

Sandstone and Quartzite Localities
in Augusta, Bath, Highland and
Rockbridge counties

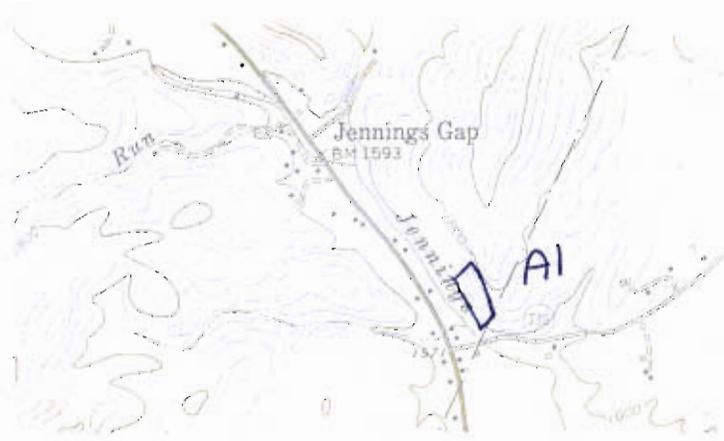
This open-file report, briefly describes 226 of the sandstone and quartzite localities in Augusta, Bath, Highland and Rockbridge counties that were visited and examined in 1972 and 1973 by Palmer C. Sweet and W. Burleigh Harris, but were not sampled for the manuscript on high-silica resources. The term Oriskany Sandstone is used instead of Ridgeley Sandstone in this open-file report; the Clinton Formation was examined at several localities, but samples for the manuscript were only taken from the Keefer Sandstone member.

Palmer C. Sweet
April, 1977

AUGUSTA COUNTY

A1: TUSCARORA FORMATION?

Location: On the west side of State Road 736 approximately 0.1 mile north of U. S. Route 250 at Jennings Gap.



STOKESVILLE, VIRGINIA 7 1/2' QUADRANGLE

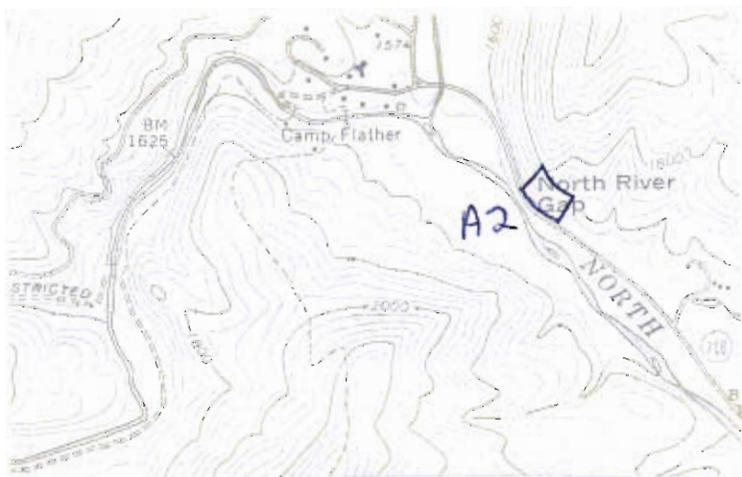
Quartzite, fine to medium grained, dark gray-green with minor light gray mottling. Iron stain is scattered throughout and is principally concentrated along fractures where it is a tan-orange. At top of section color ranges to a light tan-yellowish orange. Thin interbeds of argillaceous siltstone and brown shales in lower part of quartzite. Some of the shales are fossiliferous. The section is cut by several small faults and is highly fractured.

Attitude: N23°E, 55°SE (overturned)

AUGUSTA COUNTY

A2: POCONO FORMATION

Location: On the north side of State Road 718 at North River Gap approximately 0.5 mile by road northwest of its junction with State Road 730.



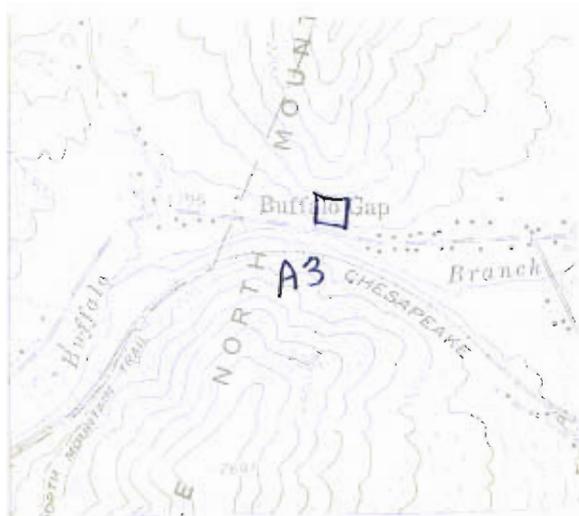
STOKESVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, medium-gray to olive-gray to brown, quartzitic, generally contain feldspar and mica, poorly sorted in part. Iron stain is very prominent along fracture surfaces and is dark-brown to medium-orange. Interbeds of dark-gray to black to dark brown, soft shale occurs. Shales are generally splintery. Bedding in sandstone ranges from 4 to 24 inches. Attitude: N18°E, 48°SE

AUGUSTA COUNTY

A3: TUSCARORA FORMATION

Location: On both sides of State Highway 42 at Buffalo Gap.



CHURCHVILLE, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, very fine to coarse, white to dark yellowish orange, subangular to subrounded, very tough and well cemented. Several thin rounded quartz pebble conglomerates with pebbles up to 10 to 15 mm in length are present. The quartz pebbles range from white to red in color. Iron stain is prominent on grains and is principally concentrated along fractures and bedding planes. Commonly fracture surfaces are casehardened. The quartzite in places is slightly friable; but generally iron stain is much higher. Beds range in thickness from 2 to 12 inches and generally average 6 to 10 inches. Excellent cross bedding.

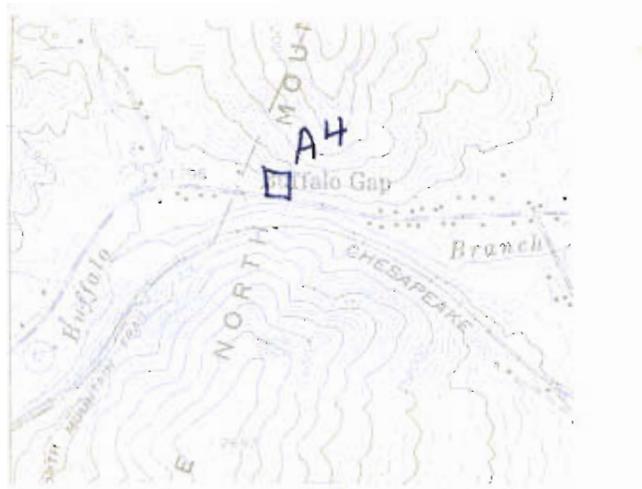
Attitude: N14°E, 29°SE (overturned)

Thickness: approximately 60-70 feet

AUGUSTA COUNTY

A4: KEEFER

Location: Exposed on both sides of State Highway 42 at Buffalo Gap.



CHURCHVILLE, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, very fine to fine, minor medium, light gray to pale yellowish-orange, subrounded to rounded. Iron stain present throughout and is variable in amount. Beds up to 3' in thickness. Several thin (1 to 5 inches thick) black shale breaks are present at base of unit.

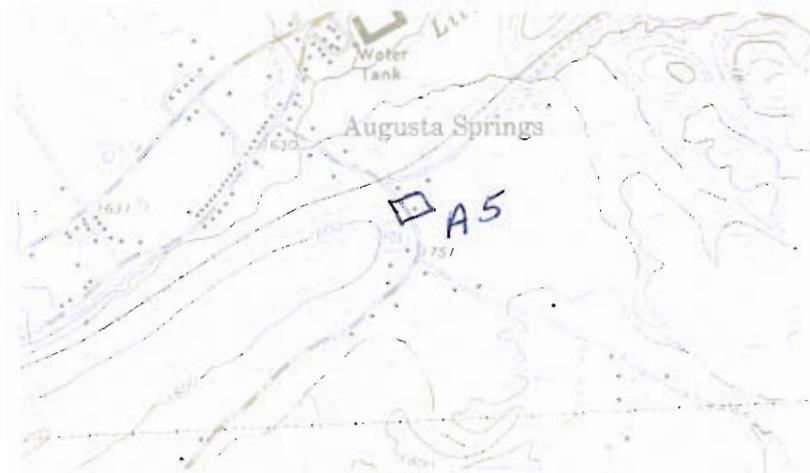
Attitude: N23°E, 35°SE

Thickness: approximately 40 feet

AUGUSTA COUNTY

A5: KEEFER

Location: On the north side of State Road 601 approximately
0.3 mile east of its junction with State Road 811.



AUGUSTA SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

The Keefers forms a northeast plunging anticline at exposure.

Sandstone, fine to medium, white to light yellowish-orange to dark yellowish-orange, subangular to rounded. Iron stain prominent throughout but principally concentrated into films along fractures. Bedding ranges from less than 1 inch to 5 or 8 inches, slabby, very slightly friable.

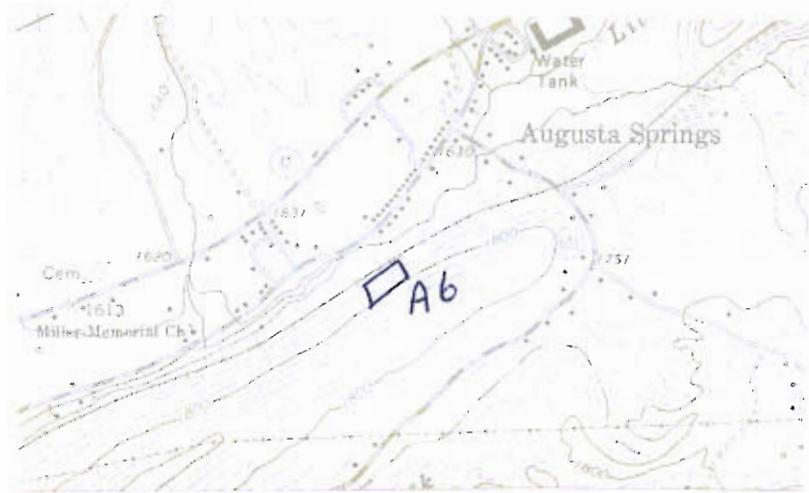
Attitude: East limb N70°W, 42°NE

Thickness: 15 feet ±

AUGUSTA COUNTY

A6: KEEFER SANDSTONE

Location: On the northwest side of Brown Ridge approximately 1800 feet and S23°W of the junction of State Road 811 and State Road 601.



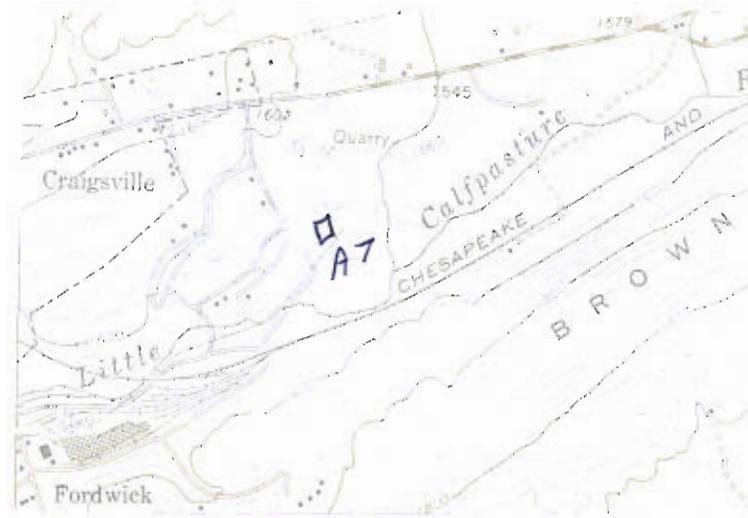
AUGUSTA SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine with some medium, white and very pale to dark yellowish-orange, friable to indurated. A few minor clay lens also occur. Bedding ranges from 2 to 12 inches. Ripple marks. Overall, the sample is too hard with too much iron-oxide stain, mainly as coating on the grains.
Attitude: N58°E, 18°SE
Thickness: approximately 25 feet

AUGUSTA COUNTY

A7: ORISKANY SANDSTONE

Location: Approximately 1500 feet and S30°E from the junction
of State Road 685 and State Highway 42.



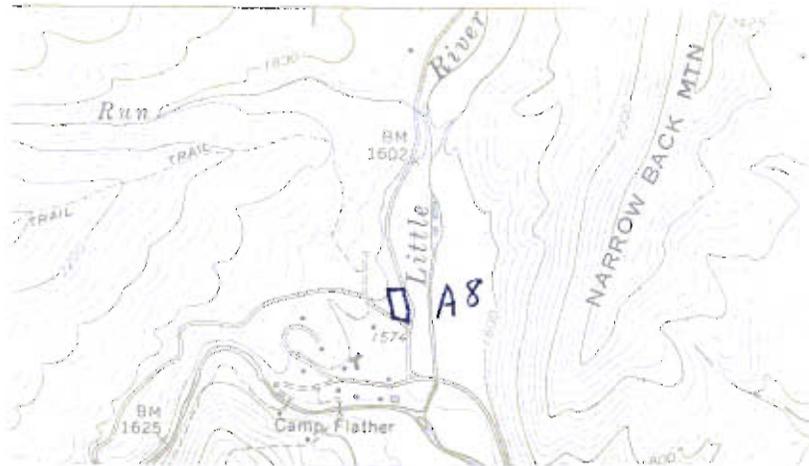
AUGUSTA SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, white to dark yellowish-orange,
subrounded to rounded, well cemented. "Spirifers"
Attitude: forms anticline
Thickness: approximately 15 feet

AUGUSTA COUNTY

A8: POCONO FORMATION

Location: In forks of forest roads approximately 5350 feet and N41°W of the junction of State Road 718 and State Road 730.



STOKESVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, dark gray to medium gray, well indurated, dirty.

AUGUSTA COUNTY

All: POCONO FORMATION

Location: On the south side of Hearthstone Lake along access road.



REDDISH KNOB, VIRGINIA-W. VA. 7 1/2' QUADRANGLE

Sandstone, fine to coarse, light yellowish-orange, subangular to subrounded. About 7-10% white to light tan feldspar. Minor parts are friable. Thin interbeds of argillaceous sandstone, minor clay lens.

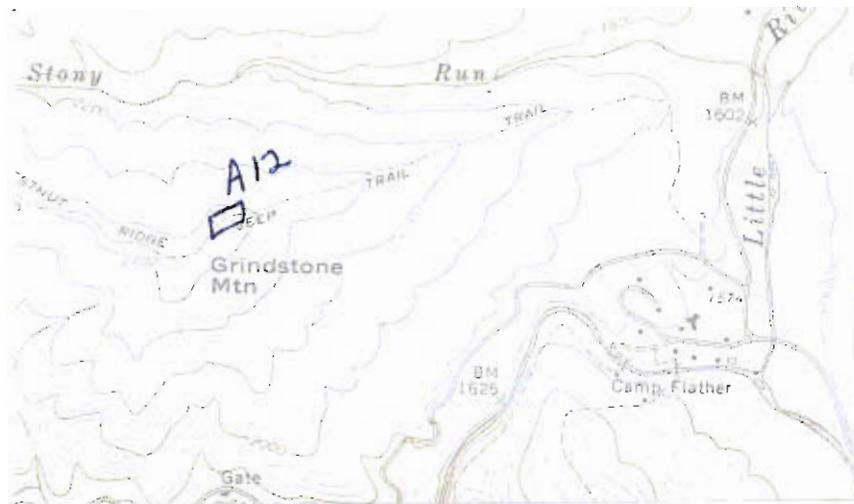
Attitude: —

Thickness: 15 feet ±

AUGUSTA COUNTY

A12: POCONO FORMATION

Location: On top of Grindstone Mountain 9900 feet and N62°W from the junction of State Road 718 and State Road 730.



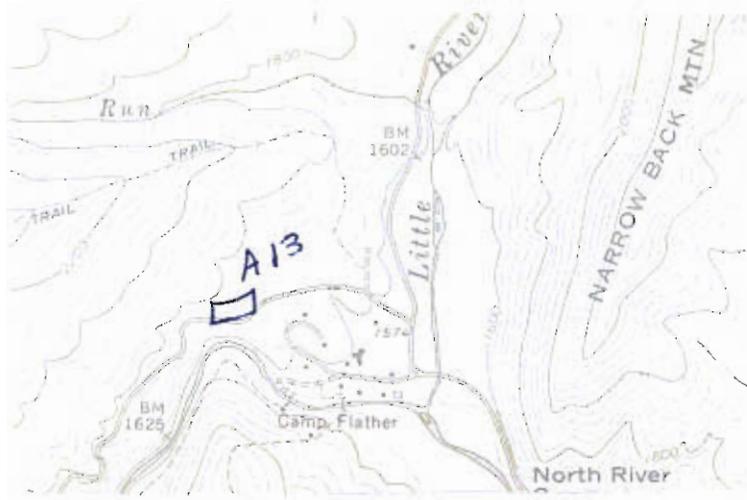
STOKESVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, brown to moderate gray, subangular, highly iron stained, well indurated. Bedding averages about 2 to 4 inches. Cross-bedding.

AUGUSTA COUNTY

A13: POCONO FORMATION

Location: Along north side of forest road approximately 6600 feet and N51°W of the junction of State Road 718 and State Road 730.



STOKESVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to coarse, light-to olive-gray to dark red, subangular to rounded, very slightly friable to well-indurated, highly iron stained. Minor interbeds of light gray to medium gray shales.

AUGUSTA COUNTY

A14: POCONO FORMATION

Location: At North River Campground approximately 14,200 feet and N36°W of the junction of State Road 728 and State Road 730.



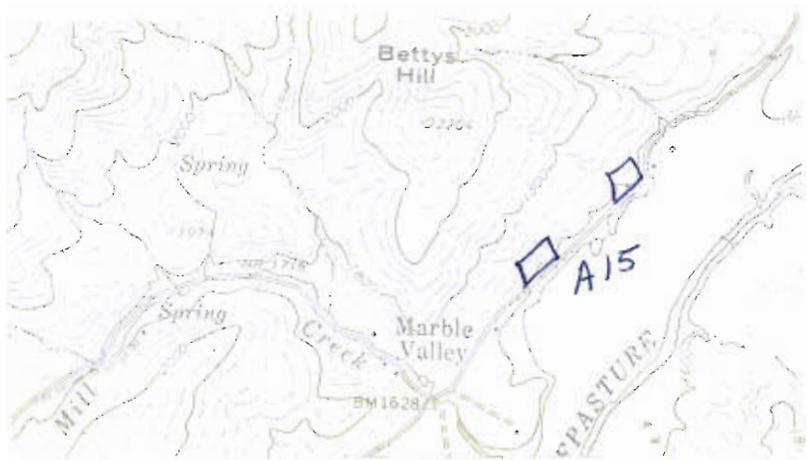
STOKESVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, very fine to very coarse, drab brown to dark yellowish-orange. Coarse sand grains are well rounded and are up to 3/4" in length. About 5% feldspar is present in the medium grained sandstone. Rock is well-indurated. Bedding averages from 8 to 12 inches, some of the finer fraction has thinner bedding.

AUGUSTA COUNTY

A15: ORISKANY SANDSTONE

Location: On the northwest side of State Road 600 approximately 0.3 mile by road northeast of its junction with forest service road 61.



DEERFIELD, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray to bright orange, sub-
rounded to rounded. Very friable to well indurated,
very highly iron stained. Brachiopods
Attitude: N40°E, 46°SE
Thickness: 10 feet ±

AUGUSTA COUNTY

A16: KEEFER SANDSTONE

Location: On the top of Walker Mountain 27,000 feet and N44°W
from the junction of State Road 687 and State Highway
42.



CRAIGSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light orange, subrounded to rounded, very friable to indurated sandstone. Iron oxide and some manganese(?) staining is present throughout the exposure, especially along fractures. Bedding ranges from 4 to 16 inches.

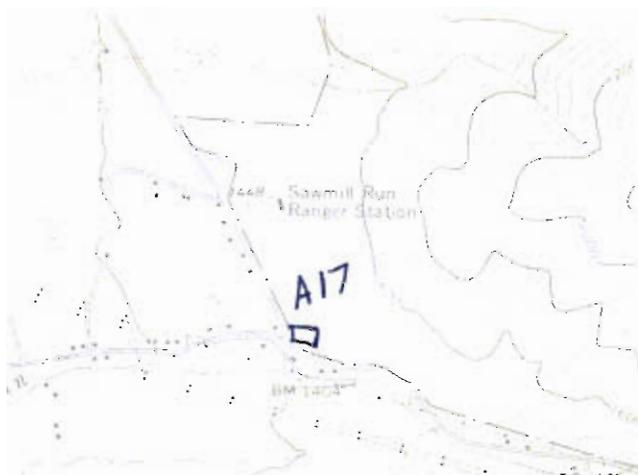
Attitude: N38°E, 8°NW

Thickness: approximately 30-35 feet

AUGUSTA COUNTY

A17: ERWIN FORMATION

Location: On the northeast side of the junction of State Road 619 and State Road 611.



WAYNESBORO EAST, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to medium, light yellowish-orange to dark yellowish-orange, subrounded, very slightly friable to well indurated. Iron stain on all quartz grains and highly concentrated along fractures.

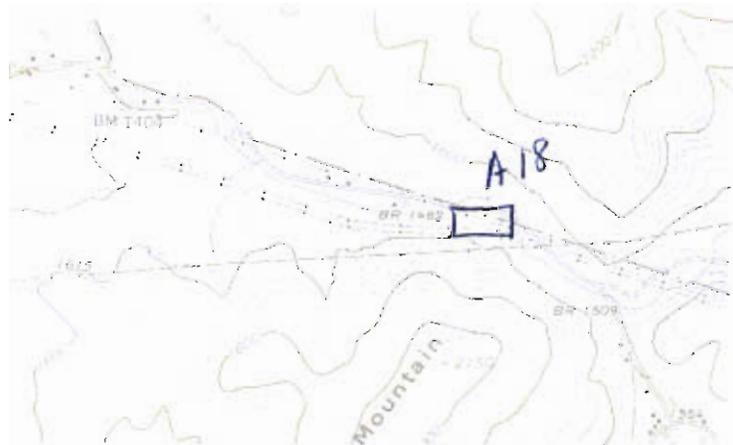
Attitude: —

Thickness: 20-25 feet±

AUGUSTA COUNTY

A18: ERWIN FORMATION

Location: On the south side of State Road 611 approximately 0.9 mile by road east of its junction with State Road 619.



WAYNESBORO EAST, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium to coarse, gray to brown to dark yellowish-brown, subangular to subrounded. In part, breaks with a conchoidal fracture. Highly iron stained.

Attitude: —

Thickness: approximately 60 feet

AUGUSTA COUNTY

A19: ERWIN QUARTZITE

Location: On the north side of the water gap on the south end of Ramsey Mountain approximately 0.1 mile west of State Road 622.



WAYNESBORO EAST, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to medium, white-light gray, pink, minor iron stain on quartz grains. Highly fractured. Scolithus. Case hardening.

Attitude: —

Thickness: approximately 10 feet

AUGUSTA COUNTY

A20: ERWIN FORMATION

Location: On the northwest side of State Road 622 approximately 1.9 miles by road southwest of its intersection with State Road 611.



WAYNESBORO EAST, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray to light yellowish-orange, some clay matrix, well indurated to slightly friable. Very thinly bedded, highly fractured.

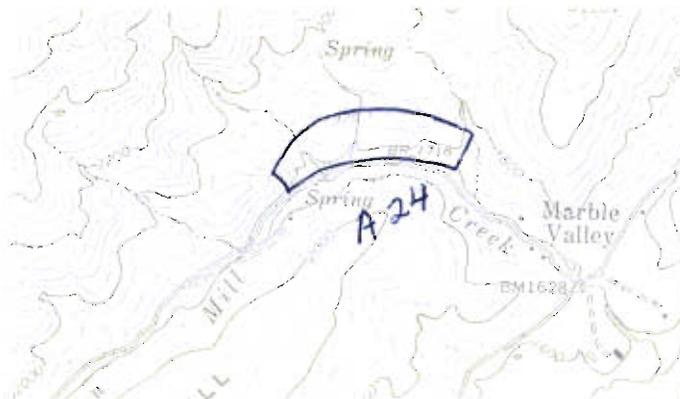
Attitude: —

Thickness: approximately 10-15 feet

AUGUSTA COUNTY

A24: KEEFER

Location: On the north side of a forest service road approximately 16,500 feet and S28°W of the junction of State Road 600 and State Road 692.



DEERFIELD, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine, minor medium, white to dark yellowish-orange, subrounded. Iron stain is present throughout and is variable in amount. Bedding from 2 to 40 inches in thickness.

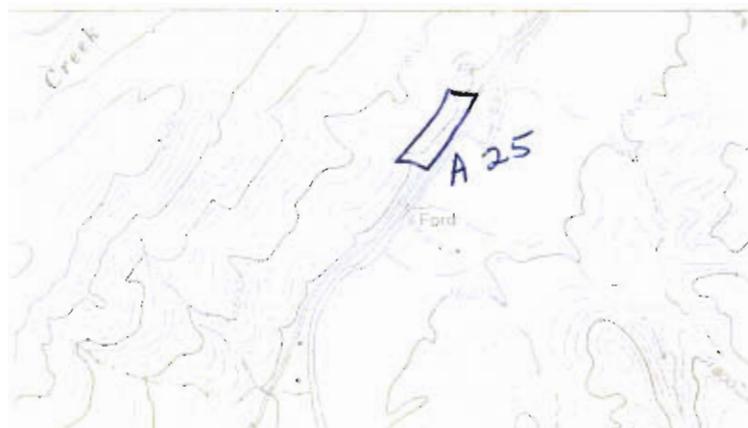
Attitude: variable (forms limb of anticline N45°E-N15°E, 42°SE-17°SE)

Thickness: approximately 35 feet ±

AUGUSTA COUNTY

A25: ORISKANY SANDSTONE

Location: On the northwest side of State Road 600, approximately 2.8 miles by road northeast of its intersection with State Road 687.



CRAIGSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, light gray to dark yellowish-orange, sub-rounded to rounded, slightly friable sandstone. Very highly iron-stained, in the fractures and as a coating on the grains; abundance of gray coloration in exposure. "Spirifers". Bedding ranges from 8 to 24 inches.

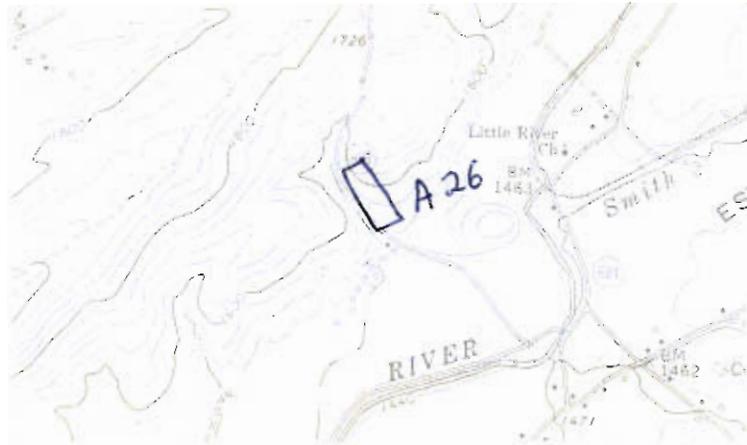
Attitude: N35°E, 40°SE

Thickness: approximately 8 feet

AUGUSTA COUNTY

A26: ORISKANY SANDSTONE

Location: On the northeast side of State Road 683, approximately 0.55 mile by road northwest of its intersection with State Road 684.



CRAIGSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to reddish orange, subrounded to rounded, friable to indurated sandstone. Iron and manganese(?) staining present; gray coloration present in parts of the unit. Bedding ranges from 8 to 18 inches and averages about 12 inches. Spirifers.
Attitude: E-W strike, 15°S
Thickness: approximately 15 feet ±

AUGUSTA COUNTY

A27: ORISKANY SANDSTONE

Location: Off the northwest side of State Highway 42, approximately 0.2 mile by road northeast of its intersection with State Road 687, leading northwest.



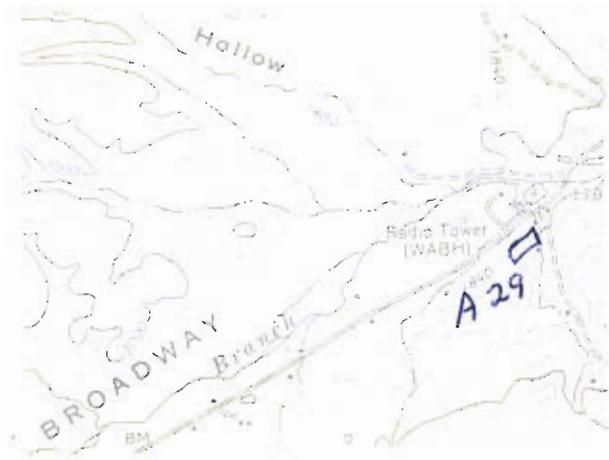
CRAIGSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to grayish-orangish-brown, subrounded, slightly friable to slightly indurated sandstone. Iron stain indicated by orange, brown, black and gray coloration on the exposure. Spirifers. Bedding ranges from 6 to 16 inches. Contact with underlying Helderberg.
Attitude: N51°E, 19°NW
Thickness: approximately 15 feet

AUGUSTA COUNTY

A29: ORISKANY SANDSTONE

Location: Off the southeast side of State Road 629, approximately 1.15 miles by road southwest of its intersection with State Road 600.



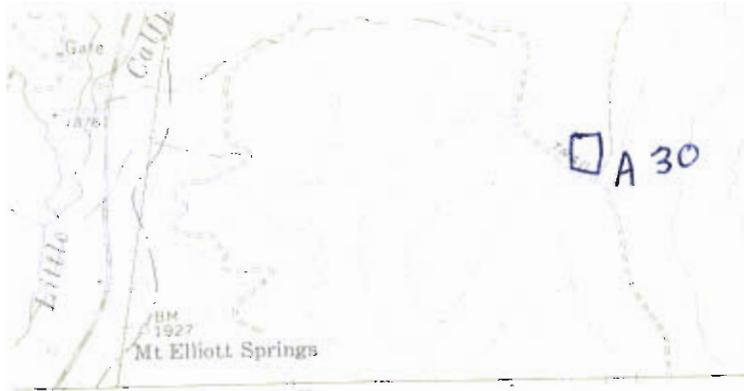
DEERFIELD, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to orangish-brown, subrounded to rounded, friable to slightly friable sandstone. Iron stain present throughout the exposure, especially in fractures. Some clear quartz pebbles present in the exposure. Bedding ranges from 8 to 16 inches. Attitude: N34°E, 35°SE
Thickness: approximately 30 feet

AUGUSTA COUNTY

A30: TUSCARORA FORMATION

Location: On Little North Mountain at the intersection of Little North Mountain trail and Shillings Trail approximately 10,900 feet and S of the former clay pit of North Mountain Brick Company.



ELLIOTT KNOB, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to tan and dark gray, sub-rounded to rounded, sandstone that is friable in places. Iron stain present along fractures. Bedding ranges from 4 to 16 inches, averaging about 12 inches.

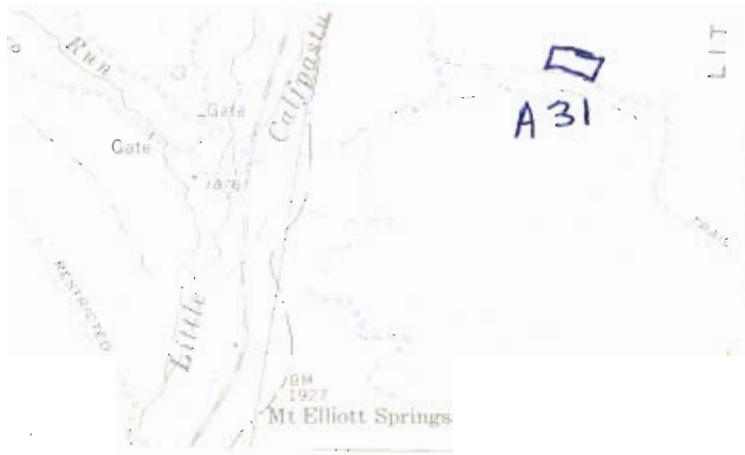
Attitude: N5°E, 66°NW

Thickness: approximately 15-20 feet

AUGUSTA COUNTY

A31: KEEFER

Location: On east side of Little North Mountain, along north side of Shillings Trail approximately 9350 feet and S10°W from the former claypit of North Mountain Brick Company.



ELLIOTT KNOB, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light gray, subrounded, slightly indurated to friable sandstone. Iron stain present in fractures, especially near the base of the exposure. Bedding ranges from 4 to 14 inches. Attitude: N34°E, 43°SE (overturned)
Thickness: approximately 45 feet ±

AUGUSTA COUNTY

A33: ERWIN QUARTZITE

Location: Off the northwest side of Johns Run approximately
11,300 feet and S35°W from Shenandoah Acres lake.



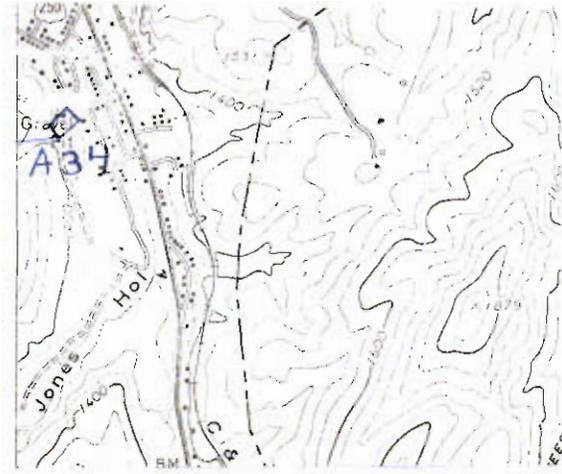
BIG LEVELS, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to medium, white to brownish with a pinkish
cast present throughout, subrounded. Secondary
silica cement in the well-indurated quartzite.
Bedding ranges from 4 to 24 inches.
Attitude: N30°W, 17°NE
Thickness: approximately 50 feet ±

AUGUSTA COUNTY

A34 ANTIETAM QUARTZITE

Location: Off the east side of U.S. Hwy. 250 and just south of Waynesboro
(abandoned gravel pit).



WAYNESBORO EAST, VA. 7½' QUADRANGLE

Quartzite, fine to medium, white to gray-white, subangular to subrounded.
Bedding ranges up to about 12 inches. Highly fractured in places.

Attitude: —
Thickness: not determined

BATH COUNTY

B2: TUSCARORA FORMATION

Location: Off the northwest side of Spring Run on Back Creek Mountain approximately 12,300 feet and S8°E from the intersection of State Road 600 with the Bath-Highland County line.



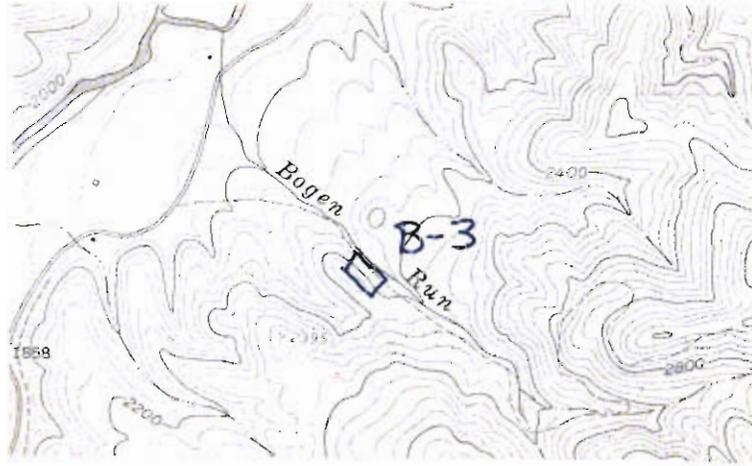
SUNRISE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray, rounded to subrounded.
Lower — approximately 40 feet of hard, indurated sandstone, slightly friable in places. Bedding varies from 6-16 inches.
Upper — approximately 25 feet of smoky and dark gray, hard, indurated sandstone with secondary silica cement. This section is finer grained and more iron-stained; bedding is 12 inches and less.
Attitude: N30°E, 25°SE
Thickness: 85+ feet including 20' covered interval

BATH COUNTY

B3: ORISKANY SANDSTONE

Location: Off the southwest side of Bogen Run on west side of Back Creek Mountain approximately 18,800 feet and S29°W from Sunrise, Virginia.



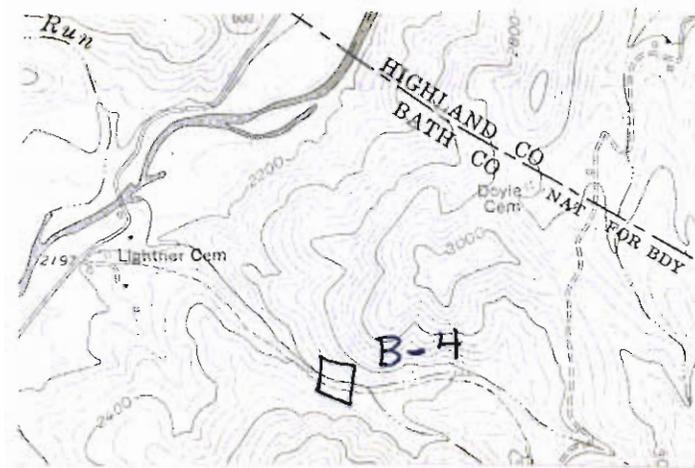
SUNRISE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, light gray to brownish-gray, subrounded. Brown and red iron-oxide staining on quartz grains and along fractures. Grayish cast given off, probably due to minor manganese staining. "Spirifers" present near the middle of the exposure. Bedding ranges from 2-18 inches. Attitude: N50°E, 80°NW Thickness: 100+ feet

BATH COUNTY

B4: TUSCARORA FORMATION

Location: Off the northwest side of Back Creek Mountain approximately 3900 feet and S6 E from the intersection of State Road 600 and the Bath-Highland County line.



SUNRISE, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to medium, white to light gray to tan-orange. Contains minor tan-orange to white, rounded, coarse pebbles; well indurated and fracture surfaces are case hardened. A brown stain, probably iron-oxide staining, is present throughout the exposure along fractures.

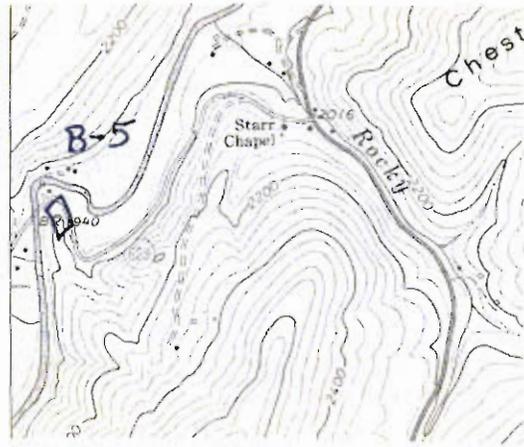
Attitude: N25°E, 80°NW

Thickness: 20± feet

BATH COUNTY

B5: ORISKANY SANDSTONE

Location: Off the west side of State Road 623, approximately 0.8 mile by road W-SW of its intersection with U. S. Hwy. 220.



