LOCATION COMMENTS.....65 MILES EAST OF MT. CARMEL CURCH, 2100 FEET S 73 DEG E FROM BENCH MARK G 375 AT THE INTERSEC TION OF STATE ROAD 689 AND US HIGHWAY 11, 1200 FEET EAST OF HUTTON BRANCH. WORKINGS EXTEND OVER A LARGE (1500' STRIKE LENGTH) AREA. UTM COORDINATES AND ELEVATION FROM CENTRAL POINT OF WORKINGS. FIELD EXAMINATION CONDUCTED 5/14/86.
COMMODITIES PRESENT.....BA F CA CU PYR
ORE MATERIALS.....BARITE, FLUORITE, CALCITE, CHALCOPYRITE, MALACHITE, PYRITE
COMMODITY INFO COMMENTS.....THE PROPERTY WAS APPARENTLY WORKED FOR BOTH BARITE AND COPPER.
MAJOR.....BA CU
MINOR.....F CA
POTEN.....PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....G.G. GOODELL?
YEAR OF DISCOVERY.....1875 TO 1885
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1875 TO 1885
YEAR OF LAST PRODUCTION.....1906 (?)
OWNER (PRESENT/LAST).....O. MCNEIL
EXPLORATION AND DEVELOPMENT COMMENTS.....MINING STARTED MOST PROBABLY SOMETIME BETWEEN 1875 AND 1885. WORKINGS CONSISTED OF OPEN CUTS AND AT LEAST ONE SHAFT. BARITE WAS FIRST MINERAL MINED, COPPER ORE WAS A SIDE PRODUCT. BARITE WAS PRIMARILY MINED FROM THE RESIDUAL CLAY. COPPER ORE IS REPORTED TO HAVE BEEN RECOVERED FROM A SHAFT NEAR THE NORTHEASTERN END OF THE HENDERLITE ESTATE. MCNEIL (PERSONAL COM

MUNICATION) STATED THAT AN EXPLORATION COMPANY FROM NORTH CAROLINA (COULD NOT REMEMBER THE COMPANY'S NAME) DRILLED 5 CORE HOLES IN 1979 OR 1980. THE LOCATION OF THE CORE AND RESULTS OF THE DRILLING WAS NOT KNOWN.
DEPOSIT TYPE.....RESIDUAL, VEINS, REPLACEMENT
DEPOSIT FORM.....IRREGULAR
MAXIMUM LENGTH.....1500 UNITS...FT
MAXIMUM WIDTH.....150-200 (?) UNITS...FT
DEPOSIT SIZE.....SMALL
STRIKE.....EAST TO N 70 DEG E
DEPOSIT DESCRIPTION COMMENTS.....BARITE OCCURS AS IRREGULAR FRAGMENTS IN RESIDUAL CLAY AND AS VEINS AND REPLACEMENT MASSES IN BEDROCK. THE BEDROCK CONSISTS OF WELL FRACTURED DOLOMITE, THE FRACTURES ARE FILLED WITH BARITE AND ASSOCIATED MINERALS. THE DOLOMITE OCCURS AS PINNACLES IN MOST OF THE WORKINGS. THE DOLOMITE STRIKES N 80 DEG E AND DIPS 30 DEG SE.
DESCRIPTION OF WORKINGS.....B
OVERALL LENGTH.....1500 UNITS...FT
OVERALL WIDTH.....150 TO 200 UNITS...FT
OVERALL AREA OF WORKINGS.....10 UNITS...AC
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS CONSIST OF OPEN CUTS, RANGING FROM A FEW FEET TO 100 FT (30.5M) IN LENGTH AND AVERAGING ABOUT 20 FT (6.1 M) IN DEPTH, AND AT LEAST ONE SHAFT, DIMENSIONS UNKNOWN. THEY ARE CLOSELY SPACED OVER AN AREA OF ABOUT 10 ACRES, EXTENDING S 70 DEG W FOR 1500 FT (457 M). FIELD EXAMINATION CONDUCTED 5/14/86. THE WORKINGS ARE PARTIALLY FILLED WITH ROCK DEBRIS AND GROWN OVER. EXCELLENT SAMPLES OF BARITE CLUSTERS, WITH FLOURITE, CALCITE AND MINOR SULFIDES WERE FOUND ON THE SMALL DUMPS ALONG THE EDGE OF THE OPEN CUTS.
HOST ROCK AGE.....EORD-QUAT
HOST ROCK TYPE.....DOLOMITE, CLAY RESIDUUM
PERTINENT MINERALS (NOT ORE).....CLAY MINERALS, CALCITE, FLUORITE.
ORE CONTROL/LOCUS.....VEINS, RESIDUAL CLAY
TECTONIC SETTING.....VA VALLEY AND RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, WALKER MOUNTAIN THRUST BLOCK. NE-SW TRENDING THRUST FAULT SYSTEM
SIGNIFICANT LOCAL STRUCTURES.....FAULTS, MCMULLEN SYNCLINE, SEVEN SPRINGS FAULT, MARION DOME. MINE LIES APPROXI MATELY 1400 FEET NORTH OF THE SEVEN SPRINGS THRUST FAULT.
FORMATION AGE.....QUAT
FORMATION AGE.....EORD
FORMATION NAME.....CLAY RESIDUUM
FORMATION NAME.....BEEKMANTOWN FORMATION
GEOLOGY COMMENTS.....EVIDENCE OF FAULTING IN THE WORKINGS IS LACKING, BUT THE FRACTURES ARE PROBABLY GENETICALLY RELATED WITH THE THRUST FAULT SOUTH OF THE DEPOSIT. FLUORITE COMPRISES UP TO 20% OF THE VEINS. REGIONAL GEOLOGY FROM BUTTS (1933). SUGARY DOLOMITE JUST SOUTH OF THE WORKINGS STRIKE N 70 DEG E AND DIP 20 DEG S.
GENERAL COMMENTS.....THIS PROPERTY WAS THE MOST EXTEN SIVELY WORKED OF THE BARITE DEPOSITS NORTHEAST OF MORTON, AND ONE OF THE BEST FOR COLLECTING BARITE WITH FLUORITE AND CALCITE IN THE SMYTH COUNTY BARITE BELT.
NON-USGS WORK.....DIREXPL ? - DUG OPEN CUTS, MINED
REFERENCE....EDMUNDSON, R. S., 1938, BARITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 53, 85 P.
REFERENCE....BUTTS, CHARLES, 1933, GEOLOGY MAP OF THE APPALA CHIAN VALLEY IN VIRGINIA, VIRGINIA GEOLOGIC SURVEY BULLETIN 42.
REFERENCE....MCNEIL, O., PERSONAL COMMUNICATION, 1986.
SOURCE OF PRODUCTION INFORMATION.....EDMUNDSON (1938)
PRODUCTION COMMENTS.....BARITE PRODUCTION UNKNOWN. ONE CAR OF COPPER ORE WAS MINED FROM A SHAFT.
SOURCE OF RESERVES INFORMATION.....EDMUNDSON (1938)
RESERVES COMMENTS.....ALL COMMERCIAL OCCURRENCES OF BARITE ARE BELIEVED TO HAVE BEEN EXHAUSTED BY THE EXTENSIVE MINING.

4. Henderson Property Prospect

MRDS-REV RECORD NUMBER.....1177
MRDS RECORD NUMBER.....W031342
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....HENDERSON PROPERTY PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... WHITETOP MOUNTAIN, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-44- N LONGITUDE.....081-33- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....CURRIER (1935, P. 109) DESCRIBES THE LOCATION AS BEING "... IN A RAVINE ON THE NORTH SIDE OF IRON MOUNTAIN 5 MILES SOUTHWEST OF QUEBEC."
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA
NON-PRODUCER MAIN.....ZN PB
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DEVELOPMENT REPORTED.
DEPOSIT SIZE.....SMALL(?)
HOST ROCK AGE.....E CAMB
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, HOLSTON MOUNTAIN FAULT
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION
GENERAL COMMENTS.....THERE IS LITTLE INFORMATION AVAILABLE IN THE LITERATURE ON THIS OCCURRENCE.
WORK DONE BY USGS.....1972 OTHER R.B. NEUMAN: COMPILED MISC. GEOL. INV. MAP I-709-A
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....RANKIN, D.W., ESPENSHADE, G.H., AND NEUMAN, R.B., 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA, VIRGINIA AND TENNESSEE: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-A, 1 SHEET, SCALE 1:250,000.

5. Livesay Prospect

MRDS-REV RECORD NUMBER.....1163
MRDS RECORD NUMBER.....W031343
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 C-1
REPORT DATE.....80 07
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID D. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 03
UPDATER.....LOVETT, JAMES A.
SITE NAME.....LIVESAY PROSPECT
MINING DISTRICT/AREA.....RYE VALLEY LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... ATKINS, VA. (1969) QUADRANGLE SCALE 1:24000
ELEVATION.....2430 FT
UTM NORTHING...4068400 EASTING...455859 ZONE...+17
LATITUDE.....36-45-41N LONGITUDE.....081-29-37W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....ABOUT 5.3 MILES S 15 DEG E FROM DOWNTOWN MARION, 4.4 MILES S 78 DEG W FROM SUGAR GROVE (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....2.45 MILES S 72 DEG W FROM THE INTERSECTION OF STATE ROADS 670 AND 601 AT TEAS, 7200 FEET N 77 DEG W FROM THE INTERSECTION OF STATE ROADS 672 AND 701 AT SLABTOWN, ON THE SOUTH EDGE OF THE SOUTH FORK OF HOLSTON RIVER, AND SAME SMALL PROSPECT PIT UP TO 200 FEET SOUTH OF THIS POINT, BELOW ELEVATION OF 2500 FEET. IT LIES 1.6 MILES S 64 DEG E WEST FROM THE SCOTT PROSPECT.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA
OCCUR.....DOL
NON-PRODUCER MAIN.....ZN PB
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....VIRGINIA LEAD AND ZINC COMPANY
YEAR OF DISCOVERY.....1905
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....USA - JEFFERSON NATIONAL FOREST
OPERATOR.....VIRGINIA LEAD AND ZINC COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....VIRGINIA LEAD AND ZINC CO. PROSPECTED THE DEPOSIT IN 1905. A SHAFT WAS REPORTED TO HAVE BEEN STARTED IN 1905 BUT NO INFORMATION IS AVAILABLE (WATSON, 1905).
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LE AD/ZINC; VEIN?, REPLACEMENT ?
DEPOSIT FORM.....PINCH AND SWELL, IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 70 DEG E
DIP.....70 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....LIMESTONE IS BRECCIATED, WITH WHITE DOLOMITE, GALENA AND SPHALERITE. SIMILAR TO GEOLOGY AND SETTING AT THE SCOTT PROSPECT (WATSON, 1905). NO GALENA OR SPHALERITE WAS FOUND BY CURRIER (1935).
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....UNKNOWN UNITS...
OVERALL LENGTH.....35 UNITS...FT
OVERALL WIDTH.....10 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....WATSON (1905) REPORTED THAT A SHAFT WAS BEING SUNK ON THE EDGE OF SOUTH FORK OF HOLSTON RIVER. DEPTH OF SHAFT UNKNOWN AND NOT FURTHER DESCRIBED BY CURRIER (1935). FIELD INSPECTION CONDUCTED 2/10/80. ADIT PARALLEL TO STRIKE JUST ABOVE CREEK LEVEL TRENDING N 70 DEG E FOUND WITH SMALL OUTSLOPE DUMP. POSSIBLE SMALL PROSPECT PITS (?) THAT ARE HEAVILY GROWN OVER LIE WITHIN 200 FEET TO SOUTH OF PROSPECT ON HILLSIDE.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....LIMESTONE, DOLOMITE
PERTINENT MINERALS (NOT ORE).....LIMESTONE, DOLOMITE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING VALLEY AND RIDGE
SIGNIFICANT LOCAL STRUCTURES.....QUEBEC THRUST FAULT, ANTICLINE

FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....GEOLOGY AT PROSPECT IS MASSIVE, DENSE, MEDIUM TO DARK GRAY, LAMINATED TO 12 INCH THICK BEDDED LIMESTONE/DOLOMTE WITH BLOCKY PARTING. STRIKE N 66 DEG E/DIP 61 DEG SE. THIN VEINS OF QUARTZ AND CARBONATE (WHITE DOLOMITE?) ALONG FRACTURES WITH MINOR FEOX STAINING, BUT NO FRESH GALENA OR SPHALERITE.
NON-USGS WORK.....1905 DIREXPL VIRGINIA LEAD AND ZINC CO.- PROSPECTED
NON-USGS WORK.....1935 GEOLMAP VA. GEOL. SURVEY: ISSUED BULL. 43
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.

6. Martin Prospect

MRDS-REV RECORD NUMBER.....1162
MRDS RECORD NUMBER.....W031346
RECORD TYPE.....X1M
DEPOSIT NUMBER.....56 D-1
REPORT DATE.....80 07
INFORMATION SOURCE.....135
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 03
UPDATER.....LOVETT, JAMES A.
SITE NAME.....MARTIN PROSPECT
SYNONYM NAME.....CULLOP PROPERTY PROSPECT
MINING DISTRICT/AREA.....RYE VALLEY LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... MARION, VA. (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....2360 FT
UTM NORTHING...4068920 EASTING...450220 ZONE...+17
LATITUDE.....36-45-60N LONGITUDE.....081-33-30W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....5.2 MILES S 25 DEG W FROM MARION, 2.1 MILES S 34 DEG E FROM ADWOLF (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....WATSON (1905) REPORTS THE PROSPECT IS LOCATED N 80 DEG W OF THE MCCARTER PROPERTY AT THE TOP AND SLOPE OF A LIMESTONE KNOLL, ABOUT 500 FEET NORTH OF THE SOUTH FORK OF HOLSTON RIVER. CURRIER (1935) STATES THE PROSPECT IS 2 MILES SOUTHEAST OF ADWOLF. KING DYE (PERSONAL COMMUNICATION, 1988) KNEW OF A LEAD PROSPECT DUG BEFORE 1918 400 FEET WEST OF STATE ROAD 709. AREA WAS EXTENSIVELY TRAVERSED, NO OTHER WORKINGS LOCATED NOR KNOWN ABOUT BY LOCAL RESIDENTS. THE PROSPECT IS 3150 FEET N 30 DEG W FROM THE INTERSECTION OF STATE ROADS 650 AND 720 WEST OF ZION HILL CHURCH, 1500 FEET S 76 DEG E FROM THE INTERSECTION OF STATE ROADS 650 AND 663 EAST OF THOMAS BRIDGE, NORTH OF THE SOUTH FORK OF HOLSTON RIVER, ON THE SOUTH SIDE OF A LIMESTONE KNOLL TRENDING N 35 DEG E, PARALLEL TO STATE ROAD 709.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA
COMMODITY INFO COMMENTS.....WATSON (1905) STATES THE MASSIVE CRYSTALLINE TYPE OF SPHALERITE IS DARKER IN COLOR THAN OTHERS FOUND IN RYE VALLEY.
NON-PRODUCER MAIN.....ZN PB
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....VIRGINIA LEAD AND ZINC COMPANY
YEAR OF DISCOVERY.....1905 (?)
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....RICK BAILEY
OPERATOR.....VIRGINIA LEAD AND ZINC COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....VIRGINIA LEAD AND ZINC CO. DUG 6 TO 8 PITS WHILE PROSPECTING IN 1905. LITTLE ORE WAS FOUND AND FURTHER DEVELOPMENT WAS STOPPED.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; VEIN (?), REPLACEMENT (?)
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....MOST LIKELY MINERALIZATION OCCURS AS OPEN SPACE FILLING IN FRACTURED AND CRUSHED DOLOMITE.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....40 UNITS...FT
OVERALL WIDTH.....20 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....WATSON (1905) MENTIONS 6 TO 8 OPENINGS WERE DUG ON THE PROPERTY. ONLY 1 OPEN CUT WAS LOCATED DURING FIELD EXAMINATION CONDUCTED 2/9/88. CUT IS ABOUT 25 FEET LONG, 3 TO 10 FEET WIDE, AND 2 TO 9 FEET DEEP, DRIVEN PARALLEL TO STRIKE AT N 50 DEG E, WITH SMALL OUTSLOPE DUMP. PROSPECT AND DUMP ARE HEAVILY WEATHERED AND GROWN OVER.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE/LIMESTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE, LIMESTONE
ORE CONTROL/LOCUS.....FRACTURES IN THE DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING VALLEY AND RIDGE
SIGNIFICANT LOCAL STRUCTURES.....ANTICLINE, THRUST FAULT
PROCESS OF CONCENTRATION/ENRICHMENT.....FRACTURE FILLING
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....DOLOMITE IS VERY LIGHT TO MEDIUM GRAY, FINE GRAINED, CRYSTALLINE, FRACTURED, WITH MINOR CALCITE AND IRON STAINING ALONG FRACTURES.
NON-USGS WORK.....1905 DIREXPL VIRGINIA LEAD AND ZINC CO.- PROSPECTED
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.

8. McCarter Prospect

MRDS-REV RECORD NUMBER.....1159
MRDS RECORD NUMBER.....W031344
RECORD TYPE.....X1M
DEPOSIT NUMBER.....56 D-4
REPORT DATE.....80 07
INFORMATION SOURCE.....135
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 03
UPDATER.....LOVETT, JAMES A.
SITE NAME.....MCCARTER PROSPECT
MINING DISTRICT/AREA.....RYE VALLEY LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... MARION, VA. (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....2450 FT (747 M)
UTM NORTHING...4067750 EASTING...454880 ZONE...+17
LATITUDE.....36-45-23N LONGITUDE.....081-30-20W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....5.5 MILES S 7 DEG E FROM MARION, 4.8 MILES S 61 DEG E FROM ADWOLF (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....WATSON (1905) STATES THAT THIS PROSPECT IS ABOUT .75 MILES SOUTHWEST OF THE LIVERSAY PROSPECT AND ABOUT .25 MILES SUTH OF THE SOUTH FORK OF HOLSTON RIVER. IT IS LOCATED 1300 FEET S 19 DEG W FROM THE INTERSECTION OF STATE ROADS 670 AND 672 OF QUEBEC, 600 FEET N 24 DEG E FROM THE INTERSECTION OF STATE ROADS 650 AND 670 SOUTHWEST OF QUEBEC, WEST OF BARTON BRANCH.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE
COMMODITY INFO COMMENTS.....GALENA DOES NOT OCCUR, PYRITE IS REPORTED ON THE DUMPS BUT IS VERY RARE.
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....VIRGINIA LEAD AND ZINC COMPANY ?
YEAR OF DISCOVERY.....1905 OR BEFORE
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....R.S. BOATWRIGHT
OPERATOR.....VIRGINIA LEAD AND ZINC COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....PROSPECTING OCCURRED IN 1905 AND RESULTED IN SEVERAL PITS AND A 12.1 M (40 FT) SHAFT.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; VEIN, REPLACEMENT AND OPEN SPACE FILLING.
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N70 DEG E
DIP.....60 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION OCCURS AS REPLACEMENT AND OPEN SPACE FILLING BETWEEN BROKEN FRAGMENTS OF A LIMESTONE BRECCIA ALONG A FAULT WITH STRIKE N 70 DEG E AND DIPS 60 DEG SE. THE FAULT FORMS THE FOOTWALL OF THE BRECCIATED ZONE. THE LIMESTONE STRIKES N 70 DEG E AND DIPS 45 DEG SE (15 DEGREES LESS THAN INTERSECTING FAULT).
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....40.1 UNITS...FT
OVERALL LENGTH.....50 UNITS...FT
OVERALL WIDTH.....20 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....WATSON DESCRIBES A SINGLE SHAFT 40 FEET DEEP AND SEVERAL SMALL OPENINGS IN 1905. FIELD EXAMINATION CONDUCTED 2/10/88. TWO OPEN CUTS INTO THE HILLSIDE WERE LOCATED. THE NORTHERN OPEN CUT (FILLED SHAFT?) IS ABOUT 30 FEET LONG, 20 FEET WIDE, AND 10 FEET HIGH AT HIGHWALL, DRIVEN EAST-WEST, WITH SMALL OUTSLOPE DUMP. ABOUT 150 FEET TO THE SOUTHWEST, A LESS DEFINED CUT ALONG THE HILLSIDE IS ABOUT 60 FEET LONG AND 20 FEET WIDE WITH SMALL OUTSLOPE DUMP.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....LIMESTONE/DOLOMITE
PERTINENT MINERALS (NOT ORE).....WHITE CRYSTALLIZED CALCITE AND DOLOMITE
ORE CONTROL/LOCUS.....FRACTURES, LIMESTONE BRECCIA
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING VALLEY AND RIDGE
SIGNIFICANT LOCAL STRUCTURES.....QUEBEC THRUST FAULT, ANTICLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....REPLACEMENT, FRACTURE FILLING
FORMATION AGE.....ECAMB

FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....LIMESTONE/DOLOMITE IN OUTCROP AND IN THE DUMPS ARE STRONGLY FRACTURED AND BRECCIATED, WITH MINOR CHERT, AND IRON STAINED CALCITE ALONG FRACTURES. NO SULFIDES OR FLUORITE WAS FOUND.
WATSON (1905) DESCRIBES THE FLUORITE AS OCCURING IN MASSES LARGE ENOUGH TO SHOW GOOD CLEAVAGE AND IN VERY SMALL GRAINS ASSOCIATED WITH CALCITE OR DOLOMITE FILLING OF THE BRECCIATED LIMESTONE.
NON-USGS WORK.....1905 DIREXPL VIRGINIA LEAD AND ZINC COMPANY-PROSPECTED
NON-USGS WORK.....1935 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 43.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.

8. McCarter West Prospect

MRDS-REV RECORD NUMBER.....1160
MRDS RECORD NUMBER.....W031345
RECORD TYPE.....X1M
DEPOSIT NUMBER.....56 D-3
REPORT DATE.....80 07
INFORMATION SOURCE.....135
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 03
UPDATER.....LOVETT, JAMES A.
SITE NAME.....MCCARTER WEST PROSPECT
MINING DISTRICT/AREA.....RYE VALLEY LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MARION, VA. (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....2370 FT
UTM NORTHING...4067500 EASTING...451680 ZONE...+17
LATITUDE.....36-45-35N LONGITUDE.....081-32-00W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....5.85 MILES S 11 DEG W FROM MARION, 3.5 MILES S 41 DEG E FROM ADWOLF (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....CURRIER (1935) STATES THE PROSPECT IS LOCATED 2 MILES WEST OF QUEBEC ON THE EAST SIDE OF THE HIGHWAY. THE PROSPECT IS LOCATED IN HOGTROUGH HOLLOW, 7500 FEET S 79 DEG E FROM THE INTERSECTION OF STATE ROADS 663 AND 720 SOUTH OF THOMAS BRIDGE, 3750 FEET S 62 DEG E FROM THE INTERSECTION OF STATE ROADS 650 AND 720 WEST OF ZION HILL CHURCH, JUST EAST OF STATE ROAD 650.
COMMODITIES PRESENT.....ZN DOL
ORE MATERIALS.....SPHALERITE, WHITE DOLOMITE
COMMODITY INFO COMMENTS.....LEAD (GALENA) WAS NOT REPORTED OCCUR.....DOL
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....1
DISCOVERER.....UNKNOWN
YEAR OF DISCOVERY.....BEPORE 1935
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....R.L. CALL
EXPLORATION AND DEVELOPMENT COMMENTS.....APPARENTLY EXPOSED ON A ROADCUT. NO MENTION THAT ANY PROSPECTING OCCURRED.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE LEAD/ZINC; VEINS (?), REPLACEMENT (?)
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....DEPOSIT IS DESCRIBED AS BEING EXPOSED ALONG A ROAD AND IS IN THE BASAL BEDS OF THE SHADY DOLOMITE, JUST ABOVE THE CONTACT WITH THE ERWIN QUARTZITE.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....NO PROSPECTING AT THIS OCCURRANCE IS REPORTED IN THE LITERATURE. FIELD EXAMINATION CONDUCTED 2/9/88. AREA WAS EXTENSIVELY TRAVERSED. SMALL PROSPECT LOCATED JUST EAST OF STATE ROAD 650 IN BASAL PORTION OF SHADY DOLOMITE, JUST ABOVE THE ERWIN FORMATION. OPEN CUT IS ABOUT 20 FEET LONG, 8 TO 10 FEET WIDE AND ABOUT 12 FEET DEEP AT THE HIGHWALL, DRIVEN IN A N 60 DEG E DIRECTION, PARALLEL TO STRIKE. NO DUMP OR MINERALIZATION FOUND. NO OTHER WORKINGS WERE LOCATED IN THE AREA.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE/LIMESTONE
PERTINENT MINERALS (NOT ORE).....WHITE "GANGUE" DOLOMITE
ORE CONTROL/LOCUS.....FRACTURES IN THE DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING VALLEY AND RIDGE
SIGNIFICANT LOCAL STRUCTURES.....THRUST FAULT AN EIGHTH OF A MILE NORTH OF THIS OCCURRENCE; THRUST FAULT JUST TO SOUTH.
PROCESS OF CONCENTRATION/ENRICHMENT.....FRACTURE FILLING
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....OPEN CUT IS IN THE BASAL PORTION OF THE SHADY DOLOMITE.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.

9. Meyers-L. Copenhaver Mine

MRDS-REV RECORD NUMBER.....1183
MRDS RECORD NUMBER.....W031272
RECORD TYPE.....X1N
DEPOSIT NUMBER.....56 D-1
REPORT DATE.....80 07
INFORMATION SOURCE.....1352
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
UPDATED.....87 09
UPDATER.....LOVET, JAMES A.
SITE NAME.....MYERS - L. COPENHAVER MINE
MINING DISTRICT/AREA.....SMYTH COUNTY BARITE BELT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....06010102 HOLSTON RIVER
LAND STATUS.....01 (1986)
QUADRANGLE NAME..... MARION, VA. (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....2200 FT (671 M)
UTM NORTHING...4077180 EASTING...447040 ZONE...+17
LATITUDE.....36-50-25N LONGITUDE.....081-35-37W
POSITION FROM NEAREST LOCALITY.....6.5 KM (4 MI) WEST OF MARION.
UPDATE: 4.2 MILES NORTHWEST OF DOWNTOWN MARION.
LOCATION COMMENTS.....240 M (787 FT) SW FROM THE INTERSECTION OF STATE ROADS 645 AND 658. ABOUT 0.8 KM (0.5 MI) NORTH OF MT. ZION CHURCH IN THE WASSUM VALLEY. 30 M (100 FT) EAST OF THE WASSUM VALLEY ROAD AND EXTENDING S70E.
UPDATE: UTM COORDINATES LOCATE THE MAIN WORKINGS (LARGEST OPEN CUT AND PORTAL TO UNDERGROUND WORKINGS) AT THE WESTERN END OF THE PROPERTY, BUT SURFACE WORKINGS EXTEND ABOUT .25 MILES TO THE SOUTHEAST. MAIN WORKINGS ARE 2500 FEET N 2 DEGREES W FROM MT. ZION CHURCH, 700' S 48 DEGREES W FROM THE INTERSECTION OF COUNTY ROAD 658 AND 645, 500 FEET EAST OF WASSUM CREEK.
COMMODITIES PRESENT.....BA ZN F PY
ORE MATERIALS.....BARITE, SPHALERITE, FLUORITE, PYRITE
MAJOR.....BA
POTEN.....ZN F
OCCUR.....PY
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....MYERS - L. COPENHAVER
YEAR OF DISCOVERY.....AFTER 1875
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....AFTER 1875
OWNER (PRESENT/LAST).....M.M. MYERS & R.L. MEEK - L. COPENHAVER
OPERATOR.....MYERS- L. COPENHAVER
EXPLORATION AND DEVELOPMENT COMMENTS.....MINING OF THIS DEPOSIT APPARENTLY OCCURRED BETWEEN 1875 AND 1885. A MILL LOCATED IN MARION AND ANOTHER OPERATED BY G.G. GOODELL AND H.P. COPENHAVER PROBABLY HANDLED THE BARITE MINED. MINING APPARENTLY WAS DONE BY MYERS AND L. COPENHAVER ON A SMALL SCALE. TRENCHES, PITS, AND OPEN CUTS WERE DUG DURING THE PRODUCTION PERIOD. ROLAND F. BEERS, INC. CORE DRILLED THE MINE IN 1959 WITH ASSISTANCE FROM THE OFFICE OF MINERALS EXPLORATION.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, REPLACEMENT, WEATHERING RESIDUAL
DEPOSIT FORM.....LENSE, PINCH AND SWELL, IRREGULAR
DEPTH TO BOTTOM.....12 UNITS...M
MAXIMUM LENGTH.....2500 (?) UNITS...FT
MAXIMUM WIDTH.....300 (?) UNITS...FT
DEPOSIT SIZE.....SMALL
STRIKE.....S 70 DEG E
DIP.....30 DEG SW (?)
DEPOSIT DESCRIPTION COMMENTS.....BARITE OCCURS AS IRREGULAR FRAGMENTS IN RESIDUAL CLAY AND AS VEINS AND AS REPLACEMENT MASSES IN BEDROCK. THE BEDROCK IS LIMESTONE AND DOLOMITE. SOME BARITE FRAGMENTS ARE OVER 0.25 M (0.8 FT) WIDE. SURFACE WORKING SCATTERED OVER A 2500 FEET BY 300 FEET AREA TRENDING S 70 DEGREE E. MOST BARITE VEINS SEEN ARE MASSIVE CLUSTERS LESS THAN 1 FOOT THICK. EXACT SIZE (LENGTH AND WIDTH) COULD NOT BE DETERMINED.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....40 UNITS...FT
LENGTH OF WORKINGS.....150 UNITS...FT
OVERALL LENGTH.....2500 UNITS...FT
OVERALL WIDTH.....100-300 UNITS...FT
OVERALL AREA OF WORKINGS.....5 UNITS...AC
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS CONSIST OF AN OPEN ADIT, AND SURFACE TRENCHES, PITS, AND OPEN CUTS WHICH BEGIN ABOUT 100 FEET EAST OF WASSUM CREEK AND STATE ROAD 645 AND EXTEND S 70 DEG 3 TO S 60 DEG E APPROXIMATELY 2500 FEET WITHIN A 100 TO 300 FEET ZONE. OPEN CUTS UP TO 400 FEET LONG, 100 FEET WIDE AND 40 FEET DEEP. MANY OF THE SURFACE TRENCHES AND PITS ARE NOW PARTIALLY FILLED WITH ROCK DEBRIS AND TRASH, AND GROWN OVER. ADIT AT WEST END OF MINE IS OPEN AND DRY AND IN RELATIVELY GOOD CONDITION. FIELD EXAMINATION 10/8/85 AND 10/9/85.
HOST ROCK AGE.....EORD-QUAT
HOST ROCK TYPE.....LIMESTONE, DOLOMITE, CLAY RESIDUUM
PERTINENT MINERALS (NOT ORE).....FLUORITE, CLAY MINERALS

ORE CONTROL/LOCUS.....VEINS/SHEAR ZONE, CLAY RESIDUUM
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, WALKER MOUNTAIN THRUST BLOCK
SIGNIFICANT LOCAL STRUCTURES.....MARION DOME, FAULTING, MCMULLEN SYNCLINE, SEVEN SPRINGS FAULT
FORMATION AGE.....EORD
FORMATION AGE.....QUAT
FORMATION NAME.....BEEKMANTOWN FORMATION
FORMATION NAME.....CLAY RESIDUUM
GEOLOGY COMMENTS.....THE HOST ROCKS CONSIST OF LIMESTONE OVERLAIN BY DOLOMITE. THE BARITE OCCURS MOSTLY IN THE LIMESTONE AND THE LOWER 30 M (100 FT) OF DOLOMITE. REGIONAL GEOLOGY FROM C. BUTTS (1933), B. COOPER (1936) AND B. FRENCH (1967).
GENERAL COMMENTS.....THIS WAS THE MOST EXTENSIVELY WORKED DEPOSIT IN SMYTH COUNTY.
NON-USGS WORK.....DIREXPL MYERS - L. COPENHAVER-BARITE PRODUCTION
NON-USGS WORK.....1959 DIREXPL ROLAND F. BEERS, INC. - CORE DRILLING
REFERENCE....EDMUNDSON, R.S., 1938, BARITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 53, 85 P.
REFERENCE....YOUNG, R.S., AND WEDOW, H., 1962, GEOLOGIC SETTING OF THE MYERS ZINC PROSPECT, SMYTH COUNTY, VIRGINIA (ABS): GEOLOGICAL SOCIETY OF AMERICA SPECIAL PAPER 68, P. 82.
REFERENCE....BUTTS, CHARLES, 1933, GEOLOGY MAP OF THE APPLACHIAN VALLEY IN VIRGINIA, VIRGINIA GEOLOGICAL SURVEY BULLETIN 42.
REFERENCE....FRENCH, B. 1967, THE GEOLOGY OF THE MARION DOME, V.P.I MASTERS THESIS (UNPUBLISHED).
SOURCE OF PRODUCTION INFORMATION.....EDMUNDSON (1938)
PRODUCTION COMMENTS.....EXTENSIVE MINING HAS PROBABLY EXHAUSTED ALL OF THE LARGE DEPOSIT, BUT IT IS THOUGHT THAT SMALL QUANTITIES OF HIGH-GRADE RESIDUAL BARITE COULD BE RECOVERED FROM THE OLD WORKINGS BY HAND METHODS.

10. Orr Mine

MRDS-REV RECORD NUMBER.....1185
MRDS RECORD NUMBER.....W031273
RECORD TYPE.....X1N
DEPOSIT NUMBER.....56 A-1
REPORT DATE.....80 10
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
UPDATED.....87 11
UPDATER.....LOVETT, JAMES A.
SITE NAME.....ORR MINE
MINING DISTRICT/AREA.....SMYTH COUNTY BARITE BELT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010101 HOLSTON RIVER
LAND STATUS.....01
QUADRANGLE NAME..... CHATHAM HILL, VA. (1958) QUADRANGLE SCALE 1:24000
ELEVATION.....2240 FT
UTM NORTHING...4084900 EASTING...445850 ZONE...+17
LATITUDE.....36-54- N LONGITUDE.....081-36- W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....2.7 MILES S 40 DEG W FROM RIDGEDALE, 1.1 MILES S 50 DEG E FROM RIVERSIDE.
LOCATION COMMENTS.....2.75 MILES, S 27 DEG W FROM BENCH MARK BM EZD 61, 9050 FEET S 20 DEG E FROM BENCH MARK BM EZD 63, 2800 FEET N 32 DEG E FROM THE INTERSECTION OF STATE ROADS 610 AND 763, 2300 FEET SOUTH OF THE NORTH FORK AT HOLSTON RIVER.
COMMODITIES PRESENT.....BA CA PYR CU FE
ORE MATERIALS.....BARITE, CALCITE, PYRITE, CHALCOPYRITE, MALACHITE, LIMONITE
MAJOR.....BA
MINOR.....CA
OCCUR.....PYR CU FE
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....AFTER 1875
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....LATE 1890'S (?)
YEAR OF LAST PRODUCTION.....BEFORE 1906
OWNER (PRESENT/LAST).....R.M. ORR
OPERATOR.....ORR (?)
EXPLORATION AND DEVELOPMENT COMMENTS.....PRODUCTION RECORDS UNKNOWN. EDMUNDSON (1938) STATED THAT BARITE FROM THE PROPERTY WAS HAULED BY WAGON TO THE MILL IN MARION ABOUT 1898 TO 1900. LOCAL RESIDENTS SAY THEY HEARD THE MINE WAS WORKED ABOUT 1900.
DEPOSIT TYPE.....REPLACEMENT, VEIN, WEATHERING RESIDUAL.
DEPOSIT FORM.....LENSE, PINCH AND SWELL, IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 60 DEG E
DEPOSIT DESCRIPTION COMMENTS.....EDMUNDSON DESCRIBES THE BARITE AS OCCURING IN SMALL REPLACEMENT MASSES IN THE BEEKMANTOWN DOLOMITE. SMALL CRYSTALS AND MASSES (LESS THAN 1 INCH) OF BARITE WAS FOUND ON THE DUMP.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....50 UNITS...FT
OVERALL WIDTH.....20 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....NO DESCRIPTION OF THE WORKINGS IS FOUND IN THE LITERATURE. FIELD EXAMINATION WAS CONDUCTED 12/5/85. WORKINGS CONSIST OF A SINGLE OPEN CUT APPROXIMATELY 30 FEET LONG, 10 TO 15 FEET WIDE, AND 3 TO 5 FEET DEEP TRENDING N 60 DEG E, AND SMALL DUMP PILE. THE MINE IS PARTIALLY FILLED IN AND GROWN OVER.
HOST ROCK AGE.....EORD-QUAT
HOST ROCK TYPE.....DOLOMITE/LIMESTONE-RESIDUAL CLAY AND SOIL
PERTINENT MINERALS (NOT ORE).....CALCITE
ORE CONTROL/LOCUS.....FRACTURES IN THE BEDROCK
TECTONIC SETTING.....VIRGINIA VALLEY AND RIDGE.
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING THRUST FAULTS.
SIGNIFICANT LOCAL STRUCTURES.....THE MINE IS 2.8 MILES SOUTH OF THE SALTVILLE THRUST FAULT, AND 3.8 MILES NORTH OF THE BRUSHY MOUNTAIN THRUST FAULT.
FORMATION AGE.....EORD
FORMATION AGE.....QUAT
FORMATION NAME.....BEEKMANTOWN FORMATION
FORMATION NAME.....RESIDUAL CLAY AND SOIL
GEOLOGY COMMENTS.....EDMUNDSON REPORTED BARITE MASSES WITH LARGE CRYSTALS OF CALCITE, AND SMALL AMOUNTS OF PYRITE, CHALCOPYRITE, MALACHITE, AND LIMONITE. REGIONAL GEOLOGY FROM BUTTS (1933) AND COOPER (1936).
NON-USGS WORK.....1900? DIREXPL ? - DUG OPEN CUTS, MINED
REFERENCE....EDMUNDSON, R.S., 1938, BARITE DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 53, 85 P.
REFERENCE....COOPER, B.N., 1936, STRATIGRAPHY AND STRUCTURE OF THE MARION AREA, VIRGINIA, VIRGINIA GEOLOGICAL SURVEY BULLETIN 46-L.
REFERENCE....BUTTS, CHARLES, 1933, GEOLOGY MAP OF THE APPALA CHIAN VALLEY OF VIRGINIA, VIRGINIA GEOLOGICAL SURVEY BULLETIN 42.

11. Porter Bank Mine

MRDS-REV RECORD NUMBER.....1157
MRDS RECORD NUMBER.....W031233
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 D-1
REPORT DATE.....80 07
INFORMATION SOURCE.....165
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 03
UPDATER.....LOVETT, JAMES A.
SITE NAME.....PORTER BANK MINE
MINING DISTRICT/AREA.....CEDAR SPRINGS LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... ATKINS, VA. (1969) QUADRANGLE SCALE 1:24000
SECOND QUADRANGLE NAME...CEDAR SPRINGS (1978) SECOND QUAD SCALE 1:24000
ELEVATION.....3040 FT (927 M)
UTM NORTHING...4071290 EASTING...466580 ZONE...+17
LATITUDE.....36-45-60N LONGITUDE.....081-21-53W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....8.5 MILES S 67 DEG E FROM MARION, 2.45 MILES N 67 DEG E FROM SUGAR GROVE (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....8600 FEET S 65 DEG W FROM BENCH MARK N2 (2605 FEET) NEAR THE INTERSECTION OF STATE ROADS 612 AND 614 AT SUMMIT, 6650 FEET N 64 DEG W FROM THE INTERSECTION OF STATE ROADS 675 AND 679 WEST OF KIRK CEMETARY, ON THE BOUNDARY OF ATKINS AND CEDAR SPRINGS QUADRANGLES, ON THE SOUTH FLANK ON A NORTHEAST TRENDING RIDGE NORTH OF STATE ROAD 676.
COMMODITIES PRESENT.....FE MN ZN PB
ORE MATERIALS.....GOETHITE (LIMONITE), SPHALERITE, GALENA
GENERAL ANALYTICAL DATA.....THE (LIMONITE) GOETHITE ORE HAS A HIGH MANGANESE CONTENT (HOLDEN, 1907).
MAJOR.....FE
MINOR.....MN ZN PB
PRODUCTION.....S
STATUS AND ACTIVITY.....4
DISCOVERER.....LOBDELL CARWHEEL COMPANY
YEAR OF DISCOVERY.....1876 ?
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....LOBDELL CARWHEEL COMPANY
OPERATOR.....LOBDELL CARWHEEL COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE WAS WORKED BETWEEN 1876 AND 1904. SEVERAL PITS WERE DUG AND 35000 TONS OF IRON ORE WAS PRODUCED. THE ORE WAS WASHED ON SITE AND THEN SHIPPED 10 KM (6 MI) TO THE WHITE ROCK CHARCOAL FURNACE.
DEPOSIT TYPE.....WEATHERING RESIDUAL (REPLACEMENT ?)
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....DEPOSIT WAS NOT DESCRIBED. LARGE WORKINGS, BUT NO FRESH DUMP MATERIAL. DUMPS ARE STRONGLY WEATHERED, DARK RED SOIL WITH NO ROCK FRAGMENTS. NO OUTCROP IN PITS.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....300 UNITS...FT
OVERALL WIDTH.....400 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....THE IRON ORE WAS SURFACE MINED IN SEVERAL PITS. FIELD EXAMINATION CONDUCTED 2/11/88 AND 2/16/80. FAIRLY LARGE WORKINGS OVER A 300 FEET LONG BY 400 FEET WIDE AREA. INCLUDES LARGE PITS AND OPEN CUTS - UP TO 150 FEET LONG AND 30 FEET DEEP, TRENCHES N 75 DEG W DRIVEN ACROSS STRIKE UP TO 200 FEET LONG, 20 FEET WIDE AND 10 FEET DEEP. NOT MUCH DUMP MATERIAL. ONLY DARK RED, WEATHERED SOIL. APPARENTLY MOST MINED MATERIAL WAS SHIPPED TO WHITE ROCK FURNACE.
HOST ROCK AGE.....ECAMB

HOST ROCK TYPE.....DOLOMITE
PERTINENT MINERALS (NOT ORE).....DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....ANTICLINE, THRUST FAULT
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
NON-USGS WORK.....1876 DIREXPL LOBDELL CARWHEEL CO.-IRON PRODUCTION
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA : VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....HOLDEN, R.J., 1907, IRON, IN WATSON, T.L., MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., P. 402-491.

