9/25/12
IRO/4 23 Black - dk
gray wackesn at base
of lincolshire N 20E 21SE
9/26/12 IRO-4115
E-W 60N N 37°11.8 17' W 80 22 393
Prospect pit or old sink
in upper Beekmantown
LS W of Cedar Run
9/26/12 BBG-6310
el 2150 b (correction ___)
N 37 11 880 W 80° 22.558
Fine micro xline dol overlain
by siliceous burrowed
dol/cast and molds
N40W 20 NE
9/26/12 BBG 6311
big deer stand
w/ deck ~ 2000 b ___
N37° 12.097 W 80 22.348
head of hollow
IRO 4116 Ellett Siltsn
red clay silt w/
s and bcds in end of
RR cut at N37° 11.830'
Bedding is ∡ w/dol W 80° 22.318
N75W 10 NE

26 IRO 8716 redux
ra - qtz cobbles
el 2100 Ta
N 37 08 262
W 80 19 507

IRO 897 redux - Roanoke
Valley Fault Rome / Elbro
N 37 07.917 W 80 17.833
walking N to

IRO 8919 N 30E 70 NW
behind double wide
at N 37 07 993
W 80 17.905
brecciated dol

IRO 8910 N 34E 70 NW
thinbedded gray dol
cleavage N 50E 60 SE
drive of new house
N 37 08033 W 80 17 983
Akers 2681 Georges
Kun
Stop 5.
IRO
Look for flat pebble cyl
algal lam, biohermes

IRO -727 A
N 37°.166101 W 80.318405
S SE dip at E end
NE dip at W end
well stratified midale
elbrook
APRIL 26 2013
ESN - 1426 mp 127.5

IRO -

IRO - 8423 upside
down Conococheague

IRO -

April 25 2013

IRONTO PHOTOS - I81

N 37.229343 W 80.242490 Photos of scarp and NW plunge ESN - 1426 A&B fault

ERO - 3625 green breccia layer in Fold limb II to row dipping N
N 37.227601 W 80.246685

IRO-621 B green breccia at new overpass
N 37.196271 W 80.269543
Google earth view

IRO 648 Google earth view
OT Synclinal hinge at
N 37.188 766
W 80.280 516

IRO 596 open trough
37.177825 - 80.248706
Sagg between two tight hinges

IRO 597 - overturned syncline w/ epikarst clay seam to road level N 37.171 994
E 80.304564

Tree Farm Johnson Lease

Parcel 3 Map 124

Sept 25
Oxide TS N 37°14.622
Mi 11.0 W 80 14.375
Stop 1 at end of Park Mtn Road (Reece Farm) Helderberg
SS, Friable, sample site
N 37° 13.955 W 19.187
Mi 16.5 park continue
to Stream 16.6 House at 16.8
N 37° 14.062' W 80°19.322

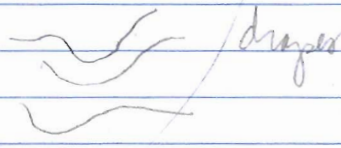
Stop 2 Pavement exp Huntersv
N 37° 14.142 W°18.435
Mileage 17.9

STop 3 NS RR park off
Myrtle lane
N 37 14 550 W8015 467
go to right above shed
24.7

mile 30.7 narrow
bridge N 37 11 .728 W 80 19 52
Stop 4A Park in
Park Paddy driveway
to walk to Fagy Cgl

STOP I 10 Oe → Ob
traverse dry creek
beginning at N 37°13.777'
W 80 21.897

Stromatolites Thrombolites
"Sandstones" channels
tabular x beds
burrow fills, algal ls



prism cracks, TP structures
Top (uphill limit)

823 N 37 08 960
W 80 18 830
TRUCKS USE RIGHT
LANE

STOP I 9 Bays SS
at Den Hill / North Fork
park at Church
N N 37° 11.207
W 80 21 152
Flagged Several Lopina
zones
ST

9/27/12
STOP 11 Cr "SS"
on CEDAR RUN
N 37° 899 W 80 23.248
"Ellett Rd on Main St
in B'burg

STOP Yellow Sulphur
N 37° 10.697
W 80° 23.855

Oct 8 '12 Joe Aylor
Virginia Uranium
231 Woodlawn Heights Rd
Chatham Virginia 24531
434 432 1016

Chuck Barley
College of William and
Mary Department of Geology
McGlothlin-Street Hall 215
Williamsburg VA 23185
PO box 8795
Williamsburg, VA 23187-8795

IRO 5216 N85E 40SE Mass
5' ledge coarse qtz
arenite ocs above
sag pond or Karst Feature
at head of clearing

IRO 5217 Reddish brn fg
arenaceous sand and siltstone
ledges in road N56E 30SE
omb? 1" linguloid brooks
in road 60' above

IRO 5218 Blocky vuggy
weathed brown ss ledges
N80W 24° SW SP @ N37°12'23.28
W80°19'04.92"

IRO 281 olive slate w/
thin grg ss layers
N79E 50SE el

IRO 282 Fresh water spring
in olive slate/sltsn
N70E 20SE el 2290T

IRO 283 green ss/sltsn
ledge, thin bedded
slaty cleavage el 2580
N10E 22SE (bedding) Qtzite ledge
visible on slope to N!

IRO 284 N 60 W 10 NE
Med bedded fine yellowish
gray to creme colored
quartz ss w ◁ chitinous
fragments (liguloids)
S[illegible] el 26006
IRO 284 on middle knob
running cedar in woods
old Cam?
IRO 285 el 2650 thick
ledge of gray to white
weathering pebbly qtzite
limonite breccia/cgl float
below on unconformity
N
APRIL 2011 IRONTO QUAD
DUNCAN FARM IRO 224
N 12 W 12 NE tan to
white chert ledge pavement
just below Duncans Gate
WP 002 el 1691 N 37°14 394
N 80 18.502.
IRO 225 N 37°14.477' W 86°18.605'
WP 003 N 14 W 12 NE white
friable qtz ss float 1822
along road - ledges in crk

4/4/11
Duncan Farm
IRO 223 quarry on Paris
Mtn ~ 50' of white qtz
ss more or less Friable
N 20W 8 NE at WP 004
N 37° 14.529' W 80° 18.753' el 1819
N 38 E 20 SE OC at int.
of little Cabin Road & Highfield
(Photo
IRO 226 OC below cabin
along old quarry road
N 60 W 9 NE White qtz
SS @ WP 005 N 37° 14.605 W 80° 18.776'
el 1891'
IRO 227 ledge exposed
at edge of high field
white med qtz arenite
N 40 W 10 NE bedding, brn
weathered Frac N 40 E 30 NE
WP 016 El 1952 N 37 14.605
W 80 18.914
IRO 228 el 1982 N 37 14.710
N 10 E 12 NW WP 007 W 80° 18.883
Photo of White SS ledge
IRO 229 in next drain west
of field WP 008 30 43 N 37 14 358
N 80° 18.948
hummock plunges S 40 E at 16
Top bed N 20 E 12 SE

44111 contd

extensional [illegible] 60 S stained in photos

IRO 2210 el 2162 el 21606 WP 009
N 37 14 915, W 80° 18 834
brn weathed ss ledges
at valley head (small
falls, sand. fill in
valley below ledges above

1' rippled ledg
N 10 W 20 NE

IRO 2211 brn weath ss
ledges in stream bed
N 60 E 16 SE e WP 10
el 2249 N 37° 14 931 W 80 18 894

N 37 14 966
IRO 2212 WP 011 el 2361 W 80 18 989
Photos of med bedded
gray pebbly qtz ss overlying
thin bedded hummocks
cross bedded ss

IRO 2213 WP 012 el 2471
N 37 14 .979 W 80 19 066'
vuggy limon cemented any ss

Float in karst like pitted dip slope landscape ledges above N45E 20SE med bedded rnded ledges med grn ss w/clear chert sand as well as vein qtz ledges just bdow clearing visible on photo

Photos of wet organic soil w/Last years turnips crop in Sag pond or karst like feature at WP 013 N 37° 15.008 W 80° 19.101 el 2519

McM 881 N 20W 10 NE quarry boom at 1:30 thin laminae interlayers with white qtz pebble beds dipping into hole

IRO 2214 wp 014 N 37 15 000 W 80 19.305 el 2600 top 2680 GPS, ledge form on dip slope is karst like here it is clearly Ca ρ rock, pebbly qtz arenite Massive w qtz veins ~ 20' ledge on edge of ridge (photo) N 20E 12SE

4/4/11

MCM 812 N54E 20SE bearing on basal 50 ledge of WP015 N37 15 042 W80 19.178 el 2580'

MCM821 N50E 10SE el 2410 WP 37 15 122 W80 8912 0.6 el 2434 Pebbly brn weath ss ledge on road.

IRO2215 White friable gtz ss ledge makes dip slope N40E 18SE WP017 N37 14 773 W80 18 647 2252

IRO 2215 Thin-med bedded white gtz ss N50E 22NW

IRO 2216 N40E 16 11W WP018 N37 14 896 W80 18.696 el 2031 2080 6

IRO 2218 EW 20 s big (10'x2 ledges cross creek at el 1259 N37 14.787 W80 18 647 WP19

IRO 2219 Stream cascades through large blocks el 1250 6 below big ledges WP20 N37 14.739 W80 18585

4/4/11

No big ledges below!

IRO 2220 E-W 3S

tht x bedded white qtz

SS ledges above ck

ck jammed w/ blocks

at WP 021 N 37 14 635 W 80 18 519

el 1655 at stream forks

16206

IRO 2221 gray to brn orange

mottled chert ocs in road

N 20 W 10 NE at WP 022

N 37° 14.612' W 80° 13.432' el 1607

IRO 2222 gray to brn orange

chert ledge base 10'

above stream N 20W 5NE

WP 023 el 1574 16306

stream 25' below air strike

N 37 14 559 W 80 19 365

4/11/11 Francis farm IRO 237

N 75 E 10 SE White X bedded

sandstone ledge below

big falls WP 024 el 1617

N 37 14 885 W 80 18.264

MCM 89 / el 1916 gray

nodular bedded chert in

road bed N 40E 23 SE

4/11/11 MCM 882 N 60E 20SE
pebble / edge in pavement
exposure at fork in road
WP 026 brn to orange weath
ss + sh pbls & cgl
N 37° 15.039 W 80° 18.481 el 2057
MCM 883 Jim Duncans Tractor
shed and range WP 027
37° 15.093 W 80 18.45 el 2073
MCM 884 WP 028 N 37° 15.145
el 2095 ledges W 80° 18.488
of brn weath, fine qtz
gr ss
MCM 885 head of drain —
trickle of H_2O in 100'
wide block field WP 29
N 37° 15.261 W 80 18.461
el 2120
MCM 886 WP 30 el 2121 ledge N50E 12 SE
N 37 15 257 W 80 18 416
el 2050 spring Flow 5 gal/min
good branch now thick bedded
cross laminated ss
MCM 892 N 60E 20 SE 4'
cross lam ledge, white
qtz ss WP 31 el 1847 N 37 16187
W 80 18226

41 W 11 MCM 893

Shelter cave bencat

Water Fall "Isaacs Rock"

N40E 20SE Massive cross bedded ss water

Fall at WP 032 N 37 15 40"
40' exposure W 80 18 203"
el 1700 ±

MCM 894 Oriskany iron ore overlain by 6' chert gray to dark gray aphanitic

WP 033

N 37 15.118 W 80 18.066
N 20E 20 SE el 1660±

MCM 895 WP 034 N 37 15.031 W 80 17.885
Shale chips begin at break in slope (el 1552

IRO 338 WP 035 el 1667
N 37 14.926 W 80 18 102
low ridges in woods w flt of Foruginous cemented ss (Oriskany)

WP 036 el 1560
N 37 14 291 W 80 18 165
N 50 E 20 SE Needmore
or milboro blk sh

IRO 339 N 20 E 20 SE
20' bank dark mdsn
+ sh beds
WP 037 N 37 14 544
W 80 18 115 el 1423

Hnges N80W plunge S80W

ap N 80 W 45 SW
N80E 40 SE Beds N40E 27S
4/12/11

N80W
S 80E plunge

IRO 2314 20 Shale sap
N40E 24SE
IRO 3714 Cometary WP 038 el 1458
N 37 12 767 W 80 17 046
chert Ok in parking area
N 22 E 16 SE closely jointed
yellow orange ss + ch
some gray
IRO 0 1 0 = Ridgely
E-W brn weath massive bedded

4/12/11

Boonesmill References

Bartholomew and Lewis, 1984

Sinha and Bartholomew 1984

Fokin 2003

Nelson 1962

Pebbly Sandstone E-W 295

WP 039 N37° 12. 526 W80° 17. 349' el 1453 Overlain by light gray fine qtzite or chert with thin beds of light gray green fissile clay shale

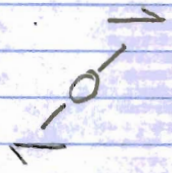
IRO 3715 WP 40 N37° 12. 578 W80° 17 24 N40E 20SE Massive dip slope held up by ledge of brown weathrd coarse pebbly ss el 1455

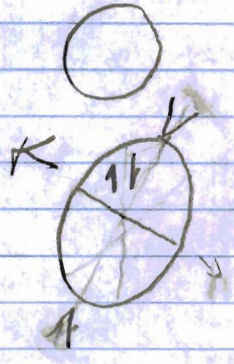
IRO 3716 WP 41 N37 12 604 W80 17 19 Massive fine grained white to pink qtz ss ledge 1446 N 10E 20SE

IRO 5323 WP 42 1531 N37 12 403 W80 17 784 N60E 24 SE slab on d.p slope above slate float

IRO 5224 bench in Millboro Sh
N 72 E 40 SE bench 25
650 m 8 m highwall @ WP
043 N 37 12 363 W 80 17 753
4/13/11
IRO 5219
N 76 E 38 SE bladed Shale
w/ slaty cp cleavage
WP 044 el 1452
N 37 12 151 W 80 18.717
IRO 5324 N 80 E 20 SE
Devonian Sh/Slt Sh Oc
on S side of N Fork
below house - tan Sh/=head
more or above?
IRO 5325 ledge N 48 E 56 SE
at top of Flat iron el 1610
WP 045 N 37 12 462 W 80 17.739'
el 1692
IRO 5326 el 1795 WP 046
N 37° 12.549' W 80 17 687
N 35 E 30 site below at top
of Flat iron, many blocks
Massive pebbly SS, Ferruginous
SS Float below ledge = DO

NE end of Callaway along Hales Cr
MSW 591 garnet gneiss at contact,





4/13/11 cl 1839

IRO 291 N80E 30SE
large flatiron ledges on break in dipslope at WP 47 N 37 12 600 W80 17.675'

Coarse pebbly ss, massive-thick bedded, X lamination karst like topography = landslide head walls?

IRO 292 N 50 E 30SE
brn weath qtz ss w/ pitted surface make pavement in road at WP 100' from gated 1872
48 N 37 12 637 W 80 17.643

IRO 293 orange-white weath qtz ss ledge makes pavement in road N 30W 16NE at WP 49 1903 N 37 12 870 W 80 17657 1903 b

IRO 294 orange white ss ledge in road bed at 1962 at turn up hill N 30 W 10 NE at WP 50 N37 12.971 W80° 17.743

IRO 295 big spring above cabin root zone at WP 51 N 37 12.954 W 80 17.897

4/13/11

orange mottled yellow clay
soil where road cuts
though colluvial deposit
in cove above.

IRO 296 N10W 20NE white qtz
ss ledge below Road
as turning uphill at WP 52
el 2103 N 37 13 017 W80 18 002

IRO 297 pebble ledge N10E
30SE at game clearing
el 21806 WP 053 N 37 13 070 W 80 18 173 el 2141
What a beautiful view up the
valley to Fare rocks

IRO 298 new house spring in
Omb WP 54 el 22
2235 N3713 056
N 20W 20 NE in shale, pebbly
orang ss at turn ~ 30' from
contact N40 W 34 NE
60' wide alluvial fill along
stream below spring

IRO 299 pebbly brn - light
gray ss ledge in
road N5 20E el 23606
2352 N37 12917 8018247

4/13/11

IRO 587 shale and thn bedded orange weathrd graywacke float in field clearing at WP 057 2513 N37 12.848' W80 18.460' el 2475 topo 2580 b —

IRO 588 Massive (1-3') cgl beds interlayered with thin bedded white X/am ss N8E 10SE el 2591 at WP 058 N37 12.805 W80 18.379

IRO 2910 continuous 20' ledge of cgl ss along break in slope blocks on Omb bench below N18W 16NE at WP 059 N37 12.754 W80 18.299 el 2488 lithic cgl F/t on bench

IRO 2911 just above road ledge continues from above N28W 8NE WP 37° 12.707 80° 18.190' 2445 el 2360 b

IRO 2912 el 2180 N40E 18SE big ledge, white qtz arenite coarse, massive bedded WP 61 N37 12.577 W80 18.043 2201

IRO 2913 N60E 14 SE bg ledge makes Flat iron pavement on dip slope just above road at WP 62 N 37 12 583 W 80 17 948 - 2093 2000 6

IRO 2914 orange yellow weathered shale saprolite and wet Omb clay soils in hollows N 75E 20 SE slaty cleavage in road bank below bore site WP 63 N 37 12 553 el 2134 W 80 18 225 2140 6

IRO 5 2 20 N 76E 24 SE White Fg qtz arenite ledge WP 064 N 37 12 434 W 80 1963 80 18 406

IRO 52 21 N60E 30SE thk bedded brn lith ss lithic cgl flt above in top of Omb el 1950 6

IRO 5222 N60E 30SE ss + sh Omb in gorge Qtzite 200' ds el 1980 WP 06 1952 On narrow path 37 12 400 80 18 487 in gorge

IRO 5223 Ledge of qtz arenite crossing ck road switch back at WP 067
1650 N 37 12 346 W8018.492
1756 N 75 E 35 SE pebbly

IRO 5224 WP 068 el 1655
N 37 12 296 W 80 18 508
coase lithic cgl
in roand bank
3" clasts

in gravely matrix
orange brn weathered
N 60 E 55 SE orfoliation
surface — no bedding

IRO 5225 N 70E 60SE contact between huntersville and Needmore
huntersville contains green ( ) shale/ss nodular weathering cgl beds and grey chert WP — Needmore
ochreous saprolite w/slaty clean
WP 069 N 37 12 274 W 80 18553
el 1607 17006

IRO 5226 N 60 E 20 SE strong NW jointed black slaty arg

upper part of stm is block
Field - rock fall area

IRO 5227 hinges in bk slaty
argillite E-W 36 ↳ sinistral
folds

IRO 5228 spl of ls concretion
in Millboro Shale
WP 70 cl 1447 N 37 12 254 W 80 17 997
fine, pyrite rich ls w calcite
Vein N 70E 22 SE

4/15/11

WP 71 cl 1525
N 37 13 888 W 80 18 360
IRO 255
N 5 10 E thick X bedded
ss ledges at creek

IRO 256 N 20W 10 NE 30'
Exposure cross bedded gray
ss in Confed camp
site el 1580 b some fe cement FH
IRO 257 N 10E 14° SE 40' sect
Massive to med bedded
thin X laminated gray
quartz ss el 1700
WP 72 1769 N 37 13 788 W 80 18 604

Check Faults
along strike
Check symbols
4/15/11 WP 73 el 1800
IRO 258 N 37 13.804 80 18.657
Shelter cave / dead calf
Coyote den? 17306
20' exposure gray thk
bedded qtz ss, 100' wide
alluvial belt w/ blocks
up to 10' long
IRO 259 boulder stream issues
from sw stream
two rock foundations
12 x 12 huts? Campsite?
WP
airstrike to N wall (30' exposure)
WP 074 N37° 13.785' 80° 18.836' 1841
IRO 2510 N 12 W 10 NE 4'
brn weath ss ledge
WP 075 < Vs upstream
N37 13.786 W 80 18.833
1900. (1820) b Knick point
IRO 2511 big block field
800-1000 long 300 wide
blocks up to 15' long 3' thk
bench above on spine. cross flt?

IRO 2512 el 19406
beds in stream bottom
NS 10 E prominant
fracture in stream bottom
pavement look "Fresh"
NS vertical cirvular slid
or slump above at WP 76
50 year old poplars on 2006
slump N 37 13704 W 80 18 997
IRO 2420 ledge of cross bed
white friable pebbly ss
w/blueish quartz granules
a in med to fine qtz
mtx above cabin site (stone
pile + flower beds along
old trail at WP 077 N37 B 571
W 80° 19.164' el 2228 3' ledge
N 10 E 10 SE
IRO 2513 contour road is
in white sand soil w/SS
float next to clearcut
at WP 78 N37 13459 W 80 18 979
el 2235
IRO 2514 N 50 W 20 NE 3'
pebble qtzite ledge overlie
1-10' orange weathed
thic cgl then ocheross

ss/sh ychips, in road
at WP 79 N 37°13.352' W el 2279
W 80° 19.017'.
IRO 289 N 56 W 20 NE
yellow orange shly sap
in roadbed at WP 80
N 37 13292 W 80 19 064 verg steep
Topography Omb el 2212

IRO 2516 N80W 30NE 6'
pebbly qtzite overlies
bleached fossiliferous
muddss w finely ribbed
brach shells WP 80 81
inferred molds el 2133
N37 13403 W80 8.682

IRO 2517 gray to orange
brn weathered chert
in road, nodular text
verg fg
N 20 W 1 E NE
Big Island Log & Lumber
Co. Bedford, VA

IRO 2518 N80E 18 NW
pavement wh friable gtz ss
in road el 2003 6

IRO 2519 Chert ledge
in road at 1650'
N 5W 10 NE
100' above fence

4/26/11

IRO 2440 N 28E 12 5E
grn sh/ss contact in drive
WP83 el 1421 N37 11 611
Knows Fred Read W 80 19 946

IRO 2441 N35E 14 5E os
Omb WP 084 el 1628
N 37 11 732 W 80 19965

IRO 517 redux on lipsey Fm
@ WP85 el 1677 N 37° 12.011
Ledge of qtz s s W80° 13.247
in drainage green brn ss sap
below on roadbed

IRO 5117 redux WP 086 el 1717
N37 11 956 W80 19 390
chert Float in drain
above switch back drive
to trailer house 16606

IRO 528 redux @ WP 087
N.37 12.003 W80 19426 el 1785 17406
Ledge of hematite stained
fine qtz ss (Omb or Juniatta)
or Srh or Dor ? Position
on hill above semi karst area
w/ abd cht flt down slope
suggests Helderburg

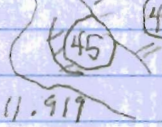
4/26/11

IRO 5142 N 24E 20 SE ledge ~
Forms spur ridge approx
strike based on topo exp.
WP 88 cl 1809 el 1750 ft
N 37° 11.953 W 80° 19.512
Conglomeratic qtz arenite
massive bedded Sh chips
in soil to west blks in drain

IRO 5143 N 20E 15 SE photo
qtz pbl cgl ledge in stream
at WP 89 N37 11 954 W 80 19 557
Photo of ledge to SE cl 1856
1750 ft Sag just Fell above!