BURNSVILLE, VIRGINIA 7 1/2' QUADRANGLE

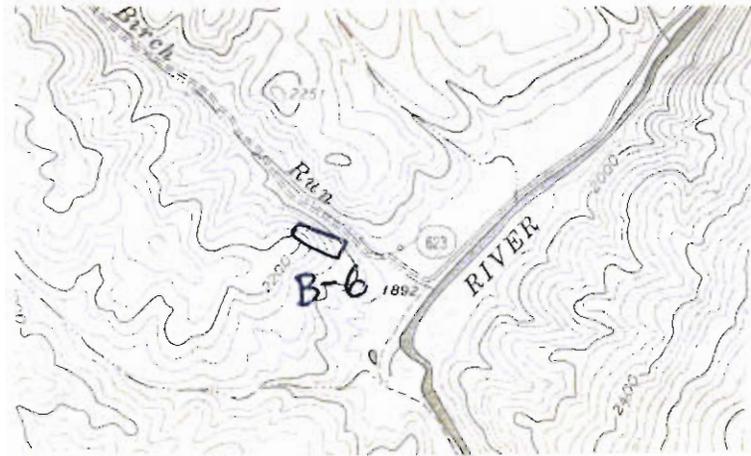
Sandstone, fine to medium, white to light gray and dark gray, rounded to subrounded. Sandstone is slightly friable in places; abundance of iron-oxide staining is present in the fractures; gray coloration is present on the grains. Bedding ranges from 6 to 16 inches. "Spirifers" present.

Attitude: N40°E, 18°NW
Thickness: 20+ feet

BATH COUNTY

B6: ORISKANY SANDSTONE

Location: Off the southwest side of a forest service road along Birch Run approximately 12,700 feet and S60°W of the intersection of State Road 623 and U. S. Hwy. 220.



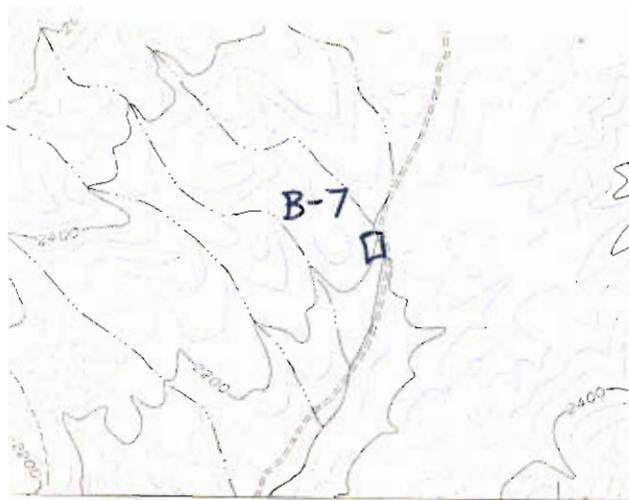
SUNRISE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light gray and dark gray, rounded to subrounded. Abundance of dark-gray and brown iron-oxide staining, and gray coloration is present on the grains where the sandstone appears to be the most friable. Exposure appears to be calcareous towards the base of the exposure, whose bedding averages about 12 inches thick. "Spirifers" present.
Attitude: N30°E, 18°SE
Thickness: 60± feet

BATH COUNTY

B7: ORISKANY SANDSTONE

Location: Off the west side of a forest service road approximately 22,250 feet and S60°W of the intersection of State Road 623 and U. S. Hwy. 220.



SUNRISE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine, medium and some coarse, white and light gray, subrounded. Sandstone highly iron-oxide stained with some manganese staining(?) also. Slightly friable where the sand is white in color. "Spirifers" present.

Attitude: N40°E, 8°NW

Thickness: (?)

BATH COUNTY

B8: ORISKANY SANDSTONE

Location: Off the east side of a forest service road approximately 13,850 feet and N13°E of its intersection with State Road 621.



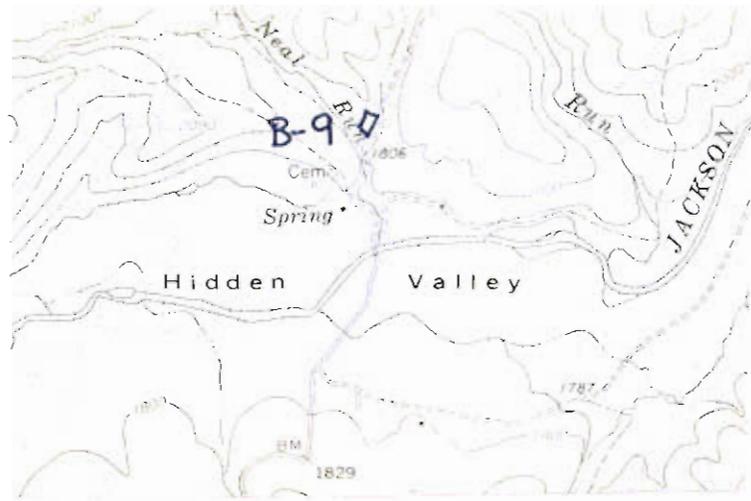
WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, light gray to brown, subrounded. Sandstone is slightly friable in places and is heavily iron-oxide stained (almost hematitic). "Spirifers" present in the sandstone; bedding from 6-12 inches. Contact with underlying Helderburg limestone.
Attitude: NE-SW strike
Thickness: 4+ feet

BATH COUNTY

B9: ORISKANY SANDSTONE

Location: Off the west side of a forest service road approximately 11,300 feet and N10° E of its intersection with State Road 621.



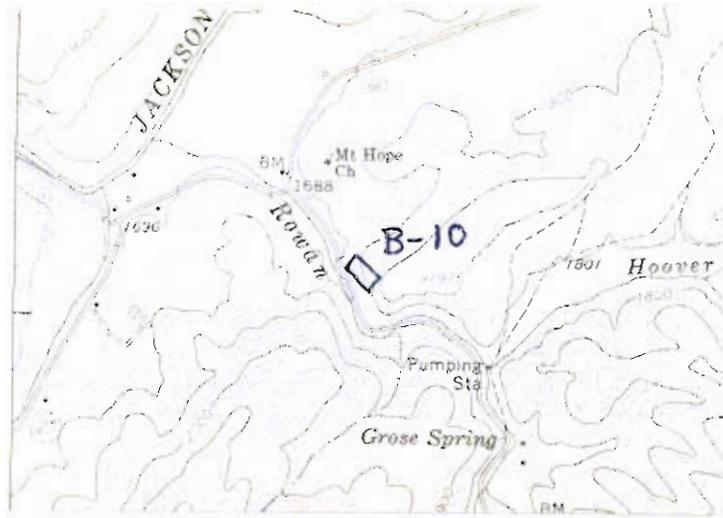
WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium grained, light gray, subrounded. Brownish iron-oxide stain is heavy in the exposure; the stained sand is slightly friable in places. Bedding ranges from 6-12 inches in thickness. "Spirifers" present.
Attitude: N35°E, 31°NW
Thickness: 20+ feet

BATH COUNTY

B10: ORISKANY SANDSTONE

Location: Off the northeast side of State Road 687, approximately 0.75 mile by road northwest of its intersection with State Road 618.



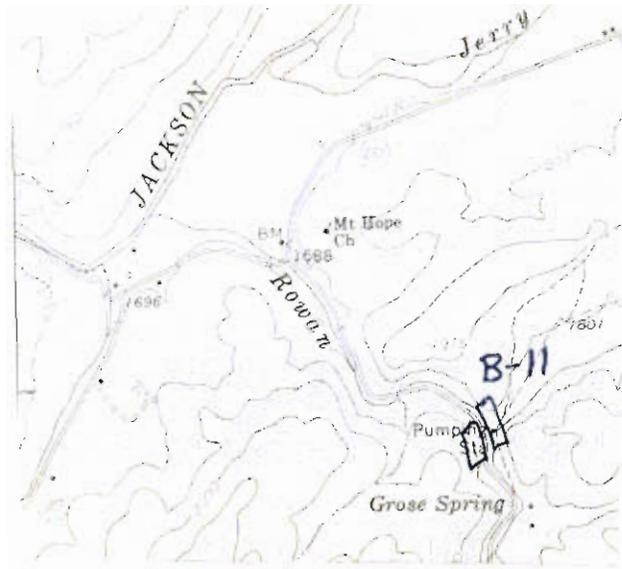
WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, white to light gray, rounded to subrounded. Sandstone ranges from well indurated to slightly friable; gray coloration (iron stain) present on the grains, although there is very little brownish iron-oxide stain in the exposure. Unit very calcareous at the base; pebble zone present. Bedding ranges from 4-16 inches. "Spirifers" present.
Attitude: N60"E, 32°NW
Thickness: 80-90+ feet

BATH COUNTY

B11: ORISKANY SANDSTONE

Location: On both sides of State Road 687 approximately 0.4 mile by road northwest of its intersection with State Road 618.



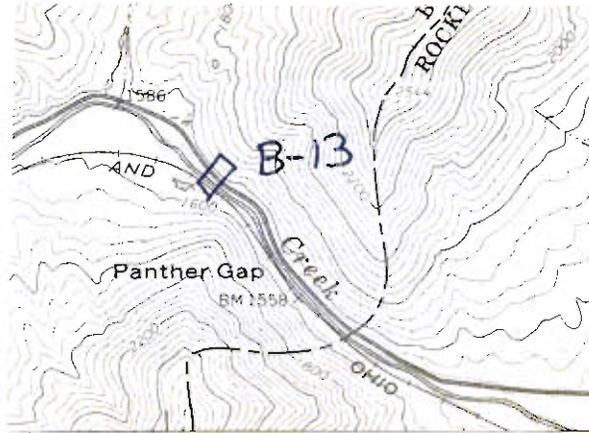
WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, white to light gray, subrounded. Material ranges from well indurated (secondary silica?) to slightly friable in places. Some iron-oxide staining along with gray coloration on the grains is present. Bedding is 4-16 inches; "spirifers" present. Attitude: N45°E, 15°SE
Thickness: 75+ feet

BATH COUNTY

B13: TUSCARORA FORMATION

Location: Along the northeast side of State Hwy. 39-42 approximately 0.45 mile by road northwest of its intersection with the Bath-Rockbridge County line.



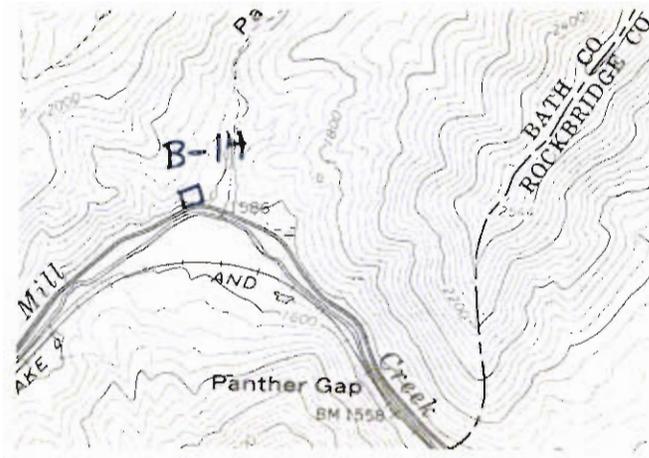
GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, very fine to medium, white and light gray to pale and dark yellowish-orange. Quartzite is very well indurated, and contains iron-oxide staining throughout, especially along fractures; 98% quartz.
Attitude: N30°E, 65°SE overturned
Thickness: 75± feet

BATH COUNTY

B14: ORISKANY SANDSTONE

Location: Along the north side of State Hwy. 39-42, approximately 0.75 mile by road northwest of its intersection with the Bath-Rockbridge County line.



GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, minor white to gray and dark yellowish-orange to orange, subangular to subrounded. Unit highly iron-oxide stained throughout and is friable to fairly well-indurated. Excellent brachiopods. Traces of white to light tan feldspar (1%+); some very coarse, white to medium gray, up to 13 mm. Bedding 3-4 inches up to 12-18 inches. Excellent contact with overlying Needmore and underlying Helderburg.

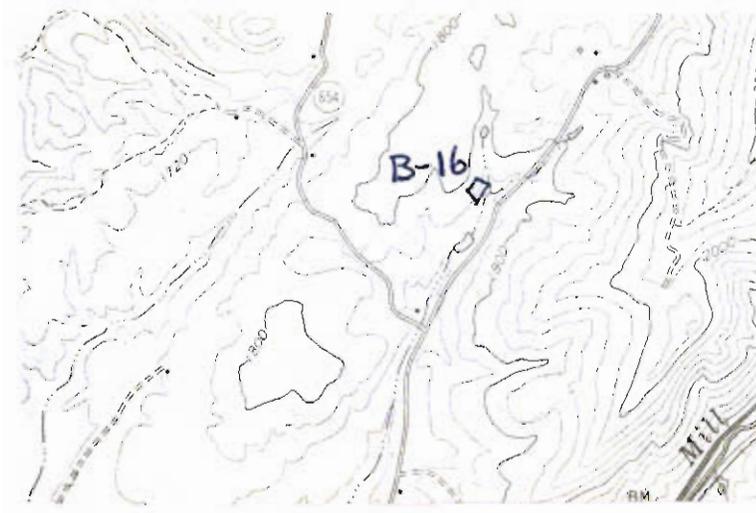
Attitude: N30°E, 50°SE

Thickness: 20-25+ feet

BATH COUNTY

B16: ORISKANY SANDSTONE

Location: Off the northwest side of State Road 640, approximately 0.3 mile by road northeast of its intersection with State Road 654.



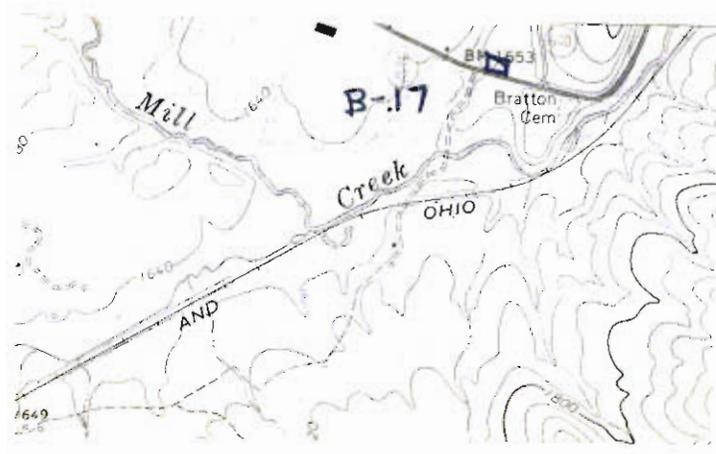
GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, dark gray to brown with minor coarse, white to medium gray, subrounded to rounded. Abundance of iron-oxide and manganese(?) staining. Excellent brachiopod casts. Very bad looking.
Attitude: N32°E, 70°SE
Thickness: —

BATH COUNTY

B17: ORISKANY SANDSTONE

Location: On the north side of State Hwy. 39-42, approximately 0.1 mile by road northwest of its intersection with State Road 640.



MILLBORO, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, white to very light gray, sub-rounded to rounded. Sandstone is pure, and friable with quartz overgrowths. Minor iron-oxide staining gives sandstone a yellowish-orange color along fractures and on the grains. Minor heavy, black minerals present.

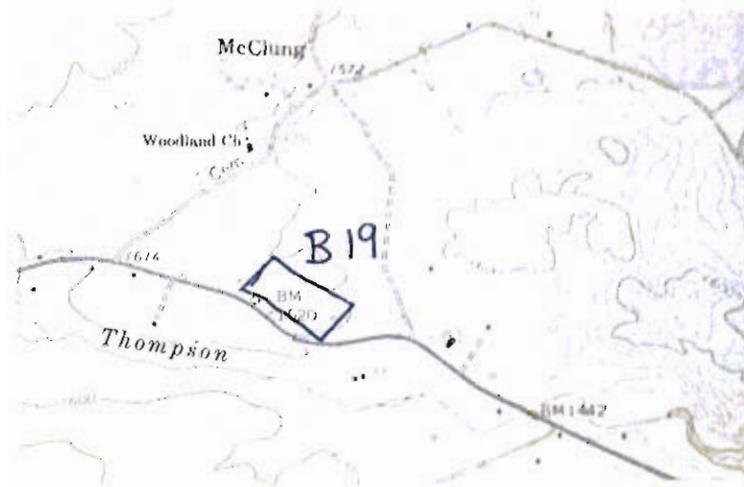
Attitude: N15°E, 20°NW

Thickness: 4+ feet

BATH COUNTY

B19: ORISKANY SANDSTONE

Location: Exposed at numerous spots in the field, off the north side of State Hwy. 39, approximately 0.4 mile by road southeast of its intersection with State Road 629.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, tan to very light yellowish-orange to light gray, subrounded and rounded. Probably not in place. Numerous sinkholes, collapse features and various strikes and dips. Excellent fossil casts and molds.

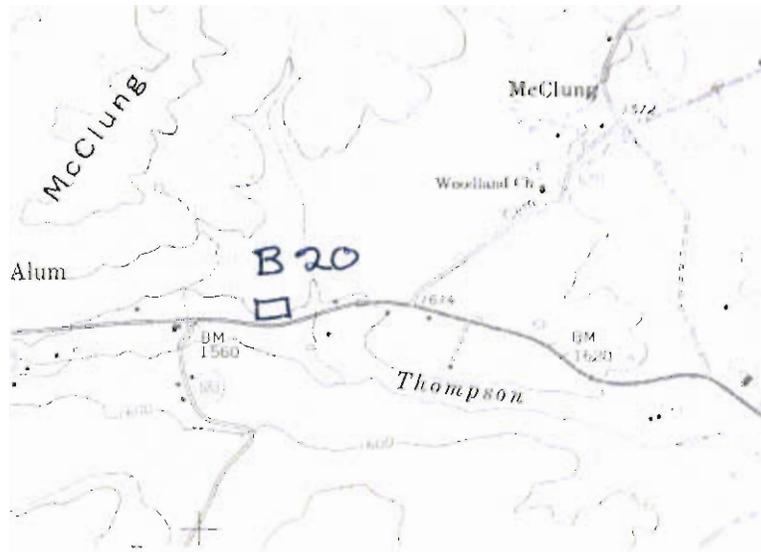
Attitude: —

Thickness: —

BATH COUNTY

B20: ORISKANY SANDSTONE

Location: Along the north side of State Hwy. 39, approximately
0.15 mile east of its intersection with State Road 683.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, orange to dark orange, subrounded to rounded. Manganese (psilomelane?) and iron mineralization along fractures. Approximately 5%+ white to tan feldspar. Bedding is thin, 5-8 inches.

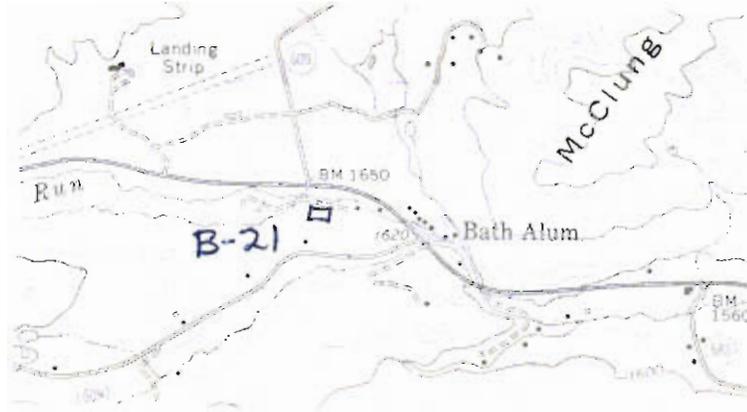
Attitude: —

Thickness: 10+ feet

BATH COUNTY

B21: ORISKANY SANDSTONE

Location: Off the south side of State Hwy. 39 at its intersection with State Road 609 leading N.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light yellowish-orange to light tan and minor light gray, subrounded to rounded. Minor white to light gray, well-rounded coarse quartz pebbles are scattered throughout, cemented by secondary silica as overgrowths. Sandstone is loosely cemented and contains iron-oxide staining throughout on grain surfaces and also highly concentrated along fractures. Some dark heavy minerals and about 1% white to light tan feldspar is present. Brachiopods present.

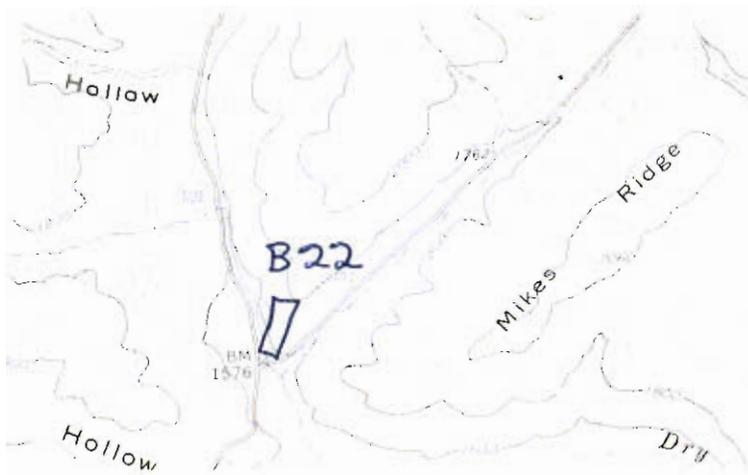
Attitude: N50°E, 40°NW

Thickness: 10+ feet

BATH COUNTY

B22: ORISKANY SANDSTONE

Location: Off the north side of State Road 624, at its intersection with State Road 609.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light tan to yellowish orange, and variably from darker orange at the top of the unit to a lighter orange in the middle and to a slightly darker orange at the base of the unit, subrounded to rounded. Lower part of exposure seems to have a clayey carbonate cement that has been leached — leaving insolubles behind. Iron mineralization at bottom of exposure that ranges from very friable to slightly friable. Bedding ranges from 12-24 inches, generally 12-18 inches. Good fossil molds and casts, good contact with the Needmore Shale.

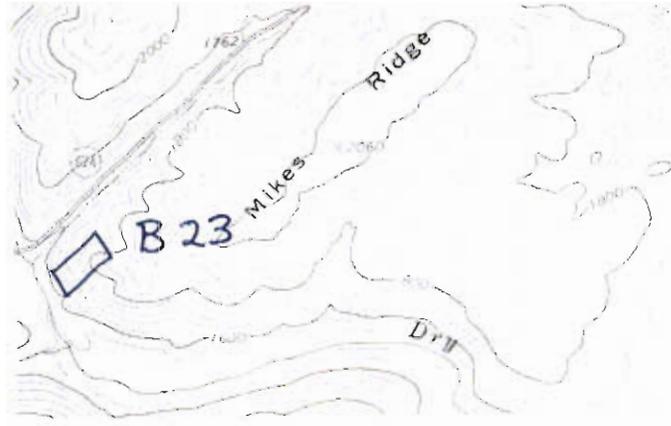
Attitude: N45°E, 62°SE

Thickness: 30+ feet

BATH COUNTY

B23: ORISKANY SANDSTONE

Location: About 0.15 mile off the southeast side of State Road 624, just northeast of its intersection with State Road 609.



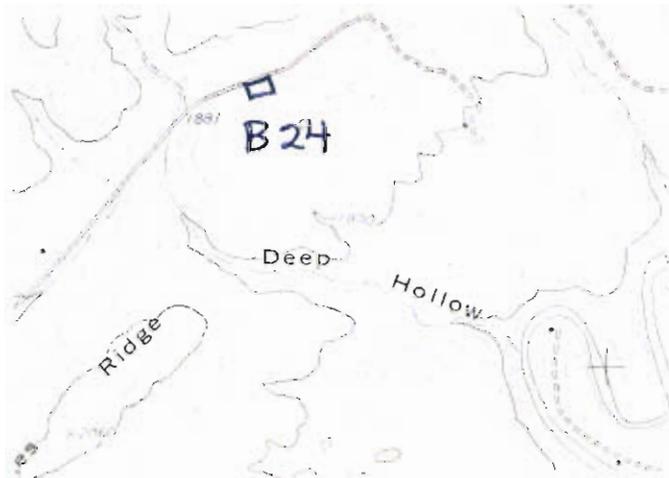
BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, yellowish-orange to dark yellowish-orange, subrounded to rounded. Minor white and light gray, coarse, rounded, quartz pebbles. Cross bedding; bedding 12-24 inches. "Spirifers" present.
Attitude: N45°E, 60°NW
Thickness: 30+ feet

BATH COUNTY

B24: ORISKANY SANDSTONE

Location: On the SE side of State Road 624 approximately 1.4 miles by road northeast of its intersection with State Road 609.



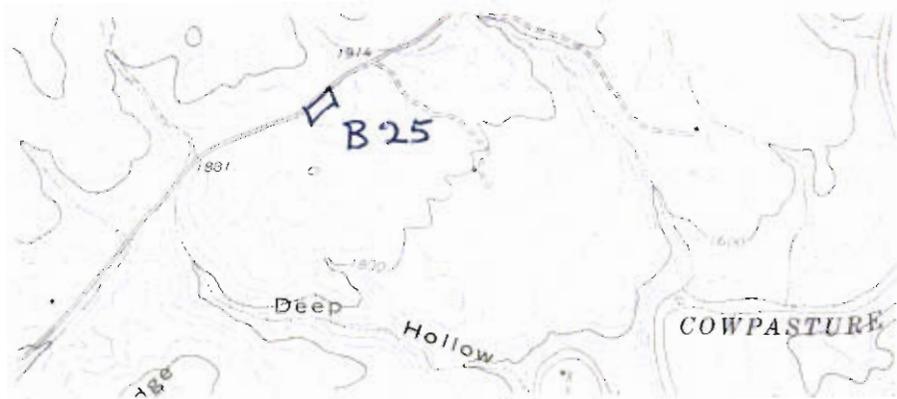
BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, dark yellowish-orange to yellowish orange, subrounded(?). Sandstone ranges from friable to fairly well indurated. Some very dark gray zones of iron and manganese(?); traces of highly weathered feldspar are present.

BATH COUNTY

B25: ORISKANY SANDSTONE

Location: On the southeast side of State Road 624, approximately 1.55 miles by road northeast of its intersection with State Road 609.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to orange, well rounded to subrounded. Friable sandstone has minor zones of medium gray, rounded sand grains. Bedding 12-18 inches. Iron and clay can be removed, if the thickness of the exposure was enough to warrant it.
Attitude: —
Thickness: 10+ feet (at most)

BATH COUNTY

B26: ORISKANY SANDSTONE

Location: On the southeast side of State Road 624 approximately 1.95 miles by road northeast of its intersection with State Road 609.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light yellowish-orange, subrounded to rounded. Sandstone is friable to slightly indurated with minor traces of white to light tan feldspar, highly weathered to clay. Iron scattered principally along fractures. "Spirifers."
Attitude: N40°E, 43°NW
Thickness: 15-20 feet

BATH COUNTY

B27: ORISKANY SANDSTONE

Location: Exposed in a series of folds (small anticlines and synclines) about 0.15 mile off the southeast side of State Road 624, approximately 2.25 miles by road northeast of its intersection with State Road 609.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light tan orange, sub-rounded (?). Iron-oxide stain is scattered throughout the exposure, but is concentrated along the fractures and bedding planes. Friable sandstone contains some black, heavy minerals.

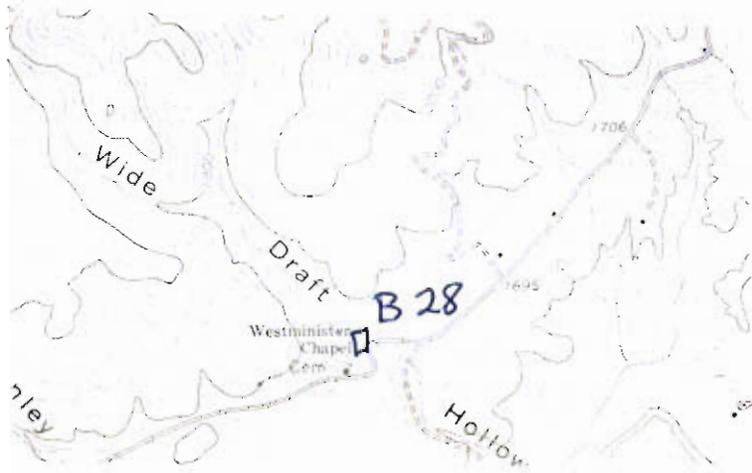
Attitude: —

Thickness: 5-10+ feet

BATH COUNTY

B28: ORISKANY SANDSTONE

Location: Off the west side of State Road 624, just north of Westminster Chapel.



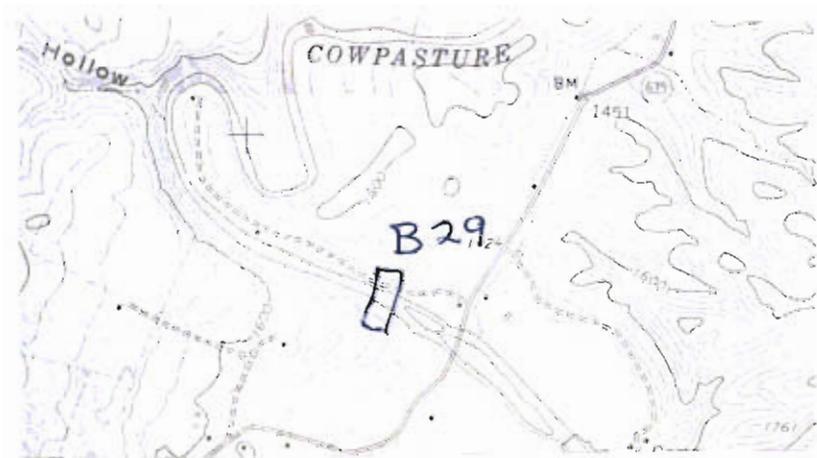
BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, pale yellowish-orange to orange, subrounded to rounded. Minor traces of white to light gray coarse, rounded quartz pebbles are present. Traces of dark gray iron stain present on grains in places. Bedding 8-12 inches.
Attitude: —
Thickness: 5-6 feet

BATH COUNTY

B29: ORISKANY SANDSTONE

Location: About 0.2 mile off the northwest side of State Road 625, just north of the Cowpasture River.



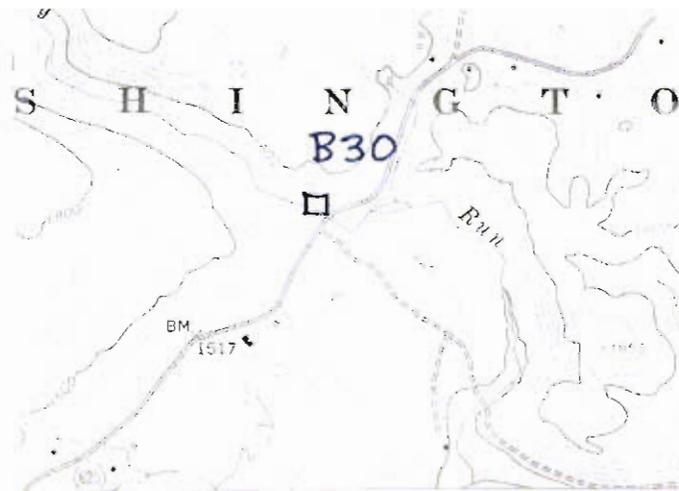
BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, yellowish orange to orange, subrounded(?). Sandstone is fairly well cemented, but slightly friable in places. Bedding varies from 12-18 inches. Exposure is highly fossiliferous and has a good contact with the underlying Helderburg. Attitude: N40°E, 14°SE
Thickness: 15+ feet

BATH COUNTY

B30: ORISKANY SANDSTONE

Location: On the northwest side of State Road 625 approximately 1.75 miles by road northeast of its intersection with State Road 629.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to very coarse, orange to medium gray, sub-rounded(?). Becomes coarse near base, with large, rounded pebbles (up to 13 mm) and slightly calcareous. Well indurated and contains brachiopods. Good contacts with Millboro and Helderberg units.

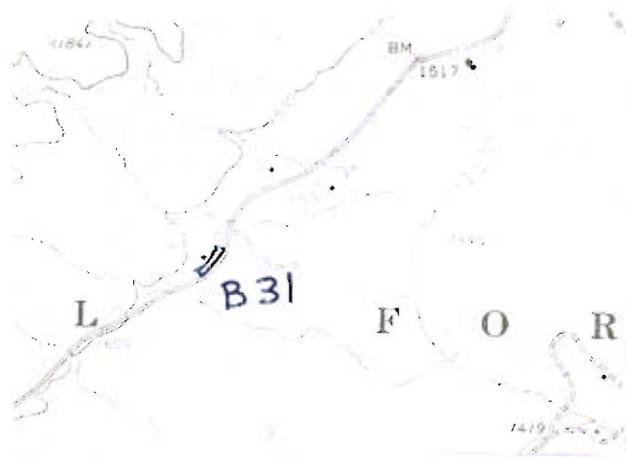
Attitude: N40°E, 18°SE

Thickness: 20± feet

BATH COUNTY

B31: ORISKANY SANDSTONE

Location: On the northwest side of State Road 625 approximately 0.75 mile by road northeast of its intersection with State Road 629.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light tan to orange to light gray, subrounded(?). Sandstone, which contains an abundance of clay in places, varies from slightly friable to well-indurated. Moderate iron-oxide stain on the grains; this increases to a high percentage elsewhere.

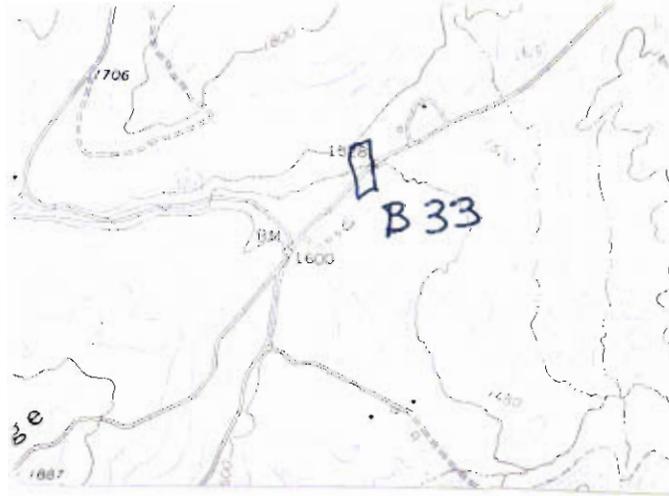
Attitude: _____

Thickness: 2± feet

BATH COUNTY

B33: ORISKANY SANDSTONE

Location: On both sides of State Road 629, approximately 0.2 mile by road northeast of its intersection with State Road 683.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to pale yellowish-orange, subrounded(?). Exposure contains some coarse, white rounded quartz "pebbles" and ranges from very slightly friable to well indurated; very well cemented with secondary silica. Brachiopods present. Iron-oxide stain is scattered throughout the unit on the grains. Bedding varies from 8-24 inches.

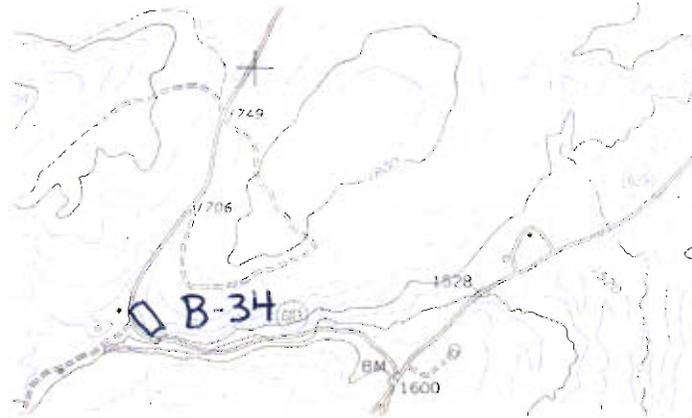
Attitude: N50°E, 10°SE

Thickness: 10₊ feet

BATH COUNTY

B34: ORISKANY SANDSTONE

Location: On the northeast side of State Road 683 approximately 0.6 mile by road west of its intersection with State Road 629.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light gray to pale yellowish-orange, subrounded to rounded. Very friable, and pure although iron-oxide stain is scattered throughout.

Attitude: N60°E, 26°SE

Thickness: 5± feet

BATH COUNTY

B36: ORISKANY SANDSTONE

Location: On northwest side of forest service road (Limekiln Road) approximately 4.7 miles by road southwest of its intersection with State Road 629.



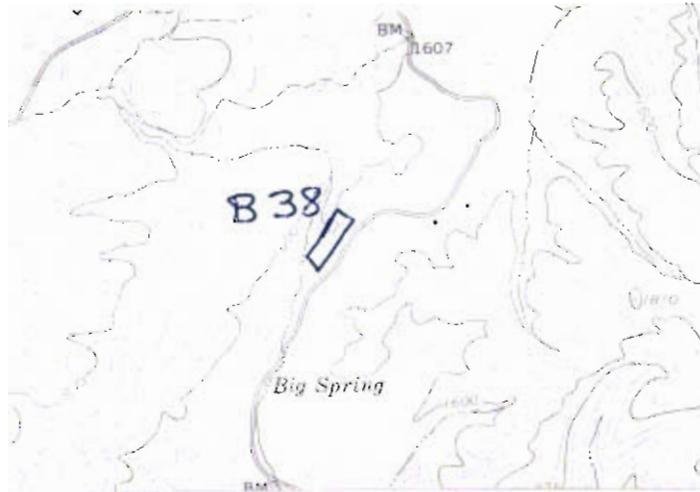
HEALING SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, very light tan to yellowish-orange, subrounded to rounded. Well-sorted sandstone contains a few white, rounded quartz pebbles scattered throughout. Unit is friable to fairly well indurated and contains moderate iron-oxide staining.

BATH COUNTY

B38: ORISKANY SANDSTONE

Location: On the northwest side of State Road 629 approximately 1.85 miles by road southwest of its intersection with State Road 683.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, light tan to dark gray, subrounded to rounded. There are also minor traces of very coarse, white to gray, well sorted "pebbles" in the exposure, which varies from very slightly friable to very well indurated. Fossils. Moderate iron staining, with traces of hematite mineralization along fracture surfaces. Bedding varies up to 2 feet.
Attitude: N35°E, 45°SE
Thickness: 5-10+ feet

BATH COUNTY

B39: ORISKANY SANDSTONE

Location: On the southwest side of Stuart Run about 0.85 mile off the southeast side of State Road 678, approximately 0.55 mile by road northeast of its intersection with State Highway 39.



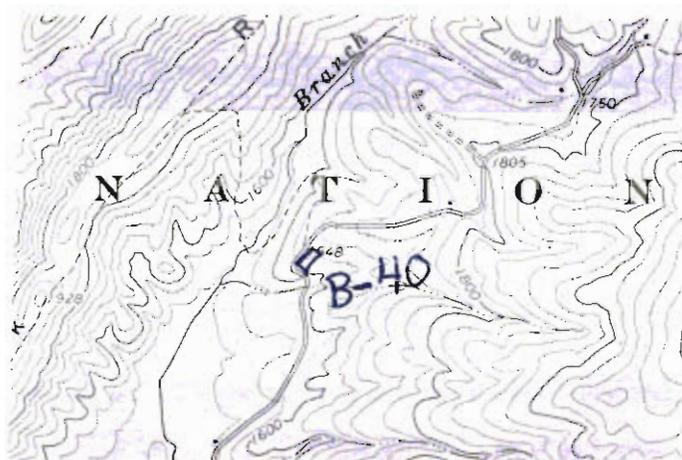
GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, medium to dark gray, subrounded. Exposure is thin bedded, slabby, fossiliferous and very calcareous towards the base. Excellent contact with the underlying Helderberg.
Attitude: N55°E, 47°SE
Thickness: 5± feet

BATH COUNTY

B40: ORISKANY SANDSTONE

Location: Sandstone exposure in the bed of State Road 633 approximately 2.6 miles by road south of its intersection with State Road 678.



GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, dark gray to orange, subrounded to rounded. Exposure is highly iron-oxide stained and varies from well indurated to friable. Unit is also highly fractured, with the fractures being filled with a bright orange clay, a couple of inches wide. Excellent contact with overlying Needmore.

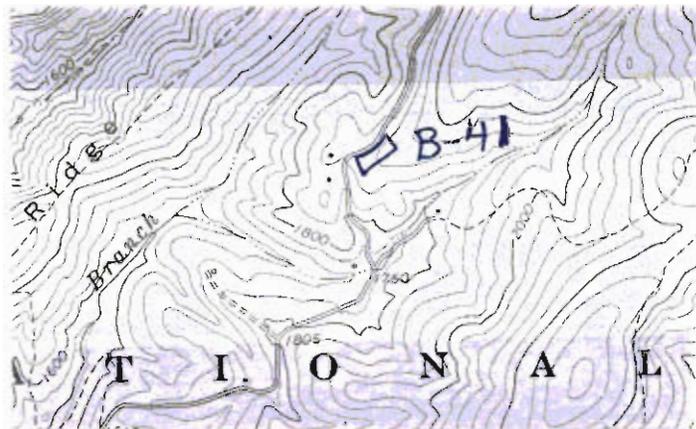
Attitude: _____

Thickness: 2-3 feet

BATH COUNTY

B41: ORISKANY SANDSTONE

Location: On the southeast side of State Road 633 approximately 1.55 miles by road south of its intersection with State Road 678.



GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

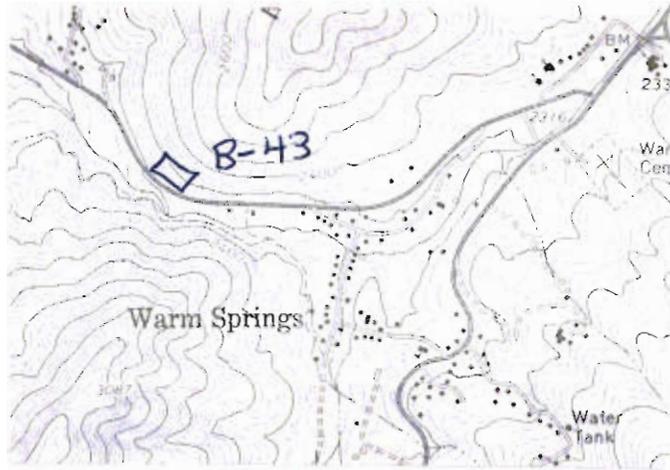
Sandstone, fine to medium, gray to orange, subrounded(?).
Unit is friable, highly iron-oxide stained and
contains "Spirifers."

Attitude: _____
Thickness: 2-3 feet

BATH COUNTY

B43: TUSCARORA FORMATION

Location: On the northeast side of State Highway 39 approximately 0.95 mile by road west of its intersection with U. S. Highway 220.



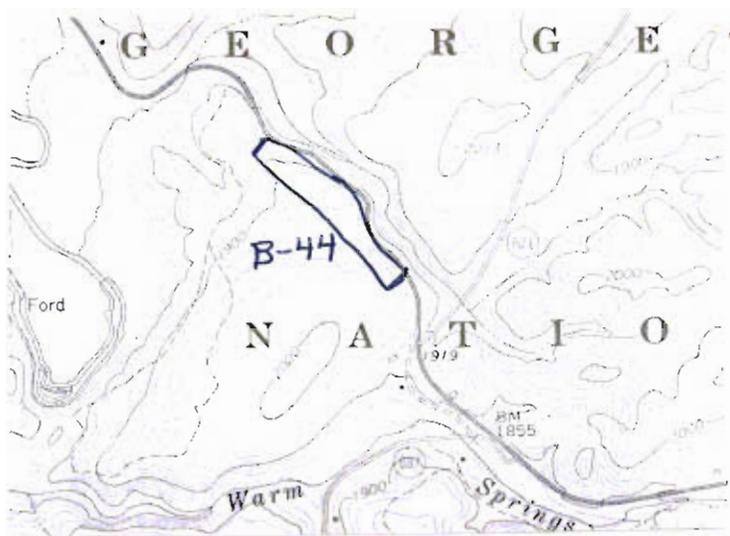
WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, very fine to medium, light to medium gray and tan to light orange, subrounded(?). Minor, coarse, white, rounded quartz "pebbles" are scattered throughout the quartzite that is very tough and well indurated; unit is highly fractured and iron stain is concentrated along these fractures. Generally, fracture surfaces are case-hardened; good cross-bedding. Bedding is very thin 2-3 inches up to 18 inches. Excellent contact with Juniata and Martinsburg formations.
Attitude: N33°E, 78°NW
Thickness: 25+ feet

BATH COUNTY

B44: ORISKANY SANDSTONE

Location: On the southwest side of State Highway 39 approximately 0.35 mile by road northwest of its intersection with State Highway 621.



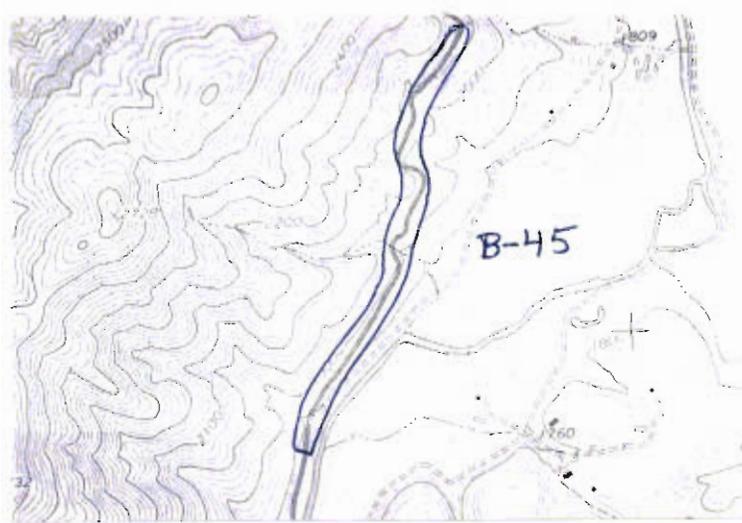
WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, with some coarse sand at the top, white to orange, subangular to rounded. Highly iron-oxide stained except for several zones near the bottom. Brachiopods present in the friable sandstone. Calcareous zone near the base is well indurated, with minor iron stains; 3-4 % feldspar. Bedding ranges from 3-4 inches - 18-20 inches. Excellent contact with Needmore.
Attitude: _____
Thickness: 35-40+ feet

BATH COUNTY

B45: ORISKANY SANDSTONE

Location: On the west side of State Highway 39 approximately 1.8 miles by road northwest of its intersection with State Road 621.



WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, brown-gray to orange, medium gray, subrounded to rounded. Sandstone contains several zones of medium gray sand grains, with a few coarse, white to milky, rounded quartz grains (these are bright orange where iron is present). Sandstone varies from friable to well indurated. Spirifers present. Bedding ranges from 3-4 inches to 18 inches.
Attitude: N37°E, 30°SE
Thickness: 20+ feet

BATH COUNTY

B46: ORISKANY SANDSTONE

Location: On the south side of State Road 621 approximately
0.65 mile by road west of its intersection with
U. S. Highway 220.



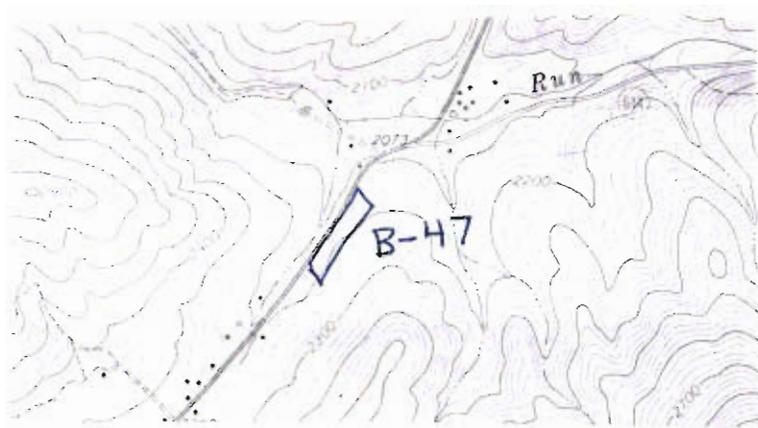
WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to speckled orange to brown orange, subrounded to rounded. Iron-oxide staining is present throughout as splotches between the sand grains, especially where porous, probably because of leached calcite. Several minor zones of medium gray sandstone are present in sandstone that varies from friable to indurated. Approximately 2-3% white feldspar; brachiopods present. Cross-bedding; bedding 12-18 inches thick.
Attitude: East limb (anticline) N25°E, 27°SE
West limb (anticline) N35°E, 25°NW
Thickness: 20-25+ feet

BATH COUNTY

B47: ORISKANY SANDSTONE

Location: On the southeast side of U. S. Highway 220,
approximately 0.3 mile by road southwest of its
intersection with State Road 614.



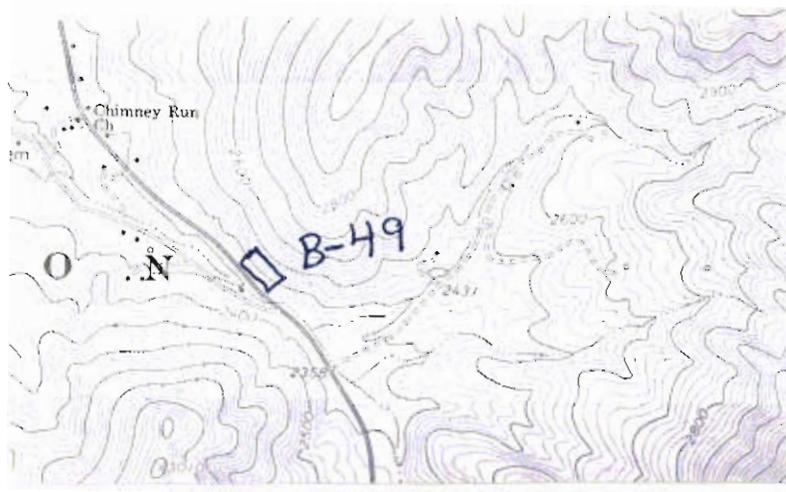
WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to dark yellowish-orange, subrounded to rounded. Sandstone ranges from friable and loosely cemented to indurated with some iron-oxide stain along fractures and scattered along the grains. Some iron and manganese(?) mineralization, impart a black to brick red color. Traces of white feldspar (1%). Brachiopods.
Attitude: N37°W, 38°SW
Thickness: 30+ feet

BATH COUNTY

B49: TUSCARORA FORMATION

Location: On the northeast side of U. S. Highway 220
approximately 0.95 mile by road southeast of
its intersection with State Road 621.



WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to very fine, white to gray. Some iron and manganese staining are present in the exposure, color ranges from orange near the base to a grayish-white where no iron is present. Bedding ranges from 4-18 inches.

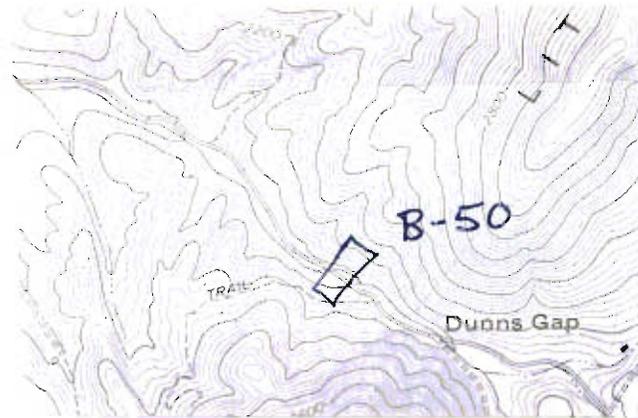
Attitude: N35°E, vertical

Thickness: 75± feet

BATH COUNTY

B50: TUSCARORA FORMATION

Location: On both sides of State Road 618 at Dunns Gap, approximately 2.4 miles by road southeast of its intersection with State Road 687.



WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to very fine, light gray to tan orange, minor dark gray. Quartzite is very hard, well indurated and is highly iron-oxide stained, especially along the fractures. Bedding 12-18 inches.

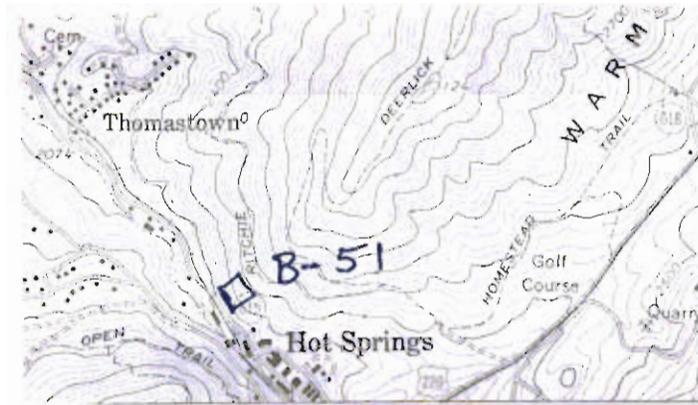
Attitude: N30°E, vertical

Thickness: 110± feet

BATH COUNTY

B51: TUSCARORA FORMATION

Location: Near the city limits of Hot Springs, on the northeast side of State Road 615 approximately 0.3 mile by road northwest of its intersection with U. S. Highway 220.



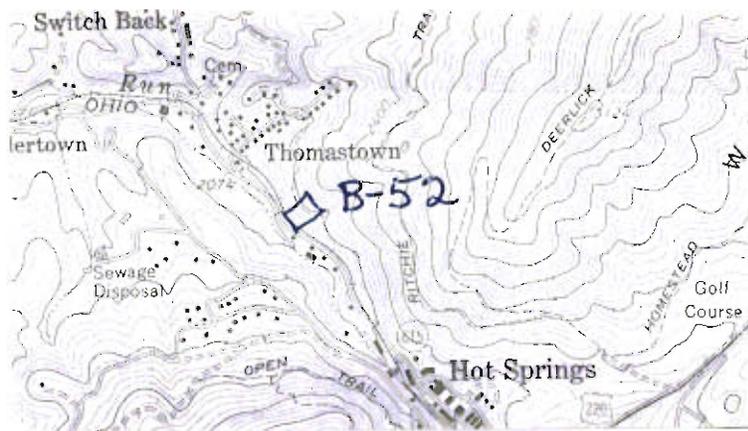
WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, very fine to fine, medium gray to light gray. Quartzite is very hard and well indurated. Bedding at the top of the exposure ranges from 3 - 30 inches, averaging about 12 inches. Bedding also averages about 12 inches at the base, although there are no 30 inch beds. Base is also highly fractured, with some coarse, white, rounded quartz "pebbles". Cross bedding. Iron-oxide staining is present throughout; orange brown and pink-red colors. Interbeds of very thin, sandy, light to medium gray shale.
Attitude: N42°E, approximate vertical
Thickness: 90± feet

BATH COUNTY

B52: ORISKANY SANDSTONE

Location: Along the C. and O. Railroad, off the northeast side of State Road 615 approximately 0.65 mile by road northwest of its intersection with U. S. Highway 220.



WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium with minor coarse, rounded quartz, bright orange to red to tan. Sandstone is friable and highly fractured; manganese and hematite staining and mineralization are present along the fractures.

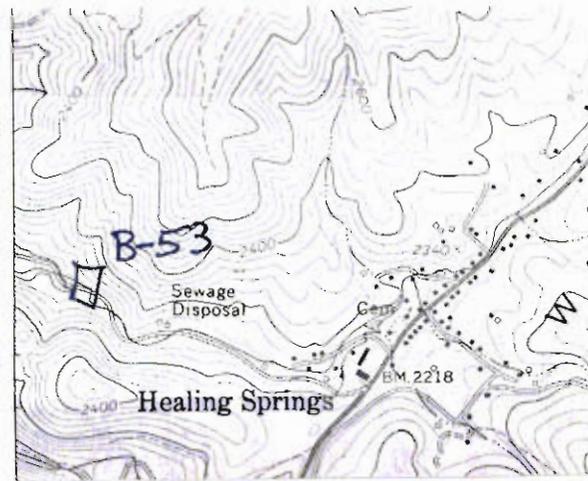
Attitude: _____

Thickness: 20-25 feet

BATH COUNTY

B53: TUSCARORA FORMATION

Location: On both sides of private drive leading northwest from the Cascades Inn approximately 0.6 mile by road northwest of its intersection with U. S. Highway 220.



HEALING SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to very fine, medium-gray to brown to light tan. Minor zones of medium to coarse quartz "pebbles" in the hard, well-indurated quartzite that contains excellent cross-bedding. Iron-oxide staining is scattered throughout as grain coatings and also very prominently as film along fracture surfaces. Bedding ranges from thin (2 inches) to thick (2 feet) with the thicker bedding exposed and the thinner bedding not exposed, but covered by float. Some black, siliceous shales (4-5 inches thick) are present in the upper part of the exposure.

Attitude: N33°E, 82°NW

Thickness: 175± feet

BATH COUNTY

B54: ORISKANY SANDSTONE

Location: On both sides of private drive leading northwest from the Cascades Inn approximately 1.05 miles by road northwest of its intersection with U. S. Highway 220.



FALLING SPRING, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, medium gray to tan brown. Some coarse, white, rounded quartz "pebbles" are present at the top of a very hard, well-indurated, massive, iron-oxide stained sandstone. Excellent contact with overlying Needmore.

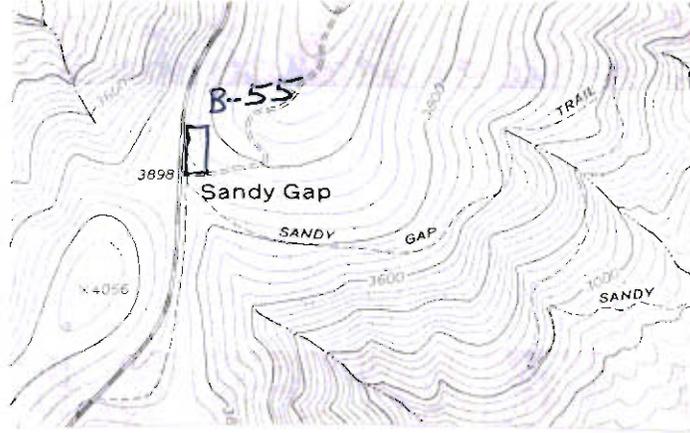
Attitude: N33°E, 54°NW

Thickness: 30+ feet

BATH COUNTY

B55: TUSCARORA FORMATION

Location: On the east side of State Road 703 (Homestead Skyline Drive) approximately 2.1 miles by road northeast of its intersection with the Bath-Alleghany County line.



HEALING SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light gray. Sandstone ranges from very friable to well-indurated and contains iron-oxide staining along the fracture zones. Cross-bedding in bedding that ranges from 2-4 inches to 16 inches.

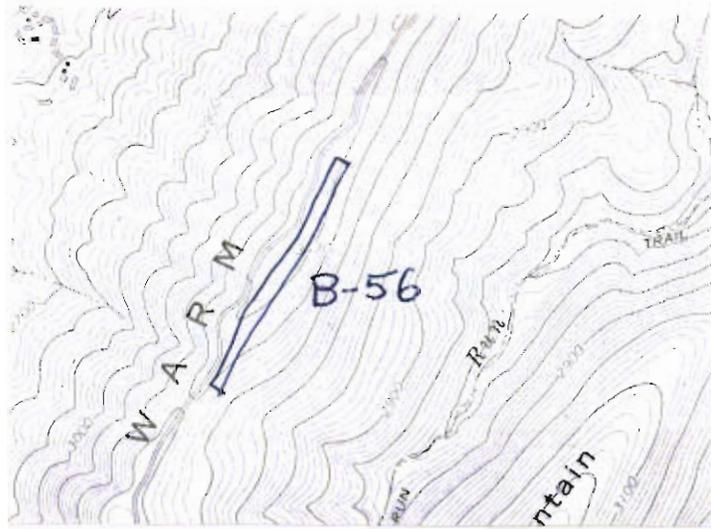
Attitude: N33°E, 19°NW

Thickness: 50± feet

BATH COUNTY

B56: TUSCARORA SANDSTONE

Location: On the southeast side of the Homestead Skyline Drive approximately 2.8 miles by road southwest of its intersection with State Highway 39.



WARM SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, very fine to fine with very minor medium, pale yellowish-orange to soft pastel red sandstone that has iron-oxide staining throughout the exposure as most of the grains has a few white, rounded quartz pebbles (up to 6 mm). Unit generally is slightly friable, although well indurated in places. Minor cross-bedding.

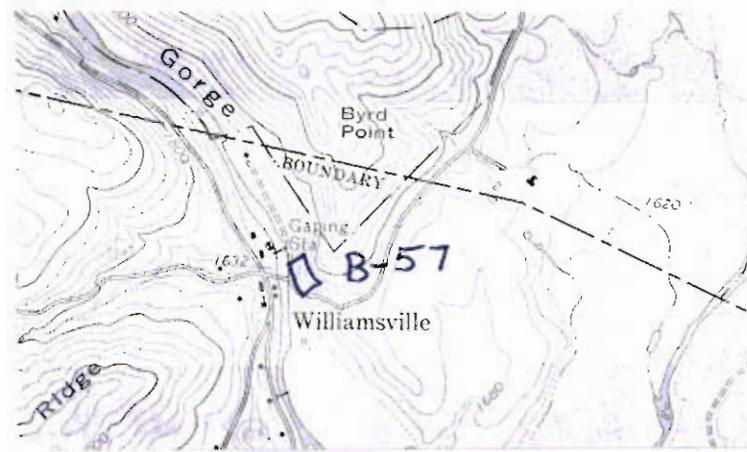
Attitude: N37°E, 34°SE

Thickness: 15± feet

BATH COUNTY

B57: ORISKANY SANDSTONE

Location: On the northeast side of State Road 614 approximately 0.1 mile by road east of its intersection with State Road 678.



WILLIAMSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray to yellowish-orange, subrounded to rounded. Sandstone becomes calcareous towards the base. It is slightly friable and bedding ranges from 4 to 30 inches. Fault present - repetition of section exposed. Iron-oxide staining present along fracture surfaces.

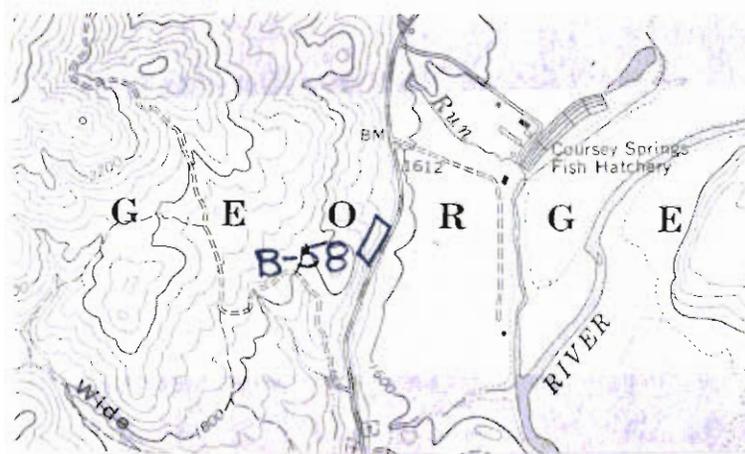
Attitude: N54°E, 85°SE

Thickness: 30-35(?) feet

BATH COUNTY

B58: ORISKANY SANDSTONE

Location: On the northwest side of State Road 678 approximately 1.85 miles by road southwest of its intersection with State Road 614.



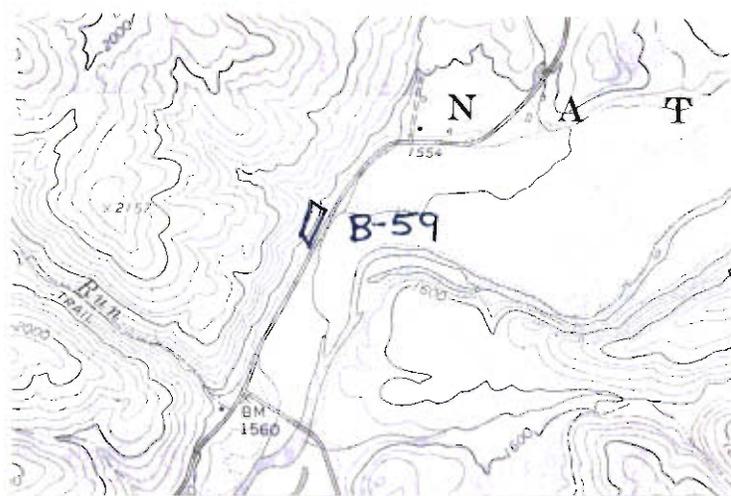
WILLIAMSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white and light gray to light yellow, subrounded. Sandstone is only slightly friable; some small quartz pebbles with gray coloration are present. Bedding ranges from 4-12 inches. Contact with underlying Helderberg unit.
Attitude: N45°E, 37°SE
Thickness: 4± feet

BATH COUNTY

B59: ORISKANY SANDSTONE

Location: On the northwest side of State Road 678 approximately 0.35 mile by road northeast of its intersection with State Road 627.



WILLIAMSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray to dull brown, sub-rounded to rounded. Iron-oxide stains as gray coloration on grains is present as are some small quartz pebbles. "Spirifers" present. Exposure becomes calcareous towards the Helderberg unit underlying the sandstone. Bedding ranges from 6-24 inches.

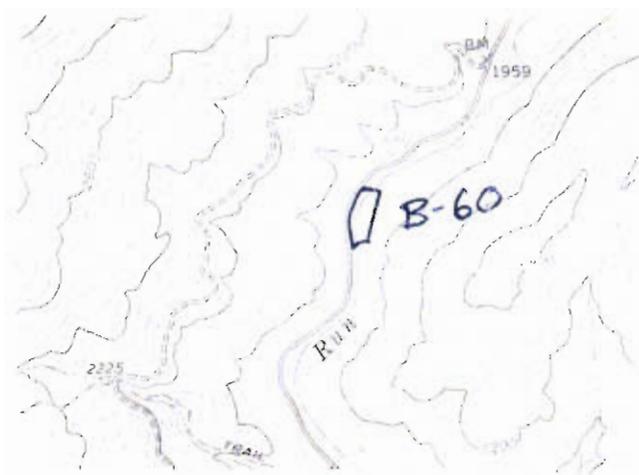
Attitude: N55°E, 29°SE

Thickness: 12+ feet

BATH COUNTY

B60: TUSCARORA FORMATION

Location: In Dry Run, off the east side of State Road 609 approximately 2.9 miles north of its intersection with State Road 624.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray to brown. Sandstone is well indurated, almost quartzitic and is not friable; iron-oxide staining and manganese staining, and gray coloration present as coating on grains and in the fractures. Bedding ranges from 2 to 16 inches.

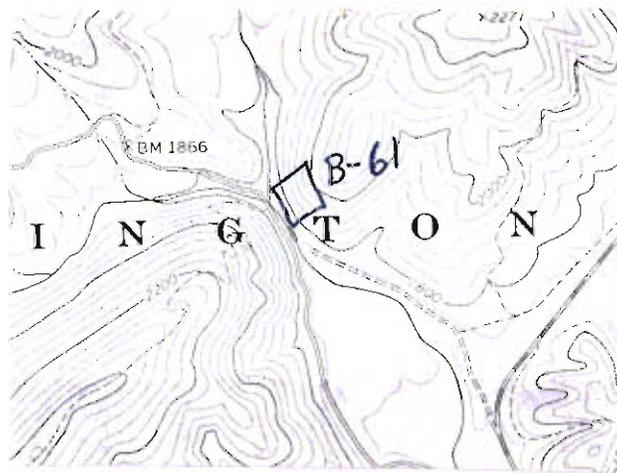
Attitude: N55°E, 23°NW

Thickness: 20-25 feet

BATH COUNTY

B61: TUSCARORA FORMATION

Location: Off the northeast side of Smith Creek Road
approximately 1.0 mile by road northwest of its
intersection with State Road 629.



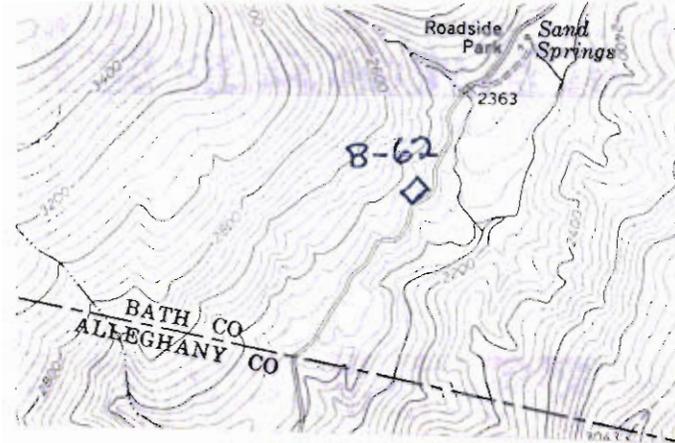
HEALING SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to coarse, light gray to brown. Quartzite
is well indurated with secondary silica. Abundance
of iron-oxide staining, especially around the
joints. Bedding is massive in places, ranging
from 5 to 30 inches.
Attitude: N68°E, 44°NW
Thickness: 120+ feet

BATH COUNTY

B62: TUSCARORA FORMATION

Location: On the northwest side of Smith Creek Road approximately 0.4 mile by road northeast of its intersection with the Bath-Alleghany County line.



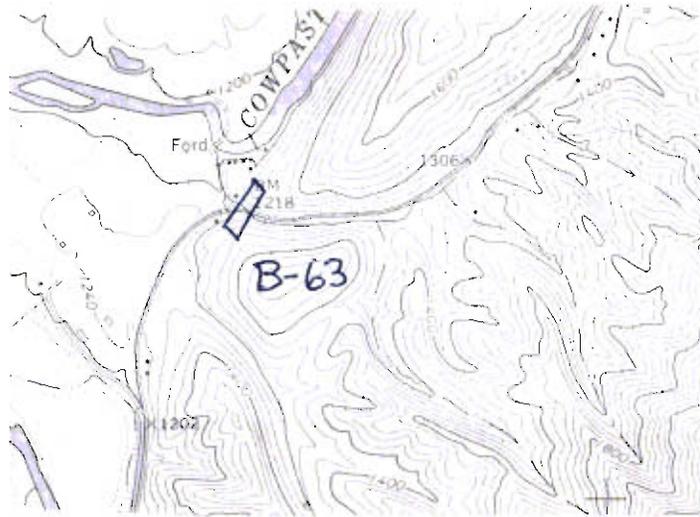
HEALING SPRINGS, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to tan to orangish and almost black. Dark colors plus some gray coloration on the grains are due to iron-oxide and possibly some manganese staining, which occurs in the fractures as well. Sandstone varies from very friable to almost quartzitic; bedding ranges from 3 to 24 inches.
Attitude: N53°E, 59-84°NW
Thickness: 80+ feet

BATH COUNTY

B63: ORISKANY SANDSTONE

Location: On both sides of State Highway 42 approximately 3.75 miles by road northeast of its intersection with the Bath-Alleghany County line.



NIMROD HALL, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, crystalline, medium gray to brown. Exposure is very calcareous, grading into the underlying Helderberg Group. Fault contact with Needmore.

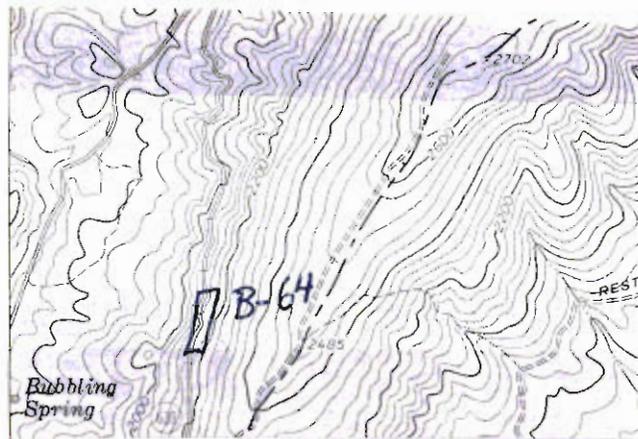
Attitude: _____

Thickness: 2-15+ feet (?)

BATH COUNTY

B64: CLINTON FORMATION

Location: Along both sides of State Road 633 approximately 0.4 mile by road north of its intersection with the Bath-Rockbridge County line.



MILLBORO, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, very fine to fine, white to light tan-orange, rounded. Sandstone varies from well indurated to very friable and from highly iron-oxide stained to very pure. Some zones of interbedded tan orange shales.

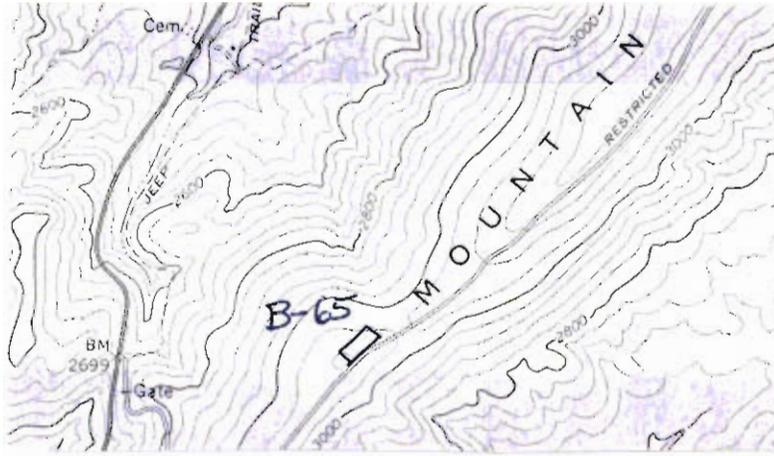
Attitude: N35°E, 20°NW

Thickness: 75+ feet

BATH COUNTY

B65: TUSCARORA FORMATION

Location: On the northwest side of a forest service road that runs along the ridge of Wilson and Jack Mountains approximately 1.0 mile by road east of its intersection with U. S. Highway 220.



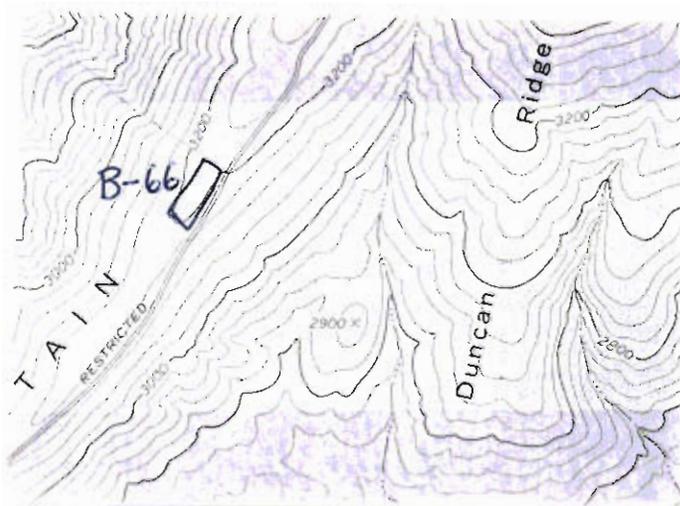
BURNSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, very fine to fine, quartz arenite. Well indurated.
Attitude: N45°E, vertical
Thickness: 4± feet

BATH COUNTY

B66: TUSCARORA FORMATION

Location: On the northwest side of a forest service road that runs along the ridge of Wilson and Jack Mountains approximately 2.1 miles by road northeast of its intersection with U. S. Highway 220.



BURNSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, very fine to fine, white to tan, subrounded to rounded. Quartzite, is pure and hard, well indurated as it is cemented by secondary silica. Iron-oxide stain scattered throughout the exposure. Breccia filled with iron and manganese mineralization in places, and fragments of quartzite that are very angular.

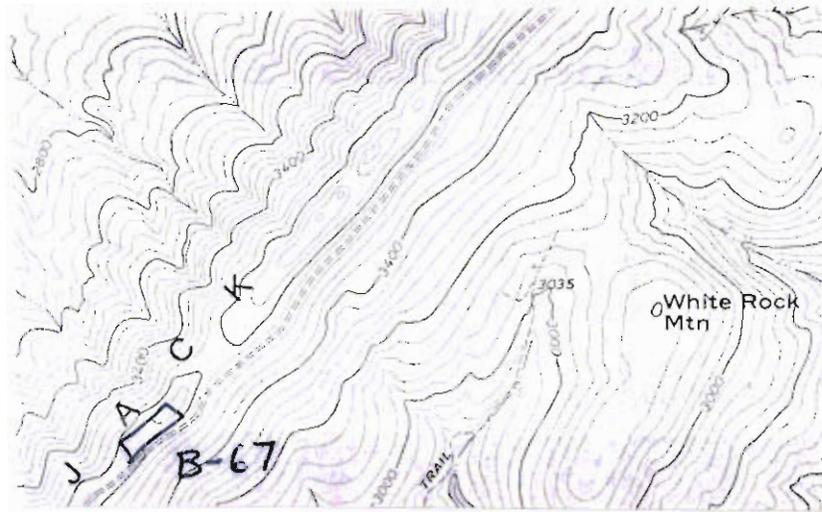
Attitude:

Thickness: 10+ feet

BATH COUNTY

B67: TUSCARORA FORMATION

Location: On the northwest side of a forest service road that runs along the ridge of Wilson and Jack Mountains approximately 4.1 miles by road south-southwest of its intersection with the Bath-Highland County line.



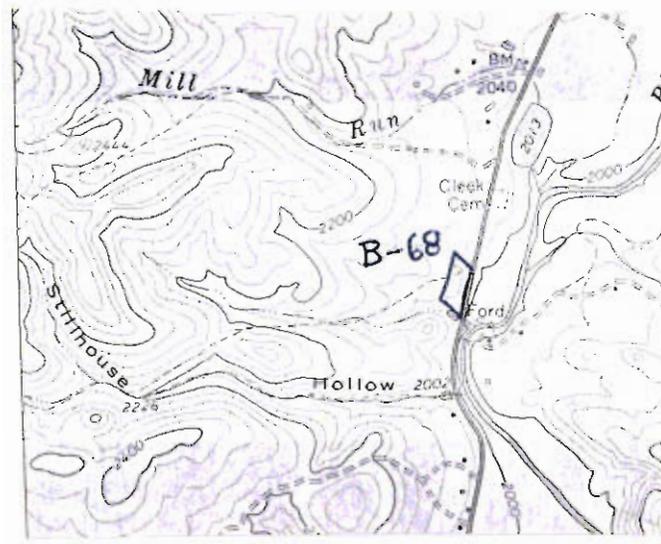
BURNSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, very fine to coarse, white to light gray to tan, yellowish-ornage, subrounded to rounded. Minor iron-oxide staining throughout that can be removed easily. Bedding varies from 8 to 12 inches.
Attitude: N45°E, 35°SE
Thickness: 10-12 feet

BATH COUNTY

B68: ORISKANY SANDSTONE

Location: On the west side of U. S. Highway 220 approximately 1.4 miles north of its intersection with State Road 623.