CUMULATIVE PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEARS GRADE
ORE FE ACC 35.000 TONS 1876?-1904
SOURCE OF PRODUCTION INFORMATION.....HOLDEN (1907);

12. Porter Prospect

MRDS-REV RECORD NUMBER.....1757
MRDS RECORD NUMBER.....VA01757
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 C-8
REPORT DATE.....88 03
INFORMATION SOURCE.....35
REPORTER.....LOVETT, JAMES A. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....PORTER PROSPECT
MINING DISTRICT/AREA.....CEDAR SPRINGS LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORTH OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... ATKINS (1969) QUADRANGLE SCALE 1:24000
ELEVATION.....2890 FT
UTM NORTHING...4071370 EASTING...466280 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....8.3 MILES S 66 DEGREES E FROM MARION, 2.3 MILE N65 DEGREES E FROM SUGAR GROVE (DOT SMYTH COUNTY HIGHWAY MAP, 1981).
LOCATION COMMENTS.....6750 FEET N 73 DEGREES E FROM THE INTERSECTION OF STATE ROAD 614 AND 695 NORTHEAST OF SUGAR GROVE, 2150 FEET N 30 DEGREES E FROM THE INTERSECTION OF STATE ROADS 675 AND 676 SOUTHEAST OF PORTER CEMETARY, ON THE CREST AND NORTH BANK OF NORTHEAST TRENDING RIDGE, 1000 FEET N 70 DEGREES W FROM THE PORTER BANK (LOBDELL) MINE. TWO PROSPECT PITS LOCATED. UTM COORDINATES IS CENTRAL LOCATION BETWEEN THE WORKINGS. NO REFERENCE FOUND FOR THIS PROSPECT IN THE LITERATURE.
COMMODITIES PRESENT.....PB? ZN? QTZ CA
ORE MATERIALS.....GALENA ?, SPHALENITE ?, QUARTZ, CALCITE
COMMODITY INFO COMMENTS.....NO REPORT OF THIS PROSPECT IN LITERATURE, NO ORE MINERALS FOUND ON DUMP, ONLY BRECCIATED LIMESTONE/DOLOMITE WITH QUARTZ AND CALCITE ALONG FRACTURES. MOST LIKELY PROSPECTED FOR LEAD AND ZINC.
OCCUR.....QTZ CA
NON-PRODUCER MAIN.....PB? ZN?
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....LOBDELL CARWHEEL COMPANY ?
YEAR OF DISCOVERY.....LATE 1800'S?
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....PORTER
OPERATOR.....LOBDELL CARWHEEL COMPANY?
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY OWNER OF PORTER BANK MINE DESCRIBED OTHER PROSPECTING BEING DONE ALONG THE RIDGE IN THIS GENERAL AREA, BUT DIDN'T KNOW WHEN OR BY WHOM. NO HISTORY OF DEVEL OPMENT KNOW, BUT TWO PITS WERE LOCATED IN THE FIELD.
DEPOSIT TYPE.....10
DEPOSIT FORM.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; REPLACEMENT (?), VEIN (?) IN BRECCIATED ZONE
DEPTH TO TOP.....IRREGULAR UNITS...
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....PROSPECTS IN THE SHADY DOLOMITE, THEREFORE MOST LIKELY LEAD/ZINC PROSPECT. NO OUTCROP IN AREA OR IN PITS. DUMP MATERIAL WAS BRECCIATED LIMESTONE/DOLOMITE WITH QUARTZ ?/WHITE DOLOMITE, CALCITE MINERALIZATION IN FRACTURES. NO ADDITIONAL INFORMATION AVAILABLE.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....200 UNITS...FT
OVERALL WIDTH.....50 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....NO PREVIOUS DESCRIPTION OF WORKINGS FOUND IN LITERATURE. FIELD EXCAVATION CONDUCTED 2/11/88. 2 PROSPECT LOCATED WHILE SEARCHING FOR PORTER BANK MINE. NORTHRN (LARGER) PIT IS ABOUT 40 FEET IN DIAMETER, 5 FEET DEEP, WITH A SMALL OUTSLOPE DUMP OF STRONGLY WEATHERED SMALL ROCK CHIPS AND FRAGMENTS. 200 FEET S 70 DEGREES W, SMALLER PIT IS ON A HILL CREST, 20 FEET IN DIAMETER AND 3 TO 4 FEET DEEP. BOTH PITS ARE GROWN OVER WITH TREES, BRUSH AND GRASS.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE/LIMESTONE
SIGNIFICANT REGIONAL STRUCTURES.....NE/SW TRENDING VALLEY AND RIDGE
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....ROCK FOUND ON THE DUMP IS DARK GRAY, STRONGLY FRACTURED, BRECCIATED, DENSE, CRYSTALLINE DOLOMITE. REGIONAL GEOLOGY FROM CURRIER, 1935.
GENERAL COMMENTS.....NO PREVIOUS DESCRIPTION OF THE PROSPECT FOUND IN THE LITERATURE. NO ORE MINERALS FOUND ON DUMPS, BUT TWO PROSPECT PITS LOCATED. BECAUSE OF STRONGLY BRECCIATED ROCK FROM SHADY DOLOMITE FOUND ON DUMPS - THIS PROSPECT WAS MOST LIKELY TESTING FOR LEAD/ZINC MINERALIZATION.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WEST VIRGINIA: VIRGINIA GEOLOGIC SURVEY BULLETIN 43, 122 PAGES.

13. Rye Valley Mining Co. Prospect

MRDS-REV RECORD NUMBER.....1758
MRDS RECORD NUMBER.....VA01758
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 C-7
REPORT DATE.....88 03
INFORMATION SOURCE.....13
REPORTER.....LOVETT, JAMES A. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....RYE VALLEY LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... ATKINS (1969) QUADRANGLE SCALE 1:24000
ELEVATION.....2665 FT
UTM NORTHING...4070480 EASTING...462780 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....6.65 MILES S 67 DEGREES E FROM MARION, 4 MILES N 29 DEGREES W FROM SUGAR GROVE (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....3400 FEET S 77 DEGREES W FROM THE INTERSECTION OF STATE ROADS 675 AND RT 16 NORTH OF SUGAR GROVE, 2900 FEET N 11 DEGREES E FROM THE INTERSECTION OF STATE ROADS 695 AND RT 16 SOUTHWEST OF SUGAR GROVE, ABOUT 150 FEET EAST OF STATE ROAD 675, 2000 FEET NORTHEAST OF RYE VALLEY MINING COMPANY MINE.
COMMODITIES PRESENT.....ZN FL DOL CA
ORE MATERIALS.....SPHALERITE, FLUORITE, DOLOMITE, CALCITE
COMMODITY INFO COMMENTS.....FLUORITE IS DARK PURPLE AS SMALL MASSES AND FRACTURES IN THE BRECCIATED DOLOMITE.
OCCUR.....DOL CA
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....FL
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....RYE VALLEY MINING COMPANY ?
YEAR OF DISCOVERY.....LATE 1800'S
NATURE OF DISCOVERY.....A
OPERATOR.....RYE VALLEY MINING COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....CURRIER (1935) DESCRIBES THIS AS A PROSPECT PIT LOCATED 2000 FEET NORTHEAST OF THE SHAFT AT RYE VALLEY MINING COMPANY. NO OTHER INFORMATION IS AVAILABLE.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; VEIN (?), REPLACEMENT (?) IN BRECCIATE ZONE
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION IN A THIN, BRECCIATED DOLOMITE BED BELOW SHALE. STRATIGRAPHIC AND LITHOLOGIC FEATURES WERE SIMILAR TO THOSE FOUND AT MAIN SHAFT OF RYE VALLEY MINING COMPANY MINE.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....CURRIER (1935) MENTIONS A PROSPECT PIT SOUTH OF RT 675. FIELD EXAMINATION CON DUCTED 2/11/88. TWO SMALL OPEN CUTS WERE LOCATED, WORKED IN A N 75 DEGREES E DIRECTION, PARALLEL TO STRIKE. WESTERN CUT IS 8 FEET LONG, 5 FEET WIDE AND 3 FEET DEEP WITH DUMP. 20 FEET TO THE EAST, A LARGER PIT IS 18 FEET LONG, 7 FEET WIDE, AND UP TO 6 FEET DEEP WITH SMALL OUTSLOPE DUMP. WORKINGS ARE FAIRLY SMALL.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE/LIMESTONE
PERTINENT MINERALS (NOT ORE).....WHITE DOLOMITE, CALCITE
ORE CONTROL/LOCUS.....BRECCIATED ZONE, LOCAL ZONE OF MINOR THRUST FAULTING
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING VALLEY AND RIDGE
SIGNIFICANT LOCAL STRUCTURES.....MINOR THRUST FAULTS
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....DUMP MATERIAL IS FINE GRAINED, BRECCIATED, DARK GRAY DOLOMITE WHICH LIES BELOW A DARK GRAY SHALE UNIT SEEN IN THE ROOF (HANGING WALL) OF PROSPECT PIT.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 PAGES.

14. Rye Valley Mining Co. Mine

MRDS-REV RECORD NUMBER.....1187
MRDS RECORD NUMBER.....W031347
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 C-6
REPORT DATE.....80 07
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 03

UPDATER.....LOVETT, JAMES A.
SITE NAME.....RYE VALLEY MINING COMPANY MINE
SYNONYM NAME.....CHAMBERLAIN MINE, SUGAR MINE, SUGAR GROVE MINE
MINING DISTRICT/AREA.....RYE VALLEY LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... ATKINS, VA. (1969) QUADRANGLE SCALE 1:24000
ELEVATION.....2640 FT
UTM NORTHING...4070260 EASTING...462180 ZONE...+17
LATITUDE.....36-46-44N LONGITUDE.....081-25-20W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....6.3 MILES S 52 DEG E FROM MARION, .7 MILES N 51 DEG W FROM SUGAR GROVE (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....4200 FEET N 60 DEG E FROM THE INTERSEC TION OF STATE ROADS 601 AND 670 AT ROBERTS MILL, 2550 FEET N 35 DEG W FROM THE INTERSECTION OF STATE ROADS 601 AND 695 WEST OF SUGAR GROVE, AND 850 FEET N 52 DEG E FROM THE INTERSECTION OF STATE ROADS 674 AND 675 NORTH OF THE SOUTH FORK OF HOLSTON RIVER. WORKINGS EXTEND ABOUT 300 IN A N80E TO N85E TREND ALONG NORTHERN HILLSIDE. LOCATION GIVEN IS THE MIDDLE OF THE WORKINGS.
COMMODITIES PRESENT.....PB ZN AU FL CA DOL
ORE MATERIALS.....GALENA, SPHALERITE, GOLD, FLUORITE, CALCITE, DOLOMITE.
COMMODITY INFO COMMENTS.....PYRITE IS SCARCE; GOLD WITH THE GALENA WAS ASSAYED AT $6.50/TON (CURRIER, 1935). VIOLET FLUORITE REPORTED BY WATSON (1905) AND FOUND ON DUMP IN 1988.
MAJOR.....PB ZN
OCCUR.....AU CA DOL
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....RYE VALLEY MINING COMPANY
YEAR OF DISCOVERY.....PRE 1897
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1897 ?
OWNER (PRESENT/LAST).....RYE VALLEY MINING COMPANY (?) CHAMBERLAIN MINERALCO. (?)
OPERATOR.....CHAMBERLAIN MINERAL CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE RYE VALLEY MINING COMPANY WORKED THE MINE IN THE 1890'S, PRODUCTION OCCURRED IN THE LATE 1890'S AND CONSISTED OF 30 CARLOADS OF HAND SORTED ORE. FROM 1907 TO 1908 THE CHAMBERLAIN MINERAL CO. ERECTED A 100-TON MILL. VERY LITTLE PRODUCTION OCCURRED FROM 1907 TO 1908, WORK WAS SPENT CHIEFLY IN DEVELOPMENT AND PROS PECTING. LEAD WAS THE CHIEF ORE PRODUCED.
DEPOSIT TYPE.....CARBONATE BASED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; VEIN (?), REPLACEMENT (?) IN BRECCIATED ZONE.
DEPOSIT FORM.....IRREGULAR
MAXIMUM WIDTH.....23 UNITS...FT
DEPOSIT SIZE.....SMALL
STRIKE..... N 80 DEG E TO N 85 DEG E
DIP.....60 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION OCCURRED IN A BRECCIATED ZONE UP TO 23 FEET THICK, BUT AVERAGED ABOUT 2 FEET THICK IN DOLOMITE BELOW A COMPACE, FINE-GRAINED CALCAREOUS OR DOLOMITE SHALE. SHAFTS WERE INCLINED, FOLLOWING THE DIP OF THE ROCK OF 60 DEG SE. SPHALERITE WAS FOUND AT THE BOTTOM OF THE 200 FOOT SHAFT.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....200 UNITS...FT
LENGTH OF WORKINGS.....225 UNITS...FT
OVERALL LENGTH.....225 UNITS...FT
OVERALL WIDTH.....100 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....WATSON (1905) REPORTED 2 MAIN SHAFTS AND A NUMBER OF SMALL SURFACE TEST PITS TRENDING N 80 DEG E. THE SHAFTS WERE INCLINED OLONG THE DIP OF THE ROCK AT 60 DEG SE, 100 AND 200 FEET DEEP, 225 FEET APART, AND CONNECTED UNDERGROUND BY A DRIFT AT THE 100 FOOT LEVEL. CURRIER (1935) REPORTED 3 SHAFTS, 2 WERE 200 FEET DEEP, AND THE OTHER WAS 100 FEET DEEP AND EACH 100 FEET APART ALONG A N 85 DEG E BEARING. FIELD EXAMINATION CONDUCTED 2/11/88. THREE CAVED SHAFTS WITH OUTSLOPE DUMPS LOCATED ON A N 82 DEG TREND. TWO CAVED SHAFTS AT EAST END ARE LONGEST. MOST EASTERN WAS 40 FT IN DIAMETER, AND 20 FEET DEEP, NOW FILLED WITH TRASH AND DEBRIS WITH LARGE DUMP. MIDDLE CAVED SHAFT WAS 25 FEET IN DIAMETER, 15 DEEP, AND OPEN, PARTIALLY CAVED SHAFT IN BOTTOM. WESTERN WORKINGS ARE SMALLER PITS, OPEN CUTS AND TRENCHES.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE, FLUORITE
ORE CONTROL/LOCUS.....ORE IS CONCENTRATED IN FRACTURES OF BRECCIATED AREA WITHIN DOLOMITE (SHEAR ZONE)
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, MINE LOCATED IN MINOR THRUST FAULTED AREA, MAJOR THRUST FAULT NEARBY
SIGNIFICANT LOCAL STRUCTURES.....MAJOR THRUST FAULT ABOUT 0.8 KM SOUTH OF MINE
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....FOR GEOLOGIC MAP SEE CURRIER (1935). ROCKS FOUND ON THE DUMPS WERE FRACTURED AND BRECCIATED, MEDIUM TO DARK GRAY, SUGARY TO VERY FINE GRAINED, DENSE, CRYSTALLINE DOLOMITE WITH SMALL QUARTZ CRYSTALS, CALCITE, DARK PURPLE FLUORITE, BARITE (?), MEDIUM BROWN SPHALERITE, FINE GRAINED GALENA, AND TRACE PYRITE.
GENERAL COMMENTS.....OLD MILL PLANT FOUNDATION LOCATED ON SOUTHSIDE OF THE RIDGE, NORTH OF STATE ROAD 675, AT UTM COORDINATES 4070 170-462170.
NON-USGS WORK.....DIREXPL RYE VALLEY COMPANY, PRODUCTION OF LEAD, ZINC
NON-USGS WORK.....1907 DIREXPL CHAMBERLAIN MINERAL COMPANY, PRODUCTION LEAD
NON-USGS WORK.....1934 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 43.
REPORTS AVAILABLE.....MCCASKEY, H.D., 1907, GOLD, SILVER, COPPER, LEAD, AND ZINC IN THE EASTERN STATES, U.S. GEOLOGICAL SURVEY, MINERAL RESOURCES OF THE U.S. PART I, P. 570. BALL AND THOMPSON, 1916, ENG. MINING JOURNAL, VOL. 102 P. 735-737
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....MCCASKEY, H.D., 1908, GOLD, SILVER, COPPER, LEAD, AND ZINC IN THE EASTERN STATES, U.S. GEOLOGICAL SURVEY, MINERAL RESOURCES OF THE U.S., PART I, P. 680.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, JAMESTOWN EXPOSITION COMMIS SION, 618 P.
SOURCE OF PRODUCTION INFORMATION.....CURRIER (1935)
PRODUCTION COMMENTS.....30 CARLOADS OF ORE.

15. Scott Prospect

MRDS-REV RECORD NUMBER.....1188
MRDS RECORD NUMBER.....W031348
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 C-3
REPORT DATE.....80 07
INFORMATION SOURCE.....135
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....VDMR
UPDATER.....LOVETT, JAMES, A.
SITE NAME.....SCOTT PROSPECT
MINING DISTRICT/AREA.....RYE VALLEY LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... ATKINS, VA. (1969) QUADRANGLE SCALE 1:24000
ELEVATION.....2505 FT (763.7 M)
UTM NORTHING...4069560 EASTING...458140 ZONE...+17
LATITUDE.....36-46-19N LONGITUDE.....081-28-18W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....5 MILES S 31 DEG E FROM MARION, 3 MILES S 89 DEG W FROM SUGAR GROVE (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....4900 FEET S 87 DEG W FROM THE INTERSEC TION OF STATE ROADS 601 AND 670 AT TEAS, 4500 N 32 DEG W FROM THE INTERSECTION OF STATE ROADS 672 AND 673 EAST OF SLABTOWN, 4700 FEET S 76 DEG W FROM THE CALHOUN PROSPECT. LOCATION CONFIRMED BY BRAD SHULER (PERSONAL COMMUNICATION, 1988) AS THE OLD "ZINC MINE ON SCOTT FARM." PROSPECT IS ABOUT 15 FEET ABOVE CREEK LEVEL, CUT INTO WALL SOUTHWEST OF THE SOUTH FORK OF HOLSTON RIVER.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
GENERAL ANALYTICAL DATA.....FE-.30%, S-33.26%, SIO2-.08%, ZN-66.94%
COMMODITY INFO COMMENTS.....NO GALENA OBSERVED
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....VIRGINIA LEAD AND ZINC COMPANY
YEAR OF DISCOVERY.....LATE 1904
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....C.R. SCOTT
OPERATOR.....VIRGINIA LEAD AND ZINC COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....IN 1904 AND 1905 THE VIRGINIA LEAD AND ZINC COMPANY PROSPECTED THE SITE AND SUNK A SHAFT 16.2 M (53 FT) DEEP AND DUG ONE PIT. NO PRODUCTION OCCURRED.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC, VEING (?), REPLACEMENT (?) IN BRECCIA ZONE.
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N75 DEG E
DIP.....48 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....SPHALERITE WITH DOLOMITE AND CALCITE IN PART AS REPLACEMENT OF LIMESTONE AND AS OPEN SPACE FILLING BETWEEN CRUSHED FRAGMENTS OF LIMESTONE, FORMING BRECCIA ORE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....53 UNITS...FT
OVERALL LENGTH.....40 UNITS...FT
OVERALL WIDTH.....15 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....WATSON (1905) AND CUR RIER (1935) DESCRIBE AN OPEN PIT AND INCLINED SHAFT. FIELD INVESTIGATION CONDUCTED 2/10/88. AN OPEN CUT 40 FEET LONG, 15 FEET WIDE, AND 20+ FEET DEEP AT THE HIGHWAY DRIVEN N 60 DEG W, AND A WATER FILLED SHAFT IN THE OPEN CUT WAS LOCATED. OPEN CUT IS NOW MOSTLY FILLED WITH TRASH AND GROWN OVER. SMALL, WEATH

ERED OUTSLOPE DUMP WITH SMALL FRAGMENTS OF BRECCI ATED DOLOMITE FOUND BELOW OPEN CUT.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....LIMESTONE, DOLOMITE BRECCIA
PERTINENT MINERALS (NOT ORE).....LIMESTONE, DOLOMITE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING VALLEY AND RIDGE
SIGNIFICANT LOCAL STRUCTURES.....TEAS FAULT; ANTICLINE
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION
GEOLOGY COMMENTS.....LIMESTONE ON THE DUMP IS LIGHT TO VERY DARK GRAY, DENSE AND FINELY CRYSTALLINE, WITH MINOR QUARTZ, CALCITE?/WHITE DOLOMITE ? AND FEOX STAINING ALONG FRACTURES.
GENERAL COMMENTS.....FAIRLY LARGE OPEN CUT AS COMPARED TO OTHERS IN THIS SOUTHEASTERN PORTION OF THE RYE VALLEY LEAD/ZINC DISTRICT.
SOURCE REFERENCE.....WATSON, 1905, P. 109
NON-USGS WORK.....1904 DIREXPL VIRGINIA LEAD AND ZINC CO.- PROSPECTED AREA
NON-USGS WORK.....1934 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 43
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA : VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.

16. Scott Prospect #2

MRDS-REV RECORD NUMBER.....1759
MRDS RECORD NUMBER.....VA01759
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 C-2
REPORT DATE.....88 03
INFORMATION SOURCE.....13
REPORTER.....LOVETT, JAMES A. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....SCOTT PROSPECT #2
MINING DISTRICT/AREA.....RYE VALLEY LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....07010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... ATKINS (1969) QUADRANGLE SCALE 1:24000
ELEVATION.....2520 FT
UTM NORTHING...4069590 EASTING...457910 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....ABOUT 4.8 MILES S 30 DEGREES E FROM MARION, 3.5 MILES E OF SUGAR GROVE (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....5600 FEET N 4 DEGREES W FROM THE INTERSECTION OF STATE ROADS 672 AND 701 AT SLABTOWN, 5650 FEET W OF THE INTERSECTION OF STATE ROADS 670 AND 601 AT TEAS, 850 FEET N 85 DEGREES W FROM THE SCOTT PROSPECT #1. PROSPECT PITS LOCATED IN THE FIELD 2/10/88 WHILE SEARCHING FOR SCOTT PROSPECT.
COMMODITIES PRESENT.....ZN F PYR CA DOL
ORE MATERIALS.....SPHALERITE, FLUORITE, PYRITE, CALCITE, DOLOMITE
COMMODITY INFO COMMENTS.....NO LEAD (GALENA) REPORTED, ZINC IS THE PRIMARY ORE OCCURING WITH DEEP VIOLET COLORED FLUORITE; PYRITE WAS REPORTED BY WATSON ON THE DUMP, BUT RARE; WHITE CRYSTALLIZED CALCITE AND DOLOMITE ARE GANGUE MINERIAL IN THE LIMESTONE BRECCIA.
OCCUR.....PYR CA DOL
NON-PRODUCER MAIN.....ZN F
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....UNKNOWN - VIRGINIA LEAD AND ZINC COMPANY WHILE WORKING THE SCOTT #1 PROSPECT?
YEAR OF DISCOVERY.....AROUND 1905 ?
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....R.D. DAVIS
OPERATOR.....VIRPGINIA LEAD AND ZINC COMPANY ?
EXPLORATION AND DEVELOPMENT COMMENTS.....NO RECORD OF THIS PROSPECT WAS FOUND IN THE LITERATURE.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; VEIN? REPLACEMENT?
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 62 DEGREES E
DIP.....33 DEGREES SE
DEPOSIT DESCRIPTION COMMENTS.....STRONGLY FRACTURED LIMESTONE FOUND IN PROSPECT CUTS. THIN VEINS OF DOLOMITE WITH IRON STAINING OR MINOR LIGHT BROWN SPHALERITE FOUND ALONG FRACTURES. MOST LIKELY IT IS SIMILAR TO THE SCOTT #1 PROSPECT.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....60 UNITS...FT
OVERALL WIDTH.....30 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....TWO SMALL OPEN CUTS LOCATED 2/10/88 DURING FIELD EXAMINATION. BOTH WERE DRIVEN APROXIMATELY N 20 DEGREES W, PERPENDICULAR TO STRIKE. EAST CUT IS 15 FEET WIDE, 20 FEET WIDE, AND 8 FEET HIGH AT HIGHWALL. 50 FEET WEST, A SMALLER CUT IS 10 FEET WIDE, 15 FEET DEEP, AND 5 FEET HIGH AT HIGHWALL. THE PROSPECTS ARE PARTIALLY FILLED AND GROWN OVER.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....LIMESTONE, DOLOMITE
PERTINENT MINERALS (NOT ORE).....CALCITE, DOLOMITE
ORE CONTROL/LOCUS.....BRECCIATE/FRACTURED LIMESTONE
TECTONIC SETTING.....VIRGINIA VALLEY AND RIDGE
SIGNIFICANT REGIONAL STRUCTURES.....NE TRENDING VALLEY AND RIDGE
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....ROCK IS VERY LIGHT GRAY TO MEDIUM GRAY WITH DARK GREY BANDS, STRONGLY FRACTURED. STRIKE IS N 62 DEGREES E, DIP IS 33 DEGREES SE
GENERAL COMMENTS.....NO DESCRTIPTION OR REPORT OF THIS PROSPECT WAS FOUND IN THE LITERATURE. THIS MAY BE PROSPECTING ALONG A TREND CURRIER (PAGE 108) MADE NOTE OF A ZINC SHOWING 1/4 MILE SOUTHWEST OF THE SCOTT PROSPECT.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WEST VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 PAGES.

17. Van Hoy Prospect

MRDS-REV RECORD NUMBER.....1760
MRDS RECORD NUMBER.....VA01760
RECORD TYPE.....X1M
DEPOSIT NUMBER.....56 D-2
REPORT DATE.....88 03
INFORMATION SOURCE.....135
REPORTER.....LOVETT, JAMES A. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....VAN HOY PROSPECT
MINING DISTRICT/AREA.....RYE VALLEY LED/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MARION QUADRANGLE SCALE 1:24000
ELEVATION.....2440 FT
UTM NORTHING...4068080 EASTING...452460 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....5.3 MILES. S 7 DEGREES W FROM MARION, 3.5 MILES S 51 DEGREES E FROM ADWOLP (DOT SMYTH COUNTY HIGHWAY MAP, 1981).
LOCATION COMMENTS.....WATSON (1905) STATES THE PROSPECT IS 1.75 MILES 280 DEGREES E OF THE MARTIN PROSPECT. CURRIER (1935) STATES THE PROSPECT IS 1.75 MILES N 80 DEGREES W OF THE MCCARTER PROSPECT, AT THE BASE OF THE NORTH SLOPE OF A QUARTZITE RIDGE. CORRECT LOCATION IS 1.5 MILES S 70 DEGREES E FROM THE MARTIN PROSPECT, 1.5 MILES N 83 DEGREES FROM THE MCCARTER PROSPECT, 7700 FEET S 78 DEGREES E FROM THE INTERSECTION OF STATE ROADS 650 AND 702 EAST OF THOMAS BRIDGE, 5800 FEET N 88 DEGREES E FROM THE INTERSECTION OF STATE ROADS 650 AND 720 WEST OF ZION HILL CHURCH, SOUTH OF THE SOUTH FORK OF HOLSON RIVER AT THE BASE OF THE NORTH SLOPE.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
COMMODITY INFO COMMENTS.....NO LEAD (GALENA REPORTED)
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....VIRGINIA LEAD AND ZINC COMPANY
YEAR OF DISCOVERY.....1905
NATURE OF DISCOVERY.....A
OPERATOR.....VIRGINIA LEAD AND ZINC COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....WATSON (1905) REPORTED THAT PROSPECTED HAD JUST BEGUN IN APRIL, 1905, AND THAT SPHALERITE HAD BEEN FOUND. CURRIER (1935) CONFIRMED SPHALERITE WAS FOUND, BUT STATED THE PROSPECT WAS UNIMPORTANT.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; VEIN (?), REPLACEMENT (?).
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....NO DESCRIPTION OF THE DEPOSIT GIVEN IN LITERATURE. NO OUTCROP OR EXPOSURES FOUND DURING FIELD INVESTIGATION. MOST LIKELY, MINERALIZATION OCCURS AS OPEN SPACE FILLING IN FRACTURED AND CRUSTED DOLOMITE.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....NO DESCRIPTION OF THE WORKINGS WAS GIVEN IN THE LITERATURE. FIELD EXAMINATION CONDUCTED 2/9/88. MANY (+20) SMALL PITS AND TRENCHES WERE DUG ON THE NORTH SIDE OF THE SLOPE OVER AN AREA ABOUT 300 FEET LONG ALONG THE NORTH SLOPE AND 400 FEET WIDE UPSLOPE. MOST SMALL WORKINGS ARE 5 TO 10 FEET LONG, 2 TO 3 FEET DEEP AND CUT IN AN EAST-WEST DIRECTION, CREATING LUMPY TOPOGRAPHY. SMALL DUMPS ARE HEAVILY WEATHERED AND GROWN OVER.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE/LIMESTONE
ORE CONTROL/LOCUS.....FRACTURES IN THE DOLOMITE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING VALLEY AND RIDGE
PROCESS OF CONCENTRATION/ENRICHMENT.....FRACTURE FILLING, SURFACE WEATHERING (?)
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....NO GEOLOGIC DESCRIPTION GIVEN IN LITERATURE. NO OUTCROP FOUND IN AREA OF WORKINGS. SMALL WEATHERED FRAGMENTS OF LIGHT GRAY DOLOMITE FOUND ON DUMPS, BUT NO SULFIDE MINERALIZATION.
REFERENCE....CURRIER. L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 PAGES.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGIC SURVEY BULLETIN 1, 156 PAGES.

18. Ward, R. N., Prospect

MRDS-REV RECORD NUMBER.....1189
MRDS RECORD NUMBER.....W031349
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 C-5
REPORT DATE.....80 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 03
UPDATER.....LOVETT, JAMES A
SITE NAME.....WARD, R.N., PROSPECT
MINING DISTRICT/AREA.....RYE VALLEY LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....06010102 SOUTH FORK OF HOLSTON RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... ATKINS, VA. (1969) QUADRANGLE SCALE 1:24000
ELEVATION.....2550 FT
UTM NORTHING...4070010 EASTING...461880 ZONE...+17
LATITUDE.....36-46- N LONGITUDE.....081-25- W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....6.35 MILES S 48 DEG E FROM MARION, 8 MILES N 80 DEG W FROM SUGAR GROVE (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....3000 FEET N 65 DEG E FROM THE INTERSEC TION OF STATE ROADS 610 AND 670 AT ROBERTS MILL, 1150 FEET N 53 DEG W FROM THE INTERSECTION OF STATE ROADS 601 AND 674 WEST OF SUGAR GROVE, ABOUT 150 FEET SOUTH OF THE SOUTH FORK OF HOLSTON RIVER, IN THE WOODS AT THE EDGE OF AN OPEN FIELD.
COMMODITIES PRESENT.....PB
ORE MATERIALS.....GALENA
COMMODITY INFO COMMENTS.....NO SPHALERITE WAS REPORTED.
NON-PRODUCER MAIN.....PB
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....RYE VALLEY MINING COMPANY
YEAR OF DISCOVERY.....AROUND 1905
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....C. WARD
OPERATOR.....RYE VALLEY MINING COMPANY, R.N. WARD.
EXPLORATION AND DEVELOPMENT COMMENTS.....PROSPECTED IN 1905; SANK SHAFT 25 M (82 FT) DEEP, ENCOUNTERED ORE AT 23.8 M (78 FT) AND AT 25 M (82 FT).
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC, VEIN (?) REPLACEMENT (?) IN BRECCIATED ZONE.
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....NO DESCRIPTION GIVEN, PROBABLY SIMILAR TO THE RYE VALLEY MINING COMPANY MINE. MOST LIKELY, MINERALIZATION OCCURS AS OPEN SPACE FILLING AND REPLACEMENT (?) BETWEEN BRECCI ATED ZONE IN THE DOLOMITE/LIMESTONE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....82 UNITS...FT
OVERALL LENGTH.....125 UNITS...FT
OVERALL WIDTH.....20 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....ACCORDING TO WATSON (1905) ONE SHAFT WAS SUNK TO A DEPTH OF 82 FEET. FIELD EXAMINATION CONDUCTED 2/11/88. A FAIRLY LARGE CUT, ABOUT 125 FEET LONG, 8 TO 20 WIDE AND 2 TO 6 FEET DEEP WITH SMALL DUMP PILES ALONG THE CUT WAS LOCATED. OPEN CUT TRENDS N 35 DEG W. NO INDICATION OF CAVED SHAFT.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE
PERTINENT MINERALS (NOT ORE).....DOLOMITE
ORE CONTROL/LOCUS.....SHEAR ZONE ?
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING VALLEY AND RIDGE.
SIGNIFICANT LOCAL STRUCTURES.....THRUST FAULT
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....NO OUTCROP EXPOSED SOUTH OF SOUTH FORK OF HOLSTON RIVER NEAR PROSPECT.
NON-USGS WORK.....1905 DIREXPL RYE VALLEY MINING CO.- PROSPECTED
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.

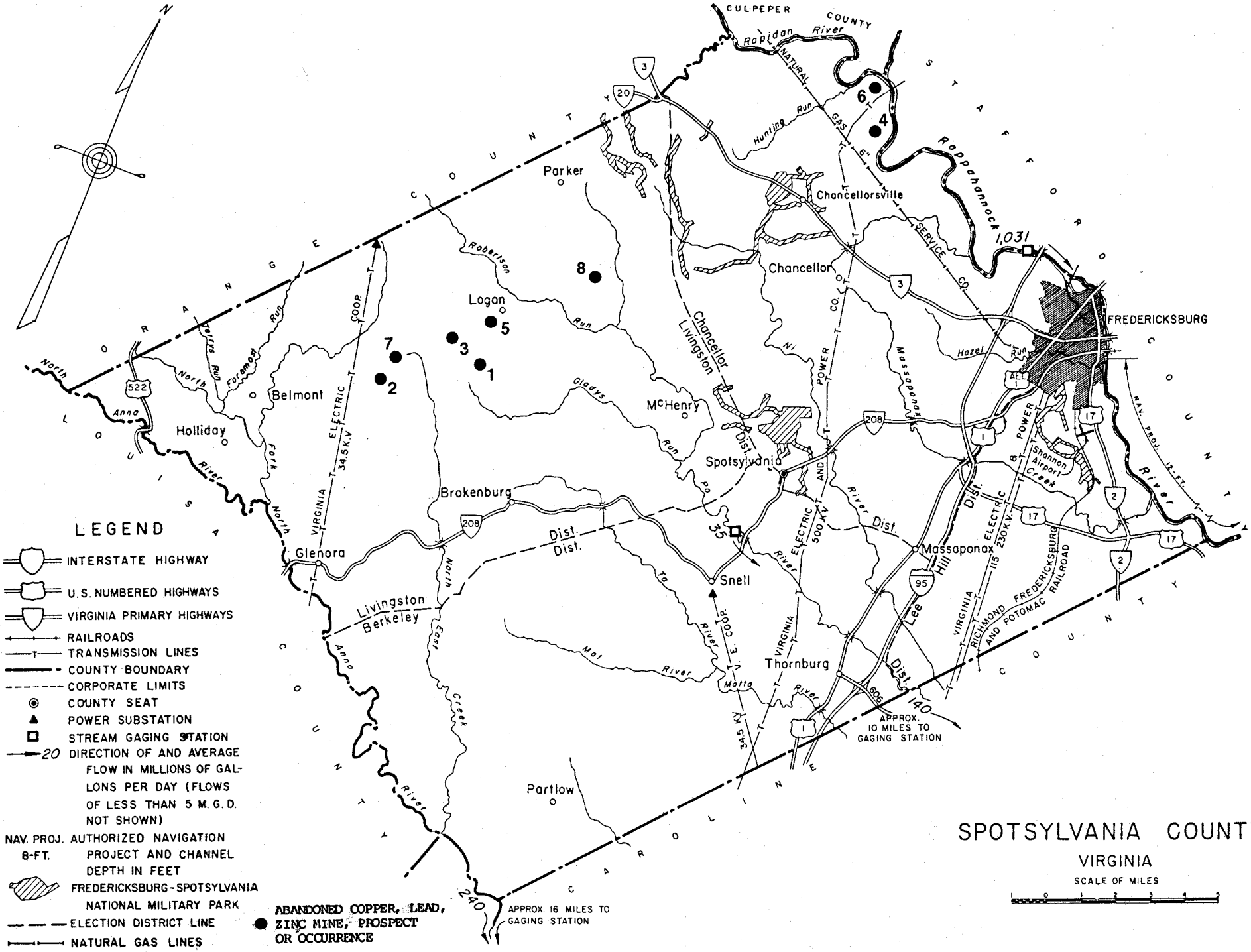
19. Wilkinson Prospect

MRDS-REV RECORD NUMBER.....1761
MRDS RECORD NUMBER.....VA01761
RECORD TYPE.....X1M
DEPOSIT NUMBER.....55 D-2
REPORT DATE.....88 03
INFORMATION SOURCE.....135
REPORTER.....LOVETT, JAMES A. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....WILKINSON PROSPECT
SYNONYM NAME.....WILKINSON PROPERTY
MINING DISTRICT/AREA.....CEDAR SPRINGS LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....SMYTH
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....05050001 CRIPPLE CREEK/NEW RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... CEDAR SPRINGS (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....2730 FT
UTM NORTHING...4071950 EASTING...468350 ZONE...+17
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....9.25 MILES S 73 DEGREES E FROM MARION, 4.15 MILES S 60 DEGREES W FROM CEDAR SPRINGS (DOT SMYTH COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....CURRIER (1935) DESCRIBES THIS PROPERTY AS 4 1/2 MILES SOUTHWEST OF CEDAR SPRINGS. IT IS 2650 FEET N 65 DEGREES E FROM THE INTERSECTION OF STATE ROADS 614 AND 676 WEST OF SUMMIT CHURCH. 2500 FEET N 85 DEGREES W FROM BENCH MARK BM N 2 (2605) AT THE INTERSECTION OF STATE ROADS 612 AND 614 AT SUMMIT. LOCAL RESIDENTS ASSISTED IN IDENTIFYING THE OLD WILKINSON FARM, WHERE NO ONE PRESENTLY LIVES. THE PROSPECT IS LOCATED IN A WOODED AREA, 350 FEET NORTH OF STATE ROAD 614.
COMMODITIES PRESENT.....ZN PB PYR
ORE MATERIALS.....SPHALERITE, GALENA, PYRITE
COMMODITY INFO COMMENTS.....CURRIER REPORTED ZINC AND LEAD, MINOR PYRITE FOUND IN ROCKS ON THE DUMP.
OCCUR.....PYR
NON-PRODUCER MAIN.....ZN PB
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....BERTHA MINERAL COMPANY ?
YEAR OF DISCOVERY.....EARLY 1900'S (?)
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DEVELOPMENT DATA AVAILABLE. CURRIER (1933) ONLY MENTIONS THIS PROSPECT BRIEFLY (PAGE 106). NO HISTORY WAS KNOWN BY LOCAL RESIDENTS. POSSIBLE WORKED DURING THE SAME PERIOD AS THE CEDAR SPRINGS MINE ON THE KEESLING PROPERTY 1905 TO 1907.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; VEIN (?), REPLACEMENT (?) ALONG FRACTURES.
DEPOSIT FORM.....IRREGULAR
STRIKE.....N 80 DEGREES E (?)
DEPOSIT DESCRIPTION COMMENTS.....MOST LIKELY MINERALIZATION OCCURS AS OPEN SPACE FILLING IN FRACTURED DOLOMITE. PACK ON THE DUMP WAS IRREGULAR BEDDED, STRONGLY JOINTED AND FRACTURED, WITH MINOR CALCITE/WHITE DOLOMITE AND TRUE PYRITE. NO DESCRIPTION OF THE DEPOSIT IS FOUND IN THE LITERATURE.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....30 UNITS...FT
OVERALL WIDTH.....20 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....SMALL PROSPECT. FIELD EXAMINATION CONDUCTED 2/16/88. ONE OPEN CUT, 30 FEET LONG, 20 FEET WIDE, AND 7 FEET HIGH AT THE HIGHWALL TRENDS N 80 DEGREES E, WITH SMALL OUTSLOPE DUMP. MINOR PYRITE, BUT NO GALENA OR SPHALERITE, FOUND NO THE DUMP.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE/LIMESTONE
ORE CONTROL/LOCUS.....FRACTURES IN DOLOMITE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING VALLEY AND RIDGE
PROCESS OF CONCENTRATION/ENRICHMENT.....FRACTURE FILLING
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....DOLOMITE WAS THIN, IRREGULAR BEDDED, MEDIUM GRAY, FRACTURED, WITH SMALL CALCITE BLEBS, TRACE PYRITE, AND THIN CALCITE VEINS. BEDS STRIKE N 68 DEGREES E AND DIP AN AVERAGE OF 65 DEGREES SE.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 PAGES.

SPOTSYLVANIA COUNTY

1. Grindstone Mine

MRDS-REV RECORD NUMBER.....1224
MRDS RECORD NUMBER.....W000447
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-008
REPORT DATE.....72 05
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 07
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....GRINDSTONE MINE
SYNONYM NAME.....HILL MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....SPOTSYLVANIA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...BELMONT , VA SECOND QUAD SCALE 1:24000
ELEVATION.....360 FT (109 M)
UTM NORTHING...4230790 EASTING...257780 ZONE...+18
LATITUDE.....38-11-40N LONGITUDE.....077-45-57W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....2.2 KM (1.4 MI) EAST OF PORTERS
LOCATION COMMENTS.....0.6 KM (0.4 MI) NNE OF STATE ROAD 612, 0.56 KM (0.35 MI) BY ROAD EAST OF JUNCTION WITH STATE ROAD 606.
COMMODITIES PRESENT.....AU AG PYR PB ZN



LEGEND

- INTERSTATE HIGHWAY
- U.S. NUMBERED HIGHWAYS
- VIRGINIA PRIMARY HIGHWAYS
- RAILROADS
- TRANSMISSION LINES
- COUNTY BOUNDARY
- CORPORATE LIMITS
- COUNTY SEAT
- POWER SUBSTATION
- STREAM GAGING STATION
- 20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
- NAV. PROJ. 8-FT. AUTHORIZED NAVIGATION PROJECT AND CHANNEL DEPTH IN FEET
- FREDERICKSBURG-SPOTSYLVANIA NATIONAL MILITARY PARK
- ELECTION DISTRICT LINE
- NATURAL GAS LINES
- ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE

SPOTSYLVANIA COUNTY

VIRGINIA

SCALE OF MILES

ORE MATERIALS.....SPHALERITE, PYRITE, CHALCOPYRITE, GALENA, NATIVE GOLD
MAJOR.....AU
OCCUR.....AG PYR PB ZN
PRODUCTION.....S
STATUS AND ACTIVITY.....6
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....CHESAPEAKE CORP OF VA
OPERATOR.....NEW JERSEY ZINC CO
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, THREE CAVED PITS AND SEVERAL DUMPS EVIDENT.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE, SPECULAR HEMATITE, MAGNETITE (?)
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, COLUMBIA SYNCLINE
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GENERAL COMMENTS.....THOUGH TWO SEPARATE WORKINGS, THE LITERATURE DOES NOT DISTINGUISH WELL BETWEEN THE GRINDSTONE AND NEW GRINDSTONE MINES. WATSON (T L, 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA, J P BELL CO, 618 P) REFERS TO EXISTENCE OF MINE. THE UPDATING REPORTER CONSIDERS THE GRINDSTONE TO BE AN OLDER WORKING, POSSIBLY PRE-1900, WHILE THE NEW GRINDSTONE INCLUDES THOSE WORKINGS REFERRED TO BY MCCASKEY (1911, 1912).
NON-USGS WORK.....1905 DIREXPL POSSIBLE BEGINNING OF DEVELOPMENT.
NON-USGS WORK.....1955 OTHER NEW JERSEY ZINC CO: LEASED PROPERTY.
NON-USGS WORK.....1974 RECON VA DIV MIN RES: INSPECTED SITE.
REFERENCE....LUTTRELL, G.W., 1966, VA. MIN. RES. REPORT 7, P. 59.
REFERENCE....MCCASKEY, H D, 1911, GOLD, SILVER, COPPER, LEAD, AND ZINC IN THE EASTERN STATES IN 1910 (MINE PRODUCTION), IN MINERAL RESOURCES OF THE UNITED STATES, CALENDAR YEAR 1910, PT. 1, METALS: US GEOLOGICAL SURVEY, P 675-691.
REFERENCE....MCCASKEY, H D, 1912, GOLD, SILVER, COPPER, LEAD, AND ZINC IN THE EASTERN STATES IN 1911 (MINE PRODUCTION), IN MINERAL RESOURCES OF THE UNITED STATES, CALENDAR YEAR 1911, PT 1, METALS: US GEOLOGICAL SURVEY, P 873-888.
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P
PRODUCTION COMMENTS.....THERE IS NO INDICATION OF THE AMOUNT OF ORE PRODUCED.