IRO 5144 Gnarly chert ledge
SS below N 44E 15 SE
6' thick WP 90 N 37° 11 895
1838, 1780 ft W 80° 19 665
Ledge traceable 100 m
blocks in valley

IRO 5145 SS ledges below
chert road wraps around



cl 1845

N 37° 11.917 cl 1750 ft
W 80° 19 702

4/26/11 cl 1800 b Photos
IRO 5146 WP 91 el 1879
brn weath slaty arg in
stream bank N60E 40SE
N37 11 991 W80 19 593
IRO 5147 pht. of weath
fe cemented Helderberg
ss in road at WP
93 el 1605 N37 12.012 W80° 19.226' 15956
ss interval 35' wide
on road then chert flt
4/27/11 el 2200 lg blks 48
qtz pbl cgl on spur
at switch back
IRO 5149 N45E 15SE
orange yellow ss f
sh sap in road
cut (0 mb at 2260 b
2300 Topo (40' correction)
IRO 5150 el 2100 b sh sap
in embankment, qtz blocks along
ridge line to west and
nose to east
IRO 5151 4' qtz ss ledge
on flat icon at el 2030 b (on
Tipsey Ridge) N30E 28SE

4127 /11

IRO 5145 redux
black slate in
drive below house
SS N36E 20SE
photo of 2 ledges
on road side el 1850
IRO 5152 el 1700 6 Otz
SS overlies weathered
Shale N40E 30SE
to bend by power line

IRO 5153 el 15006 ledges
Omb SS/sh 300'
Cut 20' high N34E20SE
Normal Fit N40E 60 NW
check ✓ photo
el 14806

Todd Walters —
9:30 pm —
Leon — B, bbq

IRO 459 Photo of kilns
at old lime plat
across cedar Run
BBG 661 N 40E 50 SE
sheared gray and
lt gray algal boundsn
in upper Beekmantown
micritic ls beds in
quarry openings along
RR
IRO 411 Photo of OC
of fine, lt gy lam
dol in upper Beekmantown
N64E 72 SE

IRO 412 at E end of
cut Photo from
above N14W 20NE
IRO413 at quarry
N18E 22SE
IRO414 on trail
NW of Cut, nodular
upper beek gyvernolu
ls N 60E 64 NW

IRO 415 N40E 28 SE
Massive bound stone, and micrite with tan dolom. partings large spring at corner
Grannie Walters

IRO 416 N 50 E 20 SE
burrowed argillitic gray micrite across From Bobs Woolgrine pasture

IRO 417 N S 20 E low lying pavement /s exposures in Gen M, lawn at corner of Deercroft and Lusters Gate

IRO 418 N10E 20SE
Massive Med gray grainstone photo w/white calcite veins

IRO 171 N4E 28 SE
black argillaceous lst slaty argillite w/ pencil fine

IRO 7430 EW 60 S
cryptoalgal lamine dol
creme to light gray
WP 583 N37 08 618 W 80 22.248

IRO 7431 gray lam dol
thk bed oc on crest
N78E 80NW WP 584 el 2087
N37° 08.791 W80° 22:398
IRO 7417 redu E-W 80 S
photo of X bedded sand
WP 584 N37° 08 796 cco dol
el 2095 W 80° 22 053
IRO 7432 N80E 65SE
Lammated gray ls and
ribbong bedded dol ls
(blue and tan) WP 585
N37 08 745 W 80 22 305
el 2121

IRO 0312 Red and grn slaty arg. ledges
Form Knob on pipe line WP 139
N37° 12.454 W 80° 15.347 el 2008
N22W 50SW

IRO 6313 Red and Grn arg ocs
on road in Pedlar Hills Preserve
at WP 139 N 37° 12.442 W 80 15 148
el 1652 N 30 W 20 NE

IRO 399 WP 140 N 37° 12.544 W 80° 15.191
el 1697 in hollow on road oc of
grn slaty argillite N55E 60SE
slaty cleavage ~~N 30W 20 NE~~ arg ledge
IRO 3910 N38E ~~46~~ 5E grn arg dol
and grn arg ocs along roadside
WP 141 N37° 12.533 W 80° 15.135
ESN 1710 WP 142 N37° 12.606' W 80° 14.963'
el 1536 Dol ledge on hill to E N20E 40E
Karst spring from cave (1' hole) Photo
in Stream bank below ledge (Ecl?)

ESN 1711 WP 143 N 37° 12.722 W 80° 14.79
el 1436 ledge of frac dol N12E 42SE
on steep slope SE of stream ~ 100' NE of Pt.

ESN 1712 WP 144 N37 12 805 W 80 14.654
el 1365 N22E 24 SE
2' ledge chrty dol

ESN 1713 gray dol ledges behind
ruins N 20W 24 NE 2' ledges on
hillside Redtail hawk soaring over
site

IRO 6313 on logging road into
PHP maroon and green argillite ledges
in cut N30W 20NE WP 145
N 37°12.423' W 80°15.047'

ESN 4114 WP 146 Yl w weath. platy dol
N 37 12.186 W 80°14.507 el 1359
N10W 14 NE, Karst at turn

ESN 4115 WP 147 N 37 12.037 W 80°14.452'
el 1328 N 35E 14 SE cross jointed
thick bedded gry xline dol

ESN 4116 massive bedded gray dol
then shaley weath yellow gry
dolomine (N64E 44 SE w
pods of polymictic breccia. WP148
N 37°12.120 W 80 14 385 el 1320

ESN 4117 Massive Rusty weath
xline dol w/ platy inter beds
N 70W 40 NE WP 149 N 37 12.239 W
el 1279 W 80 14.353

ESN 4118 Matt ox Fem Cem
WP 157 N 37 12.409 W 80 14 357

IRO 514 Rock Fall site
N 70 E 24 NW ledge photo
w/ shale below 10' thk
qtzite N 37° 11.762 W 80 19.333
el 1413 WP 234
IRO 515 Fagg Cgl site
N 20 W 3 NE cgl ledge crosses
north fork at WP 235
N 37° 11.721 W 80° 19.453
14.09 Faults trend N 30 E
down to SE 80° dip
3/17/10 Falls Ridge Preserve
IRO 543 1st 5' travertine bank
at WP 236 N 37° 11.522 W 080° 19.231
el 1507 (1340) 1460 T
IRO 544 WP 237 N 37° 11.454 W 80° 19.168
WP 237 el 1483 3' travertine bank above
grn fine grss + argillite (Ort) Photo
beds steepen up stream
IRO 545 Photos of kiln and OC
on SE bank, 60' cliff of tufa
on W side below? Fault. WP 238
N 37° 11.418 W 80° 19.144 el 1551 (Top)
15' □ square ⊓ 20 IRO 5510
Ort thk arg msltsn, ss - slaty arg
grn WP Mica folcalfolds hinges pl hinging

IRO 5521 Massive burrowed gray x line dolomite lt-dk gy N44W 5° NE WP 251 N37 11 132 W80 18.671 cl 1853

IRO 5522 Breccia core of Fold or ancient sink fill

A N35E 20 NW B N80W 8 SW

WP 252
N37 11 031
W80 18 863
1620

IRO 5523 N34E 52SE gray vuggy dol w brecciated argillite beds WP 253 N37 11 064 W80 18.987 cl 1613

IRO5524 N45E 36SE gry. Fluggy dol N37 11 143 W8019.011 cl 1584 WP 254

IRO5525 N86W 40 NE tk bded gry dolomite across from spring may show back thrust bedding dip shift From 40 NW to 20 NW

IRO 5526 Eren N20W 10NE thin laminated dol w/ relief on lam looks like fco N84W 1C NE

IRO 646 N 70E 20SE
thin bedded gray dol
IRO 647 N 30E 50SE, dol
Max meadows breccia sap
on hilltop to E & W
IRO 648 N 10E 20NW
thin bedded gray lam
dol + phyllite w MMb
pods tight folds

plunging NW
~30W 5NW plunge
AP N 20W 40NE
IRO 564 N 40E 20SE
thk bedded gray dol
IRO 565 N 20W 24SW
Thin bedded gray dol
New Cem to NW
Pond between road and
I81
IRO 591
N 20E 40SE platy thin
bedded dol, breccia
block across road

IRO 581 brecciated gray dol, some thin bedded N50W 65 SW orange ocheous sap 2 photos one of open vuggy text one of chert clasts in fine dol mtx

IRO 582 highly fract dol f/s NS vertical in road

IRO 593 N48E 40 SE thk bedded gray dol ledge, breccia below

IRO 594 N60W 5° NE thin bedded dol above road to E

IRO 595 N40W 50 NE thick bedded brecciated dol on road embankment

IRO 596 N74° W 60NE thin bedded platy dol in road bank. Dol in stream bed below Massive algal f/s + dol in tight turn below

IRO 7320 5/5/11

not on map because of corner effects EW 30N ribbony dol bed over lys algal bed 1

IRO Landslide 453

Rob Carman 5/28/11

37° 11' 03.53 N

80° 20' 49.47" W

photos on 5/30/11

IRO 454 N8E 30 SE red grn thk bedded ss w/ carg interbeds Obz

~~IRO 455~~ in drive cut at el 14606

olive grn to yellow argillite and fine ss (omb)

bedding N8E 32 SE

cleavage N10E 60 SE

mn strong green veining N20E 80 SE box work

breccia bed cuts red and yellow arg in Obz

conjugate joint

5/30/0

N 05 E 80 NW (broad) Conjugate

N 20 E 75 SE Fract

IRO 456 Greenish gray to tan weath slaty argillite cleavage in Wilson Ck below bridge N 10 E 30 SE

IRO 457 similar arg cleavage in Cedar Run above bridge N 40 E 82 NW on 2" ls or ss bed projects above water

IRO 457 Tan weathered slaty argillite (Oe N 20 E 18 SE

IRO 458 Massive bedded Beekmantown dol below road in RR cut N 4 E 26 SE

IRO 459 N 2 E 15 SE Massive gry dol w/ 1' thick thrombolite bed in upper Beekm.

5/5/11 IRO 5526 on 1900'
Knob platy dol ledge to
SW N50E 40 NW el
1910 b N52E 60 NW
mottled burrowed dol.
on NE Nose
IRO 5527 light gray
argillite Float hold
up Knob N60E 20 NW
Massive dol ledge on
NE nose sinks all around
3-6' wide 8' high
cave passage on joint
N80W vert. bed in
thin bedded dol + arg
N60E 10 NW
IRO 561 platy thin bedded
dol on nose in old
overgrown Field clearing
N70W 20 SW
IRO 562 orange weathered/rexlin
silic dol breccia on
old road at el 1620 b

5/5/11 9miles to Falls Ridge

IRO 5338 N70E 30° NW
dk gry argillaceous
limestone (Oc) low
OCS on trail below
Max Meadows type brec.

IRO 5339 sh + gtz ss (brn tgy
Float) Oba on ridge above
saddle to NE of road
intersection el 1580'

IRO 562 N20W 50SW
platy gray to brn weath
do/ ledges on trail
at el 1810'

5/6/11 IRO 5340
N54W 60 NE Mass lam
brec do/ by garage
20° NE ledges to right

IRO 644 N60E 40
SE limb of anticline in
thin bedded elGroot
E-W 20 NW NW limb
Photos N40W 80 NE gray
algal dol/ls

IRO 645 N80W 50 NE
massive gray brecciated do.

IRO 5435

IRO 5436 Trail crosses ls el 1925
beds / blue gray and yellow brn
N 60E 40 SE WP 573 N37° 11.124 W80 19.802

IRO 5437 gray frac dol ledge
Cross Frac N8W 80 NE
bed N80E 70SE WP 574 N37° 11.169 W80° 19.798
el 1930 near top of knob

IRO 5438 Folded thin bedded
brecciated dolomite ledge
N 10W 50 SW ↑↑ 5 folds S10W S
WP 575 N37° 11 208 W80° 19. 791
el 1831

IRO 5439 red and brown ss
cobbles hang in shale rich
regolith below chorty dol ledges
WP 576 N37 11 304 W80 19 704 el 1942

IRO 5424 b at base of 65 seq
photo of ore bed (in)
cgl. ·5F+ thk E-W 12 N el 1482

WP 577 N37 11 029 W80 19.573

IRD 7425 N80E 80° SE
gray chert layer in soil
2' thick at WP 578
N 37 08 483 W 80° 22.249
IRD 7426 N10W vert chert
stringer in road
IRD 747 redux ~~NW~~ 70N
Thn to thk bedded dol.
dk grey weathes light
thin siliceous silt lam
WP 579 N 37 08638 W80 22 232
el 2072
IRD 7427 spring at
WP 580 N 37 08 596 W80 22.265
el 2073
IRD 7428 big flowing spring
with spring box and house
WP 581 N 37 08 565
W 80 22.236
IRD 7429 black limestone
with coarse blocks of
chert (Chepultepec)
N40E 20NW on pond
bank at WP 582 N37°08.594
W80°22.348

BBG 333 blue gray micritic limestone el 1855 N70W 15 NE

BBG 334 is at el 1750 & N10W 20 NE stylolite along bedding

IRO 115 N20W 10 NE el 1720-30 & dk gray dol. thk bedded chts

IRO 116 above spring (septic) There is gently dipping outcrop of thin bedded argillaceous ls and dk gray slaty argillite el 16006 N20W 10 NE

IRO 121 el 15776 cobbles and pebbles as well (ss) as shaly clasts in road embankment

IRO 122 ledge of coarse grained ls in creek below bridge

IRO 123 EW 30S sh/arg ls in roadcut

IRO 124 N10E 20 De shly ls sap el 16001

shale chips = Omb
N 37° 14 207 W 80 20 012
IRO 132 el 2140 b
olive green slf sh & ss float
el 2130 red to pale pink
slft mdsn float at IRO 133
N 37° 14.317 W 80° 20.605'
IRO 134 N15E 22SE bpo
in hole cut on embankment of farm road at el 2080 T
N 37°14.365' W 80° 20.830'
IRO 135 N60E 16 SE el 2220
N 37° 14, 208 W 80° 20.723
IRO 166 el 2375 + 2377 b
blocks of wh/lt gry.
cg cgl ss on flat
top erosional surface
N 37° 14.088 W 80° 20.615'
105 pm lunch Possible sinkh.
deposits? Ochreous sh wreath
on top of round knob
IRO 167 el 2500 b Fenceline
in cut across steep spur
olive weathered Omb sand, arg
ls, sh + grainstone (spl)

11/3/11

IRO-1-6-7 contd N20W16NE
N 37° 14.102' W 80 20 467
photos and rocks pls

IRO 168 coarse cgl blks
in debris flow deposit
el 2150+ (2200?)

IRO 156 el 1850T on
old wagon road large blks
of Conglomerate (Dr
N 37° 13.932 W 80° 20.882

IRO-157 N 20W 20 NE sh
bank across from cabin
site on side of debris flow
deposit el 1780? N 37 14 002 W 80 21.054

IRO-158 N10E 16 SE on
side of debris as above

IRO 158 N 10W 18 NE
N 37 14.212 W 80° 21.458

IRO 159 N20W 5 NE
black shly ls in RR

IRO 1510 N20W 16 NE
thin bedded argillite,
tuffaceous ls in road
N 37° 13.393 W 80° 21.48
~10-20' ls, thin bedded
blkish clay

IRO 1511 Fossiliferous massive bedded ls outcrops in road at N 37 13.390 W80°21.402 N10W 20 NE

IRO 1512 ocherous weath calc argillite in road cut N18° W 12 NE N 37 13 385 W 80°21.173

IRO 1513 N 20 E 18 SE hill cap w/ blocks ocherou calc argillite at N 37 13.417 W 21.023

IRO 1514 Bays SS at el 1900 ~ 20' SS ledge above orchers brown sh sap (calc) N 37 13.490 W 80° 20.872' N20W 16 NE

IRO 169 el 2060 b at feeding sta cut in Omb, m-d bedded fossil hash beds N20W 20 NE, N 37 13.513 W 80° 20.033'

IRO 192 el 2050 b at end of ridge on TMH fence N 10 W 4 NE ocheous and gray weath ss = (Ob

N 37° 13.296 N 80 20.857

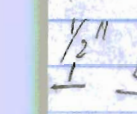
1 Outcrop on Pence Farm
IRO 172 Black argillite w/ slaty cleavage thin (1") Limestone beds N 20W 65W
IRO 183 Same as above N50E 40SE in grassy yard on North Fork
IRO 173 by creek irregularly fossiliferous med gray Wackestone lt gry argillaceous ptings Limestone w/o chert N 20E 16SE photo
IRO 174 in curve First cherty beds exposed massive med grained gray wackestone w/ black chert nodules that weather yellow brn, nodular beddings N 16W 20NE
IRO 175 just below Oe contact (black arg) above is Wacke N 30E 16SE as above & giant ceph

IRO 176 ls tan bedded at top N60W 20NE arr strike N70W

IRO 177 N40E 10SE cephalopod hash wacke grey to brn weath

IRO 178 Massive rnded N10E 6SE grey ocs of fossil hash wacke sh (on corner) below on NC road ocs of gray micrite, thick bedded (photos) ~ 6' bed then arg ls below N22E 6°SE. probably Not

IRO 179 el 16506 dolomite ledge in road ditch N18E 30SE Tan to gray



some sed breccia some burrowed = upper Peak mantown

IRO 180 N12W 8NE Mottled gy + brn-tan ls

NOTES 1/13/12

IRO 1420 20' cliff massive gray irregularly banded wackesn (Photo) N37 13.838 W80 22.000
NS 15E

IRO 1421 ledges on hill slope N8E 15SE blue gray micritic ls massive ledges just above fenceline bend in road
N3713 853 W80 22.045

IRO 1422 thin beaded reddish coarse X/line Ls overlies fine gray dol NS 18E top Obi
N37°13.895 W80 22.082

IRO 1423 Cemetary on Erim of 50' dia doline in Ol at
N 37 13 767 W 80 21 933
Jesse Trussel 1919-1957

Jan 16 1728 EdN BS hale out Crop
IRO' Bridge Abutment
water L N 8 W 10 SE
Clev EW Dip 50° S
LoC N 37° 12.725
W80° 21.675

1729 Fold
N 26 W inc 24 NE
Boudon ~~plan~~ N 70 E
(PIC) plu N 101
parall to pencil cleav
N 37 13.022
W 80 21.737

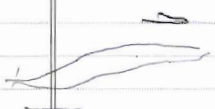
IRO 185 EdSh
Bed N 50 W 20 NE
(PIC) N 37° 12.092
W 80° 21.557'

photo

Day Runner

NOTES

Cleav PIN inters
Plong Due E at 12
Fracts stop down E on bed
Strik N 20 W
Dip 72 to N E
open



IRO 186 Lt yr Lam argous
Lime or Calc argu
N 37° 13.075' W 80° 21.327'
Bed str N 20W Dip 20E
Bed Cl parallel

gray micrite below in
front yard at el
1585
IRO 1711 el 1700 b dol,
gry, burrow mottled
w/ chert in ditch
N10E 20SE, gives
orange clay sap
with tan partings
IRO 141 Mass bedded
algal laminite
w wavrowed aspect
gray xline dol mtx
N 20 E 16 SE
IRO 142 N 30 E 16SE
inter bedded ls + dol
some pebbly, some
burrowed beds el 1650
some tan laminites
IRO 143, just past
Hicory Hill drive
Blue gray micritic ls ~10' thk
overlies dol, overlain by
thk bedded dol N10E 16SE
Very cherty soils in woods
below

IRO 144
Blue gray ls, N12W 14NE
micritic texture with
calcite "eyes" On
IRO 145 dol, lt gy rexline
chrty regolith blocks
in roadcut ~ 50' above ls
IRO 146 el 1560 gray
wakestone w/ irregular
bur. bedding (massive)
dk gry chert, N14W 16NE
photos
IRO 147 top ls in creek
bed photo N 10 E 18 SE
IRO 148 photo of Edinburg
slaty cleav argillite
N30W 50 SW prominent Frac
N10 20 SE. upper el dep
comes to road at Hahns drive
IRO 149 soft sed def
in Oe (bouding) N30E 20SE
S60E 10SE lineation (hinges
plunge 10
IRO 111 argillite Oc at grap loc
ls bouding bk slaty arg below
N 2W 12 NE
sample for paleo

May 30 2011

E trailer, Com

800 298 8924

12 - 6 pm Sunday

#23210" brake assembly (Dexter

Left & Right 10 x 2¼ 37.65

16 nuts 0.25 = 4.00 (#6-17)

16 lock washe 0.15 = 2.40 (#5-8)

Brake assembly 84556UC3

Drum

4 drums at 62.95

84556403 5 on 5 (3500)

#4763 ground wires

ring terminal w/ stock

290-991 dust cap

adjust to tight

back off 10 clicks

Wire 10 g F to b

jumpers

Scotch lock For 10

Gauge on Jumper

tape connections

loom clamps

T pole brakes

blue to blue brakes

white ground

IRO 1410 massive bedded gray wackesn w. dk fossil hash layers white calc veins along stratificat. N24E 18SE

IRO 112 N42E 18 SE gry mottled wäckestone in sinkhole next to Gateway Babtist

IRO 113 massive gray micrite beds outcrop on corner of Bunny Trail, chert debris above N15E 18°SE pavement OC on Bunny Trail N4E 18 SE in front of 2167 Harding looks dolomitic

IRO 114 on Mill Point Mass dol blocks upper beek, cht gravel soil

BBG 331 at turnaround el 19206 N64W 20NE Lot 18 on Platt, brn weathered massive bedded Beekmantown Dolomite

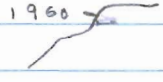
BBG 352 N30W 10 NE mass crypto algal laminite Beek

NOV 2

BBG - 3619 bedding
in dol above treatment
plant N 4W 10 NE
at N 37° 13.300 W 80° 23.252

NOV 3 Hickory Hill Farm
el
IRO 151 N 5E 16 SE
paperville type shale in
bank at N 37° 14.072 W 80° 21.480
IRO 152 N40E 14 SE (bed)
very dk gry argillaceous
ls w/ slaty cleavage.
Fractures N 20W 45 SW
photos N 60E 80 SE
N 37° 14.057 W 80 21.388
IRO 124 N14E 14 SE
argillaceous ls
N 37 14 222 W 80 21.340
IRO 125 N 18W 30 NE
bedding in lgt gy
weath dk argillaceous ls
on ridge el 1670 - 80
N 37 14.218 W 80° 21.250
IRO 126 N 60E 45 SE
el 17806 N 37° 14.168
olive weath arg W 80 21.103
ocheous yellow soil

IRO-153 el 1850 b grn-brn-red
fine ss or siltsn w/
finely ribbed brachiopod imp.
N 14 W 12 NE (Ob?)
N 37° 14.135 W 80 21.007
IRO-154 el 1960 b white
weathered medium grained
qtz ss N 37° 14.123' W 80 21.045'
distinct break in slope
= Ob. Walker Mtn ss



IRO 155 white weathering lithic
feldspar rich medium
ss ledge at el 2020-30 b
N 37° 14.115' W 80° 21.012
bedding N 20 W 12° NE
ledge crops out above on
nose of hill pit? mined
for building stone?
IRO-127 sh chips no Oc
baro correction 40 on
2084 knob
IRO-131 el 20 80 bg
blind olive-brn fossif
sand / ls blocks olive

March 3 2011 Paris Mtn

IRO 161 el 2921 (T+b) NS 12E
4' thk ledge thk bedded pebbly white qtz ss on ridge top by cottage

IRO 162 el 2850 on Hahns Fence line boulders of Ferruginous cemeted ss or limonite ore (Fagg Cgl) no tuscarora on this spur

IRO 163 at old Fence line on TMH property el 2790 greenish gray silty sh chips w/ fine thin bedded graywacke Ort Conn

IRO 164 air strike on sh - med bedded ss in martinsburg on next spur 8° aparent dip N30W from here est strike N 30 W 8° dip NE

IRO 165 on base Devonian ss unit photos at el 28206 beds N 20 W 18 NE bench on sh below cover W 21 Ks

IRO 2515 N 10 E 16 SE
4' ledge of white X bedded
quartz ss above bench
el 26806 pos. Tusc below

IRO 2516 el 2700 pit / limonite
on nose ~ 15' dia photo
IRO 2517 orange-yellow ocher
cemented sand float
looks like Helderberg
IRO 2518 Photo of Tower
strong boulder stream aboveroad
el 2490
IRO 2519 OC pavement on
end of switch back el 24106
N 4 W 16 NE Spring at road
50 M N
March 7 2011 Cool clear IRO 5116
E-W 44 S ledge of
cg gray qtzite at IRO-
5116
IRO 5215 above new house
ledge breaks across. ck
58-60 E 18 SE coarse
pebbl qtzite Float ~ keefer

Nov 29 2010 IRO-Reosdale

Talked w/ Mr. Sheppard (IRO 222) owner of property very friendly says old quarry was sand quarry (friable sand) crushed for construction. Belongs to Russell Duncan, Ditch Witch of Salem, (IRO 223) ~ law Lyn Reese, his brother in law owns upper house (IRO 241). Talked w/ Reese made trav. gate was locked.