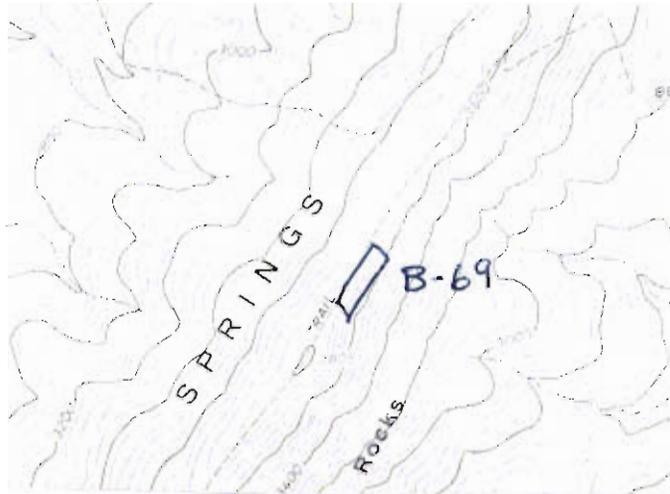
BURNSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light yellowish-orange to bright orange, subrounded to rounded. Sandstone varies from friable to fairly well-indurated and is highly iron-oxide stained; traces of hematite mineralization are present along the fractures. Traces of white-tan feldspar and a few brachiopods are also present.
Attitude:
Thickness: 20+ feet

BATH COUNTY

B69: TUSCARORA FORMATION

Location: On the top of Warm Springs Mountain approximately 13,200 feet and N39°W from the intersection of State Road 609 with State Road 624.



BATH ALUM, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to tan and dark brown along fractures, subangular to subrounded. Sandstone contains some iron-oxide stain as coatings of the grains and the iron is also highly concentrated along fractures. Sandstone ranges from very well indurated to very slightly friable and bedding varies from 4 to 18 inches.

Attitude: N40°E, 6°NW

Thickness: 20± feet

BATH COUNTY

B70: ORISKANY SANDSTONE

Location: On the southeast side of State Road 629 approximately 1.0 mile by road southwest of its intersection with the Bath-Augusta County line.



DEERFIELD, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, light yellow to dark brown, subrounded to rounded. Where the sandstone is well indurated, gray coloration is present on the grains. Iron and manganese(?) stain present in fractures. Spirifers present in sandstone, whose bedding ranges from 12-16 inches.

Attitude: N35°E 70°NW

Thickness: 15± feet

BATH COUNTY

B71: ORISKANY SANDSTONE

Location: Exposures in field about 0.2 mile off the southeast side of State Road 629 approximately 2.35 miles by road southwest of its intersection with the Bath-Augusta County line.



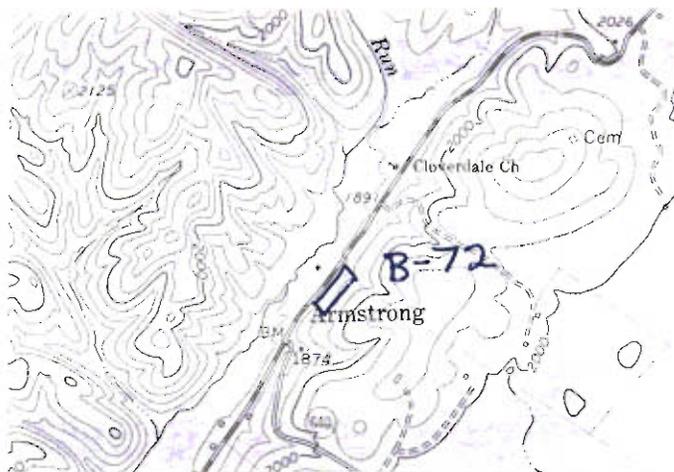
DEERFIELD, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to orange, subrounded to rounded. Sandstone is friable near the base of the exposure and becomes indurated with more iron stain (gray coloration) near the middle of the unit. Top of the exposure contains sand with orangish coatings and some black iron stain in fractures of the, again friable, sandstone. Spirifers present; bedding averages 12 inches.
Attitude: N15°E, 52°NW
Thickness: _____

BATH COUNTY

B72: ORISKANY SANDSTONE

Location: On the southeast side of State Road 629 approximately 0.15 mile by road northeast of its intersection with State Road 640.



GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

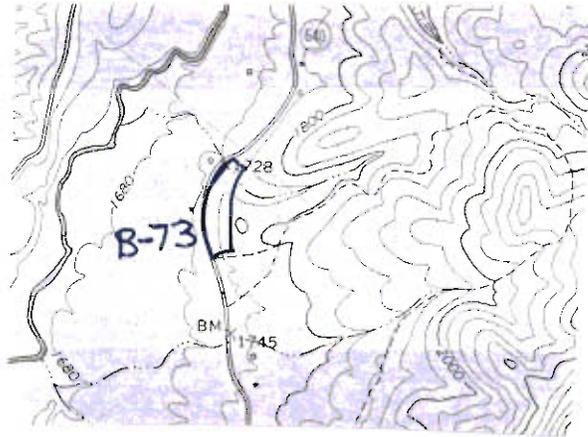
Sandstone, fine to medium, light gray to orangish brown, subrounded. Iron-oxide staining is present on the grains and in the fractures; gray coloration (iron stain) is present in some fairly well-indurated sandstone. Bedding has an average thickness of 12 inches.

Attitude: _____
Thickness: 4+ feet

BATH COUNTY

B73: ORISKANY SANDSTONE

Location: On the east side of State Road 640 approximately 0.5 mile south of its intersection with State Road 635.



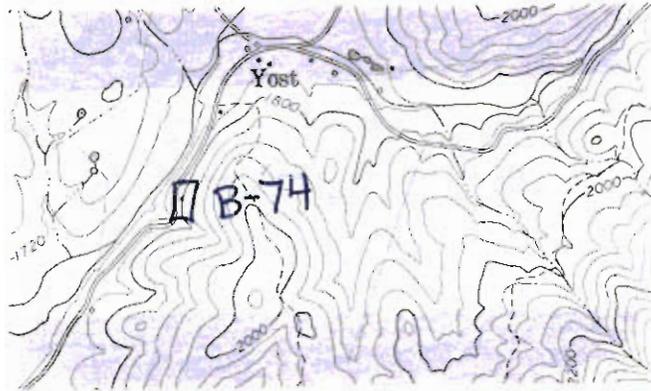
GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, mostly medium, white to orange-brown and brown black subrounded to rounded. Iron-oxide staining seems to be pretty high in the northern end of the exposure in the friable sandstone; unit becomes indurated towards the southern end of the exposure. Some manganese(?) staining is present near the middle of the exposure. Some Spirifers present in the exposure; bedding ranges from 4 to 12 inches.
Attitude: ———
Thickness: 4+ feet

BATH COUNTY

B74: ORISKANY SANDSTONE

Location: On the southeast side of State Road 640 approximately 0.6 mile northeast of its intersection with State Road 635.



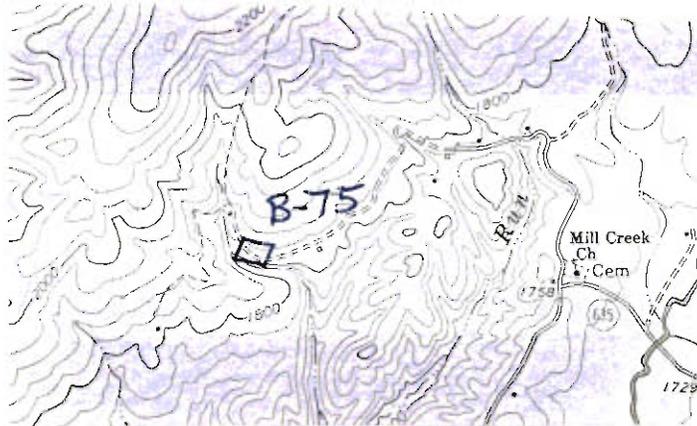
GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, mostly fine and some medium, light yellow-orange to orangish brown. Iron-oxide stain is present in the fractures of the friable sandstones; some manganese(?) is also present as coating on the grains as well as in the fractures. Bedding ranges from 6 to 16 inches. Spirifers are present.
Attitude: N34°E, 25°NW (overturned)
Thickness: 5± feet

BATH COUNTY

B75: ORISKANY SANDSTONE

Location: On the west side of a woods road approximately
1.1 miles west of its intersection with
State Road 635.



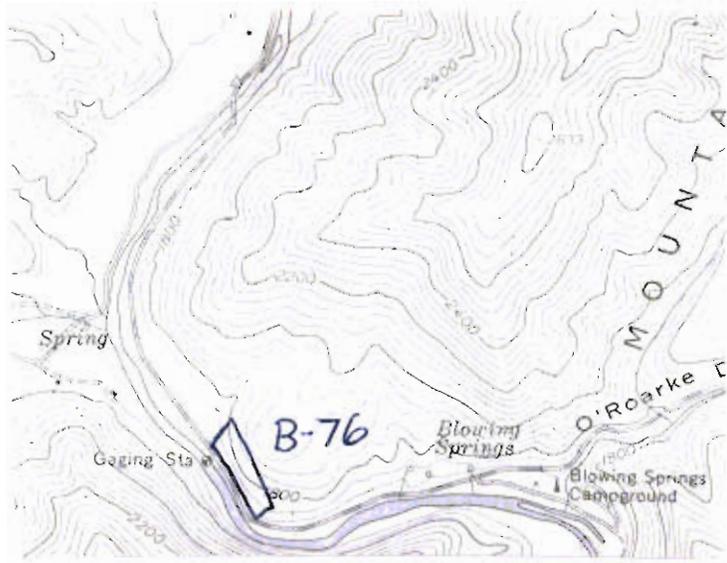
GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, predominantly medium, white to orange brown, sub-
rounded to rounded. Iron-oxide staining is present
as coating on the grains and in the fractures; gray
coloration as stain is present on some of
the grains. Bedding ranges from 6 to 16 inches.
Attitude: N75°E, 35°NW
Thickness: 12-15 feet

BATH COUNTY

B76: TUSCARORA FORMATION

Location: On the northeast side of State Highway 39
approximately 0.9 mile by road southeast of its
intersection with State Road 600.



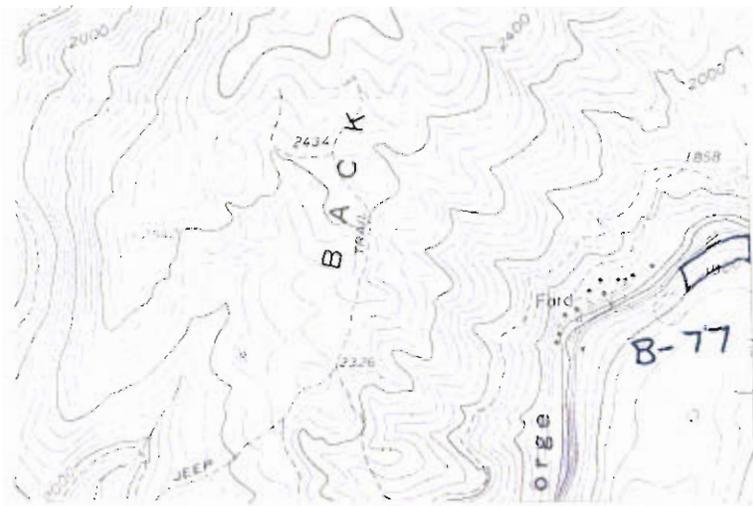
MOUNTAIN GROVE, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to medium, white to light gray to tan.
Reddish to gray iron-oxide staining is present in
parts of the exposure. Bedding ranges from 4"
to 36" to massive (4 feet) at the top of the unit.
Attitude: N54°E, 18°NW
Thickness: 25+ feet

BATH COUNTY

B77: ORISKANY SANDSTONE

Location: On the south side of State Road 603 approximately 0.3 mile by road west of its intersection with State Road 607.



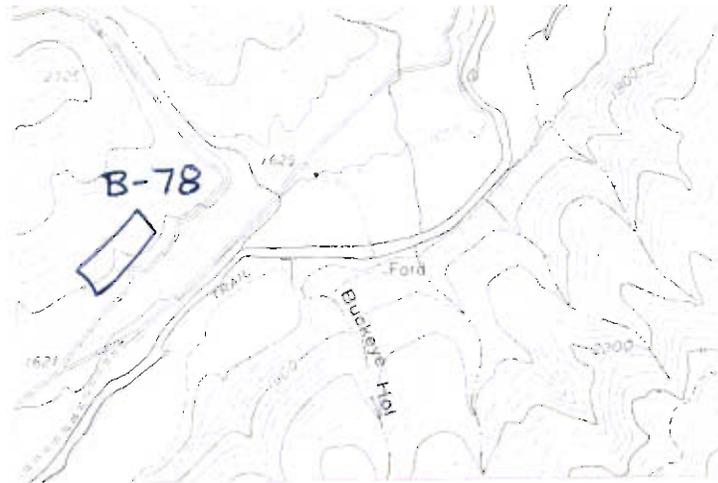
MOUNTAIN GROVE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray to gray and brown, subrounded. Sandstone varies from slightly friable to indurated; red-brown iron-oxide stain is present as coating on some grains and also in the joints. Sandstone becomes very calcareous and has some gray coloration near the base of the exposure (near the contact with the Helderberg Group). Bedding ranges from 4 to 36 inches; "spirifers" are present. Attitude: N16°E, 13°SE
Thickness: 25± feet

BATH COUNTY

B78: ORISKANY SANDSTONE

Location: On the north side of a forest service road on the southeast side of Bolar Mountain approximately 9700 feet and S45°W of the McClintic Bridge over the Jackson River.



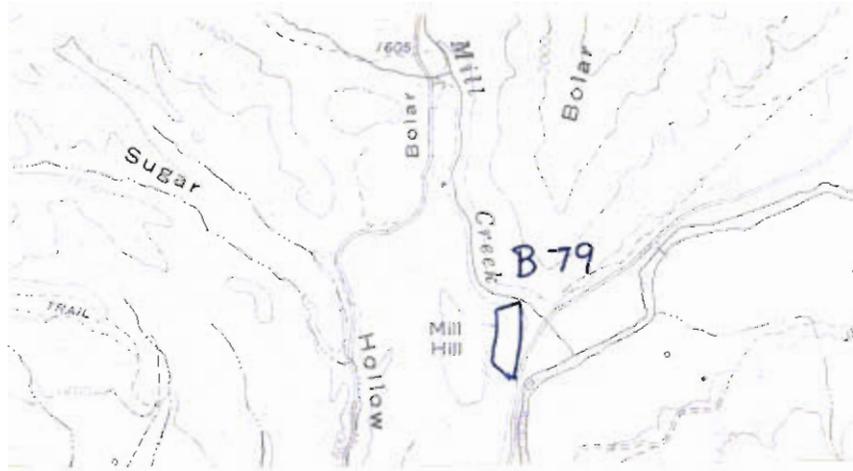
MOUNTAIN GROVE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, mostly medium, yellowish-orange to red, subrounded. Unit is heavily iron-oxide stained and also contains some manganese(?) staining. Bedding ranges from 4 to 16(?) inches. Brachiopods present. Contact with Helderberg Group.
Attitude: _____
Thickness: 4+ feet

BATH COUNTY

B79: ORISKANY SANDSTONE

Location: On the northwest side of State Road 603 approximately 0.85 mile by road northeast of its intersection with State Road 600.



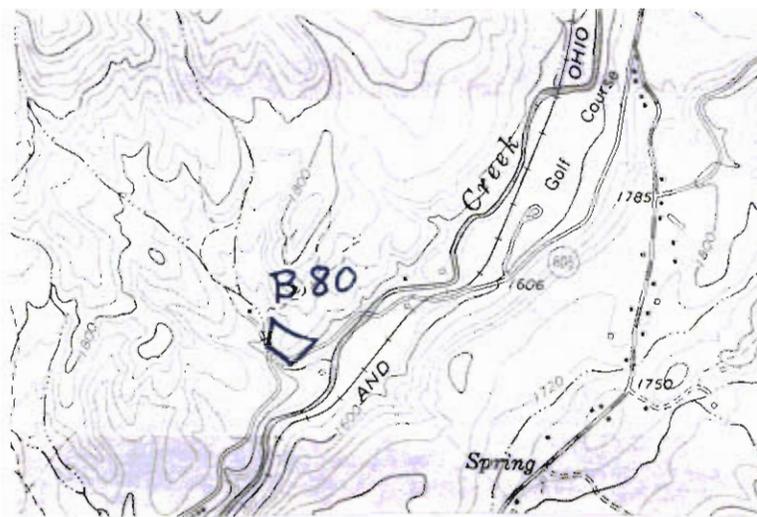
FALLING SPRING, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray to yellowish-orange, subrounded to rounded. Sandstone varies from slightly friable to indurated and contains an abundance of iron-oxide staining as well as a gray coloration as coating on the grains. Unit becomes calcareous toward the base, grading into the Helderberg Group. Bedding ranges from 6 to 24 inches; "spirifers" are present.
Attitude: N61°E, 27°SE
Thickness: 8± feet

BATH COUNTY

B80: ORISKANY SANDSTONE

Location: On the north side of State Road 605 approximately 1.05 miles by road southwest of its intersection with State Road 687.



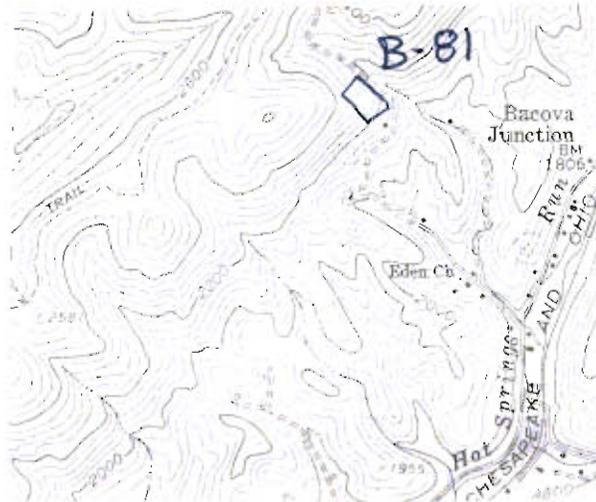
FALLING SPRING, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to yellowish-orange, subrounded to rounded. Sandstone contains iron-oxide staining, some manganese(?) staining and some gray coloration along the joints; varies from slightly friable to indurated sandstone in places. Unit is slightly calcareous near the base; "spirifers" are present in the sandstone. Bedding ranges from 6 to 20 inches. Attitude: N27°W, 14°SW
Thickness: 8+ feet

BATH COUNTY

B81: ORISKANY SANDSTONE

Location: On the southwest side of State Road 607 approximately 0.75 mile by road northwest of its intersection with State Road 687.



MOUNTAIN GROVE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium with some fine, white to yellowish-orange, subrounded. Sandstone varies from indurated to friable in places. Some iron-oxide staining is present along the joints and as a coating on the grains; secondary silica cement present in the indurated material. Contact with overlying Millboro shale; brachiopods are present. Bedding ranges from 4 to 24 inches.

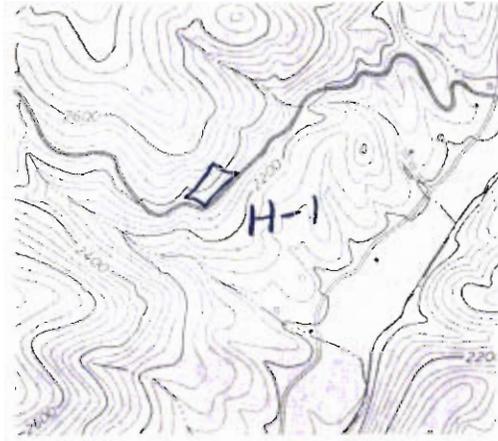
Attitude: N52°E, 37°SE

Thickness: 30-35 feet

HIGHLAND COUNTY

H1: ORISKANY SANDSTONE (R-5351)

Location: On the north side of U. S. Highway 250 about 0.8 mile by road west of its intersection with State Road 614.



MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

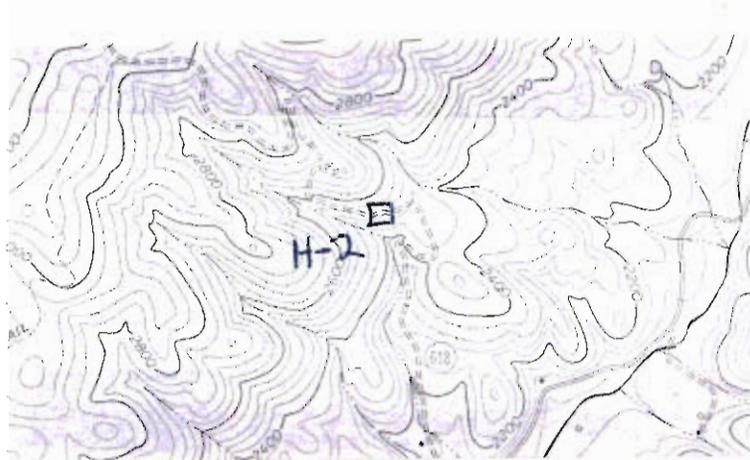
Sandstone, fine to medium, subrounded to rounded, light gray to light yellowish to dark yellowish orange, extremely fossiliferous. Traces of white tan feldspar scattered throughout, well indurated to slightly friable. Minor white coarse rounded pebbles of quartz. Some manganese mineralization along bedding planes, fractures and in fossil molds near base of exposure. Contacts with Helderberg and Needmore excellent. Manganese presence verified by atomic absorption spectroscopy.
Attitude: N35°E, 40° SE
Thickness: Approximately 100-150 feet

W

HIGHLAND COUNTY

H2: ORISKANY SANDSTONE (R-5352)

Location: On the north side of State Road 618 approximately 0.8 mile by road west of its intersection with State Road 614.



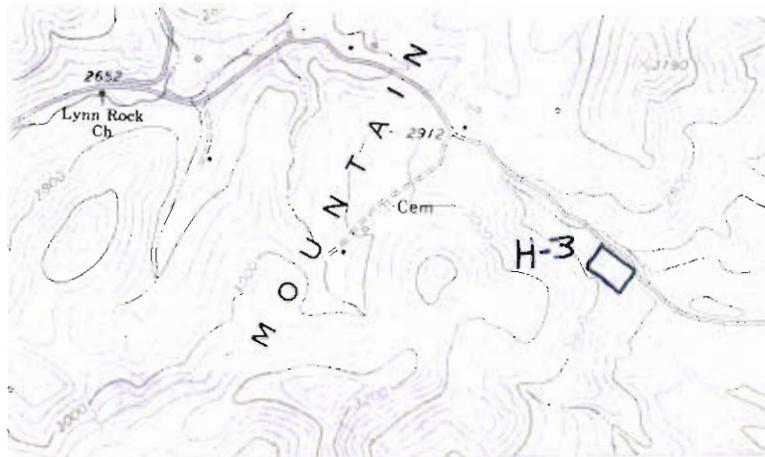
MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to coarse, subrounded to rounded, pale yellowish orange to medium gray. Some white to light tan feldspar (highly weathered). Upper 40-45 feet is friable, clean, and pale yellowish orange in color. Lower 5 feet is medium gray because of manganese mineralization along fractures and in matrix. Bedding ranges up to about 12". Excellent "Spirifers".
Attitude: N40°E, 32°SE
Thickness: 48 feet

HIGHLAND COUNTY

H3: ORISKANY SANDSTONE

Location: On the south side of State Road 619 approximately 0.7 mile by road west of its junction with State Road 614.



DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

Sandstone, fine to medium, tan orange to light gray, minor clay matrix. Excellent "Spirifers".

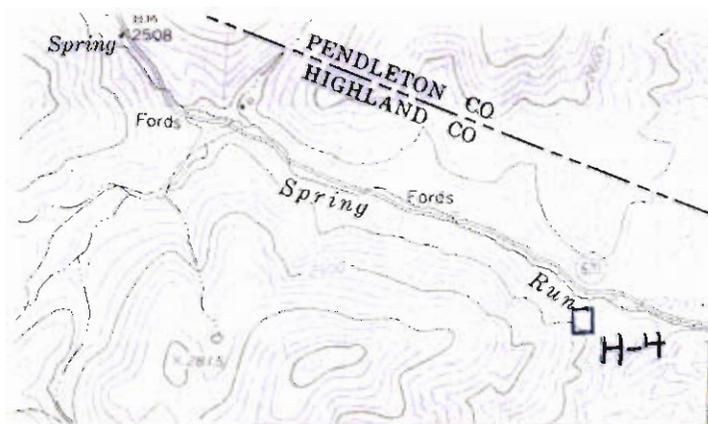
Attitude: _____

Thickness: Approximately 15-20 feet

HIGHLAND COUNTY

H4: ORISKANY SANDSTONE

Location: On the south side of State Road 620 approximately 0.5 mile by road to west of its intersection with State Road 614.



DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

Sandstone, quartzite, fine to medium, tan to gray, to dark yellowish orange where clay and iron stain are concentrated. Minor white to medium gray, rounded, quartz pebble conglomerate at top with pebbles up to 1/2" in length at top. Bedding somewhat thinner at bottom than at top, 4 inches to 10 inches.

Good "Spirifers."

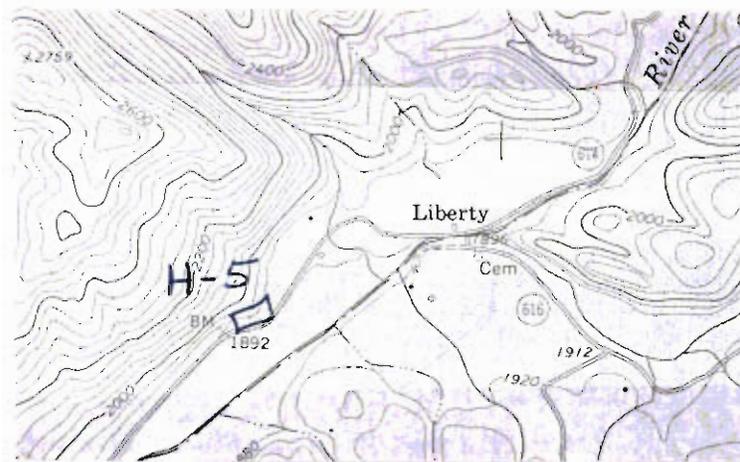
Attitude: N34°E, 38°SE

Thickness: Approximately 35-40 feet

HIGHLAND COUNTY

H5: ORISKANY SANDSTONE

Location: On the west side of State Road 614 approximately 0.5 mile by road south of its junction with State Road 616.



MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, white to light tan-orange, rounded to subrounded, friable. Coarser grains have a medium gray coloration. Traces of white to light tan feldspar (3-4%). Iron stains are present throughout. Bedding ranges from 8 to 12 inches "Spirifers".

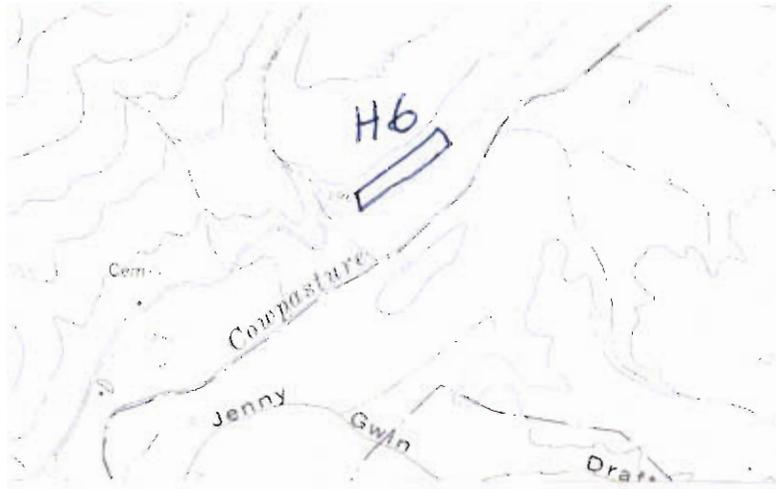
Attitude: N80°W, 20°SW

Thickness: 20 ± feet

HIGHLAND COUNTY

H6: ORISKANY SANDSTONE

Location: On the west side of State Road 614 approximately 1.2 miles by road south of its junction with State Road 616.



MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to coarse, tan to light gray to light maroon, coarse part consists of white rounded quartz pebbles up to 10 mm in length. Majority of sandstone is fine to medium. Unit ranges from very hard to friable. Iron stain is scattered throughout, but is highly concentrated along bedding planes and in "Spirifer" molds.

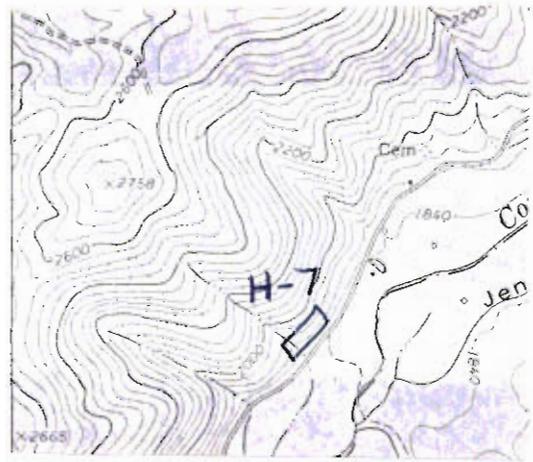
Attitude: N35°E, 20°SE

Thickness: Approximately 20 feet

HIGHLAND COUNTY

H7: ORISKANY SANDSTONE

Location: Exposed on the west side of State Road 614 approximately 2.3 miles by road south of its junction with State Road 616.



MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, tan-white to light gray, rounded to subrounded, friable to slightly friable. Much iron stain. "Brachiopods".

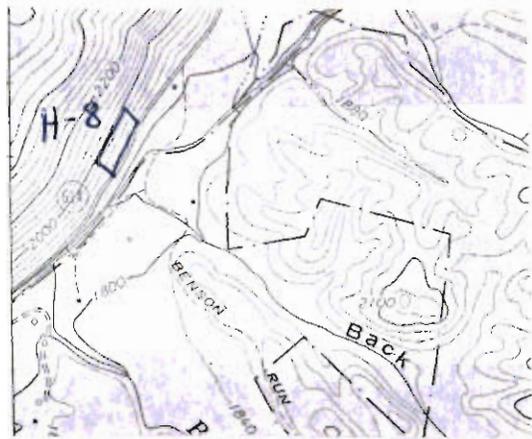
Attitude: N22°E, 75°SE

Thickness: Approximately 10 feet

HIGHLAND COUNTY

H8: ORISKANY SANDSTONE

Location: On the west side of State Road 614 approximately 3 miles by road south of its junction with State Road 616.



MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, yellowish-orange to medium gray, well indurated, calcareous. Minor white to light tan feldspar. Traces of sandstone are friable, iron stain common throughout. "Brachiopods".

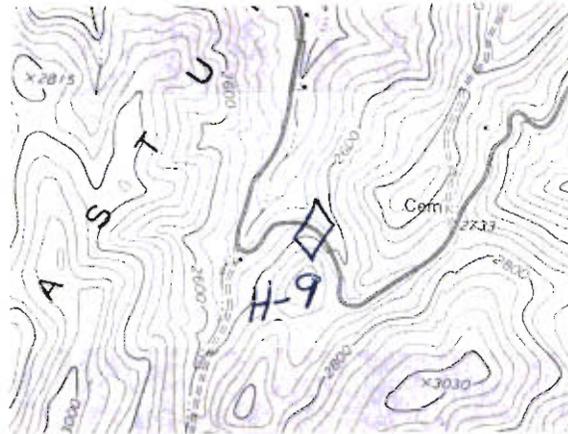
Attitude: _____

Thickness: Approximately 10-15 feet

HIGHLAND COUNTY

H9: ORISKANY SANDSTONE

Location: On Bull Pasture Mountain on the south side of U. S. Highway 250 approximately 2.1 miles by road east of its junction with State Road 678.



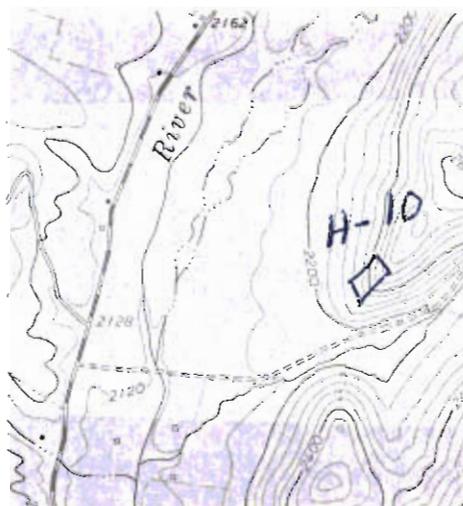
MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, white to tan-orange, subrounded to rounded; minor parts are medium gray. Exposure ranges from well indurated to friable. Traces of white to tan feldspar (highly weathered). Iron occurs throughout and is variable. Basal part of exposure is highly fractured with some Mn mineralization along them. Rock weathers to chips of various sizes. Bedding ranges to about 24 inches. "Spirifers", some large scale cross-bedding.
Attitude: N5°E, 25°NW
Thickness: _____

HIGHLAND COUNTY

H10: ORISKANY SANDSTONE

Location: On the north side of State Road 617 approximately 0.5 mile by road east of its junction with State Road 654.



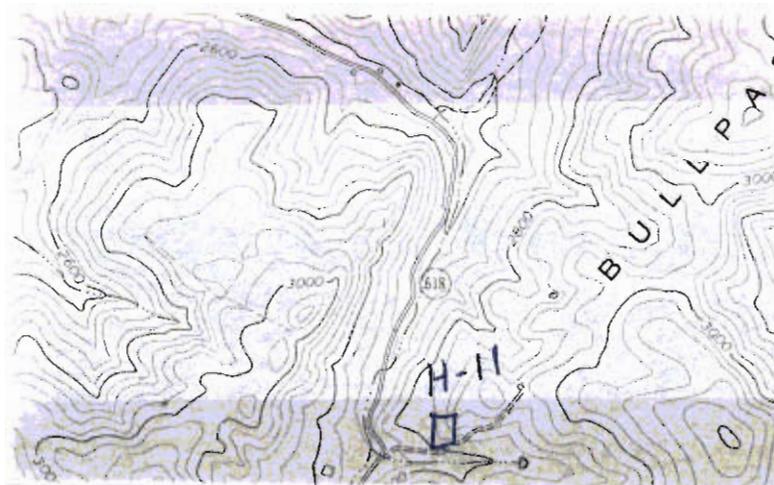
MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light yellowish-orange, very well indurated to slightly friable, very pure. Iron stain scattered throughout on grains. Bedding ranges up to about 18 inches. Float contains coarse quartz pebbles up to about 1/2 inch in length, they are white and rounded.
Attitude: N28°E, 50°SW
Thickness: 25± feet

HIGHLAND COUNTY

H11: ORISKANY SANDSTONE

Location: Approximately 0.1 mile east of State Road 618
about 2 miles east of its junction with State Road
654.



DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

Sandstone, fine to medium, rounded to subrounded, white to light gray, very well sorted, somewhat friable. Traces of white feldspar (1-2%). Excellent spirifers.

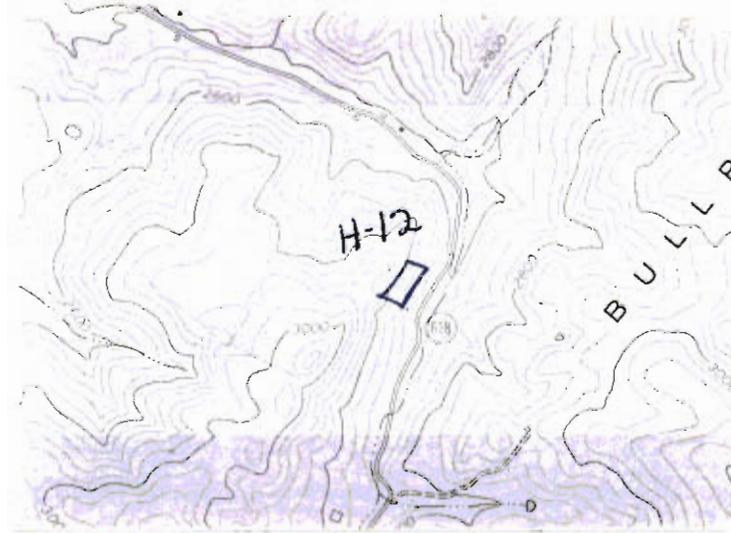
Attitude: _____

Thickness: Approximately 15 feet

HIGHLAND COUNTY

H12: ORISKANY SANDSTONE (R-5353)

Location: Along the west side of State Road 618 approximately 1.5 miles east of its junction with State Road 654.



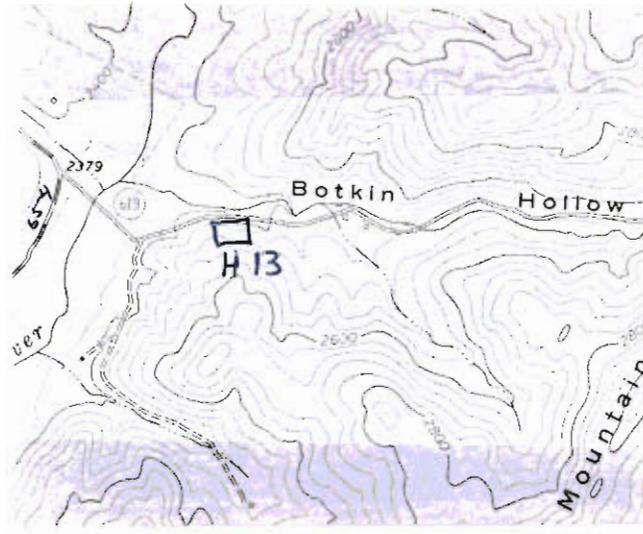
DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

Sandstone, hematitic, fine to coarse, subrounded to rounded, blackish red to dark yellowish orange. Matrix is hematite, some metallic (specular?) hematite mineralization along fractures and bedding planes. "Spirifers".
Attitude: N25°E, 80°SE
Thickness: 5-10+ feet

HIGHLAND COUNTY

H13: ORISKANY SANDSTONE (R-5354)

Location: On south side of State Road 619, 0.3 mile by road east of its junction with State Road 654.



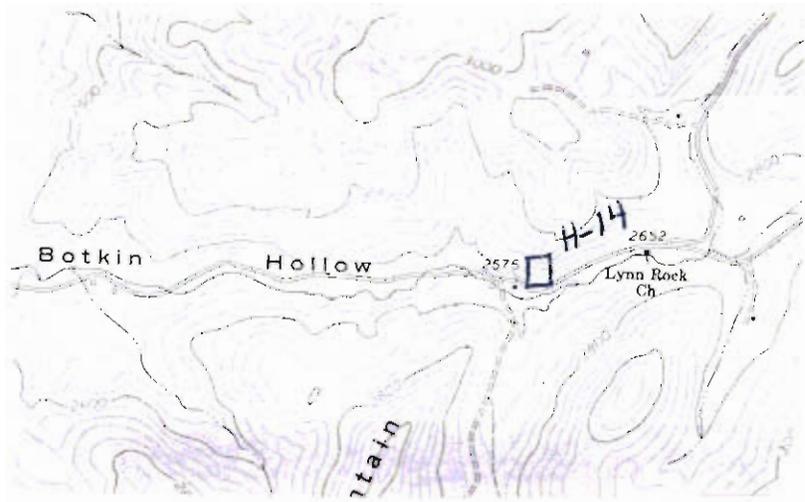
DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

Sandstone, fine to medium, subrounded to rounded, white to light gray to dark yellowish orange. Some coarser grains near top of exposure. Sandstone is well indurated to slightly friable. Traces of white to light tan, fine to medium, feldspar (highly weathered). Bedding ranges from medium up to 1 1/2' thick. Excellent "Spirifers". Attitude: N30°E, 33°NW
Thickness: 40+ feet with a 15-20' covered interval.