2. Marva Prospect

MRDS-REV RECORD NUMBER.....1231
MRDS RECORD NUMBER.....W000450
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-011
REPORT DATE.....72 05
INFORMATION SOURCE.....1,2
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....80 01
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D.C.)
SITE NAME.....MARVA PROSPECT
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....SPOTSYLVANIA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...BELMONT , VA. SECOND QUAD SCALE 1:24000
ELEVATION.....390 FT (119 M)
UTM NORTHING...4227070 EASTING...254590 ZONE...+18
LATITUDE.....38-09-36N LONGITUDE.....077-48-03W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.3 KM (0.8 MI) SE OF JONES.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED BY VDMR. ABOUT 0.3 KM (0.2 MI) WEST OF EXTENSION OF HAILEY MILL ROAD, 2.6 KM (1.6 MI) NORTH OF JUNCTION WITH STATE ROAD 601. ADDITIONAL WORKINGS LOCATED ABOUT UTM N 4227800., E 254910.
COMMODITIES PRESENT.....ZN PB CU AU AG PYR
ORE MATERIALS.....SPHALERITE, GALENA, CHALCOPYRITE, PYRITE, PROBABLY NATIVE GOLD AND NATIVE SILVER
OCCUR.....ZN PB CU AU AG
NON-PRODUCER MAIN.....ZN PB
NON-PRODUCER MINOR.....CU AU AG PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1920
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DEVELOPMENT INFORMATION LOCATED.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE
DEPOSIT SIZE.....SMALL
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST, METAQUARTZITE
AGE OF IGNEOUS ROCK.....PAL-TRI
IGNEOUS ROCK TYPE.....PERIDOTITE, DIABASE
PERTINENT MINERALS (NOT ORE).....QUARTZ, MUSCOVITE (SERICITE)
ORE CONTROL/LOCUS.....QUARTZ VEINS
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, COLUMBIA SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....FROM VOLCANIC EXHALATIONS (?).
FORMATION AGE.....EPAL
FORMATION AGE.....PAL(?)
FORMATION AGE.....TRI
IGNEOUS UNIT AGE.....PAL(?)
IGNEOUS UNIT AGE.....TRI
GEOLOGY COMMENTS.....IGNEOUS ROCKS OCCUR AS DIKES ABOUT 0.3 KM TO EITHER SIDE OF #1 WORKINGS. ORE OCCURS IN QUARTZ VEINS IN HOST ROCK.
GENERAL COMMENTS.....THERE IS NOT VERY MUCH INFORMATION ABOUT THIS MINE.
NON-USGS WORK.....DIREXPL DEPOSIT PROSPECTED
REFERENCE....CLINE, J.H., WATSON, T.L., AND WRIGHT, F.J., 1921, A GEOLOGIC MAP OF THE PYRITE-GOLD BELT IN LOUISA AND SPOTSYLVANIA COUNTIES, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY, 1 SHEET, SCALE 1:63360.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
SOURCE OF PRODUCTION INFORMATION.....LUTTRELL (1966)
PRODUCTION COMMENTS.....NO MENTION OF WHETHER OR NOT THERE WAS ANY PRODUCTION.

3. New Grindstone Mine

MRDS-REV RECORD NUMBER.....1218
MRDS RECORD NUMBER.....W029533
RECORD TYPE.....X1M
REPORT DATE.....79 07
INFORMATION SOURCE.....1,3
FILE LINK ID.....VDMR
REPORTER.....MEINTZER , ROBERT E. (D.C. LE VAN)
SITE NAME.....NEW GRINDSTONE MINE

MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....SPOTSYLVANIA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...BELMONT, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....395 FT (120 M)
UTM NORTHING...4231210 EASTING...256780 ZONE...+18
LATITUDE.....38-11-52N LONGITUDE.....077-46-39W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....1.3 KM (0.8 MI) NE OF PORTERS.
LOCATION COMMENTS.....0.72 KM (0.45 MI) OFF NORTH SIDE OF STATE ROAD 606, 0.5 KM (0.3 MI) BY ROAD NW OF JUNCTION WITH STATE ROAD 612.
COMMODITIES PRESENT.....AU AG ZN PB PYR
ORE MATERIALS.....NATIVE GOLD, SPHALERITE, PYRITE, CHALCOPYRITE, GALENA
MAIN ORE MINERALS.....NATIVE GOLD
MINOR ORE MINERALS.....SPHALERITE, PYRITE, CHALCOPYRITE, GALENA
MAJOR.....AU
OCCUR.....AG ZN PB PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1910 (?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1910 (?)
OWNER (PRESENT/LAST).....CHESAPEAKE CORP. OF VA.
OPERATOR.....NEW JERSEY ZINC CO.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....IN 1974, THREE WATER-FILLED SHAFTS, AND TEN HILLSIDE TRENCHES AND CUTS EVIDENT.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST, GNEISS
AGE OF IGNEOUS ROCK.....TRI
IGNEOUS ROCK TYPE.....DIABASE
PERTINENT MINERALS (NOT ORE).....QUARTZ, LIMONITE, SPECULAR HEMATITE, MAGNETITE (?)
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, COLUMBIA SYNCLINE
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION.
IGNEOUS UNIT AGE.....TRI
IGNEOUS UNIT NAME.....DIABASE DIKE
GEOLOGY COMMENTS.....DIABASE DIKE LOCATED ABOUT 0.4 KM WEST OF MINE.
GENERAL COMMENTS.....THOUGH TWO SEPARATE WORKINGS, THE LITERATURE DOES NOT DISTINGUISH WELL BETWEEN THE NEW GRINDSTONE AND GRINDSTONE MINES. THE NEW GRINDSTONE IS PROBABLY THE MINE TO WHICH REFERRED BY MCCASKEY (1911, 1912) AND IS THE LATER DEVELOPED MINE.
NON-USGS WORK.....1910 DIREXPL PROBABLE FIRST ATTEMPT AT DEVELOPMENT
NON-USGS WORK.....1955 OTHER NEW JERSEY ZINC CO: LEASED PROPERTY
NON-USGS WORK.....1974 RECON VA. DIV. MIN. RES.: INSPECTED SITE.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, IN PRESS.
REFERENCE....MCCASKEY, H.D., 1911, GOLD, SILVER, COPPER, LEAD, AND ZINC IN THE EASTERN STATES IN 1910 (MINE PRODUCTION), IN MINERAL RESOURCES OF THE UNITED STATES, CALENDAR YEAR 1910, PT. 1, METALS: U.S. GEOLOGICAL SURVEY, P. 675-691.
REFERENCE....MCCASKEY, H.D., 1912, GOLD, SILVER, COPPER, LEAD, AND ZINC IN THE EASTERN STATES IN 1911 (MINE

PRODUCTION), IN STATES, CALENDAR GEOLOGICAL SURVEY, P. 873-
MINERAL RESOURCES OF THE UNITED YEAR 1911, PT. 1, METALS: U.S. 888.
PRODUCTION COMMENTS.....THERE IS NO INDICATION OF PRODUCTION; IT WAS PROBABLY SMALL.

4. Pruitt No. 4 Prospect

MRDS-REV RECORD NUMBER.....1211
MRDS RECORD NUMBER.....W000432
RECORD TYPE.....X1M
DEPOSIT NUMBER.....GK-030
REPORT DATE.....72 05
INFORMATION SOURCE.....1,2,4
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....80 01
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D.C.)
SITE NAME.....PRUITT NO. 4 PROSPECT
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....SPOTSYLVANIA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02-RAPPAHANNOCK RIVER
SECOND QUADRANGLE NAME...SALEM CHURCH, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....210 FT (64 M)
UTM NORTHING...4247280 EASTING...271850 ZONE...+18
LATITUDE.....38-20-47N LONGITUDE.....077-36-38W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....6.6 KM (4.1 MI) NORTH OF CHANCELLOR.
LOCATION COMMENTS.....LOCATION NOT FIELD CHECKED. 0.4 KM (0.2 MI) ENE OF END OF FARM LANE, 0.85 KM (0.5 MI) BY ROAD NE OF JUNCTION WITH STATE ROAD 620, 0.5 KM (0.3 MI) NORTH OF JUNCTION WITH STATE ROAD 616.
COMMODITIES PRESENT.....ZN CU PB PYR GRF
ORE MATERIALS.....SPHALERITE, GALENA, CHALCOPYRITE, PYRITE, GRAPHITE
COMMODITY INFO COMMENTS.....MINERALOGY OF DEPOSIT NOT DELINEATED; PROBABLY SPHALERITE, CHALCOPYRITE, AND GALENA. SOME GRAPHITE NOTED.
OCCUR.....ZN CU PB
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....CU PB PYR GRF
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....1958 (?)
NATURE OF DISCOVERY.....A
OPERATOR.....BEEBS, INC.
ECONOMIC COMMENTS.....DEPOSIT NOT CONSIDERED ECONOMICALLY WORKABLE.
EXPLORATION AND DEVELOPMENT COMMENTS.....LITTLE INFORMATION AVAILABLE ON THIS PROSPECT. DRILLED BY BEERS, INC. IN 1958 TO EVALUATE GOSSAN. DRILLED AS AN OFFICE OF MINERAL EXPLORATION (OME) PROJECT.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, GOSSAN, LENS(?), MASSIVE SULFIDE(?)
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....SEVERAL HOLES DRILLED AND FOUR SHALLOW PITS DUG.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....METAQUARTZITE, CHLORITE-SERICITE-QUARTZ SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, COLUMBIA SYNCLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....SUBAQUEOUS VOLCANIC EMANATIONS (?)
FORMATION AGE.....EPAL
FORMATION NAME.....PETERS CREEK QUARTZITE MEMBER, CHOPAWAMSIC
GEOLOGICAL DESCRIPTIVE NOTES.....MINE ITSELF IS IN PETERS CREEK QUARTZITE.
NON-USGS WORK.....1958 DIREXPL BEERS, INC.: DRILLED PROSPECT, PROSPECT PITS DUG.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.

5. Roney Prospect

MRDS-REV RECORD NUMBER.....1225
MRDS RECORD NUMBER.....W000446
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-007
REPORT DATE.....72 05
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 07
UPDATER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....RONEY PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....SPOTSYLVANIA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...BELMONT SECOND QUAD SCALE 1:24000
ELEVATION.....320 FT (97.5 M)
UTM NORTHING...4232650 EASTING...258130 ZONE...+18
LATITUDE.....38-12-40N LONGITUDE.....077-45-45W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 2.6 KM (1.6 MI) NNE OF MASTINS CORNER.
LOCATION COMMENTS.....ON CATHARPIN RUN, 1.0 KM (0.6 MI) OFF THE S SIDE OF STATE ROAD 608 AT LOGAN, VA.
COMMODITIES PRESENT.....AU AG ZN PB CU PYR
ORE MATERIALS.....PROBABLY NATIVE GOLD AND NATIVE SILVER, SPHALERITE, GALENA, CHALCOPYRITE, PYRITE
NON-PRODUCER MAIN.....AU
NON-PRODUCER MINOR.....AG ZN PB CU PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....TWO CAVED PITS, ONE MEASURES 18.3 M BY 5.5 M WITH 1.2 M MAX. DEPTH. IT EXPOSES QUARTZ-SERICITE SCHIST, HAS A SMALL CAVED DUMP OF MOSTLY SCHIST AND SOME QUARTZ. THE OTHER PIT MEASURES 6.1 M BY 1.3 M , AND IS SHALLOW WITH MOSTLY LOOSE WHITE QUARTZ IN IT. A FEW PILES OF WHITE TO BROWN QUARTZ. AS SEEN IN 1974 BY P. SWEET.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST, QUARTZITE
PERTINENT MINERALS (NOT ORE).....QUARTZ
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE
FORMATION AGE.....EPAL
GEOLOGY COMMENTS.....QUARTZ IS WHITE TO IRON-STAINED; PERTINENT MINERALOGY (EXCEPT QUARTZ) IS TAKEN FROM LUTTRELL AND THIS MINERALIZATION WAS NOT REPORTED IN 1974.
NON-USGS WORK.....DIREXPL ORGANIZATION UNKNOWN; MINOR SURFACE DIGGING; NO PRODUCTION REPORTED
NON-USGS WORK.....1974 RECON VA. DIVISION OF MINERAL RESOURCES; SITE INSPECTED BY SWEET.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....LUTTRELL, G. W., 1966, BASE AND PRECIOUS METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....CLINE, J.H., WATSON, T.L., AND WRIGHT, F.J., 1921, A GEOLOGIC MAP OF THE PYRITE-GOLD BELT IN LOUISA AND SPOTSYLVANIA COUNTIES, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY, 1 P., SCALE 1:63,360.
PRODUCTION COMMENTS.....THERE IS NO MENTION OF WHETHER THERE WAS EVER ANY PRODUCTION

6. United States Mine

MRDS-REV RECORD NUMBER.....1210
MRDS RECORD NUMBER.....W000430
RECORD TYPE.....X1M
DEPOSIT NUMBER.....GK-028
REPORT DATE.....72 05
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 07
UPDATER.....MEINTZER, ROBT. E.; (LE VAN, D. C.)
SITE NAME.....UNITED STATES MINE
SYNONYM NAME.....WELFORD MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....SPOTSYLVANIA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...SALEM CHURCH, VA SECOND QUAD SCALE 1:24000
ELEVATION.....285 FT (87 M)
UTM NORTHING...44248480 EASTING...270940 ZONE...+18
LATITUDE.....38-21-25N LONGITUDE.....077-37-17W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....6.2 KM (3.9 MI) NORTH OF FREDERICKSBURG-SPOTSYLVANIA NATIONAL MILITARY PARK.
LOCATION COMMENTS.....1.0 KM (0.6 MI) DOWN A WOODS ROAD OFF NORTH SIDE OF STATE ROAD 620, 1.1 KM (0.7 MI) BY ROAD NORTH OF JUNCTION WITH STATE ROAD 616.
COMMODITIES PRESENT.....AU ZN PB CU W V PYR
ORE MATERIALS.....PYRITE, MARCASITE, CHALCOPYRITE, SPHALERITE, GALENA, WULFENITE, VANADINITE, NATIVE GOLD
GENERAL ANALYTICAL DATA.....ASSAY OF ORE CRUSHED WAS 1 TOZ PER TON.
COMMODITY INFO COMMENTS.....GANGUE MINERALS ARE QUARTZ, SERICITE, CHLORITE, AND ANKERITE. THE GOLD TENDS TO BE COARSE, AND MANY SPECIMENS CONTAINED VISIBLE SPECKS OF FREE GOLD.
MAJOR.....AU
OCCUR.....ZN PB CU W V PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1835
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1835
OPERATOR.....NORTH AMERICAN MINING CO, INC
EXPLORATION AND DEVELOPMENT COMMENTS.....A MILL WAS ERECTED IN 1865, AND IN 1868 THERE WAS A 125-FT. SHAFT. NORTH AMERICAN MINING CO. INC. PROSPECTED THE MINE IN 1934-1935.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....LENSES AND STRINGERS
DEPTH TO TOP.....0 FT(SURFACE) UNITS...M
MAXIMUM THICKNESS.....0.61 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 30-40 DEG. E
DIP.....75 DEG. E
DEPOSIT DESCRIPTION COMMENTS.....THESE FIGURES REFER TO THE GOLD-BEARING QUARTZ VEINS. ONE VEIN DIPS 45 DEG NW

AURIFEROUS QUARTZ HAS A SUGARY TEXTURE . PARDEE AND PARK (1948) HAVE A MORE DETAILED DESCRIPTION OF THE DEPOSIT.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....38 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....SEE PLATE 21 OF PARDEE AND PARK (1948) FOR A SURFACE PLAN OF WORKINGS. IN 1974, VA DIV MIN RES RECONNAISSANCE DISCLOSED ABOUT FIFTEEN CAVED PITS AND SEVERALSMALL DUMPS.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....DIORITE, RHYOLITE OR DACITE (?), QUARTZ-CHLORITE, CHLORITE-AMPHIBOLE SCHIST.
AGE OF IGNEOUS ROCK.....EPAL
IGNEOUS ROCK TYPE.....DIORITE, RHYOLITE OR DACITE (?)
PERTINENT MINERALS (NOT ORE).....QUARTZ, SERICITE, CHLORITE, ANKERITE, SCHORL
ORE CONTROL/LOCUS.....SHEAR ZONES
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, COLUMBIA SYNCLINE
SIGNIFICANT ALTERATION.....IN SOME AREAS THE DIORITE IS ALTERED TO SAPROLITE
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE ENRICHMENT
FORMATION AGE.....EPAL
FORMATION NAME.....FREDRICKSBURG COMPLEX
IGNEOUS UNIT AGE.....EPAL
IGNEOUS UNIT NAME.....FREDRICKSBURG COMPLEX
GENERAL COMMENTS.....THIS IS THE OLDEST MINE IN SPOTSYLVANIA CO. IT IS THOUGHT THAT SOME COASTAL PLAIN REMNANTS WERE ENCOUNTERED IN THE SURFACE WORKINGS (WATER-WORN COBBLES).
GEOLOGICAL DESCRIPTIVE NOTES.....THE VEINS OCCUR IN SEVERAL DIFFERENT KINDS OF COUNTRY ROCK.
REGIONAL TRENDS.....NORTHEAST-SOUTHWEST.
NON-USGS WORK.....1835 DIREXPL US MINING CO: CONDUCTED INITIAL DEVELOPMENT AND PRODUCTION.
NON-USGS WORK.....1865 DIREXPL MILL ERECTED, SHAFT DEEPENED.
NON-USGS WORK.....1934 DIREXPL NORTH AMERICAN MINING CO: PROSPECTED WORKINGS, NO NEW DEVELOPMENTS.
REFERENCE....LUTTRELL, G W, 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....MAURY, M F, 1837, NOTICE OF THE GOLD VEINS OF THE UNITED STATES' MINE, NEAR FREDERICKSBURG, VA: AMERICAN JOURNAL OF SCIENCE, V 32, NO 1, P 325-330
REFERENCE....PARDEE, J T AND PARK, C F, JR, 1948, GOLD DEPOSITS OF THE SOUTHERN PIEDMONT: U S GEOLOGICAL SURVEY PROFES SIONAL PAPER 213, 156 P
REFERENCE....SWEET, P C, 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P
REFERENCE....CREDNER, H., 1868, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VI, P. 393.
REFERENCE....LONSDALE, J.T., 1927, GEOLOGY OF THE GOLD-PYRITE BELT OF THE NORTH EASTERN PIEDMONT, VIRGINIA: VGS BULL 30, 110 P.
REFERENCE....PARK, C.F., JR., 1936, PRELIMINARY REPORT ON GOLD DEPOSITS OF THE VIRGINIA PIEDMONT: VGS BULL 44, 42 P.
REFERENCE....WATSON, T.L., 1907, GOLD AND SILVER, IN MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, J.P. BELL CO., P. 549-567.
REFERENCE....SILLIMAN, B., 1837, REMARKS ON THE GOLD MINES AND ON PARTS OF THE GOLD REGION OF VIRGINIA: AMER. JOUR. SCI. AND ARTS, VOL. 32, P. 98-130.
SOURCE OF PRODUCTION INFORMATION.....LUTTRELL REF.
PRODUCTION COMMENTS.....NO EXACT PRODUCTION FIGURES GIVEN, BUT IN 1836 THE MINE PRODUCED $600 PER WEEK IN AU.

7. Valzinco Mine

MRDS-REV RECORD NUMBER.....1253
MRDS RECORD NUMBER.....W000448
RECORD TYPE.....X1M
DEPOSIT NUMBER.....HL-009
REPORT DATE.....72 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A. / WEDOW, HELMUTH
UPDATED.....79 08
UPDATER.....BEAULIEU, HARVEY R.; (LE VAN, D. C.)
SITE NAME.....VALZINCO MINE
SYNONYM NAME.....VALZINCO-MINERAL DISTRICT
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....SPOTSYLVANIA, LOUISA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 MID-ATLANTIC (YORK RIVER)
LAND STATUS.....01
SECOND QUADRANGLE NAME...BELMONT , VA SECOND QUAD SCALE 1:24000
ELEVATION.....400 FT (122 M)
UTM NORTHING...4228850 EASTING...254940 ZONE...+18
LATITUDE.....38-10-34N LONGITUDE.....077-47-51W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....2.0 KM (1.2 MI) SSW OF PORTERS, VA
LOCATION COMMENTS.....0.6 KM (0.4 MI) ON DIRT ROAD EAST OF JUNCTION WITH STATE ROAD 612, 1.7 KM (1.05 MI) BY ROAD SOUTH OF JUNCTION WITH STATE ROAD 606 AT PORTERS
COMMODITIES PRESENT.....ZN PB CU PYR
ORE MATERIALS.....SPHALERITE, GALENA, CHALCOPYRITE, PYRITE, PYRRHOTITE
GENERAL ANALYTICAL DATA.....ORE REMOVED DURING 4 MO PERIOD IN 1940'S: 7.8% ZN, 3.7% PB (FOR ADDITIONAL ANALYSES, SEE GROSH, 1949)
COMMODITY INFO COMMENTS.....HOLLADAY VEIN IS MAINLY SPHALERITE, GALENA AND MINOR CHALCOPYRITE; THE DISCOVERY VEIN CONSISTS OF SPHALERITE, CHALCOPYRITE AND GALENA IN DECREASING ORDER
MAJOR.....ZN
MINOR.....CU
OCCUR.....PB PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-1909
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1909
OWNER (PRESENT/LAST).....NEW JERSEY ZINC CO
OPERATOR.....PANAMINUS CO.
ECONOMIC COMMENTS.....100-TON PER-DAY MILL ERECTED IN 1942
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPERATED IN 1909-1912 BY THE BERTHA MINERAL CO.; IN 1914-1918 AND 1927 BY THE VA. LEAD AND ZINC CORP.; AND IN 1942-1945 BY PANAMINUS CO.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS
MAXIMUM THICKNESS.....3 UNITS...M
DEPOSIT SIZE.....MEDIUM
STRIKE.....N40 DEG E
DIP.....65 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....MINERALIZATION OCCURS IN 2 BODIES: THE HOLLADAY VEIN (THE LARGER) AND THE DISCOVERY VEIN (114 M EAST OF HOLLADAY VEIN. LENS THICKNESS AVERAGED 1.2 M
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....110 UNITS...M
LENGTH OF WORKINGS.....1524 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....MINE WORKED FROM A SINGLE 76 M SHAFT WITH DRIFT LEVELS AT 31, 46, 62, AND 76 M. A WINZE WAS SUNK 37 M FROM THE 76 M LEVEL ABOUT 107 M NE OF THE SHAFT. A SECOND SHAFT WAS SUNK 38 M DEEP FROM A POINT ABOUT 366 M NE OF THE MAIN SHAFT HAVING A SHORT DRIFT RUNNING AT THE 30 M DEPTH. IN 1973, THE CONCRETE MILL FOUNDATION AND A SMALL CONCRETE SILO ARE AT THE MINE SITE. THE DUMP HAS MOSTLY BEEN REMOVED.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....QUARTZ-SERICITE SCHIST, CHLORITE SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, CHLORITE, MUSCOVITE, MAGNETITE
TECTONIC SETTING.....EUGEOSYNCLINE (PIEDMONT)
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, COLUMBIA SYNCLINE
SIGNIFICANT LOCAL STRUCTURES.....LOCAL FAULTING, WITH THE VEINS LOCALIZED ALONG THE FAULT FISSURES. FOLIATION OF COUNTRY ROCK STRIKES N25 DEG E AND DIPS 60-70 DEG SE
SIGNIFICANT ALTERATION.....LOW(?) GRADE METAMORPHISM
PROCESS OF CONCENTRATION/ENRICHMENT.....FROM VOLCANIC` EMANATIONS
FORMATION AGE.....EPAL
FORMATION NAME.....CHOPAWAMSIC FORMATION
GEOLOGY COMMENTS.....ZONE OF MINERALIZATION IS ABOUT 30 MILES LONG EXTENDING NORTHEAST THROUGH MINERAL AND VALZINCO. ORE OCCURS AS FISSURE ANDFAULT FILLINGS IN PRECAMBRIAN OR CAMBRIAN MICA SCHISTS OR QUARTZ-SERICITE SCHIST; ACID AND BASIC DIKES ARE NUMEROUS AND LARGEPOST-CARBONIFEROUS GRANITE BODIES ARE FOUND A FEW MILES TO THE EAST AND WEST. (MCKNIGHT, 1960?, UNPUBLISHED DATA.)
GENERAL COMMENTS.....MINE SHAFT AND TAILINGS POND ARE INDICATED ON THE BELMONT 7-1/2 MIN. TOPO SHEET.
GEOLOGICAL DESCRIPTIVE NOTES.....THE VEINS ARE IN A MINERALIZED BELT MARKED BY GOSSAN OUTCROPS EXTENDING INTERMITTENTLY FOR A DISTANCE OF 30 MILES FROM MINERAL, LOUISA CO., NORTHEASTWARD TO THE AUSTIN RUN MINE IN STAFFORD CO.
REGIONAL TRENDS.....NORTHEAST-SOUTHWEST
NON-USGS WORK.....1909 DIREXPL BERTHA MINERAL CO: FIRST DEVELOPMENT
NON-USGS WORK.....1943 DIREXPL U S B M & PANAMINAS, INC: DRILLED 9 EXPLORATORY HOLES
NON-USGS WORK.....1955 OTHER NEW JERSEY ZINC CO: CONDUCTED GEOCHEMICAL & GEOPHYSICAL SURVEYS.
REFERENCE....BROWN, W H, 1953, STRUCTURAL FRAMEWORK AND MINERAL RESOURCES OF THE VIRGINIA PIEDMONT, IN MCGRAIN, P (ED), PROCEEDINGS OF THE SOUTHEASTERN MINERAL SYMPOSIUM, 1950: KENTUCKY GEOLOGICAL SURVEY SERIES 9, SPECIAL PUBLICATION 1, P 88-111, VIRGINIA GEOLOGICAL SURVEY REPRINT SERIES 16, 1954.
REFERENCE....GROSH, W.A., 1949, INVESTIGATION OF VALZINCO LEAD ZINC MINE, SPOTSYLVANIA COUNTY, VIRGINIA: U.S. BUREAU OF MINES REPORT OF INVESTIGATIONS 4403, 7 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....POOLE, J.W., 1974, NOTES ON SOME ABANDONED COPPER, LEAD, AND ZINC MINES IN THE PIEDMONT OF VIRGINIA: VIRGINIA MINERALS, V.20, NO.2, P.10-16.
REFERENCE....MCKNIGHT, 1960, UNPUBLISHED REPORT.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE PB/ZN	EST	4.50000	MET TONS	1914-1918	5% PB, 12.5% ZN
ORE PB/ZN	SML			1942-1945	7.8% ZN, 3.7% PB, CU*NOT REPORTED

SOURCE OF PRODUCTION INFORMATION.....GROSCH (1949), POOLE (1974)

8. Whitehall Mine

MRDS-REV RECORD NUMBER.....1233
MRDS RECORD NUMBER.....W000452
RECORD TYPE.....X1M

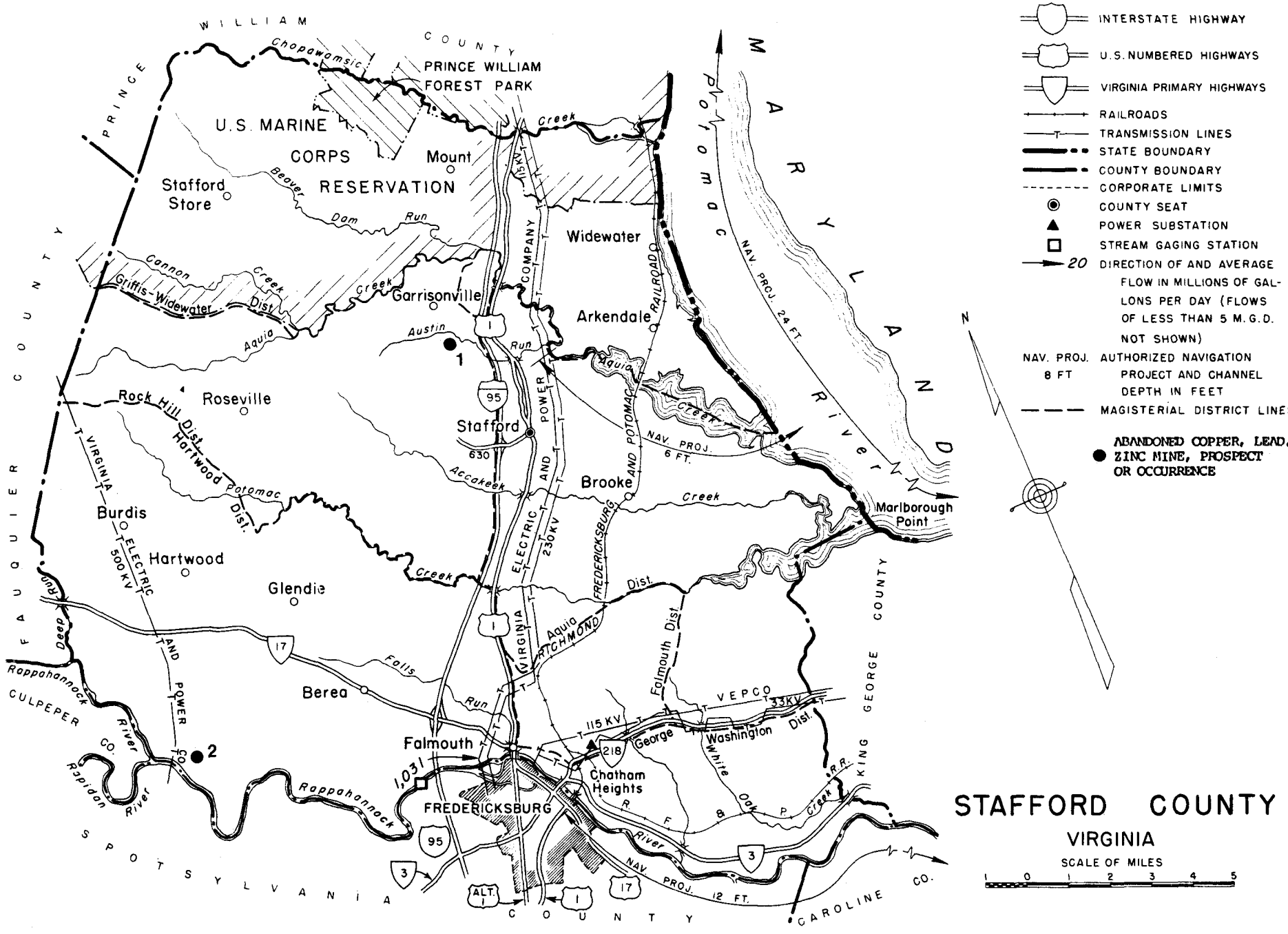
DEPOSIT NUMBER.....GL-001
REPORT DATE.....72 05
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....82 01
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....WHITEHALL MINE
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....SPOTSYLVANIA
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 YORK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...BROKENBURG SECOND QUAD SCALE 1:24000
ELEVATION.....365 FT (111.3 M)
UTM NORTHING...4235680 EASTING...260320 ZONE...+18
LATITUDE.....38-14-21N LONGITUDE.....077-44-19W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 3.0 KM (1.9 MI) NW OF SHADY GROVE CORNER.
LOCATION COMMENTS.....2.17 KM (1.35 MI) ALONG A LOGGING ROAD OFF THE N SIDE OF STATE ROAD 608 ABOUT 2.65 KM (1.65 MI) BY ROAD W OF ITS INTERSECTION WITH STATE ROAD 612.
COMMODITIES PRESENT.....AU TE PB
ORE MATERIALS.....AURIFEROUS PYRITE, GALENA, TELLURIUM, NATIVE GOLD
COMMODITY INFO COMMENTS.....NATIVE TELLURIUM FOUND ENCRUSTING THE GOLD, AND BISMUTH TELLURIDE MINERAL CONTAINING SELENIUM ARE MENTIONED IN LUTTRELL (1966).
MAJOR.....AU
OCCUR.....TE PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1806
NATURE OF DISCOVERY.....B
YEAR OF FIRST PRODUCTION.....1848
YEAR OF LAST PRODUCTION.....1884 (?)
PRODUCTION YEARS.....1848-1881
EXPLORATION AND DEVELOPMENT COMMENTS.....GOLD IN PLACE WAS FIRST DISCOVERED IN 1806. THE MINE WAS WORKED BETWEEN THE YEARS 1848 AND 1884, EXCEPT DURING THE CIVIL WAR. SILLIMAN STATES THAT $10,000 IN GOLD WAS FOUND WITHIN AN AREA OF 20 SQUARE FEET AT THE MINE IN JUST A FEW DAYS. ANOTHER REPORT STATES THAT AT A DEPTH OF 8.5 M (28 FT), IN A SPACE OF 3 SQUARE FEET, $160,000 OF PURE GOLD WAS OBTAINED (HOTCHKISS, 1881). PROPERTY HAS ALSO BEEN OPERATED AS A PLACER, WITH NUGGETS WORTH $1 TO $3, AND ONE WORTH $35, HAVING BEEN WASHED OUT PRIOR TO CREDNER'S VISIT IN 1865.
DEPOSIT TYPE.....QUARTZ VEINS, PLACER
DEPOSIT SIZE.....MEDIUM
DEPOSIT DESCRIPTION COMMENTS.....A QUARTZ VEIN CARRYING FREE GOLD AND AURIFEROUS PYRITE WAS OPENED. THE ALLUVIUM, 6.1 M (20 FT) THICK, CONTAINS FREE GOLD IN NUGGETS, AND HAS BEEN WORKED SUCCESSFULLY PRIOR TO 1865.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....30.5 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....TWO SHAFTS, 27.5 M AND 30.5 M DEEP WERE REPORTED FLOODED IN 1865 (LUTTRELL, 1966). THREE CAVED PITS, THE LARGEST ONE MEASURING 7.6 M BY 2.0 M, SEVERAL SHALLOW CUTS, A LARGE CUT-OUT AREA 22.8 M WIDE BY 4.6 M DEEP, A SMALL TRENCH, AND SEVERAL DUMP PILES CONTAINING SCHIST AND QUARTZ WERE REPORTED IN 1974.
HOST ROCK AGE.....EPAL, ORD
HOST ROCK TYPE.....SCHIST, SLATE
PERTINENT MINERALS (NOT ORE).....QUARTZ
ORE CONTROL/LOCUS.....IN QUARTZ VEINS, ALSO IN SLATE AND SCHIST
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....COLUMBIA SYNCLINE
FORMATION AGE.....EPAL
FORMATION AGE.....ORD
FORMATION NAME.....CHOPAWAMSIC FORMATION
FORMATION NAME.....QUANTICO SLATE
GENERAL COMMENTS.....$10,000 IN GOLD WAS POUND WITHIN A 20 SQ FT AREA PRIOR TO 1837.
NON-USGS WORK.....1848 DIREXPL WHITEHALL MINING CO.; TWO SHAFTS DEVELOPED IN INTERVALS UNTIL 1884.
NON-USGS WORK.....1974 RECON VIRGINIA DIVISION OF MINERAL RESOURCES; SITE INSPECTED BY SWEET, P. C.
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....SWEET, P. C., 1971, GOLD MINES AND PROSPECTS IN VIRGINIA: VIRGINIA MINERALS VOL. 17, PP. 25-35, VIRGINIA DIVISION OF MINERAL RESOURCES.
REFERENCE....LUTTRELL, G. W., 1966, BASE- AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REP. 7, 167 P.
REFERENCE....CLINE, J.H., WATSON, T.L., AND WRIGHT, F.J., 1921, A GEOLOGIC MAP OF THE PYRITE-GOLD BELT IN LOUISA AND SPOTSYLVANIA COUNTIES, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY, 1 P., SCALE 1:63,360.
REFERENCE....CREDNER, H., 1868, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VI, P. 371.
REFERENCE....WATSON, T.L., 1907, GOLD AND SILVER, IN MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, J.P. BELL CO., P. 549-567.
REFERENCE....HOTCHKISS, J., 1881, GOLD-MINING IN VIRGINIA: THE VIRGINIAS, VOL. 2, P. 182.
REFERENCE....SILLIMAN, B., 1837, REMARKS ON THE GOLD MINES AND ON PARTS OF THE GOLD REGION OF VIRGINIA: AMERICAN JOURNAL OF SCIENCE AND ARTS, VOL. 32, P. 98-130.

ANNUAL PRODUCTION
ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE
ORE MED VALUED AT $1,800,000
SOURCE OF PRODUCTION INFORMATION.....LUTTRELL REF.
PRODUCTION COMMENTS.....$1,800,000 FROM 1848 TO 1881 ACCORDING TO RECORDS OF THE PHILADELPHIA MINT. (SWEET, P. C., 1971)

STAFFORD COUNTY

1. Austin Run Mine

MRDS-REV RECORD NUMBER.....1263
MRDS RECORD NUMBER.....W000438
RECORD TYPE.....X1M
DEPOSIT NUMBER.....FK-001
REPORT DATE.....72 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 08
UPDATER.....MEINTZER, ROBT. E. (LE VAN, D. C.)
SITE NAME.....AUSTIN RUN MINE
SYNONYM NAME.....GARRISONVILLE, FER-SUL, OLD DOMINION
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....STAFFORD
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 POTOMAC RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...STAFFORD, VA. SECOND QUAD SCALE 1:24000
ELEVATION.....120 FT (32 M)
UTM NORTHING...4259700 EASTING...288660 ZONE...+18
LATITUDE.....38-27-45N LONGITUDE.....077-25-20W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....3.9 KM (2.4 MI) SW OF AQUIA
LOCATION COMMENTS.....JUST NW OF STATE ROAD 684, 1.1 KM (0.7 MI) BY ROAD SW OF JUNCTION WITH STATE ROAD 610.
COMMODITIES PRESENT.....PYR CU
ORE MATERIALS.....PYRITE, CHALCOPYRITE
MAJOR.....PYR
OCCUR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1906(?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1910
OWNER (PRESENT/LAST).....FER-SUL COMPANY(?)
OPERATOR.....FER-SUL COMPANY(?)
ECONOMIC COMMENTS.....MILL ERECTED
EXPLORATION AND DEVELOPMENT COMMENTS.....MINE OPENED IN 1906. FIRST PRODUCTION WAS IN 1910 UNDER AUSTIN RUN MINING CO.; NO FURTHER PRODUCTION UNTIL 1917. OLD DOMINION SULPHUR CO. PURCHASED PROPERTY IN 1912 AND CONTINUED DEVELOPMENT. LATER OWNERS/OPERATORS INCLUDE WESTERN PYRITE CO. AND FER-SUL CO. LAST PRODUCTION WAS IN 1920.
DEPOSIT TYPE.....STRATA-BOUND MASSIVE SULFIDE
DEPOSIT FORM.....POD/LENS, IRREGULAR
MAXIMUM WIDTH.....1.5 UNITS...M*
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....*WIDTH IS AVERAGE.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....197 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....DEVELOPED BY ONE SHAFT 197 M DEEP WHICH ENTERED VERTICALLY FOR 106 M, THEN BECAME INCLINED.
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....HORNBLENDE-QUARTZ SCHIST, HORNBLENDE-CHLORITE-SERICITE SCHIST, QUARTZ-SERICITE SCHIST
IGNEOUS ROCK TYPE.....DIORITE, QUARTZ DIORITE
PERTINENT MINERALS (NOT ORE).....HORNBLENDE, QUARTZ, CHLORITE, EPIDOTE, GARNET, MUSCOVITE
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, COLUMBIA SYNCLINE
SIGNIFICANT LOCAL STRUCTURES.....COUNTRY ROCK FOLIATION STRIKES N.33 DEG.E. AND DIPS 50 DEG. SE. (LONSDALE, 1927) OR N.35-45 DEG.E AND 60-80 DEG.NW.TO VERTICAL (WATSON, 1920)
SIGNIFICANT ALTERATION.....LOW GRADE METAMORPHISM (?)
FORMATION AGE.....CRET
FORMATION AGE.....EPAL
FORMATION AGE.....(?)
FORMATION AGE.....(?)
FORMATION NAME.....PATUXENT FORMATION
FORMATION NAME.....CHOPAWAMSIC FORMATION
FORMATION NAME.....DIORITE GABBRO COMPLEX
FORMATION NAME.....QUARTZ DIORITE
IGNEOUS UNIT AGE.....(?)
IGNEOUS UNIT AGE.....(?)
IGNEOUS UNIT NAME.....DIORITE GABBRO COMPLEX
IGNEOUS UNIT NAME.....QUARTZ DIORITE
GEOLOGY COMMENTS.....COUNTRY ROCK IS FINELY FOLIATED. CHOPAWAMSIC IS HOST FORMATION. IGNEOUS BODIES LOCATED 0.4 KM TO NW. CRETACEOUS ROCK LOCATED 0.6 KM TO SE. LONSDALE (1927) CONSIDERS THE CHLORITE SCHIST TO BE OF SEDIMENTARY PARENTAGE, WHILE KINKEL (1967) CONSIDERS THE QUARTZ-SERICITE SCHIST TO HAVE ORIGINALLY BEEN A RHYOLITE OR RHYOLITIC CRYSTAL TUFF.
GENERAL COMMENTS.....ALSO SEE U.S.G.S. MINERAL RESOURCES OF


LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
NAV. PROJ. 8 FT AUTHORIZED NAVIGATION PROJECT AND CHANNEL DEPTH IN FEET
MAGISTERIAL DISTRICT LINES
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
N
STAFFORD COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5
PRINCE WILLIAM COUNTY
PRINCE WILLIAM FOREST PARK
U.S. MARINE CORPS RESERVATION
Mount
Stafford Store
Widewater
Garrisonville
Arkendale
Roseville
Stafford
Brooke
Burdis
Hartwood
Glendie
Berea
Falmouth
FREDERICKSBURG
Chatham Heights
Marlborough Point
MARYLAND
Potomac River
NAV. PROJ. 24 FT.
NAV. PROJ. 6 FT.
NAV. PROJ. 12 FT.
FAUQUIER COUNTY
CULPEPER CO.
SPOTSYLVANIA COUNTY
KING GEORGE COUNTY
CAROLINE CO.
Chopawamsic Creek
Beaver Dam Run
Cannon Creek
Griffis-Widewater Dist.
Aquia Creek
Austin Run
Rock Hill Dist.
Hartwood Dist.
Potomac Dist.
Accakeek Creek
Falls Run
Deep Run
Rappahannock River
Rapidan River
Falmouth Dist.
George Washington Dist.
White Oak Creek
R.F. & P. R.R.
VIRGINIA ELECTRIC AND POWER COMPANY
VIRGINIA ELECTRIC AND POWER CO.
FREDERICKSBURG AND POTOMAC RAILROAD
RICHMOND
VEPCO
1,031
1
2
95
17
218
3
ALT. 1

U.S. FOR YEARS 1910 AND 1912 FOR GENERAL INFORMATION.
GEOLOGICAL DESCRIPTIVE NOTES.....COUNTRY ROCK FINELY FOLIATED. SCHISTOSITY STRIKES N 33 DEG. E AND DIPS 50 DEG. E.
WORK DONE BY USGS.....1962 OTHER A.R. KINKEL, JR.: PROF. PAPER 558.
NON-USGS WORK.....1906 DIREXPL MINE OPENED
NON-USGS WORK.....1910 DIREXPL AUSTIN RUN MINING CO.: FIRST PRODUCTION
NON-USGS WORK.....1973 RECON VA. DIV. MIN. RES.: INSPECTED SITE
REFERENCE....KINKEL, A.R., JR., 1967, THE ORE KNOB COPPER DEPOSIT, NORTH CAROLINA, AND OTHER MASSIVE SULFIDE DEPOSITS OF THE APPALACHIANS: U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 558, 58 P.
REFERENCE....LONSDALE, J.T., 1927, GEOLOGY OF THE GOLD-PYRITE BELT OF THE NORTH EASTERN PIEDMONT, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 30, 110 P.
REFERENCE....POOLE, J.L., 1973, IRON SULFIDE MINES IN VIRGINIA: VIRGINIA MINERALS, V.19, NO.3, P.29-33.
REFERENCE....WATSON, T.L., 1920, VIRGINIA; IN SMITH, P.S., SULPHUR, PYRITES, AND SULPHURIC ACID; IN U.S. GEOLOGICAL SURVEY, MINERAL RESOURCES OF THE UNITED STATES, 1917, PART 2 - NONMETALS, P. 51-55.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
PYR	ACC	0.61000	MET TONS	1920	SULFUR PRODUCTION
PYR	ACC	0.85800	MET TONS	1918	SULFUR PRODUCTION, VALUE: $15630
PYR	ACC	1.96300	MET TONS	1917	SULFUR PRODUCTION, VALUE: $8106
PYR	ACC	0.50800	MET TONS	1910	SULFUR PRODUCTION, VALUE: $4800

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
PYR	ACC	3939.	MET TONS	1910-1920	SULFUR PRODUCTION, *VALUE: $28,536

SOURCE OF PRODUCTION INFORMATION.....LONSDALE REFERENCE, P. 10.
PRODUCTION COMMENTS.....NO PRODUCTION: 1906-1908, 1911-1914, 1916, 1919. NO AVAILABLE FIGURES (BUT PROBABLY NO PRODUCTION): 1909, 1915.