IRO 242 massive bedded med-coarse impure (calc?) sand w pits on bedding = 5 ft thick burrows N10E 6SE = keefer? el 2158 spot el on map

IRO 241 Hummocky bedded Egem thick bedded light gray to white sandstone w 0.5" pebble zones N4E 18SE 2200 ft

IRO 243 coarse massive sand ledge N 10 E 14 SE overlies thin white sand beds (Photo el 2260

IRO 244, Freeable white med/thk bedded qtz ss el 2375 N10E 10SE

IRO 245 el 2480 b ledge at head of hollow N12E 14SE massive pebbly white SS

IRO 246 el 2680 b ledge between Karst depression N8E 12SE Pebbly ss, cg lt grey—w/ red brn weathering

IRO 247 Dip slope in mass bedded grg pebbly ss. el 2775 N12E 16SE Dip slope above to top summit

IRO 248 doline el 2700 b ~50' across 10' deep

11/29/2010 21 miles Mazda B2300

IRO 5117 chert Float
below rose hill
ledge in switch back
by house at el 1750 6

March 2 2011
IRO 251 Huntersville Chrt
from road pavement Cdip
slope N 37° 14' 08.68"
W 80° 18' 25.30"
Spls For Chem

IRO 241 Ridgely SS Oc
37° 14' 00.46N 80° 19' 15.9"
IRO 242 Ridgely Core
37° 13' 57.73 N 80° 19' 10.84"W

March 3
IRO 248 trail crossing
stream large blocks Field
by cabin at 2250 ledge N2E12St
IRO 249 trail Veers to left
below nearly Flat ledges
of cg pebbly qtz SS
N 10W 18 NE CKeefer? cl2300
Following drain

IRO 2410 N S 16 E
Photos of thk (6'
pebbly ledge w/qtz
cgl layers x beds
el 2430b
IRO 2411 at head of
hollow 10-20' by 3'- blocks
as valley fill some coarse brn
ss/w orange oceous replacement
cement between cg qtz sand
grains - looks like oriskany
or martinsburg - el 2500 ~ 80'
baro error el 2520 - spring
emergant from Colluvium including
orange ocheous ss + sh + coarse
limonite goethite cobble sized flt
IRO 2412 photos and spl
of limonite from ore pit
20' dia 8' deep 40' trench
below el 2600' photos
N 37°13' 45.03" W 80° 19' 41.73
IRO 2413 el 2650 on road pavement
outcrop white friable ss
N 10E 10SE bedding
IRO 2414 el 2720 pavement
white friable ss N S6W 10NE

IRO253 coarse cgl qtz sand overlain by gray slaty argillite N22E 10 SE cf qt ccm 2158 Photos

IRO 254 Fine white friable ss w/ limonite layers grading to brn red sandy clay sap (Helderberg Dr) E 1950 b N 5E 15 SE

IRO263 N 40E 10°SE ledge between pig wallow and barn chert or qtzite?

11-15-2010 :

IRO239 Large sh oc on stream bank N40 E 18 SE Dm

IRO 264 Air shot white-tan sand soil looks like Db

IRO 319 New house on nose drive way exposes orange to olive weathed shale and thin medium bedded siliceous argillite / fine ss beds, Extensive qtz ss clasts on road above curve and around buildings

April Danner
Terry Nichoson
Civil war trails grant
On campus tour for sesquicentenary
Overview Black Family Cemetery
Jane Alexander Black 1832 Blacks woods
15 20 years ago African american lam
Mtn Rifleman
Col Ronald - Cambria originally
named for him
Wm Sarvey - worked at White
Sulfur springs Hospital
Conowheny block (1) Cco block BBG 34
BBG 348 sinkhole?

IRO 2 3 10 20' sh bank Dm
dk gry slaty argillite BPC
cleavage N 30E 20 SE
just below gate
IRO 3 1 10 slaty argillite
w/ 1 - 2" mass silt
or ls beds Dm
IRO 2 65 sh mush wad
slaty cleaved bk
N
argillite hinge plunging N 50 E
at 35°

IRO 267 N 74 W 20 NE Massive qtzite ledge/ spring with arrowheads

IRO 268 dk gry slaty argillite outcrops in roadbed, N76W 50NE

IRO 3413 Black slaty arg Exposed in driveway to new house N80E 50NW

IRO 3411 N80W 50NE Black slaty ar

IRO 3412 DK gry slty arg N56W 40NE BPC

IRO 3413 N40E 20NE Black slaty argillite some thinS beds

11/18/10 MCM 988

Bob Lowells Lot 3950

NCOE 18SE gry weathed argillite w/ slaty cleavage very black well cuttings.

MCM 989 Orange weath black micrite beds (nodules) weat out of ridgeline N80E 20SE on ridge

black slaty argillite clean

MCM 9810 N50E 20SE

Gray blk argillite in spillway Hickory Knob Pond

slaty pavement on road to pond, cht and qtzite cobbles and pebbles scattered on upland surface

MCM 9811 Shale bank on lot 7 blk 5 slaty argillite cleavage N60E 18 SE

11/5/10 cool, partly cloudy

IRO 338 Db/Dm contact 50' above tracks on road up drainage above house el 1800 N 44 W 18 NE med bedded rusty weathered fine ss

IRO 339 N 70 W 18 NE el 1660 Tm (fg Fogs ss flt on NW slope at 1630' bench

IRO 3310 fg white - creme weathered ss flt 1630-60 bench on top not fossil rich

IRO 3311 el 1760 B N 70 E 20 SE lt gray to brn weathered slt sn and fine muscovite rich ss OCs on steep trail below power line

IRO 3312 N 8° E 25 E olive grn clay sh w/ flaty cleavage at el 1760

IRO 3313 N 80 E 20 NW el 14406 Db at head of valley

Cold 1" snow on ground

11/15/10 Moutain Lake (Eggleston)

37 21 832 80 31 808 4089

① red N40E 16-17 SE el 3500

Joint N80E vert 80N

Joint N48W 80SW

Location N 37 22.114

W 80 34 467

② water spl in spring branch 3900

3) Spring revisited 3980

③ Outcrop of tassarora - 8' le 1 ft

Flat to slightly dipping

ethead of rock glacier

in Sartain Brach

④

④ Begin red ss Float Srh

11/08/10

IRO 324 A Fault N80 80 SE

bed s(FW) FW 5N

(HW) N80W 20 SW

B Thrust

N50E 18° SE

bed N70E 10SE

Begin 11/9/10

N 72 E 18

light gry

sh/slaty

cem

IRO 327

massive

weathered

gry beneath

IRO 327A Truncating

just NW of

327 B N8W vert

Fault

cem N 20W 80SW

another ~~do~~ to E fault

(photo

N80E

11/09/10

IRO 325 thk ss beds in gry

shale Db photo N72E 26 SE

IRO 326 N40E 3 SE

thnls/slt interbeds in gray sh

IRO 328 photo of
Gently dipping Db/Dm
contact. Beds N60W 20NE
Milboro dk gry thn bedded
to massive slaty (bpc).
mdsn
Brallier, gry-olive gry tan weath
Mudsn w med-thin fine
sand and silt beds
Photo
IRO 329 N20E 20SE Milboro
/edge on S. bank of stream
IRO 3210 water line in stream
bottom N40W 3° NE
IRO 311 N40W 20SW Dm in bank
just above 622 bridge
IRO 312 N40E 15SE Dm
on road bank
MeM 971 oc of gray shale, Fissile
on road bank at Taylor house
314 half Acre of Rocks Road
N40E 30SE
IRO 313 large blocks of
white qtz arenite along
stream and in yds = Of

11/08/10 Sunny cool, Bradshaw Road
MCM 994 N20E 17 SE gray slaty
cleaved mudsn w/ burrows
thin ss/sltsn clasts in soil
MCM 995 N20E 18 SE gray
weath sh w/ rusty weathered
fine ss beds ~ 2-4" thick
IRO 3314 N10E 14 SE
30' high bank in gray to
greenish gray mudsn w/ ls
concretions at top of lower
1/3 SE dipping cleavage
breaks across massive
Mudsn CPhotal N30E 30SE
IRO 3315 N66E 4SE gray
to pale pink orange
weathered clay shale
w/ bedding plane cleavage
in ditch, very bleached
soils chips no ss or sltsn
float on slope = DM
at el 1380 ft
IRO 3316 N70E 4SE
total saprolite lt gry
pink sandy clay from

Mgwy, ss and silstone clasts
in soil. Old td? at
New house

IRO 321 sh + fg ss float
def braillier sap, some
rounded cobbles of Td

IRO 322 sh + fg ss float
wet - smelly sap
on road bank = septic
failure N40E 10 SE
in cut bank on Lindsy road
(SR 1054)

IRO 323 Lot 47A 2920 Taylor
Lane, yellow orange shale
saprolite on road side
Dbr. 10" p.t N40E 10° ST

IRO 324 almost SS OC in
Brenda Masons yard

IRO 3317 N70W 20 NE
cleavage in lt gry
to pink orange slaty
saprolite very little SS at all
Brenda Mason

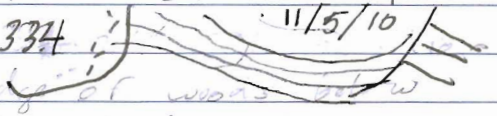
IRO 335 11/1/10

N 40 E 15° SE dk grg to black mdsn w/ slaty cleavage forms 30' cliff below RR

MCM991 N 50E 30 SE Thn/med qtz ss beds in gray shale sap

Db in 2 bench 60' cut

IRO 334 11/5/10



at edge of woods below

Syncline between 2 drains

IRO 333 cliff above creek

N 50 E 15 SE dk gry mdsn w/ slaty cleavage

some limestone concretions, 41' is bed? Om

IRO 337 ss flt at edge of Td

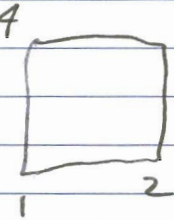
IRO 336 " edge of field above tracks

GOOGLE EARTH view side bar (remove) ctrl alt print screen, edit paste Scale 70%

Scale, hold shift to maintain aspect ratio

Elliston Coordinates

UL 37° 15" 80° 15"
UR 37° 15' 80° 7' 30"
LL 37 07 30 80° 15"
LR 37 07 30 80 7' 30"



export PDF
adobe
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add image overly
Loc
First Loc (1.1.

Ironto 600 Pdf
LL

LL 37.15 80 22.30
UR 37 15 80.15

ESN 1714 aband. quarry thk bedded dol
N 25E 40 SE strike
N 66W 80SW joint
WP 152 N 37 12 583 W 80 14 296 el 1238
on bench above Flood plain ~ 100 m
ESN 4118 Rusty brn weathered dol
in lower elbrook Massive to
thin bedded NGW 20 NE plunging
anticlinal nose (pix)
Jan 29 '2010 Ironto Coated cloudy
IRO 362 olive grn to tan sh
N 80 W 20 NE WP 152 N 37 13 931 el 1245
Brallier fm w/ sltsn W 80 15 431
partings
IRO 363 N 45E 18 SE 2' sltsn
beds w/ grn shly interbeds
WP 153 N 37° 13.887' W 80° 15.544' 1275
IRO 364 Photo of Brallier / Millboro
contact in rail cut WP 154
N 37 13.780 W 80 15.807
N 46E 18SE Photo of Ot synform
N 80 E 5 NE
Brallier in cut to SW
IRO 351 olive gray weath shale
with med (1') (6") disrupted

1/29/10 IRO 351
silt beds N 56 E 50 SE
at WP 154 N37° 13.683 W 80° 15.841
IRO 365 el 1387. Section of steeper
dipping reg bedded 2" ss rust red
IRO 365 weathered forms 100' cliff
above river
IRO 366 el 1599 WP 155 N37° 13.619
shaley float changes to W80° 15.678
tan phyll or platy arg. W
cobble sized gry crystalline dol or ss.
IRO 367 ylw brn sh + gray and
red ss (qtz) Float on semi
bench at WP 156 N37 13 577 W 80 15 0 12
el 1730 (Ord bays Fm?) Dolomite
on bench above
IRO 368 Oc thk bedded gocar
chty dol N 78E 20SE
IRO WP 157 el 1812 N 37 13.555 W 80 15.551
IRO 369 soil type changes
from choc brn clay carb to
thn tan and red phyllite chips
N37 13.509 W80 15.511 el 1979
(2021)
IRO 3610 Ribbon banded and
laminated s.l. dol N 76W 30NE

IRO 3618 Needmore shale
Olive grn thn bedded mdstn
rust red weathering
strong joints of faults
N44E 74 NW // 26 E 6 SE

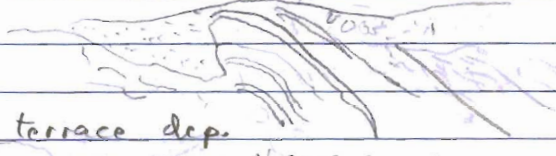
IRO 3619 N60E 30SE bedding in green thin bedded mudstone - Needmore

IRO 3620 N80E 4NE
assymetric anticlinal hinge
in green sh and mudstn

IRO 3621 N76E 40 SE green-gray lustrous mdstn w/ slaty cleavage at private crossing

IRO 3622 10' at least yellow sandy td w 2' white qtzite bldrs at top of cut Fine sandy soil washed over gray sh in RR cuts

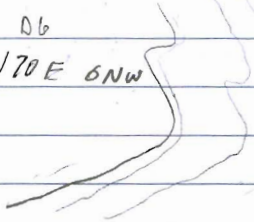
IRO 3623 Fault Scarp??



in terrace dep.
Fault trends N 30 E 70 SE
beds trend N50E 20 SE
(medium bedded fine ss + sh = Db

IRO 331 FW 40 40 crenulated 'chevron' folding in upper millboro then overturned sands in Bralier, Contact well exposed here

N70E 80 SE DT limbs →



IRO 332 Flat lying Dm w/ regular thin to med beds of fine rusty sand

Main brailler Contact ~ 30' above at 1st bench large dark section above 2nd bench ~ 100' cut

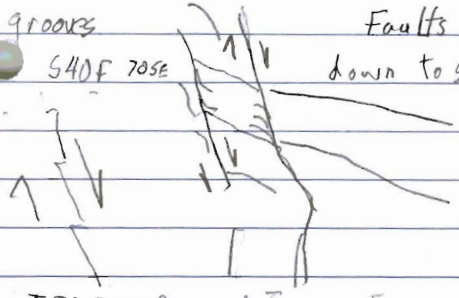
IRO 333 Flat lying Dm or Db w/ old channel N60W 4

IRO 334 Sap of Brailler thin bedded ss clasts in Fold

ESN NOV 1 2010

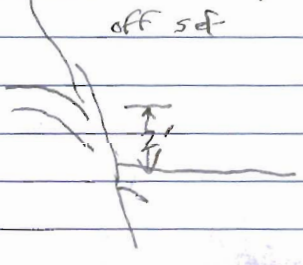
Bowers Farm at "Bradshaw"

sign on NW switch for trash train 06 Brallier, gray fg ss thn - med bedded (10-20cm) ss in gray shale mtx N60E 15SE weathers olive-brown

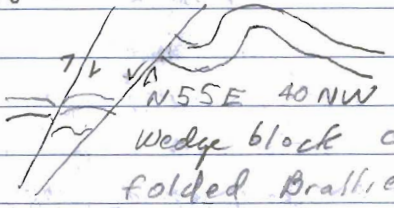


IRD 3615 Bowers' Trash Train

Brallier at Breast height N80E 15SE. greenish gray ss in gray shale thicker rusty beds above fault N10E 75SE

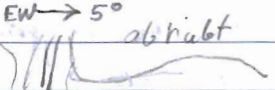


IRO 3616



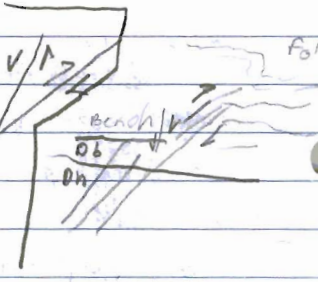
Wedge block cuts folded Brallier

above



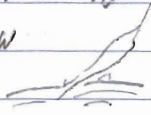
10m

hinge plunging EW at 5°r appears to break into reverse (back thrust) fault in hinge, does not penetrate lower bench except as Flowen structure



prod marks current indicators on bed bottoms = Turbidite flow

IRO 3617 NW dipping Normal faults N35E 60NW offset limy strata in upper Millboro



MCM 981 N40E 18SE Db sandstone bed in saprolite along ridge road (inc) white ss / tan sh extremely leached silty soil

MCM 982 tan to reddish weathered argillite w slaty cleavage on power line N66E 45SE

MCM 996 0-4" ang qtz ss clasts in sandy soil along power line ± Db

MCM 983 tan weathered argillite w/ slaty cleavage N60E 60SE on trail elevation 1430 ft

MCM 984 in curve on trail at 1480-90 thin bedded silty argillite w/ qtz sandbeds N40E 30SE

MCM 985 white sandy soil angular ss + sltst clasts two photos of typical Dm regolith

McM 986

Photos of Shale Cut
200 x 40 x 40 presumably
a road under construction
N60E 15SE massive
gray weathy argillite
W(bpc) Dm? el 1500
McM987 thin bedded silt/ss
layers above pit in
curve on old road bed
N30E 30SE D6??
11/10/10 IRO 314 el 1550
topo high w white weath ss
clasts in bleached silty soil
IRO 3213 el 13006 at
stream level bed and banks
contain slaty argillite, dk
gry massive OCS N40E 20SE
IRO 3214 1' fine grag ls?
beds in dk gry slaty cleaved
mdsn (Spl) ledge N60E 20SE
IRO 3215 50 x 2' depression
(doline) in stream
course Fill = ls unit in Sub
el 13506 N40E 20SE thin beds
on stream bank slate in ark

11/10/10 IRO 3710 Reesedale Rd
gray slaty cleaved argillite
N 40 E 48 SE
IRO 341. N 60 E 20 SE
black slate with tiny
triangular shell fossils
▽ with a biaxial
symmetry Stylolina sp?
IRO 342 dk gry slaty arg
ox on road bank, sh soil to
slope below house N 30 E 26 SE
thin bedding or bpc
in driveway cut
IRO 261 borrow pit in
blk slaty argillite
N 60 E 25 SE
IRO 3216 1-2' dia qtzite bldrs
in drain on old river terrace
break in slope at 1310
shot on Irene Leech house
IRO 3217 2nd break in slope 100' above
~ 1380
IRO 355 on flat below barn
site, white leached sandy soil
fine SS clasts at 1380-1400

11/09/10

IRO 320 in gorge w/slate bottom 1st good SS ~1' thk about 30' above on bluff, N40E 10SE slaty clevage

IRO 321 in Gorge, a def. bench decends on SW bank at el 1320' beds in ck bank N40E 15 SE Db

IRO 322 On top sandy white top soil Fine ss clasts at el 1480. Good hard wood stand on top big [illegible] on NE slope - Nice land

11/10/10 IRO 343 on 2nd knob behind double wide white qtz sandstone float

IRO 344 N 65 W 34 NE SS, lite grey weath white and tan, med bedded, thin Db. shale, pale green weath tan, burrowed

IRO 345 bypassed house w/dog sta at intersection of forest road SS Flt, Fg, mica, qtz rich

11/10/10 Ctd IRO 345 white leached silty sand topsoil some orange slaty chips (Db)

IRO 346 4" ss clasts along road bleached micaceos sandy top soil el 1540 - 1550 b

IRO 397 abandoned well in saddle

IRO 348 Building on blocks OC in cut bench, gray and red slaty mudsn sap in cut n 75 W 26 NE el 1480b

IRO 349 N 75 E 40 SE gray slaty argillite in road cut

IRO 3510 another house on ridge to SE white fine sandstone chips in the saddle

IRO 3511 N 40 E 42 SE White Wea Crenr gray slaty argillite overturned beds ?