HIGHLAND COUNTY

H14: ORISKANY SANDSTONE (5355)

Location: Along the north side of State Road 619 approximately
1.5 miles east of its junction with State Road 654.



DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

Sandstone, fine to medium, subrounded to rounded, pale yellowish brown to dark yellowish brown, very well sorted, well indurated. Minor trace of light tan to white feldspar. Excellent "Spirifers". Iron stain highly concentrated along fractures and bedding planes. Bedding from about 4 to 10 inches.

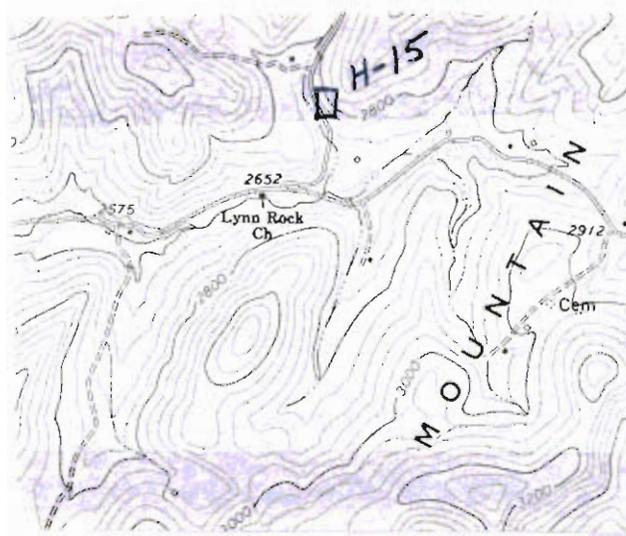
Attitude: N44°E, 78°SE

Thickness: Approximately 30 feet

HIGHLAND COUNTY

H15: ORISKANY SANDSTONE (R-5356)

Location: On the north-northeast side of State Road 648 approximately 0.25 mile by road northwest of its intersection with State Road 619.



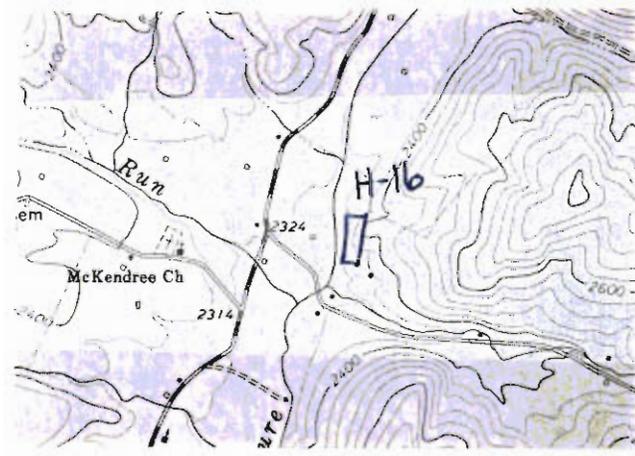
DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, subrounded to rounded, white to light yellowish-orange, very clean and friable. Minor light gray coloration, excellent "Spirifers"; bedding ranges from thin to 6 inches thick.
Attitude: N25°E, 60°NW
Thickness: Approximately 30 feet

HIGHLAND COUNTY

H16: ORISKANY SANDSTONE (R-5357)

Location: Approximately 0.1 mile north of State Road 618,
from a point 0.2 mile east of its junction with
State Road 654.



DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

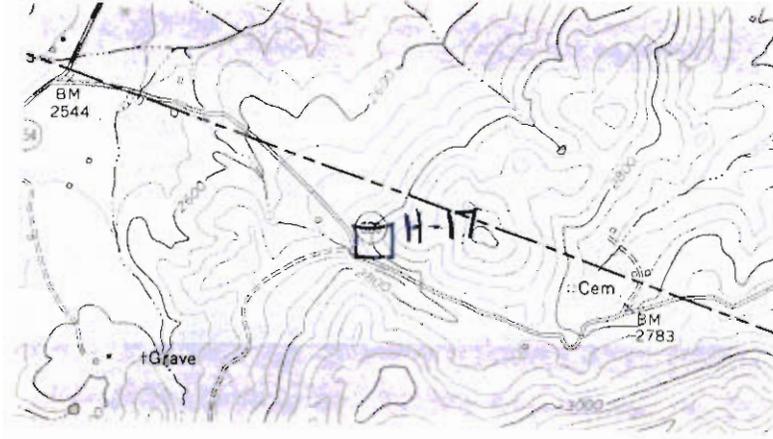
Sandstone, fine to coarse, subrounded to rounded, light gray to grayish orange to pale yellowish brown, poorly sorted in part, well indurated. Iron stain concentrated along fractures, bedding planes and in fossil molds. Some case hardened surfaces. Very minor bright red to dark red iron stain in fractured sandstone.

Attitude: Exposure forms a small anticline
Thickness: Approximately 20 feet

HIGHLAND COUNTY

H17: ORISKANY SANDSTONE

Location: On the north side of State Road 620 approximately 0.7 mile east of its junction with State Road 654.



DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

Sandstone, fine to medium, subrounded to rounded, light gray to light tan, very clean. Iron stain scattered throughout but highly concentrated along fractures bedding planes and in ssil molds. Sandstone is in part friable.

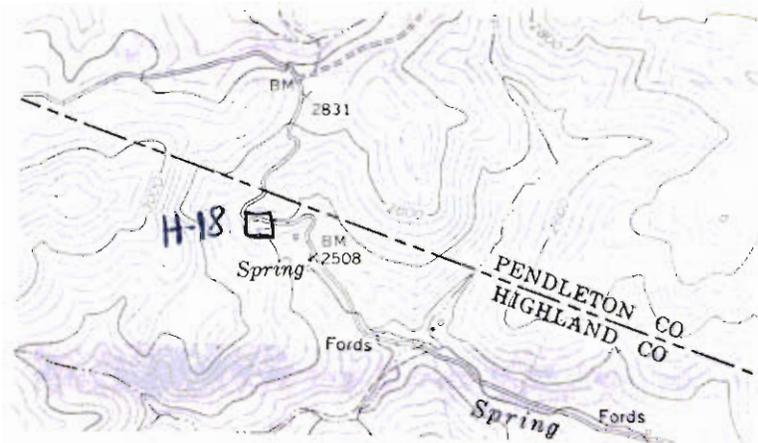
Attitude: N22°E, 72°NW

Thickness: Exposure consists of about 5 feet, then covered interval of about 35 feet and then some more sandstone. Not enough for a proper evaluation.

HIGHLAND COUNTY

H18: ORISKANY SANDSTONE (R-5358)

Location: On the north side of State Road 620 approximately 1.9 miles by road west of its junction with State Road 614.



DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

Sandstone, fine to medium, subrounded to rounded, very pale orange to pale yellowish orange where fresh to dark yellowish orange along bedding planes and fractures. Fairly well sorted and fairly well indurated. Minor 2-3% white to tan feldspar. Iron stain. A few coarse white rounded quartz grains occur. Bedding up to 1 1/2 feet.

Attitude: N42°E, 54° NW

Thickness: not over 15 feet (includes several zones with covered intervals omitted)

HIGHLAND COUNTY

H19: ORISKANY SANDSTONE

Location: Just east of State Road 618 approximately 2.5 miles by road south of its junction with State Road 654.



MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, subangular to rounded, white-gray to light yellowish orange, fairly well sorted, highly iron stained. Very friable, very highly weathered horizon.

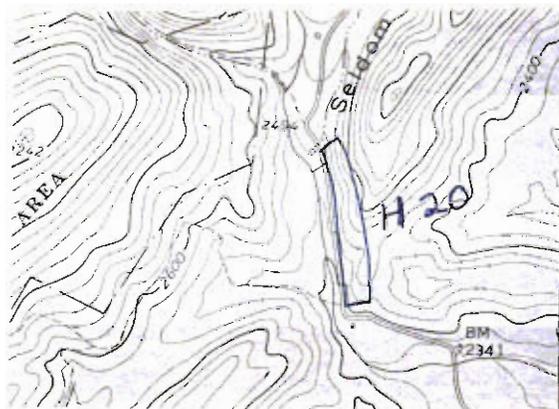
Attitude: _____

Thickness: _____

HIGHLAND COUNTY

H20: ORISKANY SANDSTONE

Location: Along the north side of State Road 617 approximately 1.6 miles by road west of its junction with State Road 654.



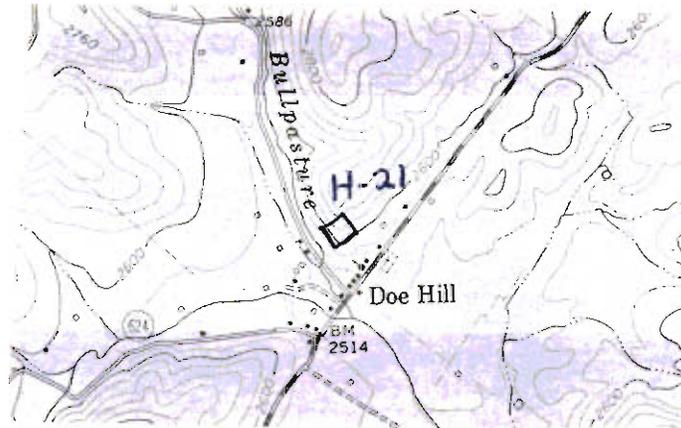
MONTEREY SE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium grained, white to light gray to light yellowish-orange, subrounded to rounded, well sorted, slightly friable to well indurated. Iron stain on most grains and along fractures. Bedding ranges from 4 to 8 inches at top increasing to 8 to 18 inches at bottom, much more massive. "Spirifers". Samples were X-rayed and iron and manganese were found.
Attitude: N42°E, 40°SE
Thickness: Approximately 40-45 feet

HIGHLAND COUNTY

H21: ORISKANY SANDSTONE

Location: Approximately 0.1 mile north of the junction of
State Road 622 and 654.



DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

Sandstone, hematitic, fine to medium, rounded to subrounded,
deep red to dark metallic black. Hematite is
cement and is scattered with goethite and limonite
along fractures.

Attitude: N18°E, 37°SE

Thickness: Two exposures of sandstone, bottom
approximately 10-15 feet, covered
interval of 15 feet, top about 10 feet.

HIGHLAND COUNTY

H22: ORISKANY SANDSTONE

Location: On the north side of State Road 622 about 0.8 mile by road west of its junction with State Road 654.



DOE HILL, VA-W.VA. 7 1/2' QUADRANGLE

Sandstone, fine to coarse, subrounded to rounded, light yellowish orange to very light tan. Some traces of white to tan feldspar. Hardness is variable from well indurated to friable. Exposure is intensely fractured and forms a small syncline. Near base of west limb iron and manganese mineralization occur along fractures and in collapsed(?) breccias.

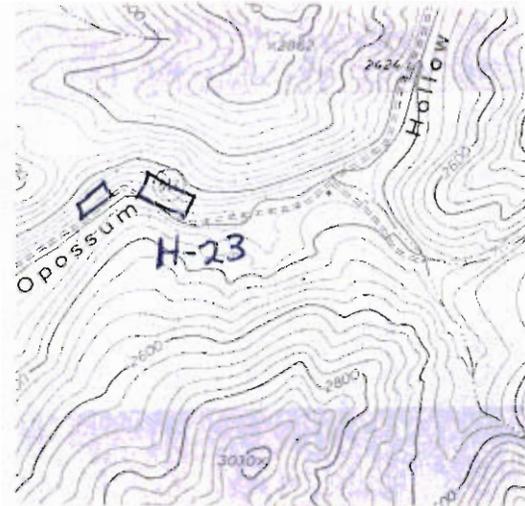
Attitude: _____

Thickness: Approximately 40-50 feet

HIGHLAND COUNTY

H23: KEEFER SANDSTONE

Location: Along State Road 617 for a distance of about 0.2 mile approximately 1 mile east of its intersection with State Road 654.



MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to medium, tan to gray brown, dense, well indurated. Exposures consist of a series of two anticlines.

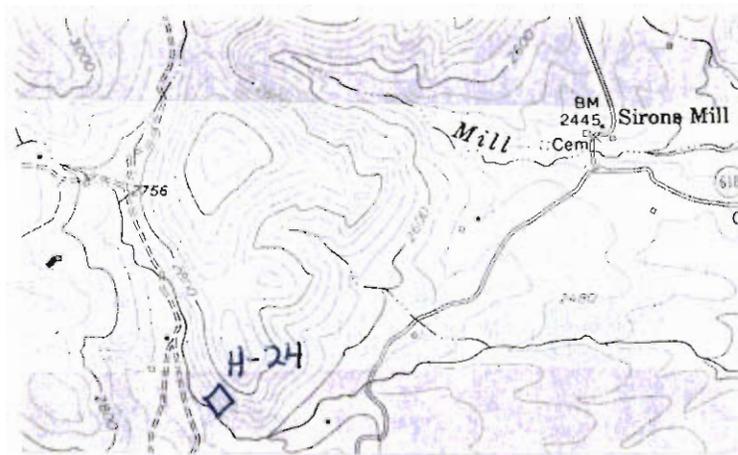
Attitude: _____

Thickness: Approximately 15 feet

HIGHLAND COUNTY

H24: ORISKANY SANDSTONE

Location: Approximately 0.1 mile north of State Road 617 at a point approximately 1 mile by road south of its junction with State Road 618.



DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, subangular to rounded, white to light gray to light yellowish orange, medium to thick bedded (6 inches to 2 feet). Hardness is variable but generally it is well indurated. Iron stain present throughout, somewhat higher content at top of exposure. Well sorted.

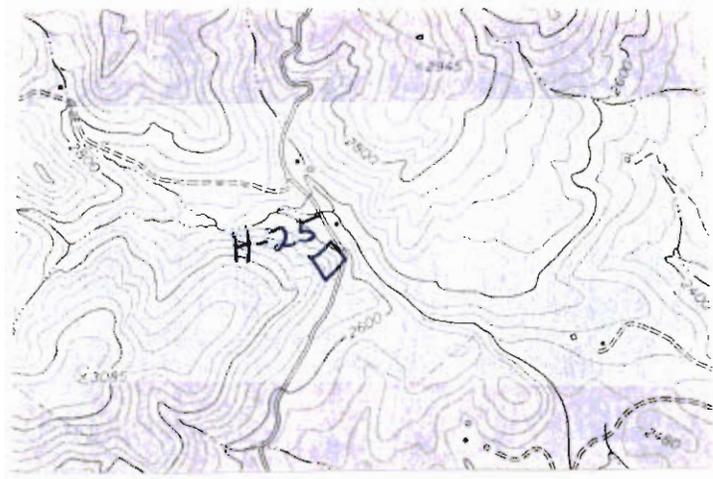
Attitude: N30°E, Vertical

Thickness: Approximately 50'

HIGHLAND COUNTY

H25: ORISKANY SANDSTONE

Location: On the west side of State Road 617 approximately 0.7 mile by road north of its junction with State Road 618.



DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, hematitic, replacing cement (calcareous?) and forming fractures and bedding planes. (Top of section) Much clay (weathered feldspar) in with the hematite and quartz. Some goethite and limonite is also present. Down section sandstone, fine to medium, light gray to light yellowish orange, traces of tan feldspar. Some dark iron stain in sandstone.

"Spirifers"

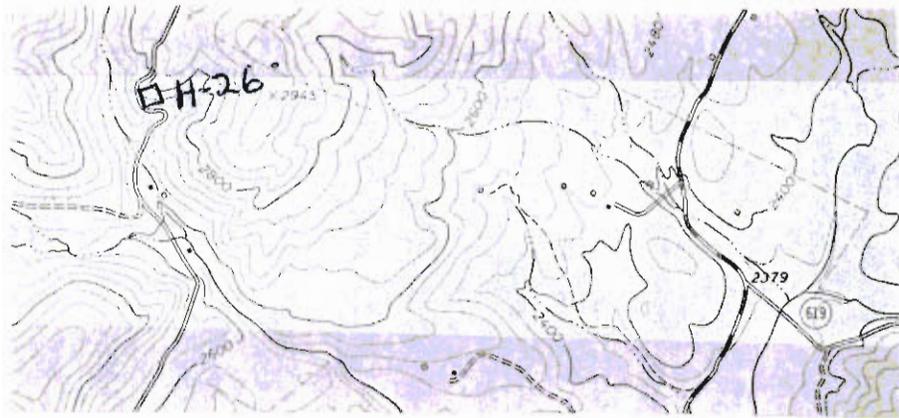
Attitude: N50°E, 80°SE

Thickness: 30 feet mineralized, total exposure may be 100 feet, including a covered interval near center of exposure.

HIGHLAND COUNTY

H26: ORISKANY SANDSTONE

Location: On the north side of State Road 617 about 1.1 miles
by road north of its junction with State Road 618.



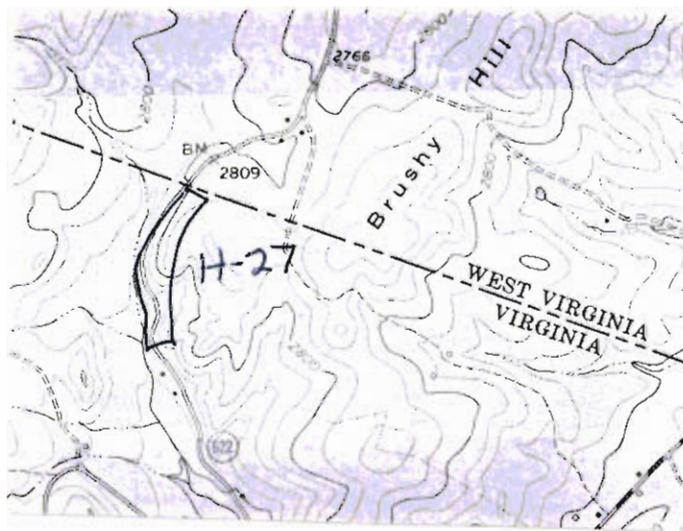
DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light tan orange, well sorted,
well indurated. Bedding from 8 inches to 15 inches.
Attitude: N20°E, 25°NW
Thickness: approximately 10 feet

HIGHLAND COUNTY

H27: ORISKANY SANDSTONE (R-5359)

Location: Along the north side of State Road 622 approximately 1 mile by road north of its junction with State Road 654.



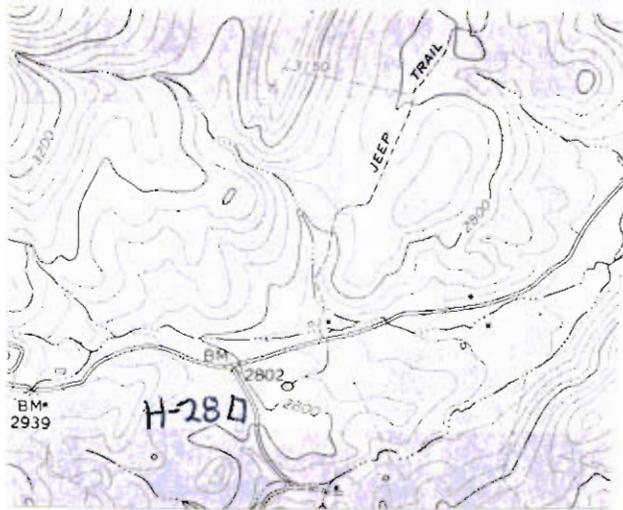
DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to coarse, subrounded to rounded, fair sorting, white to pale yellowish orange to dark yellowish orange. Minor white to light tan feldspar (2-3%). Sandstone is very friable and highly fractured. Iron stain scattered throughout but concentrated along fractures, bedding planes, and in fossil molds. Excellent "Spirifers".
Attitude: N30°E, 50°NW
Thickness: approximately 20-25 feet

HIGHLAND COUNTY

H28: ORISKANY SANDSTONE

Location: On the west side of State Road 617 about 0.1 mile south of its junction with State Road 624.



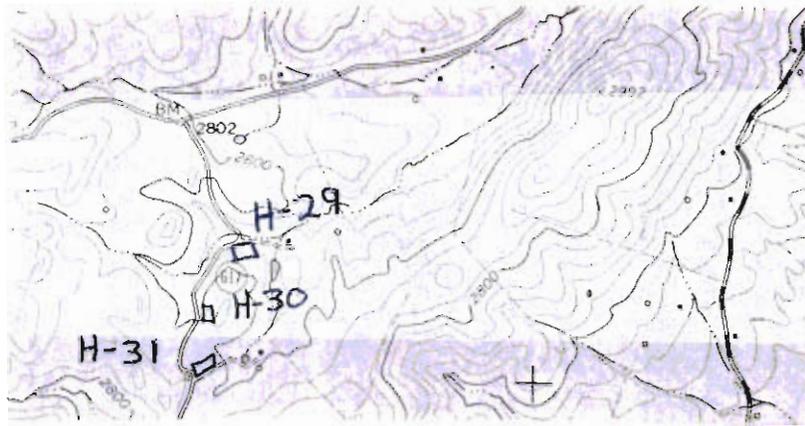
DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, rounded to subrounded, white to light gray to light yellowish orange. Highly fractured with iron stain throughout. "Spirifers"
Trace iron mineralization?
Attitude: N35°E, 25°NW
Thickness: approximately 5'

HIGHLAND COUNTY

H29, H30, H31: ORISKANY SANDSTONE

Locations: On the east side of State Road 617 (see index map)



DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

H29 Sandstone, medium to coarse, rounded to subrounded, white to light gray to pale yellowish orange. Fairly well indurated. "Spirifers"
Attitude: N16°E, 10°SE
Thickness: approximately 5 feet

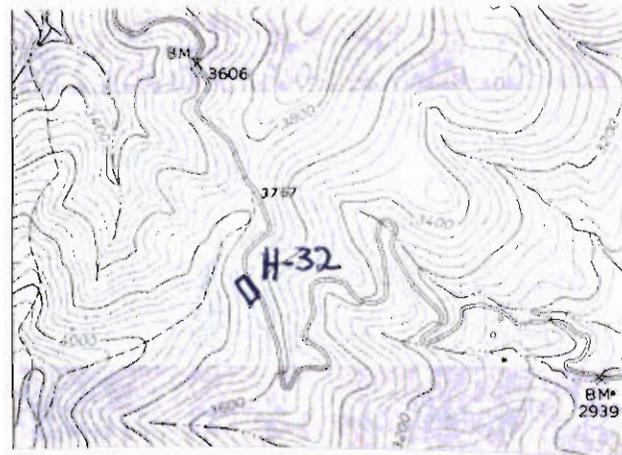
H30 Sandstone, hematitic, some mineralization along fractures of hematite, goethite and limonite.

H31 Sandstone, medium to coarse, subrounded to rounded, grayish orange pink to dark yellowish orange to moderate brown. Much clay as matrix. Very highly iron stained.
Attitude: N38°E, 65°SE
Thickness: approximately 4 feet

HIGHLAND COUNTY

H32: TUSCARORA FORMATION

Location: On the west side of State Road 624 approximately 2 miles
by road west of its junction with State Road 617.



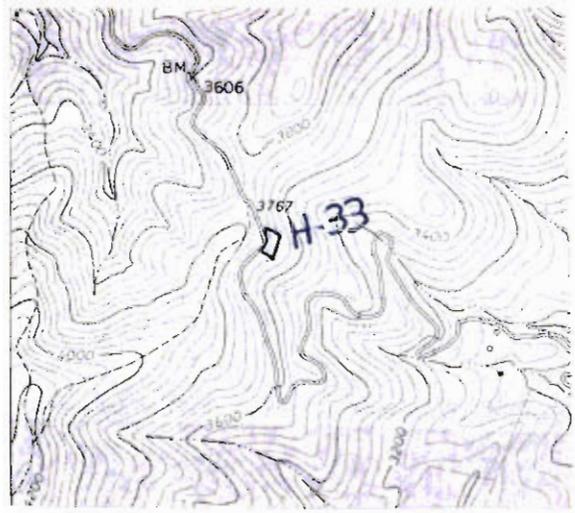
DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light gray, friable in
lower part, tougher up above.
Attitude: N43°E, 50°SE
Thickness: approximately 8'±

HIGHLAND COUNTY

H33: TUSCARORA FORMATION (R-5361)

Location: On the east side of State Road 624 approximately 2.1 miles by road west of its junction with State Road 617.



DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

Sandstone and quartzite, very fine to fine, white to light gray, hardness variable from very friable to quartzitic, very pure, slight red iron stain.

Attitude: N30°E, 56°SE

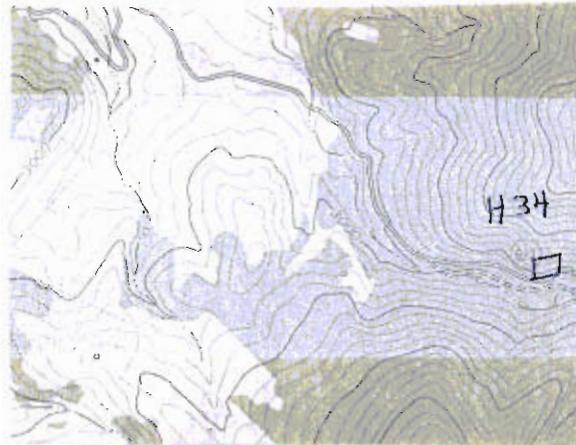
Thickness: 8-10'+

Exposure is probably too thin to make proper evaluation for high silica purposes.

HIGHLAND COUNTY

H34: TUSCARORA FORMATION

Location: On the north side of State Road 624 approximately 2.4 miles by road east of its junction with State Road 629.



MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Quartzite, very fine to fine grain, light gray to white to light pink, very well indurated, well sorted. Massive, bedding up to 1 1/2 feet. Iron stain scattered throughout, quite high along fractures and bedding planes. Very large scale cross bedding. Thickness: approximately 50 feet

HIGHLAND COUNTY

H35: ORISKANY SANDSTONE (R-5362)

Location: Along the east side of State Road 624 approximately
0.2 mile by road east of its junction with State
Road 629.



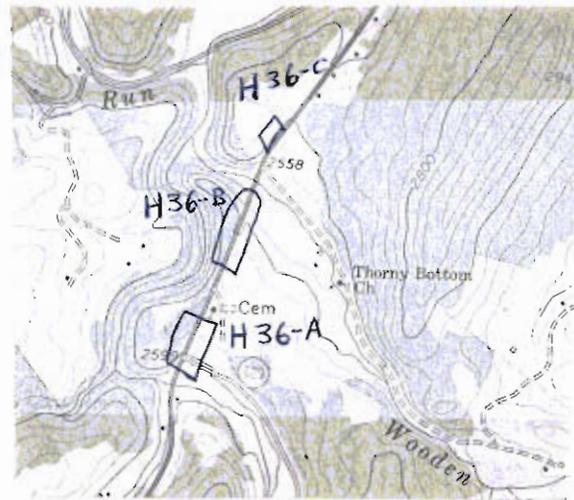
MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, subrounded to rounded, white to light gray to light yellow to dark yellowish orange, very fossiliferous. Some grains have gray coloration. Iron stain. Minor traces of white to light tan feldspar (1-2%+). Excellent "Spirifers." Bedding averages 8-10 inches but is as thick as 18 inches. Very friable to fairly well indurated.
Attitude: N30°E, 46°SE
Thickness: approximately 30 feet

HIGHLAND COUNTY

H36A, H36B, H36C: ORISKANY SANDSTONE

Location: Along U. S. Highway 220 for a distance of about 0.5 mile by road north of its junction with State Road 629.



MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

H36A Sandstone, medium to coarse, rounded to subrounded, light gray to light brown. Several quartz pebble zones (lens) up to 12 inches thick with pebbles up to 20 mm in length. Pebble zones are very fossiliferous with numerous "Spirifers." Iron stain scattered throughout. Bedding from 6 inches to 12 inches.

Attitude: N70°E, 13°NW

Thickness: 10-15 feet

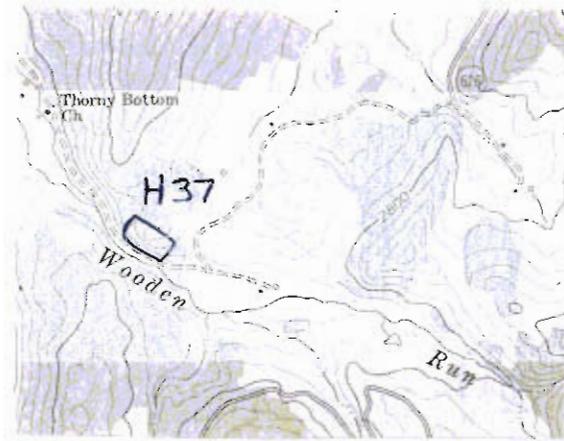
H36B Like 36A except sandstone is calcareous at bottom. Different attitude.

H36C Sandstone, hematitic, upper iron ore zone of Oriskany, hematite, goethite, and limonite.

HIGHLAND COUNTY

H37: ORISKANY SANDSTONE (R-5363)

Location: On the north side of State Road 627 that leads to Thorny Bottom Church approximately 0.5 mile by road west of its junction with U. S. Route 220.



MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, subrounded to rounded, medium gray to dark yellowish orange to moderate brown. Some larger fraction of well rounded medium gray quartz grains. Minor white to light tan feldspar. Excellent "Spirifers" and other bugs. Iron stain scattered throughout but highly concentrated along bedding planes and fractures. Minor zones are friable but unit is generally well indurated. Bedding ranges up to 1 1/2 feet.

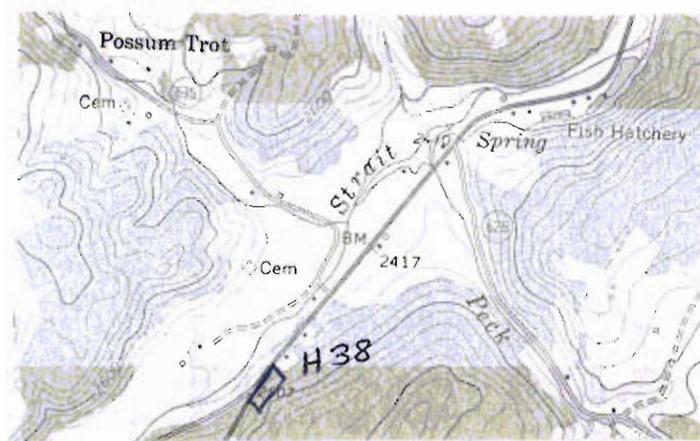
Attitude: forms slight syncline

Thickness: approximately 30 feet

HIGHLAND COUNTY

H38: ORISKANY SANDSTONE

Location: On the east side of U. S. Highway 220 at its intersection with State Road 634.



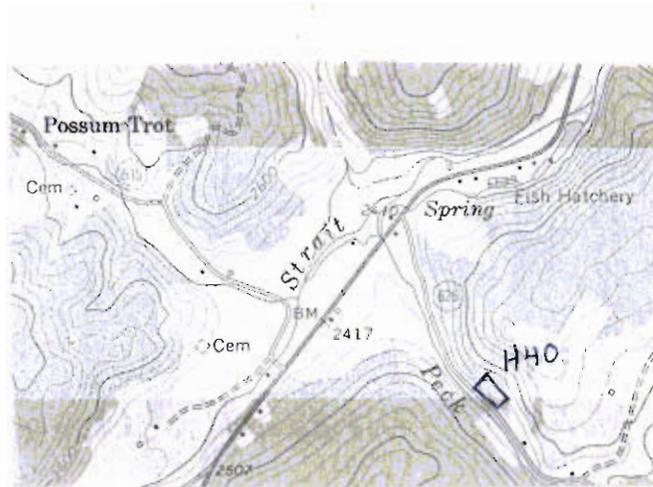
MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, medium grained, dark yellowish-orange to orange, well sorted, very highly iron stained. Very friable. Minor hematite mineralization along fractures. Bedding ranges from 6 to 12 inches. "Spirifers"
Attitude: N12°W, 10°SW
Thickness: approximately 20 feet

HIGHLAND COUNTY

H40: ORISKANY SANDSTONE

Location: On the north side of State Road 626 approximately 0.3 mile by road east of its junction with U. S. Highway 220.



MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, white to light gray to pale yellowish orange, rounded to subrounded, somewhat friable in places. Excellent fossil molds and cross-bedding. Beds range from 6 to 18 inches. Most of unit is well indurated.

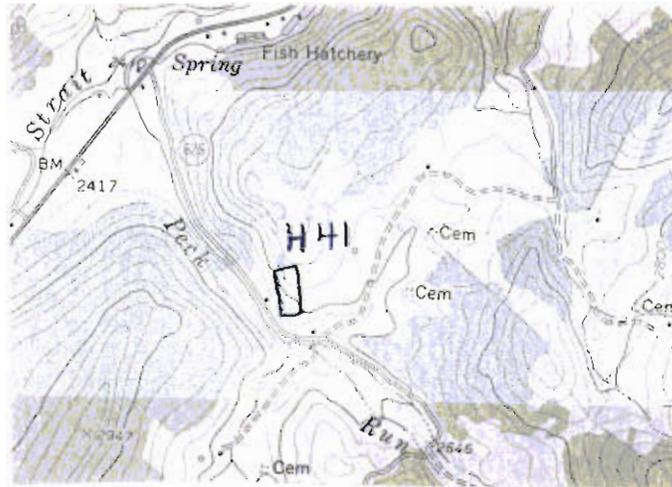
Attitude: N-S, 10°E, N12°E, 10°SE

Thickness: approximately 30 feet

HIGHLAND COUNTY

H41: ORISKANY SANDSTONE

Location: Along the north side of State Road 626 approximately 0.5 mile by road west of its junction with U. S. Highway 220.



MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, medium grain, white to light gray to light tan to yellowish orange, slightly friable to well indurated; well sorted. Excellent "Spirifers", cross bedding, and parts are friable to well indurated. Some well rounded white quartz pebbles. Bedding is from 6 to 12 inches.

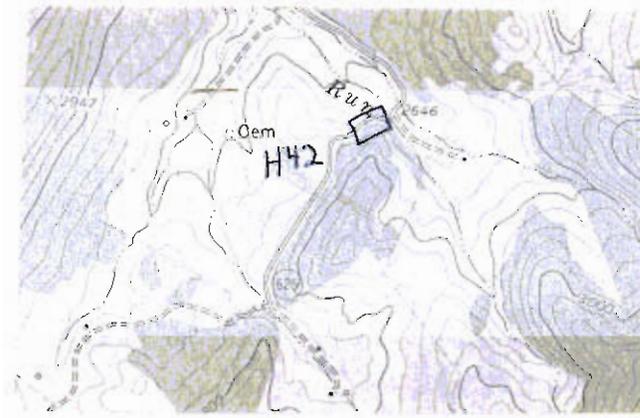
Attitude: N83°E, 17°SE

Thickness: 20 feet ±

HIGHLAND COUNTY

H42: ORISKANY SANDSTONE

Location: On the east side of State Road 626 approximately
1 mile by road east of its junction with U. S.
Highway 220.



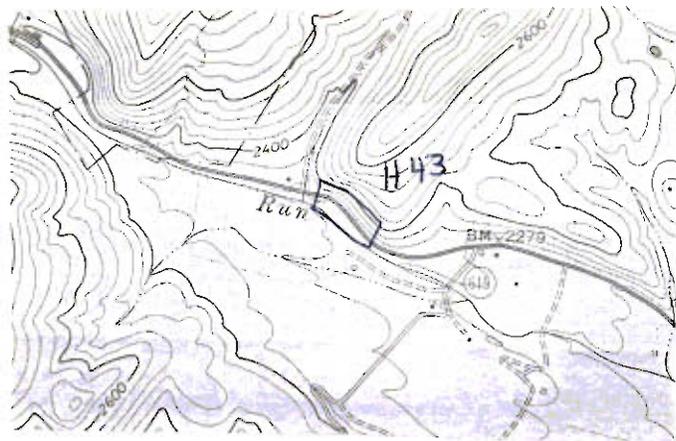
MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, medium grain, light gray to white to light yellowish
orange, well sorted. Friable and excellent "Spirifers"
Attitude: N86°E, 53°NW
Thickness: approximately 15-20 feet

HIGHLAND COUNTY

H43: ORISKANY SANDSTONE

Location: On the north side of U. S. Highway 250 about 0.2 mile west of the junction of State Road 615 and Highway 250.



MONTEREY SE, VA 7 1/2' QUADRANGLE

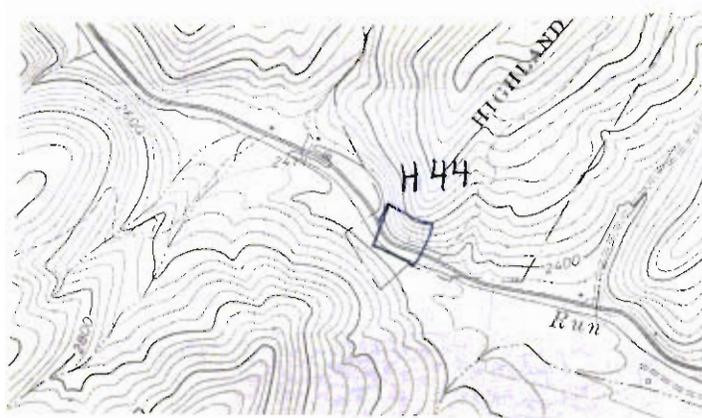
Sandstone, fine to coarse, light to medium gray, subangular to rounded, well indurated. Minor iron stain in places, tan-orange. Minor zones of quartz pebbles (up to 1/2" in length), white to medium gray, well rounded, zones are up to 8 inches. Excellent fossil zones in the conglomerate. Bedding ranges up to 2 feet. Sandstone is very slightly friable in places.
Attitude: N40°E, 15°SE
Thickness: 15-20 feet

Exposure continues for about 0.1 mile, friability varies but iron content increases where sandstone is more friable. Minor iron mineralization. Traces of white feldspar (up to 1%) are also present.

HIGHLAND COUNTY

H44: TUSCARORA FORMATION

Location: On the north side of U. S. Highway 250 approximately 0.7 mile by road west of its junction with State Road 615.



MONTEREY SE, VA 7 1/2' QUADRANGLE

The Tuscarora can be divided into three members at this locality, an upper quartzite, a medial argillaceous sandstone and a lower quartzite.

Upper Quartzite, fine to medium, white to light gray, very hard, minor coarse white rounded quartz grains. Bedding from 5 inches up to 1 1/2 feet, averages about 1 foot. Minor beds of light gray, soft, mottled shale up to 3 inches thick. Quartzite is highly fractured with tan orange to dark yellowish orange iron stain on fractures and bedding planes.
Thickness: 75'+

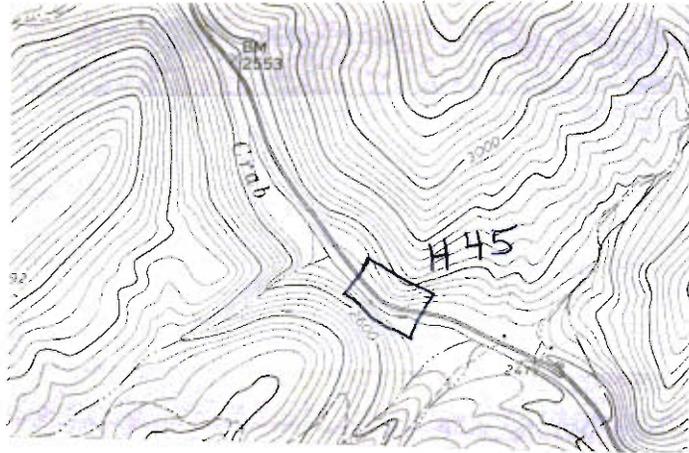
Middle, quartzites, thin, 6 to 8 inches interbedded with white to light gray soft shale. (Race Track)
Thickness: 15'+

Lower, as upper
Thickness: 40'+
Attitude: N32°E, 58°SE

HIGHLAND COUNTY

H45: TUSCARORA FORMATION

Location: On the north side of U. S. Highway 250 approximately 1.4 miles by road west of its junction with State Road 615.