RESERVES AND POTENTIAL RESOURCES

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE		SML			

RESERVES AND RESOURCES COMMENTS.....THERE IS PROBABLY A SMALL AMOUNT OF ORE LEFT.

2. Eagle Mine

MRDS-REV RECORD NUMBER.....1256
MRDS RECORD NUMBER.....W000429
RECORD TYPE.....X1M
DEPOSIT NUMBER.....GK-027
REPORT DATE.....72 05
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....WRIGHT, NANCY A.
UPDATED.....79 07
UPDATER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....EAGLE MINE
SYNONYM NAME.....RAPPAHANNOCK, SMITH, MORGAN AND RAPPAHANNOCK
MINING DISTRICT/AREA.....GOLD-PYRITE BELT
COUNTRY.....US STATE.....VA COUNTY.....STAFFORD
COUNTRY NAME...UNITED STATES STATE NAME...VIRGINIA
PHYSIOGRAPHIC PROVINCE.....02 PIEDMONT
DRAINAGE AREA.....02 RAPPAHANNOCK RIVER
LAND STATUS.....01
SECOND QUADRANGLE NAME...SALEM CHURCH SECOND QUAD SCALE 1:24000
ELEVATION.....235 FT (71.6 M)
UTM NORTHING...272560 EASTING...272400 ZONE...+18
LATITUDE.....38-21-30N LONGITUDE.....077-35-15W
ACCURACY.....UNKNOWN PRECISION
POSITION FROM NEAREST LOCALITY.....ABOUT 7.32 KM (4.55 MI) W OF BEREA, VA.
LOCATION COMMENTS.....ABOUT 1.0 KM (0.6 MI) S FROM THE END OF STATE ROAD 651
COMMODITIES PRESENT.....AU AG ZN PB PYR
ORE MATERIALS.....NATIVE GOLD, PYRITE, SPHALERITE, ARGENTIFEROUS GALENA
COMMODITY INFO COMMENTS.....HOST ROCK ALSO CONTAINS MICROSCOPIC TOURMALINE CRYSTALS.
MAJOR.....AU
OCCUR.....AG ZN PB PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1834 (?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1834
YEAR OF LAST PRODUCTION.....1894
PRODUCTION YEARS.....1834-1894
OPERATOR.....RAPPAHANNOCK GOLD MINING COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....THE MINE WAS PROBABLY FIRST WORKED ABOUT 1834. CREDNER REPORTED THE MINE HAD BEEN OPERATED FOR 20 YEARS, BUT IT WAS CLOSED DOWN AT THE BEGINNING OF THE CIVIL WAR. FROM 1879 TO 1886 MINING MAGAZINES INDICATED CONSIDERABLE ACTIVITY TOOK PLACE. IN 1879 IT WAS NOTED IN ONE ARTICLE THAT WORKINGS WERE 26 M (85 FT) DEEP, THE VEIN WAS 1 M (3.5 FT) WIDE, AND 30 MEN WERE EMPLOYED. IN 1885, 10,000 TONS OF ORE WAS REPORTED BLOCKED OUT ON 3 LEVELS. THE ORE CARRIED $10 PER TON AND 50 PER CENT OF THE GOLD WAS FREE. THE MINE WAS OPERATED IN 1894 BY THE RAPPAHANNOCK GOLD MINING CO. WHEN IT WAS CLOSED, REPORTEDLY DUE TO FLOODING. A MILL CONSISTING OF A 60 HORSEPOWER ENGINE, 2 BOILERS, 10 STAMPS, 2 SHAKING TABLES, AND 2 CHILEAN MILLS, WAS ERECTED DURING THE EARLY OPERATIONS.
DEPOSIT TYPE.....VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR, PINCH AND SWELL
MAXIMUM WIDTH.....2 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N 45 DEG E
DIP.....85 DEG E
DEPOSIT DESCRIPTION COMMENTS.....THE VEIN VARIES IN THICKNESS FROM 36 CM (14 IN) TO 2 M (6.5 FT) AND CONSISTS OF WHITE, COMPACT QUARTZ, WITH PYRITE, ARGENTIFEROUS GALENA, AND FREE GOLD IN FINE PARTICLES AND IN MOSS-LIKE CONCRETIONS.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....76.2 UNITS...M
LENGTH OF WORKINGS.....183 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....A 9 M-DIAMETER AREA FLOODED BY RUST-WATER, WHICH WAS PROBABLY THE MAIN SHAFT OPENING, A STONE WALL, SEVERAL SCATTERED DUMPS ALONG A CREEK AND SCATTERED BRICKS AND SEVERAL HILLSIDE CUTS WERE REPORTED BY P. C. SWEET IN 1974. CREDNER REPORTED A SHAFT 49 M (160 FT) DEEP HAD BEEN SUNK ON THE VEIN, THE CHIEF WORKINGS CONSIST OF GALLERIES DRIVEN FROM THIS SHAFT TO THE SOUTHWEST. WATSON REPORTED WORKINGS REACHED A DEPTH OF 76 M (250 FT) AND A LENGTH OF 183 M (600 FT).
HOST ROCK AGE.....EPAL
HOST ROCK TYPE.....GARNET-BIOTITE-QUARTZ SCHIST
PERTINENT MINERALS (NOT ORE).....QUARTZ, TOURMALINE
ORE CONTROL/LOCUS.....WITHIN QUARTZ VEINS WHICH INTRUDE SCHIST
TECTONIC SETTING.....PIEDMONT
SIGNIFICANT REGIONAL STRUCTURES.....COLUMBIA SYNCLINE , NE-SW TREND
FORMATION AGE.....EPAL
FORMATION NAME.....FREDERICKSBURG COMPLEX
GEOLOGY COMMENTS.....SCHIST IS DARK GRAY AND BORDERS WITH THE QUANTICO SLATE NEAR THIS AREA, THOUGH THE CONTACT OF THESE ROCK BODIES HAS NOT BEEN MAPPED IN THIS AREA. THE SCHIST CONTAINS MICROSCOPIC TOURMALINE CRYSTALS AND IS FINELY FOLIATED.
GEOLOGICAL DESCRIPTIVE NOTES.....THE SCHIST IS DARK GRAY AND FINELY FOLIATED. ITS STRIKE IS N 45 DEG. E. AND DIPS 85 DEG. E.
NON-USGS WORK.....1894 DIREXPL THE RAPPAHANNOCK GOLD MINING CO. FINISHED ITS EXTENSIVE WORKINGS OF THE MINE.
NON-USGS WORK.....1974 RECON VA. DIVISION OF MINERAL RESOURCES: SITE INSPECTED
REFERENCE....SWEET, P.C., 1980, GOLD IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, PUBLICATION 19, 77 P.
REFERENCE....LONSDALE, J. T., 1927, GEOLOGY OF THE GOLD-PYRITE BELT OF THE NORTHEASTERN PIEDMONT, VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 30, 110 P.
REFERENCE....WATSON, T. L., 1907, MINERAL RESOURCES OF VIRGINIA: J. P. BELL CO., PRINTERS AND BINDERS, LYNCHBURG, VIRGINIA.
REFERENCE....CREDNER, H., 1868, REPORT OF EXPLORATIONS ON THE GOLD FIELDS OF VIRGINIA AND NORTH CAROLINA: AMER. JOUR. MNG., VOL. VI, P. 393.
REFERENCE....MORRILL, P., 1972, VIRGINIA MINES AND MINERALS: ROCKS AND MINERALS, VOL. 47, NO. 7-8, P. 442.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE AU	ACC	10.000	TONS	1885	$10./TON, 50% OF THE AU WAS FREE

SOURCE OF PRODUCTION INFORMATION.....LONSDALE(1927).
PRODUCTION COMMENTS.....CREDNER (1868) REPORTED THAT SHORTLY BEFORE THE MINE CLOSED AT THE BEGINNING OF THE CIVIL WAR THE MINE YIELDED FOR EVERY TWENTY-FIVE DOLLARS OF WAGES THIRTY OUNCES OF GOLD: BUT AT OTHER TIMES THE AVERAGE YIELD HAS BEEN SIXTEEN OUNCES OF GOLD FOR EVERY TWENTY-FIVE DOLLARS OF WAGES. LONSDALE (1927) STATES THAT IN 1886 ELEVEN NUGGETS WEIGHING FROM 1 TO 18 DWT. WERE FOUND.

RESERVES AND POTENTIAL RESOURCES

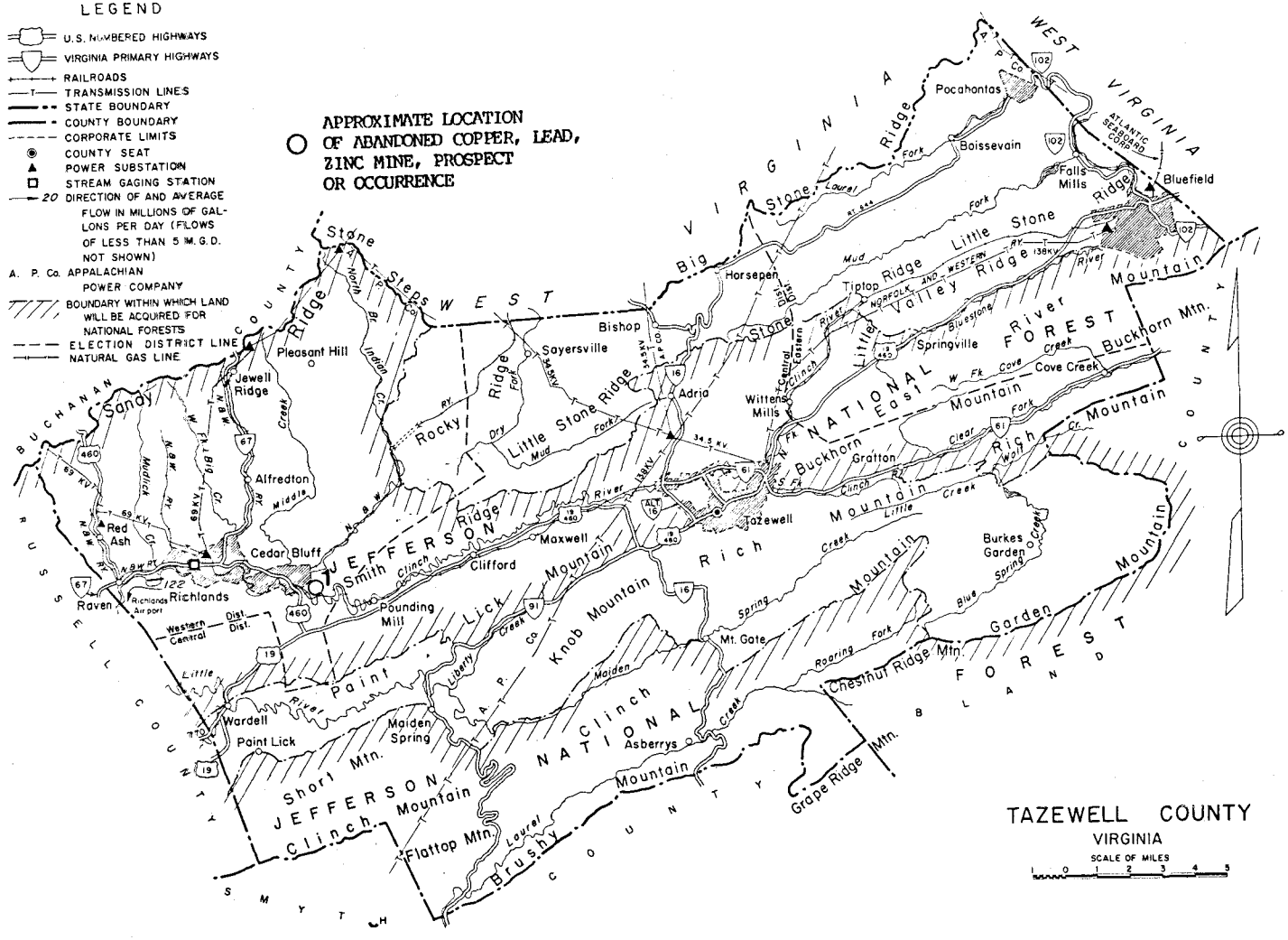
ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE AU	EST	10.000	TONS		VALUED AT $10/TON

SOURCE OF RESERVES AND RESOURCES INFORMATION.....LUTTRELL REFERENCE.

TAZEWELL COUNTY

1. Cedar Bluff Prospect

MRDS-REV RECORD NUMBER.....1290
MRDS RECORD NUMBER.....W031350
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....CEDAR BLUFF PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....TAZEWELL
COUNTRY NAME...UNITED STATES STATE NAME...


LEGEND
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
STATE BOUNDARY
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
A. P. Co. APPALACHIAN POWER COMPANY
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
ELECTION DISTRICT LINE
NATURAL GAS LINE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
WEST VIRGINIA
BUCHANAN COUNTY
RUSSELL COUNTY
SMYTH COUNTY
BLAND COUNTY
Pocahontas
Boissevain
Falls Mills
Bluefield
Horsepen
Bishop
Sayersville
Adria
Tiptop
Springville
Wittens Mills
Grafton
Tazewell
Maxwell
Clifford
Pleasant Hill
Jewell Ridge
Alfredton
Cedar Bluff
Red Ash
Raven
Richlands
Richlands Airport
Pounding Mill
Wardell
Paint Lick
Maiden Spring
Mt. Gate
Asberrys
Burkes Garden
Cove Creek
Buckhorn Mtn.
Chestnut Ridge Mtn.
Grape Ridge Mtn.
Flattop Mtn.
Short Mtn.
Knob Mountain
Paint Lick Mountain
Little Stone Ridge
Rocky Ridge
Big Stone Ridge
Little Stone Ridge
Valley Ridge
Buckhorn Mountain
Rich Mountain
Garden Mountain
Brushy Mountain
Clinch Mountain
Sandy Ridge
Stone Steps
Jefferson Ridge
Smith Ridge
Clinch Mountain
Jefferson National Forest
Clinch National Forest
Buckhorn East Mountain
Little River Mountain
Western Dist.
Central Dist.
Atlantic Seaboard Corp.
TAZEWELL COUNTY
VIRGINIA
SCALE OF MILES
1 0 1 2 3 4 5

PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....06 CLINCH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... RICHLANDS, VA.; POUNDING MILL, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2000 FT (610 M)
LATITUDE.....37-05- N LONGITUDE.....081-45- W
POSITION FROM NEAREST LOCALITY.....ABOUT 0.35 KM (0.2 MI) SOUTHEAST OF THE TOWN LIMITS OF CEDAR BLUFF
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. ABOUT 400 M (1250 FT) EAST OF JUNCTION OF U.S. HWY. 460 AND U.S. HWY. BUSINESS 460 SE OF CEDAR BLUFF.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....PROBABLY SPHALERITE AND GALENA
COMMODITY INFO COMMENTS.....CURRIER (1935) DOES NOT DISCUSS THE ORE MINERALOGY.
NON-PRODUCER MAIN.....ZN PB
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
DEPOSIT TYPE.....PROBABLY REPLACEMENT/DISSEMINATED
DEPOSIT SIZE.....SMALL(?)
STRIKE.....NE
HOST ROCK AGE.....CAMB
HOST ROCK TYPE.....LIMESTONE
PERTINENT MINERALS (NOT ORE).....CALCITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, ST. CLAIR FAULT, STONE MOUNTAIN FAULT, PINE MOUNTAIN-RICHLANDS FAULT
FORMATION AGE.....CAMB
FORMATION AGE.....CAMB
FORMATION NAME.....NOLICHUCKY FORMATION (LOWER SHALE MEMBER)
FORMATION NAME.....HONAKER FORMATION
GEOLOGY COMMENTS.....CURRIER (1935) STATES OCCURRENCE IS LOCATED IN DENSE LIMESTONE AT BASE OF NOLICHUCKY FORMATION.
WORK DONE BY USGS.....1897 GEOLMAP M.R. CAMPBELL: U.S.G.S. GEOL. ATLAS NO. 44.
NON-USGS WORK.....DIREXPL DEPOSIT REPORTEDLY PROSPECTED.
REFERENCE....CAMPBELL, M.R., 1897, TAZEWELL, VIRGINIA-WEST VIRGINIA: U.S. GEOLOGICAL SURVEY, GEOLOGIC ATLAS OF THE U.S., FOLIO 44.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA : VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....MILICI, R.C., SPIKER, C.T., JR., AND WILSON, J.M., 1963, GEOLOGIC MAP OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, 1 SHEET, SCALE 1:500,000.

WARREN COUNTY

1. EMPIRE MINE

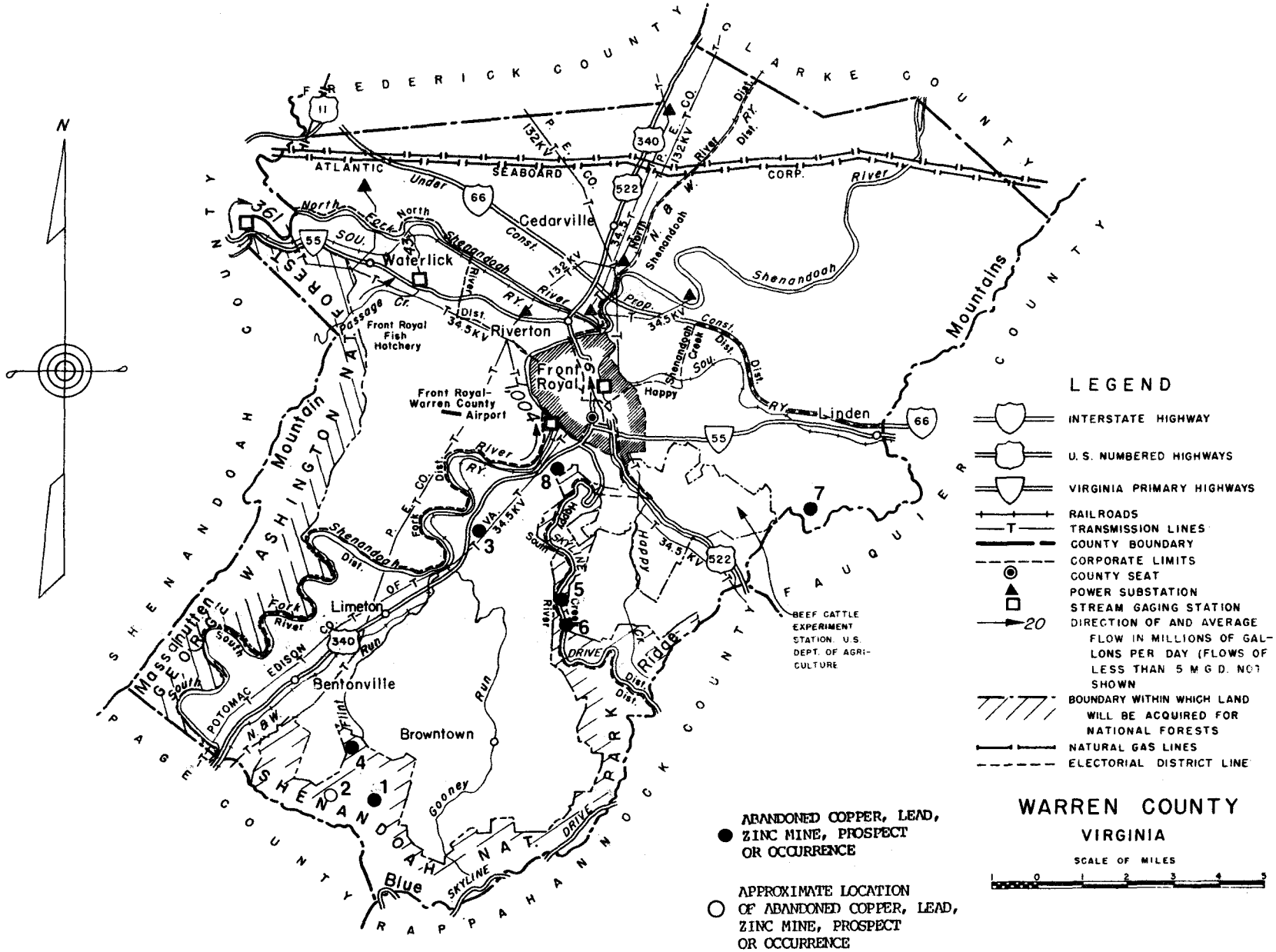
MRDS-REV RECORD NUMBER 1327
MRDS RECORD NUMBER.....W030926
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....EMPIRE MINE
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....WARREN
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....45
QUADRANGLE NAME..... BENTONVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2230 FT (680 M)
UTM NORTHING...4296760 EASTING...735160 ZONE...+17
LATITUDE.....38-47-24N LONGITUDE.....078-17-33W
POSITION FROM NEAREST LOCALITY.....5.1 KM (3.2 MI) SE OF BENTON VILLE.
LOCATION COMMENTS.....IN SHENANDOAH NATIONAL PARK, SE OF SUMMIT OF MATTHEWS ARM, 2.2 KM (1.4 MI) ESE FROM END OF STATE ROAD 630.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....CUPRITE, BORNITE, MALACHITE, AZURITE
COMMODITY INFO COMMENTS.....MINERALIZATION OCCURS IN ALTERED EPIDOTIZED BASALT. MALACHITE OCCURS ALONG JOINT PLANES.
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-WW1
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-WW1
ECONOMIC COMMENTS.....ORE DID NOT AVERAGE MORE THAN 1 OR 2% CU.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, PORPHYRY
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....SOME AMYGDULES IN METABASALT CONTAIN BORNITE.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....27 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN 1978, A SHALLOW TRENCH AND A CAVED SHAFT (5M DIAMETER) WERE NOTED. ORIGINAL WORKINGS CONSISTED OF A SHAFT 27 M (90 FT) DEEP AND SEVERAL SMALL BLAST HOLES.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT, AMYGDALOIDAL METABASALT
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT, AMYGDALOIDAL METABASALT
PERTINENT MINERALS (NOT ORE).....EPIDOTE, QUARTZ, SERPENTINE, ASBESTOS, CALCITE, FELDSPAR
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
NON-USGS WORK.....1905 DIREXPL PROSPECT PITS DUG, SHAFT SUNK.
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES: SITE INSPECTED.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VDMR, PUB. 27, P. 39-52.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.

2. F. C. Hartley Prospect

MRDS-REV RECORD NUMBER.....1768
MRDS RECORD NUMBER.....VA01768
RECORD TYPE.....X1M
REPORT DATE.....87 09
INFORMATION SOURCE.....13
REPORTER.....SWEET, PALMER C.
REPORTER AFFILIATION.....VDMR
SITE NAME.....F.C. HARTLEY PROSPECT
COUNTRY.....US STATE.....VA COUNTY.....WARREN
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE PROVINCE
DRAINAGE AREA.....02070005 MID ATLANTIC
LAND STATUS.....45
QUADRANGLE NAME..... BENTONVILLE (1972) QUADRANGLE SCALE 1:24000
ELEVATION.....1800 FT
UTM NORTHING...7297000 EASTING...734000 ZONE...+17
ACCURACY.....EST WITHIN 500 METERS
LOCATION COMMENTS.....IN SHENANDOAH NATIONAL PARK, OFF THE W-SW SIDE OF THE SUMMIT OF MATHEWS ARM.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....MALACHITE, AZURITE
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....1870'S
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....SHAFT SUNK IN THE 1870'S
DEPOSIT FORM.....VEIN/SHEAR
DESCRIPTION OF WORKINGS COMMENTS.....IN 1978, THERE WAS NO EVIDENCE OF THE SHAFT NOR OF A DUMP.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA, IN CONTRIBUTIONS TO VIRGINIA GEOLOGY-IV: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA, LYNCHBURG, VA. J.P. BELL CO., 618 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.

3. Gooney-Manor Mine

MRDS-REV RECORD NUMBER.....1308
MRDS RECORD NUMBER.....W030927
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1 3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....82 06
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....GOONEY-MANOR MINE
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....WARREN
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FRONT ROYAL, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....645 FT (197 M)
UTM NORTHING...4307220 EASTING...739340 ZONE...+17
LATITUDE.....38-52-59N LONGITUDE.....078-14-27W
POSITION FROM NEAREST LOCALITY.....4.6 KM (2.9 MI) SW OF CITY LIMITS OF FRONT ROYAL.
LOCATION COMMENTS.....0.4 KM (0.25 MI) OFF SE SIDE OF U.S. HWY. 340, 0. 6 KM (0.4 MI) BY ROAD NORTH OF JUNCTION WITH STATE ROAD 607.
COMMODITIES PRESENT.....CU AU AG
ORE MATERIALS.....CHALCOPYRITE, MALACHITE, BORNITE, NATIVE COPPER
COMMODITY INFO COMMENTS.....GOLD AND SILVER REPORTED IN TRACE AMOUNTS ONLY; NATIVE COPPER IS IN TRACE AMOUNTS.
MAJOR.....CU
MINOR.....AU AG
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE-WW1
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE-WW1
OPERATOR.....VIRGINIA AND PITTSBURGH COPPER CO.
DEPOSIT TYPE.....VEIN/SHEAR ZONE; SECONDARY ENRICHMENT
DEPOSIT FORM.....LENS



FREDERICK COUNTY
CLARKE COUNTY
SHENANDOAH COUNTY
PAGE COUNTY
RAPPAHANNOCK COUNTY
FAUQUIER COUNTY
ATLANTIC SEABOARD CORP.
Cedarville
Waterlick
Riverton
Front Royal
Front Royal Fish Hatchery
Front Royal-Warren County Airport
Happy
Linden
Limeton
Bentonville
Browntown
Blue
Mountains
Mountain
Massanutten
WASHINGTON NAT. FOREST
SHENANDOAH NAT. PARK
Ridge
BEEF CATTLE EXPERIMENT STATION, U.S. DEPT. OF AGRICULTURE
LEGEND
INTERSTATE HIGHWAY
U. S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M G D. NOT SHOWN
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
NATURAL GAS LINES
ELECTORIAL DISTRICT LINE
ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
WARREN COUNTY
VIRGINIA
SCALE OF MILES

DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....COPPER MINERALIZATION OCCURS ALONG CREVICES AND IN FRACTURES FORMED IN GREENSTONE. THE DEPOSIT WAS DESCRIBED AS "A LENS-SHAPED ORE BODY AT THE CONTACT OF THE PORPHYRY AND LIMESTONE." SULFIDES WERE FOUND AT A DEPTH OF 107 M (350 FT) IN A 2 M (7 FT) THICK ORE BODY THAT WAS TRACED 244 M (800 FT) ALONG STRIKE.
DESCRIPTION OF WORKINGS COMMENTS.....CONCRETE FOUNDATIONS, HILLSIDE PITS AND EXCAVATIONS WERE REPORTED PRESENT IN 1975, WITH THE LARGEST PIT ABOUT 12M (40 FT) BY 6M (20 FT) AND WITH A DEPTH OF 3M (10 FT).
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT
AGE OF MINERALIZATION.....PREC-ORD
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE
ORE CONTROL/LOCUS.....FAULTING, FRACTURES
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....FRONT ROYAL FAULT
PROCESS OF CONCENTRATION/ENRICHMENT.....PERCOLATING SURFACE WATERS CONCENTRATED MATERIAL LEACHED FROM COPPER-RICH IGNEOUS ROCKS.
FORMATION AGE.....PREC
FORMATION AGE.....ORD
FORMATION NAME.....CATOCTIN FORMATION
FORMATION NAME.....ROCKDALE RUN FORMATION
GEOLOGY COMMENTS.....FAULTING BROUGHT PRECAMBRIAN CATOCTIN GREENSTONE INTO CONTACT WITH ORDOVICIAN LIMESTONE.
GENERAL COMMENTS.....AREA PARTLY OVERGROWN WITH VEGETATION
NON-USGS WORK.....1909 DIREXPL VIRGINIA AND PITTSBURGH COPPER CO., SEVERAL CARLOADS OF ORE REMOVED, ASSAYED AT 5% COPPER.
NON-USGS WORK.....1975 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED.
REPORTS AVAILABLE.....HANEY, M., 1909, GOONEY MANOR: ENGINEERING MINING JOURNAL, VOL. 88, P. 235. ALSO: HANEY, M., 1918, COPPER DEPOSITS OF THE BLUE RIDGE MOUNTAINS: ENGINEERING MINING JOURNAL, VOL. 106, P. 248.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VA. DIV. MIN. RES. PUBLICATION 27, P. 39-52.
REFERENCE....RADER, E.K., AND BIGGS, T.H., 1975, GEOLOGY OF THE FRONT ROYAL QUADRANGLE, VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES REPORT OF INVESTIGATIONS 40, 91 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VA. DIVISION OF MINERAL RESOURCES MINERAL RESOURCES REPORT 7, 167 P.
SOURCE OF PRODUCTION INFORMATION.....HANEY (1909)
PRODUCTION COMMENTS.....IN 1909 SEVERAL CARLOADS OF ORE ASSAYED AT 5 PERCENT COPPER WERE PRODUCED.

4. Martin Mine

MRDS-REV RECORD NUMBER.....1323
MRDS RECORD NUMBER.....W030929
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....MARTIN MINE
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....WARREN
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....45
QUADRANGLE NAME..... BENTONVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1500 FT (457 M)
UTM NORTHING...4298810 EASTING...734810 ZONE...+17
LATITUDE.....38-48-31N LONGITUDE.....078-17-45W
POSITION FROM NEAREST LOCALITY.....3.2 KM (2.0 MI) SE OF BENTONVILLE
LOCATION COMMENTS.....HALFWAY DOWN THE RIDGE SLOPE OF MATTHEWS ARM, IN SHENANDOAH NATIONAL PARK
COMMODITIES PRESENT.....CU
ORE MATERIALS.....MALACHITE, AZURITE, BORNITE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1903
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1903
OWNER (PRESENT/LAST).....U.S. GOVERNMENT
OPERATOR.....MR. S.M. BOYD, PHILADELPHIA
DEPOSIT TYPE.....VEIN
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 50 DEG E
DIP.....20 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....ORE MINERALIZATION PRESENT IN EPIDOTIZED CATOCTIN GREENSTONE WHICH IS PARTLY STAINED BY IRON OXIDE ALONG FRACTURES. ONE PROMINENT JOINT HAS A STRIKE N. 32 DEG. W. AND A VERTICLE DIP.
DEPTH BELOW SURFACE.....21.3 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....IN EARLY 1978, THE SITE WAS REPORTED AS A WATER-FILLED SHAFT 5.5 M BY 4M, A SHALLOW PIT 2M IN DIAMETER AND 0.6M DEEP, A LARGE HIGH DUMP OF DENSE DARK GREENSTONE WITH MALACHITE STAIN ALONG WITH QUARTZ AND SERPENTINE. ORIGINALLY SHAFT WAS AT LEAST 21 M (70 FT) DEEP.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT, EPIDOSITE
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT
AGE OF MINERALIZATION.....PREC
PERTINENT MINERALS (NOT ORE).....QUARTZ, CALCITE, CHLORITE, FELDSPAR, EPIDOTE
ORE CONTROL/LOCUS.....JOINTS
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
SIGNIFICANT ALTERATION.....WEATHERING RESIDUAL ACCUMULATION
PROCESS OF CONCENTRATION/ENRICHMENT.....PERCOLATING SURFACE WATERS LEACHED COPPER FROM ORIGINAL ORE-BEARING ROCKS
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CACTOCTIN FORMATION
NON-USGS WORK.....1903 DIREXPL S.M. BOYD, SUNK 1 SHAFT, INTERMITTENTLY WORKED FOR 1 YEAR.
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VDMR, PUB. 27, P. 39-52.
REFERENCE....PHALEN, W.C., 1906, COPPER DEPOSITS NEAR LURAY VIRGINIA: U.S. GEOLOGICAL SURVEY BULLETIN 285, 506 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VIRGINIA, J.P. BELL CO., 618 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: USGS BULL. 455, 166 P.

5. Mills Prospect

MRDS-REV RECORD NUMBER.....1309
MRDS RECORD NUMBER.....W030930
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1 3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
UPDATED.....82 06
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....MILLS PROSPECT
SYNONYM NAME.....COVE FARM PROSPECT
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....WARREN
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....45
QUADRANGLE NAME..... CHESTER GAP, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2320 FT (707 M)
UTM NORTHING...4304080 EASTING...742360 ZONE...+17
LATITUDE.....38-51-15N LONGITUDE.....078-12-26W
POSITION FROM NEAREST LOCALITY.....5.3 KM (3.3 MI) NNE OF BROWNTOWN; 500M SSE OF SIGNAL KNOB OVERLOOK.
LOCATION COMMENTS.....IN SHENANDOAH NATIONAL PARK; 2.34 KM (1.45 MI) S OF THE DICKEY RIDGE VISITOR CENTER OFF THE E SIDE OF THE SKYLINE DRIVE.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....NATIVE COPPER, MALACHITE, AZURITE, CHRYSOCOLLA, BORNITE
COMMODITY INFO COMMENTS.....BORNITE OCCURS IN LOWEST DEPTHS OF THE CUT.
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....4
OWNER (PRESENT/LAST).....U.S. GOVERNMENT
EXPLORATION AND DEVELOPMENT COMMENTS.....WORKINGS ARE LOCATED ON A LEDGE 15M LONG AND 6M WIDE ABOUT 61M BELOW THE SUMMIT OF DICKEY HILL.
DEPOSIT TYPE.....PROBABLY DISSEMINATED.
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....NO MINERALIZATION WAS SEEN IN 1978
OVERALL LENGTH.....11 UNITS...M
OVERALL WIDTH.....2 UNITS...M
OVERALL AREA OF WORKINGS.....22 UNITS...SQM
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS LOCATED ON A LEDGE 15M LONG AND 6M WIDE ABOUT 61M BELOW THE SUMMIT OF DICKEY HILL. IN 1978, THE LEDGE CONTAINED SHALLOW DEPRESSIONS, BUT NO DEFINITE OPENINGS.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT, EPIDOSITE
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....BASALT
PERTINENT MINERALS (NOT ORE).....EPIDOTE
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
GEOLOGY COMMENTS.....ROCK ON SLOPE CONSISTS OF DARK GREEN DENSE GREENSTONE, EPIDOTIZED IN PLACES
NON-USGS WORK.....DIREXPL
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZA

TION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VA. DIV. MIN. RES. PUBLICATION 27, P. 39-52.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: J.P. BELL CO., LYNCHBURG, VIRGINIA, 618 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.

6. Rudacill Prospect

MRDS-REV RECORD NUMBER.....1310
MRDS RECORD NUMBER.....W030931
RECORD TYPE.....X1M
REPORT DATE.....79 05
INFORMATION SOURCE.....1 3
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R., (LE VAN, D. C.)
UPDATED.....82 06
UPDATER.....TRIMBLE, DAVID, C.
SITE NAME.....RUDACILL PROSPECT
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....WARREN
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....45
QUADRANGLE NAME..... CHESTER GAP, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2130 FT (649 M)
UTM NORTHING...4303480 EASTING...742550 ZONE...+17
LATITUDE.....38-50-55N LONGITUDE.....078-12-19W
POSITION FROM NEAREST LOCALITY.....5 KM (3 MI) NNE OF BROWN TOWN.
LOCATION COMMENTS.....IN SHENANDOAH NATIONAL PARK ABOUT 3.08 KM (1.85 MI) S OF THE DICKEY RIDGE VISITOR CENTER; ALONG DICKEY HILL TRAIL.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....NATIVE COPPER, MALACHITE, CUPRITE, BORNITE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....1905
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1905
OWNER (PRESENT/LAST).....U.S. GOVERNMENT
DEPOSIT TYPE.....PROBABLY DISSEMINATED
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....NO CU MINERALIZATION SEEN IN 1978.
DEPTH BELOW SURFACE.....15 UNITS...M
OVERALL LENGTH.....22.8 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....SHAFT REPORTED TO RANGE IN DEPTH 6M TO 15M; NUMEROUS PITS AND SHALLOW DEPRESSIONS ALONG DICKEY HILL TRAIL REPORTED IN 1978, PITS AVERAGED 2M IN DIAMETER AND APPEARED TO BE DUG IN SOIL ONLY, NOT BEDROCK. ONE OPENCUT WAS 23 M (75 FT) LONG.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....EPIDOTE, JASPER
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM, NE-SW TREND
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
NON-USGS WORK.....1905 DIREXPL VIRGINIA AND PITTSBURG COPPER COMPANY; 2 OPENINGS MADE.
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED.
REFERENCE....SWEET, P.C., AND BELL, S.C., 1980, METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VA. DIV. MIN. RES. PUBLICATION 27, P. 39-52.
REFERENCE....WEED, W. H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES: U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: J.P.BELL CO., LYNCHBURG, VA., 618 P.

7. Sealoch Mine

MRDS-REV RECORD NUMBER.....1321
MRDS RECORD NUMBER.....W030932
RECORD TYPE.....X1M
REPORT DATE.....79 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....BEAULIEU, HARVEY R. (LE VAN, D. C.)
SITE NAME.....SEALOCH MINE
SYNONYM NAME.....SEALOCK MINE; MARSHALL MINE; RAVENSWOOD MINE
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....WARREN
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... LINDEN, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1940 FT (591 M)
UTM NORTHING...4307450 EASTING...750930 ZONE...+17
LATITUDE.....38-52-55N LONGITUDE.....078-06-26W
POSITION FROM NEAREST LOCALITY.....4.11 KM (2.55 MI) SW OF LINDEN; 0.3 KM (0.2 MI) OFF N SIDE OF SUMMIT DR. ABOUT 1.8 KM (1.1 MI) BY ROAD E OF ITS INTERSECTION WITH HIGH KNOB DRIVE.
LOCATION COMMENTS.....680M SE OF BENCHMARK ON SUMMIT OF HIGH KNOB.
COMMODITIES PRESENT.....CU
ORE MATERIALS.....NATIVE COPPER, CUPRITE, AZURITE, MALACHITE, CHALCOPYRITE, BORNITE
MAJOR.....CU
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....CIVIL WAR
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....CIVIL WAR
DEPOSIT TYPE.....VEIN
DEPOSIT FORM.....IRREGULAR
DEPOSIT DESCRIPTION COMMENTS.....NO CU MINERALIZATION WAS REPORTED SEEN IN 1978.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....24.4 UNITS...M
LENGTH OF WORKINGS.....61 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....24.4M SHAFT REPORTEDLY CALLED PHILLIPS SHAFT. 35 TONS OF GOOD ORE SHIPPED FROM THIS SHAFT, 1861; 2 OTHER SHAFTS, THE SOLOMON, AND THE SEALOCK WHICH WAS REPORTEDLY 13M DEEP AND INCLINED 70 DEG S. TUNNEL DRIVEN FROM HILLSIDE TO CONNECT WITH SOLOMON SHAFT. IN 1978, THE ABANDONED SITE WAS REPORTED AS A 2M DIAMETER PIT WITH A LARGE SPREAD OUT RIM DUMP.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....EPIDOSITE, METABASALT, DIABASE SCHIST
AGE OF IGNEOUS ROCK.....PREC
IGNEOUS ROCK TYPE.....BASALT, DIABASE
PERTINENT MINERALS (NOT ORE).....RED JASPER, QUARTZ
ORE CONTROL/LOCUS.....ALONG LINES OF JOINTING OR SCHISTOSITY
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....FRONT ROYAL FAULT
SIGNIFICANT ALTERATION.....CONCENTRATION
PROCESS OF CONCENTRATION/ENRICHMENT.....PERCOLATING SURFACE WATERS THROUGH COPPER-BEARING ROCK
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN FORMATION
IGNEOUS UNIT AGE.....PREC
IGNEOUS UNIT NAME.....CATOCTIN FORMATION
GEOLOGY COMMENTS.....FAULT IS STRIKE-SLIP ABOUT 3 KM N OF SITE TRENDING EAST-WEST.
GENERAL COMMENTS.....THE ENTIRE AREA HAS BEEN LOGGED OVER IN THE LAST 15 TO 20 YEARS (AS OF 1978), AND DEBRIS MAY HAVE FILLED PITS AND DEPRESSIONS.
NON-USGS WORK.....1861 DIREXPL 35 TONS OF CU ORE REMOVED AND SHIPPED ABROAD.
NON-USGS WORK.....1904 DIREXPL 61M SHAFT DRIVEN.
NON-USGS WORK.....1978 RECON VA. DIV. OF MINERAL RE SOURCES; SITE INSPECTED.
REFERENCE....SWEET, P.C. AND BELL, S.C., 1980 METALLIC MINERALIZATION IN THE BLUE RIDGE PROVINCE OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES PUBLICATION 27, P. 39-52.
REFERENCE...HALLADAY, C.R., 1977, TRACE ELEMENTS IN STREAM SEDIMENTS DERIVED FROM THE CATOCTIN FORMATION, NORTHERN VIRGINIA: VIRGINIA MINERALS, V. 23, N. 4, P. 34-39.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA, J.P. BELL CO., 618 P.
REFERENCE....LUTTRELL, G.W., 1966, BASE-AND PRECIOUS-METAL AND RELATED ORE DEPOSITS OF VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES, MINERAL RESOURCES REPORT 7, 167 P.
REFERENCE....WEED, W.H., 1911, COPPER DEPOSITS OF THE APPALACHIAN STATES, U.S. GEOLOGICAL SURVEY BULLETIN 455, 166 P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
CU	ACC	0.03500	TONS	1861	MORE THAN 10% CU

SOURCE OF PRODUCTION INFORMATION.....WEED (1911).