IRO 3512 of limb crenr N80 14 NE photo enveloping surface

14

N 50 E 60 SE

IRO 356 N 60 W 40 NE gry sh w 3" - 6" ls ?

IRO 357 Dm slaty arg
N70E 36 NW in bank at
el 1300'

IRO 358 photo of Fold hinge
in dark greenish gray arg
N80E 5NE

IRO 359 photo of terrace
bleached soil. thk 55 tcht
blds on & cobbles along
road

IRO 3218 (in front of Leech's)
N54W 30NE med thin avg or
silt beds in dk grg arg

11/12/10 Flatwoods Road
IRO 315 outcrops on road
above hunters burden
N 40 E 16 SE orange-tan
weathered slaty argillite
(Dm)
IRO 316 outcrops of argill
and is poss. sltstn N 70W
15 NE at end of Bridge

11/12/10 IRO 317
N 70 W 16 NE gry tan
weathered argillite N40W vert
slaty clearage joints N10E 80NW

IRO 318 dk gray slaty N78W 80SW
Dm argillite N 14 E 10 SE joint N70W 60SW
N74E 80NW

IRO 231 roadside OCs black joints N40W 80SW
slaty argillite N 60 12 SE N60E 80NW

IRO 232 " " N70E 24SE
IRO 233 N80E 20SE blk
slaty argillite beneath sandy
regolith containing round
qtz cobbles gray and white
chert. Intersection 689 Sarver Rd.
IRO 234 S60W 20 plunging antiform
IRO 235 N25E 20 SE thin
bedded gray argillite Dm
IRO 236 gray slaty argillite bank
N 80 E 30 SE Crenulation
plunging S&W 20, graphite?
and chlorite sheen on
Folded Clearage

11/12/10

IRO 250 dark gray - blk slaty argillite chips on road bank, light colored sandy leached soil on top

IRO 251 light gray to white nodular bedded chert pavement on turn N-S 15 E IRO 22/ Tan to light brown, and brown to red limonitic SS in drive way N 40 E 30 SE White qtz arenitic ledges below N 55 E 10 SE sp/ of impure lt brn SS.

IRO 252 N 20 E 8 SE Med gry to brown weathered qtz SS w/ some limonitic cement (Dr) N 35 E + 5 E ledges of light gry nodular chert form pavement above N 45 E 4 SE thin limonitic layer at base of chert overlies reddish clay sap (LS??)

Jan 27 '10 IRONTO QUAD Pedlar Hills

Met Mr. Wells on road at
IRO 391 N37 13 049 W80 15. 184
WP120 1782 Rd + brn slaty argillite
N48E 28SE across creek on road
IRO 392 N37 12 915 W80 15 251
el 1507 121 Rd slaty argillite
w/ bpc N20E 20SE spring box
below old house on map
IRO 393 N37 12.768 W80 15.277
el 1730 (1715B) lt grn-y/wish
gray phyllite or slaty arg in
ledge across road. Dol
gray thk bedd Occ in
strm across from Mr Wells's
N12E 20SE (at 122)
IRO 394 el 1830f N37 12 723 W80 15223
el 1838 grn gry, y/g slaty arg
chips, slt and weath ss
float ~20' dol below
bpc N20W 20NE N26E 40SE 6' dol
dk brg Frost on other side of hollow
IRO 395 N18E 40SE dk gry
thn, irreg bedded Dol or arg dol
w slaty clay. N37 12.663 W80 15 244
el 1809 in saddle - Fold? WP124

IRO 395 on 2nd knob in saddle
Mod bedded arg do' N 12 W 32 NE
FC N60E across beds at BBSEB
IRO 316 on knob at NH boundary
WP 125 N37 12 .615 W 80° 15.432 el 1935
ledge of grn slaty argillite N10E 45°
black chert. Float in saddle to N
IRO 631 grn. and rd slaty argillite ledge
and chips on ridge top N12W 46NE
WP 126 N37 12.412 W80° 15.426 el 2058
2040 T
IRO632 2' dol interbed in argillite
N14W 40 NE @ wp 127 N37° 12.339 W 80° 15.428
el 2078 - 2010 b
IRO633 blue gray dol ls, thin bedded
w/ algal strom N6W 18 NE Elbrook lite
WP 128 N 37° 12.241 W 80° 15.529
el 1837' (180 2) b
IRO 34 blue gray ribbon banded ls + dol
burrowed limestone and massive gray
dolomite blocks and pavement exposed
on both sides of knob along pipeline
no Rome lithologies beyond IRO-
632. WP 129 N 37 12.163 W 80° 15.769
el 2043 bedding in blue gray dol ls N45W30NE

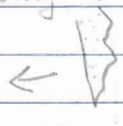
IRO 635 2' thick burrowed dol ls.
N 18E 14 SE on dip slope
dipping SE under steep knob
show fr on MJB map WP
N 37° 12.147 W 80° 15.627 el 1860

IRO 636 N 32 W 60 SW bedding massive
in gray dolomite w/algal structures
whispy,

IRO 637 Thin bedded platy ylw weath
dolomite pod of breccia (2')
in pipeline cut N 38 W 40 NE

IRO 397 maroon slaty argillite
and ocheous yellow orange laminated
argilline OCs on ridge in VDH
'corner' N 10 E 72 SE OT?
WP 131 N 37° 12.691 W 080 15.416 el 1970

Photo of fine sand bed in ocher
Laminite showing ot scour geom



IRO 398 Lam maroon arg w/
thin white sandstone layers
drapes + ripples ot

Photo
1918 el

N 10E 45 SE WP 132 N 37 12.291 W 80 15.417

IRO 361 grn arg/slaty cleav
n 25E 60SE WP 133 N 37 3 058 W 80 15.319
el 1877 18606 Jan 28 2010
ESN 610 N 8E 60 SE platy
y/w gry dol ledge along
pipeline WP 134 N 37 13057
[illegible] sin W 80 15317
ESN 6111 2 sinks in elbrock
to N of Pipe line N most
is WP 135 N 37 12.450 W 80 14 937
el 1892 - qtzite bldrs ~ old river jack
IRO 638 WP 135 N 37 12.388 W 80 15.016
el 1839 Water filled doline 75 yds
long red grn sh chips on pipeline
IRO 639 Knob on pipeline held up
by lam grn and rd arg in lower
elbrook near Flatlying N 30W 18 NE
platy arg dol oc pavement on pipeline
IRO 6310 100' dia 15-20' deep sink
just S of pipeline at WP 137
N 37 12 385 W 80 15 201 el 1853
grn argillaceous dol N 50W 40 NE
IRO 6311 Red and grn slaty argillite Oc
on pipeline N 46W 50 NE at WP 138
N 37 12 418 W 80 15 235

IRO3610 ctd WP158 1810 b

N37 13.553 W80 15 420 el 1707

IRO 3611 WP159 N37 13586 W80 379

el 1630 1660b gray algal lol

N20E 26SE

IRO 3612 top bench blk sh chips

~salem flt N37 13611

el 1632 W80 15.358 1620b

ls scarp facing NW

IRO 3613 above Bowers barn

tn bedded SS - sh N 80E 40SE

WP 161 N37°13.798' W80° 15.262'

el 1322 D6

IRO 3613 about 50' of gray

and brown sand crossing drain

here at WP 293 N37°10.147 el 1698

N W80°21.140 (1550b

IRO 3

IRO-432 el 26006

IRO-433 Fine grained ss w abundant O O liguloid brachs + gastropod shells? 4" dia spheroids weathed Fmo ledge N80E 20SE el 25756

IRO-434 el 2410 beyond saddle there is a 75-100' dia doline with white sandy soil and qtz ose sandstone clasts (base of Devonian Helderberg ss? Ridgely? or sink hole Fill on old erosion surface small snaggle horn buck!

IRO-435 yellow ochèrous clay shale chips on skid road below at el 23406 some qtz ss blocks in talus chute that drains to east

IRO-436 N 60E 25 SE nigly weath calc cemented? qtz ss beds exposed in skid road at property boundary el 24406

IRO-437 white qtz ss blks and

aparently interlayered olive gray lithic ss persistal along narrow strike ridge at el 24056

IRO-438 blks of white fg qtz ss and gray to olive lithic ss, NO pebb cgl 6" qtz ss just above saddle N50E 60SE cross bedded. el 2280

IRO-439 ochorous yellow gry to olive siltsn and mudsn chips on nose at el 22756

IRO-4310 white qtz ss v 6' thk blocks on steep slop above break inslope at top of spur ridge

IRO-4311 N25E 24SE thin bedded olive to yellow brown weathered Mudsn w/ bpc el 20806

IRO-421 at break in slope on flat spur el 18206 Fine tan shale chips, block of black sh (oil?)

IRO-422 break in slope

begin dusky reddish chips
in pink silty sorl
some ocheous weathed sandstone
w/Feldpar and qtz grans
el 1800 b (Ob.)
IRO-423 el 1750 b N50E 45SE
skid road bank exposed
dusky red and yellow green bur.
mudsn. (Ob)
IRO-424 el 1720 b N50 45SE
olive to yellowish weathed
clay sh and silt-Fine
sand exposed in road
bank (Omb
IRO-425 air strike on Bays cliff
across river N 30 E 34 SE
~200-300' wide
IRO-426 ledges of Oln
band argillite N20E 40SE
bedding Cleavage N60E 60SE
IRO-427 N-S 22E thk argillite
argillaceous ls beds above river
Oln
IRO-428 N34E 30SE
black slaty arg and banded
gray and black arg ls

IRO 185 N3E 20 SE fnk
to massive bed of dk
argillaceous Liberty hall
15 near Pence line along
North Fork Poanoka River

3122 | 09 IRO 487 WP 281
road WP N37°10.644 e/1677
W80°21.188'

IRO 488 ledges of brecciated gry dolomite just above saddle at WP 282 N37°10.133 W80°21.129

IRO 489 lt gry fract. xbne dol ledges on road N30E 60

IRO 4810 N45E 29SE gray dolomite ledges w/ wht fracture fills @ pipeline WP 283 N3710.521 e/1810 W8020.991

IRO 4811 N35E 45SE thn bdded to laminated gry dolomite WP 284 N37°10.410' W80°20.944' e/1940

IRO 491 N62E 66SE ledges of lt gry - dk laminated dolosn some massive/brecciated WP 285 N37°10.382' W80°20.752' e/1913 red clay soils cedar

IRO 492 N70E 40SE gry-lt gry aphanitic thn bedded dol ls WP 286 37°10.428 W80°20.599' e/1962 Ecr?

IRO 493 thk bedded laminite dol med-lite grey N 20W 60SW ledge across trail WP 287.
N 37° 10.563 W 80° 20.558 el 1942
Polymictic breccia in pavement above

IRO 494 massive thk bedded C.Xline grey-cream colored dolomine ledges on trail N20W 10NE WP 288
N 37° 10.616' W 80° 20.516' el 1984

IRO 495 creme colored dol and gray qtz ss Float and spoil in 2 pits ~ 10' diam 5' deep on ridgeline at WP N37 10 632
W 80 20 464

IRO 496 N10W 50 NE thn bedded bioclasted blk dol on pipeline at WP 290
N 37° 10.636 W 80° 20.598

IRO 497 N26E 74SE thin bedded algal laminite lt gy in trail sh Comb 30' to W WP 291
N 37° 10.635 W 80° 20.701' el 1935

IRO 498 N 40W 60NE
long sect grn phyllite then
platy dol in trail = tol (lower)

IRO 4812 plunge pool in green
argillite w/slaty cleavage
at WP 292 N 37 10.613 W 80°21.028
el 1700 16706
N 60E 40 NW
IRO 4813 N80E 35SE
green argillite w/slaty cleavage

IR 4814 about 50' SS N80W 40SW
IRO 452 grn slaty arg w/ thin
SS N 72E 60 NW in stm
at Power line (Omb)
IRO 952 dol/phy N10E 60SE
294 N37 0 744 W80 21.141
IRO 921 WP 295 3/23/80
N 37 09.322 W 80 16.613
el 1618 - red clay silt in Flood
plain.
IRO922 N30E 10SE
red slaty argillite and orange
weath dol WP 298
N 37 09 482 1800
W 80 16 676 16806

WP997

IRO 923 N 54E 40 SE

gry tk bedd dol w/ tan slaty
beds Cel at Spring
N 37 09 293 W 80 16 431 el 14 sc

WP 298 N 37 09 095 IRO 924

Travertine, W 80 16 286 spring

IRO 953 WP 299 N 37 08 864 W 80 16 353

Elbrook ledges N 40E 30SE
travertine upstream

IRO 941 N 60E 20 SE
massive ledge of gry
dol / marl in meadow
WP 300 N 37 08 925 W 80 16 701
1532 15006

IRO 942 N 58 W 16SW
Elbrook, lands/ide across stn
WP 301 N 37 08 760 W 80 16 717
1557

IRO 943 platy dol N 30E 20
WP 302 N 37 08 718 W 80 16 105
el 1582

IRO WP 303 N 37 11 480 80 14 975
308. ledge N 45W 10° NE
coarse. calcite cemented breccia

10/26/11

IRO-4710 el 2090 b

overturned tree exposed

pink sand soil fine qtz

SS clasts in loamy soil

at N 37° 10.565 W 80° 22.062

bays Fm on top above 2050

red mudstone chips

IRO 4711 N 14 E 30 SE

4' qtz SS lodge

above Sh bench 30' below

el 2040 N 37° 10.602 W80 22.070

IRO-4712 coase gr qtz SS

blocks on nose of ridge

at el 2100 b N 37° 10.513 W 80° 22.105

walker Mtn SS

IRO-4713 edinburg slate dk

gry weath light gray

N 76E 30SE slaty clear

el 1810 b N 37° 10.487

W 80° 21.720

IRO-4714 on lipsey's rd

across ravine from UT

smart road Turn Around

gray weathed black slate

cleavage N 70E 70 SE

el 1700 N 37° 10.250 W80°

10/26/11

IRO 4715 Lipsey Rd adjacent to Smart Road el 1680'

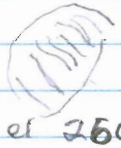
N 37° 10.295 W 86° 22.202

N 20 E 40SE bedding?

IRO5154 High top / Lipsey Farm N80E 22 SE clear in thin bedded slaty mudrock (Ort) grades down into medium bedded burrowed fossiliferous bracciopod rich SS & mudst, olive green - gray

IRO-5155 75' dia doline in saddle developed in upper Ort ~ 2' closure at el 2400'

IRO 431 olive gray fine grained calcareous SS or sandy lime sap rock on top with abundant zones of finely ribbed brachs olive - ochreous yellow



el 2500'

IRO-432 Fine grained brown sand

N35E 36SE, SW side of Knob

Oct 26 breezy cool sunny
IRO 476 at el 18806?
N 40E 20 SE ls, dk
gray argillaceous interbed
in black slate (Oih
at N 37° 10.240 W 80° 21.915'
IRO 477 pipeline trends N 60E
at N 37 10.228 W 80° 21.847
argillaceous ds ledges N40E 20SE
just NW of pipeline,
must be Salem Flt
IRO-4825 qtz pebble cgl float 20600
on ridge at el 20006 N 37° 10.787'
W 80° 21.550'
SDr (fagg cgl?) Photo
IRO 4826 tan weath gray
slate N 60E 50SE Cleav
just beyond fence
el 2030 N 37° 10.875
Oih on Ort W 80° 21.500'
IRO-457 flaggy bedded dark
gray argillite w/slaty
cleavage on backslope
at el 1830 50 yds SW
of N 37° 11.125 W 80° 21.465'
IRO-458 white sandy Top
fragments of white med gr ∡

OCT 26 2011 IRO-458 /
sandstone, porous because
of leaching cement
el 1780 6 N37°11.143
Walker Mtss W 80°21.362 O bays
IRO-459 N 78 W 60 NE
tan to dusky red sh
and mudrock ledges
on slope above clear
cut at el 1765 b
N 37° 11.142 W 80° 21.288'
IRO 4510 N 10 E 30 SE
sandsn ledge in tan sh
tight folds below el 1750
on road at N37° 11.233 W 80° 21.337
IRO-4511 stone pile white
weath qtz SS OC
just to W of tan
slate N 5E 34 NW clear
N 37° 11.125 W 80° 21.500
Baro correction 100'

IRO -478 qtz ss 6/dks + 6/lts
on nose at el 2000' N 37° 10.478'
W 80° 21.780'
IRO-479 on top of hill yellow gry
clay sh (Meta bentonitic?) el 2110 b
N 37° 10.487 W 80° 21.713

Slaty cleavage EW 28N bed
N80E 85SE cleav
IRO 497 N14E 40SE tan
to bn dol ledge, new well
Ecol
IRO 4816 wp 507 N 37 10 346
W 80° 21, 324 el 1624
rounded dug out
spring w/ dol blocks
travertine drapes drain
below
IRO 4817 N70W 60NE N37 10 343 W 80 21 345
N76W 50NE thk bedded gray
dol w/ butcher block text
IRO 4818 by pond (dug)
EW 12S ledge
of gray brecciated dolomite
Travertine falls within pond
IRO 4819 N65E 40SE
greenish gray phyllite, gray
argillaceous dol and gray
polymictic breccia
IRO 4820 N54W 40SW
brecciated + veined thk bedded
exposed in borrow pit by dam

4122/10

WP 508 N37 10 143 W80 21 832

el 1614

IRO 482 S40W 30 dextral fold in slaty laminated dol.

IRO 7216 badly cut over karst. Wetland, large spring Flow across 4 wheel trail old spring at wp 509 el 1594 N3709.969 W80°21.471.

IRO 7120 wetland, spring above Phone Line Trail at WP 510 N37 09 943 W80 21.678 el 1768

IRO 7121 8' tufa bank, water Fall Karst wetland area above WP 511 N37°09 913 W80°21.723 el 1757

IRO 7216 WP 512 N37°09.615 W80.21.730 el 2190 beige to lt gray massive fg dolomite (Ecol) N 90E 49°

IRO 7218 WP 513 N10E 28 NW ledge of creme colored Fg lam dol (Cco Just at Intersection John Lipseys lane N3709.630 W80 21.592 el 2085

3117/00 IRO 5515 WP

ANTICLINE N 70 W 40 NE WP 245
N 50 E 60 SE below N 37 11.255
W 80 19.041

IRO 5516 WP 246 N 37 11 273 W 80 18 988
Central point in Karst Field
sinkholes 20 50' deep ~100' dia
New fields cleared to SE
Coarse strom chert heads to top of
Knob at WP

IRO 5517 WP 247 N 68 E 50 SE
gray thn to med bedded crackle
brecciated dolomite el 1823
N 37 11.213 W 80 18 969

IRO 5518 WP 248 N 37° 11. 282
W 80° 18. 714
grey med-thk bedded xline dol
with breccia zones (crackel)
N 84 W 60 NE in Karst Field
W 4 sink entrances

IRO 5519 dusky red argillite w/
slatycleavage, thn orange red
weathy dol beds on road WP 249
N 37° 11. 205' W 80° 18. 666' Knob
above el 1865

IRO 5520 dol ledge nearly flat
lt gry finely xline N 84 E 18 SE
WP 250 N 37 11. 125 W 80° 18. 614 el 1851

Outcrops of Obcys SS above kiln

IRO 5510 WP 239 N37 11 409 W 80° 19.116'

gray grn slaty argillite/interlayers of m.cg. brn SS

lineation S 30°E 18 SE

Join N16W 75 SW Clear N30E 20 SE

beds N76E 22 SE

IRO 5511 grn + red weath slaty

argillite. slaty cleavage N68°E 74 SE

WP240 N 37° 11.506 W 80° 19.166

el 1611

IRO 5512 WP 241 el 1665 N37° 11.626' W80° 19.218'

ledge of lithic cgl overlain by

white quartz arenite - steps

on Trail N60E 20 NW Top of Cgl

limonitic, silicified cgl = Driskany / Hell

IRO 5513 WP 242 N37 11 358 W80 19.089

El 1704 Dolostone overlying tufa

N70E 50SE thin bedded

IRO 5514 WP 243 N 37 11 226

el 1580 Flow ~50 gpm W80 19074

spring emerges from cavern

on side of hill mass-bedded

gray slime limestone.