MONTEREY SE, VA 7 1/2' QUADRANGLE

Upper Quartzite, white to light gray, very hard and well indurated. Highly fractured with dark yellowish to light yellowish orange iron stain along fractures. Quartzite is very fine to fine with some medium grains.
Thickness: 75'+

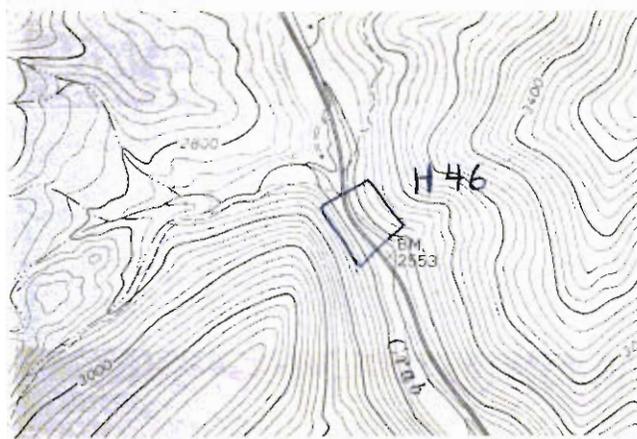
Middle - as H44
Thickness: 20'+

Lower - as upper
Attitude: N23°E, Vertical
Thickness: 40'+

HIGHLAND COUNTY

H46: TUSCARORA FORMATION

Location: On the north and south side of U. S. Highway 250 about 2 miles by road west of its junction with State Road 615.



MONTEREY SE, VA 7 1/2' QUADRANGLE

Quartzite, fine to very fine, white to light gray, subrounded to rounded, very hard and well indurated, fairly well sorted. Cemented with secondary silica. Some cross bedding.

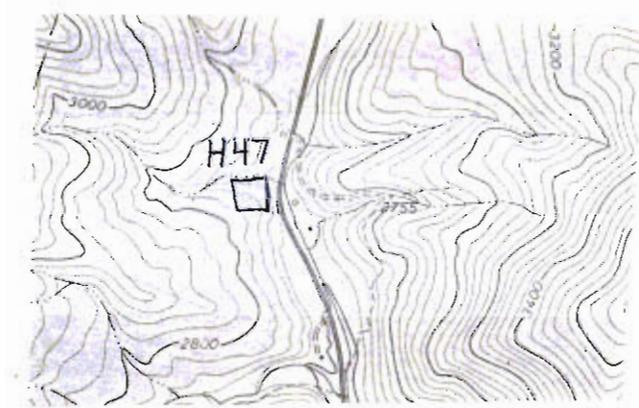
Attitude: N58°E, 42°NW

Thickness: 120'+

HIGHLAND COUNTY

H47: KEEFER SANDSTONE?

Location: Just south of U. S. Highway 250 approximately 2.3 miles by road south-east of its junction with State Road 629.



MONTEREY SE, VA 7 1/2' QUADRANGLE

Sandstone, very fine to fine, tan to brownish tan, well indurated.
Minor medium sand grains and several thin shale
zones that are very argillaceous. Bedding 1 1/2 - 2 feet.
Attitude: N16°E, 9°NW
Thickness: 20 feet ±

HIGHLAND COUNTY

H48: TUSCARORA FORMATION (R-5364)

Location: Along the south side of U. S. Highway 250 approximately 1.1 miles by road east of its junction with State Road 631.



MONTEREY, VA 7 1/2' QUADRANGLE

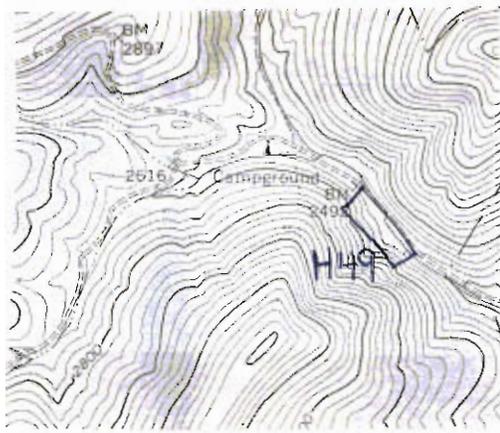
Sandstone, very fine to fine, white to very pale yellowish orange, (dark yellowish orange iron stain along fractures), well sorted, rounded to subrounded, very clean, a few minor rounded heavies. Very friable to slightly indurated. Bedding ranges from 12 to 18 inches. Attitude: N27°E, 7°SE
Thickness: 15 feet +

Sample locality would be very good except for thin nature and fine grains.

HIGHLAND COUNTY

H49: TUSCARORA FORMATION

Location: Along the forest road along Davis Run approximately
0.9 mile west of its junction with State Road 615.



MONTEREY SE, VA 7 1/2' QUADRANGLE

Quartzite, very fine to fine, gray to green gray, (dark brown to orange where iron stained on weathered surfaces), very well indurated. X-bedding. Bedding ranges up to about 1 foot.

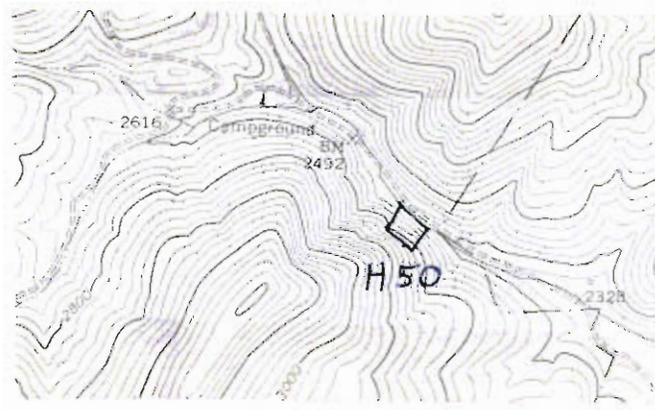
Attitude: N23°E, 67°NW

Thickness: approximately 75'

HIGHLAND COUNTY

H50: TUSCARORA FORMATION

Location: Just north of the forest road along Davis Run
approximately 0.7 mile by road west of its junction
with State Road 615.



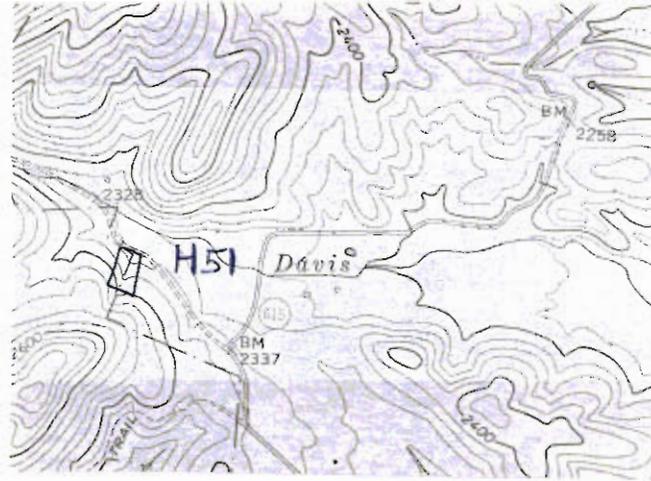
MONTEREY SE, VA 7 1/2' QUADRANGLE

Quartzite, fine to medium, white to light tan-orange, very well
indurated. Iron stained. Unit is massive, bedding
up to 1 1/2 feet.
Attitude: N53°E, 44°SE
Thickness: 75'+

HIGHLAND COUNTY

H51: ORISKANY SANDSTONE

Location: Just south of the forest road along Davis Run
approximately 0.2 mile west of its junction with
State Road 615.



MONTEREY SE, VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to tan-orange to medium gray,
rounded to subrounded. Iron stain scattered through-
out. Bedding up to 2 feet but averages 1 foot.

"Spirifers"

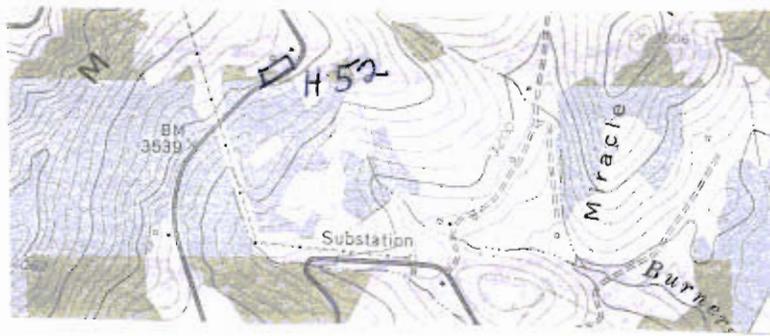
Attitude: N25°E, 80°SE

Thickness: 15-20 feet

HIGHLAND COUNTY

H52: CLINTON?

Location: On the south side of U. S. Route 250 approximately
2.3 miles by road west of its intersection with
U. S. Highway 220.



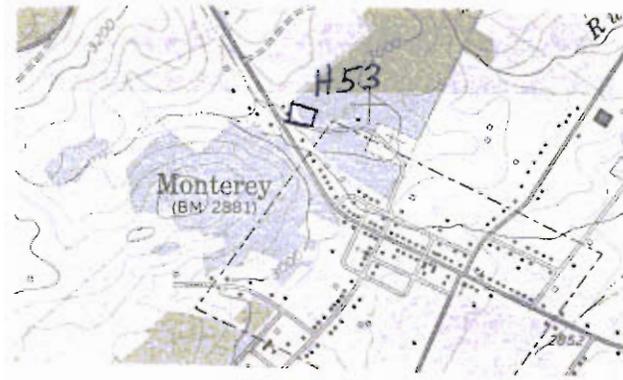
MONTEREY, VA 7 1/2' QUADRANGLE

Sandstone, very fine to coarse, white to light tan, rounded
to subrounded, very pure and friable
Attitude: N 58°W, 28°NE
Thickness: 20-30 feet

HIGHLAND COUNTY

H53: ORISKANY SANDSTONE (R-5365)

Location: On the north side of State Road 652 at its junction with U. S. Highway 250.



MONTEREY, VA 7 1/2' QUADRANGLE

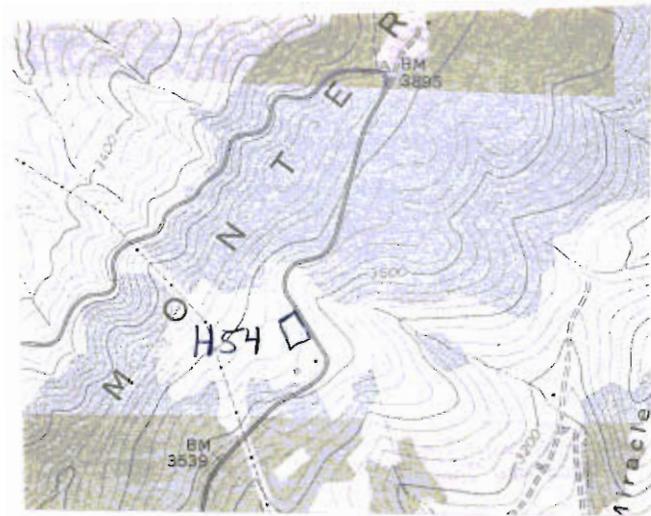
Sandstone, medium grained, white to tan orange, subrounded to rounded, very clean, well sorted, very friable. Traces of white to tan feldspar. Iron stain on grains and concentrated along fractures. Bedding is about 8-12 inches thick. "Spirifers"
Attitude: N55°W, 60°SW
Thickness: 10-15 feet

Excellent material but only 10-15 feet of unit is exposed.

HIGHLAND COUNTY

H54: TUSCARORA FORMATION

Location: On the south side of U. S. Highway 250 about 2.3 miles
by road west of its intersection with U. S. Highway 220.



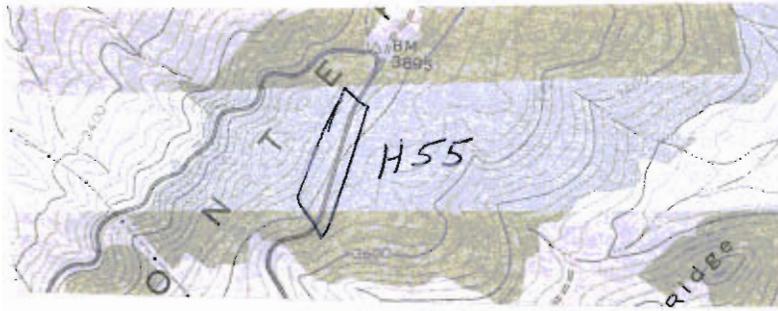
MONTEREY, VA 7 1/2' QUADRANGLE

See Lowry, 1954, p. 32-36.
Samples collected

HIGHLAND COUNTY

H55: TUSCARORA FORMATION

Location: On the south side of U. S. Highway 250 approximately
2.7 miles by road northwest of its intersection.



MONTEREY, VA 7 1/2' QUADRANGLE

Same as H54

Attitude: N25°E, 33°SE

HIGHLAND COUNTY

H56: ORISKANY SANDSTONE

Location: On the south side of U. S. Highway 250, approximately 0.3 mile by road west of its intersection with U. S. Highway 220.



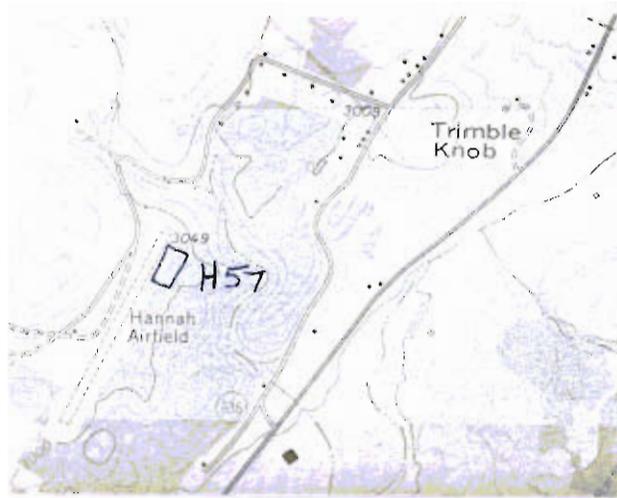
MONTEREY, VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray to tan orange, clean, friable. "Spirifers"
Thickness: 5 feet ±

HIGHLAND COUNTY

H57: ORISKANY SANDSTONE

Location: On the east side of the north end of Hannah Airfield just east of State Road 621 from a point approximately 1.2 miles southeast of the intersection of State Road 636 and U. S. Highway 250.



MONTEREY, VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light yellowish orange, subrounded to rounded, very friable. Iron and manganese mineralization along fractures, as matrix, and possibly replacing fossils. Some sand grains are medium gray to dark gray in color. Some "Spirifers" and cross bedding.

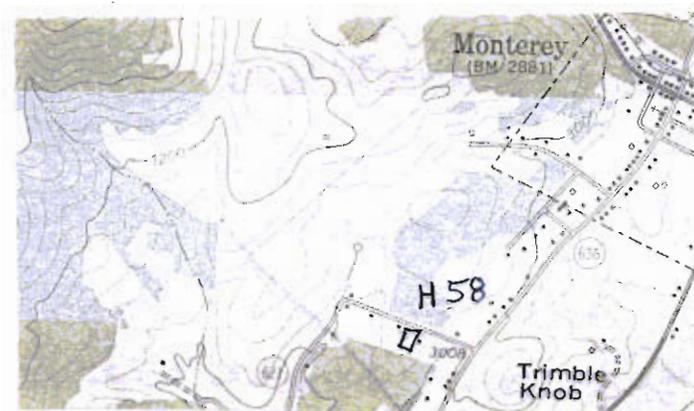
Attitude: N18°E, 12°SE

Thickness: 20'±

HIGHLAND COUNTY

H58: ORISKANY SANDSTONE

Location: On south side of State Road 621 approximately 0.1 mile
by road west of its junction with State Road 636.



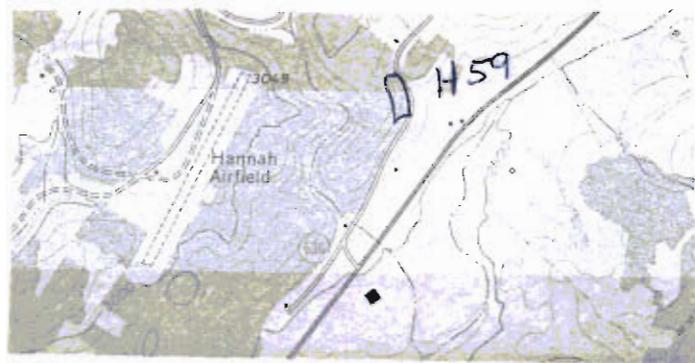
MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light yellowish orange,
subrounded to rounded, friable to well indurated.
"Spirifers."
Attitude: ?
Thickness: 8-10'

HIGHLAND COUNTY

H59: ORISKANY SANDSTONE

Location: On the west side of State Road 636 approximately
1 mile by road south of its intersection with U. S.
Highway 220.



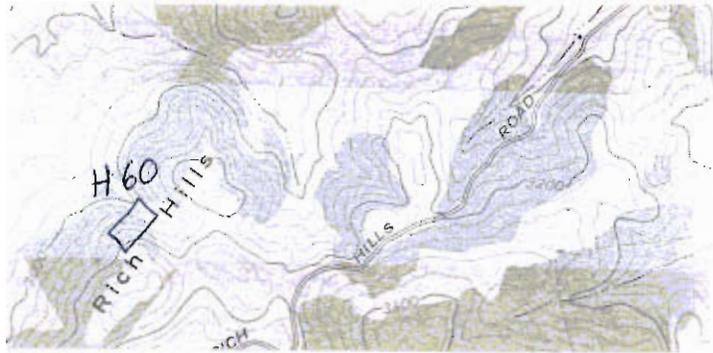
MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, tan orange to light gray, subrounded to rounded, friable to well indurated. Minor (3-4%) white feldspar grains. Iron stain scattered throughout, principally in "Spirifer" molds and along fractures. Minor coarse gray rounded grains. Bedding ranges up to 1 1/2 feet, but averages 1 foot.
Attitude: N42°E, 32°SE
Thickness: 30-40 feet

HIGHLAND COUNTY

H60: ORISKANY SANDSTONE

Location: On the north side of hill approximately 0.5 mile northeast of the junction of State Road 631 and U. S. Highway 220.



MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray to tan orange brown, subrounded to rounded, very slightly friable. Iron stain throughout but principally concentrated along fractures and in fossil molds. Bedding round 12 inches.

Attitude: N38°E, 77°NW

Thickness: 20 feet_±

HIGHLAND COUNTY

H61: ORISKANY SANDSTONE (R-5366)

Location: Just north of State Road 647 approximately 0.3 mile
by road west of its junction with State Road 632.



MONTEREY, VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, very light yellowish to light gray, subangular to rounded, friable to slightly indurated. Very minor coarse, white to light gray, rounded quartz pebbles. Minor (2-4%) white to light tan highly weathered feldspar. Generally quartz grains are iron stained; along fractures and in some fossil molds iron stain is greater. "Spirifers" present, bedding ranges 8-12 inches in thickness.

Attitude: N55°E, 5°SE

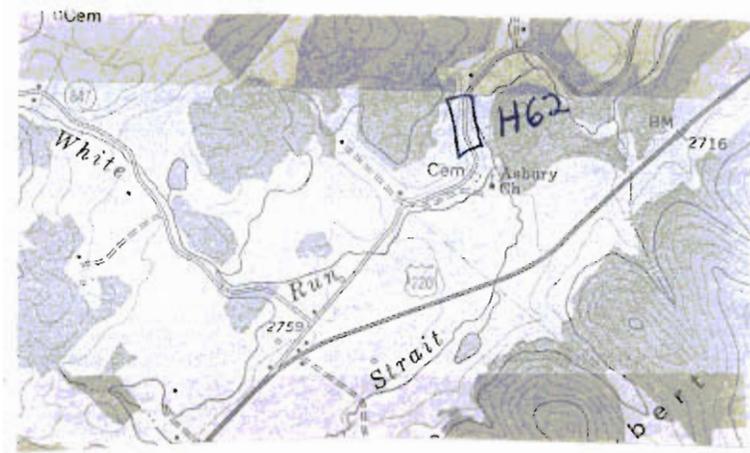
Thickness: 15 feet±

*Very minor traces of hematite mineralization.

HIGHLAND COUNTY

H62: ORISKANY SANDSTONE

Location: On the south side of State Road 632 approximately 1.4 miles by road south of its junction with U. S. Highway 220.



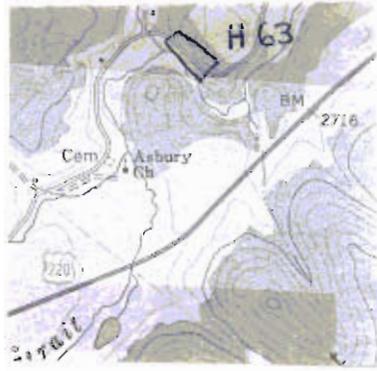
MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light yellowish orange to dark yellowish orange, subrounded to rounded, minor coarse rounded quartz grains. Sandstone is extremely iron stained along fractures and in fossil molds. Very friable, minor grains are medium to dark gray, possible manganese mineralization. Exposure forms a small anticline and syncline.
Attitude: not taken
Thickness: 20-25 feet ±

HIGHLAND COUNTY

H63: ORISKANY SANDSTONE

Location: Along the north side of State Road 632 approximately 1 mile by road south of its junction with U. S. Highway 220.



MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, medium grained, light gray to tan, very fossiliferous. Minor (3-4%) white to light tan feldspar. Iron oxide staining abundant in middle of exposure. Bedding ranges from 4 inches to 18 inches, massive. Sandstone varies from friable to fairly well indurated. Cross bedded.

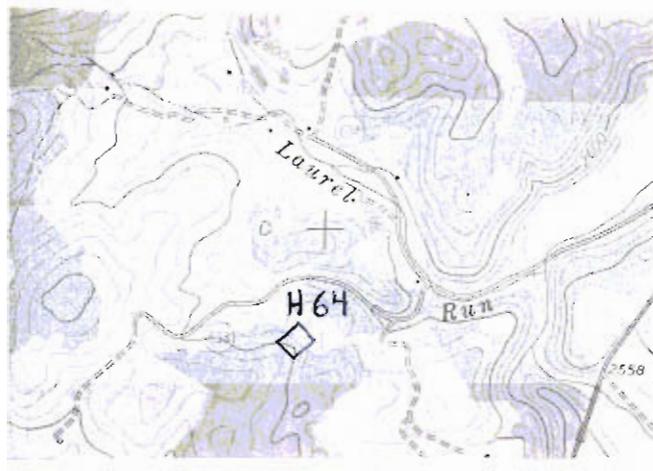
Attitude: N75°E, 8°SE

Thickness: 40 feet ±

HIGHLAND COUNTY

H64: ORISKANY SANDSTONE

Location: Approximately 0.1 mile south of State Road 633 from a point approximately 0.3 mile by road west of its junction with State Road 634.



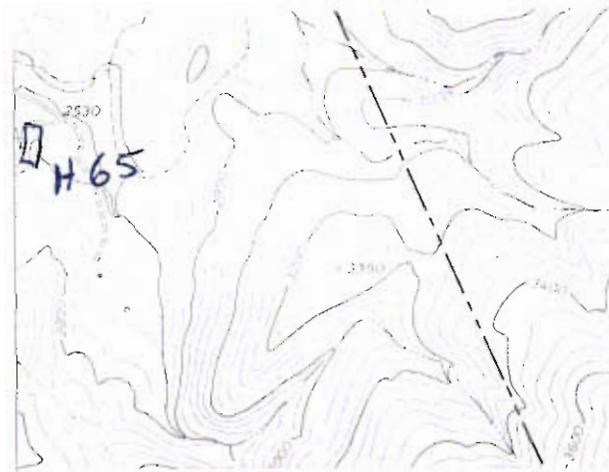
MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, float, very friable white, fine to medium, much loose sand but none in place.

HIGHLAND COUNTY

H65: ORISKANY SANDSTONE

Location: On the east side of State Road 625 approximately 0.8 mile by road east of its junction with U. S. Highway 220.



DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, pale yellowish-orange to medium yellowish orange, subrounded to rounded, minor coarse white rounded quartz grains. Traces (2-3%) of white to pale tan weathered feldspar. Iron stain throughout on grains but principally along fractures. Sandstone is well indurated to very slightly friable. Bedding ranges up to 1 1/2 feet, some cross bedding and "Spirifers."

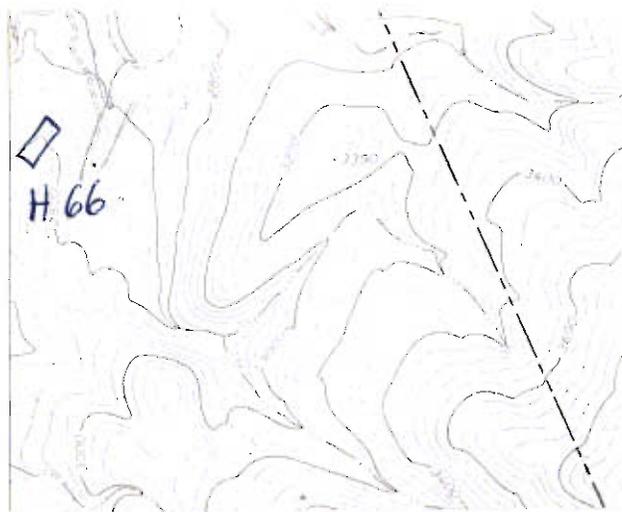
Attitude: N35°E, 8°SE

Thickness: 20 feet ±

HIGHLAND COUNTY

H66: ORISKANY SANDSTONE

Location: Approximately 0.1 mile east of a point on State Road 625 about 1 mile east of its junction with U. S. Highway 220.



DOE HILL, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, white to very light yellowish orange, very slightly friable to fairly well indurated. Minor fraction of fine sand and some white rounded very coarse quartz grains. "Spirifers"

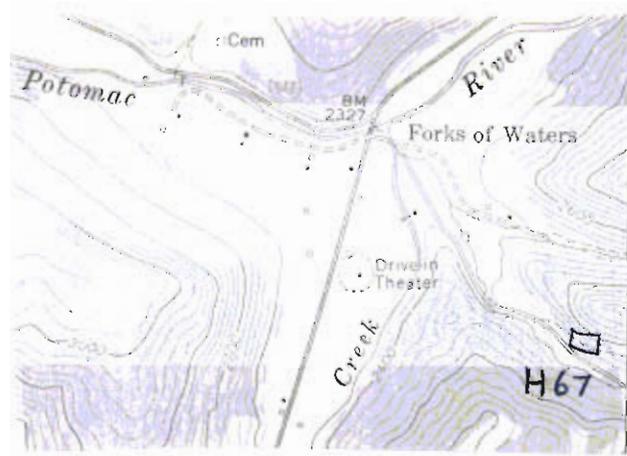
Attitude: N45°E, 85°SE

Thickness: 20 feet ±

HIGHLAND COUNTY

H67: ORISKANY SANDSTONE

Location: On the north side of State Road 625 approximately 0.6 mile by road east of its junction with U. S. Highway 220.



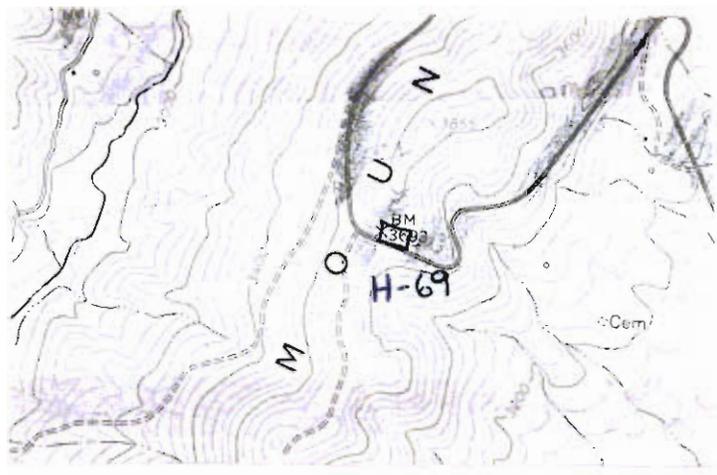
MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, light gray to yellowish orange, subrounded to rounded, iron stained. Beds range in thickness to 10-12 inches. Fossiliferous. Minor traces of manganese mineralization.
Attitude: N68°E, 25°SE
Thickness: 15 feet +

HIGHLAND COUNTY

H69: TUSCARORA FORMATION

Location: Near the crest of Lantz Mountain on the north and south sides of U. S. Hwy. 250 approximately 1.75 miles by road west-northwest of its intersection with State Road 640 in Hightown, Virginia.



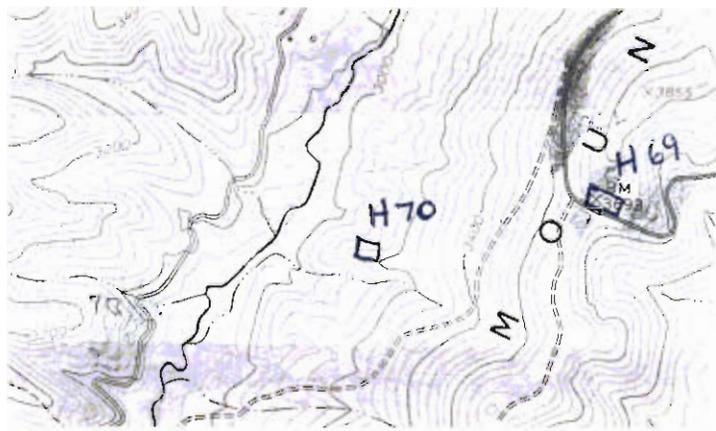
HIGHTOWN, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, very fine to fine, white to very light gray on fresh surfaces and light tan to yellowish orange on weathered surfaces of fractures and bedding planes, subrounded to rounded. Size increases to medium with some coarse, rounded, white quartz pebbles up to 3/4" in length. Actually a conglomerate, white, to gray to yellow tan. Sediment is poorly sorted and generally sub-angular. Quartz appears to be the main clastic component, although a fair amount of feldspar may also be present, causing the yellow tan colored, powdery material filling in the voids. The sediment has fair cementation and is fairly friable. Pebbles range up to about 8 mm in length. Bedding ranges from several inches to slightly greater than 1 foot in thickness. Excellent contact with Cacapon and Juniata Formations.
Attitude: N22°E, 57°SE overturned
Thickness: ±100'

HIGHLAND COUNTY

H70: ORISKANY SANDSTONE

Location: Approximately 7400 feet along a N86°W azimuth from the intersection of State Road 640 and U. S. Highway 250.



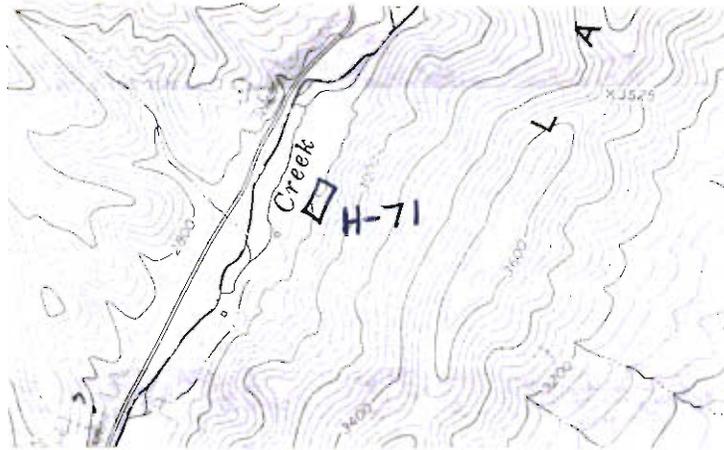
HIGHTOWN, VA-WVA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, dark yellowish orange to dark brown, subrounded to rounded. Highly iron stained and highly fractured. Appearance is in part that of an autobreccia, some iron and manganese mineralization. Some "Spirifers".
Attitude: N-S, 40°W
Thickness: Approximately 5 feet

HIGHLAND COUNTY

H71: ORISKANY SANDSTONE

Location: Approximately 9200 feet along a N22°W azimuth from the junction of State Road 640 and State Road 84.



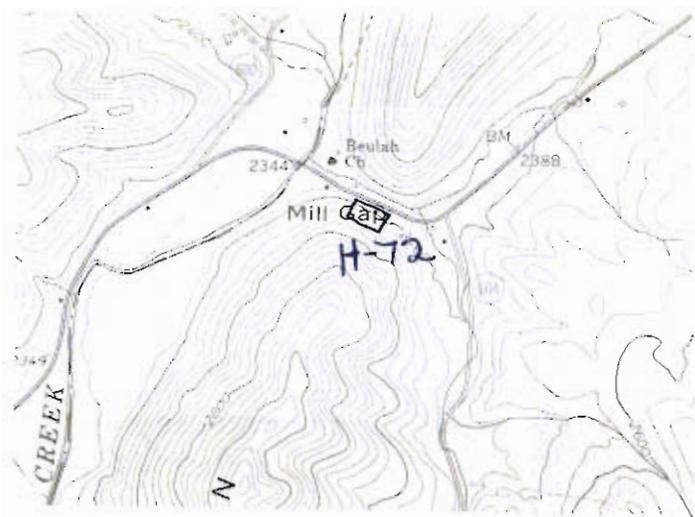
HIGHTOWN, VA-WVA 7 1/2' QUADRANGLE

Sandstone, fine to medium, gray to tan orange, very calcareous at bottom. Minor coarse rounded quartz pebbles. Generally upper part is friable but much clay is present in matrix. Bedding is thin, 6-8 inches. Lower contact appears to be gradational with the Helderberg. Attitude: N20°E, 80°SE
Thickness: 20-25 feet

HIGHLAND COUNTY

H72: TUSCARORA FORMATION

Location: On the south side of State Highway 84 approximately 0.2 mile by road west of its junction with State Road 604.



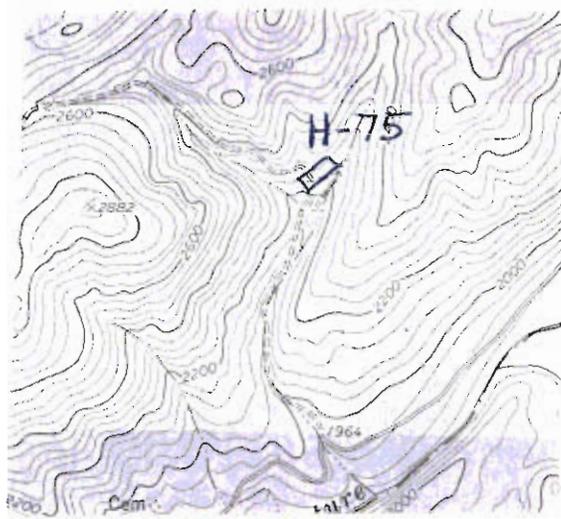
MUSTOE, VA-WVA 7 1/2' QUADRANGLE

Quartzite, very fine to fine, light gray to medium gray with very minor white. Very hard and cemented by secondary silica, iron stain throughout and concentrated to a dark yellowish orange along fractures. Attitude: N24°E, 64°SE (overturned)
Thickness: 25+ feet exposed

HIGHLAND COUNTY

H75: ORISKANY SANDSTONE

Location: On the north side of State Road 612 approximately 0.6 mile by road west of its junction with State Road 614.



MCDOWELL, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, medium gray to dark yellowish orange, subangular to rounded. Friable, highly iron stained. Bedding ranges from 4-10 inches. "Spirifers".

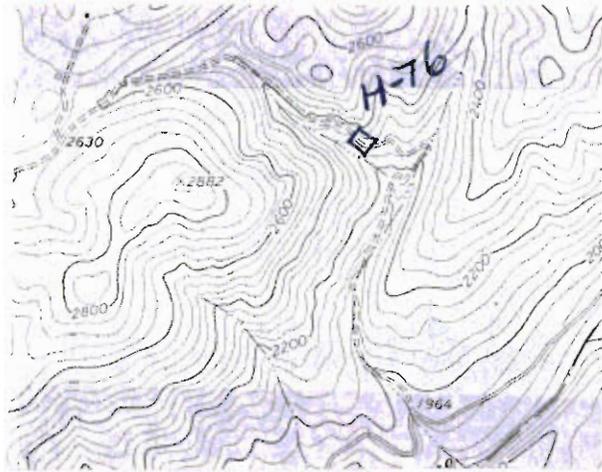
Attitude: N37°E, 54°SE

Thickness: 10 ± feet exposed

HIGHLAND COUNTY

H76: ORISKANY SANDSTONE

Location: On the north side of State Road 612 approximately 0.7 mile by road west of its junction with State Road 614.



MCDOWELL, VA 7 1/2' QUADRANGLE

Sandstone, fine to coarse, light to medium gray, rounded to subangular, well indurated to very slightly friable. Minor dark red-maroon hematitic sandstone at top. Some (1-2%) white to light tan feldspar. Bedding ranges from 6-12 inches.

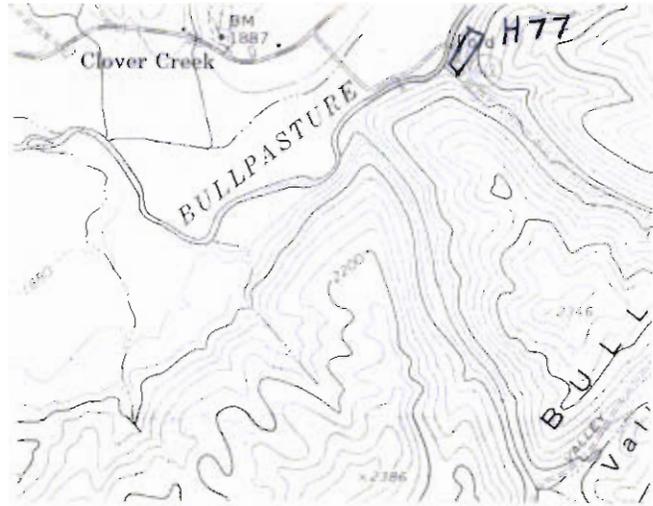
Attitude: N28°E, 58°SE

Thickness: approximately 30'

HIGHLAND COUNTY

H77: ORISKANY SANDSTONE

Location: On the north side of State Road 612 approximately 0.3 mile by road east of its junction with State Road 678.