8. Virginia and Pittsburgh Copper Co. Prospect

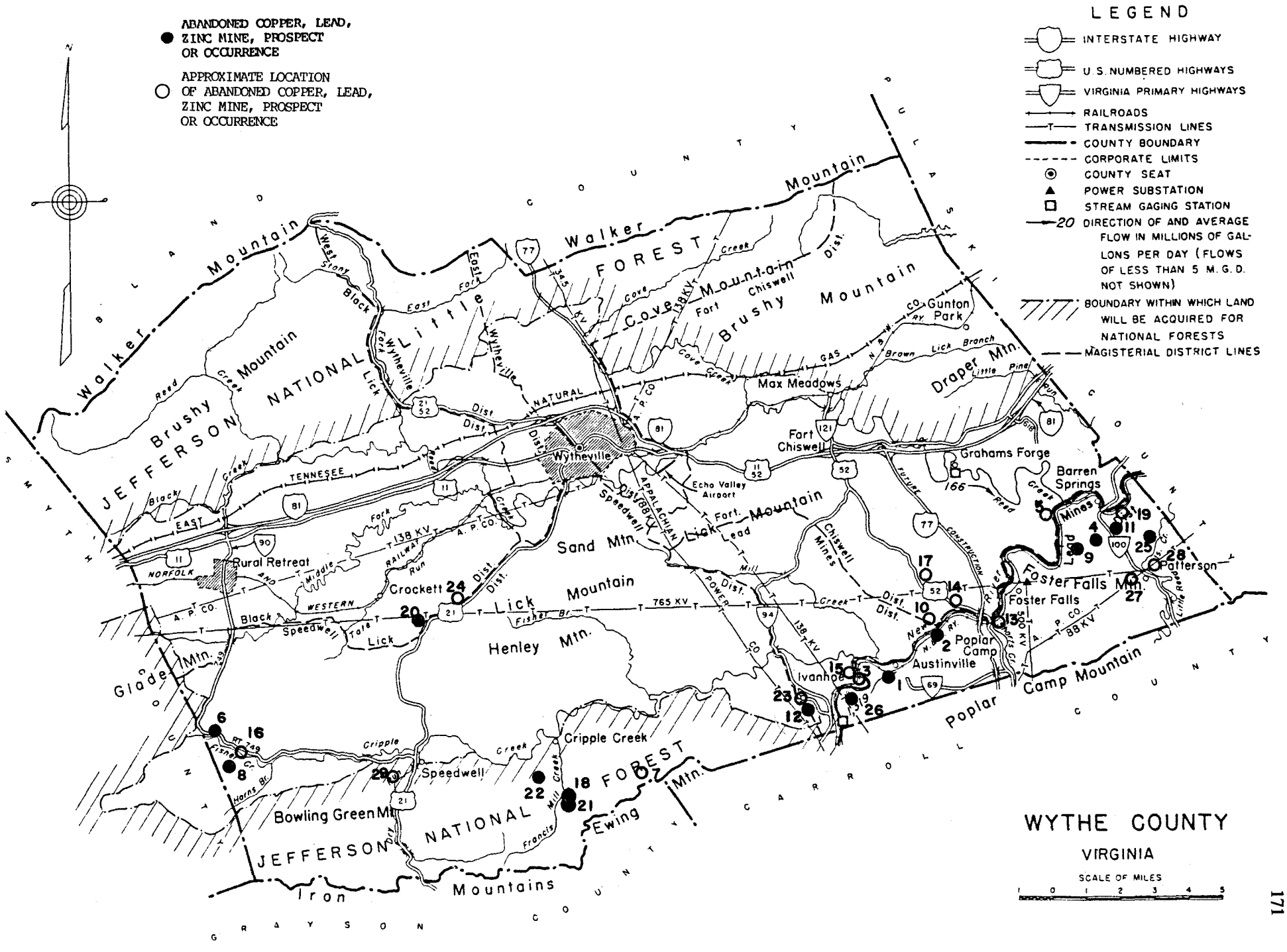
MRDS-REV RECORD NUMBER.....1324
MRDS RECORD NUMBER.....W032039
RECORD TYPE.....X1M
REPORT DATE.....82 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....VIRGINIA AND PITTSBURGH COPPER CO. PROSPECTS
MINING DISTRICT/AREA.....NORTHERN SECTION-BLUE RIDGE PROVINCE
COUNTRY.....US STATE.....VA COUNTY.....WARREN
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 BLUE RIDGE
DRAINAGE AREA.....02 SHENANDOAH RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FRONT ROYAL, VA. (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....229 M
UTM NORTHING...4308780 EASTING...742170 ZONE...+17
LATITUDE.....38-53-47N LONGITUDE.....078-12-28W
POSITION FROM NEAREST LOCALITY.....2.4 KM (1.5 MI) SOUTHSOUTHWEST OF FRONT ROYAL.
LOCATION COMMENTS.....ON THE WEST SIDE OF DICKEY RIDGE IN A RAVINE BEHIND THE KAUFFMAN FARMHOUSE ABOUT 0.5 KM (0.3 MI) SOUTH OF THE INTERSECTION OF THE KAUFFMAN DRIVEWAY AND STATE ROAD 649, 0.8 KM (0.5 MI) BY ROAD SOUTH OF ITS INTERSECTION WITH U.S. ROUTE 340. SECOND PROSPECT IS LOCATED ON THE CREST OF A WESTWARD TRENDING RIDGE 0.7 KM (0.4 MI) SOUTH-SOUTHWEST OF THE ABOVE MENTIONED PROSPECT AT UTM COORDINATES N 4308115, E 741945, ELEV. 343 M, AND 0.34 KM (0.2 MI) EAST OF STATE ROAD 649, 2.4 KM (1.5 MI) BY ROAD SOUTH OF ITS INTERSECTION WITH U.S. ROUTE 340.
COMMODITIES PRESENT.....CU

ORE MATERIALS.....MALACHITE, AZURITE, CHALCOPYRITE
NON-PRODUCER MAIN.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....VIRGINIA AND PITTSBURGH COPPER CO.
YEAR OF DISCOVERY.....EARLY 1900'S
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....NORTH PROSPECT-DOROTHY KAUFFMAN: SOUTH PROSPECT -DONALD BOHLMANN
OPERATOR.....VIRGINIA AND PITTSBURGH COPPER CO.
DEPOSIT TYPE.....VEIN/SHEAR ZONE: SECONDARY ENRICHMENT
DEPOSIT FORM.....LENSE (?)
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....NORTH PROSPECT CONSISTED OF OPEN CUT MINING WHERE THE ROCK WAS BLASTED OUT OF THE WALLS ON BOTH SIDES OF THE RAVINE. SOUTH PROSPECT CONSISTS OF 3 PITS, THE LARGEST IS ABOUT 4.6 M (15 FT) IN DIAMETER AND 1.0 M (3 FT) DEEP. SOME MALACHITE AND CHALCOPYRITE WERE SEEN AT THE NORTH PROSPECT. THE SOUTH PROSPECT CONTAINED ABUNDANT MALACHITE AND AZURITE.
HOST ROCK AGE.....PREC
HOST ROCK TYPE.....METABASALT
PERTINENT MINERALS (NOT ORE).....QUARTZ, EPIDOTE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....OROGEN
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, BLUE RIDGE ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....FRONT ROYAL FAULT
FORMATION AGE.....PREC
FORMATION NAME.....CATOCTIN GREENSTONE
REFERENCE....RADER, E.K., AND BIGGS, T.H., 1975, GEOLOGY OF THE FRONT ROYAL QUADRANGLE, VIRGINIA: VA. DIV. MIN. RES., REPT. OF INVESTIGATIONS 40, 91 P.

WYTHE COUNTY

1. AUSTINVILLE EAST MINE

MRDS-REV RECORD NUMBER.....1383
MRDS RECORD NUMBER.....K002907
RECORD TYPE.....X1M
REPORT DATE.....75 04
INFORMATION SOURCE.....1235
REPORTER.....WEEDOW, HELMUTH
REPORTER AFFILIATION.....VDMR
UPDATER.....88 03
COUNTRY/ORGANIZATION USGS....GOOD, RICHARD, S.
SITE NAME.....AUSTINVILLE EAST LEAD ZINC MINES
SYNONYM NAME.....AUSTINVILLE, VAN MATER SHAFT
MINING DISTRICT/AREA.....NEWRIVER-CRIPPLE CREEK REGION, AUSTINVILLE-IVANHOE DISTRICT
COUNTRY....US STATE.....VA COUNTY.....WYTHE
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001
LAND STATUS.....01
QUADRANGLE NAME..... AUSTINVILLE (1979) QUADRANGLE SCALE 1:24000
ELEVATION.....2200 FT
UTM NORTHING...4077700 EASTING...507100 ZONE...+17
LATITUDE.....36-50-49N LONGITUDE.....080-57-13W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....0.35 MILES SW OF AUSTINVILLE FROM STATE ROAD 636.
LOCATION COMMENTS.....SITE OF SHAFT IS ON AN ACTIVE DOLOMITE PRODUCER, THE AUSTINVILLE LIMESTONE COMPANY, A SUBSIDIARY OF JAMES RIVER LIMESTONE COMPANY, BUCHANAN, VA.
COMMODITIES PRESENT.....ZN PB DOL (FE)
ORE MATERIALS.....SPHALERITE, GALENA, HEMIMORPHITE, SMITHSONITE, HYDROZINCITE, CERUSSITE, ANGLESITE, GOETHITE, LIMONITE
COMMODITY SUBTYPES.....5
GENERAL ANALYTICAL DATA.....AT CLOSING 1981: 3% ZN, 0.4% PB; 1968: 3.7% ZN, 0.7% PB (SEE PRODUCTION TABLE 1968-1981)
COMMODITY INFO COMMENTS.....IRON FORMERLY MINED 1800'S TO EARLY 1920'S NEAR AUSTINVILLE. 60 PPM AG IN GALENA; SILVER IN GALENA TOO LOW FOR COMMERCIAL EXTRAC TION. SILVER ERRONEOUSLY REPORTED BY US BUREAU OF MINES TO BE BYPRODUCT (WEINBERG, 1988). IRON IN SPHALERITE 0.0-0.3%, CADMIUM IN SPHALERITE 0.0-0.3% (FOLEY , 1980)
MAJOR.....ZN PB DOL
MINOR.....(FE)
PRODUCTION.....L
STATUS AND ACTIVITY.....6
DISCOVERER.....COLONEL CHISWELL, BRITISH ARMY OFFICER
YEAR OF DISCOVERY.....1750-1756
NATURE OF DISCOVERY.....B
YEAR OF FIRST PRODUCTION.....1750-1756
YEAR OF LAST PRODUCTION.....1981
OWNER (PRESENT/LAST).....GULF AND WESTERN INDUSTRIES, INC. (PURCHASED NEW JERSEY ZINC COMPANY)
OPERATOR.....AUSTINVILLE LIMESTONE COMPANY CURRENTLY OPERATES A SURFACE QUARRY FOR CRUSHED STONE AND AGRICULTURAL LIME.
EXPLORATION AND DEVELOPMENT COMMENTS.....SEE GENERAL COMMENTS FOR HISTORICAL TECHNOLOGY. MODERN MINING (1925-1981) CONSISTED OF HAULING ORE BY RAIL TO UNDERGROUND CRUSHER BREAKING TO 4 INCH MAXIMUM SIZE, HOISTING, AUTOMATICALLY IN SIX TON SKIPS TO FLOTATION MILL ON SURFACE WHICH PROCESSED 2,500 TONS DAILY.
DEPOSIT TYPE.....STRATAFORM
DEPOSIT FORM.....LENSE: PENCIL SHAPED WITH LENSE-LIKE CROSS SECTION; TABULAR, SOME LENSES STAGGER.
DEPTH TO BOTTOM.....1200 UNITS...FT
MAXIMUM LENGTH.....>400 UNITS...FT
MAXIMUM WIDTH.....>100 UNITS...FT
MAXIMUM THICKNESS.....30 UNITS...FT
DEPOSIT SIZE.....LARGE
STRIKE.....NE
DIP.....SE
DEPOSIT DESCRIPTION COMMENTS.....THE AUSTINVILLE MINE IS PART OF A SYSTEM OF 17 EN ECHELON LENSES WITH VERTICAL THICKNESS OF 8 FEET AND MORE AND COMBINED PB AND ZN % OF AT LEAST 3.5 AVERAGING 4.7% (MILLER, 1985). SIMPLE MINERALOGY: SPHALERITE-PYRITE-GALENA +/- (MARCASITE-CHALCOPYRITE)(FOLEY, 1980) AVERAGING 400 FEET STRIKE LENGTH, 100 FEET DEP LENGTH, 10-30 FEET IN THICKNESS; LENSES ARE VERTICALLY STACKED, SOME CONNECTED (WEINBERG 1963, 1971). ORE BODIES ARE: SOUTHWEST, FISHERFIELD, BROWN (NOT MINED), CHISWELL, RIBBON DOLOMITE, NORTHEAST CHAFFIN, HUNDRED, FLATWOODS LOWER, AUSTINVILLE NORTHEAST, NINTH LEVEL, FORTY, MOTTLED MARKER, PYRITE, FLATWOODS UPPER (NOT MINED) AUSTINVILLE SOUTHWEST, SHARP (MILLER, 1985)
DEPTH BELOW SURFACE.....1200 UNITS...FT
OVERALL LENGTH.....6 UNITS...MILES
OVERALL WIDTH.....0.5 UNITS...MILES
DESCRIPTION OF WORKINGS COMMENTS.....MINE WORKINGS EXTEND FOR SIX MILES ALONG STRIKE AND 0.5 MILE ACROSS STRIKE, LEVELS WERE CUT EVERY 100 FEET DOWN TO 1200 FOOT DEPTH. THREE MAIN SHAFTS WERE SUNK: 1) AUSTINVILLE (VAN MATER); 2) IVANHOE, 2.6 MILES WSW OF VAN MATER; 3) FLATWOOD 1.5 MILES NE OF VAN MATER. AUSTINVILLE (VAN MATER) WAS THE FIRST MODERN SHAFT. IVANHOE AND FLATWOOD WERE MUCH LATER - 1950'S-1970.
HOST ROCK AGE.....CAMBRIAN
HOST ROCK TYPE.....RIBBON LAMINATED DOLOMITE, STROMATOLITIC DOLOMITE WITH SHALY CARBONATE LAYERS
AGE OF IGNEOUS ROCK.....- NONE IN AREA OF ORE DEPOSITS. MT. ROGERS FELSIC VOLCANICS 10 MILES TO SOUTH (LATE PREC TO CAMBRIAN)
IGNEOUS ROCK TYPE.....NONE FOUND IN EXTENSIVE DRILLING AND SURFACE MAPPING.
AGE OF MINERALIZATION.....PALEOZOIC: CAMBRIAN OR POST CAMBRIAN
PERTINENT MINERALS (NOT ORE).....PYRITE, CHALCOPYRITE, MARCASITE, FLUORITE, BARITE, GPYSUM, CHERT, ANHYDRITE, CALCITE, DOLOMITE, PLUMBO-ARAGONITE, MINIUM, MASSICOT.
ORE CONTROL/LOCUS.....ORE CONFINED TO 1300 FEET WITHIN PATTERSON AND SACCHAROIDAL MEMBERS OF SHADY DOLOMITE.
TECTONIC SETTING.....CARBONATE RAMP HOMOCLINE: WITH UPWARD SHALLOWING PLATFORM MARGIN WITH SKELETAL ALGAL REEF.
SIGNIFICANT REGIONAL STRUCTURES.....MULTIPLE, IMBRICATE, STEEP THRUST FAULTS PARALLEL TO REGIONAL STRUCTURE; FRIES THRUST
SIGNIFICANT LOCAL STRUCTURES.....AUSTINVILLE SYNCLINE, AUSTINVILLE ANTICLINE; POSTERS FALLS FAULT, LOG WASHER FAULT, VAN MATER FAULT, STAMPING GROUND FAULT, GLEAVES FAULT, CALLAHAN FAULT, IVANHOE FAULT, BLUE GRASS FAULT.
SIGNIFICANT ALTERATION.....OXIDATION AT SURFACE ON CARBONATE PINNACLES AND ALONG FAULTS TO 100 FEET BELOW SURFACE; DOLOMITE RECRYSTALLIZED IN BARREN ZONE AROUND ORE ("MET").
PROCESS OF CONCENTRATION/ENRICHMENT.....WARM BRINE DEPOSITION CONCENTRATED MOSTLY WITHIN BRECCIAS, OPEN SPACE DEPOSITION (60%) AND REPLACEMENT (?) (40%).
FORMATION AGE.....CAMBRIAN
FORMATION NAME.....SHADY DOLOMITE: PATTERSON MEMBER (USGS USAGE)=RIBBON MEMBER (NJ ZINC USAGE)
FORMATION NAME.....SHADY DOLOMITE: SACCHAROIDAL MEMBER (USGS) = AUSTINVILLE MEMBER (NJ ZINC).
IGNEOUS UNIT AGE.....- NONE IN AREA. MT. ROGERS VOLCANIC GROUP OF LATE PRECAMBRIAN TO CAMBRIAN (?) AGE.
IGNEOUS UNIT NAME.....NONE WITHIN TEN MILES OF ORE ZONE
GEOLOGY COMMENTS.....(WEINBERT, 1963, BROWN AND WEINBERG 1967, WEINBERG 1971, FOLEY 1980, FOLEY AND OTHERS, 1981). 1. THE ORE FLUIDS WERE WARM, METAL-RICH BRINES WITH TEMPERATURES OF 100-160 DEG C AND HIGH SALINITIES (10-25% EQUIV WT. NACL) BASED ON FLUID INCLUSIONS IN SPHALERITE. 2. THE ORE MINERALS ARE SIMPLE AND CONSIST LARGELY OF LENSES OF SPHALERITE-PYRITE-GALENA WITH TRACES OF MARCASITE AND CHALCOPYRITE. 3. PYRITE IS UBIQUITOUS AND IS THE FIRST MINERAL TO FORM IN ORE BODIES. IT MAKES UP ABOUT 5% OF TOTAL SULFIDES. 4. THE SPHALERITE IS BANDED, IN PLACES BOTH DARK BROWN AND HONEY COLORED AND WAS DEPOSITED CYCLICALLY. 5. ALL ORE IS DOLOMITE-HOSTED WITH VARYING AMOUNTS OF BLEACHING AND RECRYSTALLIZATION (WHITE "MET-) AROUND ORE LENSES. RECRYSTALLIZATION OF DOLOMITE WITHIN ORE HAS LED TO ALTERNATING LAYERS OF WHITE AND DARK DOLOMITE IN MUCH OF THE ORE. THERE ARE UP TO THREE GENERATIONS OF DOLOMITE. 6. THE ORE OCCURS AS BRECCIA FILLINGS AND THIN LENSLIKE REPLACEMENTS PARALLEL TO SEDIMENTARY LAYERING. FOOTWALL ORE IS GENERALLY CONFORMABLE TO BEDDING, HANGING WALL CONTACT IS IRREGULAR. 7. BRECCIATION AND DOLOMITIZATION PRECEDED ORE DEPOSITION AND IS POST SEDIMENTATION. 8. THE MAJORITY OF ORE LENSES ARE PARALLEL TO SUBPARALLEL TO FAULTS AND SEVERAL ARE STACKED NEAR FAULT ZONES. SOME OF THE STACKS ARE CONNECTED VERTICALLY. LATERAL AND STRIKE BOUNDARIES ARE BOTH ABRUPT (FAULT, JOINT) AND GRADATIONAL. 9 BOTH POST ORE AND PRE-ORE FAULTING


ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
APPROXIMATE LOCATION OF ABANDONED COPPER, LEAD, ZINC MINE, PROSPECT OR OCCURRENCE
LEGEND
INTERSTATE HIGHWAY
U.S. NUMBERED HIGHWAYS
VIRGINIA PRIMARY HIGHWAYS
RAILROADS
TRANSMISSION LINES
COUNTY BOUNDARY
CORPORATE LIMITS
COUNTY SEAT
POWER SUBSTATION
STREAM GAGING STATION
20 DIRECTION OF AND AVERAGE FLOW IN MILLIONS OF GALLONS PER DAY (FLOWS OF LESS THAN 5 M.G.D. NOT SHOWN)
BOUNDARY WITHIN WHICH LAND WILL BE ACQUIRED FOR NATIONAL FORESTS
MAGISTERIAL DISTRICT LINES
WYTHE COUNTY
VIRGINIA
SCALE OF MILES
Walker Mountain
Walker Mountain
Brushy Mountain
Brushy Mountain
Draper Mtn.
Cove Mountain
Lick Mountain
Sand Mtn.
Lick Mountain
Henley Mtn.
Glade Mtn.
Poplar Camp Mountain
Foster Falls Mtn.
Iron Mountains
Ewing Mtn.
JEFFERSON NATIONAL FOREST
Wytheville
Max Meadows
Fort Chiswell
Grahams Forge
Barren Springs
Gunton Park
Rural Retreat
Crockett
Speedwell
Bowling Green Mt.
Cripple Creek
Austinville
Poplar Camp
Ivanhoe
Foster Falls
Patterson
Echo Valley Airport
BLAND COUNTY
PULASKI COUNTY
SMYTH COUNTY
GRAYSON COUNTY
CARROLL COUNTY

ARE PRESENT BUT ONLY MINOR FAULTS INTERSECT ORE LENSES. ORE BODIES GENERALLY DO NOT MATCH ON OPPOSITE SIDES OF SAME FAULT. OXIDATION ALONG SOME FAULTS HAS BEEN OBSERVED TO 1100 FEET BELOW SURFACE. 10. SPALERITE COLOR DOES NOT COREELATE WELL WITH IRON CONTENT (0.0-3.0%). CADMIUM (0.0-0.3%) BEARS INVERSE RELATIONSHIP TO IRON. SPHALERITE STRATIGRAPHY CAN BE USED FOR CORRELATION. 11. LATE STAGE SPHALERITE, FLUORITE, QUARTZ, BARITE, GYPSUM AND ANHYDRITE OCCUR IN VUGS AND VEINS. THE FLUORITE IS COLORLESS TO PALE PURPLE. CHERT IS COLORLESS TO PALE PURPLE. CHERT IS COLORLESS, RED, OR BLACK, QUARTZ. ISOTOPIC DATA ON LEAD IN GALENA WAS NOT COMPATIBLE WITH A CAMBRIAN OR LATER AGE OF MINERALIZATION CLEARLY DEMONSTRATED FROM GEOLOGIC AND MINER ALOGIC EVIDENCE. A "PSEUDOSECONDARY" ISOCHRON INDICATED 3.5 +/- 0.4 BILLION YEAR AGE FOR SOURCE OF LEAD, UNREASONABLE FOR CRUSTAL ENVIRONMENT UNLESS INHERITED THROUGH MULTICYCLES FROM CRUSTAL OR ASTEROID SOURCE. DATA DOES INDICATE MIXING OF LEAD FROM AT LEAST TWO SOURCES.

GENERAL COMMENTS.....1750-1756: WATSON (1905, P. 15, P.68) MENTIONS 1750 AND BOYD (1881, P. 74) INDICATES 1756 AS FIRST YEAR OF MINING. COLONEL CHISWELL, BRITISH COLONIAL OFFICER AND PIONEER, CREDITED WITH DISCOVERY ALONG HIGH BLUFF ON BANK OF NEW RIVER. A 20 FOOT TUNNEL WAS DRIVEN UNDERNEATH LEAD SHOWINGS JUST ABOVE RIVER LEVEL (CHISWELL'S HOLE"). 1756-1776: PRIMITIVE SURFACE EXTRACTION OF LEAD FROM GALENA IN SHADY DOLOMITE. CHISWELL'S *SMELTING* PLANT WAS COMMON AIR FURNACE WITH HEARTH AND ROOF BUILT OF FIRE BRICK, PROBABLY FROM ENGLAND. THE SMELTER WAS AN IMPORTANT SOURCE OF LEAD SHOT IN THE FRENCH-INDIAN WARS AND AMERICAN REVOLUTION. 1776: MINING WAS TERMINATED BECAUSE OF CHISWELL'S TORY SYMPATHIES. PROPERTY CONFISCATED AND OPERATED BY AN AMERICAN REVOLUTIONARY ARMY DETAIL UNDER WASHINGTON'S ORDERS. COLONEL CHISWELL DIED IN 1776 IN CUMBERLAND COURTHOUSE JAIL, VIRGINIA (WATSON, 1905). MINES SOLD AT PUBLIC AUCTION. 1780: TO STEPHEN AND MOSES AUSTIN. MINES RENTED TO CAPTAIN NEWEL WHO WAS FIRST TO WORK CERUSSITE IN ADDITION TO GALENA. 1800: IRON PRODUCED AT NEARBY IVANHOE FURNACE. 1805: *AUSTINS DEFAULTED ON* PAYMENTS, PROPERTY REVERTED TO VIRGINIA WHICH SOLD MINES BY AUCTION TO THOMAS JACKSON, DANIEL SCHEEFEY AND DAVID PIERCE. 1805-1837: PERIOD OF LOW, INTERMIT TENT PRODUCTION BECAUSE OF MULTIPLE OWNERSHIP COMPETING FOR SAME ORE, SALES OF PARTIAL INTERESTS, CONTESTED INHERITANCE, AND OTHER LITIGATION. IN 1837 FOUR SEPARATE MINING COMPANIES (KOHLER, 1870, IN MILLER, 1985). 1830: WATERPOWER FROM NEW RIVER USED FOR CRUSHING AND GRINDING. 1838: COMPETING MINES JOINED TO FORM WYTHE LEAD MINE COMPANY (1839) FOR TEN YEAR CONTRACT. SCOTTISH FURNACE ("SMELT MILLS") USED. FIRST SYSTEMATIC DEVELOPMENT, CROSSCUT ADIT FROM BLUFF BEGUN, COMPLETED IN 1851 (1527 FT) SHOT TOWER *SHAFT (242 FT DEEP) AT END OF TUNNEL. SHOT* LOADED ON TRAM CAR AND RUN TO SURFACE FOR SEPARATION, SIZING AND GLAZING. MINES PROSPEROUS (WATSON, 1905; BOYD, 1881). 1843: LARGE SCALE SHOTMAK ING BEGUN. FURNACES FOR BUILDING SLAG BUILD ON SITE OF OLD SCOTCH FURNACES (WATSON, 1905). 1848: WYTHE UNION LEAD MINE COMPANY FORMED FOR TEN YEAR CONTRACT. MULTIPLE OWNERSHIP DISPUTES RESOLVED BY SELLOUT OF PRIMARY DISSENTERS. 1858: UNION LEAD MINE FORMED. OPERATED MINES DURING CIVIL WAR AND SAID TO HAVE SUPPLIED MOST OF LEAD SHOT FOR CONFEDERATE ARMIES EAST OF MISSISSIPPI RIVER. OXIDIZED ZINC ORES, SMITHSONITE AND HEMIMOPHITE MINED FOR FIRST TIME WITH TRIAL BATCH SENT TO CONFEDERATE ZINC WORKS AT *PERTERSBURG. NEAR END OF* WAR MINING EQUIPMENT AND CONCENTRATING EQUIPMENT AT AUSTINVILLE DESTROYED *BY FEDERAL CAVALRY. ZINC WORKS DESTROYED BY UNION* TROOPS. 1864: MINES CLOSED DECEMBER 17, 1864 BY UNION CAVALRY (WATSON, 1905). 1865: MINES REOPENED OCTOBER 1865 WITH ZINC ORE SHIPPED TO LEHIGH ZINC WORKS, BETH LEHEM, PENNSYLVANIA AND MERCER ZINC WORKS, TRENTON, NJ. 1874: WYTHE LEAD AND ZINC MINING COMPANY PURCHASED AUSTINVILLE FOR SMITHSONITE. NEW COMPANY FOUND ABUNDANT SPHALERITE BUT LITTLE SMITHSONITE AT DEPTH. SOLD ZINC ORE, PRODUCED ABOUT 3 TONS OF PIG LEAD AND LEAD SHOT/DAY. 1879-1881: AIR COMPRESSOR USED TO VENTILATE MINES AND RUN BURLEIGH DRILL (BOYD, 1881). 1879: ZINC SMELTER OF BERTHA MINERAL COMPANY OPENED AT PULASKI, VIRGINIA. 1902: BERTHA MINERAL COMPANY FORMED AS SUBSIDIARY *OF NEW JERSEY ZINC COMPANY. 1911: ZINC TAILINGS* EXHAUSTED. FLOTATION PROCESS DEVELOPED FOR RECOVERY OF ZINC FROM SPHALERITE. 1925-1297: CONSTRUCTION OF CONCENTRATION MILL FOR FLOTATION. MODERN SHAFT SUNK AT AUSTINVILLE. 1950-1960: IVANHOE PROPERTY DEVELOPED FROM PROSPECT TO MAJOR ORE PRODUCER. 1960-1970: FLATWOOD PROPERTY DEVELOPED TO 800 FEET BELOW SURFACE WITH 4000 FEET OF DRIFT. SEVERE WATER PROBLEM AND SPOTTY ORE KEPT FLATWOOD FROM PROFITABLE MINING (WEINBERG, 1980). 1970-1980: CHAFFIN ESTATE PROPERTY 1 MILE SE OF FLATWOOD WAS NEVER DE VELOPED BECAUSE OF DEPTH (1800-2000 FT). CHAFFIN CONTAINED A MAJOR PORT ION OF 900,000 TONS RESERVES AT TIME OF CLOSING. GULF AND WESTERN INDUSTRIES, INC. *BOUGHT NEW JERSEY ZINC IN LATE 1970'S. 1981: BECAUSE OF* NEARLY DEPLETED RESERVES, COST OF DEWATERING MINES AT 1100 FOOT LEVEL (13,000 GALLONS OF WATER /MINUTE, $60,000/MONTH, RISING LABOR COSTS, AND CONTINUING ENVIRONMENTAL IMPACT AND SAFETY HEARINGS, THE MINE WAS ALLOWED TO FLOOD IN NOVEMBER, 1981. TOTAL VOLUME OF WATER AFTER FLOODING UNDERGROUND WORKINGS ESTIMATED AT 1 BILLION GALLONS, EQUIVALENT TO A LAKE OF 265 ACRES, TEN FEET DEEP. MINE CLOSED DECEMBER, 1981. (WEINBERG, 1981, PERSONAL COMMUNICA TION , 1988).

REFERENCE....BROWN, W.H., 1935, QUANTITATIVE STUDY OF ORE ZONING, AUSTINVILLE MINE, WYTHE COUNTY, VIRGINIA: ECON. GEOLOGY VOL.30, NO.4, P.425-433. 02> BROWN

REFERENCE....BROWN, W.H., 1953, AUSTINVILLE: MINING ENG., VOL. 5, NO. 12, P.1216-1221.

REFERENCE....BROWN, W.H., AND WEINBERG, E.L., 1967, GEOLOGY OF THE AUSTINVILLE-IVANHOE DISTRICT, VIRGINIA, IN RIDGE, J.D., ED., ORE DEPOSITS OF THE UNITED STATES 1933-1967, MAPLE PRESS, YORK, PA.

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REFERENCE....FOLEY, N.K., 1980, MINERALOGY AND GEOCHEMISTRY OF THE AUSTINVILLE DISTRICT, UNPUBLISHED M.S. THESIS, VIRGINIA POLYTECHNIC INSTITUTE & STATE UNIVERSITY, 84P.

REFERENCE....FOLEY, N.K., SINHA, A.K. AND CRAIG, J.R.,1981, ISOTOPIC COMPOSITION OF LEAD IN THE AUSTINVILLE-IVANHOE LEAD-ZINC DISTRICT: ECONOMIC GEOLOGY, VOL. 76, P.2012-2017.

REFERENCE....KOHLER, E., 1870, HISTORY OF AUSTINVILLE, VIRGINIA: UNPUBLISHED MANUSCRIPT IN NEW JERSEY ZINC (GULF & WESTERN INDUSTRIES, INC) COMPANY FILES.

REFERENCE....MCCREATH, A.S. AND D'INVILLIERS, E.V., 1887, THE NEW-RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HAR RISBURG PUBLISHING CO., HARRISBURG, PA, 171P. WITH MAP.

REFERENCE....MILLER, J.W., 1985, STATISTICAL MODELING OF AUSTIN VILLE MINE: A GUIDE TO EXPLORATION: PH. D. DISSERTA TION AT UNIVERSITY OF GEORGIA, ATHENS, GA., 142P.

REFERENCE....PHEIL, R.W., AND READ, J.F., 1980, CAMBRIAN-CARBONATE PLATFORM FACIES, SHADY DOLOMITE, SOUTHWESTERN VIRGINIA, U.S.A. JOURNAL SED PET. ,VOL.50, NO. 1, P.91-115.

REFERENCE....VDMR, 1981, AUSTINVILLE MINE CLOSES: VIRGINIA MINEALS, VOL.27, NO.4, P.43.

REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: GEOLOGICAL SURVEY OF VIRGINIA BULLETIN1, 150P.

REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA, THE JAMESTOWN EXPOSITION COMMISSION., J.P. BELL COMPANY, LYNCHBURG, VA., 618 P.

REFERENCE....WEINBERG, E.L., 1963, GEOLOGY OF THE AUSTINVILLE-IVANHOE MINE AREA IN GEOLOGIC EXCURSIONS IN SW VIRGINIA, VIRGINIA POLYTECHNIC INSTITUTE ENG. EXTENSION SERIES, GUIDEBOOK II, P.5-17.

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REFERENCE....WEINBERG, E.L., 1980, AUSTINVILLE MINING-1756 TO PRESENT: VIRGINIA MINERALS, VOL 26, NO. 1, P. 11.

REFERENCE....WEINBERG, E.L., 1988, PERSONAL COMMUNICATION

RESERVES AND POTENTIAL RESOURCES

ITEM ACCURACY AMOUNT THOUS UNITS YEAR GRADE

IVANHOE WAS MINED FOR IRON IN THE 19TH CENTURY TO THE 1920'S. IT DID NOT BECOME DEVELOPED FOR ZN AND PB UNTIL THE 1950'S AND IN THE 1960'S TO 1981 MOST OF AUSTINVILLE PRODUCTION WAS FROM IVANHOE. PRODUCTIO IN FIGURES FOR 1968-1981 ARE GIVEN IN THE TABLE. CONCENTRATES AVERAGED 61.5% ZN METAL AND 75% PB METAL FROM FLOTATION MILL (WEINBERG, 1980). OVERALL PRODUCTION FROM THE COMBINED ORES FROM AUSTINVILLE AND IVANHOE HAVE BEEN ESTIMATED AS 34,000,000 SHORT TONS (30 MILLION METRIC TONS) OF 2.3-6.6, AVERAGE 4.7% COMBINED LEAD AND ZINC FROM 1750 (1756) TO 1981 (MILLER, 1985). THERE ARE SEVENTEEN SEPARATE ORE BODIES IN THE AUSTINVILLE DEPOSITS INCLUDING THE IVANHOE AND ALL BUT THREE WERE MINED

RESV.....BROWN, W.H., 1935, QUANTITATIVE STUDY OF ORE ZONING, AUSTINVILLE MINE, WYTHE COUNTY, VIRGINIA: ECON. GEOL. VOL. 30 NO. 4, P. 425-433.

RESV.....BROWN, W.H., 1953, AUSTINVILLE: MINING ENG., VOL. 5, NO. 12, P. 1216-1221.

RESV.....BROWN, W.H., AND WEINBERG, E.L., 1967, GIOLOGY OF THE AUSTINVILLE-IVANHOE DISTRICT, VIRGINIA, IN RIDGE, J.D., ED., ORE DEPOSITS OF THE UNITED STATES 1933-1967, MAPLE PRESS, YORK, PA.

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RESV.....FOLEY, N.K., 1980, MINERALOGY AND GEOCHEMISTRY OF THE AUSTINVILLE DISTRICT, UNPUBL. MS. THESIS, VIRGINIA POLYTECH INSTITUTE AND UNIV., 84 P.

RESV.....FOLEY, N.K., SINHA, A.K., CRAIG, J.R., 1981, ISOTOPIC COMPOSITION OF LEAD IN THE AUSTINVILLE-IVANHOE PB-ZN DISTRICT: ECON GEOL, VOL. 76, P. 2012-2017.

RESV.....KOHLER, E., 1870, HISTORY OF AUSTINVILLE, VIRGINIA: UNPUBLISHED MANUSCRIPT IN NEW JERSEY ZINC (GULF AND WEATERN INDUSTRIES, INC.) COMPANY FILES.

RESV.....MCCREATH, A.S., AND D'INVILLIERS, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HARRISBURG PUBLISHING CO., HARRISBURG, PA, 171 P. WITH MAP.

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RESV.....PHEIL, 4.W., AND READ, J.F., 1980, CAMBRIAN-CARBONATE PLATFORM FACIES, SHADY DOLOMITE, SOUTHWESTERN VIRGINIA, U.S.A. JOURN SED PET, VOL. 50, NO. 1, P. 91-115.

RESV.....VDMR, 1981, AUSTINVILLE MINE CLOSES: VIRGINIA MINERALS, VOL. 27, NO. 4, NOV. 1981.

RESV.....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: GEOL. SURV. VIRGINIA BULL. 1, 150 P.

RESV.....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA,

THE JAMESTOWN EXPOSITION COMM., J.P. BELL CO., LYN CHBURG, VA, 618 P.

RESV.....WEINBERG, E.L., 1963, GEOLOGY OF THE AUSTINVILLE-IVANHOE MINE AREA, IN GEOLOGIC EXCURSIONS IN SW VIRGINIA, VA POLYTECH. INSTIT. ENG. EXTENSION SERIES, GUIDEBOOK II, P. 5-17.

RESV.....WEINBERG, E.L., 1971, SULFIDE MINERALIZATION IN SW VIRGINIA, AUSTINVILLE-IVANHOE MINE, IN GUIDEBOOK TO APPALACHIAN TECTONIC AND SULFIDE MINERALIZATION: GEOL, SOC. AM, SE SECT. MTG., BLACKSBURG, VA, P. 7-23.

RESV.....WEINBERG, E.L., 1980, AUSTINVILLE MINING - 1756 TO PRESENT: VIRGINIA MINERALS, VOL 26, NO. 1, P. 11.

RESV.....WEINBERG, E.L., 1988, FORMERLY NEW JERSEY ZINC COMPANY REGIONAL GEOLOGIST, PERSONAL COMMUNICATION.