IRO 5515 WP 244 N 37° 11.228 W80° 19.274

N 10E 32 SE Siliceous banded

thk bedded dolosth ledges

3/17/09

IRO 546

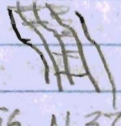
N 24 W 40 SW slaty tan weath dolomitic crenulation folds

N 26° W re NW WP 255

N 37 11 335 W 80° 14.175

el 1599

IRO 547 at bend thin bedded gray fractured dol N 30 W 20 NE



dextral folds

el 1616 N 24 W 2° NW

WP 256 N 37 11 354 W 80 19 813

IRO 548 above road in bend ledges outcrop above 20' cirque el 1607 old cave/spring opening at WP 257

N 37° 11.378 W 80° 19.248 STD N 50 W 65 W

IRO 549 above Road in bed (NW end)

WP 258 N 37 11 406 W 80 19 268

el 1699 ledge of dol breccia above ylw weath sh/slate chips in soil - ls or chute below carb bench

IRO 5410 brn/gm gry slaty wrs oc in bank at WP 259 el 1644

N 24 E 24 SE clean joints. N 78 W 80 NE

N 37° 11.440 W 80 19 236

IRO 5411

N 50 W 50 NE grn olive fg ss
in ditch N 37 11 593 W 80 19.341
el 1357 WP 260 Ort

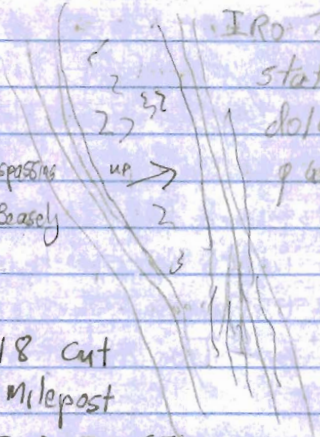
3/22/09 IRO 451 Omb grn sh / slsh
N72E 74 SE cleav N50E 60SE [OT]
IRO 482 N20E 30SE beds upright
dipping away from bays. Cleavage
N 70 E 80 SE [illegible], photos
WP 277 N37 12 660 W 80° 21.728
WP 278 N 37 10.617 W 80° 21.208
IRO 483 Fault N 82 W 70 NE photo
IRO 483 cleavage in mass argillite
on embankment — N 50 E 70 SE
WP 279 N 37 10 712 W 80 21.278
el 1517 2'-3' traverfine bank
in stream grn arg on embankment
IRO 484 N 70 E 80 mass gray ss
bed interbedded w/ thin ss
+ arg (Top of ss to ss
WP 280 N 37 10 757 W 80 21 310
2' trav bank in front of
cabin IRO 485
IRO 486 Salem Fault FW
10' dolomite
IRO 487 Fossil bed in grn gry
y/w brn weath arg on logging

IRO 7417

stat. calc 1s and dolomite in old quarry N80W 75SW

NO Trespassing

Fred Beasely



IR7418 cut at Milepost N72E 70SE

N288

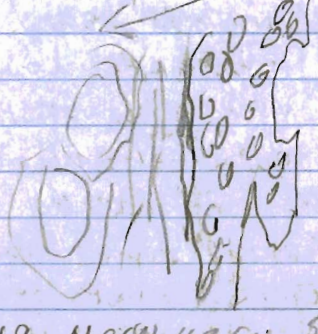
Itra Folia Folds Of?

thin bedded laminated dolostone w/ thin argillite layers

hing plunging S64E 50SE

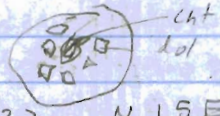
Looks transitional to elbrook

Good flat pebble cgl beds on N side W algal strats that are rsy



IRO 7419 N86W 48SW Strat. dol

IRO 7420 N88E 58 SE strat. 1
dolomite ledge in field
IRO 7421 N74E 45 SE complex
slop made up of pinnicles
of gray sacharoidal elbrook
dolomite with deep terra
rosa soil between - pinicles
20-30' apart - Iron mine?
N86E 20 SE
IRO 711 N 82E 60 SE frac
and brecciated dol ledge along
trail - Elbrook? Breccia blocks on knob



IRO7422 N 15E 60 NW
thin bedded dolomite with
massive beds of catclasite and
breccia
IRO7423 N 50 W 15 SW thin
bedded phylonnitic lower El.
IRO 7424 N80E 20 NW straticulate
blue gray dol looks like FW
BBG 96 16 gry straticulate dol w/ X beds
and pebble sized rip up cgl layer
looks of truncated
by fault to NW

IRO 746 thk blue gray algal ls above creek then ledges of straticulate ls (ribbon rock) interbedded w/ gray butcher blk dol. N60E 40SE (Oca)

WP 494 N37 08 634 el 2031
W80 22 341

IRO 747 Ledges of thk bedded butcher block weath gray dol along fence N80E 80NW

WP 495 N37 08 653 el 2042
W80 22 230

IRO 748 ledges of straticulate dolomite with argillite beds N80E 80NW N80E 80SE algal chert heads in soil

WP 496 N37 08 642 W80 22 070 el 2106

IRO 749 old Cem. not cared for oldest marker Richard Snow 4-1-1901.

IRO 7410 Road crosses gray straticulate-dol. ledge E-W 50s

IRO 7411 dolomite chert and 1' ss ledge forms small nose E-W 80N (dol) ss E-W 80N dol. gray thk bedded butcher block tex sand fine lam

IRO 741E Straticulate dol w flat pebble cgl bed seq may be OT
EW 50S IRO 741B → Large block blue gray ls w/ algal fingers

below sed pond for Walnut Ck subdivision oc of dol in spillway
N80W 60SW
IRO 741C N80E 84NW Straticulate dol ocs abve 4wheel trail, ls o- algal dol. blocks below
IRO 741D thk bedded crse-ltgry dol ledges, spring below pond
N80W 66SW nsd
IRO 741E 2nd spring on left
N80W 84SE algal matted med bedded gry dol
Still site, Fire circle (brick) barrels in creek below spring small travertine falls then 100' wide alluvial flat meander belt
IRO 741G old Ls quarry along road Spls blue gray micrite with possible sulfide minerals
N80E 80SE Strat dol in upper bench
N80E 54SE thk beds

IRO 461 dol ledge thk bedded gray w/ regular jointing or space cleavage. Beds N80W 30 NE cleavage N 30 E 80 SE
WP 544 N37° 10.860' W80° 20.566' el 1946
IRO 462 Martinsburg, orange to yellow-weathered argillite chips in soil, brn qtz ss + qtzite as cobble sized float at fault
Brecciated gray dol to SE
N 10 E 60 SE - ledges of gray brecciated dol - Flow struct? breccia zone ~ 100' wide
IRO 4917 brn weath butcher block dol ledge N 10 W 30 NE on E side of 200' sink ~20' deep at WP 545 N 37° 10.812' el 1974 W 80° 20.137'
IRO 463 250' dia sink 30' deep mass ribbon layered dol on E side N 10 W 20 NE
WP 546 N37° 10.879' W80° 20.144' el 1942

IRO 464 N 80 E 25 NW
med bedded dol overlies
massive algal ls fel WP 549
N 37 10.939 W 80 20 098 el 2020
(2000+)

IRO 465 N 10W 20 NE mass
thk bedded gray dol breccia tl
chert breccia flt
WP 548 N 37° 10.988' W 80° 20.145
el 2020 1930 b

IRO 466 N 50E 15 SE WP 549
mass - thk bedded dol
blue gray algal bands ls
in synclinal trough ontop
N 37 11 075 W 80 20 174
el 1968 1960 b

IRO 467 brn y/w sh f ss
Float on trail Fault line at
WP 550 N 37° 11.153 W 80° 20.192
el 1786

IRO 468 lt gry weathered s/slt
N 60 E 45 SE cleavage
WP 551 N 37 11 302 W 80 20 305
1487 50 SE Fossil casts
WP 552 N 37 11 342 W 80 20 234

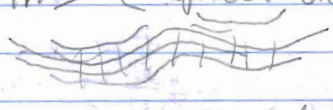
April 20 2010 clear
Lipsey Fam cool

IRO 475 N65E 70SE
thick bedded brown
weathered gray xline
dolomite with thin
platy interbeds

IRO 476 dark gray algal
boundstone/wackestone
grading up into ribbon
magnesian dolomite / short
Elbrook cycles in ledges
along road just below gas line

IRO 711 thin bedded algal lamite
overlying thick algal strom/
thrombolite beds N dip E-W strike
fel

IRO 712 Alternating thin
bedded algal laminite beds
and thick algal biohermal
boundstone/wackestone beds
gentle fold plunges N70E at 60
with spaced cleavage



N70E vertical, healed w/ white xline
dol

4/20/10

IRO 713 N 40 W 60 NE
light gray, tan to biege weathered platy dolomite laminite beds w rounded thick stromatolitic ls beds
IRO 714 laminite beds kink folded hinge N50E 80°W ribbon rock in thin cycles along trail
IRO 715 Massive bedded Fine grained, light gray to creme colored microx fine dolomite CEcol outcrops on trail N 70 E 42 SE on siliceous silt/fine sand laminae that weather in positive relief also 2of 5S cobbles and pebbles in colluvial soils w/ cross bedding N50W 10 SW rsd laminite beds above show ripple marks in cross Sect

IRO #64

cg gs bed (Ot. N60E)
Fossil zone (Christiana?
IRO 4610 dk gray argillite interbedded
with thin ls beds
N70E 20 SE dextral Fold
N76E 5 NE Photos
Oe?, WP 553 N37°11.461
el 1424 W80 20 1.59

IRO 4611 photo of cobbles
in brown terrace WP 554 N37 11.508 W80 20.002
el 1437

4/29/10 WP 555 IRO 5424
20-30' of wh. to
brown fine grained
quartz sandstone
on cliff face below
WP555 el 1499 N 37 11.569
W 80 19.672
E-W 18° N

WP 556 N37°11.552 W80°19.657
el 1500. Qtz ss beds turn
up at end of ledge
E-W 65 NW photo of
hematite bed looks
like Heldeburg?

WP 557 N80E 70 NW 1 1/2'
limonite bed at base of
ss section above Martinsburg
N 37 11 549 W 80 19 647 el 1548
N 37° 11.387
IRO 5425 WP 558 W80° 19.448
el 1770 ss and chert Float
on knob - Ob?
IRO 5426 brn weathered
butcherblock dol ledges
on SE side of road crossing
in Saddle ledges N 30 E 20SE
WP 559 N 37 11 363 W80 19 473
el 1785
IRO 5427 WP 560 N 37° 11.339
W80 19.459
el 1759 Fossiferous grn -
orange Eel shale float!
on road in head of drain Maroon
layers (Photo)
IRO 5428 island of dol Ocs
in middle of hollow N70E 20SE
IRO 5429 E - W 20
med bedded gry dol
ledges on SE nose WP 561
N 37 11 192 W80 19 204 el 1976

IRO 5318 top of cht Knob
photo of chrtfss
green shale below ~20-30'
to top Keefer WP 206 N37 11.940'
1757' - 1760 b W 80° 17.676'
1690 b top SS = 70' sh?
Wed March 10' 2010
IRO 511 SK
N 84 E 22 NW base of
cgl section in Keefer.
10' ledge above 10' Med bedded
white qtz arenite below
WP 207 N37° 11.644 W 80° 19.357
el 1465
IRO 541 N60E 30NW olive gry
arg, lite to SS (omb?) WP 208
N37 11.637 W 80 19.300 el 1551
IRO 512 sk white pebbl
cgl blocks or in place
residual N 44 W 10 SW on
SW slope Omb below WP 209
N37°11.664' W 080° 19.241'
el 1677
IRO 513 on table rock (photo)
WP 210 N37° 11.704 W 80° 11.704 el 1666
N 80 E 20 NW sight on dip slope

3/10/10

IRO 513 to NW 2 big ledges
with cgl at base of upper
Quartzarenite blocks across
hollow in Pines

IRO 541 on Conservancy Trail at WP 211
olive green ss + argillite F/t
Forms ridge line to SE of SK
N 37° 11.647 W 80° 19.179 el 1734
(16806)

IRO 551 at WP 212 on NC trail
N 37 11 534 W 80 19.075 el 1743 [illegible]
shale chips ~~ort~~ all te way
Photos of Mill Knob show no qtzite
ledges on top

IRO 552 at wp 213 el 18206, GPS 1780
N 37° 11.487 W 80° 19.051
2' ledge of brown and red
ocheous weathering SS forms
bump on trail dolosn OC's 20' above
Photo of "bump" and dolosn ledges above
breccia zone (few bldrs of MMb on
trail NS 14° E hanging wall

IRO 553 n 30E 20 SE dolosn ledge
on trail el 1880 b WP 214 N 37° 11.457
el 1778 W 80 19.017

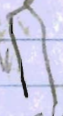
3/10/10

IRO 527 Big blocks in Landslide below Keefer beach along NS RR WP 229 N 37° 12.120 W 080° 18.627 el 1402

IRO 528 Millboro shale bank N 66 E 68 SE WP 230 N 37° 12.081 W 80° 18.710 ss blks coming down ridge at switch Fugg

IRO 529 N80E 40 S OT ledges of Keefer crossing hollow at WP 231 N37° 12.017 W 80° 18.836 el 1346

IRO 5210 N80E 40 SE OT qtzite ledge w/ shale beneath



IRO 5211 elongate ls deposit below Keefer ledge

IRO 5212 Millboro black shale in cut variable slumps N30E 81NW el 1460 WP 232 N 37 11 952 W 80 19.032

IRO 5213 upper ledge comes down hollow acr N80E 20 NW blocks below at WP 233 el 1423 N 37 11 .871 W 80° 19.161

IRO 521 photo of Ort shale/arg chips in roots of Ot tree on nose of SW knob. WP 220
N 37° 11.703 W 80° 18.734 el 2084
2020 Topo adjust boro 30' down

IRO 522 Float of coarse brachiopod (linguloid dom) breccia bed on top of SW knop - Orthrycula zone
WP 221 N37° 11.705 W080° 18.823
el 2124

IRO 523 qtz arenite, gry med-fg * Float along trail, with grn olive argillite chips below. Outlyers of Skh? WP 222 N37° 11.740
el 1931 1990's W80° 18.874'

IRO 524 Many piles of med gry green and red stained qtz ss in woods along gentle terrace like slope = Obz el 1998
WP 223 N37° 11.713 W80° 18 601
1960's

IRO 525 N44E 20 NW gry to reddish brn. medium grained thk bedded ss ledges in hollow
N 37 11.799 W 80 18.416 WP 224
el 1974 1940's

March 9 2010 ERO 533
Milboro sh w/ cleavage lgbx
1' concretion zone bedding
E-W 30S cleavage
Photos of Grinder Train and
shale Outcrops
N37 12.248 W80 17.951
el 1405
photo of fold and fault
ERO 534 Section between base
of Milboro and base of
Keefer cgl
Bedding Strikes EW dip 42
at base cgl width on road 60'
top is 2' of black chert
(Huntersville) then brown
weathed ss w/ thin sh partings
then 20 wide on road white
cgl qtz arenite beds.
Martinsburg (Reedsville sh
not exposed. Photo includes
1' dk green and white striped
"leopard bed". Martinsburg
ledges in River
ERO 535 40' wide grn
qtz arenite ledge on hillside

IRO 535 WP 192 N 37° 12 025
E 1353 W 80 17 812
N62E 74 NW underlain
by dark gry to brown weath
barowed fossil bearing calc
mdsn - massive bedded
40' measured ⊥ strike on rowy
bed
IRO 536 Qtz graite over grnish
brn sh sap N 56E 60 SE - qtz
visible up the hill side
8' brn thk bedded mdsn at top
of Reedsville overlain by fractured
Sand sn / white massive Qa
N 37° 11.849' W 80° 17.729 el 1388
WP 193 Photo of base of SS sect
meas w tape 73' wide S 56E
Photo of Slickensided surface
clear N64E 80SE lin

plunge S 56° W 64 SW
asparity is up to NW

IRO 537 dark brn weath argillite
gray thk bedded fos. SS

May 4, 2011 IRO 5328
White qtz ss N70W 65
NE on river, black
shale overlies to NE
shale cleavage at
driveway SW
ss at corner N60W
50SW (IRO 5329
IRO 5330 N80E 60SE
8' OT qtz ss ledge
just on SE side of
point about 50' above
river = Top of Ridgely

IRO5331 OT qtz ss ledge
16 paces wide overlies
(structurally under)
reddish brn ss
and sltsn in upper
OMb on river N80E 70SE
IRO 5332 N80E 65SE
15-20' qtzite ledge
~50' high on slope
(OT) 100' above river
broken ledges on slope above

Sh chips above ~ 0mb

IRO5333 rounded and angular qtz ss float on ridge road to new house

IRO5334 qtzite ledge crops out on ridge top above trailer house to E Ledge trends N76W 70SW

IRO5335 N 70W 45 SW 10-15' qtzite cgl ledge OC by poweline just behind house on ridge

IRO 5336 chert and qtzite ledge forms hog back ridge above house - ledge form trends N60 W to outcrop on road to SE

IRO5337 N80W 60SW Sh sap in drive SS oc below W/cht a top (bottom) above new construction job

N 50 E 28 SE at WP 55 1.5'

WP 194 N 37 11.881 W 80 17.762

IRO 538 N 70E 36 SE WP 195
N 37 11 815' W 80 17 674
WP 195 el 1424 brn sh 6" lgw

WP 196 IRO 539 N 37 11 85
first blackish oc W 80 17 654 el 1440

IRO 5310 WP 197 N 37° 11.848 W 80° 17.621
el 1407 S10E shot at 15° to base of Salem Thrust Fault

IRO 5311 WP 198 N 37 11 840 W 80 17 562 el 1394
first ls/dol oc - karst above house blocks at Thicketler Lane. Massive gray dol and breccia/shly layers Fault angle must be steepened to fit in valley

IRO 641 N 60E 3 NW or horizontal crinkly thin bedded dolomite in Elbrook? at WP 199 el 1543
N 37° 11.634 W 80° 16.973

IRO 6215 MMb (P) on hillslope ledge above gray breccia N40 W 26SW
WP 200 N 37 11.737 W 80 16.294
el 1714

IRO 5312 N 85E 65SE 10-15'
qtzite ledge ends on hill side
at WP 201 N 37° 12.051 W 80° 17.764'
el 1549 chert Float above sh pit
then cgl qtzite float
IRO5313 olive lithic ss w abundant
brachiopod molds at WP 202
N 37° 12.023 W 80° 17.735 el 1645
N 20W 24NE bedding thk irreg.
IRO 5314 olive to light grn sltsn/
fine ss beneath 10' qtz arenite
ledge N 10W 10NE WP 210
N 37° 12.012 W 080° 17 714'
el 1696
IRO 5315 bk to lt gy chert
med thk bedded, holds
hill top above ledge at 14
WP 204 N 37 12 016 W 80 17.646
IRO 5316 WP 205 N 37 11 992
W 80° 17.625' el 1739 karst
depression between chert knob
and dolosn ridge
IRO 5317 N 30E 14SE ledges
lt gy thn to laminated dol WP 206
N 37° 11 982 W 80 17.592 1819

talus slope below el 8606
Ecol 4/21/10
IRO 5413 Med - thk bedded gray dol N 85W 22 NE
IRO 5414 breccia and phyllite chips on gentler slope below wash dol. OC
IRO 5415 spring 30 gal/min N65E 60 NW thk bedded gray dol Frac N20E 80 NW
IRO 5416 N70E 10° OMG covered above in travertine
IRO 5417 50' ledge of Silurian SS N70E 30SE
IRO5412
N54E 25SE Mass dol (Ecol?)
10' Days beneath Fault
IRO 5525 NS plunging assym. Fold plunges 5 at S

4/22/10 SPRING HOLLOW SPH 1

N82E 60 NW photo

of Right abutment hinges

interbedded dol and red arg

N70E 5NE

WP

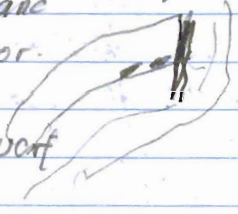
SPH 2 photo of qtzite blders working way down slope from old Fan - very round

SPH 3 photo of fold with in road cut

dextral kaust pipe

hinge N80W plunges 2° NE

fault plane beds w/por in HW N80E vert



truncating developed in bed

4/28/10

IRO 5417

N 85E 16 NW thin med bedded

SS

IRO 5418 N 86W 48SW OT

fg SS in martinsburg clear

N 80 W 76 SW WP

Travertine dam ~3' high

N37 11 440 W80 19.686

IRO 5419 property corner stake

at WP 521 N 37° 11.248' W 80 19.610

el 771 at stm intersection

~20' falls in 100' from

left fork

IRO 5419 WP530 N37°11.232 W80°19.622

el 1591 ~50' travertine cascade

below large dol ledge EW 66S

IRO 5420 Thin bedded platy

dol w/ dk gry sh or

argillite N6E 20 N40W 54SW

just up hill at drainage

IRO 5421 WP 531 N37 16 971 W80 19.710

el 1604. N56W 85NE Thk beds

of ribbon laminated gray dol

burrow struct is rsu = tel (u)

road washed out expose a

4/28/10 IRO 5422 WP 531
Massive - thk bedded gry dol beds in strm N40W 60NE thin mantle of algae and wet tufa below
WP N 37° 10.890' W80° 19.831' el 1662
IRO 5710 Irreg laminated blue grey algal limestone, micritic N24W 66 NE at WP 032, N37° 10.765 W80° 19.408 el 2042 al is 100' wide stream is subsurface above gas line
IRO 5711 N20W 40NE thk bedded gray dol ledges on point al on both sides at WP 533
N37° 10.614 W80° 19.835' 1846 el 1900 T
IRO 5712 N20W 60NE thk/med bedded gray dol. some algal Chert masses up to 1.5' dia on ridge line WP 534
N37° 10.460 W80° 19.789' 1970
IRO 5713 N50E 40SE thin blue algal ls bed w/ thk bedded butcher block dol. WP 535
N37 10 415. W80 19 852

May 13 '10 IRO 5523
WP 5C0 37" dol on trail before
sh Ocs on trail just beyond
drainage
IRO 5524 olive drab to
lt brown argillite
lcp w/ fine SS above
N72E 20SE
N 37 11.675
W 80 18.874

Elv 1957
WP 591

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IRO 5430 N 14 W 12 NE
massive decalcified dol ls
breccia ledge at WP
head of steep hollow
WP 562 N37° 11.123' W80° 19.238
el 1901

IRO 5431 100' dia sink
-20' deep at WP 563
N37° 11.064 W80° 19.211
el 1927

IRO 5432 ledge of blue gray
thin bedded algal ls
E-W 38 N WP 564 N37° 10.942'
el 1859 1860 W80° 19.206'

IRO 5718 ledge of breccia
or coarse dol cgl clast
line E-W 46 N
WP 566 N37° 10.839 W80° 19.317' el 1954

IRO 5719 Thn bded blue gray
algal limestone w/ stron
an thin cgl beds rsy
N 60 W 60 NE WP 566
N37° 10.808 W80° 19.552 el 1996
calcite healed cross fract
N20E 75 NW

IRO 5720 possible cave entrance beneath ledges of blue gray algal matte banded Elbrook limestone at WP 567 N37 10.628 W80 19.968 el 1856 N20W 30NE photos

IRO 4918 Cave entrance trends S74E From shallow sink el 1886 thin / mass algal ls + dol WP 568 N 37° 10.719' W 80° 20.005 N10W 20 NE

IRO4919 Blue gray ls beds exposed on pipeline, Sink hole 10'x40' crevasse in ls and dol just over hill from pipeline at 1845 WP 569 N37° 10.511 W 80° 20.064 N4W 40 NE

IRO 4612 Kink in thk gry dol beds E-W 5W photo N 37 10.919 W80 20.012 el 2043

IRO 5433 Thk gray dol bed N50E 20 NW cross Frac N6W 72 NE WP 571 N37 10° 963 W 80° 19 990 el 1982

IRO 5434 N80W 30 NE thk gry dol WP572 N 37° 10.945' W 80° 19.954' el 1929

IRO 5714 · N 40 W 50 SW blue gray and brown banded algal ls on trail at WP 536 N37 10.468 W80 19.673 el 1532

IRO 5715 N 60 E 80 NW gently undulose fg gray dol lgst massive xline (algal) dol on nose