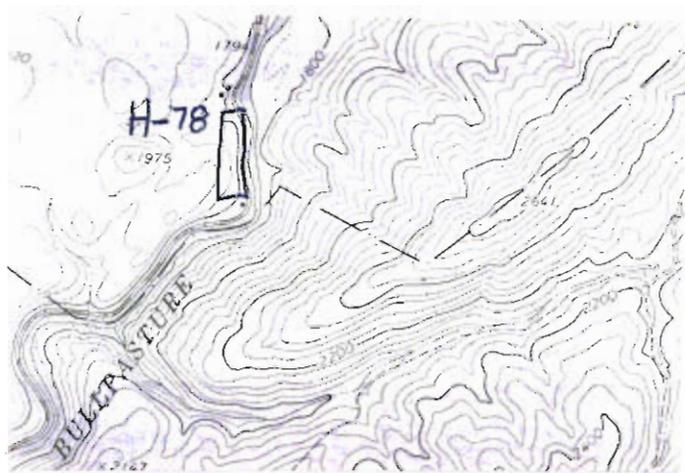
MONTEREY SE, VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, slightly friable, iron stained, very hard in places. Fossil molds.
Attitude: N32°E, 42°NW
Thickness: approximately 8 feet

HIGHLAND COUNTY

H78: ORISKANY SANDSTONE

Location: Along the west side of State Road 678 for a distance of about 1.5 miles south starting from a point about 0.5 mile by road south of the junction of State Road 609 with State Road 678.



WILLIAMSVILLE, VA 7 1/2' QUADRANGLE

Sandstone, fine to medium grain, dark gray to light tan orange or yellow-orange, in part slightly calcareous. Very minor coarse, white rounded quartz pebbles. Minor bituminous material. Traces of exposure are friable. Iron stain present throughout. Bedding ranges from 12 to 18 inches. "Spirifers"

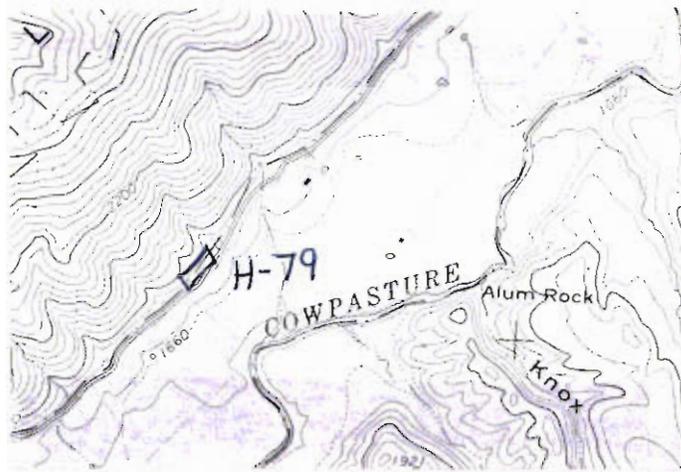
Attitude: _____
Thickness: 25-30 feet.

Exposure is in part continuous for 1.5 miles and forms a small anticline.

HIGHLAND COUNTY

H79: ORISKANY SANDSTONE

Location: On the west side of State Road 614 approximately 1.6 miles by road north of its intersection with State Road 678.



WILLIAMSVILLE, VA 7 1/2' QUADRANGLE

Sandstone, medium to coarse grain, medium gray to dark yellowish orange, rounded to subrounded, very minor fine sand. Some grains have a deep internal gray coloration.

"Spirifers"

Attitude: N35°E, 48°SE

Thickness: 5 feet ±

HIGHLAND COUNTY

H80: ORISKANY SANDSTONE

Location: In bed of Cow Pasture River where State Road 614 crosses the river approximately 3 miles north of the intersection of State Roads 678 and 614.



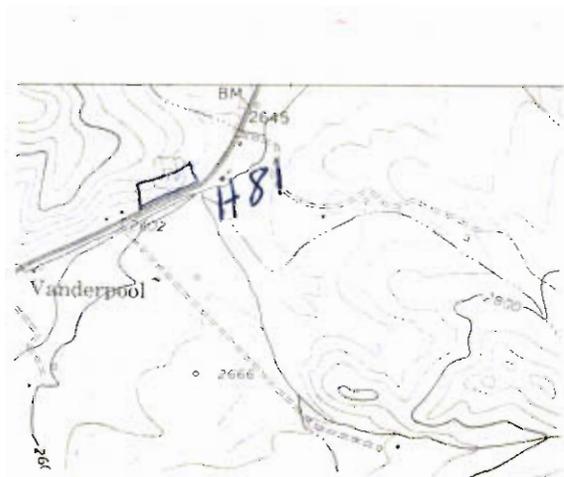
WILLIAMSVILLE, VA 7 1/2' QUADRANGLE

Sandstone, medium to coarse grain, light gray to dark gray, rounded to subrounded, well indurated, calcareous, minor zones of fine sand at base. Iron staining present throughout. Bedding ranges from 4-12 inches generally. "Spirifers"
Attitude: N40°E, vertical
Thickness: approximately 45 feet

HIGHLAND COUNTY

H81: ORISKANY SANDSTONE

Location: On the west side of U. S. Highway 220 approximately 0.3 mile by road north of its junction with State Highway 84.



MONTEREY SE, VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, very light tan to light yellowish orange, subrounded to subangular, friable to indurated, minor white to tan coarse rounded quartz pebbles. Traces of white feldspar. Bedding averages around 12 inches. "Spirifers"
Attitude: N34°, 12°SE
Thickness: approximately 10 feet, covered interval and then 5 feet

HIGHLAND COUNTY

H82: ORISKANY SANDSTONE

Location: on the west side of U. S. Highway 220 at its junction with State Road 608.



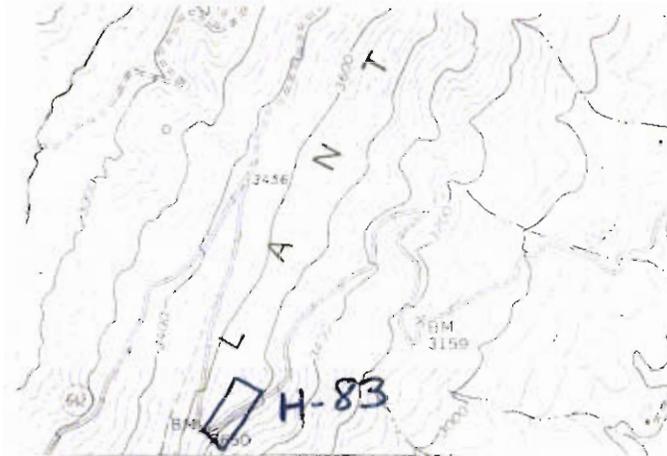
MUSTOE, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, medium grain, dark gray to yellowish orange, subrounded to rounded, calcareous. Friable (where calcite has been leached) to well indurated. Iron staining prominent where calcite has been leached. Minor coarse rounded quartz grains scattered throughout. Bedding ranges from 8-16 inches but is generally around 12 inches.
Attitude: N43°, 19°SE
Thickness: approximately 45 feet

HIGHLAND COUNTY

H83: TUSCARORA FORMATION

Location: On the north side of State Road 642 approximately 2 miles west of its junction with State Road 643 on Lantz Mountain.



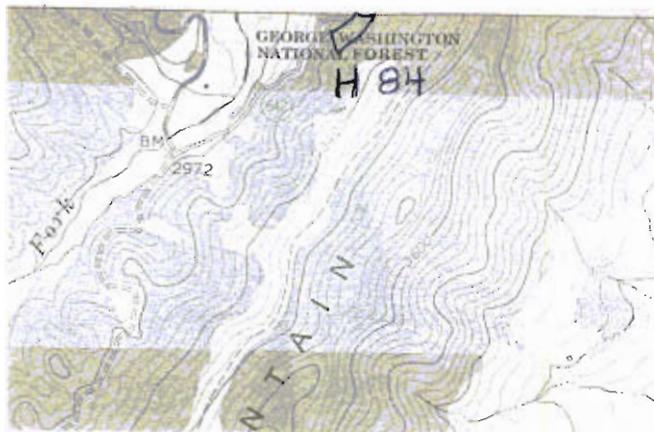
SNOWY MOUNTAIN, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, very fine to fine at top grading down section to medium-fine, several coarse white rounded quartz pebbles at bottom. Sandstone is white to light yellowish orange, friable to slightly indurated, iron stain on grains and principally concentrated along fractures. Majority of sandstone (70%+) is very fine to fine. Top part of exposure is highly fractured and is not as friable as lower part.
Attitude: N24°E, 16°NW
Thickness: 50 feet ±

HIGHLAND COUNTY

H84: ORISKANY SANDSTONE

Location: On the east side of State Road 642, approximately 2 miles from the junction of State Road 640 and State Road 637 along a N57°30'W azimuth.



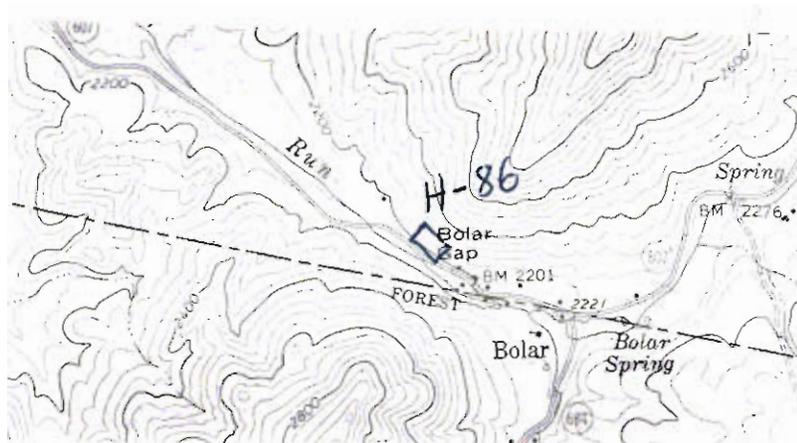
MONTEREY, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, medium gray to light yellowish orange, clacareous in part. Well indurated to slightly friable. Top of unit contains coarse rounded and frosted, light to medium gray, quartz pebbles. Highly iron stained where calcite has been removed. Massive, "Spirifers". Excellent contacts with Needmore and Helderberg.
Attitude: N30°E, 32°NW to vertical
Thickness: approximately 20 feet

HIGHLAND COUNTY

H86: TUSCARORA FORMATION

Location: On the north side of State Road 607 approximately 0.3 mile by road west of its junction with State Road 694 at Bolar Gap.



BURNSVILLE, VA 7 1/2' QUADRANGLE

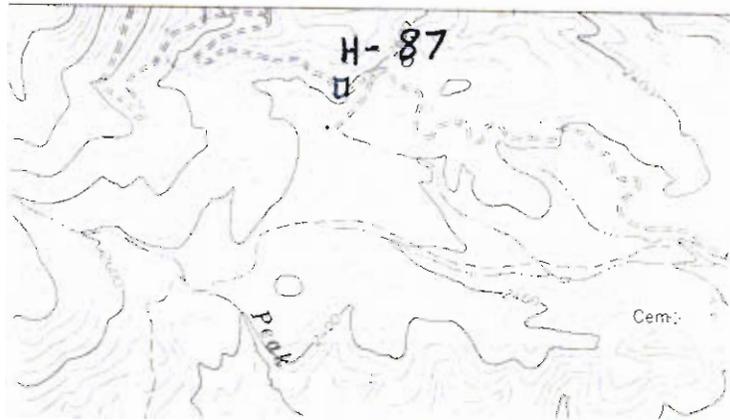
Excellent exposure of upper, middle, and lower Tuscarora.

Quartzite, very fine to medium, tan-pink to medium gray, very hard and well indurated, moderate iron stain throughout, but primarily concentrated along fractures. A zone about 2 feet in thickness at base is very friable, white to very light yellowish orange. Beds are generally 18-24 inches thick. Cross bedding.
Attitude: N40°E, 76°NW
Thickness: Upper 25'±
 Middle 10'±
 Lower 40'±

HIGHLAND COUNTY

H87: ORISKANY SANDSTONE

Location: At a point 1.4 miles along a N6°W azimuth from the junction of State Road 607 and U. S. Highway 220.



BURNSVILLE, VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light yellowish orange, subrounded to rounded, very friable. Minor (2-3%) white to light tan feldspar. Manganese mineralization as psilomelane and manganite scattered throughout along fractures and as replacement of cement? Some iron mineralization also occurs. Iron stain on grains. Attitude: N48°E, 58°SE
Thickness: 40'±

HIGHLAND COUNTY

H88: TUSCARORA FORMATION

Location: At point approximately 2.35 miles along a S53°W azimuth from the junction of State Road 606 and U. S. Highway 220.



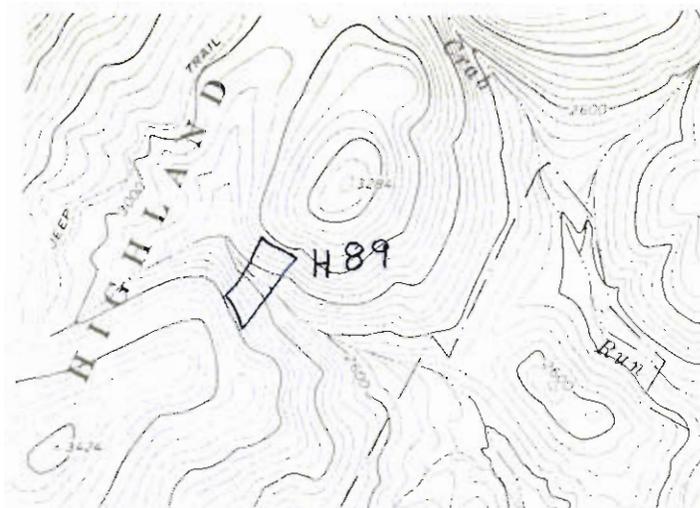
MUSTOE, VA-W.VA 7 1/2' QUADRANGLE

Quartzite and sandstone, fine to medium, white to light gray, moderate pink iron stain on grains concentrated to a dark yellowish orange along fractures. Very well endured to friable, subangular to subrounded. Quartzite well cemented by secondary silica. Several very thin shales are present a few clasts or clay balls of green shale occur. Bedding ranges from 6-16 inches and averages 12 inches.
Attitude: N44°E, 32°SE

HIGHLAND COUNTY

H89: TUSCARORA FORMATION

Location: At a point approximately 3.1 miles along a N50°30'W azimuth from the junction of State Road 612 and State Road 678.



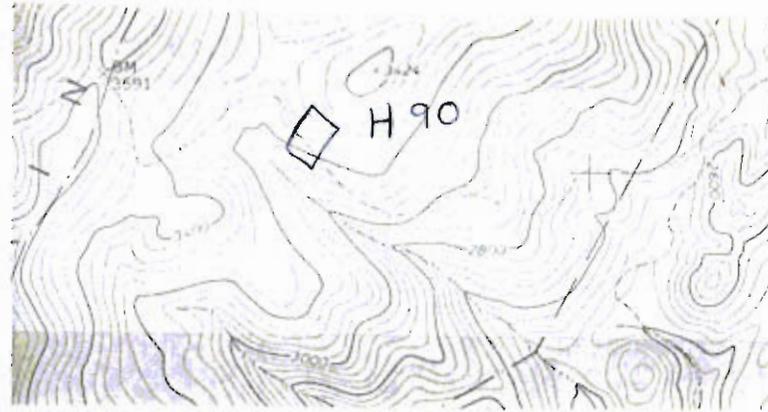
MONTEREY SE, VA 7 1/2' QUADRANGLE

Quartzite, very fine to fine, dark gray to top grading to yellowish orange at bottom, extremely well cemented with secondary silica, breaks in part with a conchoidal fracture. Quartzite is generally highly iron stained. Fracture surfaces are case hardened. Cross-bedding, massive bedding ranges from 6 inches to 18 inches. Attitude: N23°E, 32°SE
Thickness: 30 feet ±

HIGHLAND COUNTY

H90: TUSCARORA FORMATION

Location: At a point approximately 17,400 feet west along a N63°W azimuth from the junction of State Road 678 and State Road 612.



MONTEREY SE, VA 7 1/2' QUADRANGLE

The Tuscarora forms a small anticline.

Sandstone, very fine to fine, white to light yellowish orange, subangular to rounded. Very clean and in part friable. Some case hardened surfaces.

Attitude: East limb N50°E, 49°SE

Thickness: East limb approximately 2 feet

Thickness: West limb approximately 3 feet

HIGHLAND COUNTY

H91: TUSCARORA FORMATION

Location: On top of Jack Mountain approximately 19,500 feet
along a N63°W azimuth from the junction of State
Road 678 and State Road 612.



MONTEREY SE, VA 7 1/2' QUADRANGLE

Quartzite, very fine to fine, white to gray to pale yellowish
orange, subangular to rounded. Minor grains of
medium sand. Exposure contains iron stain on some
grains and along fractures, principally concentrated
along fractures. Bedding ranges from 4 to 8 inches.
Cross bedding

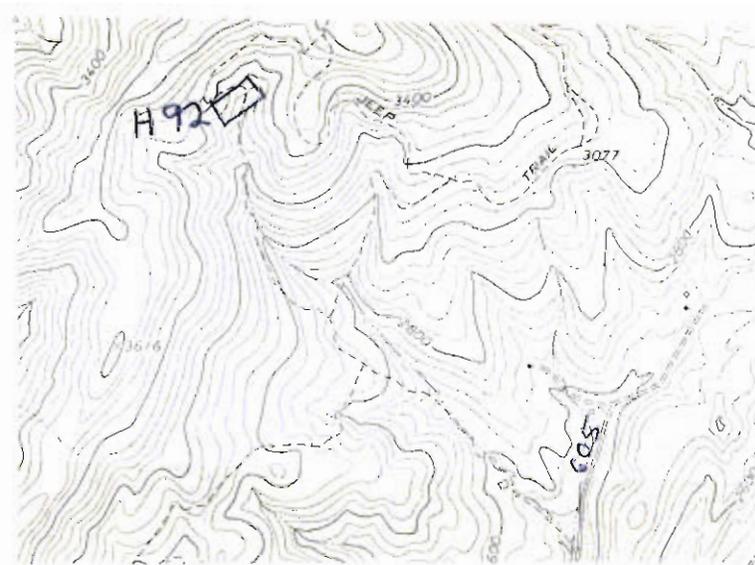
Attitude: N25°E, 45°SE

Thickness: approximately 4 feet

HIGHLAND COUNTY

H92: TUSCARORA FORMATION

Location: At a point approximately 8,000 feet along a N35°W azimuth from the junction of State Road 605 with U. S. Highway 220.



MUSTOE, VA-W.VA 7 1/2' QUADRANGLE

Quartzite, very fine to fine, white to very light gray, sub-angular to rounded, clean and well indurated. Minor iron stain, a very pale tan, on grains, along fractures it is a light yellowish orange. Bedding ranges from 6 to 18 inches but averages around 12 inches. Attitude: N60°E, 41°SE
Thickness: 15 feet+

HIGHLAND COUNTY

H93: ORISKANY SANDSTONE

Location: Approximately 4700' and S69°W from the junction of
State Road 606 and U. S. Highway 220.



MUSTOE, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, fine to medium, orange to dark yellowish orange,
subangular to rounded, friable to slightly indurated.
Minor (2%) traces of white to light tan feldspar.
Some white coarse, iron stained pebbles are present.
Iron stain throughout, some mineralization along
fractures.

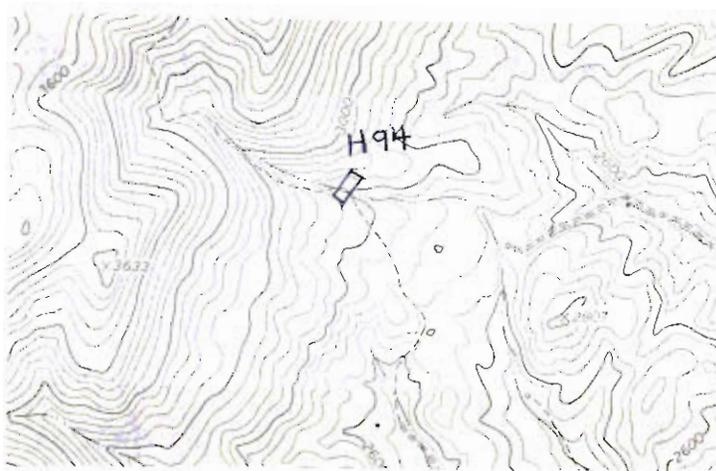
Attitude: N40°E, 15°NW

Thickness: 4 feet ±

HIGHLAND COUNTY

H94: KEEFER SANDSTONE

Location: Approximately 6700 feet and N71°W of the junction
of U. S. Highway 220 and State Road 606.



MUSTOE, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, very fine to fine, very light-tan to pale yellowish-
orange, friable to fairly well indurated. Iron
stain throughout, fractures show a concentration
of stain. Bedding 8-12 inches.

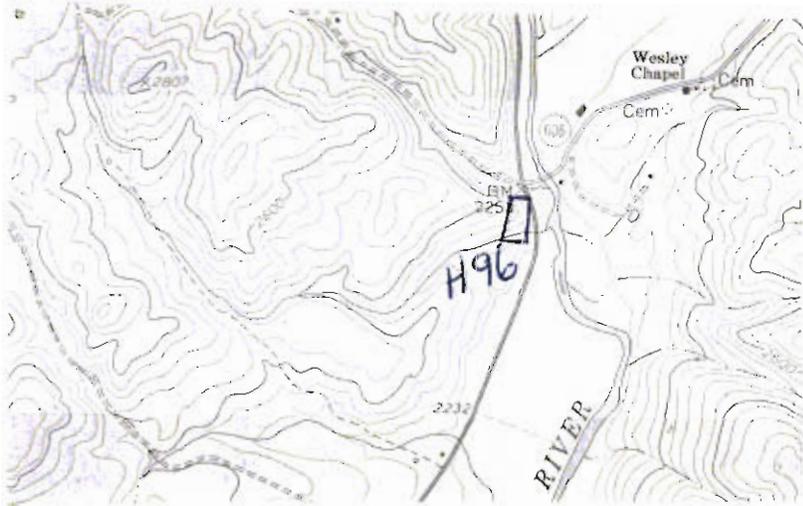
Attitude: N45°E, 53°SE

Thickness: 10 feet ±

HIGHLAND COUNTY

H96: ORISKANY SANDSTONE

Location: On the south side of U. S. Highway 220 at its junction with State Road 606.



MUSTOE, VA-W.VA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, orange to white to gray, sub-angular to rounded, friable to indurated. Traces (3-4%) of white highly weathered feldspar. Minor manganese and iron mineralization in fossil molds and on fractures. Bedding ranges from 8 to 18 inches. "Spirifers"

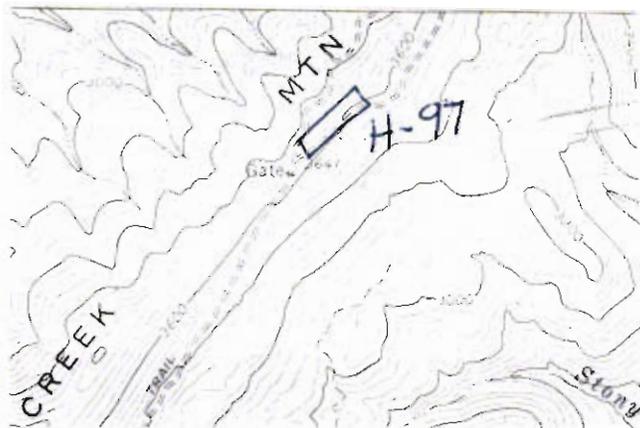
Attitude: N40°E, 29°SE

Thickness: 25-30 feet

HIGHLAND COUNTY

H97: TUSCARORA FORMATION

Location: On top of Back Creek Mountain approximately 10,000 feet and N47°W from the junction of U. S. Highway 220 and State Road 607.



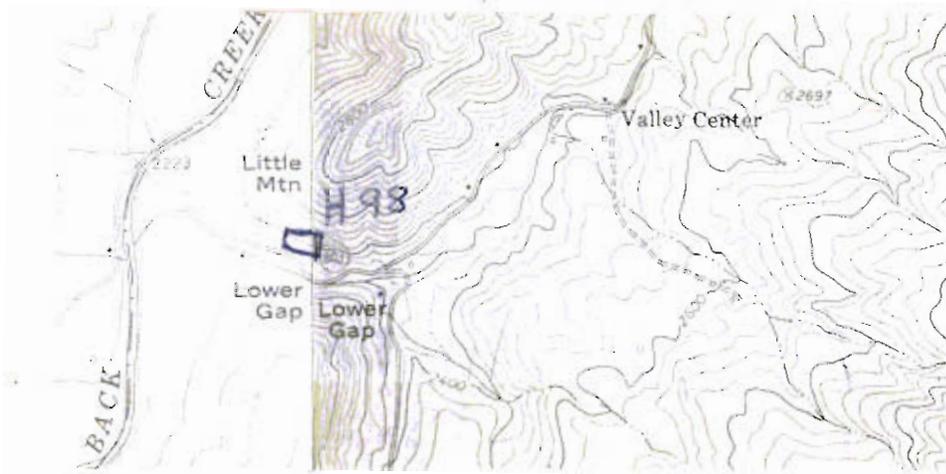
BURNSVILLE, VA 7 1/2' QUADRANGLE

Sandstone, very fine to fine, white to light tan to orange-red, iron stain variable throughout, slightly friable to well indurated. Very minor coarse, white rounded pebbles. Cross bedding.
Attitude: N50°E, 36°SE

HIGHLAND COUNTY

H98: TUSCARORA FORMATION

Location: On the north side of State Road 603 approximately 0.2 mile by road west of its junction with State Road 604.



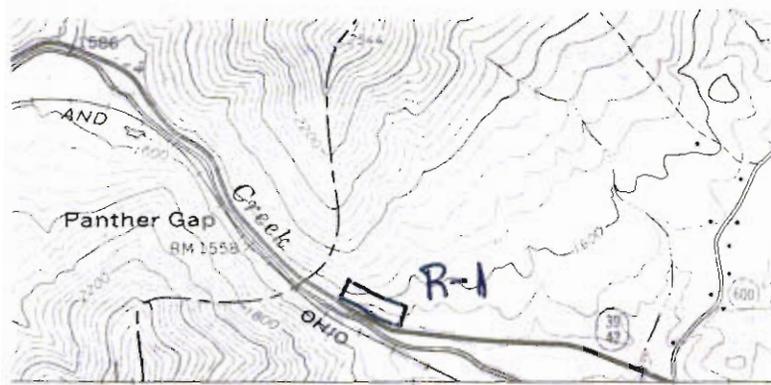
MUSTOE, VA-W.VA 7 1/2' QUADRANGLE
PADDY KNOB, W.VA.-VA. 7 1/2' QUADRANGLE

Quartzite, very fine to fine, white- light gray to pale yellowish orange. Iron stain on grains and principally along fractures. Very minor white rounded coarse quartz pebbles. Very high percentage of quartz, conchoidal fracture. Bedding generally averages around 12 inches. Fracture surfaces case-hardened.
Attitude: N40°E, 60°SE overturned
Thickness: 70 feet ±

ROCKBRIDGE COUNTY

R1: CLINTON SANDSTONE

Location: On the northeast side of State Highway 39 and 42 approximately 0.15 mile by road southeast of its intersection with the Bath-Rockbridge County line.



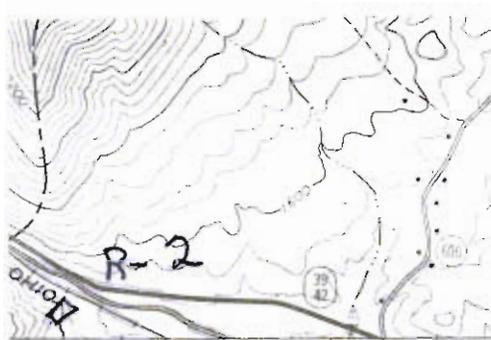
GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, very fine to fine with minor medium, medium gray to pink, subangular to subrounded. Unit is tightly cemented with secondary silica. Iron-oxide stain is scattered throughout the exposures along the fractures.

ROCKBRIDGE COUNTY

R2: ORISKANY SANDSTONE

Location: On the southwest side of the C & O Railroad tracks approximately 0.15 mile by road southeast of its intersection with Bath-Rockbridge County line.



GREEN VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium with minor fine, yellowish-orange, subrounded to rounded. Unit probably calcareous, but it has been leached in places; high purity with iron-oxide stain scattered throughout the exposure. Bedding varies from thick to thin, with minor amounts of clay. Excellent brachiopods.

Attitude: N35°E, 43° SE

Thickness: 10-12 feet

ROCKBRIDGE COUNTY

R3: ORISKANY SANDSTONE

Location: On the northwest side of State Road 600 approximately 0.8 mile by road southwest of its intersection with State Road 614.



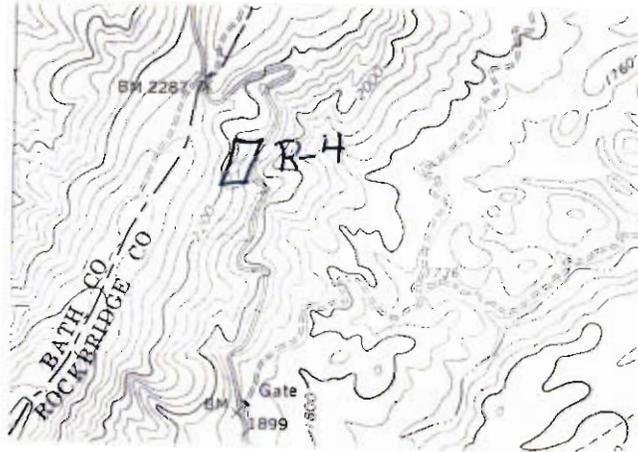
CRAIGSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to yellow-orange, sub-rounded to rounded. The top of the exposure is friable with varying degrees of reddish-brown iron-oxide staining; unit becomes harder and indurated toward the base. Small quartz granules (2-3 mm) are present near the base, where there is a fairly good contact with the underlying Helderberg Group. Gray coloration is present on the grains; bedding ranges from 12 to 16 inches. Brachiopods are present.
Attitude: N43°E, 29°SE
Thickness: 6+ feet

ROCKBRIDGE COUNTY

R4: KEEFER SANDSTONE

Location: On the west side of State Road 633 approximately 0.5 mile by road southeast of its intersection with the Bath-Rockbridge County line.



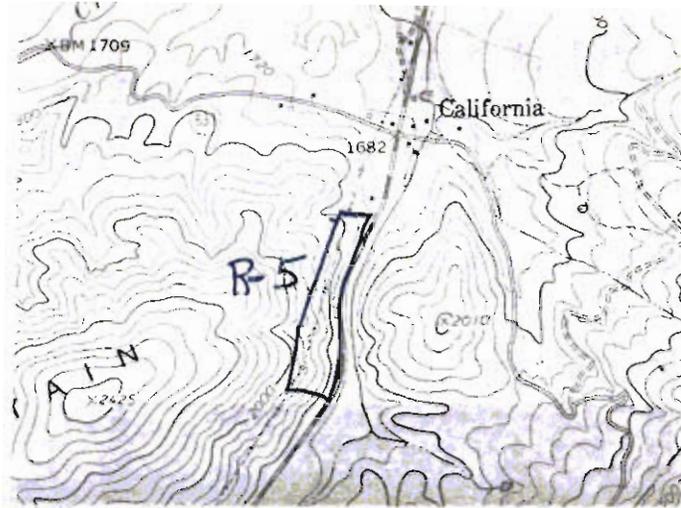
MILLBORO, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, very fine to fine, white to pinkish-red, sub-rounded. Sandstone ranges from very slightly friable to very hard and almost quartzites in places. An abundance of brown, reddish and black iron-oxide staining is present along the joints. Bedding varies from 12 to 24 inches.
Attitude: N55°E, 19°SE
Thickness: 5+ feet

ROCKBRIDGE COUNTY

R5: CLINTON SANDSTONE

Location: On the west-northwest side of State Road 780 approximately 0.3 mile by road southwest of its intersection with State Road 633.



MILLBORO, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine, white to reddish-pink, subrounded. Exposure of indurated sandstone is interbedded with some reddish to tan shales. An abundance of dark reddish-brown to orange brown and black iron-oxide staining is present in the joints. Bedding varies from 2 to 24 inches.

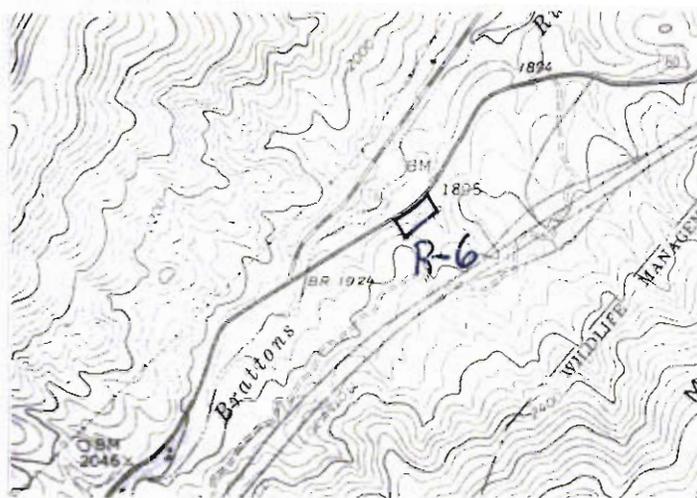
Attitude: N43°W, 20°NE

Thickness: 40+ feet

ROCKBRIDGE COUNTY

R6: ORISKANY SANDSTONE

Location: On the southeast side of U. S. Highway 60 approximately 0.3 mile by road northeast of its intersection with State Road 780.



MILLBORO, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to yellowish-orange, subrounded. Exposure is friable with only a small amount of iron-oxide stain; unit also very loosely cemented.

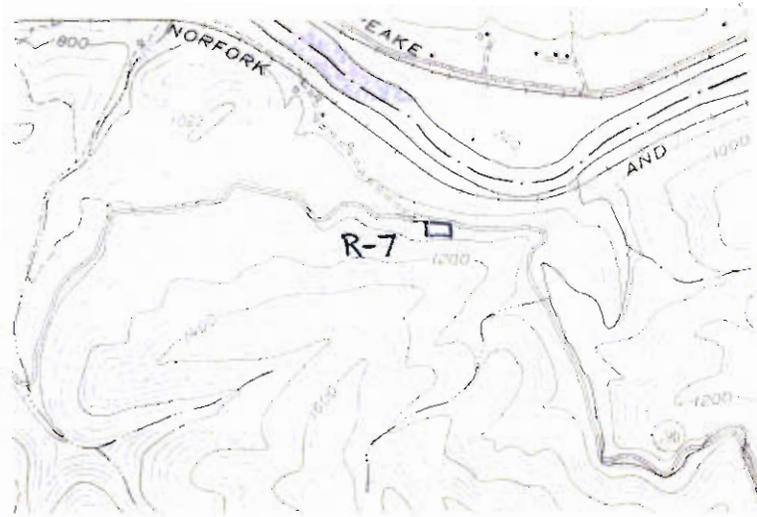
Attitude: _____

Thickness: 3+ feet

ROCKBRIDGE COUNTY

R7: ERWIN FORMATION

Location: On the south side of State Road 790 approximately 1.25 miles by road northwest of its intersection with State Road 781.



ARNOLD VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium, light gray to dull red-brown, angular to subangular. Brown, red to bright red and gray iron-oxide staining is present on the grains. Unit varies from indurated to very slightly friable near the base. Secondary silica cement between grains. Bedding averages from 12 to 16 inches.

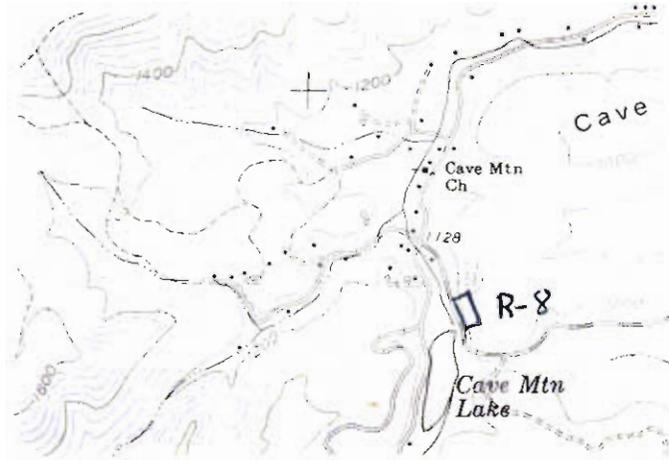
Attitude: N57°E, vertical

Thickness: 15+ feet

ROCKBRIDGE COUNTY

R8: ERWIN QUARTZITE

Location: On the east side of State Road 781 approximately 0.15 mile by road southeast of its intersection with the entrance road to Cave Mtn. Lake.



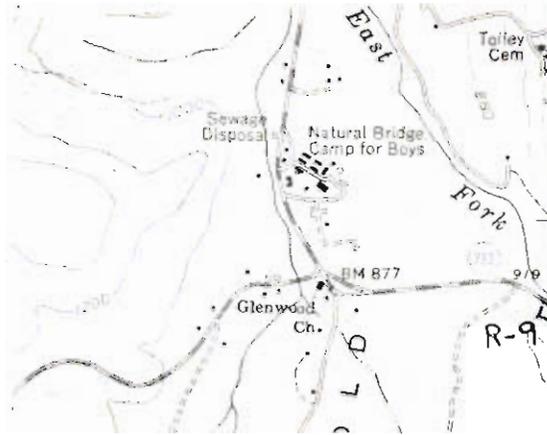
ARNOLD VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to medium, off-white to gray, subangular. Exposure is very hard (indurated) and dull looking. Some orange and brown iron-oxide stain is present in the joints. Bedding ranges from 4 to 16 inches. Attitude: N57°E, vertical. Thickness: 35-40 feet

ROCKBRIDGE COUNTY

R9: ERWIN QUARTZITE

Location: On the southwest side of State Road 781 approximately 0.45 mile by road southeast of its intersection with State Road 759.



ARNOLD VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, fine to medium, reddish-brown to dark gray, sub-angular. Well-indurated quartzite with secondary silica cement has light gray to black, iron-oxide stain on the grains. Bedding ranges from 4 to 16 inches.

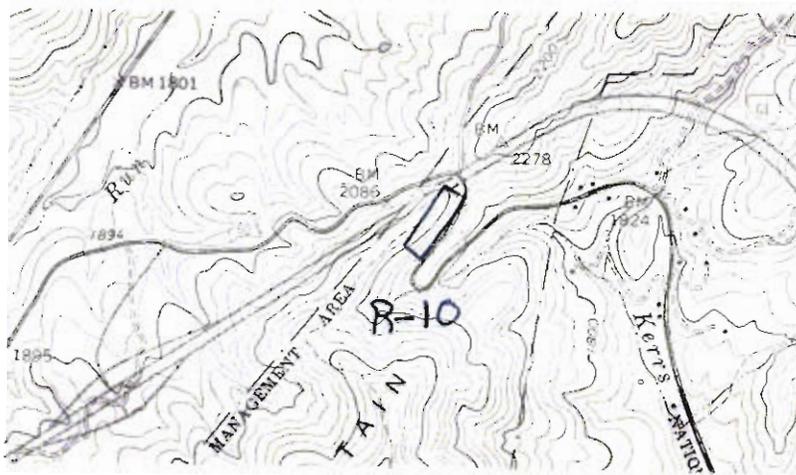
Attitude: N58°E, 67°NW

Thickness: 150+ feet

ROCKBRIDGE COUNTY

R10: TUSCARORA FORMATION

Location: On the west-northwest side of U. S. Highway 60 approximately 1.55 miles by road northeast of its intersection with State Road 780.