2. Austinville Flatwood Mine

MRDS-REV RECORD NUMBER.....1769
MRDS RECORD NUMBER.....VA01769
RECORD TYPE.....X1M
REPORT DATE.....88 03
INFORMATION SOURCE.....1235
REPORTER.....GOOD, RICHARD S. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....AUSTINVILLE FLATWOOD PB ZN MINE
MINING DISTRICT/AREA.....NEW RIVER-CRIPLE CREEK REGION, AUSTINVILLE-IVANHOE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
PHYSIOGRAPHIC PROVINCE.....02
DRAINAGE AREA.....05050001
LAND STATUS.....01
QUADRANGLE NAME..... AUSTINVILLE (1979) QUADRANGLE SCALE 1:24000
ELEVATION.....2140 FT
UTM NORTHING...4079400 EASTING...509110 ZONE...+17
LATITUDE.....36-51-44N LONGITUDE.....080-53-52W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....8500 FEET NE OF AUSTINVILLE VAN MATER SHAFT, 1.3 MILES NE OF AUSTINVILLE FROM ROUTE 636.
LOCATION COMMENTS.....0.6 MILE SOUTH FROM ROUTE 619 CROSS NEW RIVER ON SR 636, TAKE LEFT TURN THROUGH AUSTINVILLE AND CONTINUE 1.5 MILES FROM SR 636 ON PRIVATE ROAD TO FLATWOOD SHAFT AND QUARRY.
COMMODITIES PRESENT.....ZN PB DOL
ORE MATERIALS.....SPHALERITE, GALENA, HEMIMORPHITE, SMITHSONITE, CERUSSITE, ANGLESITE
GENERAL ANALYTICAL DATA.....GRADES AT FLATWOOD NOT KNOWN BUT OVERALL GRADE OF IVAHHOE AT CLOSING WAS 3% ZN 0.4% PB.
COMMODITY INFO COMMENTS.....AG IN GALENA (60PPM) TOO LOW FOR EXTRACTION. CADMIUM IN SPHALERITE 0.0-0.3% (FOLEY, 1980), IRON IN SPHALERITE 0.0-3.0% (FOLEY, 1980).
MAJOR.....ZN PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....NEW JERSEY ZINC COMPANY
YEAR OF DISCOVERY.....1960'S
YEAR OF FIRST PRODUCTION.....1960'S
YEAR OF LAST PRODUCTION.....1970'S
OWNER (PRESENT/LAST).....NEW JERSEY ZINC COMPANY
OPERATOR.....NEW JERSEY ZINC COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....DEVELOPED IN 1960'S AND 1970'S MINED TO 7TH LEVEL 800 FEET BELOW SURFACE. MOST OF ORE FROM 3RD AND 4TH LEVEL. ABOUT 4,000 FEET OF DRIFTS, WATER PROBLEM SEVERE, ORE SPOTTY, DID NOT GENERATE NET PROFIT.
DEPOSIT TYPE.....STRATIFORM
DEPOSIT FORM.....LENSE: PENCIL SHAPED WITH LENSE-LIKE CROSS SECTION
STRIKE.....NE
DEPOSIT DESCRIPTION COMMENTS.....TWO ORE BODIES FLATWOOD AND UPPER AND LOWER (MINED).
DEPTH BELOW SURFACE.....800 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....OVER 4000 FEET TOTAL DRIFTS.
HOST ROCK AGE.....CAMBRIAN
HOST ROCK TYPE.....RIBBON LAMINATED DOLOMITE, STROMHTOLITIC DOLOMITE WITH SHALEY CARBONATE LAYER
AGE OF IGNEOUS ROCK.....NONE IDENTIFIED IN ORE DEPOSIT. NEAREST VOLCANIC ROCKS 10 MILES TO SOUTH.
IGNEOUS ROCK TYPE.....NONE KNOWN
AGE OF MINERALIZATION.....PALEOZOIC: CAMBRIAN OR POST CAMBRIAN.
PERTINENT MINERALS (NOT ORE).....PYRITE, CHALLOPYRITE, MARCASITE, FLUORITE, BARITE, GYPSUM, CALCITE, DOLOMITE
ORE CONTROL/LOCUS.....ORE CONFINED TO PATTERSON AND SACCARROIDAL MEMBERS OF SHADY DOLOMITE.
TECTONIC SETTING.....CARBONATE RAMP HOMOCLINE: UPWARD SHALLOWING PLATFORM MARGIN WITH SKELETAL ALGAE REEFS.
SIGNIFICANT REGIONAL STRUCTURES.....MULTIPLE IMBRICATE, STEEP THRUST FAULTS PARALLEL TO REGIONAL STRUCTURE; FRIES THRUST.
SIGNIFICANT ALTERATION.....OXIDATION AT SURFACE AND ALONG FAULT PLANES; DOLOMITE RECRYALLIZED ("MET ZONE") IN BARREN ZONE AROUND ORE.
PROCESS OF CONCENTRATION/ENRICHMENT.....WARM BRINE DEPOSITON CONCENTRATED MOSTLY WITHIN BREACIAS. OPEN SPACE DEPOSITION 60%, "REPLACEMENT " 40%.
FORMATION AGE.....CAMBRIAN
FORMATION NAME.....SHADY DOLOMITE: PATTERSON MEMBER (USGS USAGE) = RIBBON MEMBER (NJ ZINC USAGE)
FORMATION NAME.....SHADY DOLOMITE: SACCHAROIDAL MEMBER (USGS) = AUSTINVILLE MEMBER (NJ ZINC).
GEOLOGY COMMENTS.....THE FLATWOOD ORE BODIES ARE PART OF AN ECHELON AUSTINVILLE SYSTEM OF SEVENTEEN SEPARATE ORE BODIES WHICH HAS AN OVERALL LENGTH OF 6 MILES AND WIDTH OF 0.5 MILE. ADDITIONAL COMMENTS: 1. THE ORE FLUIDS WERE WARM, METAL-RICH BRINES WITH TEMPERATURES OF 100-160 DEGREES C, AND HIGH SALINITIES (10-25% EQUIV. WT. NACL) BASED ON FLUID INCLUSIONS IN SPHALERITE. 2. THE ORE MINERALS ARE SIMPLE AND CONSIT LARGELY OF LENSES OF SPHALERITE-PYRITE-GALENA WITH TRACES OF MARCASITE AND CHALCOPYRITE. 3. PYRITE IS UBIQUITOUS AND IS THE FIRST MINERAL TO FORM IN ORE BODIES. IT MAKES UP ABOUT 5% OF TOTAL SULFIDES. 4. THE SPHALERITE IS BANDED, IN PLACES BOTH DARK BROWN AND HONEY COLORED AND WAS DEPOSITED CYCLICALLY. 5. ALL ORE IS DOLOMITE-HOSTED WITH VARYING AMOUNTS OF BLEACHING AND RECRYSTALLIZATION (WHITE "MET") AROUND ORE LENSES. RECRYSTALLIZATION OF DOLOMITE WITHIN ORE HAS LED TO ALTERNATING LAYERS OF WHITE AND DARK DOLOMITE IN MUCH OF THE ORE. THERE ARE UP TO THREE GENERATIONS OF DOLOMITE. 6. THE ORE OCCURS AS BRECCIA FILLINGS AND THIN LENSLIKE REPLACEMENTS PARALLEL TO SEDIMENTARY LAYERING. BRECCIATION AND DOLOMITIZATION PRECEDED ORE DEPOSITION AND IS POST SEDIMENTATION. 8. THE MAJORITY OF ORE LENSES ARE PARALLEL TO SUBPARALLEL TO FAULTS AND SEVERAL ARE STACKED NEAR FAULT ZONES. SOME OF THE STACKS ARE CONNECTED VERTICALLY. 9. BOTH POST ORE AND PRE-ORE FAULTING ARE PRESENT BUT ONLY MINOR FAULTS INTERSECT ORE LENSES. ORE BODIES GENERALLY DO NOT MATCH ON OPPOSITE SIDES OF SAME FAULT. 10. SPHALERITE COLOR DOES NOT CORRELATE WELL WITH IRON CONTENT (0.0-3.0%). CADMIUM (0.0-0.3%) BEARS INVERSE RELATIONSHIP TO IRON. SPHALERITE STRATIGRAPHY CAN BE USED FOR CORRELATION. 11. LATE STAGE SPHALERITE, FLUORITE, QUARTZ, BARITE, GYPSUM AND ANHYDRITE OCCURE IN VUGS AND VEINS. THE FLUORITE IS COLORLESS TO PALE PURPLE. 12. ISOTOPIC DATA ON LEAD IN GALENA WAS NOT COMPATIBLE WITH A CAMBRIAN OR LATER AGE OF MINERALIZATION CLEARLY DEMONSTRATED FROM GEOLOGIC AND MINERALOGIC EVIDENCE. A "PSEUDOSECON DARY" ISOCHRON INDICATED 3.51 +/- 0.4 BILLION YEAR AGE FOR SOURCE OF LEAD, UNREASONABLE FOR CRUSTAL ENVIRONMENT UNLESS INHERITED THROUGH MULTICYCLES FROM CRUSTAL OR ASTEROID SOURCE. DATA DOES INDICATE MIXING OF LEAD FROM AT LEAST TWO SOURCES.
GENERAL COMMENTS.....SEE MRDS LISTINGS FOR IVANHOE LEAD ZINC MINE AND AUSTINVIOLLE LEAD ZINC MINE FOR MORE COM PLETE INFORMATION OF THE HISTORY, GEOLOGY, AND UNDERGROUND WORKINGS ON STRIKE TO SW OF FLATWOOD SHAFT.

REFERENCE....BROWN, W.H., 1935, QUANTITATIVE STUDY OF ORE ZONING, AUSTINVILLE MINE, WYTHE CO., VIRGINIA: ECON. GEOL., VOL 30, NO. 4, P. 425-433.

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REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA, THE JAMESTOWN EXPOSITION COMM., J.P. BELL CO., LYNCHBURG, VA, 618 P.

REFERENCE....WEINBERG, E.L., 1963, GEOLOGY OF THE AUSTINVILLE-IVANHOE MINE AREA, IN GEOLO. EXCURSIONS IN SW VIRGINIA, VA POLYTECH. INSTIT. ENG. EXTENSION SERIES, GUIDEBOOK II, P. 5-10.

REFERENCE....WEINBERG, E.L., 1971, SULFIDE MINERALIZATION IN SW VIRGINIA, AUSTINVILLE-IVANHOE MINE IN GUIDE BOOK TO APPALACHIAN TECTONICS AND SULFIDE MINERALIZATION: GEOL. SOC. AM., SECT. MTG., BLACKSBURG, VA, P. 7-23.

REFERENCE....WEINBERG, E.L., 1980, AUSTINVILLE MINING - 1756 TO PRESENT: VIRGINIA MINERALS, VOL. 26 NO. 1, P. 11.

REFERENCE....WEINBERG, E.L., 1988, FORMERLY NEW JERSEY ZINC COMPANY, PERSONAL COMMUNICATION.

3. Barndollar Prospect

MRDS-REV RECORD NUMBER.....1388
MRDS RECORD NUMBER.....W031351
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....BARNDOLLAR PROSPECT

MINING DISTRICT/AREA.....AUSTINVILLE-IVANHOE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... AUSTINVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1960 FT (598 M)
UTM NORTHING...4077520 EASTING...505700 ZONE...+17
LATITUDE.....36-50-43N LONGITUDE.....080-56-10W
POSITION FROM NEAREST LOCALITY.....1.9 KM (1.2 MI) WSW OF AUSTINVILLE.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. ABOUT 0.3 KM (0.2 MI) NE OF END OF DIRT ROAD, ABOUT 1.1 KM (0.7 MI) FROM END OF STATE ROAD 639, ABOUT 1.8 KM (1.1 MI) NE OF JUNCTION WITH VA. HWY. 94 IN IVANHOE.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, PYRITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OPERATOR.....NEW JERSEY ZINC CO.(?)
EXPLORATION AND DEVELOPMENT COMMENTS.....TWO PROSPECT SHAFTS WERE SUNK IN 1930.
DEPOSIT TYPE.....REPLACEMENT, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
STRIKE.....N60 DEG E
DIP.....45 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....THERE IS NO REPORT OF DIMENSIONS OF MINERALIZED ZONE.
DESCRIPTION OF WORKINGS.....U
DEPTH BELOW SURFACE.....49.4 UNITS...M
LENGTH OF WORKINGS.....69.8 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....TWO SHAFTS SUNK (20.4 M, 49.4 M).
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....SACCHAROIDAL DOLOSTONE BRECCIA, WAVY-BEDDED DOLOSTONE.
PERTINENT MINERALS (NOT ORE).....DOLOMITE, BARITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, AUSTINVILLE SYNCLINAL BASIN, GLEAVES KNOB OVERTHRUST
SIGNIFICANT LOCAL STRUCTURES.....ANTICLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....EPIGENETIC TELETHER MAL SOLUTIONS.
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FM., RIBBON (PATTERSON) MEMBER
NON-USGS WORK.....1930 DIREXPL TWO SHAFTS SUNK.
NON-USGS WORK.....1934 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 43.
NON-USGS WORK.....1939 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 72.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P

4. Bertha and Barren Springs Mine

MRDS-REV RECORD NUMBER.....1389
MRDS RECORD NUMBER.....W031352
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....BERTHA AND BARREN SPRINGS MINES
SYNONYM NAME.....BERTHA MINE, BARREN SPRINGS MINE, MANNING & SQUIER: PITS
MINING DISTRICT/AREA.....BERTHA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FOSTERS FALLS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2100 FT (640 M)
UTM NORTHING...4084420 EASTING...516870 ZONE...+17
LATITUDE.....36-54-27N LONGITUDE.....080-48-38W
POSITION FROM NEAREST LOCALITY.....0.7 KM (0.4 MI) WSW OF BARREN SPRINGS.
LOCATION COMMENTS.....250 M (800 FT) NW OF STATE ROAD 608, 0.6 KM (0.35 MI) SW OF JUNCTION WITH VA. HWY. 100 IN BARREN SPRINGS. SOUTHEASTERN TERMINUS OF WORKINGS IS BERTHA MINE. WORKINGS EXTEND NORTHWEST ABOUT 1200 M TO ORIGINAL BARREN SPRINGS MINE ON EITHER SIDE OF STATE ROAD 622.
COMMODITIES PRESENT.....ZN FE PYR
ORE MATERIALS.....SMITHSONITE, HEMIMORPHITE, HYDROZINCITE, GOETHITE, SPHALERITE, PYRITE
GENERAL ANALYTICAL DATA.....BARREN SPRINGS IRON ORE: FE-44.27%, SIO2-12.50%, P-0.14%, MN-0.47%; BERTHA IRON ORE: FE-44.98%, MN-0.53% (HOLDEN, 1907, P. 452). BERTHA ZINC ORE: ZN-26% (WATSON, 1905, P. 82).
COMMODITY INFO COMMENTS.....GALENA IS CONSPICUOUSLY LACKING.
MAJOR.....ZN FE
OCCUR.....PYR
PRODUCTION.....M
STATUS AND ACTIVITY.....6
DISCOVERER.....IRON-?, ZINC-DAVID S. FORNEY
YEAR OF DISCOVERY.....1854
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1854
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL AND COKE CO.
OPERATOR.....VIRGINIA IRON, COAL AND COKE CO.
ECONOMIC COMMENTS.....ZINC OUTPUT: 200T PER DAY.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE BARREN SPRINGS MINE WAS OPENED FOR IRON (LIMONITE ORE) IN 1854. IN 1866, ZINC ORE WAS DISCOVERED AT THE LOCATION OF THE BERTHA MINE AND, IN 1879, THE FIRST ORE WAS SHIPPED TO PROVIDENCE, R.I. FOR PROCESSING. THE BERTHA MINING CO. OPERATED THE BERTHA MINE FOR ZINC UNTIL 1898 WHEN THE PROPERTY WAS LEASED TO THE PULASKI IRON CO. FOR IRON ORE PRODUCTION. THE BARREN SPRINGS MINE (MANNING & SQUIERS PROPERTY) WAS ALSO OPERATED FOR ZINC DURING THE 1880'S-1890'S. AS OF 1907 THE MINES WERE STILL BEING OPERATED FOR IRON.
DEPOSIT TYPE.....WEATHERING RESIDUAL (DISSEMINATED, REPLACEMENT)
DEPOSIT FORM.....IRREGULAR
DEPTH TO BOTTOM.....30 UNITS...M
MAXIMUM THICKNESS.....30 UNITS...M
DEPOSIT SIZE.....MEDIUM
STRIKE.....NE
DIP.....SE
DEPOSIT DESCRIPTION COMMENTS.....DIMENSIONS REFER TO THICKNESS OF CLAY MANTLE. UNDERLYING ROCK SHOWS LITTLE OR NO MINERALIZATION.
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....IRON WAS WORKED BY OPEN-PIT METHODS; WHILE ZINC WAS PREDOMINANTLY OPEN-PIT, BUT, IN ADDITION, SHALLOW SHAFTS AND TUNNELS WERE DRIVEN.
HOST ROCK AGE.....ECAMB-QUAT
HOST ROCK TYPE.....CLAY RESIDUUM, DOLOSTONE, DOLOSTONE BRECCIA
PERTINENT MINERALS (NOT ORE).....CLAY MINERALS, BARITE, CALCITE, DOLOMITE
ORE CONTROL/LOCUS.....ORE CONCENTRATED IN "VALLEYS" AROUND RESIDUAL DOLOSTONE/LIMESTONE CHIMNEYS.
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, GALENA SYNCLINAL BASIN, HOLSTON MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....HEMATITE MOUNTAIN OVERTHRUST, SAYER SCHOOL FAULT
SIGNIFICANT ALTERATION.....OXIDATION OF PRIMARY SULFIDES
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE WEATHERING.
FORMATION AGE.....QUAT
FORMATION AGE.....ECAMB
FORMATION NAME.....RESIDUUM
FORMATION NAME.....SHADY FORMATION (AUSTINVILLE (SACCAROIDAL) MEMBER)
GEOLOGY COMMENTS.....FOR GEOLOGIC MAP SEE CURRIER (1935), STOSE AND STOSE (1957) (VA. DIV. MIN. RES. BULL 72), AND ESPENSHADE, AND OTHERS (1975) (U.S.G.S. MISC. GEOL. INV. MAP I-709-B)
WORK DONE BY USGS.....1975 OTHER R.B. NEUMAN: MISC. GEOL. INV. MAP I-709-B.
NON-USGS WORK.....1854 DIREXPL BARREN SPRINGS MINE OPENED FOR IRON.
NON-USGS WORK.....1866 RECON D.S. FORNEY: DISCOVERED ZINC ORE AT BERTHA MINE.
NON-USGS WORK.....1879 DIREXPL BERTHA MINE: ZINC MINING BEGUN
REPORTS AVAILABLE.....MCCREATH, A.S., AND D'INVILLIERS, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HARRISBURG, PA., HARRISBURG PUBLISHING CO., 171 P.
REFERENCE....CASE, W.H., 1894, THE BERTHA ZINC MINES AT BERTHA, VIRGINIA: AMERICAN INSTITUTE OF MINING ENGINEERS TRANSACTIONS, V. 22, P. 511-536.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....HOLDEN, R.J., 1907, IRON, IN WATSON, T.L., MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., P. 402-491
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE ZN	ACC	2.50000	TONS	1881	

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE ZN	MED			1879-1898	ZN=26%
ORE ZN	ACC	12.775	TONS	1879-1898	

SOURCE OF PRODUCTION INFORMATION.....HOLDEN, (1907); WATSON (1905); MCCREATH AND D'INVILLIERS (1887 P. 56).

5. Carter Ferry Prospect

MRDS-REV RECORD NUMBER.....1390
MRDS RECORD NUMBER.....W031353
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....CARTER FERRY PROSPECT
MINING DISTRICT/AREA.....BERTHA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE

DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... POSTERS FALLS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1850 M (564 FT)
UTM NORTHING...4085360 EASTING...514710 ZONE...+17
LATITUDE.....36-54-57N LONGITUDE.....080-50-05W
POSITION FROM NEAREST LOCALITY.....0.7 KM (0.4 MI) SW OF LONE ASH.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. ON NORTH SIDE OF RAVINE, 50 M (175 FT) NORTH OF STATE ROAD 626, 0.6 KM (0.4 MI) EAST OF JUNCTION WITH STATE ROAD 611.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....DEPOSIT WAS PROSPECTED PRIOR TO 1930.
DEPOSIT TYPE.....REPLACEMENT
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL(?)
STRIKE.....NE
DIP.....SE
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOSTONE BRECCIA
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, LASWELL OVERTHRUST
SIGNIFICANT LOCAL STRUCTURES.....CARTER FERRY FAULT
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION (AUSTINVILLE (SACCAR OIDAL) MEMBER)
WORK DONE BY USGS.....1975 OTHER R.B. NEUMAN: MISC. GEOL. INV. MAP I-709-B.
NON-USGS WORK.....DIREXPL DEPOSIT PROSPECTED.
NON-USGS WORK.....1934 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 43.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.

6. Cedar Springs Zinc Mine

MRDS-REV RECORD NUMBER.....1395
MRDS RECORD NUMBER.....W031354
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 04
UPDATER.....GOOD, RICHARD S.
SITE NAME.....CEDAR SPRINGS ZINC MINE
SYNONYM NAME.....CEDAR SPRINGS MINES
MINING DISTRICT/AREA.....CRIPPLE CREEK-NEW RIVER
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... CEDAR SPRINGS, VA. (1979) QUADRANGLE SCALE 1:24000
ELEVATION.....2480 FT
UTM NORTHING...4075610 EASTING...474760 ZONE...+17
LATITUDE.....36-49-41N LONGITUDE.....081-16-59W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....0.4 MILE EAST OF CEDAR SPRINGS ON NORTH SIDE ROUTE 749.
LOCATION COMMENTS.....0.4 MILES EAST OF JUNCTION WITH ROUTE 614. MAIN CUT IS NORTH OF BRIDGE OVER CRIPPLE CREEK ON TRIBUTARY INTO WEST BANK. TROUT HATCHERY ON EAST BANK.
COMMODITIES PRESENT.....ZN PB PYR
ORE MATERIALS.....SPHALERITE, SMITHSONITE, HEMIMORPHITE, GALENA, PYRITE
MAJOR.....ZN PB FE (?)
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....BERTHA MINERAL COMPANY
YEAR OF DISCOVERY.....1890'S (?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1890'S
YEAR OF LAST PRODUCTION.....1907
OWNER (PRESENT/LAST).....EDWARD MOORE
OPERATOR.....COLUMBUS MINING CORP.
ECONOMIC COMMENTS.....MILL CONSTRUCTED AROUND 1907.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE DEPOSIT WAS FIRST PROSPECTED BY THE BERTHA MINERAL CO. (PROBABLY IN THE 1890'S), LATER OPERATED BY THE CEDAR SPRINGS ZINC MINING AND DEVELOPMENT CO. (1905) AND FINALLY BY THE COLUMBUS MINING CORP. NO PRODUCTION IS RECORDED AFTER 1907.
DEPOSIT TYPE.....STRATIFORM, SHEAR ZONE, DISSEMINATED, REPLACEMENT, COLLAPSE BRECCIA
DEPOSIT FORM.....IRREGULAR, LENSE
DEPOSIT SIZE.....SMALL
STRIKE.....N 85 DEG E; N78-88 DEG E
DIP.....75-80 DEG SE
DIRECTION OF PLUNGE.....NE
DEPOSIT DESCRIPTION COMMENTS.....SPHALERITE OCCURRRED IN DOLOMITE VEINS; OTHER MINERALS IN CRACKLE AND SHATTER BRECCIA.
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....50.2 UNITS...FT
OVERALL LENGTH.....1000 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....MAIN CUT TRENDS N 85 DEG E IS 215 FEET LONG, 10-25 FEET WIDE, 25-30 FT DEEP. THE BASE IS FILLED WITH A FEW FEET OF WATER AND THE WESTERN END IS FILLED WITH TRASH. ABOUT 800 FEET WEST OF CUT ALONG R. 749 IS A SMALL QUARRY USED FOR ROAD AGGREGATE, UPSLOPE 400 FEET NORTH OF ROUTE 749 AND 1000 FEET WEST OF MAIN WORKING AREA ARE TWO SHAFTS NOW INACCESSIBLE AND FILLED WITH TRASH AND STUMPS. BETWEEN SHAFTS AND MAIN CUT ARE WORKINGS-NOW FILLED.
HOST ROCK AGE.....E CAMBRIAN
HOST ROCK TYPE.....BLACK DOLOMITE WITH WHITE DOLOMITE SPLOTCHES.
AGE OF IGNEOUS ROCK.....NONE KNOWN
PERTINENT MINERALS (NOT ORE).....DOLOMITE, FLUORITE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, PULASKI THRUST FAULT, HOLSTON MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....THRUST FAULTING OF FOLDED STRATA, ANTICLINE, TRANSUERSE FAULT
SIGNIFICANT ALTERATION.....OXIDATION OF ZINC SULFIDES.
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION
GEOLOGY COMMENTS.....BEDS ARE STEEPLY FOLDED FORMING A SERIES OF LOCAL ASYMMETRICAL COMPRESSED FOLDS WITH EASTWARD PITCH.
WORK DONE BY USGS.....1972 GEOLMAP R.B. NEUMAN: MISC. GEOL. INV. MAP I-709-A.
NON-USGS WORK.....1934 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 43.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....RANKIN, D.W., ESPENSHADE, G.H., AND NEUMAN, R.B., 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA-VIRGINIA, AND TENNESSEE: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-A, 1 SHEET, SCALE 1:250,000.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.
REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., 618 P.

7. Cove Branch Prospect

MRDS-REV RECORD NUMBER.....1396
MRDS RECORD NUMBER.....W031355
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....COVE BRANCH PROSPECT
MINING DISTRICT/AREA.....CRIPPLE CREEK DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... CRIPPLE CREEK, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2370 FT (723 M)
UTM NORTHING...4074140 EASTING...495910 ZONE...+17
LATITUDE.....36-48-54N LONGITUDE.....081-02-45W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN; ABOUT 4.85 KM (3.0 MI) ESE OF CRIPPLE CREEK.
LOCATION COMMENTS.....ABOUT 4.3 KM (2.7 MI) ALONG STATE ROAD 643 FROM JUNCTION WITH STATE ROAD 642. UTM GRID LOCATION IS AN APPROXIMATION ONLY.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....PROBABLY SPHALERITE
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE-1888
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....DEPOSIT WAS PROBABLY PROSPECTED IN 1880'S.
DIRECTION OF PLUNGE.....NE
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOSTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, GLEAVES KNOB OVERTHRUST, FENSTER
SIGNIFICANT LOCAL STRUCTURES.....ANTICLINE
FORMATION AGE.....ECAMB
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION (AUSTINVILLE (SACCAR OIDAL) MEMBER)
FORMATION NAME.....SHADY FORMATION (RIBBON (PATTERSON) MEMBER)
GENERAL COMMENTS.....LITTLE DESCRIPTION OF THIS OCCURRENCE IS PROVIDED BY CURRIER (1935).
NON-USGS WORK.....1934 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 43
REFERENCE....BOYD, C.R., 1888, MAP OF WYTHE COUNTY, VIRGINIA (SHOWING GEOLOGY AND OCCURRENCES OF LEAD, ZINC, ETC.).
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL

RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P

8. Davis Prospect

MRDS-REV RECORD NUMBER.....1353
MRDS RECORD NUMBER.....W031356
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....135
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 03
UPDATER.....LOVETT, JAMES A./GOOD, RICHARD S.
SITE NAME.....DAVIS PROSPECT
SYNONYM NAME.....NEWLAND FARM LEAD MINE
MINING DISTRICT/AREA.....CEDAR SPRINGS LEAD/ZINC DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VIRGINIA VALLEY AND RIDGE
DRAINAGE AREA.....05050001 CRIPPLE CREEK/NEW RIVER
LAND STATUS.....01 (1988)
QUADRANGLE NAME..... CEDAR SPRINGS, VA. (1978) QUADRANGLE SCALE 1:24000
ELEVATION.....2450 FT
UTM NORTHING...4073620 EASTING...475470 ZONE...+17
LATITUDE.....36-48-37N LONGITUDE.....081-16-32W
POSITION FROM NEAREST LOCALITY.....14.0 MILES S 47 DEG W FROM MARION, 1.6 MILES S 43 DEG E FROM CEDAR SPRINGS (DOT WYTHE COUNTY HIGHWAY MAP, 1981)
LOCATION COMMENTS.....CURRIER DESCRIBED THIS PROSPECT AS 3/4 MILE WEST OF THE JAMES PROPERTY (WYTHE COUNTY) AND 1 1/2 MILES SOUTH OF CEDAR SPRINGS. THIS PROSPECT IS 4200 FEET S 74 DEG W FROM THE INTERSECTION OF STATE ROADS 629 AND 749 SOUTHEAST OFCEDAR SPRINGS, 4050 FEET S 12 DEG E FROM BENCH MARK K 20 (2432) EAST OF ASBURY CREEK AND CRIPPLE CREEK, 50 TO 150 FEET NORTH OF STATE ROAD 692. ONE OF THE LARGER PROSPECTS FOUND IN THE AREA. REFERRED TO AS NEWLAND FARM LEAD MINE BY LOCAL RESIDENTS. SMALL QUARRY 100 FEET NORTH OF PRIVATE GRAVEL ROAD TO TROUT FARM (EXTENSION OF ROUTE 692) 0.9 MILE WEST FROM ROUTE 749. LOCATED NEXT TO FARM SILO. STOP SIGN ON GATE.
COMMODITIES PRESENT.....PB ZN FE
ORE MATERIALS.....GALENA, SPHALERITE ?, GOETHITE, LIMONITE, HEMATITE, HEMIMORPHITE.
MAJOR.....ZN FE
NON-PRODUCER MAIN.....PB ZN ?
PRODUCTION.....N
STATUS AND ACTIVITY.....2
DISCOVERER.....UNKNOWN
YEAR OF DISCOVERY.....EARLY 1900'S ?
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....DARRYL BRIGGS
EXPLORATION AND DEVELOPMENT COMMENTS.....NO EXPLORATION/ DEVELOPMENT DATA GIVEN IN THE LITERATURE, OR DETAILED HISTORY KNOWN ABOUT BY LOCAL RESIDENTS. ONE OF THE LARGER PROSPECTS IN THE AREA.
DEPOSIT TYPE.....CARBONATE HOSTED MISSISSIPPI VALLEY TYPE (MVT) LEAD/ZINC; VEIN (?), REPLACEMENT (?). STRATIFORM.
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....S 70 DEG W
DIP.....39 DEG SE
DEPOSIT DESCRIPTION COMMENTS.....1 METER THICKNESS OF OCHER WITH NODULES OF GOETHITE-LIMONITE. WHITE CRYSTAL LINE POWDER NOTED IN LIMONITE-SECONDARY FE SULFATES (?). MOST LIKELY, MINERALIZATION OCCURRED AS OPEN SPACE FILLING IN FRACTURED (BRECCIATED ?) DOLOMITE.
DESCRIPTION OF WORKINGS.....S
DEPTH BELOW SURFACE.....20 UNITS...FT
LENGTH OF WORKINGS.....160 UNITS...FT
OVERALL LENGTH.....300 UNITS...FT
OVERALL WIDTH.....100 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....NO DESCRIPTION OF THE WORKINGS FOUND IN THE LITERATURE. FIELD EXAMINATION CONDUCTED 2/18/88. FAIRLY LARGE SURFACE WORKINGS. MAIN PIT IS APPROXIMATELY 120 FEET LONG, 60 TO 80 FEET WIDE, AND 20 FT DEEP CUT IN N 70 DEG E DIRECTION PARALLEL TO STRIKE. TRENCH CUT PERPENDICULAR TO STRIKE FROM THE ROAD IS APPROXIMATELY 80 FEET LONG, 20 FEET WIDE AND 8 FEET DEEP. SMALLER WORKINGS OF PITS AND TRENCHES EXTEND FOR ABOUT 150 FEET TO THE EAST. DUMP MATERIAL SCATTERED. MAIN PIT IS PARTIALLY FILLED WITH TRASH AND DEBRIS. WORKINGS AND DUMPS ARE HEAVILY WEATHERED AND GROWN OVER.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....SACCAROIDAL DOLOMITE
IGNEOUS ROCK TYPE.....NONE KNOWN IN IMMEDIATE VICINITY.
PERTINENT MINERALS (NOT ORE).....DOLOMITE, QUARTZ, CALCITE, SECONDARY FE SULFATES (WHITE CRYSTALS).
ORE CONTROL/LOCUS.....FRACTURES IN THE DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....PULASKI FAULT, HOLSTON MOUNTAIN FAULT; NE-SW TRENDING VALLEY AND RIDGE
SIGNIFICANT LOCAL STRUCTURES.....ANTICLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....FRACTURE FILLING
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....DOLOMITE FOUND ON THE DUMP IS LIGHT TO MEDIUM GRAY, MASSIVE, FINE GRAINED CRYSTALLINE, IR REGULAR BEDDED AND FRACTURED WITH THIN VEINS OF CALCITE AND WHITE DOLOMITE WITH MINOR IRON STAINING ALONG OUTSIDE EDGE OF VEINS. CURRIER (1935, P. 106) NOTES PROPERTY IS 0.75 MILES WEST OF JAMES PROPERTY PROSPECT.
GENERAL COMMENTS.....CURRIER (1935) DOES NOT DESCRIBE OCCURRENCE.
WORK DONE BY USGS.....1972 GEOLMAP R.B. NEUMAN: MISC. GEOL. INV. MAP I-709-A.
NON-USGS WORK.....1934 GEOLMAP VA. GEOL. SURV.: ISSUED BULL. 43.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....RANKIN, D.W., ESPENSHADE, G.H., AND NEUMAN, R.B., 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA-VIRGINIA, AND TENNESSEE: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-A, 1 SHEET, SCALE 1:250,000.

9. Falling Cliff Mine

MRDS-REV RECORD NUMBER.....1354
MRDS RECORD NUMBER.....W031357
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....135
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....8804
UPDATER.....GOOD, RICHARD S.
SITE NAME.....FALLING CLIFF MINE
SYNONYM NAME.....FORNEY'S MINE
MINING DISTRICT/AREA.....CRIPPLE CREEK - NEW RIVER
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FOSTERS FALLS, VA. (1985) QUADRANGLE SCALE 1:24000
ELEVATION.....2269 FT
UTM NORTHING...4083760 EASTING...516080 ZONE...+17
LATITUDE.....36-54-06N LONGITUDE.....080-49-10W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....5 MI EAST OF BERTHA.
LOCATION COMMENTS.....ABOUT 500 FT NW OF DIRT ROAD SHOWN ON TOPOGRAPHIC MAP, NW OF JNC WITH STATE ROAD 608, 0.2 MI NE OF JUNCTION WITH STATE ROAD 621. PITS ARE BULLDOZED AND PROPERTY IS NOW PART OF BERTHA FARMS WITH SMALL FIVE ACRE LOTS. WITH STATE ROAD 621. THIS PIT IS PROBABLY AROUND THE CENTER OF THE MINE PROPERTY.
COMMODITIES PRESENT.....ZN PB FE
ORE MATERIALS.....SMITHSONITE, HEMIMORPHITE, HYDROZINCITE, SPHALERITE
GENERAL ANALYTICAL DATA.....LUMP ORE: 47.578% ZN, 0.198% PB (MCCREATH AND D'INVILLIERS, 1887, P. 58).
MAJOR.....ZN
MINOR.....PB
OCCUR.....AG
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1880'S(?)
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1880'S(?)
OWNER (PRESENT/LAST).....PAUL HOLSTON, BERTHA FARMS (H AND H PROPERTIES, PULASKI, VA)
OPERATOR.....D.S. FORNEY. NEW JERSEY ZINC (NOW GULF AND WESTERN INDUSTRIES) FORMERLY HAD MINERAL RIGHTS.
EXPLORATION AND DEVELOPMENT COMMENTS.....TWO OR THREE SHALLOW PITS WERE DUG AND SEVERAL SHAFTS AND TUNNELS WERE DRIVEN. LAND NOW PART OF BERTHA FARMS (WHICH IS BROKEN UP INTO PRIVATELY DEVELOPED LOTS OF 5 ACRES. THERE WERE NO BUILDINGS AT TIME OF VISIT AND NO IMPROVEMENT EXCEPT ACCESS TRACKS.
DEPOSIT TYPE.....STRATIFORM AND WEATHERING RESIDUAL
DEPOSIT FORM.....IRREGULAR, PINNACLE DOMINATED
DEPTH TO BOTTOM.....24.4 UNITS...METERS
MAXIMUM THICKNESS.....5 UNITS...M
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....24.4 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....TWO OR THREE SHALLOW PITS WERE DUG AND SEVERAL SHAFTS AND TUNNELS WERE DRIVEN.
HOST ROCK AGE.....CAMBRIAN
HOST ROCK TYPE.....RIBBON LAMINATED DOLOMITE
IGNEOUS ROCK TYPE.....NONE KNOWN
AGE OF MINERALIZATION.....- CAMBRIAN AND POST CAMBRIAN
PERTINENT MINERALS (NOT ORE).....GOETHITE, LIMONITE (MAY HAVE BEEN MINED.)
ORE CONTROL/LOCUS.....HOT BRINES, STRATABOUND AND FOLLOW ING BRACTURING, BRECCIATION AND COLLAPSE.
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDING MULTIPLE, IMBRICATE THRUST FAULTS, GALENA SYNCLINAL BASIN, HOLSTON MOUNTAIN FAULT
SIGNIFICANT LOCAL STRUCTURES.....HEMATITE MOUNTAIN OVERTHRUST
SIGNIFICANT ALTERATION.....SPHALERITE OXIDIZED TO HEMIMORPHITE, MINOR SMITHSONITE, DOLOMITE.
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE WEATHERING
FORMATION AGE.....- CAMBRINA
FORMATION NAME.....SHADY DOLOMITE, AUSTINVILLE (NEW JERSEY ZINC)-SACCHAROIDAL MEMBER (USGS)
GENERAL COMMENTS.....PROPERTY CONSISTED OF 100 ACRES (40.5 HA) IN FEE AND 112 ACRES (45.4 HA) IN MINERAL RIGHTS. THE

PROPERTY WAS PROBABLY ALSO MINED LATER FOR IRON. IN LATE 1970'S NEW JERSEY ZINC (NOW GULF AND WESTERN INDUSTRIES) DRILLED IN VICINITY OF OLD FALLING CREEK MINE TO 700 FEET DEPTH AND INTERSECTED 22 FEET OF 8% ZN, 0.8% PB AT 150-200 FEET BELOW SURFACE. AT 700 FEET 10 FEET OF 4.1%ZN, 0.2% PB IN RIBBON MEMBER OF SHADY DOLOMITE. E.L. WEINBERG, PERSONAL COMMUNICATION, 1988, UNPUBLISHED DATA.
WORK DONE BY USGS.....1975 OTHER R.B. NEUMAN: MISC. GEOL. INV. MAP I-709-B.
NON-USGS WORK.....DIREXPL MINED FOR OXIDIZED ZN ORE.
NON-USGS WORK.....1934 GEOL. MAP VA. GEOL. SURV.: ISSUED BULL. 43.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....MCCREATH, A.S., AND D'INVILLIERS, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HARRISBURG, PA., HARRISBURG PUBLISHING CO., 171 P.
REFERENCE....DEWEY, F.P., 1882, NOTE ON THE FALLING CLIFF MINE: AMERICAN INSTITUTE OF MINING ENGINEERS, TRANSACTIONS, V. 10, P. 111-112.
REFERENCE....NEUMAN, R.B., 1975, MISC. GEOL. INVEST. MAP I-709-B.

10. Galena Prospect

MRDS-REV RECORD NUMBER.....1355
MRDS RECORD NUMBER.....W031358
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....GALENA PROSPECT
MINING DISTRICT/AREA.....AUSTINVILLE-IVANHOE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... AUSTINVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2020 FT (616 M)
UTM NORTHING...4080470 EASTING...508620 ZONE...+17
LATITUDE.....36-52-19N LONGITUDE.....080-54-12W
POSITION FROM NEAREST LOCALITY.....2.7 KM (1.7 MI) NNE OF AUSTINVILLE.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. ABOUT 2.4 KM (1.5 MI) BY STATE ROAD 619 NE OF JUNCTION WITH STATE ROAD 636.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
COMMODITY INFO COMMENTS.....TRACES OF SPHALERITE NOTED IN OUTCROP.
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DETAILED EXPLORATION OR DEVELOPMENT REPORTED.
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT
DEPOSIT SIZE.....SMALL(?)
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOSTONE BRECCIA
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, LASWELL FAULT, GLEAVES KNOB OVERTHRUST, PIERCE MILL OVERTHRUST, HEMATITE MOUNTAIN OVERTHRUST
SIGNIFICANT LOCAL STRUCTURES.....THRUST FAULT
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION (AUSTINVILLE (SACCAROIDAL) MEMBER)
GENERAL COMMENTS.....THERE IS NO REPORT OF ACTIVE EXPLORATION OF THIS OCCURRENCE.
WORK DONE BY USGS.....1975 OTHER R.B. NEUMANN: ISSUED MISC. GEOL. INV. MAP I-709-B
NON-USGS WORK.....1934 GEOLMAP VA. GEOL. SURV: ISSUED BULL. 43
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P

11. Grham and Robinson Pits Prospect

MRDS-REV RECORD NUMBER.....1773
MRDS RECORD NUMBER.....VA01773
RECORD TYPE.....X1M
REPORT DATE.....88 04
REPORTER.....GOOD, RICHARD S. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....GRAHAM AND ROBINSON PITS PROSPECT
MINING DISTRICT/AREA.....CRIPPLE CREEK-NEW RIVER, BERTHA SUBDISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001
LAND STATUS.....01
QUADRANGLE NAME..... FOSTERS FALLS (1985) QUADRANGLE SCALE 1:24000
UTM NORTHING...4084760 EASTING...517660 ZONE...+17
LATITUDE.....36-54-38N LONGITUDE.....080-48-05W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....0.3 KM (0.18 MI) NORTHEAST OF BARREN SPRINGS
LOCATION COMMENTS.....0.4 KM (0.25 MI) EAST ON STATE ROAD 603 FROM BARREN SPRINGS, 300 FEET NW FROM ROAD ON NE SIDE OF SMALL HILL.
COMMODITIES PRESENT.....FE ZN PYR
ORE MATERIALS.....LIMONITE, GOETHITE, HEMATITE, HEMIMORHITE, SMITHSONITE, SPHALERTITE
MAJOR.....ZN
MINOR.....FE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....FE
PRODUCTION.....N
STATUS AND ACTIVITY.....2
OWNER (PRESENT/LAST).....WILLIAM E. MCNEELY. MINERAL RIGHTS FORMERLY BELONGED TO NEW JERSEY ZINC (NOW GULF AND WESTERN INDUSTRIES), MINERAL RIGHTS HAVE REVERTED TO PRESENT OWNER..
EXPLORATION AND DEVELOPMENT COMMENTS.....NW TRENDING TRENCH 15-30 FEET DEEP, 15-30 FEET WIDE, ABOUT 400 FEET LONG
DEPOSIT TYPE.....STRATIFORM AND WEATHERING RESIDUAL
DEPOSIT FORM.....IRREGULAR IN CLAY RESIDUUM AROUND PINNACLES
DEPOSIT SIZE.....SMALL
STRIKE.....N50-55W
DIP.....10 SW
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....400 UNITS...FT
OVERALL WIDTH.....30 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....NW TRENDING TRENCH 15-30 FEET DEEP, 15-30 FEET WIDE ABOUT 400 FEET LONG STARTING FROM SMALL FARM POND. OTHER PITS NEARBY, SOME FILLED IN.
HOST ROCK AGE.....CAMBRIAN
HOST ROCK TYPE.....DOLOMITE
IGNEOUS ROCK TYPE.....NONE KNOWN
AGE OF MINERALIZATION.....- CAMBRIAN AND POST CAMBRIAN
PERTINENT MINERALS (NOT ORE).....PYRITE, CLAYS, BARITE (?), CALCITE, DOLOMITE.
ORE CONTROL/LOCUS.....RESIDUAL WEATHERING
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND OF STACK OF IMBRICATE ALLOCTHONS.
SIGNIFICANT LOCAL STRUCTURES.....HEMATITE MOUNTAIN OVERTHRUST, SAYER SCHOOL FAULT.
SIGNIFICANT ALTERATION.....OXIDATION OF SULFIDES
PROCESS OF CONCENTRATION/ENRICHMENT.....RESIDUAL WEATHERING, SUPERGENE ENRICHMENT
FORMATION AGE.....CAMBRIAN
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....SPONGY LIMONITE, GOETHITE, HEMATITE FLOAT; PUNKY LIMONITE AT SE END OF CUT NEAR FARM POND.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOL SURVEY BULL 43, 122 P.