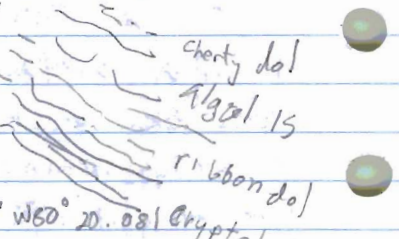
IRO 5716 N 60 W 60 NE thin bedded blue gray algal ls on trail at WP 537 N37° 10.557' W80° 19.669' el 1977 Polymictic dol/arg breccia on knob

IRO 5717 N 20 W 30 NE thin bedded algal ls and platy dol. in short Eel cycles (photos at WP 538 N37° 10.482 W80° 19.879 el 1961

IRO 4910 N 10 W 30 NE dk gry microxine dol w/ brn weath butcher block text. ON SW side of 200' dia sink ~ 50' deep

IRO 4911 N 26 W 34 NE photo of platy argillaceous dol beds with algal stromatolites indicated used WP 539 N37 10.603 W80° 20.042 el 2010

IRO 4912 N20W 24 NE
lam dol at top of fenestella
cycle that contains blue gray ls
micrite near base
elbrook 5'
cycle
at edge of
cleared area
WP 540 N37 10.606' W80° 20.081 el 1965



IRO 4913 WP 541 N37°10.46 W80°20.132 1829
Shaly chips in soil then lt pinkish gray to creme colored fine xl lmst dol float
IRO 4914 WP cleaved massive gray dol N54W 20NE clean. N70E 70NW
WP 542 N37° 10.741' W80° 20.243 el 1876
Elbrook above pipeline
IRO 4915 N26W 30 NE thin bedded to med bedded blu gray algal ls + dol on trail at WP 543
N37°10.784 W80°20.329 el 1925
IRO 4916 N72°W 26 NE thk bedded dol ledge on trail WP

3/10/0

IRO 554 thinbedded gray to tan layered shly dol ledges on trail at WP215 N37 11424 W80 18758 el 1898 N26E. 80 SE clevage gentler than bedding

IRO 555 N 74 W 44 NE thin bedded gry to tan laminite with cren folds plunging N80W N40W 36°NW WP216 N37°11.483 W80°18.827 1909 (1880) Photo of folds

IRO 556 N 60E 44 SE thin bedded laminate dol WP217 N37°11.52 W80° 18.827' el 1929

IRO 557 N 80W 5°NE

IRO 558 N 60W 60S v crinkly lam gray dolomn ledge at trail split WP 218 N 37° 11.600' W 80° 18.785' el 1972

IRO 559 hematite +Mn CO_3 ? ? cemented breccia pile next to trail at el 2000' WP 219 el 2033 N37°11.656 W80°18.749 photo of breccia

3/10/10

IRO 5319 air strike across Ginger Hollow - Dolosn cliff blocks EW 17 N ~50' high

IRO 5320 N 30-20 E 20 SE dk gry and white ss w/ SEP text qtz, mica feld comp

WP 225 N 37° 11.930 W 80° 18.270 el 1981 photos across river show fold hinge / off set

IRO 5321 el 1860b WP 226 N 37° 12.012 W 080 18 299 el 1737 angular white qtzite on slope above steep slope exposes ocherous shale chips, argillite and olive silt fine sand stone chips

IRO 5322 el 1680b N 60E 46SE white qtz arenite w/inv. cross beds 6' thk Cross N 46E 30SE

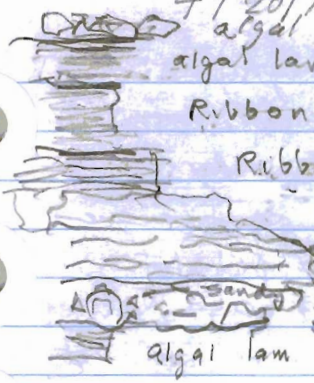
WP 227 N 37 12 073 W 80 18.322 1590

IRO 5526 gray sh + creme ls beds in Millboro N 80E 25 SE WP 228 N 37° 12.145' W 80° 18 457' 1393

3/17/10

IRO 545 thn/slaty ⊙ dk gry WP 256 N 50W 60 SW N 37 11 310 W 80 19 146 el 1646

4/20/12 IRO 716



12
18
p18
48"
5'
15"
2.6"

beds N 72 W 10 SW

IRO 717 photos of cave in Ecol straticulate dolomite beds dip gently SW 620 W dip strike N70E @ 14°SW Sink is 100' dia 20' deep

IRO 718 pits and board end pile at old saw mill site sandy soil creme colored dol blocks on site

IRO 719 straticulate dol forms dip slope, ledges strike N70E dipping 10 SE Ecol

IRO 728 very light gray to white weathered microxline dolomite bed forms a small pavement along old logging road N 70E 20SE @ 1860 ft

IRO 7210 light gray - creme colored thk bedded straticulate dol N 70E 40SE ledges on trail

IRO 7211 light gray - creme colored dolomite w Flat pebble cgl beds on erosive base developed on algal laminite beds at top of previous cycle indicate NW Facing N 60 E 80SE

IRO 7212 Blue gray algal bounstone/wakestone float a 1850 b along trail Trail switch back to sw N 80 E 60 SE shly or platy elbrook dol arg above

IRO 7213 N 72 E 65 SE sheared ribbon banded blue gray dol 15 Oc by fallen oak at el 2010 on trail

IRO 7214 E-W 40S thk beds of gray brown weath dolomite with some shaly beds yellow orange chips - in soil el -000

April 12 2010 IRONTO IRO 8515
N 40E 55 NW thk - thin bedded
gray - brn weath dol on travel
at WP 472 N37 08.550 N[illegible]
el 2728

IRO 8516 N 10E 20 SE
IRO 8517 round qtzite cobbles
at house

IRO 8716 WP 473 N37 08.214
W80 19.509
N 65E 30 SE el 2723
ribbon lam ls/dol + Fig
gray weath ss ledges
in cut ||7

IRO 766 mixed al w/ old maroon
qtz ribbon mylonite, coarse qtzite
in back of new house

IRO 767 Δ angular, Eco, ss
resid up tz 2'

IRO 7514 Chert residuum
along ridge

IRO 7515 qtz gravel along road
in cut ~ 10' above grade
WP 474 N37 08.441 W80 21.546 el 2240

IRO 743 6' gray clay (pipe clay
exposed in base of al at
Industrial park includes round
qtz pebbles + cobbles grades up
in to yellow orang mottled clay
loam - pebbles and cobbles thr
WP 475 N37 08 .465 W 80 21 657
el 2159

IRO 7516 E-W 30S Gray
thk bedded buture block dol
beds with flat chert
nodules along bedding
(Obs) WP 476 N 37 08 540 2129
W 80 21 617

IRO 744 20' highwall in unconsol
mtl many round cobbles
WP 476 N 37 08 591 W80 21 886

IRO 781 N 78E 56SE dk gray mottled
crystalline dolomite
WP 477 N 37 07 640 El 2169
W 80 21 622 thin
rubble or algal bedding
large blocks of dolomitized
ribbon rock.

IRO 7215 el 1990 below barn N80W 80 SW ribbony dol bed interlayered with med bed of algal dol. oolitic chert float on trail. Much SS Float Ecol

IRO 7422 EW - 74 SE striaticulate creme colored siliceous dol OC in Stream Cl 1900 6

IRO 7423 EW 60 S massive bedded gray dol el 1850 6

IRO 7424 EW 60 S White weath striaticulate dol at el 1820

IRO 7110 N80E 54 SE Massive gray butcher block weathered brown dol

IRO 7111 N60W 10 SW gray, fg, butcher block dolomite in stream - Noal

IRO 7112 N50W 70NE cascade of dk gray thin bedded el brook dol. in Attidion

Fore limb, brittle cross facture
IRO 7113 N20W 24NE end of
completty exposed section of Upper
elbrook ribbon dolomite, algal dol ls
thin bedded ls + sh (dark gray)
IRO 7114 N60W 80SW Massive dol
beds, gray Fg xline w butcherblock
photo of travertine Cylinck
IRO 7115 N70E 40 SE mass gray
brecciated dol above dry
section of stream bed poss.
cave entrance
IRO 7116 N5E 44SE lt gray to white Straticulate
dol interbedded with Fg
gray dolomicrite ε col?
IRO 7117 thin black arg bed
separates thok sequence
of cream colored straticulite
dol from massive gray cherty
dol ledge. Base of ε col?
E-W 20N
IRO 7118 N20W 40NE silicic
strat. dol. lt gr (ε col)
IRO 7119 silicic lt gry -
trat dol and 1' thk ss layer

4/22/10 EL 1975
N 37°09.67'
IRO 7219 WP 514 W80 21 329
black chert float tan chips
of platy dol along trav
IRO 7220 N 20W 30 SW ledges
of massive to thick bedded gray
dolomite prospect pit in
mineralized pyrite? silicified
breccia at WP 515 N 37°09 591
W80 21 297
el 1919 17506 1800T
T model Ford gas tank
and cowling
IRO 7221 Iron mine adit
developed along 2-3' thick
argillaceous dol with layers
of hematite, now foliate
N 40 W 34 SW photos of
adit - timbers visible dump
suggest less than 50' back
WP 516 N 37 09 621 W80° 21.170
el 2004 17506
IRO 7222 Spring flow emerges
from beneath dol. ledge
N55W 25SW WP 517
N37 09 800 W80 21 050 el 1852
1C49 6

IRO 7323 begin karst wetland spring flow below travertine dam at WP 518 N37°10.037 W80°20.745 el 1520

IRO 4823 Spring on 20' travertine mound WP N 37 10 120 el 1660 W 80 20 907

IRO 736 N80W 75SW gray fg Staticulate dol w/ siliceous silty parting at N 37 09.785 W 80 20.765

IRO 737 N60E 70SE yell orange weath shly dol beds in road bed - Cq

IRO 738 N 20 W 60 SW Foliation in cataclastic breccia (green) Weathered yellow orange N37 09.850 W80 20.609 el 1852'

IRO 739 Photos of Travertine in stream valley at N 37 09.725 W80 20.606 el 1740 6c. 1660 +

IRO 7310 Photo of debris flow massive dol E-W to N80W dip 40S stream full of angular 2' blocks possibly upper elbrook / Big Spring Sta N37 09 670 W 80 20 586' photo of Flat pebble cgl block in dry stream bed stream appears at ledge dry above on Cq

IRO 7311 Partly dolomitized ribbon rock (photo) E-W 20 S1 blocks choke stream (debris flo N37°09.618 W80°20.491

IRO 7312 N66E 12 SE ltgry dol with siliceous partings (Θco) highly deformed cleaved red clay mtx in stream = old debris flo (Photo) N 37 09 518 W 80 20.492

IRO 7313 Massive bedded sandy dol w/ siliceous parting E-W 505 at el 1800b N37° 09.938' W 80°. 20.515'

IRO 7314 Massive bedded sand dol N60E 60NW accross cross bedded Synclinal axis photo N 37° 09.399 W 80° 20.470 el 1800b

IRO 7315 N60E 20SE beds flip into fault zone

IRO 7316 100' Flood plain ends in bedrock gorge. Massive ltgry dol beds in stream N66E 20° on waterline N37° 09.351 W 80° 20.347 Θco

IRO 7317 photo of big spring and wetland valley at N 37 09 274 W 80 20.381

4/15/10 IRONTO QUAD

IRO 7324 Typ Θco dol w/ sil partings straticulate ls N80W 40SW on new 25 xD Rang

IRO 732 N 70E 20 SE axial plane of 100' wide anticline in slaty argillaceous Cambrian Elbrook dol Sink hole to s along fault

IRO 733 N 80 E 60 NW slaty cleavage in argillaceous dolomite photo of orange weathered phyllite-breccia ledge N 37° 09.143 W 80° 20.798

IRO 721 N 76E 40 SE med gray thk bedded sacharoidal weathered dolomite photo of organic rich wetland soil in flat bottomed Forest Valley for Nan

IRO 722 cherty lam lt & dk gray dol E-W 85 N N 37° 09.289 W 80° 20.971 Meadow lands ~ 200' wide

IRO 723 cement posts mark house site dol ledges N60W 50 SW photo of cacté and dol ledge N 37 09 315 W 80 21 012

IRO 724 Photo of yellow orange Weatered gray grn argillite w slaty deav interbedded w/ Laminated dol and dolomitized cgl zones that

IRO 724 contd can be used to delineate typical elbrook 'short cycles N37°09.411 W 80 21007

IRO 725 thk bedded dk gry fg xline dol at N37 09.446 N54W 40SW. straticulate W80 21.041' leached white sandy soil on top No cobbl

IRO726 N80E 25 NW fine grained el gry dolomite. On road bed N37 09.519 W80 21.004 el 1880 1900 + cor.

IRO 727 N76W 20SW ledge of fine grained orange weathered sandy dolomite (Θc lower)? el 1990 N37 09 611 W80°20.964

IRO 728 sink w/mass dol beds in bottom (Photo at N37°09.631' el 2020 rim W80°20.923' N50W 20 SW el 2000 at bottom Dia 100' upper elbrook? or Θco

IRO 734 N40W 24SW straticulate gray dol w sandy partings

IRO 735 N 30W 44 SW thk bedded gray sach dol w/ butcher block N37 09 733 W80 20 787 el 1980

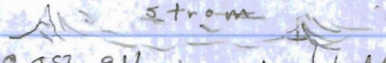
BBG 9617 E-W 50 S rubbly
weatern lk gray ls w/ thn dol
partings abdt algal
features
BBG 9618 transported algal
chert heads size of
basket ball also cobbles
of Chilhowe derived from
old Sheyer River Terrace
4114/10
IRO 731 N37 09.288 W89 20 204 d
Isaac WALTON N 20 W 5 SW thk bdd
brecciated dol w/ shaly intervals

IRO 769 EW 15 S massive creme
lt gray (Big Springs Sta Dr)

IRO 7610 N 37 09.114 W80 20.485
Massive creme to lt gry
dolomite in cut small
cave opening dol w/ thn brn sand lay
beds N74E 62 SE photo
of cut, close up of beds
w facing criterion indicating OT bed
IRO 7611 N 37 08 982 W80 20 544
thk bedded gray dol w/ but chem blocks
N80E 26 SE

IRO 7612 N 76E 36 SE thk bedded gray xline dol interbedded w/ blue gray and brn-tan ribbon rock or dolomitic limestone Facies w/ flat pebble cgl beds.

IRO 7613 N 74E 54 SE photo of algal strom ribbon rock boundary showing agal 1cm "ladders" between strom



N 37° 08.911
W 80 26.501 ± 17'

IRO 7614 N 64 E 56 SE thin bedded tan weath supertidal laminate at N 37° 08.890 Mass an cgl beds above W 80 20 506 at beginning of VDOT Fill fold hinge 5 09 W 65 W (photo)

IRO 7615 big cut N 74 E 60 SE Massive and brown-tan banded silic dolomite. Occ steep fault N 40 E 80 NW brecciated zone

IRO 774 N 37°07.594 W80°22.08
dolomite platy dolomite and dusky red argillite in ditch line on access road el 2160 ft.

IRO 788 massive to thk bedded algal laminated upper Elbrook ledges N70E 50SE el 2050

IRO 789 Big spring under old power line at N37 07 671 W80°21 270 Thick bedded gray dolomite w/ algal mottles E-W 60S

PLT 123 ledge of decalcified lam lst dol overlies yellow orange polymictic breccia N76W 50 SW

IRO 7910 big laminated dol argillite ledge in lower Elbrook 2 photos, one photo of original travertine dam modified by land owner - Karst wetland N37 07 511 W80°20.940 el 1920

IRO 7811 thk dol ledge w/ thn platy argillite zones N50W10°

IRO 7812 photo of broken cobbles in plowed garden

IRO 794 at corner of lot 9 6" dia white qtzite cobble in slty clay matrix.

IRO 795 lean N 37 08 036
White qtz soil W 80 20.351
BSSD N 60E 30SF

IRO 775 old quarry / borrow pit
N89E 14SE @ N37°08.04
white and grey w/ W 80 22 204
bk cherty nodules (photo) behind GO RACE

IRO 776 Several large blocks in front yard of newer home
white - lt gry sandy dolomite ⊖ co

IRO 777 white sandstone boulder pitted but well rounded, round sand grains, recemented w qtz and iron N 37 07 947
W 80 22 252

IRO 789 lot between BP and Knights N 15' orange silty clay w white round quartz cobbles
N 37°08.188' W 80°2 1.570'
Photo

IRO 782 N 65 E 36 SE
thin to med bedded
ribbon rock facies dol w
staticulate banding

IRO 783 N 85 E Base thin
bedded laminated dol overlies
light gray - creme weathered
gray microcrystalline dol

IRO 782 quartzite cobbles along
drive at 228 Glade Dr Coy

IRO 784 qtzite cobble pebbles
at new house much as (3" chunk
float at end of Cullen Court

IRO 786 N 75 E 20 SE cut at
edge of Yard at WP 478 0/2161
Lomoor St. N 37 08 024 W80 21 198
Staticulate light gray tan
weathered dolomite beds

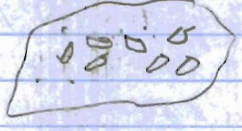
IRO 787 sink hole behind Fairfield
In with 3 drains dwelled
large deep water to drain
Chert and ss float in silty
loamy soil

IRO 788 INTERSTATE OVERNITE PARK
Original grade dropped ~ 6' below
house and flattened for trailer
park
IRO 789 Straticulate dol / flat
pebble cgl block in WP 479
church yard behind / TD decker
N 37 08 373 W 80 21 007 el 2159
IRO 7810 graded land w/some
cht some Ecoss chips and
several exotic BR qtzite cobbles
at WP 481 N 37 08 860 W 80 21 115
el 2157
IBBG 964 WP 482 Dark gray
thin bedded to wavy laminated
limestone w thin partings
white veins WP 482 N 37 08 48
Beds E-W 54 S el 2096 W 80 22 900
Veins N 10 W 80 E, delicate (subtile)
karst next to road
BBG 965 small quarry opening
dark gray dol w/ chert
lenses thin sick parting
could be knox or Beekmantown
deformed beds N 30 E 70 SE
EW 80 N N 60 E 80 SE

IRO 7218 N 60 W 18° SW
straticulate layered dol
(Oco Big Springs Station Member)
IRO 7219 piles of oolitic chl
below rope trail and blocks of dolomite

IRO 7220 Massive ledge of
straticulate dol w/ siliceous
silt and sand ribbing
N72 W 60 NE ⊖ Co BM
IRO 8125 Gray siliceous
straticulate dol, thin sandy
soil on ridge top N 76E 32SW
IRO 7221 Thick bedded brn
weath siliceous dol N 70 W
44 SW on top of ridge
topo forms indicate SW dipping
beds
IRO 7222 dark gray xline
dol, thk bedded alterating
with thin shaley argill.
dol. N 76 W 50 SW
air strike N 76 W 38 SW in valley
below
IRO 8126 el 1850 b Massive brn weath
dol ledge 3-4' thk overlain by ribbon dol N60E 80SE

IRO 8126 contd this ribbon dol
is below sandy ledges ∴ Cel P.
IRO 8127 massive bedded lite gray
sandy dol N46W 18SW lies
above dk and light gray
dol with brown-yellow ribbon
banding disposed in short
upward fining "Elbrook Cycles"
Big Spring Station Member Conococh
IRO 8128 Massive straticulate dol on
hose N 60W 20 SW oolitic chert
w/flat pebble beds litters crest



PLT 121 N70E 20SE lam dol
Cel
PLT 122 platy lam tan
argillaceous dol N70E 80NW
PLT 123 platy lam dol
N60E 30 NW

IRO 773 photo of yellow soil
profile w/gry and red mottles
and white bleached qtz cobbles
and pebbles N 37° 07.583 W80° 22.145'

IRO 7810 photos of cobbles and pebbles in slty cly mtx along I81 off ramp at Bypass in Christiansburg N37 07925 W80° 22.254

BBG 981 massive gray xline dol. w/ butcher block weathering, chert replacement structures in quarry N36W 40SW @ N 37° 08.157' W 80° 23.413'

BBG 951 blocks of oolite and sandstone in fill from cut to south at turn around

BBG 952 Photos of folds in brecciated green and dusky red phyllite

fold hinge 55SW 20SW

axial surface?

high angle Fault N20E 75SE

N 37° 08.584' W 80° 23.398'

cherty soil along old road

BBG 991 crome to yellow orange dolomite, fine xine w/ much chert debris

BBG 992 chert debris in lite reached soil. No bedrock here

N 37° 08.312 W 80 23.112

PLT 111 WP 006
terrace gravel in new cut
N 37 27 189
W 80 22 363 2160

Bill Henika

6/11 IRO 419 N4°E 14SE
massive gray fg dol - el 1770
N 37 12 .515 W80 22.288'

IRO 4110
N 30 W 10 SE burrowed y/w
and gray dol ls el 1660
N 37° 12.358 W 80° 22.182

IRO 4111 N 20E 10SE
burrow mottled dol
ls upper 0 be el 1640
N 37 12.290 W 80° 22.182

IRO 4112 Massive fossil blue
gray wacke sn, w burrow mottles ls
N 36E 20 SE, 0 ln
N 37 12 .157 W 80° 22.040
N ?