MILLBORO, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium with some fine, white to yellowish-gray, subangular to subrounded. Yellowish-orange and brown to black iron-oxide stain is present in the joints of the highly fractured sandstone; overall color of the unit seems to be a light yellowish to tan. Bedding varies from 2 to 18 inches.

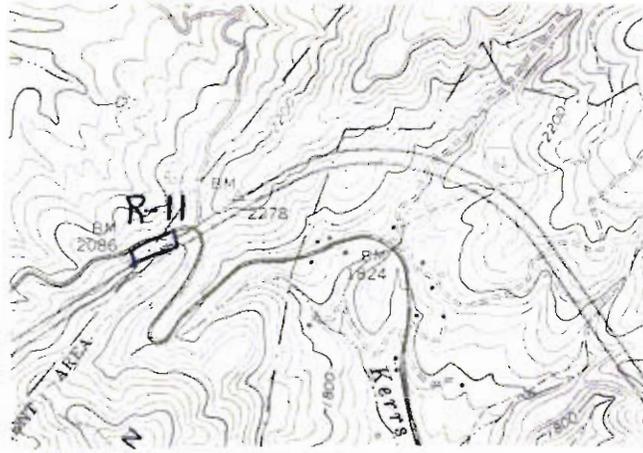
Attitude: N56°E, 48°SE (overturned)

Thickness: 125+ feet

ROCKBRIDGE COUNTY

R11: KEEFER SANDSTONE (sampled by Lowry)

Location: On the south side of U. S. Highway 60 approximately 1.4 miles by road northeast of its intersection with State Road 780.



MILLBORO, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light yellow orange, subangular to subrounded. Sandstone is weathered and is very friable and contains some brown to dark orange iron-oxide stain in the joints and also some on the grains. Bedding ranges from 3 to 10 inches.

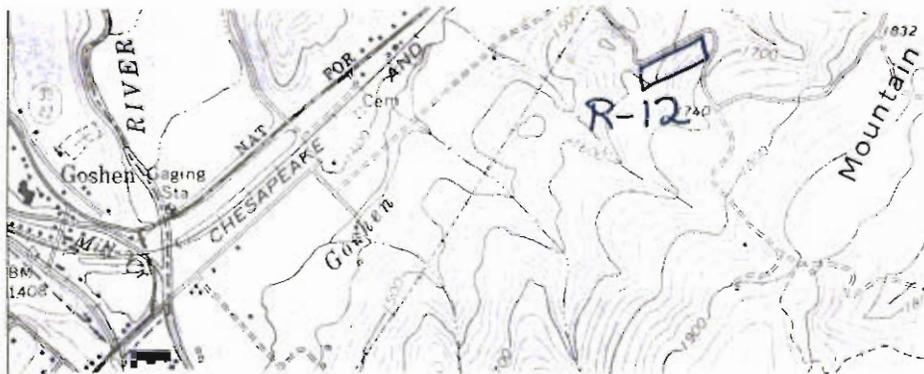
Attitude: N36°W, 57°NE (overturned)

Thickness: 40± feet

ROCKBRIDGE COUNTY

R12: CLINTON SANDSTONE

Location: On the southeast side of State Road 615 approximately 0.5 mile by road southeast of its intersection with State Highway 42.



GOSHEN, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine with some medium, light yellowish-orange to orange brown, subrounded. Sandstone is only very slightly friable and contains an abundance of iron-oxide stain throughout the unit. Bedding varies from 4 to 10 inches.

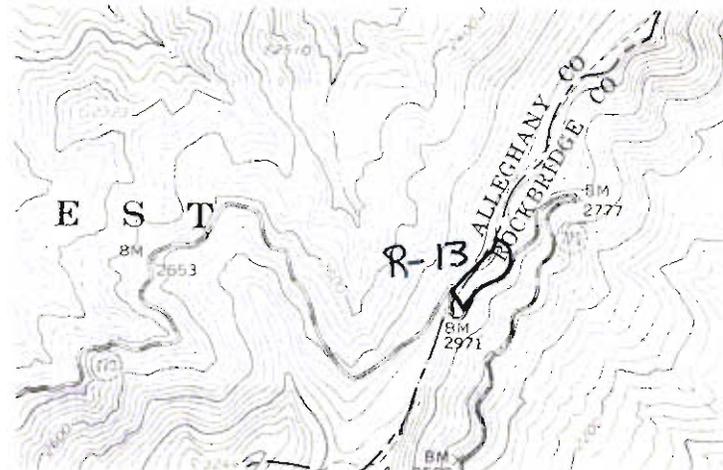
Attitude: N46°E, 19°NW

Thickness: 3-4+ feet

ROCKBRIDGE COUNTY

R13: CLINTON SANDSTONE

Location: On the northwest side of State Road 770, just east of its intersection with the Alleghany-Rockbridge County line.



LONGDALE FURNACE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to reddish, subrounded. Sandstone varies from indurated to slightly friable. Pink, reddish and brown iron-oxide stain is present on the unit. Bedding varies from 6 to 36 inches, with an average of 20 inches.

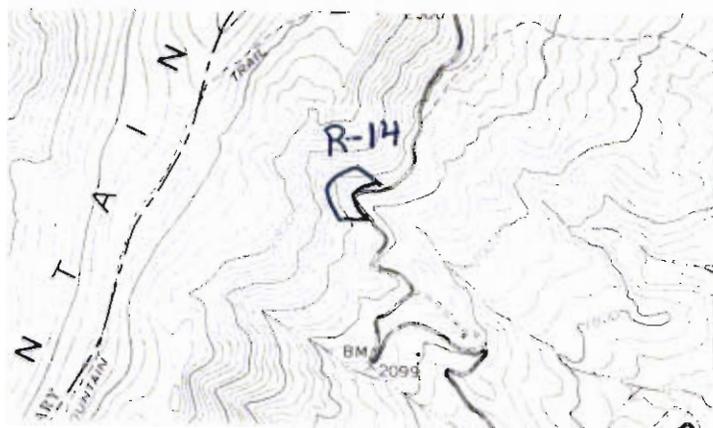
Attitude: N28°E, 17°NW

Thickness: 20-25 feet

ROCKBRIDGE COUNTY

R14: TUSCARORA FORMATION

Location: On the west side of State Road 770 approximately 1.45 miles by road northwest of its intersection with State Road 654.



LONGDALE FURNACE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, gray to dark gray, subangular. Very hard sandstone, with secondary silica has an abundance of the gray coloration on the grains. Bedding ranges from 4 to 16 inches, averaging 12 inches.

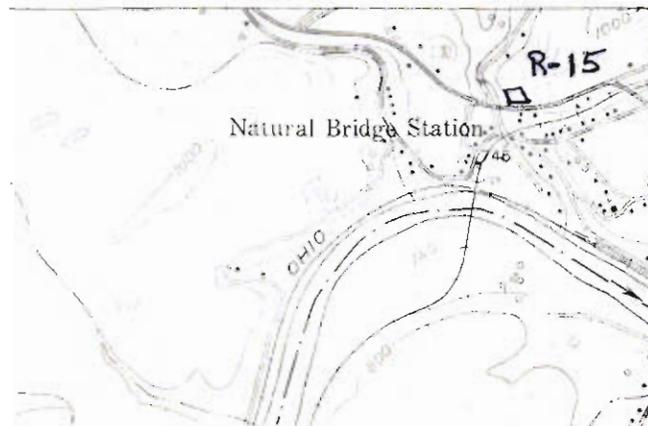
Attitude: N30°E, 39°NW

Thickness: 50± feet

ROCKBRIDGE COUNTY

R15: ERWIN QUARTZITE

Location: Off the north side of State Highway 130 approximately 0.1 mile by road east of its intersection with State Road 688.



ARNOLD VALLEY, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium to coarse, white to reddish brown, sub-rounded. Well indurated material with secondary silica has yellowish-orange to reddish-brown, and dark brown iron-oxide stain as coating on grains. Exposure is highly fractured; bedding ranges from 4 to 12 inches (?).

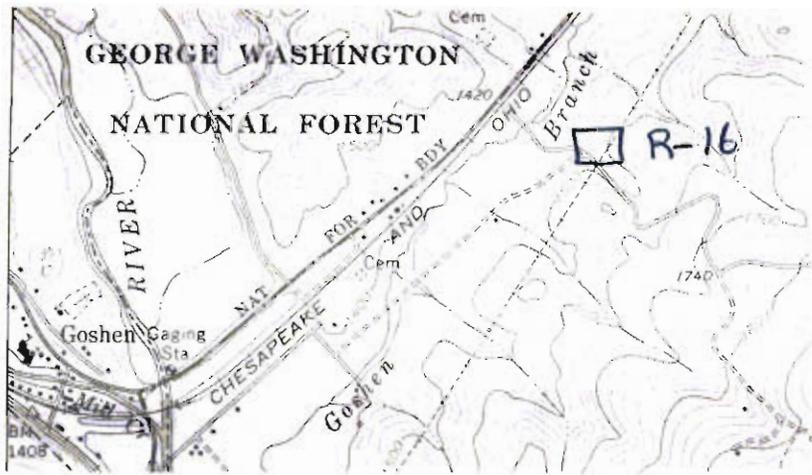
Attitude: N62°W, 23°SW

Thickness: 20± feet

ROCKBRIDGE COUNTY

R16: ORISKANY SANDSTONE

Location: On the northeast side of State Road 615 approximately 0.2 mile by road southeast of its intersection with State Highway 42.



GOSHEN, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium to coarse, light gray to dark reddish-orange, subrounded. Abundance of purplish (Mn)? stain as well as reddish-orange, brown iron-oxide stain is present on the very slightly friable sandstone. Some quartz pebbles (\approx 5mm) as well as Spirifers molds are present. Bedding ranges from 16 to 20 inches.

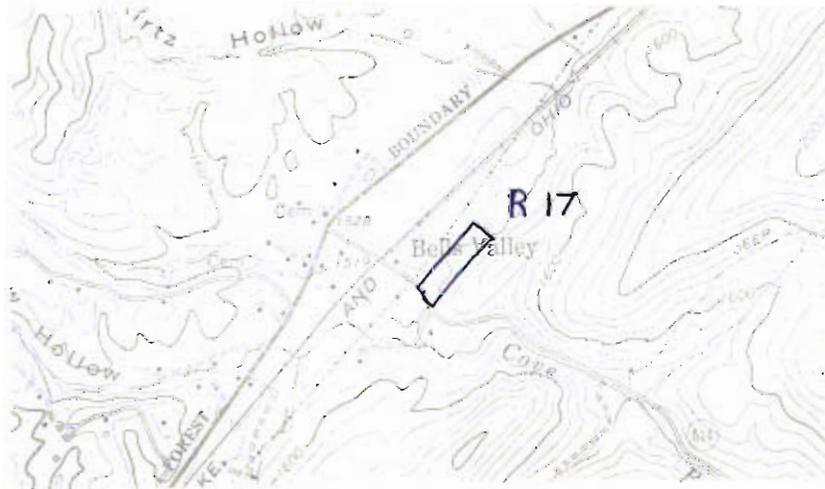
Attitude: N56°E, 27°NW

Thickness: 6+ feet

ROCKBRIDGE COUNTY

R17: ORISKANY SANDSTONE

Location: Off the northeast side of State Road 614
approximately 0.25 mile by road southeast of its
intersection with U. S. Highway 42.



CRAIGSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine to medium, white to light, yellowish-orange, subrounded to rounded. Sandstone varies from slightly friable in places to almost indurated; gray coloration as well as yellowish-orange iron-oxide stain is present on the exposure. Spirifer molds present. Bedding ranges from 2 to 20 inches.

Attitude: N32°E, 30°NW

Thickness: 12+ feet

ROCKBRIDGE COUNTY

R18: ORISKANY SANDSTONE

Location: On the southeast side of State Road 601 approximately 0.3 mile by road east of its intersection with State Road 614.



CRAIGSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, light gray to yellow brown, subrounded. Sandstone is very slightly friable and is iron-oxide stained throughout with a gray coloration. Spirifers present; bedding ranges from 2 to 20 inches. Good contact with underlying Helderberg. Attitude: Horizontal
Thickness: 4+ feet

ROCKBRIDGE COUNTY

R19: ORISKANY SANDSTONE

Location: On the southeast side of State Highway 42 approximately 0.8 mile by road northeast of its intersection with State Road 614 leading southeast.



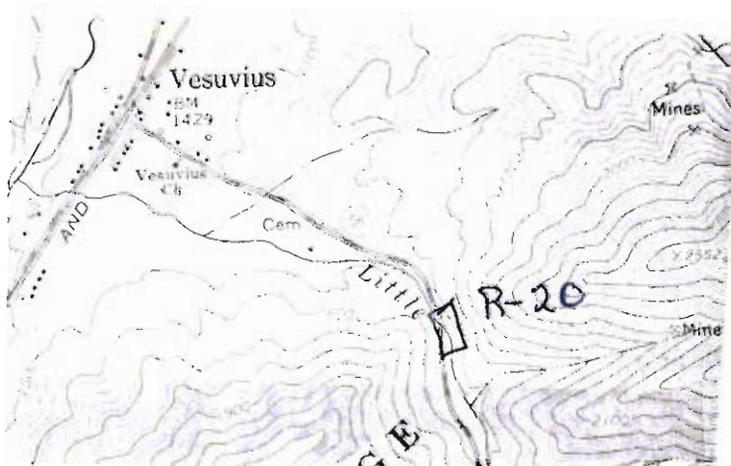
CRAIGSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, off white to light yellowish-orange. Slightly friable to indurated sandstone contains yellowish-orange to sooty black (Mn)? iron-oxide staining throughout the exposure. Spirifer molds present; bedding ranges from 4 to 12 inches. Close contact with Millboro shale.
Attitude: N40°E, 26°NW
Thickness: 15± feet

ROCKBRIDGE COUNTY

R20: ERWIN QUARTZITE

Location: On the east side of State Highway 56 approximately 0.8 mile by road southeast of its intersection with State Road 608.



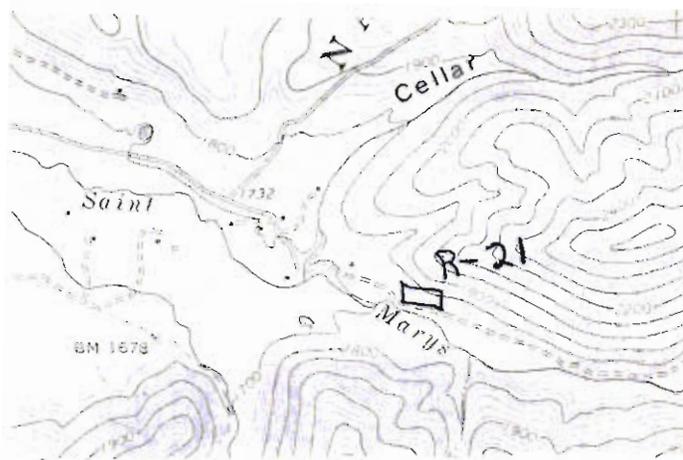
VESUVIUS, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium, white to light purplish, subrounded. Unit is well indurated with secondary silica cement and contains reddish-purple and red-brown iron-oxide stains. Bedding ranges from 5 to 36 inches.
Attitude: N73°E, 70°NW
Thickness: 175± feet

ROCKBRIDGE COUNTY

R21: ERWIN QUARTZITE

Location: Off the northeast side of a forest road approximately 1.15 miles by road southeast of its intersection with State Road 608.



VESUVIUS, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium to coarse, light gray to purplish-red, subrounded. Light yellow-orange, light reddish-pink and dark brown and black iron-oxide stain are present on the tough, secondary silica cemented quartzite. Bedding ranges from 4 to 30 inches.

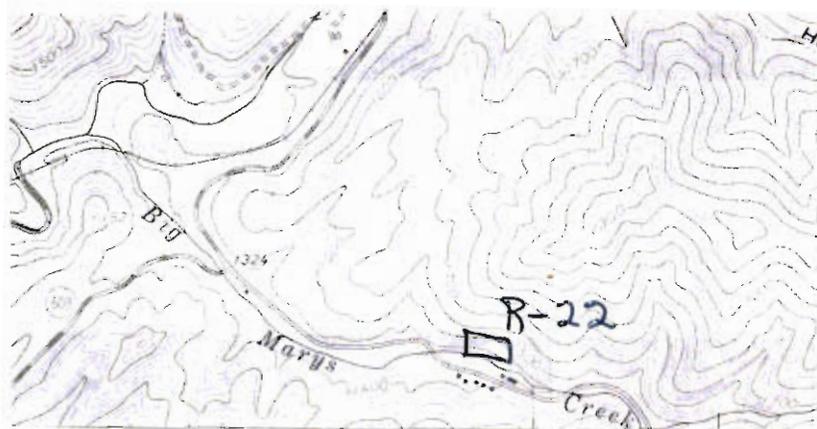
Attitude: N4°W, 75°SW

Thickness: 35± feet

ROCKBRIDGE COUNTY

R22: ERWIN QUARTZITE

Location: Off the north side of forest road 104 approximately 0.55 mile by road southeast of its intersection with State Road 608.



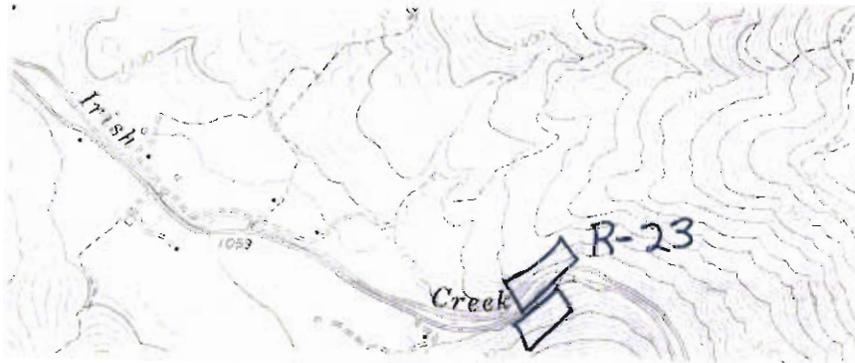
VESUVIUS, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium, white to brownish-yellow, subrounded. Very well indurated, with secondary silica cement, to almost friable quartzite; contains an abundance of grayish to reddish and yellowish-brown iron-oxide staining. Unit is much denser toward the base and the Hampton Formation. Exposure is highly fractured towards the top. Bedding ranges from 5 to 20 inches.
Attitude: N32°E, 85°NW
Thickness: 150+ feet

ROCKBRIDGE COUNTY

R23: ERWIN QUARTZITE

Location: Off the north-northwest side of State Road 603 in creek bed approximately 1.35 miles by road southeast of its intersection with State Road 608.



CORNWALL, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium, light gray to light yellowish-orange to pinkish, subrounded. Overall color gives a grayish-pinkish cast; a minor amount of iron-oxide stain is present around joints. Quartzite, which is fractured up quite a bit in places; grades from well indurated with secondary silica cement to almost slightly friable. Bedding varies from 4 to 36 inches, averaging 12 to 16 inches.

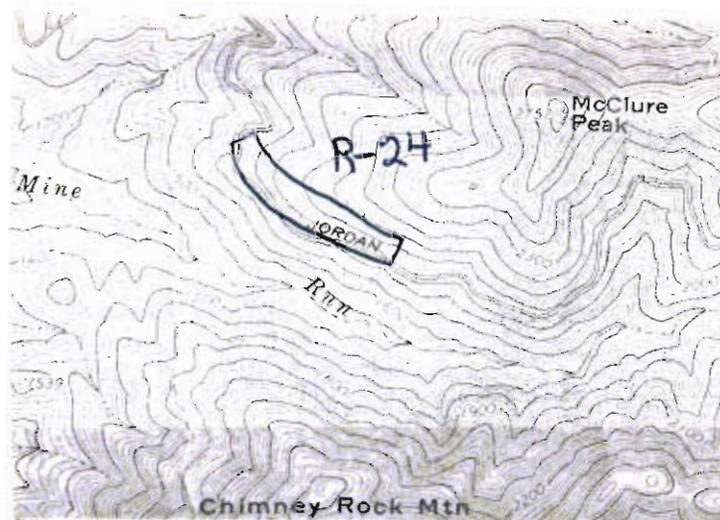
Attitude: N34°E, 32°NW

Thickness: 30-35 feet

ROCKBRIDGE COUNTY

R24: ERWIN QUARTZITE

Location: Off the northeast side of State Road 733 extended approximately 1.4 miles by road east of its intersection with State Road 631.



CORNWALL, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium, white to flesh and grayish-pink, sub-rounded. Exposure ranges from well indurated with secondary silica cement between grains to a crumbly friable and weathered quartzite in places. Iron-oxide and some manganese(?) stain is present in parts of the exposure, which becomes clean and white at the top. Bedding ranges from 6 to 30 inches.

Attitude: N50°E, 30°NW

Thickness: 60± feet

ROCKBRIDGE COUNTY

R25: KEEFER SANDSTONE

Location: In Byrd Gap, approximately 14,300 feet and
N86°E of the junction of State Road 614 and
State Road 601



CRAIGSVILLE, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, fine with some medium near the bottom, white to gray, yellowish-orange to reddish. Unit varies from white and very friable sandstone at the base (lower 4-5 feet) to iron-oxide stained and almost quartzitic material with gray coloration and Mn(?) stain in the joints in the top 30-35 feet of the exposure. Secondary silica cement. Bedding varies from 4 to 20 inches, averaging 12 inches.

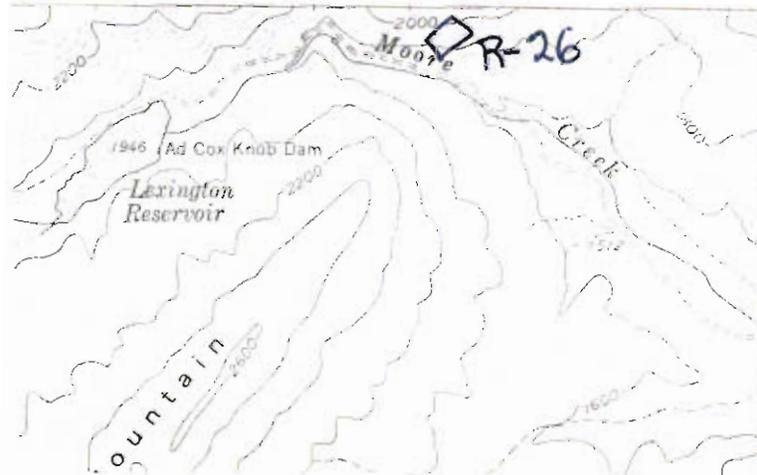
Attitude: N43°E, 50°NW

Thickness: 40± feet

ROCKBRIDGE COUNTY

R26: TUSCARORA FORMATION

Location: Off the northeast side of the Lexington Reservoir road, approximately 2.6 miles by road northwest of its intersection with State Road 612.



SUGARLOAF MOUNTAIN, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to yellowish-brown, subrounded. Sandstone ranges from friable to quartzitic with some secondary silica cement. Pebble zones are present at the base of the unit; most pebbles average 2-3 mm, with some up to 10 mm in diameter. Bedding varies from 5 to 20 inches, averaging 12 to 14 inches.

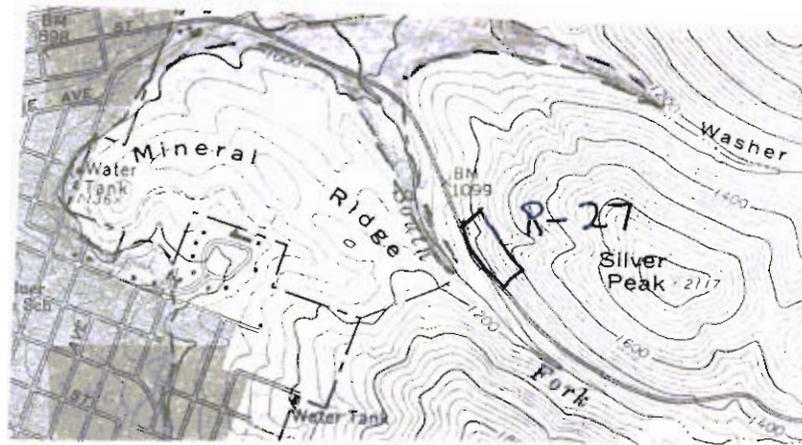
Attitude: N13°E, 33°NW

Thickness: 40± feet

ROCKBRIDGE COUNTY

R27: ERWIN QUARTZITE

Location: On the northeast side of U. S. Highway 60 approximately 1.45 miles by road east-southeast of its intersection with U. S. Highway 501 in Buena Vista.



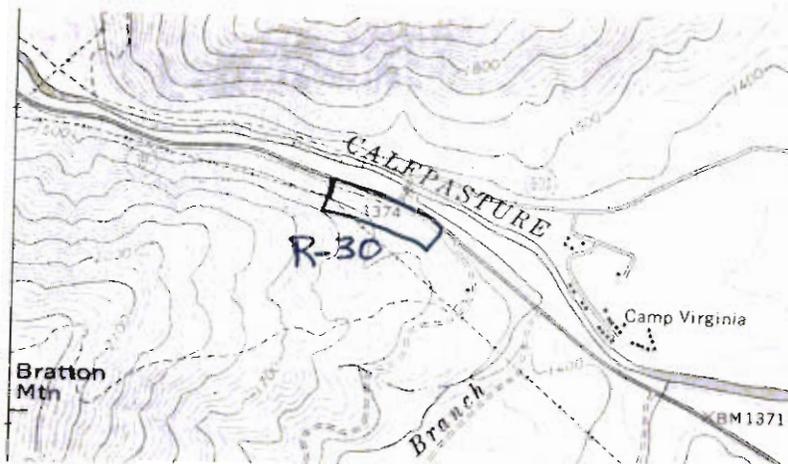
BUENA VISTA, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium, light grayish-white to pinkish-gray, subrounded. Unit varies from very well indurated to just slightly friable sandstone in which there is an abundance of iron-oxide stain and also some granules >2 mm. Small pinkish casts and Scolithus tube rings (7 mm diameter) are present in the more indurated, cleaner Erwin. Overall there are small faults present, giving repetition of section and a broken up Erwin unit. Bedding ranges from 10 inches to massive, averaging about 16 to 20 inches.
Attitude: N29°E, 45°NW
Thickness: 20+ feet

ROCKBRIDGE COUNTY

R30: KEEFER SANDSTONE

Location: On the southwest side of State Highway 39 just northwest of its intersection with State Road 601.



GOSHEN, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to light reddish-gray, subangular to subrounded. Sandstone varies from friable to indurated with secondary silica cement throughout the exposure; interbeds of Clinton shale are present. Abundance of iron-oxide stain sporadically placed in the exposure. Bedding ranges from 3 to 48 inches, averaging 12 to 16 inches.

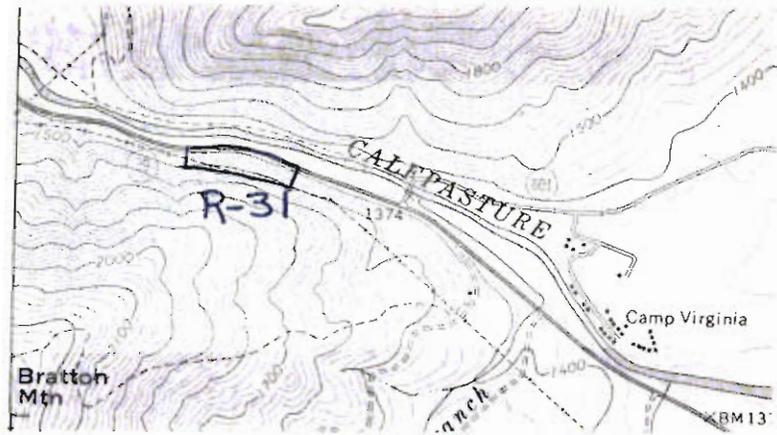
Attitude: N9°W, 21°NE

Thickness: 150± feet

ROCKBRIDGE COUNTY

R 31: KEEFER SANDSTONE

Location: On the southwest side of State Highway 39 approximately 0.3 mile by road northwest of its intersection with State Road 601.



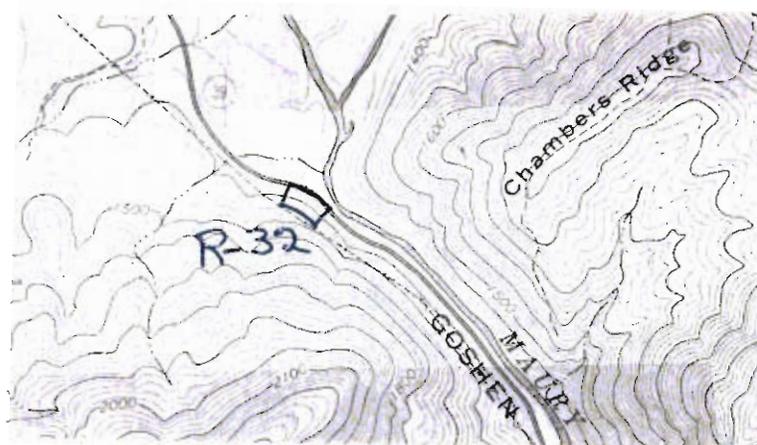
GOSHEN, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to grayish, subangular to subrounded. Sandstone varies from very friable to almost quartzitic. Secondary silica is in the harder sandstone. Abundance of reddish-brown to black iron-oxide staining is present; Scolithus tube rings also present. Contact with Cacapon member. Bedding ranges from 12 to 36 inches, averaging 16 inches. Attitude: N.24°W., 43°NE; N.19°E., 44°SE. Thickness: 150+ feet

ROCKBRIDGE COUNTY

R 32: KEEFER SANDSTONE

Location: On the southwest side of State Road 39 approximately 1.9 miles by road southeast of its intersection with State Road 601.



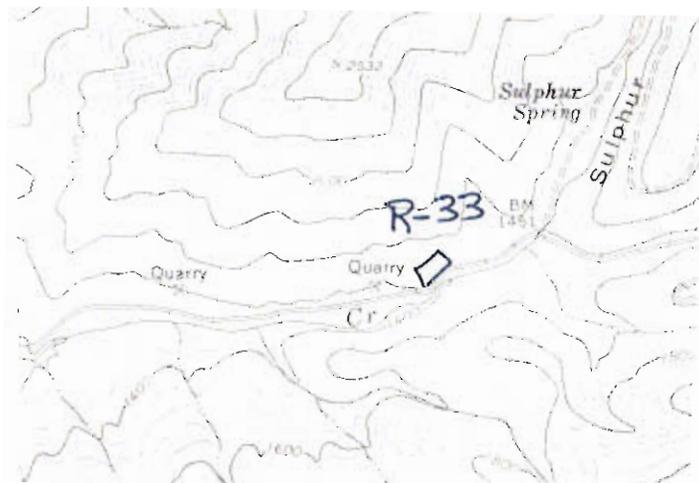
GOSHEN, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to yellow brown, subrounded. Varies from friable to indurated, iron-oxide stained sandstone. Light tan is the predominant color of the unit that is in contact with the underlying Cacapon members of the Clinton Formation. Bedding ranges from 1 1/2 to 12 inches.
Attitude: N.64°E., 54°SE.
Thickness: 50± feet

ROCKBRIDGE COUNTY

R 33: ERWIN FORMATION

Location: On the northwest side of State Road 781 approximately 2.9 miles by road southeast of its intersection with State Road 759. (Sample from exposure just east of the Mathews-Curtis Co. quarry from which Lowry collected samples.)



SNOWDEN, VIRGINIA 7 1/2' QUADRANGLE

Sandstone, medium, white to gray, subangular to subrounded. Sandstone varies from friable to indurated, and contains an abundance of yellowish-brown, gray, and reddish-brown to black iron-oxide staining, mainly along the fractures. The indurated material contains secondary silica between the grains. Bedding ranges from 12 to 60 inches, averaging 16 to 20 inches.

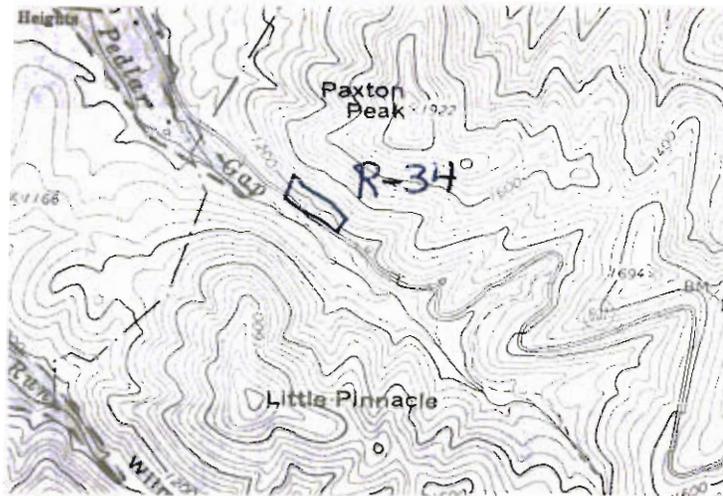
Attitude: N.5°W., 18°SW

Thickness: 40+ feet

ROCKBRIDGE COUNTY

R34: ERWIN QUARTZITE

Location: On the northeast side of State Road 607 approximately 0.6 mile by road southeast of its intersection with the city limits of Buena Vista.



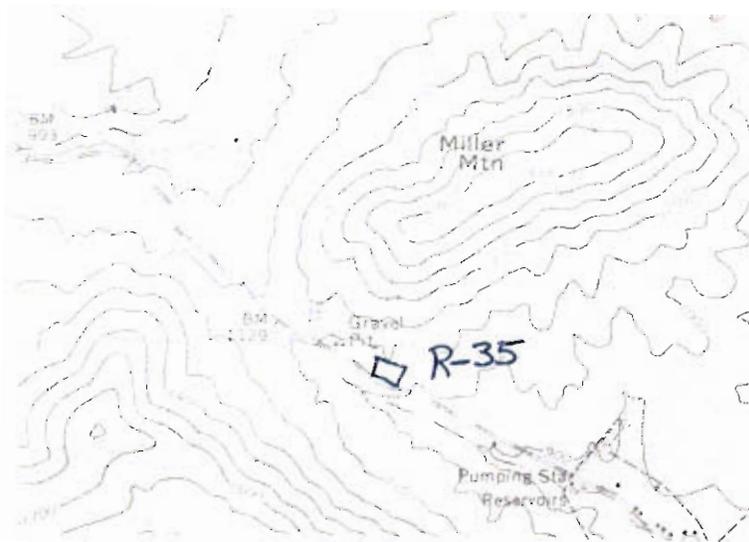
BUENA VISTA, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium, white to gray, subrounded to rounded. Highly fractured unit varies between well-indurated to friable. Contains an abundance of yellowish-orange to brownish iron-oxide stains, possibly some mineralization near the base of the unit and some Scolithus tube rings(?), one-half inch yellow-brown in color. Secondary silica makes a tight bond in the indurated part of the exposure. Bedding ranges from 2 to 30 inches, averaging 8 to 12 inches.
Attitude: N25°E, 70°NW
Thickness: 200± feet

ROCKBRIDGE COUNTY

R35: ERWIN FORMATION

Location: On the northeast side of State Road 684 approximately 1.4 miles by road southeast of its intersection with State Road 608.



GLASGOW, VIRGINIA 7 1/2' QUADRANGLE

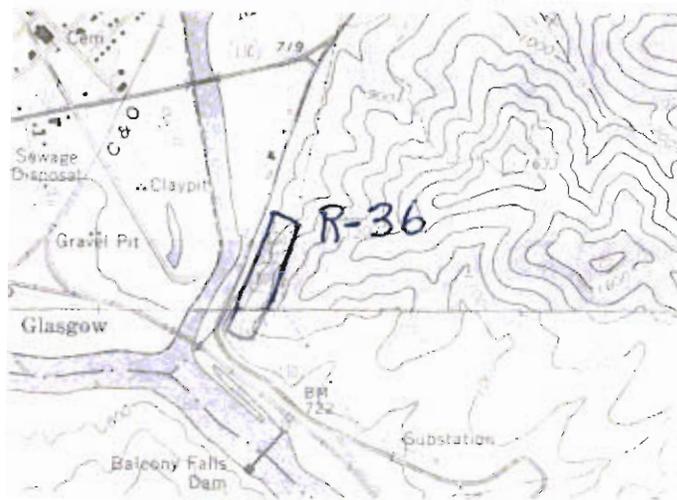
Sandstone, fine to medium, grayish-white to orangish-brown, subrounded. Sandstone is very soft and friable; abundance of blue-black iron and manganese(?) stain along with some yellowish-orange limonite staining is present on the grains and along fractures. Bedding ranges from 2 to 12 inches.

Attitude: —
Thickness: 20+ feet

ROCKBRIDGE COUNTY

R36: ERWIN FORMATION

Location: On the southeast side of U. S. Hwy. 501 and State Hwy. 130 approximately 0.7 mile by road southwest of its intersection with State Hwy. 130 leading west to Natural Bridge.



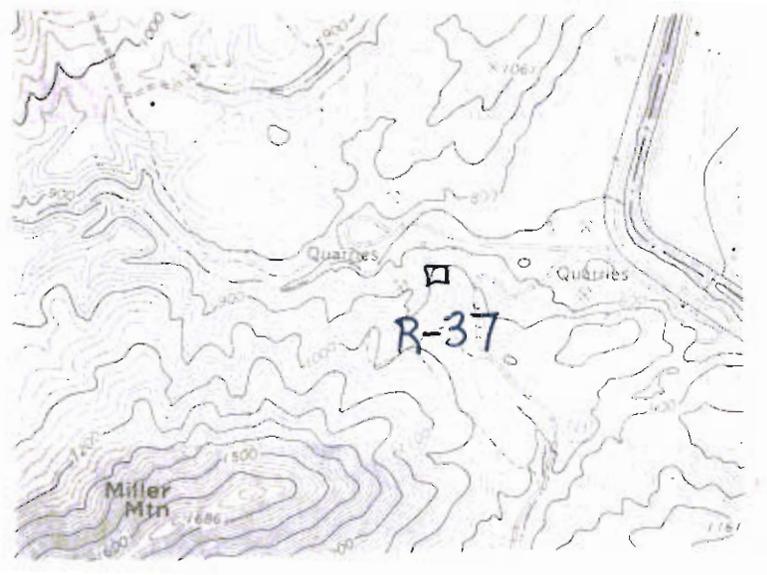
GLASGOW, VIRGINIA 7 1/2' QUADRANGLE
SNOWDEN, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium, white to light gray and reddish-gray, subrounded. Quartzite ranges from slightly indurated to very well indurated, with a secondary silica cement. Unit is white to grayish and very pure near the middle of the exposure. Abundance of iron-oxide stain is present on the unit. Bedding ranges from 6 to >48 inches.
Attitude: N52°E, 33°NW
Thickness: 200+ feet

ROCKBRIDGE COUNTY

R37: ERWIN FORMATION

Location: Quarry of Lone Jack Limestone Co., Inc. approximately 0.25 mile by company road west of its intersection with State Road 679.



GLASGOW, VIRGINIA 7 1/2' QUADRANGLE

Quartzite, medium, light gray to gray, subrounded. Quartzite is indurated and heavily iron-oxide and manganese stained black in the fractures. Weathered to a yellowish-brown, highly busted up and brecciated quartzite. Bedding ranges from 2 to 24 inches. Attitude: N30°E, 50°NW
Thickness: 100+ feet