12. Ivanhoe Lead-Zinc Mine

MRDS-REV RECORD NUMBER.....1791
MRDS RECORD NUMBER.....VA01791
RECORD TYPE.....X1M
REPORT DATE.....88 03
INFORMATION SOURCE.....1235
REPORTER.....GOOD, RICHARD S. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....IVANHOE LEAD ZINC MINE
SYNONYM NAME.....AUSTINVILLE WEST LEAD ZINC MINE
MINING DISTRICT/AREA.....NEW RIVER-CRIPPLE CREEK REGION, AUSTINVILLE-IVANHOE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001
LAND STATUS.....01
QUADRANGLE NAME..... AUSTINVILLE (1979) QUADRANGLE SCALE 1:24000
ELEVATION.....2095 FT
UTM NORTHING...4076260 EASTING...503380 ZONE...+17
LATITUDE.....36-50-03N LONGITUDE.....080-57-44W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....0.25 MILE SSW OF IVANHOE FROM STATE ROAD 94.
LOCATION COMMENTS.....300 FEET WEST OF STATE ROAD 742; 500 FEET BY PRIVATE ROAD NNW FROM STATE ROAD 742 FROM POINT 0.1 MILE NW FROM JNC OF STATE ROADS 601 AND 642.
COMMODITIES PRESENT.....ZN PB DOL (FE)
ORE MATERIALS.....SPHALERITE, GALENA, HEMIMORPHITE, SMITHSONITE, HYDROZINCITE, CERUSSITE, ANGLESITE, GOETHITE, LIMONITE
COMMODITY SUBTYPES.....5
GENERAL ANALYTICAL DATA.....AT CLOSING 1981: 3% ZN, 0.4% PB; 1968: 3.7% ZN, 0.7% PB (SEE PRODUCTION TABLE 1968-1981)
COMMODITY INFO COMMENTS.....IRON FORMERLY MINED 1800'S TO EARLY 1920'S NEAR AUSTINVILLE. 60 PPM AG IN GALENA; SILVER IN GALENA TOO LOW FOR COMMERCIAL EXTRACTION. SILVER ERRONEOUSLY REPORTED BY US BUREAU OF MINES TO BE BYPRODUCT (WEINBERT, 1988). IRON IN SPHALERITE 0.0-0.3%, CADMIUM IN SPHALERITE 0.0-0.3% (FOLEY , 1980)
MAJOR.....ZN PB DOL
MINOR.....(FE)
PRODUCTION.....L
STATUS AND ACTIVITY.....6

DISCOVERER.....COLONEL CHISWELL, BRITISH ARMY OFFICER
YEAR OF DISCOVERY.....1750-1756
NATURE OF DISCOVERY.....B
YEAR OF FIRST PRODUCTION.....1750-1756
YEAR OF LAST PRODUCTION.....1981
OWNER (PRESENT/LAST).....GULF AND WESTERN INDUSTRIES, INC. (PURCHASED NEW JERSEY ZINC COMPANY)
OPERATOR.....AUSTINVILLE LIMESTONE COMPANY CURRENTLY OPERATES A SURFACE QUARRY FOR CRUSHED STONE AND AGRICULTURAL LIME.
EXPLORATION AND DEVELOPMENT COMMENTS.....SEE GENERAL COMMENTS FOR HISTORICAL TECHNOLOGY. MODERN MINING (1925-1981) CONSISTED OF HAULING ORE BY RAIL TO UNDERGRUND CRUSHER BREAKING TO 4 INCH MAXIMUM SIZE, HOISTING, AUTOMATICALLY IN SIX TON SKIPS TO FLOTATION MILL ON SURFACE WHICH PROCESSED 2,500 TONS DAILY.
DEPOSIT TYPE.....STRATAFORM
DEPOSIT FORM.....LENSE: PENCIL SHAPED WITH LENSE-LIKE CROSS SECTION; TABULAR, SOME LENSES STAGGER.
DEPTH TO BOTTOM.....1200 UNITS...FT
MAXIMUM LENGTH.....>400 UNITS...FT
MAXIMUM WIDTH.....>100 UNITS...FT
MAXIMUM THICKNESS.....30 UNITS...FT
DEPOSIT SIZE.....LARGE
STRIKE.....NE
DIP.....SE
DEPOSIT DESCRIPTION COMMENTS.....THE IVANHOE MINE IS PART OF THE AUSTINVILLE SYSTEM OF 17 EN ECHELON LENSES WITH VERTICAL THICKNESS OF 8 FEET AND MORE AND COMBINED PB AND ZN % OF AT LEAST 3.5 AVERAGING 4.7% (MILLER, 1985). SIMPLE MINERALOGY: SPHALERITE-PYRITE-GALENA +/- (MARCASITE-CHALOCOPYRITE)(FOLEY, 1980) AVERAGING 400 FEET STRIKE LENGTH, 100 FEET DEP LENGTH, 10-30 FEET IN THICKNESS; LENSES ARE VERTICALLY STACKED, SOME CONNECTED (WEINBERG 1963, 1971). ORE BODIES ARE: SOUTHWEST, FISHERFIELD, BROWN (NON MINED), CHISWELL, RIBBON DOLOMITE, NORTHEAST CHAFFIN, HUNDRED, FLATWOODS LOWER, AUSTINVILLE NORTHEAST, NINTH LEVEL, FORTY, MOTTLED MARKER, PYRITE, FLATWOODS UPPER (NOT MINED) AUSTINVILLE SOUTHWEST, SHARP (MILLER, 1985)
DEPTH BELOW SURFACE.....1200 UNITS...FT
OVERALL LENGTH.....6 UNITS...MILES
OVERALL WIDTH.....0.5 UNITS...MILES
DESCRIPTION OF WORKINGS COMMENTS.....MINE WORKINGS EXTEND FOR SIX MILES ALONG STRIKE AND 0.5 MILE ACROSS STRIKE, LEVELS WERE CUT EVERY 100 FEET DOWN TO 1200 FOOT DEPTH. THREE MAIN SHAFTS WERE SUNK: 1) AUSTINVILLE (VAN MATTER); 2) IVANHOE, 2.6 MILES WSW OF VAN MATER; 3) FLATWOOD 1.5 MILES NE OF VAN MATER. AUSTINVILLE (VAN MATER) WAS THE FIRST MODERN SHAFT. IVANHOE AND FLATWOOD WERE MUCH LATER - 1950'S-1970.
HOST ROCK AGE.....CAMBRIAN
HOST ROCK TYPE.....RIBBON LAMINATED DOLOMITE, STROMA TOLITIC DOLOMITE WITH SHALY CARBONATE LAYERS
AGE OF IGNEOUS ROCK.....- NONE IN AREA OF ORE DEPOSITS. MT. ROGERS FELSIC VOLCANICS 10 MILES TO SOUTH (LATE PREC TO CAMBRIAN)
IGNEOUS ROCK TYPE.....NONE FOUND IN EXTENSIVE DRILLING AND SURFACE MAPPING.
AGE OF MINERALIZATION.....- PALEOZOIC: CAMBRIAN OR POST CAMBRIAN
PERTINENT MINERALS (NOT ORE).....PYRITE, CHALCOPYRITE, MARCASITE, FLUORITE, BARITE, GPYSUM, CHERT, ANHY DRITE, CALCITE, DOLOMITE, PLUMBO-ARAGONITE, MINIUM, MASSICOT.
ORE CONTROL/LOCUS.....ORE CONFINED TO 1300 FEET WITHIN PATTERSON AND SACCHAROIDAL MEMBERS OF SHADY DOLOMITE.
TECTONIC SETTING.....CARBONATE RAMP HOMOCLINE: WITH UPWARD SHALLOWING PLATFORM MARGIN WITH SKELETAL ALGAE REEF.
SIGNIFICANT REGIONAL STRUCTURES.....MULTIPLE, IMBRICATE, STEEP THRUST FAULTS PARALLEL TO REGIONAL STRUCTURE; FRIES THRUST
SIGNIFICANT LOCAL STRUCTURES.....AUSTINVILLE SYNCLINE, AUSTINVILLE ANTICLINE; FOSTERS FALLS FAULT, LOG WASHER FAULT, VAN MATER FAULT, STAMPING GROUND FAULT, GLEAVES FAULT, CALLAHAN FAULT, IVANHOE FAULT, BLUE GRASS FAULT.
SIGNIFICANT ALTERATION.....OXIDATION AT SURFACE ON CARBONATE PINNACLES AND ALONG FAULTS TO 100 FEET BELOW SURFACE; DOLOMITE RECRYSTALLIZED IN BARREN ZONE AROUND ORE ("MET").
PROCESS OF CONCENTRATION/ENRICHMENT.....WARM BRINE DEPOSITION CONCENTRATED MOSTLY WITHIN BRECCIAS, OPEN SPACE DEPOSITION (60%) AND REPLACEMENT (?) (40%).
FORMATION AGE.....CAMBRIAN
FORMATION NAME.....SHADY DOLOMITE: PATTERSON MEMBER (USGS USAGE)=RIBBON MEMBER (NJ ZINC USAGE)
FORMATION NAME.....SHADY DOLOMITE: SACCHAROIDAL MEMBER (USGS) = AUSTINVILLE MEMBER (NJ ZINC).
IGNEOUS UNIT AGE.....- NONE IN AREA. MT. ROGERS VOLCANIC GROUP OF LATE PRECAMBRIAN TO CAMBRIAN (?) AGE.
IGNEOUS UNIT NAME.....NONE WITHIN TEN MILES OF ORE ZONE
GEOLOGY COMMENTS.....(WEINBERT, 1963, BROWN AND WEINBERG 1967, WEINBERG 1971, FOLEY 1980, FOLEY AND OTHERS, 1981). 1. THE ORE FLUIDS WERE WARM, METAL-RICH BRINES WITH TEMPERATURES OF 100-160 DEG C AND HIGH SALINITIES (10-25% EQUIV WT. NACL) BASED ON FLUID INCLUSIONS IN SPHALERITE. 2. THE ORE MINERALS ARE SIMPLE AND CONSIST LARGELY OF LENSES OF SPHALERITE-PYRITE-GALENA WITH TRACES OF MARCASITE AND CHALCOPYRITE. 3. PYRITE IS UBIQUITOUS AND IS THE FIRST MINERAL TO FORM IN ORE BODIES. IT MAKES UP ABOUT 5% OF TOTAL SULFIDES. 4. THE SPHALERITE IS BANDED, IN PLACES BOTH DARK BROWN AND HONEY COLORED AND WAS DEPOSITED CYCLICALLY. 5. ALL ORE IS DOLOMITE-HOSTED WITH VARYING AMOUNTS OF BLEACHING AND RECRYSTALLIZATION (WHITE "MET~) AROUND ORE LENSES. RECRYSTALLIZATION OF DOLOMITE WITHIN ORE HAS LED TO ALTERNATING LAYERS OF WHITE AND DARK DOLOMITE IN MUCH OF THE ORE. THERE ARE UP TO THREE GENERATIONS OF DOLOMITE. 6. THE ORE OCCURS AS BRECCIA FILLINGS AND THIN LENSLIKE REPLACEMENTS PARALLEL TO SEDIMENTARY LAYERING. FOOTWALL ORE IS GENERALLY CONFORMABLE TO BEDDING, HANGING WALL CONTACT IS IRREGULAR. 7. BRECCIATION AND DOLOMITIZATION PRECEDED ORE DEPOSITION AND IS POST SEDIMENTATION. 8. THE MAJORITY OF ORE LENSES ARE PARALLEL TO SUBPARALLEL TO FAULTS AND SEVERAL ARE STACKED NEAR FAULT ZONES. SOME OF THE STACKS ARE CONNECTED VERTICALLY. LATERAL AND STRIKE BOUNDARIES ARE BOTH ABRUPT (FAULT, JOINT) AND GRADATIONAL. 9 BOTH POST ORE AND PRE-ORE FAULTING ARE PRESENT BUT ONLY MINOR FAULTS INTERSECT ORE LENSES. ORE BODIES GENERALLY DO NOT MATCH ON OPPOSITE SIDES OF SAME FAULT. OXIDATION ALONG SOME FAULTS HAS BEEN OBSERVED TO 1100 FEET BELOW SURFACE. 10. SPALERITE COLOR DOES NOT COREELATE WELL WITH IRON CONTENT (0.0-3.0%). CADMIUM (0.0-0.3%) BEARS INVERSE RELATIONSHIP TO IRON. SPHALERITE STRATIGRA PHY CAN BE USED FOR CORRELATION. 11. LATE STAGE SPHALERITE, FLUORITE, QUARTZ, BARITE, GYPSUM AND ANHYDRITE OCCUR IN VUGS AND VEINS. THE FLUORITE IS COLORLESS TO PALE PURPLE. CHERT IS COLORLESS TO PALE PURPLE. CHERT IS COLORLESS, RED, OR BLACK, QUARTZ. ISOTOPIC DATA ON LEAD IN GALENA WAS NOT COMPATIBLE WITH A CAMBRIAN OR LATER AGE OF MINERALIZATION CLEARLY DEMONSTRATED FROM GEOLOGIC AND MINER-ALOGIC EVIDENCE. A "PSEUDOSECONDARY" ISOCHRON INDICATED 3.5 +/- 0.4 BILLION YEAR AGE FOR SOURCE OF LEAD, UNREASONABLE FOR CRUSTAL ENVIRONMENT UNLESS INHERITED THROUGH MULTICYCLES FROM CRUSTAL OR ASTEROID SOURCE. DATA DOES INDICATE MIXING OF LEAD FROM AT LEAST TWO SOURCES.
GENERAL COMMENTS.....1750-1756: WATSON (1905, P. 15, P.68) MENTIONS 1750 AND BOYD (1881, P. 74) INDICATES 1756 AS FIRST YEAR OF MINING. COLONEL CHISWELL, BRITISH COLONIAL OFFICER AND PIONEER, CREDITED WITH DISCOVERY ALONG HIGH BLUFF ON BANK OF NEW RIVER. A 20 FOOT TUNNEL WAS DRIVEN UNDERNEATH LEAD SHOWINGS JUST ABOVE RIVER LEVEL (CHISWELL'S HOLE"). 1756-1776: PRIMITIVE SURFACE EXTRACTION OF LEAD FROM GALENA IN SHADY DOLOMITE. CHISWELL'S SMELTING PLANT WAS COMMON AIR FURNACE WITH HEARTH AND ROOF BUILD OF FIRE BRICK, PROBABLY FROM ENGLAND. THE SMELTER WAS AN IMPORTANT SOURCE OF LEAD SHOT IN THE FRENCH-INDIAN WARS AND AMERICAN REVOLUTION. 1776: MINING WAS TERMINATED BECAUSE OF CHISWELL'S TORY SYMPATHIES. PROPERTY CONFISCATED AND OPERATED BY AN AMERICAN REVOLUTIONARY ARMY DETAIL UNDER WASHINGTON'S ORDERS. COLONEL CHISWELL DIED IN 1776 IN CUMBERLAND COURTHOUSE JAIL, VIRGINIA (WATSON, 1905). MINES SOLD AT PUBLIC AUCTION. 1780: TO STEPLHEN AND MOSES AUSTIN. MINES RENTED TO CAPTAIN NEWEL WHO WAS FIRST TO WORK CERUSSITE IN ADDITION TO GALENA. 1800: IRON PRODUCED AT NEARBY IVANHOE FURNACE. 1805: AUSTINS DEFAULTED ON PAYMENTS, PROPERTY REVERTED TO VIRGINIA WHICH SOLD MINES BY AUCTION TO THOMAS JACKSON, DANIEL SCHEEFEY AND DAVID PIERCE. 1805-1837: PERIOD OF LOW, INTERMITTENT PRODUCTION BECAUSE OF MULTIPLE OWNERSHIP COMPETING FOR SAME ORE, SALES OF PARTIAL INTERESTS, CONTESTED INHERITANCE, AND OTHER LITIGATION. IN 1837 FOUR SEPARATE MINING COMPANIES (KOHLER, 1870, IN MILLER, 1985). 1830: WATERPOWER FROM NEW RIVER USED FOR CRUSHING AND GRINDING. 1838: COMPETING MINES JOINED TO FORM WYTHE LEAD MINE COMPANY (1839) FOR TEN YEAR CONTRACT. SCOTTISH FURNACE ("SMELT MILLS") USED. FIRST SYSTEMATIC DEVELOPMENT, CROSSCUT ADIT FROM BLUFF BEGUN, COMPLETED IN 1851 (1527 FT) SHOT TOWER SHAFT (242 FT DEEP) AT END OF TUNNEL. SHOT LOADED ON TRAM CAR AND RUN TO SURFACE FOR SEPARATION, SIZING AND GLAZING. MINES PROSPEROUS (WATSON, 1905; BOYD, 1881). 1843: LARGE SCALE SHOTMAK ING BEGUN. FURNACES FOR BUILDING SLAG BUILD ON SITE OF OLD SCOTCH FURNACES (WATSON, 1905). 1848: WYTHE UNION LEAD MINE COMPANY FORMED FOR TEN YEAR CONTRACT. MULTIPLE OWNERSHIP DISPUTES RESOLVED BY SELLOUT OF PRIMARY DISSENTERS. 1858: UNION LEAD MINE FORMED. OPERATED MINES DURING CIVIL WAR AND SAID TO HAVE SUPPLIED MOST OF LEAD SHOT FOR CONFEDERATE ARMIES EAST OF MISSISSIPPI RIVER. OXIDIZED ZINC ORES, SMITHSONITE AND MEMIMOPHITE MINED FOR FIRST TIME WITH TRIAL BATCH SENT TO CONFEDERATE ZINC WORKS AT PERTERSBURG. NEAR END OF WAR MINING EQUIPMENT AND CONCENTRATING EQUIPMENT AT AUSTINVILLE DESTROYED BY FEDERAL CAVALRY. ZINC WORKS DESTROYED BY UNION TROOPS. 1864: MINES CLOSED DECEMBER 17, 1864 BY UNION CAVALRY (WATSON, 1905). 1865: MINES REOPENED OCTOBER 1865 WITH ZINC ORE SHIPPED TO LEHIGH ZINC WORKS, BETHLEHEM, PENNSYLVANIA AND MERCER ZINC WORKS, TRENTON, NJ. 1874: WYTHE LEAD AND ZINC MINING COMPANY PURCHASED AUSTINVILLE FOR SMITHSONITE. NEW COMPANY FOUND ABUNDANT SPHALERITE BUT LITTLE SMITHSONITE AT DEPTH. SOLD ZINC ORE, PRODUCED ABOUT 3 TONS OF PIG LEAD AND LEAD SHOT/DAY. 1879-1881: AIR COMPRESSOR USED TO VENTILATE MINES AND RUN BURLEIGH DRILL (BOYD, 1881). 1879: ZINC SMELTER OF BERTHA MINERAL COMPANY OPENED AT PULASKI, VIRGINIA. 1902: BERTHA MINERAL COMPANY FORMED AS SUBSIDIARY OF NEW JERSEY ZINC COMPANY. 1911: ZINC TAILINGS EXHAUSTED. FLOTATION PROCESS DEVELOPED FOR RECO-VERY OF ZINC FROM SPHALERITE. 1925-1297: CONSTRUCTION OF CONCENTRATION MILL FOR FLOTATION. MODERN SHAFT

SUNK AT AUSTINVILLE. 1950-1960: IVANHOE PROPERTY DE VELOPED FROM PROSPECT TO MAJOR ORE PRODUCER. 1960-1970: FLATWOOD PROPERTY DEVELOPED TO 800 FEET BELOW SURFACE WITH 4000 FEET OF DRIFT. SEVERE WATER PROBLEM AND SPOTTY ORE KEPT FLATWOOD FROM PROFITABLE MINING (WEINBERG, 1980). 1970-1980: CHAFFIN ESTATE PROPERTY 1 MILE SE OF FLATWOOD WAS NEVER DEVELOPED BECAUSE OF DEPTH (1800-2000 FT). CHAFFIN CONTAINED A MAJOR PORTION OF 900,000 TONS RESERVES AT TIME OF CLOSING. GULF AND WESTERN INDUSTRIES, INC. BOUGHT NEW JERSEY ZINC IN LATE 1970'S. 1981: BECAUSE OF NEARLY DEPLETED RESERVES, COST OF DEWATERING MINES AT 1100 FOOT LEVEL (13,000 GALLONS OF WATER/MINUTE, $60,000/MONTH RISING LABOR COSTS, AND CONTINUING ENVIRONMENTAL IMPACT AND SAFETY HEARINGS, FOCUSED ON SEWAGE IN THE MINE AND CYANIDE USED IN FROTH FLOTATION PROCESS, THE MINE WAS ALLOWED TO FLOOD IN NOVEMBER, 1981. TOTAL VOLUME OF WATER AFTER FLOODING UNDERGROUND WORKINGS ESTIMATED AT 1 BILLION GALLONS, EQUIVALENT TO LAKE 265 ACRES, TEN FEET DEEP. MINE CLOSED DECEMBER 31, 1981 (WEINBERG, 1981, PERSONAL COMMUNICATION, 1988).

REFERENCE....BROWN, W.H., 1935, QUANTITATIVE STUDY OF ORE ZONING, AUSTINVILLE MINE, WYTHE COUNTY, VIRGINIA: ECON. GEOL. VOL. 30 NO. 4, P. 425-433.

REFERENCE....BROWN, W.H., 1953, AUSTINVILLE: MINING ENG., VOL. 5, NO. 12, P. 1216-1221.

REFERENCE....BROWN, W.H., AND WEINBERG, E.L., 1967, GEOLOGY OF THE AUSTINVILLE-IVANHOE DISTRICT, VIRGINIA, IN RIDGE, J.D., ED., ORE DEPOSITS OF THE UNITED STATES 1933-1967, MAPLE PRESS, YORK, PA.

REFERENCE....CURRIER, L.W., AND WEINBERG, E.L., 1967: ZINC AND LEAD REGION OF SOUTHWESTERN VIRGINIA: VIRGINIA GEOL. SURV. BULL. 43, 122 P.

REFERENCE....FOLEY, N.K., 1980, MINERALOGY AND GEOCHEMISTRY OF THE AUSTINVILLE DISTRICT, UNPUBL. MS. THESIS, VIRGINIA POLYTECH INSTITUTE AND UNIV., 84 P.

REFERENCE....FOLEY, N.K., SINHA, A.K., CRAIG, J.R., 1981, ISOTOPIC COMPOSITION OF LEAD IN THE AUSTINVILLE-IVANHOE PB-ZN DISTRICT: ECON GEOL, VOL. 76, P. 2012-2017.

REFERENCE....KOHLER, E., 1870, HISTORY OF AUSTINVILLE, VIRGINIA: UNPUBLISHED MANUSCRIPT IN NEW JERSEY ZINC (GULF AND WESTERN INDUSTRIES, INC.) COMPANY FILES.

REFERENCE....MCCREATH, A.S., AND D'INVILLIERS, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HARRISBURG PUBLISHING CO., HARRISBURG, PA, 171 P. WITH MAP.

REFERENCE....MILLER, J.W., 1985, STATISTICAL MODELING OF AUSTINVILLE MINE: A GUIDE TO EXPLORATION: PH.D. DISSERT./UNIV. OF GEORGIA, ATHENS, 142 P.

REFERENCE....PHEIL, R.W., AND READ, J.F., 1980, CAMBRIAN-CARBONATE PLATFORM FACIES, SHADY DOLOMITE, SOUTHWESTERN VIRGINIA, U.S.A. JOURN SED PET, VOL. 50, NO. 1, P. 91-115.

REFERENCE....VDMR, 1981, AUSTINVILLE MINE CLOSES: VIRGINIA MINERALS, VOL. 27, NO. 4, NOV. 1981.

REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: GEOL. SURV. VIRGINIA BULL. 1, 150 P.

REFERENCE....WATSON, T.L., 1907, MINERAL RESOURCES OF VIRGINIA, THE JAMESTOWN EXPOSITION COMM., J.P. BELL CO., LYNCHBURG, VA, 618 P.

REFERENCE....WEINBERG, E.L., 1963, GEOLOGY OF THE AUSTINVILLE-IVANHOE MINE AREA, IN GEOLOGIC EXCURSIONS IN SW VIRGINIA, VA POLYTECH. INSTIT. ENG. EXTENSION SERIES, GUIDEBOOK II, P. 5-17.

REFERENCE....WEINBERG, E.L., 1971, SULFIDE MINERALIZATION IN SW VIRGINIA, AUSTINVILLE-IVANHOE MINE, IN GUIDEBOOK TO APPALACHIAN TECTONIC AND SULFIDE MINERALIZATION: GEOL, SOC. AM, SE SECT. MTG., BLACKSBURG, VA, P. 7-23.

REFERENCE....WEINBERG, E.L., 1980, AUSTINVILLE MINING - 1756 TO PRESENT: VIRGINIA MINERALS, VOL 26, NO. 1, P. 11.

REFERENCE....WEINBERG, E.L., 1988, FORMERLY NEW JERSEY ZINC COMPANY REGIONAL GEOLOGIST, PERSONAL COMMUNICATION.

ANNUAL PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEAR	GRADE
ORE			645	1968	3.50% ZN; 0.66% PB
ORE			656	1969	3.48% ZN; 0.65% PB
ORE			670	1970	3.19% ZN; 0.60% PB
ORE			622	1971	3.20% ZN; 0.65% PB
ORE			738	1972	3.15% ZN; 0.65% PB
ORE			594	1973	3.37% ZN; 0.59% PB
ORE			596	1974	3.33% ZN; 0.55% PB
ORE			640	1975	3.12% ZN; 0.56% PB
ORE			547	1976	2.72% ZN; 0.44% PB
ORE			533	1977	2.89% ZN; 0.50% PB
ORE			525	1978	3.01% ZN; 0.49% PB
ORE			498	1979	2.92% ZN; 0.44% PB
ORE			532	1980	2.97% ZN; 0.43% PB
ORE			482	1981	2.78% ZN; 0.54% PB

PRODUCTION COMMENTS.....IVANHOE WAS MINED FOR IRON IN THE 19TH CENTURY TO THE 1920'S. IT DID NOT BECOME DEVELOPED FOR ZN AND PB UNTIL THE 1950'S AND IN THE 1960'S TO 1981 MOST OF AUSTINVILLE PRODUCTION WAS FROM IVANHOE. PRODUCTION FIGURES FOR 1968-1981 ARE GIVEN IN THE TABLE. CONCENTRATES AVERAGED 61.5% ZN METAL AND 75% PB METAL FROM FLOTATION MILL (WEINBERG, 1980). OVERALL PRODUCTION FROM THE COMBINED ORES FROM AUSTINVILLE AND IVANHOE HAVE BEEN ESTIMATED AS 34,000,000 SHORT TONS (30 MILLION METRIC TONS) OF 2.3-6.6, AVERAGE 4.7 % COMBINED LEAD AND ZINC FROM 1750 (1756) TO 1981 (MILLER, 1985). THERE ARE SEVENTEEN SEPARATE ORE BODIES IN THE AUSTINVILLE DEPOSITS INCLUDING THE IVANHOE AND ALL BUT THREE WERE MINED.

13. Jackson Ferry Prospect

MRDS-REV RECORD NUMBER.....1356
MRDS RECORD NUMBER.....W031360
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....JACKSON FERRY PROSPECT
MINING DISTRICT/AREA.....AUSTINVILLE-IVANHOE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SYLVATUS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1970 (601 M)
UTM NORTHING...4080320 EASTING...511820 ZONE...+17
LATITUDE.....36-52-14N LONGITUDE.....080-52-03W
POSITION FROM NEAREST LOCALITY.....0.15 KM (0.1 MI) NE OF JACKSON FERRY.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. JUST EAST OF THE RAILROAD BRIDGE OVER SHORTS CREEK; 125 M (400 FT) NORTH OF STATE ROAD 608, 0.15 KM (0.1 MI) BY ROAD EAST OF JUNCTION WITH U.S. HWY. 52 IN JACKSON FERRY. R.S. GOOD WAS UNABLE TO LOCATE PROSPECT IN MARCH, 1988.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA
NON-PRODUCER MAIN.....ZN PB
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DEVELOPMENT WORK REPORTED.
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOSTONE BRECCIA
PERTINENT MINERALS (NOT ORE).....DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, AUSTINVILLE SYNCLINAL BASIN, GLEAVES KNOB OVERTHRUST
SIGNIFICANT LOCAL STRUCTURES.....SHORT HILL OVERTHRUST
PROCESS OF CONCENTRATION/ENRICHMENT.....EPIGENETIC TELETHERMAL SOLUTIONS
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION (AUSTINVILLE (SACCAROIDAL) MEMBER)
GEOLOGY COMMENTS.....FRACTURED ZONE APPARENTLY TRENDS AT RIGHT ANGLES TO THE STRIKE (CURRIER, 1935).
NON-USGS WORK.....1934 GEOL. MAP VA. GEOL. SURV.: ISSUED BULL. 43.
NON-USGS WORK.....1939 GEOL. MAP VA. GEOL. SURV.: ISSUED BULL. 72.

REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.

REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P

14. Jackson Ferry West Prospect

MRDS-REV RECORD NUMBER.....1357
MRDS RECORD NUMBER.....W031361
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....JACKSON FERRY WEST PROSPECT
MINING DISTRICT/AREA.....AUSTINVILLE-IVANHOE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MAX MEADOWS, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1960 FT (598 M)
UTM NORTHING...4081150 EASTING...509850 ZONE...+17
LATITUDE.....36-52-41N LONGITUDE.....080-53-22W
POSITION FROM NEAREST LOCALITY.....0.6 KM (0.4 MI) SE OF GALENA.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. JUST NNE OF U.S. HWY 52, 0.6 KM (0.4 MI) BY ROAD SE OF JUNCTION WITH STATE ROAD 619 IN GALENA. R.S. GOOD WAS UNABLE TO LOCATE PROSPECT IN MARCH, 1988.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, PYRITE
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....OCCURRENCE NOT DEVELOPED.
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT SIZE.....SMALL(?)
STRIKE.....NE
DIP.....NW
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOSTONE BRECCIA
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE

SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, AUSTINVILLE SYNCLINAL BASIN GLEAVES KNOB OVERTHRUST
SIGNIFICANT LOCAL STRUCTURES.....HEMATITE MOUNTAIN OVERTHRUST
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION (PATTERSON (RIBBON) MEMBER)
GEOLOGY COMMENTS.....SHADY FORMATION IS PINCHED OUT IN THE VICINITY OF THIS OCCURRENCE BY THE ERWIN FORMATION AND THE ELBROOK FORMATION (STOSE ANDSTOSE, 1957, PL. 1)
NON-USGS WORK.....1934 GEOL. MAP VA. GEOL. SURV.: ISSUED BULL. 43.
NON-USGS WORK.....1939 GEOL. MAP VA. GEOL. SURV: ISSUED BULL. 72.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P

15. Jackson Prospect

MRDS-REV RECORD NUMBER.....1380
MRDS RECORD NUMBER.....W031362
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VMDR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....JACKSON PROSPECT
MINING DISTRICT/AREA.....AUSTINVILLE-IVANHOE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... AUSTINVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1980 FT (604 M)
UTM NORTHING...4077890 EASTING...505210 ZONE...+17
LATITUDE.....36-50-55N LONGITUDE.....080-56-30W
POSITION FROM NEAREST LOCALITY.....2.35 KM (1.45 MI) WEST OF AUSTINVILLE.
LOCATION COMMENTS.....LOCATION APPROXIMATE, NOT FIELD CHECKED. 75 M (250 FT) NE OF DIRT ROAD AND BEHIND HOUSE 0.6 KM (0.4 MI) BY ROAD NE FROM END OF STATE ROAD 639.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....SPHALERITE
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....JACKSON
EXPLORATION AND DEVELOPMENT COMMENTS.....VERY LITTLE PROSPECTING REPORTED BY CURRIER (1935, P. 102).
DEPOSIT TYPE.....DISSEMINATED, REPLACEMENT, VEIN/SHEAR ZONE
DEPOSIT FORM.....IRREGULAR
STRIKE.....NE
DIP.....50 DEG. NW
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOSTONE BRECCIA
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, AUSTINVILLE SYNCLINAL BASIN, GLEAVES KNOB OVERTHRUST
SIGNIFICANT LOCAL STRUCTURES.....ANTICLINE
PROCESS OF CONCENTRATION/ENRICHMENT.....EPIGENETIC TELETHERMAL SOLUTIONS
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY FORMATION (AUSTINVILLE (SACCAR OIDAL) MEMBER)
GENERAL COMMENTS.....0.7 KM (0.45 MI) SW OF THIS LOCATION AND JUST WEST OF FORMER NATIONAL CARBIDE CO. QUARRY, A PROSPECT SHAFT DISCLOSED A SPHALERITE-BEARING DOLOSTONE BRECCIA WITHIN THE CARBIDE (IVANHOE) MEMBER.
NON-USGS WORK.....1934 GEOL. MAP VA. GEOL. SURV.: ISSUED BULL. 43.
NON-USGS WORK.....1939 GEOL. MAP VA. GEOL. SURV.: ISSUED BULL. 72.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....STOSE, A.J., AND STOSE, G.W., 1957, GEOLOGY AND MINERAL RESOURCES OF THE GOSSAN LEAD DISTRICT AND ADJACENT AREAS IN VIRGINIA: VIRGINIA DIVISION OF MINERAL RESOURCES BULLETIN 72, 233 P

16. James Prospect

MRDS-REV RECORD NUMBER.....1358
MRDS RECORD NUMBER.....W031363
RECORD TYPE.....X1M
REPORT DATE.....80 06
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....MEINTZER, ROBERT E. (SWEET, P. C.)
SITE NAME.....JAMES PROSPECT
MINING DISTRICT/AREA.....CEDAR SPRINGS DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... CEDAR SPRINGS, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-49- N LONGITUDE.....081-16- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....CURRIER (1935, P. 106) DESCRIBES OCCURRENCE AS BEING 1.5 MI (2.5 KM) SE OF CEDAR SPRINGS. R.S. GOOD COULD NOT LOCATE IN APRIL, 1988.
COMMODITIES PRESENT.....ZN
ORE MATERIALS.....PROBABLY SPHALERITE
NON-PRODUCER MAIN.....ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....JAMES
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DEVELOPMENT REPORTED.
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, PULASKI FAULT, HOLSTON MOUNTAIN FAULT
FORMATION AGE.....CAMB
FORMATION AGE.....CAMB
FORMATION NAME.....ROME FORMATION
FORMATION NAME.....SHADY FORMATION
WORK DONE BY USGS.....1972 OTHER R.B. NEUMAN: COMPILED MISC. GEOL. INV. MAP I-709-A.
NON-USGS WORK.....1934 GEOL. MAP VA. GEOL. SURV.: ISSUED BULL. 43
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....RANKIN, D.W., ESPENSHADE, G.H., AND NEUMAN, R.B., 1972, GEOLOGIC MAP OF THE WEST HALF OF THE WINSTON-SALEM QUADRANGLE, NORTH CAROLINA, VIRGINIA, AND TENNESSEE: U.S. GEOLOGICAL SURVEY MISCELLANEOUS GEOLOGIC INVESTIGATIONS MAP I-709-A, 1 SHEET, SCALE 1:250,000.

17. Laswell Prospects

MRDS-REV RECORD NUMBER.....1359
MRDS RECORD NUMBER.....W031364
RECORD TYPE.....X1M
REPORT DATE.....80 07
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....LASWELL PROSPECTS
MINING DISTRICT/AREA.....BERTHA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... MAX MEADOWS, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-54- N LONGITUDE.....080-54- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....0.4 KM (0.25 MI) EAST OF U.S. HIGHWAY 52, ABOUT 0.8 KM (0.5 MI) NORTH OF LASWELL, NEAR THE NORTH SIDE OF SOME IRON PITS. THE IRON PITS MAY BE THE SANDERS AND CEDAR RUN IRON PITS. R.S. GOOD COULD NOT LOCATE IN APRIL, 1988.
COMMODITIES PRESENT.....PB ZN
ORE MATERIALS.....GALENA, SPHALERITE
NON-PRODUCER MAIN.....PB ZN
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
EXPLORATION AND DEVELOPMENT COMMENTS.....NO DEVELOPMENTAL WORK WAS DONE.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....GALENA OCCURS AS VEINLETS AND SPHALERITE IS DISSEMINATED IN PINNACLES OF THE PATTERSON LIMESTONE MEMBER OF THE SHADY DOLOMITE, JUST ABOVE THE LASWELL OVERTHRUST. ZINC HAS CONTAMINATED THE IRON ORE AT THIS PLACE.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE, LIMESTONE
PERTINENT MINERALS (NOT ORE).....DOLOMITE, LIMESTONE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND FAULTING
SIGNIFICANT LOCAL STRUCTURES.....LASWELL OVERTHRUST
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.

18. Little Wythe Mine

MRDS-REV RECORD NUMBER.....1363
MRDS RECORD NUMBER.....W031365
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 04

UPDATER.....GOOD, RICHARD S.
SITE NAME.....LITTLE WYTHE MINE
SYNONYM NAME....."YELLOW ORE BANK"
MINING DISTRICT/AREA.....CRIPPLE CREEK - NEW RIVER

COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001 NEW RIVER
LAND STATUS.....41
QUADRANGLE NAME..... CRIPPLE CREEK, VA. (1968) QUADRANGLE SCALE 1:24000
ELEVATION.....2442 FT.
UTM NORTHING...4072340 EASTING...491440 ZONE...+17
LATITUDE.....36-47-55N LONGITUDE.....081-05-45W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.7 MILES SSE OF THE TOWN OF CRIPPLE CREEK FROM CRIPPLE CREEK RIVER BANK.
LOCATION COMMENTS.....1.0 MILE SOUTH ALONG ROUTE 740 FROM JUCNTION WITH ROUTE 602, 0.49 MILE SOUTH OF NATIONAL FOREST SIGN ON R. 740 AT WEST END OF FRY HILL, TO LEFT IN WOODS 500 FEET EAST OF R. 740.
COMMODITIES PRESENT.....FE ZN PYR
ORE MATERIALS.....SMITHSONITE, HEMIMORPHITE, LIMONITE, PYRITE
GENERAL ANALYTICAL DATA.....(1) FOR IRON ORE: AT LITTLE WYTHE MINE: FE-42.75%, MN-0.32%, SIO_2-13.77%, P-0.25%. (2) IRON ORE - FE-55.4%, P-0.127, SIO_2-7.96%
MAJOR.....FE
MINOR.....ZN
OCCUR.....PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....CROCKETT, OGLESBY, & COMPANY.
YEAR OF DISCOVERY.....PRE 1885
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE 1885
OWNER (PRESENT/LAST).....VIRGINIA IRON, COAL, AND COKE CO.
OPERATOR.....VIRGINIA IRON, COAL, AND COKE CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE NORMA IRON COMPANY SOLD LAND TO THE CROCKETT, OGLESBY, & CO. BEFORE 1885 AND CROCKETT, OGLESBY, & CO. DEVELOPED THE LITTLE WYTHE MINE, STARTING BEFORE 1885. IRON ORE WAS PRODUCED FOR THE WYTHE FURNACE BUT DISCONTIN UED BY 1885. THE VIRGINIA IRON, COAL, AND COKE, CO. THEN PURCHASED THE PROPERTY. IRON ORE AGAIN WAS MINED ON A SMALL SCALE AS WELL AS TWO CARLOADS OF ZINC ORE.
DEPOSIT TYPE.....BEDDED, SHEAR ZONE, WEATHERING RESIDUAL
DEPOSIT FORM.....BLANKET TO IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....N 10 DEG E
DIP.....15 DEG NE
DEPOSIT DESCRIPTION COMMENTS.....THE DEPOSIT IS VERY CLOSE TO AN OVERTHRUST. IRON ORE WAS MINED ALMOST AT THE FAULT CONTACT. THE PYRITE AND OXIDIZED ZINC MINERALS OCCUR IN DOLOMITE OF THE PATTERSON LIMESTONE (RIBBON) MEMBER OF THE SHADY DOLOMITE
DESCRIPTION OF WORKINGS.....S
DEPTH BELOW SURFACE.....10-20 UNITS...FT
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS ARE SURFACE PITS. THERE ARE EXTENSIVE CUTS 10-15 FEET DEEP IN LARGELY CONIFER WOODS WITHIN NATIONAL FOREST. DRILLING BY NEW JERSEY ZINC IN 1960'S(?) INDICATED ONLY IRON AND MANGANESE MINERALIZATION.
HOST ROCK AGE.....EARLY CAMBRIAN
HOST ROCK TYPE.....DOLOMITE, LIMESTONE
IGNEOUS ROCK TYPE.....NONE KNOWN
AGE OF MINERALIZATION.....CAMBRIAN AND POST-CAMBRIAN.
PERTINENT MINERALS (NOT ORE).....PYRITE, GYPSUM
ORE CONTROL/LOCUS.....WARM METAL RICH BRINES, TEMPERATURE CONTROLLED, REMOBILIZAITON CONTROLLED BY LATER FRACTURING AND RESIDUAL WEATHERING LAST PROCESS.
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....STACKED ALLOCTHONS IN IMBRICATE AND DUPLEX SYSTEMS.
SIGNIFICANT LOCAL STRUCTURES.....BRUSH CREEK OVERTHRUST, FRY HILL ANTICLINE, POPLAR CAMP OVERTHRUST
SIGNIFICANT ALTERATION.....OXIDATION OF PRIMARY SULPHIDES PYRITE TO FE OXIDES, SPHALERITE.
PROCESS OF CONCENTRATION/ENRICHMENT.....RESIDUAL WEATHERING OF ORIGINALLY STRATABOUND MINERALIZATION TO HEMIMORPHITE, SMITHSONITE.
FORMATION AGE.....ECAMB
FORMATION AGE.....CAMBRIAN
FORMATION NAME.....SHADY DOLOMITE
FORMATION NAME.....ERWIN QUARTZITE
IGNEOUS UNIT NAME.....NONE KNOWN
GEOLOGY COMMENTS.....THE ERWIN QUARTZITE HAS BEEN OVERTHRUSTED UPON THE SHADY DOLOMITE.
GENERAL COMMENTS.....THERE ARE NUMEROUS IRON PITS IN IMMEDIATE VICINITY AS WELL AS TWO OTHER MINES, THE NORMA ("OUTBURST OPENINGS"), 0.25 MILE SSE AND BEVERLY 0.25 MILE NNE (MCCREATH AND D'INVILLIER, 1887, MAP).
SOURCE REFERENCE.....(1) HOLDEN, R.J., (1907). P. 458; (2) MCCREATH AND D'INVILLIER (1887). P. 118
NON-USGS WORK.....DIREXPL CROCKETT, OGLESBY, & COMPANY-MINED IRON ORE
NON-USGS WORK.....DIREXPL VIRGINIA IRON, COAL, AND COKE CO.-MINED
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....HOLDEN, R.J., 1907, IRON, IN WATSON, T.L., MINERAL RESOURCES OF VIRGINIA: LYNCHBURG, VA., J.P. BELL CO., P. 402-491.
REFERENCE....MCCREATH, A.S., AND D'INVILLIER, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HAR RISBURG, 171 P.
SOURCE OF PRODUCTION INFORMATION.....CURRIER (1935).
PRODUCTION COMMENTS.....2 CARLOADS OF ZINC ORE WAS PRODUCED. ALSO UNDETERMINED AMOUNT OF IRON ORE.