IRO 4113 el 1960 6
med gray dol ledges
on road bank and driveway
N 10 W 16 NE

IRO 4114 massive light
gray massive dol N5W 12SE
by culvert el 1830

10/7/11 IRO-14 11
N 14 W 20 NE 2' rubbly
weath white chert bed
comes down to ck.
Stream disappears above
In rubble at el 1630b
N 37° 13.978 W 80° 22.442
IRO-1412 el 1620b
thk bedded, rounded weath
blue gray wackestn is
fizzes at N 37° 13.977
4 sats W 80° 22.407
N 20 E 20 NE
IRO-1413 ~ 2' thick bedded
grst wackestn fizzes at
el 1580b N37 13.957 W 80 22.295
heavy chert/dol above
N 10 W 14 NE
IRO-1414 30' dol section
as stream bends to SE
N 8 E 14 SE N 37° 13.947
Some ~~~ W 80 22.172
laminated algal matts
overlain by thk gs beds
Some lime beds

Bill Henika

NOTES Nov 4 Hicory Hills

IRO 1515 at toe of bldr flow photo of large bldrs on upper edinburg surface
N 37 13 483 W 80 21.252

IRO 1516 el 1800 b photo of yellow silty clay w/quartzite bldrs typical of colluvial valley fill N 37° 13.540
W 80° 20.946
strike and dip across creek
N 8 W 20 NE ochrous - olive weathered arg w 2' 15 layers
(O)h

IRO-16N on Road bearing N20E slope 1-2° to SW Bays section is 80 steps wide beds dip gently NE 10° strike N 4W photos N37° 13.583 W80° 20.833

IRO-1612 N26W 20 NE Top of Bays is 6" red bed (photo beneath olive silt arg illite of Martinsburg, El 1900 b
N 37° 13 670 W 80° 20.727

IRO-1517 Mottled yellowish orange - white qtz ss sap in bottom of 2' hole dug on road bank el 2075 b

IRO-1518 Dusk red brown clay stone sap in bank by Pheasant trap
N 20 W 22 NE
N 37° 13.743 W 80° 20.852

NOTES

IRO-1613 olive to yellow brn weathered
salty argillite w/4"W 1S
interbeds on skid road
at el 2020 N37°13.805'
W80° 20.688'

bedding N10W 20NE
fold plunge N80E 12NE

is has cleavage
pattern

IRO-1614 debris flow fills this
drain interbedded 1S
el 2010 + arg on cut
N37 13 877 W80 20 708
N10W 16NE photo of
interbedded 1S + arg
Sample at N37°13.803'
IRO-1519 2-3' W80°20.733
Blocks and blats on debris
fan behind barn at
N37° 13.570 W80°21.157
IRO-1520 4' block of cgl in
debris flow el 1542
N 27 13 613 W 80 21 355

IRO 1521 Ravine expse 20' sect
Gln N 37° 13.628
W 80° 21.463
el 1510
Beds N10W 20° NE
IRO 1416 gray micrite OC
by River at N37 13 602
N5E 20SE W80 21.097

Item # 033-3

NOTES Lipsey Farm

dk gry x'line wackesn
just above Flood plain
strike ll creek dip
15-20 SE Oln
IRO 1 519 Photo of

Blacksburg from
SW end of Catawba
syncline (Hickory Hill)

Taylor Hollow Nov 7, 2011
IRO- N 60E 20 SE argillaceous
ls/slaty argillite, v
IRO 4 29 thin bedded w/ slaty
cleavage
IRO 4 210 Gray slaty argillite
some more massive
N 60E 30SE Easts
Driveway 1297 THR
IRO-193 N 50W 20 NE
N 37° 12.645 W 80° 20.438'
Massive argillite w/slaty
cleavage

IRO-271 cl 1730 b brown weath
punk calc argillite OC
in switch back
N 37° 12.628 W80 19.897
beds N70E 30SE
IRO 272 cl 1830 gray arg w/
slaty cleav, white qtz
SS float from above N60E 20SE
N 37° 12.700 W 80° 19.781
IRO 273 cl 1860 N 38E 20SE Thk bedded SS
contact on road N 37 12.697
W 80 19.770

Day Runner

NOTES

IRO 274 el 1930 b red brn dusky red mdsn Float and resid in road on point at N37 12 685 W80 19.702

IRO-275 el 2050 b in cut on spur of Hightop Mtn N37 12.532 W80 19.750 olive shale + slsn sap N80E 40SE bedding plane cleavage

IRO-276 on knob at el 2000 b brown SS flt, some white qtz arenite chips N37 12.642 W80 19 725

IRO-277 E-W 60N el 1610 b gray argillite w/ slaty cleavage N37 12.760 W80°19.847

Nov 28 IRO 129 below New house
corse bldrs of SS from Dev
above form a fan like debris
deposit on SW side of strem
black shaly limestone ledge
on N side N 30 E 20 SE
thin bedded bk argillite

IRO 1210 N 20E 20 SE dk gry
argillite grades upwards into
ylow grweathered argillite
at at
IRO 1211 10' white/lt gry
quartz SS N 40 E 20 SE at
el ot
IRO-1212 el 10 6 reddish
brn to dusky red mudstone
sits on top of SS
N 10E 10SE
IRO 137 10' ledge of dusky
red mdsn on fenceline trail
N 30 E 12 SE el 1900 Topo

IRO 1213 el 1990 oc 6' of
coarse brwn weath qtz SS
cross beds Sample and Photo
N 37°14.444' W 80°20.889'
N 10E 12 IRO - 1214
House el 1660 el 1600
N40E 20 SE thin bedded arg, dk
Address 2618, 2614 Twisters
Gate

IRO-1215 cht gravel td
level above al.
IRO-3216 N 28 E 10SE dk
fry black carb sh / slaty clear

Nov 29 2010 Kaknis
cem el 1950 IRO 139 green
shale overlying red mdsn
106
IRO 1350 N 24 E 10SE
burrowed brn sh at
el 1975 ~ 25' above cem
on old road
IRO 1311 el 1980 green
slaty arg OM6
N 36 E 18 SE

IRO 1312 stream filled w/
debris flow - coarse cgl
qtz ss from above el 1800b
red mdsn float in road
embankment
OC N 24 E 18 SE @
1850 b

IRO-1313 N 12 E 10SE
10-15' w/ 4' exposed
Walker Mtn ss @ 1790b
coars cgl blks debris
from D/S def bench on
NE side of drainage.

is formed on SS

IRO 1314 at edge of Field old fenceline el 1780 ± (reset cor ~30' cor

IRO 1315 at farm lane below Kaknis house el 1720± N 30 E 24 SE ocher weathd calc mdstn w/ slaty cleav,

IRO 1316 walker mt SS OCg in stream ~30' wide 20' high el 18706
N 37° 14.550 W 20.572
N 20 E 20 SE.

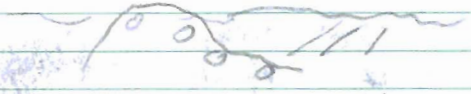
IRO 1317 N 22 E 20 SE 6' ledge maroon mdstn el 1850 ±

IRO 1318 el 2020 ± on road next to Field ~50' blow saddle orange ochre ls sap N 40 E 22 SE Omb trenton ! Top of maroon Mudstn ~25' below on road at N 37 14 477 W 80 20 543

IRO-1319 N 40 E 22 SE maroon dk brn mdstn in road bank below cabinsite el 19506 N 37° 14 493 W 80° 20 522

Hawk Siting — baby
Hawk Playing?

IRO 1216
N68E 20 SE thin bedded
dk gray argillite and
argillaceous ls in deep
Entrenched stream cut
through debris flow
(Photo)



IRO 1217 old spring house
(Willow Spring built
under VDOT roadway
N 37° 14.937 W 80 21.293'

IRO-117 N36E 22SE coarse
grain stone (Murat facies)
above Agnew Quarry
N 37

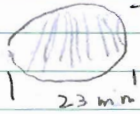
IRO 118 in Agnew Quarry
N45W 22 NE coarse
gs bed w/abundant
brac valves trilobite spines
on echelon Fracs
N37°14 725
W 80° 21.902
N 80E 8000
N 80E 18SE
in CK

Black chert
preserves bracs

N34E 12°E on bench

Agnew Farm O/n

IRO-119 N26E 10SE braces on bedding plane fine ribs wackesn dk gray thick bedded



- N 37° 14.798
W 80 22.013

sink hole partly filled w/ quarry overburden

IRO-1110 N32E 20SE 48 steps wide
dk gray micrite in fence corner behind new house across from chapel (old church)
N37° 14.758 W 80° 22.043
Beekmantown Chert on hill above oc along fence line

N37°14.763 W 80 22 005 sink hole
on contact On/Ol
N37 14.787 W 80 22.013 sink hole
less than 20 On VISIGle

IRO-1111 contact between Beekmantown Dolomite and Newmarket? Med thin bedded gray lime above dk gray San weathered dolomite
Jufa in stream
N 37 14 735 W 80 22 077
N20E 20SE at Fence

IRO - 1112 NS 10E
massive ledges of gray
laminated, siliceous dol
large chert blocks down
stream
N 37 14 .775 W 80 22 095

IRO-1113 40' thick
blue gray micrite ∞
N 30 W 6° NE
N 37° 14.820 W 80° 22.115'

IRO - 1114 N 6E 10 SE
thin bedded - lam sil. gray
dol. ledge at el 1510 b
N 37° 14.805' W 80° 22.205'

IRO - 1115 N 10E 6 SE 2'
mass gray sil dol ledge
at N 37° 14.873'
W 80 22.282' el 1580 b 100 OFC

IRO-1116 N 32E 10 SE
pavement on SE side of
Indian Run N37° 14 898 W 80 22.305

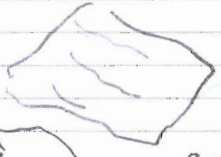
IRO-1117 at Listers Mill
heavy Tufa ~ 15' above
pinicled dol in crk total
fall ~ 40'. dol ledge above
N 10E 15 SE N37 14 975 W 80 22.353

IRO-1118 Plunge pool below tufa ledge N18E 18SE 30' dia 6' deep pool N 37 14.965 W80 22 498

IRO-1119 N65W 20NE thk bedded grey dol N 37° 14.937 W 80° 22.600 dry stream bed separated from main stream by elevate road (not Wilderness Rd) possibly Lusters Gate Mill run? in corner of quad map as tufa along Flat terrace Wilderness Road is on higher terrace level cut into slope and with obvious fills dominated by weathered Beekmantown chert blocks and boulders Returned to Lusters Gate by way of Wilderness Road which is hard to trace through the Back Yards of Gate Way Baptist School

NOTES Dec 2

IRO 1120 gray massive micrite (On N 20 E 22 SE bedding w/ rillenstein Fluted surface



IRO 1121 gray micrite becomes coarse dol packestone w chert clasts at base dolomite below N 50 E 30 SE basal cgl layer

IRO 1122 N S 20 SE lam gray dol w/ cht debris (Ole behind garage

IRO 1123 el 1635-40 Tufa in stream bed, large X dol blocks 6' x 1' x 4' beds N 20 E 15 SE Obc thk bedded gray dol

IRO 1124 Angular fracturing / strike Vert N 88 W - 8 SW el 1650 ft N 10 W 12 NE waterline strikes on grooved beds

IRO 1125 el 1680 N S 10 E thk bedded gray xline dol large blocks on slope to NE. New House on ridge line to NE

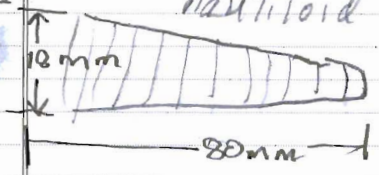
Day Runners

NOTES DEC 3 Field Trip w/ Radford and Kent State

IRO-6218 Sample of green breccia matrix from I81 climbing lane cut gray ish green coarse crystalline dolomite matrix
N 37° 11.962'
W 80° 16.116'

Dec 5 - 11

IRO-1126



dk gray wackestn silicified fossils many shell fragments

Tension veins
N 50 W 85 SW calc filled N/P

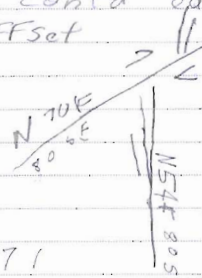
IRO 1127 dk gry wackestone w/ bio grains abundant, brach and silic cephalopod fragments Neither Lincolnshire nor Newmarket on NW side of 200' dia 30' deep conical doline w/ drain to sub about 300' along fence line from IRO 1110

IRO-1128 gray wackstn abdt brach and ceph fossils silicified, tension + shear fractures N 14 W 16 SW fluting and weathering is veins transitional to Qy

Item # 033-3

NOTES 12/05/11

IRO-1128 contd cavity veins offset



6y/ato veins

MCM 771
N40E 16SE light gray weathered gray wackes on edge of 200' wide sink another just to NE definately Lincolnshire - rounded black chert in gry ls ledges along SE rim of doline

MCM 772 N46E 10NW near flat layered tan-gray weathered fine xline dol (Obe) just above road mach chert in woods

IRO 1129 N80W 60SW
el 1660 crossed contact
b Obe \ Oln at ~1700'
basal ls is gry grainstone (with dark fossil fragments grades upards into dk gray fg wackestone with some dk grg Micrite

IRO N30 in sink - cave ent. across dock to SE N40E 80

MCM 773 N70E 60SE gray xline dol, thk bedded, laminated

NOTES

MCM773 on nose at el 1700 b
contact 20' below dol
ls w/ dol + cht pebble
sized & clasts Oln/Obe

MCM-774 thk bedded gray
xline dol LS at el 1700
N44E FROM OLD BLOCK
House at LUSTERS GATE
MILL (Oln N80E 20 NW

MCM-775 on nose above lusters
gate mill at el 1720 1
2' thk Chert bed
N 60E 60SE

IRO 1131 N24E 10 mass gray
ls Oln at el 1720 in cedar
Field across old
fence line from MCM775

Dec 8 2011

MCM 781 ocs 6 F coarse gray
gainstone in front of Barn
N40W 16 NE

MCM 182 N30W 16 NE Thk bedded
gray lime grainstn

IRO 3317 N60E 16 SE coarse
gray gs weathers brn

MCM 783 dk gray gs/wackestn
weathed redish brn
N80W 60 NE on W side
of 100' dia 20' deep doline
(photo)

NOTES

~~MCM~~ ~~184~~ black slaty arg
IRO 3318 N 10E 18 SE in
borrow pit by pond
IRO 3319 gental doline along
fence line fault trace?
IRO 3320 chips in brn clay
soil, very wet olive
clay
IRO 3321 black slate N 10E 10SE
outcrop in small drainage
MCM 791 Sutton Farm
boulders in alluvial
terrace at house
OCs of gray sh in
bank to SE N 12 E 24 SE
MCM 792 el 1640 b on Sutton
coarse SS bldrs up to
2' on road side an
in stream bed
IRO 1321 N 10E 24 SE on
pencil cleaved argillite
exposed in embankment
cut through boulder slope
deposit. el 1700 b
IRO 1322 el 1800 b prom
bench on green shale
and sltsn (Ob) white
qtz arenite bldrs w/qtz
xls
IRO 1323 el 1970 b on nose
dusky red mudsone
chips in overturned
tree roots (Ob) 200' gorge
w/ falls below

NOTES

IRO1324 large block slide el 2020-50 on gentle slope

IRO1325 el 2160 b SE dippin bench at top of (20' below) bays 0 mb green shale chips in roots of trees

IRO1326 el 2040 b bays top red + grn slsn OC above stream N80W 40NE big qtzite cgl blks in stream at 2020

IRO1327 el 1920 N80W 30 2 massive green SS ledges OC on steep slope

IRO1328 2 2' SS ledges brn to reddish N 70E 22SE el 1830

MCM793 N50E 30° SE 6' qtz SS ledge crossing stream and holding up ridge to nw

MCM794 N 80 20 NE massive to thin bedded arg ls. blk

IRO1131 thin bedded gray wackesn OCS in eroded spot where fence bends

Dec 9 EW 80N NEL 650

IRO194 slate + thnls

Slate Lick fm

IRO195 N80E 80NW gray calc slate + arg in road bed el 1560

Item # 033-3

NOTES Dec 8' 11

IR0196	N80E 80SE slaty clean in OC bed N44W 18 NE in stream bank across from House el 1700 b
IR0197	sandstone ledge holds up steep ridge (el 1750 b in creek) ledge Form on surface N30W 20 NE
IR0198	green calc siltn, slate and ss, abdt linguloid brach shells N30W 10 Ort
IR0199	on old power line row at el 2000' large (5') < blocks of white cross bedded ss fan like surface
IR0190	el 2030 b - steep slope w/ gren-orange sh + slt chips - end block Field
IR0191	N85E 18 NW black ls w/ sulfate on surface boudins or cobbles in slaty mtx Ort el 1860
IR0192	el 1920 75' by 15' trench in hillside w. road leading up to ridge Shale pit?
IR0193 IR	N72W 34 NE greenish gry ls and argillite w/ slaty cleavage OCs on road at el 2000 b at hedge of Clearing
IR0194	N50W 18 NE bench on qtz ss ~ 2' thick

Day Runner

NOTES

cap rock for ridge line at el 20

IRO 1915 el 1890b cut road OC in curve N 38 W 18 NE slaty cleavage in dusky red and green mudsn

IRO 1916 walker Mtn qtz SS about 6' thick on road bank n 52W 19 NE el 1860b

IRO 1917 el 1750 ocher shale or slate pavement on road above studio

IRO 1918 el 1700b - qtz cgl of Silu - Dev in slope deposits

Dec 11 " TAYLOR Hollow

IRO 277 Bays N 40 E 58 SE grn gry sh overlain by SS ledge el 1740b

IRO 278 Bays grn sh + SS 1780b red mdsn N 60 E 20 SE at east to house

IRO 279 Bays SS in Crk ~2 ledges N 70 E 20 NW el 1720b

IRO 2710 grn red mudsn Ocs in road at el 1700b E-W 65 N

IRO 4211 on creek bank el 1520 Just below Fork, gry slsty ls + slsty org N 70 E 10 NW bedding N 70 E 70 SE cleavage

Item # 033-3

NOTES Inferred Fault

short dashed 1.5 mm
thick .375 mm .75 mm

In Ferred Contacts

.15 mm thk

C. 425 pt

4.25 2.13 pt
pt

Short dashed contact
0.425
miter limit 4
1.42 2.13
dash gap

12/19/11
Ellen Gilliland 405 4706826
VIRGIA CENTER COAL & ENERGY
460 Turner St
Suite 304

Dennis Estes Estes Motors
Dec 20, 2011 Cell Tower Property
IRO 4212 on NS tracks 16'
15 ledges, gray-brn weath
slaty argillite N40E 40SE

N 37° 12.047 W 80 21.477'
strong jointing N30E 50NW IRO4213
N 37° 11.980 W 80 21.363
IRO 4214 N 02E BRL to High Top
N37° 11.783 W 80 21.436'
orange weath slate chips

Day Runner

NOTES Dec 22 '11

IRO 42 15 Just below summit in road bank yellow orange-gray weathered slaty argillite N 40 E 50 SE slaty cleavage. N37 11.892' W 80 21.555'

IRO 42 16 N 40 E 45 SE thinly bedded calc-argillite w/ slaty cleavage el 1706 N 37° 11.700 W 80° 21.598'

IRO 45 12 slaty argillite lite gr on fresh roadcut at el 1650 N 37 11.597 W 80 21.470 N 20 E 20 SE

IRO 45 13 white qtz ss blks on knob above grn sh turn in road el 1620 ft N 37° 11.537 W 80 21.428

I Walker Mtn SS / 06 may be offset across road to S

IRO 45 14 el 1700 ss gravel in tree roots N 37° 11.500 W 80 21.423

IRO 45 15 listvenite ledge form crosses nose at el 1640 ft N 37 11 492 W 80 21 352 red mudsn + qtz sand

IRO 45 16 red mudstone soil and float on slope el 1570 N 37 11.445 W 80 21 332

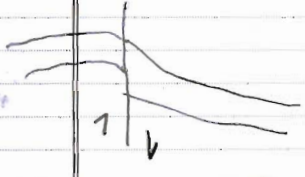
IRO 45 17 joint N 76 E 56 SE or N 20 W 12 NE Rcd mdsn ledge on point, N 37° 11.48 W 80° 21.300

Item # 033-3

NOTES Dec 20 '11

IRO 45 | 18 N 40 E 36 SE
rd mdlm+ tan thk bedded
ss Ob at turn 40' borrow
pit N 37 11 390 W 80 21 206

IRO 45 | 19 N 4 E 20 SE
gently undulose
argillite / calc arg
beds Ohb N 37° 11.470
el 1500 W 80 21.185
Folds and pencil cleavage
plunging N 80 E 20 NE
Flts N 60 E 64 SE
down to SE



IRO 45 | 20 N 10 E 40 SE rd and
grn argillite w/ slaty
cleav
N 37° 11.600 W 80° 21.180'
spheroidal weathered
fine SS

Dec 21 20 11
IRO 21 1716 | N 30 W 30 NE mass 2' ledge
lol, tufo in stm
100 m from yellow
frame house el 1650
N 37 13 185 W 86 22.477

IRO 1717 1600 | NS 16 E thk blk
Micrite ledges
N 37 13 097 W 80° 22 185'

Day Runner

NOTES

NOTES 1-12-12

IRO 17 17 black slaty argillite
OC N 50 W Dip 50 NE
N37° 12.680 min W80° 21.860'

IRO 17 19 N37° 12.742' W 80° 21.985'
Dark Gr mass bedded limestone
N30W 20NE

IRO 123 (redo) N 26 W 42 NE
Grooving lineation on folds
N60E 40NE
limestone pebble cgl
white cal veins 1set N 30W
dip 40 SW
interset view N 44 E
dip 70 NW
GPS N 37 12.820'
W 80° 21.995'

Photo IRO 174 Cherty ow at N 37° 12.950
N37° 12.950
W 80° 21.987'
IRO 175 cave opening active sinkhole
N 37° 12.988' W 80° 21.998'
picture

IRO 1720 Top of limestone
Bed N 26° W 20 NE
Long N 37° 12.997',
W 80° 21.915'

IRO 1721 GPS N 37 13.150' W 80° 21.857'
Landslide slump scarp on top
of LS contact
photo across Rd

IRO 1722 lime LS Ledge
N 36 W 20 NE
N37 13.139' W 80 21.877'

1723 IRO 1723 N 10 W 16 NE
Th bedded cobbly weather dr gr
LS N37 13.240 W 80 21.980

NOTES 1-12-12

1724 N 56 E Dip 8 SE

1-13-12 IRO 1725
cg gray wackelsn, yellow bandy
N 37 12 860 W 80 21 960
WP I01 N 20E16 SE

IRO 1726 I 03
N 37 13 042 W 080 22 RR
Dark gray wack sn w/banded
text large fossil
Eversole drilling Co 276 637
N30W 16NE 3361

IRO 1132 Ellenbogen Farm Contact
01/0e in Ck N37 14.228
air N6E 22 SE W80 21.983

IRO 1133 thk bedded Ls
N5 16E N37° 14.232 W80 22.05
IRO 1134 Massive dove gray
micrite ledgs at Corner
On N 37°14 252 W 80 22130'
N8E 14SE

IRO 1417 chips in rusty brn
soil = 0E
N 37° 14.128 W 80 21.922
IRO 1418 photo of bk sh arg
ledge w/ clean-bed i.e.
B N20W 18 NE
C N80E 80SE
R F 20E 1in
IRO 1419 dk gr wacke sn
Masive bded N20E 20SE

Item # 033-3
N37 13 787 W 80 21 942

NOTES Jan 20 '2012 BBG

Buchanan, William T.