19. Manning and Squires Prospect

MRDS-REV RECORD NUMBER.....1364
MRDS RECORD NUMBER.....W031366
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....MANNING AND SQUIERS PITS PROSPECT
MINING DISTRICT/AREA.....BERTHA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... POSTER FALLS, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-55- N LONGITUDE.....080-49- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....PITS ARE EAST AND NORTHEAST OF THE BERTHA MINES. LOCATION NOT VERIFIED BY R.S. GOOD IN APRIL, 1988.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....OXIDIZED ZINC MINERALS, PYRITE?
COMMODITY INFO COMMENTS.....COMMODITIES ARE BASED ON THOSE AT THE BERTHA MINE WHICH HAS A SIMILAR GEOLOGY
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR?
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....MANNING AND SQUIERS
EXPLORATION AND DEVELOPMENT COMMENTS.....PITS WERE DUG FOR PROSPECTING, BETWEEN 1879-1899. SEVERAL SHAFTS WERE ALSO DEVELOPED TO 9M (30 FT). SOME ORE WAS FOUND.
DEPOSIT TYPE.....WEATHERING RESIDUAL
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....PITS WERE DUG FOR PROSPECTING. SEVERAL 30 FOOT (9 M) SHAFTS WERE ALSO DEVELOPED.
HOST ROCK AGE.....ECAMB-QUAT
HOST ROCK TYPE.....DOLOMITE, CLAY RESIDUUM
PERTINENT MINERALS (NOT ORE).....CLAY MINERALS, DOLOMITE
ORE CONTROL/LOCUS.....CLAY RESIDUUM OF DOLOMITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, GALENA SYNCLINAL BASIN
SIGNIFICANT LOCAL STRUCTURES.....SAYER SCHOOL FAULT, HEMATITE MOUNTAIN OVERTHRUST
SIGNIFICANT ALTERATION.....OXIDATION OF PRIMARY ZINC SULPHIDES
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE WEATHERING
FORMATION AGE.....QUAT
FORMATION AGE.....ECAMB
FORMATION NAME.....CLAY RESIDUUM
FORMATION NAME.....SHADY DOLOMITE
NON-USGS WORK.....DIREXPL MANNING AND SQUIERS ? - DUG PITS
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA : VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....MCCREATH, A.S. AND D'INVILLIERS, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HAR RISBURG, 171 P.

20. Mount Ephraim Church Prospect

MRDS-REV RECORD NUMBER.....1373
MRDS RECORD NUMBER.....W031367
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 04
UPDATER.....GOOD, RICHARD S.
SITE NAME.....MOUNT EPHRAIM CHURCH PROSPECT
MINING DISTRICT/AREA.....SAND MOUNTAIN AREA
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SPEEDWELL, VA. (1979) QUADRANGLE SCALE 1:24000
ELEVATION.....2430 FT
UTM NORTHING...4080500 EASTING...484780 ZONE...+17
LATITUDE.....36-52-19N LONGITUDE.....081-10-16W
ACCURACY.....ACC
POSITION FROM NEAREST LOCALITY.....1.5 MI SE OF CROCKETT (CROCKETT QUADRANGLE); 0.3 MI SSE OF EPHRAIM CHURCH (CROCKETT QUADRANGLE).
LOCATION COMMENTS.....0.4 KM (0.25 MI) SOUTH OF MOUNT EPHRAIM CHURCH. 0.4 KM (0.25 MI) NORTH ON STATE ROAD 690 FROM ITS INTERSECTION WITH U.S. ROUTE 21, 60 M (197 FT) EAST OF ROAD IN FORK OF TWO CREEKS, AT WEST END OF SAND

MOUNTAIN.
COMMODITIES PRESENT.....ZN PYR
ORE MATERIALS.....SPHALERITE, PYRITE
COMMODITY INFO COMMENTS.....GALENA NOT PRESENT
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....DAVID MORRIS
EXPLORATION AND DEVELOPMENT COMMENTS.....TWO PITS WERE DUG BY UNKNOWN COMPANY. DATE OF DIGGINGS ALSO UNKNOWN. PITS WERE OF UNKNOWN DEPTH AND ABOUT 23 M (75 FT) APART ALONG A LINE BEARING N55E.
DEPOSIT TYPE.....VEIN/SHEAR ZONE, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
MAXIMUM LENGTH.....23 UNITS...M
DEPOSIT SIZE.....SMALL
STRIKE.....N55 DEG E
DEPOSIT DESCRIPTION COMMENTS.....SPHALERITE OCCURS PERIPHERALLY IN DOLOMITE AND CALCITE VEINS. SPHALERITE AND PYRITE ARE ALSO DISSEMINATED IN THE DOLOMITE BRECCIA.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....23 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....TWO PITS 6-8 FEET WIDE, NOW 2 TO 3 FEET DEEP, ABOUT 60 FEET APART ALONG A LINE N 55 DEG E, ABOUT 100 FEET SOUTH OF FORK IN UNNAMED STREAM WHICH CROSSES ROUTE 690. NO EXTENSIVE DUMP PILE, NO MINERALIZATION NOTED IN PIT FRAGMENTS.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....BRECCIATED WHITE AND GRAY DOLOMITE
IGNEOUS ROCK TYPE.....NONE KNOWN
AGE OF MINERALIZATION.....CAMBRIAN TO POST CAMBRIAN
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE, QUARTZ
ORE CONTROL/LOCUS.....BRECCIATION
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDS, FAULTING, LICK MOUNTAIN ANTICLINORIUM
SIGNIFICANT LOCAL STRUCTURES.....SAND MOUNTAIN OVERTHRUST
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....RUBBLE OF GRAY DOLOMITE AT PITS; OCHERY BRECCIA BOULDER IN YARD OF NEARBY BRICK HOUSE (DAVID MORRIS)
NON-USGS WORK.....DIREXPL ? - DUG 2 PITS
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.

21. Norma Mine

MRDS-REV RECORD NUMBER.....1792
MRDS RECORD NUMBER.....VA01792
RECORD TYPE.....X1M
REPORT DATE.....88 04
INFORMATION SOURCE.....1,3
REPORTER.....GOOD, RICHARD S. (SWEET, PALMER C.)
REPORTER AFFILIATION.....VDMR
SITE NAME.....NORMA MINE
SYNONYM NAME.....“OUTBURST OPENINGS”
MINING DISTRICT/AREA.....CRIPPLE CREEK-NEW RIVER
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001
LAND STATUS.....41
QUADRANGLE NAME..... CRIPPLE CREEK QUADRANGLE SCALE 1:24000
ELEVATION.....2420 FT
UTM NORTHING...4071980 EASTING...491560 ZONE...+17
LATITUDE.....36-47-44N LONGITUDE.....081-05-41W
POSITION FROM NEAREST LOCALITY.....1.95 MILES SSE OF TOWN OF CRIPPLE CREEK FROM RIVERBANK OF CRIPPLE CREEK.
LOCATION COMMENTS.....1.15 MILES SOUTH ALONG STATE ROAD 740 FROM JUNCTION WITH STATE ROAD 602, 0.6 MILE FROM NATIONAL FOREST SIGN, ON LEFT IN WOODS, 0.25 MILE SOUTHEAST FROM ROAD. MANY SMALL PITS AND TWO OTHER MINES TO NORTH (LITTLE WYTHE AND BEVERLY MINES) MAIN WORKINGS AT HEAD OF RAVINE.
COMMODITIES PRESENT.....FE ZN
ORE MATERIALS.....LIMONITE, SMITHSONITE, HEMIMORHITE, PYRITE
COMMODITY SUBTYPES.....ZN PY
GENERAL ANALYTICAL DATA.....IRON ORE: FE 42.65% P2 O5 0.12% ; AVERAGE IRON ORE ANALYSIS FROM BOTH LUMP ORE AND WASHED ORE SAMPLES: FE 50.8% P_2O_5 0.21% , SiO_2 10.11% (MCCREATH AND D'INVILLIER, 1887, P.112-113).
MAJOR.....FE
OCCUR.....ZN PY
PRODUCTION.....S
STATUS AND ACTIVITY.....6
DISCOVERER.....NORMA IRON COMPANY
YEAR OF DISCOVERY.....PRE 1886
OWNER (PRESENT/LAST).....PULASKI IRON COMPANY
OPERATOR.....PULASKI IRON COMPANY
EXPLORATION AND DEVELOPMENT COMMENTS.....NORMA IRON COMPANY OPERATED BEFORE 1886 AND DEVELOPED “OUTBURST OPENINGS” FOR IRON ORE. PROPERTY WAS THEN SOLD TO CLINCH VALLEY COAL AND IRON COMPANY. THE PULASKI IRON COMPANY THEN BOUGHT THE PROPERTY AND OPENED THE NORMA MINE IN 1905. IRON ORE WAS PRODUCED.
DEPOSIT TYPE.....BEDDED SHEAR ZONE WEATHERING RESIDUAL
DEPOSIT FORM.....BLANKET TO IRREGULAR
STRIKE.....NE
DIP.....50 NW
DEPOSIT DESCRIPTION COMMENTS.....IRON WAS MINED ALMOST AT THE OVERTHURST FAULT CONTACT IN THE SHADY DOLOMITE WITH THE ERWIN QUARTZITE.
DEPTH BELOW SURFACE.....20 UNITS...FEET
DESCRIPTION OF WORKINGS COMMENTS.....WORKINGS CONSISTED OF SURFACE PITS AND SHALLOW SHAFTS UP TOP 20 FEET DEEP. ONE ADIT EXTENDED 35 FEET INTO HILLSIDE. ONE LARG PIT MEASURED 60 FEET AND WAS 20 FEET DEEP. MANY OTHER SMALLER PITS ARE PRESENT.
HOST ROCK AGE.....E CAMBRIAN
HOST ROCK TYPE.....DOLOMITE
IGNEOUS ROCK TYPE.....NONE KNOWN
AGE OF MINERALIZATION.....CAMBRIAN, POST CAMBRIAN (?)
PERTINENT MINERALS (NOT ORE).....ANKERITE, DOLOMITE, CALCITE, CLAYS
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, DUPLEX STRUCTURE
SIGNIFICANT LOCAL STRUCTURES.....POPLAR CAMP OVERTHURST, FRY HILL ANTICLINE, BRUSH CREEK OVERTHURST
SIGNIFICANT ALTERATION.....OXIDATION OF PYRIT TO LIMONITE
PROCESS OF CONCENTRATION/ENRICHMENT.....RESIDUAL WEATHERING
FORMATION AGE.....E CAMBRIAN,
FORMATION AGE.....E CAMBRIAN
FORMATION NAME.....SHADY DOLOMITE
FORMATION NAME.....ERWIN QUARTZITE
IGNEOUS UNIT NAME.....NONE KNOWN
GEOLOGY COMMENTS.....NOTED WHITE DOLOMITE EYES WITH ANKERITE-SIDERITE RIMS AND TRACES OF MINUTE PYRITE CRYSTALS (<1MM).
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122P.
REFERENCE....HOLDEN, R.J., 1907, IRON, IN WATSON, T.L., MINERAL RESOURCES OF VIRGINIA: J.P. BELL COMPANY, LYNCHBURG, VA., P.402-491.
REFERENCE....MCCREATH, A.S., AND D'INVILLIERS, E.J., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HARRISBURG, 171P.

22 Porter Iron Pits Mine

MRDS-REV RECORD NUMBER.....1376
MRDS RECORD NUMBER.....W031235
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....PORTER IRON PITS MINE
SYNONYM NAME.....PORTER ORE BANK MINE
MINING DISTRICT/AREA.....CRIPPLE CREEK AREA
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
QUADRANGLE NAME..... CRIPPLE CREEK, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....2445 FT (745 M)
UTM NORTHING...4073000 EASTING...489770 ZONE...+17
LATITUDE.....36-48-17N LONGITUDE.....081-06-53W
POSITION FROM NEAREST LOCALITY.....2.4 KM (1.5 MI) SOUTHWEST OF THE TOWN OF CRIPPLE CREEK.
LOCATION COMMENTS.....0.8 KM (0.5 MI) SOUTH ON COUNTY ROAD 740 FROM ITS INTERSECTION WITH STATE ROAD 602; 0.8 KM (0.5 MI.) WEST OF ROAD, WITH THE MINE SITE EXTENDING ON WESTWARD FOR ABOUT ANOTHER 1.3 KM (0.8 MI) ALONG THE NORTH BASE OF HUSSEY MOUNTAIN. THIS PROPERTY IS WITHIN THE PURCHASE BOUNDARY OF THE JEFFERSON NATIONAL FOREST.
COMMODITIES PRESENT.....FE ZN
ORE MATERIALS.....LIMONITE, SMITHSONITE, HEMIMORPHITE, HYDROZINCITE
GENERAL ANALYTICAL DATA.....IRON ORE: FE-57.2%, P-0.111%, SIO2-4.73%.
MAJOR.....FE
MINOR.....ZN
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE 1885
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE 1885
OWNER (PRESENT/LAST).....NORMA
OPERATOR.....CLINCH VALLEY COAL AND IRON CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....THE MINE WAS WORKED FOR IRON ORE IN PITS, OPEN-CUTS, TRENCHES, AND SHAFTS ON THE NORMA PROPERTY BY AN UNKNOWN COMPANY, POSSIBLY THE NORMA IRON CO. THE MINE CLOSED DOWN AROUND 1885 AND WAS SOLD BEFORE 1887 TO THE CLINCH VALLEY COAL AND IRON COMPANY. FURTHER WORK DONE BY THIS COMPANY WAS NOT STATED.
DEPOSIT TYPE.....WEATHERING RESIDUAL
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DIP.....70 DEG NW
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....21.3 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....WORKED BY PITS, TRENCHES, AND SHAFTS. ONE SHAFT WAS 21.3 M (70 FT) DEEP. ONE OPEN CUT WAS 38 M (125 FT) LONG, EAST AND WEST, 18.3 M (60 FT) WIDE, AND 12.2 M (40 FT) DEEP.
HOST ROCK AGE.....ECAMB-QUAT
HOST ROCK TYPE.....LIMESTONE, DOLOMITE, CLAY RESIDUUM
PERTINENT MINERALS (NOT ORE).....DOLOMITE, LIMESTONE, CLAY MINERALS, QUARTZ
ORE CONTROL/LOCUS.....CLAY RESIDUUM
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND.
SIGNIFICANT LOCAL STRUCTURES.....FRY HILL ANTICLINE, POPULAR CAMP OVERTHRUST, SYNCLINE;
SIGNIFICANT ALTERATION.....OXIDATION OF PRIMARY SULPHIDES
FORMATION AGE.....QUAT
FORMATION AGE.....ECAMB

FORMATION NAME.....CLAY RESIDUUM
FORMATION NAME.....SHADY DOLOMITE
SOURCE REFERENCE.....MCCREATH AND D'INVILLIERS (1887).
NON-USGS WORK.....DIREXPL ? DUG AND MINED PITS, TRENCHES, SHAFTS.
NON-USGS WORK.....DIREXPL CLINCH VALLEY COAL AND IRON CO.- DEVELOPED FURTHER ?
REFERENCE....MCCREATH, A.S., AND D'INVILLIERS, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HAR RISBURG, PENNSYLVANIA, 171 P.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.

23. Price Property Prospect

MRDS-REV RECORD NUMBER.....1374
MRDS RECORD NUMBER.....W031368
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....PRICE PROPERTY PROSPECT
MINING DISTRICT/AREA.....IVANHOE DISTRICT
COUNTRY....US STATE.....VA COUNTY....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... AUSTINVILLE, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-50- N LONGITUDE.....080-58- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN, INSIDE OF IVANHOE TOWN LIMITS
LOCATION COMMENTS.....LOCATED BEHIND THE IVANHOE HOTEL AND ALONG A STREET NORTH OF THE PRICE PROPERTY AND NORTH OF THE RAILROAD (NOW ABANDONED). NOT FIELD CHECKED.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....HEMIMORPHITE, SMITHSONITE, SPHALERITE, GALENA.
MAJOR.....ZN
OCCUR.....PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....1874
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....1874
OWNER (PRESENT/LAST).....PRICE
EXPLORATION AND DEVELOPMENT COMMENTS.....PROPERTY BEHIND THE IVANHOE HOTEL WAS MINED BY OPEN PIT AND TRENCH IN 1874-1875. 49 TONS OF ZINC ORE WAS MINED. EXPOSURES ALONG A STREET NORTH OF THE PRICE PROPERTY AND NORTH OF THE RAILROAD (NOW ABANDONED) AN OCCURRENCE OF SPHALERITE, GALENA, AND BARITE IN SACCHAROIDAL DOLOMITE WAS REPORTED, BUT NOT PROS PECTED.
DEPOSIT TYPE.....WEATHERING RESIDUAL; VEIN/SHEAR ZONE
DEPOSIT FORM.....LINEAR
DEPTH TO BOTTOM.....9 UNITS...M
MAXIMUM LENGTH.....23 UNITS...M
MAXIMUM WIDTH.....1.8 UNITS...M
MAXIMUM THICKNESS.....9 UNITS...M
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....DIMENSIONS REFER TO THE THICKNESS OF THE CLAY MANTLE. OXIDIZED ZINC MINERALS OCCUR AS RESIDUUM. SPHALERITE, GALENA AND BARITE OCCUR IN A SACCHAROIDAL DOLOMITE BRECCIA.
DESCRIPTION OF WORKINGS.....S
OVERALL LENGTH.....23 UNITS...M
OVERALL WIDTH.....1.8 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....ZINC ORE WAS MINED FROM ONE OPENING 23 M (75 FT) LONG, 1.8 M (6 FT) WIDE, AND 9 M (30 FT) DEEP.
HOST ROCK AGE.....ECAMB-QUAT
HOST ROCK TYPE.....DOLOMITE, CLAY RESIDUUM
PERTINENT MINERALS (NOT ORE).....DOLOMITE, BARITE, CLAY MINERALS
ORE CONTROL/LOCUS.....CLAY RESIDUUM
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TRENDS, GALENA SYNCLINAL BASIN
SIGNIFICANT LOCAL STRUCTURES.....AUSTINVILLE ANTICLINE, IVANHOE CROSS FAULT, GLEAVES KNOB OVERTHRUST, PIERCE MILL OVERTHRUST
SIGNIFICANT ALTERATION.....OXIDATION OF PRIMARY SULPHIDES
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE WEATHERING
FORMATION AGE.....QUAT
FORMATION AGE.....ECAMB
FORMATION NAME.....RESIDUUM
FORMATION NAME.....SHADY DOLOMITE
NON-USGS WORK.....1874 DIREXPL ? - MINED ZINC ORE
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.

CUMULATIVE PRODUCTION

ITEM	ACCURACY	AMOUNT	THOUS UNITS	YEARS	GRADE
ORE ZN	ACC	0.04900	TONS	1874-1875	

24. Riggles Prospect

MRDS-REV RECORD NUMBER.....1379
MRDS RECORD NUMBER.....W031369
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....RIGGLES PROSPECT
MINING DISTRICT/AREA.....SAND MOUNTAIN AREA
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... CROCKETT, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....750 M
UTM NORTHING...4081540 EASTING...486530 ZONE...+17
LATITUDE.....36-52-54N LONGITUDE.....081-09-04W
POSITION FROM NEAREST LOCALITY.....3.5 KM (2.2 MI) EAST SOUTHEAST OF CROCKETT.
LOCATION COMMENTS.....0.8 KM (0.5 MI) SOUTHEAST OF THE MOUNTAIN VIEW SCHOOL. 1.61 KM (1 MI) SOUTH ON U.S. ROUTE 21 FROM ITS INTERSECTION WITH STATE ROAD 652, TURN RIGHT ON DIRT ROAD TO END OF ROAD, APPROXI MATELY 0.2 KM (0.1 MI) OFF OF 21. NOT FIELD CHECKED.
COMMODITIES PRESENT.....ZN PB CU
ORE MATERIALS.....SPHALERITE, GALENA, CHALCOPYRITE, BORNITE, MALACHITE AND AZURITE STAINS.
NON-PRODUCER MAIN.....ZN PB
NON-PRODUCER MINOR.....CU
PRODUCTION.....N
STATUS AND ACTIVITY.....1
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....RIGGLES
DEPOSIT TYPE.....VEIN/SHEAR ZONE?
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....DEPOSIT OCCURS IN A BRECCIA OF SHADY DOLOMITE, NEAR THE CONTACT BETWEEN THE SHADY AND ROME FORMATIONS, RELATED TO THE SAND MOUNTAIN OVERTHRUST.
HOST ROCK AGE.....ECAMB
HOST ROCK TYPE.....DOLOMITE
PERTINENT MINERALS (NOT ORE).....DOLOMITE, QUARTZ, BARITE
ORE CONTROL/LOCUS.....SHEAR ZONE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....SAND MOUNTAIN OVERTHRUST, SAND MOUNTAIN ANTICLINE, ANTICLINE TO NORTH OF PROSPECT
FORMATION AGE.....ECAMB
FORMATION NAME.....SHADY DOLOMITE
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.

25. Sayers Properety Mine

MRDS-REV RECORD NUMBER.....1377
MRDS RECORD NUMBER.....W031236
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....VDMR
UPDATER.....GOOD, RICHARD S.
SITE NAME.....SAYERS PROPERTY MINE
SYNONYM NAME.....SAWYERS PROPERTY MINE
MINING DISTRICT/AREA.....CRIPPLE CREEK-NEW RIVER
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... POSTERS FALLS, VA. (1985) QUADRANGLE SCALE 1:24000
ELEVATION.....1980 FT
UTM NORTHING...4084360 EASTING...519760 ZONE...+17
LATITUDE.....36-52-25N LONGITUDE.....080-46-40W
ACCURACY.....ACC: OTHER IRON PITS NEARBY FILLED IN.
POSITION FROM NEAREST LOCALITY.....1.1 MILE NNE OF PATTERSON CROSSROAD, ROUTS 621 AND 607.
LOCATION COMMENTS.....1.15 MILES NORTH ON ROUTE 607 FROM ROUTE 621. PIT IS ON RIGHT SIDE OF ROAD NORTH OF SMYTHERS HOUSE ABOUT 200 FEET EAST OF R. 607.
COMMODITIES PRESENT.....FE ZN PB
ORE MATERIALS.....LIMONITE, SMITHSONITE, HEMIMORPHITE, SPHALERITE
GENERAL ANALYTICAL DATA.....IRON ORE - FE - 53.75%, P - 0.065% SiO_2 - 8.12%. IRON ORE SITE TO NORTHEAST OF FIRST ONE - FE - 57.5%, P - 0.046%, SiO_2 - 5.18%
MAJOR.....FE ZN
MINOR.....PB
PRODUCTION.....S
STATUS AND ACTIVITY.....6
YEAR OF DISCOVERY.....PRE 1880
NATURE OF DISCOVERY.....A
YEAR OF FIRST PRODUCTION.....PRE 1880
YEAR OF LAST PRODUCTION.....1880'S
OWNER (PRESENT/LAST).....VIRGINIA IRON AND COKE, PULASKI, VA: MINERAL RIGHTS; SURFACE: SMYTHERS (PURCHASED FROM W.M. HUBBARD).
EXPLORATION AND DEVELOPMENT COMMENTS.....IRON ORE WAS MINED IN THE 1880'S FROM NUMEROUS PITS. A SHAFT WAS DUG FOR LEAD AND ZINC ORES IN PRE 1880. ORE WAS DISCOVERED BUT NEVER DEVELOPED. SHAFT IS 600 FEET

WEST OF LITTLE REED ISLAND CREEK.
DEPOSIT TYPE.....STRATIFORM AND WEATHERING RESIDUAL
DEPOSIT FORM.....BLANKET, FOLLOWS FRACTURES
DEPTH TO TOP.....12 UNITS...0
DEPOSIT SIZE.....SMALL
STRIKE.....N 40 DEG W
DIP.....2 DEG NE
DEPOSIT DESCRIPTION COMMENTS.....OXIDIZED ZINC MINERALS (MOSTLY HEMIMORHITE) AND LIMONITE OCCUR IN RESIDUAL CLAYS. ONE PIT WAS 3.7 M (12') DEEP. IRON ORE VISIBLE IN PITS, SINK HOLES, AND GULLIES.
DESCRIPTION OF WORKINGS.....B
DESCRIPTION OF WORKINGS COMMENTS.....NUMEROUS PITS AND ONE SHAFT WERE DUG IN THE 1880'S OR BEFORE. THE SHAFT IS 183 M (600 FT.) WEST OF THE LITTLE REED ISLAND CREEK. MAIN CUT 420 FEET LONG TRENDING NNW, ABOUT 25 FEET DEEP AND 20-40 FEET WIDE.
HOST ROCK AGE.....CAMBRIAN
HOST ROCK TYPE.....DOLOMITE, CLAY RESIDUUM
IGNEOUS ROCK TYPE.....NONE KNOWN
AGE OF MINERALIZATION..... CAMBRINA AND POST CAMBRIAN
PERTINENT MINERALS (NOT ORE).....CLAY MINERALS, DOLOMITE, CALCITE, QUARTZ
ORE CONTROL/LOCUS.....CLAY RESIDUUM
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, GALENA SYNCLINAL BASIN
SIGNIFICANT LOCAL STRUCTURES.....ANTICLINE, PERIWINKLE BRANCH OVERTHRUST, HEMATITE MOUNTAIN OVERTHRUST, POPLAR CAMP OVERTHRUST
SIGNIFICANT ALTERATION.....OXIDATION OF PRIMARY SULPHIDES
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE WEATHERING
FORMATION AGE.....CAMBRIAN
FORMATION AGE.....CAMBRIAN
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....CUT SHOWS 1.2 FOOT THICKNESS OF OCHER WITH WHITE SECONDARY ENCRUSTATIONS N 40 DEG W/2 DEG NE AND LIMONITE/HEMATITE IN CONFORMABLE CONTACT IN THIN BEDDED SHADY DOLOMITE WITH BEDDING LAMINAE 1/4-1" THICK. HEMATITE ALSO FOLLOWS FRACTURES AND SLIGHTLY UNDULATING SURFACE WITH NEAR HORIZONTAL DIP. MAXIMUM DIP IS 20 DEG SW.
SOURCE REFERENCE.....MCCREATH AND D'INVILLIERS (1887).
NON-USGS WORK.....DIREXPL ? -SHAFT SUNK
NON-USGS WORK.....DIREXPL ?-PITS DUG, IRON ORE MINED
REFERENCE....BOYD, C.R., 1881, RESOURCES OF SOUTHWEST VIRGINIA: NEW YORK, JOHN WILEY AND SONS, 321 P.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....MCCREATH, A.S., AND D'INVILLIERS, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA HAR RISBURG, 171 P.

26. Simmerman Prospect

MRDS-REV RECORD NUMBER.....1360
MRDS RECORD NUMBER.....W031370
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....SIMMERMAN PROSPECTS
MINING DISTRICT/AREA.....AUSTINVILLE DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... AUSTINVILLE, VA. QUADRANGLE SCALE 1:24000
ELEVATION.....1990 FT (606.7 M)
UTM NORTHING...4076770 EASTING...505260 ZONE...+17
LATITUDE.....36-50-19N LONGITUDE.....080-56-28W
POSITION FROM NEAREST LOCALITY.....0.8 KM (0.5 MI) EAST OF IVANHOE FERRY.
LOCATION COMMENTS.....0.8 KM (0.5 MI) EAST OF IVANHOE FERRY, IN A VALLEY TRIBUTARY TO THE NEW RIVER. IRON PITS 1.6 KM (1 MI) EAST OF IVANHOE. 2.4 KM (1.5 MI) NORTH ON STATE ROAD 635 FROM ITS INTERSECTION WITH STATE ROAD 636, PROSPECT IS ABOUT 80 M (262 FT) SOUTH OF 635 AND EXTENDS TO SOUTHWEST.
COMMODITIES PRESENT.....ZN PB FE PYR
ORE MATERIALS.....SPHALERITE, HEMIMORPHITE, SMITHSONITE, LIMONITE, GALENA, PYRITE, CERUSSITE.
NON-PRODUCER MAIN.....ZN FE
NON-PRODUCER MINOR.....PB PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
YEAR OF DISCOVERY.....PRE 1900
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....SIMMERMAN
EXPLORATION AND DEVELOPMENT COMMENTS.....ZINC AND IRON ORES WERE FOUND IN OPEN CUT PITS IN THE LATE 1800'S.
DEPOSIT TYPE.....WEATHERING RESIDUAL, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....SPHALERITE, GALENA, AND PYRITE IS DISSEMINATED THROUGH THE LIMESTONE/ DOLOMITE PINNACLES WITHIN THE CLAY RESIDUUM. IRON ORE, OXIDIZED ZINC MINERALS OCCUR IN CLAY RESIDUUM.
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....ORES WERE FOUND BY OPEN CUT PITS.
HOST ROCK AGE.....ECAMB-QUAT
HOST ROCK TYPE.....DOLOMITE, LIMESTONE, CLAY RESIDUUM
PERTINENT MINERALS (NOT ORE).....DOLOMITE, LIMESTONE, CALCITE, FLUORITE, QUARTZ, (CHERT), BARITE, CLAY MINERALS
ORE CONTROL/LOCUS.....CLAY RESIDUUM AROUND LIMESTONE/ DOLOMITE PINNACLES
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, GALENA SYNCLINAL BASIN
SIGNIFICANT LOCAL STRUCTURES.....AUSTINVILLE ANTICLINE, GLEAVES KNOB OVERTHRUST, SHORT HILL OVERTHRUST, IVANHOE CROSS FAULT
SIGNIFICANT ALTERATION.....OXIDATION OF PRIMARY SULPHIDES
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE WEATHERING
FORMATION AGE.....QUAT
FORMATION AGE.....ECAMB
FORMATION NAME.....CLAY RESIDUUM
FORMATION NAME.....SHADY DOLOMITE
NON-USGS WORK.....DIREXPL SIMMERMAN ? - PROSPECTED BY DIGGING PITS
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.
REFERENCE....WATSON, T.L., 1905, LEAD AND ZINC DEPOSITS OF VIRGINIA, VIRGINIA GEOLOGICAL SURVEY BULLETIN 1, 156 P.
REFERENCE....WATSON, T.L., 1907, ZINC AND LEAD IN MINERAL RE SOURCES OF VIRGINIA, LYNCHBURG, VIRGINIA, JAMESTOWN EXPOSITION COMMISSION, P. 520-548.

27. Squires Property Prospect

MRDS-REV RECORD NUMBER.....1361
MRDS RECORD NUMBER.....W031371
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....SQUIERS PROPERTY PROSPECT
MINING DISTRICT/AREA.....BERTHA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FOSTERS FALLS, VA. QUADRANGLE SCALE 1:24000
LATITUDE.....36-53- N LONGITUDE.....080-47- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....NEAR PATTERSON, AT EAST END OF FOSTER FALLS MOUNTAIN.
COMMODITIES PRESENT.....ZN FE PYR
ORE MATERIALS.....SMITHSONITE, HEMIMORPHITE, LIMONITE, SPHALERITE, PYRITE
COMMODITY INFO COMMENTS.....GALENA IS LACKING
NON-PRODUCER MAIN.....ZN
NON-PRODUCER MINOR.....FE PYR
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....SQUIERS
EXPLORATION AND DEVELOPMENT COMMENTS.....PITS WERE DUG DURING PROSPECTING
DEPOSIT TYPE.....WEATHERING RESIDUAL, DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....PITS WERE DUG DURING PROSPECTING.
HOST ROCK AGE.....ECAMB-QUAT
HOST ROCK TYPE.....DOLOMITE, CLAY RESIDUUM
PERTINENT MINERALS (NOT ORE).....DOLOMITE, CALCITE, BARITE, CLAY MINERALS
ORE CONTROL/LOCUS.....IN CLAY RESIDUUM AROUND DOLOMITE/ LIMESTONE PINNACLES.
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND, GALENA SYNCLINAL BASIN
SIGNIFICANT LOCAL STRUCTURES.....HEMATITE MOUNTAIN OVER THRUST, PERIWINKLE BRANCH OVERTHRUST; POSTERS FALLS MOUNTAIN ANTICLINE
SIGNIFICANT ALTERATION.....OXIDATION OF PRIMARY SULPHIDES
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE WEATHERING
FORMATION AGE.....QUAT
FORMATION AGE.....ECAMB
FORMATION NAME.....RESIDUUM
FORMATION NAME.....SHADY DOLOMITE
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.

28. Stephens Property Prospect

MRDS-REV RECORD NUMBER.....1378
MRDS RECORD NUMBER.....W031237
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....1
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
SITE NAME.....STEPHENS PROPERTY PROSPECT
MINING DISTRICT/AREA.....BERTHA DISTRICT
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... FOSTERS FALLS, VA. QUADRANGLE SCALE

1:24000
LATITUDE.....36-54- N LONGITUDE.....080-47- W
POSITION FROM NEAREST LOCALITY.....EXACT LOCATION UNKNOWN
LOCATION COMMENTS.....WEST OF LITTLE REED ISLAND CREEK, ADJOINING THE SAYERS PROPERTY. 0.4 KM (0.25 MI) NORTH ON STATE ROAD 607 FROM ITS INTERSECTION WITH STATE ROAD 100, STEPHEN'S PROPERTY IS ON BOTH SIDES OF 607. STEPHEN'S PROPERTY ALSO INCLUDES LAND SOUTH OF THE INTERSECTION OF 607 AND 100 TO PERIWINKLE MOUNTAIN.
COMMODITIES PRESENT.....FE ZN PB PYR
ORE MATERIALS.....LIMONITE, SMITHSONITE, HEMIMORPHITE, SPHALERITE, GALENA? PYRITE.
GENERAL ANALYTICAL DATA.....AVERAGED FROM ALL THE IRON ORE PITS: "LUMP ORE" - FE - 55.87%, P - 0.05%, SIO_2 - 5.95%, P IN 100 PARTS OF IRON - 0.089% WASHED ORE - FE - 54.5%, P - 0.097%, SIO_2 - 7. 51%, P IN 100 PARTS OF IRON - 0.18%. ZINC ORE TAKEN FROM A SHAFT (NO. 11) YIELDED: ZN - 39.37%, PB - 8.77% FOR LUMP ORE. WASHED ORE YIELDED: ZN - 32.84%, PB - 1.32%. ALL SAMPLES WERE DRIED AT 212 DEG F (100 DEG C).
MAJOR.....FE
MINOR.....ZN PB PYR
PRODUCTION.....S
STATUS AND ACTIVITY.....4
YEAR OF DISCOVERY.....PRE 1887
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....STEPHENS
OPERATOR.....PULASKI IRON CO.
EXPLORATION AND DEVELOPMENT COMMENTS.....CRIPPLE CREEK IRON CO. BOUGHT LAND, MAY HAVE STARTED DEVELOPMENT. PULASKI IRON CO. THEN TOOK OVER OPERATIONS AND THROUGH THE 1880'S DUG PITS AND TRENCHES FOR IRON ORE AND ZINC ORE. SEVERAL SHAFTS WERE SUNK FOR BOTH ORES AS WELL. IRON ORE WAS MINED AND SHIPPED TO THE PULASKI FURNACE. ZINC PRODUCTION APPARENTLY NEVER OCCURRED.
DEPOSIT TYPE.....WEATHERING RESIDUAL, DESSIMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
STRIKE.....NE-SW
DEPOSIT DESCRIPTION COMMENTS.....IRON ORE PITS WERE GENERALLY ABOUT 3.7 M (12 FT) DEEP AND 1.4 M (4.5 FT.) WIDE. THE ORE GENERALLY STARTED ABOUT 0.3 M (1 FT) BELOW THE SURFACE AND EXTENDED DOWNWARD TO THE BOTTOM OF THE PITS, INDICATING ORE WAS OFTEN OVER 3.4 M (11 FT) THICK. ONE IRON ORE SHAFT WAS 12.5 M (41 FT.) DEEP AND SHOWED ORE FROM THE SURFACE DOWNWARD 4.6 M (15 FT), THEN 1.8 M (6 FT) OF BARREN CLAY, AND THEN 6.1 M (20 FT) OF ORE MATERIAL WITH THE BOTTOM OF THE SHAFT STILL IN ORE. THE SHAFTS FOR THE ZINC ORE WERE USUALLY SHALLOW, ABOUT 6.1 M (20 FT), BUT ONE SHAFT WAS 21.3 M (70 FT.) DEEP. ZINC ORE REACHED THICKNESS OF AT LEAST 1.2 M (4 FT.).
DESCRIPTION OF WORKINGS.....B
DEPTH BELOW SURFACE.....21.3 UNITS...M
LENGTH OF WORKINGS.....18.3 UNITS...M
DESCRIPTION OF WORKINGS COMMENTS.....PITS WERE UP TO 3.7 M (12 FT.) DEEP AND 1.4 M (4.5 FT) WIDE. SHAFTS WERE UP TO 21.3 M (70 FT) DEEP BUT USUALLY SHALLOW.
HOST ROCK AGE.....ECAMB-QUAT
HOST ROCK TYPE.....DOLOMITE, LIMESTONE, CLAY RESIDUUM
PERTINENT MINERALS (NOT ORE).....DOLOMITE, LIMESTONE, CLAY MINERALS, CALCITE, QUARTZ
ORE CONTROL/LOCUS.....CLAY RESIDUUM WITHIN THE LIMESTONE.
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....NE-SW TREND
SIGNIFICANT LOCAL STRUCTURES.....ANTICLINE, PERIWINKLE BRANCH OVERTHRUST, HEMATITE MOUNTAIN OVERTHRUST, POPLAR CAMP OVERTHRUST
SIGNIFICANT ALTERATION.....OXIDATION OF PRIMARY SULPHIDES
PROCESS OF CONCENTRATION/ENRICHMENT.....SUPERGENE WEATHERING
FORMATION AGE.....QUAT
FORMATION AGE.....ECAMB
FORMATION NAME.....CLAY RESIDUUM
FORMATION NAME.....SHADY DOLOMITE
GEOLOGY COMMENTS.....THE ORE OCCURS IN TEH PATTERSON LIMESTONE FORMATION OF THE SHADY DOLOMITE.
SOURCE REFERENCE.....MCCREATH AND D'INVILLIERS (1887)
NON-USGS WORK.....DIREXPL CRIPPLE CREEK IRON CO. - DUG PITS ?
NON-USGS WORK.....DIREXPL PULASKI IRON CO.- DEVELOPED PITS, MINED
REFERENCE....MCCREATH, A.S. AND D'INVILLIERS, E.V., 1887, THE NEW RIVER-CRIPPLE CREEK MINERAL REGION OF VIRGINIA: HAR RISBURG, 171 P.

29. Taylor Prospect

MRDS-REV RECORD NUMBER.....1362
MRDS RECORD NUMBER.....W031372
RECORD TYPE.....X1M
REPORT DATE.....80 08
INFORMATION SOURCE.....13
FILE LINK ID.....VDMR
REPORTER.....TRIMBLE, DAVID C. (SWEET, P. C.)
REPORTER AFFILIATION.....VDMR
UPDATED.....88 04
UPDATER.....GOOD, RICHARD S.
SITE NAME.....TAYLOR PROSPECT
MINING DISTRICT/AREA.....CRIPPLE CREEK-NEW RIVER
COUNTRY.....US STATE.....VA COUNTY.....WYTHE
COUNTRY NAME...UNITED STATES STATE NAME...
PHYSIOGRAPHIC PROVINCE.....02 VALLEY AND RIDGE
DRAINAGE AREA.....05050001 NEW RIVER
LAND STATUS.....01
QUADRANGLE NAME..... SPEEDWELL, VA. (1979) QUADRANGLE SCALE 1:24000
ELEVATION.....2640 FT
UTM NORTHING...4073580 EASTING...483550 ZONE...+17
LATITUDE.....36-48-05N LONGITUDE.....081-11-00W
ACCURACY.....EST: THE IDENTITY OF THIS PROSPECT REMAINS UNCERTAIN.
POSITION FROM NEAREST LOCALITY.....0.6 MILE S 53 DEG W FROM SPEEDWELL R 749 AND R 21.
LOCATION COMMENTS.....ON SW END OF CAVE HILL NEAR TOP IN OPEN FIELD, 0.6 MI SE OF SPEEDWELL CHURCH TWO LEVEL DEPRESSIONS MAY BE OLD PROSPECT PITS OR SINK HOLES.UTHEAST OF THE SPEEDWELL CHURCH.
COMMODITIES PRESENT.....ZN PB
ORE MATERIALS.....SPHALERITE, GALENA
NON-PRODUCER MAIN.....ZN PB
NON-PRODUCER MINOR.....
PRODUCTION.....N
STATUS AND ACTIVITY.....2
NATURE OF DISCOVERY.....A
OWNER (PRESENT/LAST).....M.L. GROSECLOSE OR REX WHALEN
EXPLORATION AND DEVELOPMENT COMMENTS.....SOME DIAMOND DRILLING SAID TO HAVE BEEN CONDUCTED BY NEW JERSEY ZINC CO. IN 1960'S (?) ON CAVBE HILL WITH UNKNOWN BUT PRESUMABLY DISCOURAGEING RESULTS.
DEPOSIT TYPE.....DISSEMINATED
DEPOSIT FORM.....IRREGULAR
DEPOSIT SIZE.....SMALL
DEPOSIT DESCRIPTION COMMENTS.....NO MINERALIZATION NOTED AT TIME OF VISIT. CURRIER (1935, P.105) DESCRIBES "VERY DARK COLORED DOLOMITE BEDS NEAR TOP OF SHADY", AND "SPH ALERITE PRESENT IN A BRECCIA OF WHITE DOLOMITE AND QUARTZ."
DESCRIPTION OF WORKINGS.....S
DESCRIPTION OF WORKINGS COMMENTS.....TWO SMALL PITS NOW FILLED AND NEARLY LEVELED IN OPEN MEADOW, ON STEEP SW SIDE OF HILL. THIS LOCATION IS QUESTIONABLE.
HOST ROCK AGE.....- EARLY CAMBRIAN
HOST ROCK TYPE.....DOLOMITE BRECCIA
IGNEOUS ROCK TYPE.....NONE KNOWN
AGE OF MINERALIZATION.....- CAMBRIAN
PERTINENT MINERALS (NOT ORE).....DOLOMITE, QUARTZ, CALCITE
TECTONIC SETTING.....MIOGEOSYNCLINE
SIGNIFICANT REGIONAL STRUCTURES.....SPEEDWELL SYNCLINE, HOLSTON MOUNTAIN OVERTHRUST, SUGAR GROVE OVERTHRUST.
SIGNIFICANT LOCAL STRUCTURES.....SPEEDWELL SYNCLINE, HOLSTON MOUNTAIN OVERTHRUST, SUGAR GROVE OVERTHRUST
FORMATION AGE.....ECAMB
FORMATION AGE.....EARLY CAMBRIAN
FORMATION NAME.....ROME FORMATION
GEOLOGY COMMENTS.....NO MINERALIZATION NOTED. TOP AND SOUTH SLOPE OF CAVE HILL IS ROME FORMATION. CAVE HILL IRON FURNACE ON A NOW DRY TRIBUTARY OF DRY RUN IS 0.3 MI SW OF PRESUMED LOCATION OF TAYLEOR PROSPECT. THERE ARE EXTENSIVE CUTS AT THE CAVE HILL IRON MINE. IRON AND MANGANESE MINERALS NOTED IN OLD IRON WORKINGS; OPEN CUTS IN WOODS 6000 FEET WSW OF THE PRESUMED LOCATION OF THE TAYLOR PROSPECT.
GENERAL COMMENTS.....OLD SPEEDWELL RAILROAD STATION MENTINED BY CURRIER (1935, P. 105) WAS APPARENTLY ABOUT 1 MILE NORTHEAST OF SPEEDWELL CROSSROADS ON 1979 MAP. NUMEROUS CAVES IN CAVE HILL WITH UNSUB STANTIATED REPORTS OF SMALL SHOWINGS OF SINC AND LEAD MINERALIZATION.
REFERENCE....CURRIER, L.W., 1935, ZINC AND LEAD REGION OF SOUTH WESTERN VIRGINIA: VIRGINIA GEOLOGICAL SURVEY BULLETIN 43, 122 P.