The Trigg Site, City of Radford
Richmond, Arch Soc VA 1984

E178.V7 B83 1984

BBG 325 - Advance stone lam thk bedded gray dol (eel)
N 37° 14.185 W 80 25.260
N56 E 50 SE

Jan 24 '12
IRO-7716 ledge of dk gry micrite ~100 from road
N37 10.270 W 80 22.677'
Photos of Joseph Bridge
IRO-7717 pebbly grainstone w/ cht dol pebbles Fossil debris ~Histon facies - Maysat
N37 10.310 W 80 22.620
Bedding N40E 24 SE (Photo)

IRO-7718 N 30 E 26 SE
dark gray arg wackestn lumpy bedded surface
spring source
N 37° 16 283 W 80 22 5 73

IRO 7719 Ol dk gry arg wackestn N40E 26SE
N37 10.177 W 80 22 620
Photo OC S/O Smart Rd

IRO 7720 On dk gry micrite ledges just above copse of cedar 3/4 up slope From CK
N37 10.175 W 80 22 765

NOTES rudely layered

OCS N 22 E 24 SE ~100'
from Rad 65 paces

BBG is dk gry micrite
mottled w/ tan dolomitic
burrows, porous chert
prob top Ob @
N 37 10.158 W 80 22 757
Chert layers
(photos) of chrt
and pure micrite
N 28 E 2 SE probably
a pinicle ~ 10-15' diff
alps

IRO 7521 bays SS (qtzite
Float on roadbank
just past house
N 37 111.397 W 80 21 385
Green bays SS
NS 40 E

IRO 1730 chert gravel in soil

IRO 1731 massive ls ledge
N 10 E 18 SE coarse gray
wackesn w/ promnant
N 37 12 612 W 80 21 .935
I .el 1580 b

IRO 1732 N 10 E 18 SE el 1590 b
N 37 12 602 W 80 22 023
Massive Gray micrite
w/ some dol mottling
and silc brgazoa?

Item # 033-3

NOTES N 37 12 . 588 W 80 22 . 100'

IRO 1733 N 4 W 12 NE brarrow
mottled dol ls spring @ 1600 ft
IRO 1734 butcher block
dolomite crops out
in stream bottom
N20 E 20 SE
N37 ° 12 . 605 W 80° 22 . 217
el 1620
IRO 1734 A spl of
dk gy blk xline ls
(marble) w/ chert clasts
at base of On
1st display st dolom led
form on hillside solution
depression below ledge
poss cave below

Jan 25
IRO 4410 ls dk gr micrite
N 37 11 120 W 80 22 . 210
lite gry weath, brown
chert NS 19 E
N 37
IRO 4411 ls dk gry micrite
N 20 E 20 SE no chert

IRO-4412 white blocky chert
masses across nose
of hill (upper dol)
N 37° 11 . 213 W 80° 22 . 358
IRO-4413 el 1780 lite gry
crystalline dol N 30 W 10 NE
N 37 11 187 W 80° 22 . 460
Obe ls just below N20E 10
Obel gray massive bedded micritic

Day Runner

NOTES

IRO4414 N 20E 18SE ledges of light gra - blue gray micritic ls in upper Beekmantown el 1680b N37° 11.125 W 80° 22.465

IRO4415 blue gray - lite gray ls blocks in woods just below ROW Fence el 1590b, Sink, conical ~ 6-8' deep 50' dia a N 37° 11.028 W 80° 22.380

IRO4416 N20E 22 10' thk massive micrite bed lt bluish gray ls in cut at el 1580 N37, 11.016 N80° 22.482

IRO-4

Item # 033-3

NOTES Honda Packas G 1909

19.69	Mirror R 1989695-001 19.69
6.29	C9p 33mm Black NH1 132355-001
19.69	Bulb 12V 35/35W 17413S7-001
	1-888-339-3888 Bike Bandit
	E.B. Knopf, 1927, Some results of recent work in the southern Taconic area: Am. Journ. Sci., 5th Series Vol 14 pp. 457-458, 1927.
P36	Kyanite in Va The old explanation of the change from east to west in Pennsylvania of the highly metamorphosed rocks to albite chlorite schists and other rocks of low-rank metamorphism is that the metamorphism died out to the NW In central Virginia where there is an alternation of zones of high rank and low rank metamorphism the explanation was not applicable and rocks
	Knopf, E. B., 1931, Retrogressive Metamorphism and Phyllitization Amer Journ. Sci 5th Ser Vol. 21 pp 1-27
	Jonas, A. I., Metamorphic belt of the Appalachians: Geol. Soc. of America Bull., Vol 40, pp. 507-10, 1929

Day Runner

NOTES IRONTO QUAD 10/19/09

IRO 981	N 37° 08.207 W 80 15 .979
IRO 982	WP 001 N37 08 335 W80 15 993
	red brown shale arg
	oc on road bank
	coarse bldrs along field
	bndry
IRO 951	N 37 07 635 W80 074
	near vertical ledge
	along road bank
	N14E 78°NW gray grn
	thin bedded argillite w BPC
IRO 983	Red and gray grn slaty clean
	argillite
	WP02 N37 08 199 W80 16.053
	el 1373 Bedding N 34° E 60SE
IRO 984	Massive Dol, gray fg - xline some bands
	N42W 60NE
IRO 985	massive bedded gry dol, than
	thin bedded ltgy dol w chert
	N 10E 60 SE
IRO 986	small quarry in dk gry
WP004	rexine iron stained dol
N 37°08,064	N82W 60 NE slicks
W80°15,909	ON Fract strike N 70E 50NW
	plunging 18° W
IRO 999	N 20 W 50SW bioturb red laminated
WP05	argillite w BPC, 25' buxcow dol
el 1441	N 37 08 085 W 80 15 .715
	above on road
IRO 910	N 20 E 65 SE Rd + grn slaty
WP 06	argillite above mass dol sect
el 1666	forms ridge line N 37 08 .015 W 80 15 .783

Item # 013-200

IRONTO Project 10/19/09

NOTES

Make New Layer

*	Select all
x	Copy to New layer;
x	Save old layer
x	Pathfinder Devide new layer
x	seled a fill for all No stroke)
IRO 9911	N26E 60SE grn-gry slaty argillite then dolomite, w deep clay
WP007	soil above at powerline dk gry barn
1856	N 37 08.200 W 80° 15.805' dol with min white veins
IRO9912	Grn-Gry slaty argillite on ridge
WP008	trail N18E 80SE
el 1896	N 37° 08.304 W 80° 15.717 min
IRO9913	Grn-Gry y/w grn slaty argillite
WP	ledge in road N08W 45NE
el 1935	N 37 08.314 W 80 15.617
IRO961	N24E 67NW lt gry slaty argillite
WP009	N 37° 08.395 W 080° 15.548'
el 2143	Red argillite below in woods
IRO962	N6E 50NW N 37° 08.556 W 80° 15.364
WP010	el 2231
IRO963	N 20E 72NW Rd + Grn slaty argillite
WP11	in saddle along ridge
el 2095	N 37 08.714' W 80° 15.341
IRO964	N10E 82SE thin cleaved paper
WP13	slate, lt gry-grn
el 2248	N 37° 08.808' W 80° 15.298'

Day Runner

NOTES

IRO965 N10E 66 SE N 37 08, [illegible] W 80 15.274
WP14 ledge of paper thin slaty
el 2114 argillite. lt gray-grn

IRO966 N 10E 80 NW silty argillite
WP 15 grn gray + maroon, burrows
2146 fine sericite sheen on BPC
ledge beneath tower N 37 08.998
W 80° 15.277

IRO967 N 85 W 50 S W thn dol bed
WP016 with gentle Z folds ~ plunge
S 85 W at 5° or less
2129 N 37° 08.791 W 80 15.741

IRO969 Red and green argillite w/BPC
WP17 holds up ridge close spaced
joints N 85 W 70 SW
1745 N 37° 08.520 W 80° 15.177
BPC N10E 77 NW close spaced
joints break up OC into
blocks possible cross struct-
10/20/09
IRO987
WP018 N 37° 08.213' W 80° 15.346'
el 1712 Greenish gray thin bedded
argillite w/ slaty cleav // to
bedding 044 30° SE w/
coarse qtz rite boulder fd
above along old rd

WP019 N5W 60NE cleav in rd cut
IRO988 Slaty arg. N 30E 36SE bdg
el 1783 N 37 08 111' N 80 16.345
el 1974 N.

NOTES

Coles Hill 5/19/09

WP20 el 1560 IRO989	IRO 100m up from trailer much chert, cg dol blocks in valley N 37 07.826 W 080 16.582
IRO9810 WP21 el 1659	N62E 42 NW coarse sach dol ats deeply weathered to orange gray mass N 37 07.764 W 80 16.641
IRO9811 WP22 el 1804	N 60 E 50 SE on log road 60' above valley Red laminated argillite - bedding N 37° 07.688 W 80 16.690
IRO971 WP23 el 2001	Red argillite ledge N 35 E 40NW on nose of hill N 37 07.568 W 80° 16.683'
IRO972 WP024 el 1994	in saddle w/ low relief angular blocks and bldrs of med gr impure ss or meta graywacke Er ? N 37° 07.544 W80° 16.920 tan mica/clay mtx fine - med rounded qtz
IRO973 WP 2079	Tan sltsn/argillite beds w/BPC N 60W 20 NE N 37 07 646 W 80 16.938 (on ridge to N ~ 100m)
IRO 974 WP26	N40 E 70 NW Red + grn slaty arg, thin bedded ledges on nose of hill N 37° 07.682 W 80° 16.884 el 2042
IRO975 1783	N 20W 20 SW 1'-2' thick argillite bed slaty cleavage N 30E vert. cal. drag road to valley N 37° 07.725 80° 16.818'

NOTES

IR0976	Massive cry dol, dk gry
WP 28	float in saddle
1828	N 37 07 760 W 80 16.723
IR0977	Gray xln dol w/cht
above	saddle N 40 E 30 SE
WP 29	thin bedded gray argillite
1713	below N 37 07 841 W 80 16.685
IR0981	Thin bedded tan siliceous arg
WP 030	N 10 E 56 SE N 37 08.091'
el 1763	W 80 16.557'
IR0981	Massive gry carbonate w
WP 31	complex stylolitic beds
1760	N 37 08 180 W 80 16.619
	Bed N 16 E 66 SE
	Joint N 84 W 70 NE
	Joint N 50 W 60 SW
IR0978	Lam to med bedded bkt gry arg w
WP 032	tan weath dol and argillite
el 1756	N 39 E 40 SE w interfolial folds
	dol. boudins
	2 folds plunge S 20 W 18 SW
	N 37° 08 109' W 80° 16.717
IR0979	Massive mottled dk gy dol w
1556	disc. vuggy zones beds N 39 E 40 SE
	Fract. w/ gash veins N 50 E 45 NW
N 28 E	N 37 08 017 down to NW
40 SE	W 80 16 750
bed at	overlain by mylonitic grn and
top of	rd phyllonite with intricate
80 p	folds plunge S 36 E at 40
N 16 W	folia N 84 E 50 SE
line 0c	then thk beds or rd and grn

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NOTES

IRO 9710	New housesite exposes massive
WP 034	burrowed dol ls photo N38E 20 NW
el 1551	N37° 07.868 W 60° 16.745'
IRO 9711	N52E 57SE Gray dol, grn arg
WP035	w tan argillitic beds offset
1553	by cleavage N 37° 07.783 W 80° 16.054
IRO 9712	Slide or Rock Fall area where
WP036	slaty argillite cleav dips NW mass
el 1607	dol beneath beds dip [illegible]
	N 37° 07.658 W 80° 17.236
IRO 9713	
T	N50E 66 NW at W end of cut
	thk layers of grn and rdd
	slaty argillite, ylw weathed
	arg dol. w/mudcracks
	33 paces from West end of cut
	is karstic dol - road shows
WP037	subsidence Photos c N 37° 07.646
1763	W 80 17.352
IRO 9714	Rome fm slaty gry grn arg
WP038	syncline N60E 3° photo
	N 37 07.763 W 80° 17.489
IRO 891	N46E 80 SE massive 20' dol offset
WP039	by fault (photo) N5 30° W
	ornimeted with sulfate or gyp
	subliminate N37 07.764 W 80° 17.536'
IRO892	dk gry-bk burrow mottled dol.
WP040	N26E 60 NW N37° 07.757 W 80° 17.547
el 1699	Crest of anticline in dol ledges
WP041	at N 37° 07.790 W 80° 17.539 1677
	bed N42W 6° SW
IRO893	N 20W 30 SW med bedded dol ledges
WP042	on nrl side at N 37 07 839 W 80 17 651
2013 el	red slaty arg. road level N50W 30 SW

Gay Runner

NOTES

OCT 21 '09

IRO894 WP43 — N 50E 30NW dk gry and grn thin bedded to laminated argillite in roadbank 15' high N 37 07 866 W 80 17.709

IRO895 WP44 2003 — INTENSELY BUCKLED F1 HINGE IN F2

Hanging valley below — MAIN AXIS N60E 16 ANTIFORM F1 axis (hinge) S60W 10° SE LIMB N45E 40 SE N45E 72SE N 37° 07.887 W 80° 17.780

IRO896 — blue gray thin bedded arg. N56E72 SE kink axes N26W 12 NE S56W 7 SW

IRO897 — S60W 5SE open antiform in gray argillaceous ls or dol

IRO898 WP047 — ledge of lt tan wea mass dol N80E 15 SE N 37 08.031 W 80° 17.932'

IRO899 WP46 1963 — lt gry xline dol w/ calcite veins N 76 E 40 SE thk bed in road bank at N 37 08 169 W 80 18.006

IRO8910 WP48 — thin platy tan wea dol w/ thk N 37 08 208 W 80 18 020 N80W 40 SW (Eel? karst in massive bed 60' W

IRO8911 WP49 — Massive gry and pnk breccia (Eel) in road bank S18E 14 SE

el 1804 — boudin or hinge lin in brecciated dol N37 08 249 W 80 18.067

Item # 013-200

NOTES

OCT 21 09

IRO 8912	Thin bedded gray dolomite
WP50	outcrops along roadside
el 1868	for 300 m N 37°08 262 W 80 18.278
	N 60E 24SE Photo
IRO 8913	Thk beded to ribbon layered
WP51	peritidal carbonate (dol)
	beds N 5[illegible]E 24 SE
	N 37 08 280 W 080 18.474
OCT 22 '09	Photo
PLT 231	Brn weat maroon argillite w/grn
WP52	N 37 06 .812 W 80 17.897
el 1584	argillite layers along Elliot cr.
1487	N 34E 60 NW
0	
PLT 232	dk gry + brn weath arg +
	argillitic dolomite N60E 80NW
1682 el	N 37 07 275 W 80 18.036
IRO 8914	N 50E 60NW
WP53	N 37 07 525 W 80 17.973
	el 1663 old house foundation
	black - dk gry thk bedded
	Rome dolomite beds
IRO 8914	N 16W 20 SW Tan weath gry
WP055	- grn thn - thk bedded arg
	N 37 07.550 W 80 18.232
1791	N 80W 30 SW slaty arg oc
	above new bridge and gate to
	"enchanted creek contorted
	folds plunging S50W at 20 ⇐
IRO 8915	N 50E 70 NW thk - med
el 1813	bed dk gry arg dol in Stm
	N 37 07 585 W 80 .094

NOTES OCT 22 '09

IRO 8917 platy dol
WP 056 37 07 776 W 80 18 110

IRO 8881 dk gry slaty argillite
WP 057 in bank N 60 E 80 SE
1823 N 37 07 642 W 80 18 380

IRO 8882 lt gry slaty dol argillite
in new at SR 742/739 INT
WP 058 N 80 E 80 NW
N 37° 07.687' W 80° 18.409

IRO 8883 N 80 E 60 SE 4' gray dol
WP 059 ledge stands out in cut
1845 N 37 07 713 W 80 18 416

IRO 8918 slaty argillite in log landing
WP 060 cut N 80 E 20 SE good eposure
1841 of valley fill in cut
N 37° 07.629 W 80° 18.323

IRO 8884 el 206 Elbrook dol lt gry
WP 61 N 37° 08.875 W 80° 18.436
thin bedded to thk bedded
chert - thin clay partings -
brecciated w/white carb veins
several ledges in 100' cut

IRO 8885 Orange ocher sh chips
WP 062 N 37° 07.764 W 80 18.393
el 1951 in residual soil above
new driveway

IRO 8886 N 70 E 42 SE lite gray
WP 63 platy dol in old
1871 drive way N 37 07 694 W 80 18.582

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Clear, cool, breezy 1 27 11

IRO 52 14 18" thick lt gry white-pink conglomeratic qtzite ledge at Lipsey qtc N55E 30SE

IRO 517 N80E 28SE 6' pebbly qtzite ledge crosses drain at el 1600 b bldrs in v slope & drain below N70E 30SE sight - dip slope above

4 IRO 518 el 1800 b hematite red brn qtz ss ledge on road bed N55E 28SE red clay soil deep brn red ss float in road above point capping w/ 2' qtzite beds

IRO 519 el 1925 b passed though leacted soil w/qtzite then black shale chips on road — erratic

IRO 5110 el 1960 b big block strikes N60E 40SE 3-4' qtz pebble cgl ledge

Switch back at 1980 b

IRO 5111 el 2040 b
1' thick ferruginous cgl
float on dip slope N60E 35SE
could be Fagg cgl photo
IRO 5112 el 2130 b at ridge
and road curve N30E 30SE
on brown rippled pebbly (ang qtz)
ss ledge
IRO 5116 redux 2190 b N10W
80SW

Ot? xbedded qtz ss
ledge on ridge el 2300 ocherous Gly silt (corb sap)
IRO 5113 el 2340 b road Poplar covers
turns up hill in
large blocks of qtz ss +
qtzite ~ 3-4' thk
IRO 5114 el 2480 b thk tan
pink weathered qtzite ledge
many blocks on nose
N30W 20 NE
IRO 5115 el 2540 qtzite
blks on nose in saw
IRO 5116 bed on road brnk 2200
weath ss micaceous N55E 26SE

May 10 2010

IRO 8130 Orange arg dol and gray phy dol N 20 W 80 SW
N37 09 414
at WP 586 W80 19 437 2043

IRO 8130 N 50 W 80 NE thk to thn bedded fractured dol.

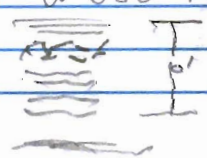
IRO 8418 N50E46SE Massive bedded, closely cleaved Fine gray dolomite Clear EW 60N

IRO 8419 Wedge block collapse from Karst tunnel exposed 30' above grade (Photos) Fracture N10W80NE Bedding in massive gry argillaceous dol N 80 E 20SE Begin cream colored siliceous dol w/ cross bedded qtz silt layers, straticulate layering (Big Springs Sta) RSU!

IRO 8420 EW 35 S photo of upside down cycles w/ strom and thom. text. elevation 2114

WP 587 N 37° 09 W 080° 19.845

Photos of 2 meter to 3 meter Ecoge.



IRO 8421 WP588 el 2110
WP N 37 09 038 W 80 19.901
Photos of 1 m cave ent.
in blue gray ribbon
banded ls. Eco Op.
blue HTI sign N 20E 24SE
IRO8422 upside down algal
strom photo in 1994
guide at WP Mile post
120
IRO7616 EW 40S air strike
at MP 119.7 N 37 06 884 1907
WP 589 W 80 20 195

IRO 7417 EW 60 S gray
dolomite
IRO 7418 N74E 80SE
beek dol cross Frac
gry
IRO7419 EW - N80E 40S
algal ls - Stone hinge

NOTES

IRO887 Platy dol, lt gray fg. W thick x line
WP887 dol beds N 60E 70SE Ocs
064 on embankment
1888 N37°07.719' W80°18.576'
pod of breccia above (10')

IRO 888 Platy weath argill. fe dk grnish
gray w/ slaty cleavage N60E 70S
bedding N 70E 30SE

IRO889 Fg dk gry thk-thn bedded
WP65 X line dol N 60E 60SE
1906 N 37 07 726 W 80 18 705

IRO8810 Tightly folded blu gray clay shale
WP ✓ and light gray-tan platy dol.
S50W 8°SW 5 Fold hinge ✓

IRO791 Quarry in thick bedded
WP66 gray re x line dolomite
e/1868 N20W 40NE joint N70E 70NW
N20W 80NW
N37° 07.505 W80°20.481

PLT132 Breccia along falling branch
at base of Hamiltons Ridge S of the
WP067 ~100 yds long to spring
PLT133 N37 07 458 W80 20 626 pnt to
WP068 N37 07.429 W80 20.733'
1889 large spring along fault
at Ginger Hill

PLT 134 N60E 60SE Massive brec.
069 dolomite along creek just
WP stream From Bridge
1900 N37 07 404 W80 20 850

Day Runner

NOTES Oct 26 '2009

IRO 8811 WP 070	N 76 E 44 SE lt gry tan weath. med gray fine grained dolomite, thin to thick beds N 37 07.403 W 80 20.848
IRO 8812 WP 071 Eel	Light gray - tan weath. shale or shly dol in bnk slaty cleav dips N 74E 40 SE N 37°08.162 W 80° 20.128
IRO 8813 WP 072 1968	N 84 E 36 SE thick bedded tan weath dolomite N 37°08.097' W 80° 19.091'
IRO 8816 WP 073 2068 Eel	N 34 E 60 SE cleav/transposed bedding N 20 E 4° NE N folds gray dol, slaty cleav N 37 07 952 W 80 18 412
PLJ Rome	251 N 40 E 80 SE rd slaty argillite ledges on hill nose CWP N 37 06.636 W 80 18.453
IRO 871 WP 75 Ecr?	At pump station on John Lemeley Lane N 80 E 40 SE thick bedded gray dolomite, creme to very light gray weatered sandy zones large stromatolites N 37 08.141 W 80 19 958
IRO 712 Eel WP 76 1916	alternating lt and dark gray thn to thick bedded dol W rounded bk chert nodules up to pumpkin sized laminated dol w/ yellow weathering zones N 62 E 42 SE N 37 08.075 W 80 19 989 Cal in stm.

Item # 013-200

May 13' 2006

IRO 691 Site of Ft Jause Excavation

Gave copy of Shawsville 100K map to Gregory Adams - contract archy w/ University of Kentucky Group

no more funds today

3/29/09 Ironto, cool cloudy
IRO 6215 N20E 40 SE
breccia below on I81 NBL
coarse thick bedded gray
dolomite beds above at WP
WP 324 N37 11 747 W80 15.109 1942
~ 1800 topo

IRO 6216 N22E 60SE, dol
gray massive thick bedded, some
burrowed beds some ribbon banded
gray limestone beds WP 325 N37°11.760
photo 1800b el 1839 t W80° 15.980

IRO 6217 yellow-orange stained
thin bedded gray dol EW 70N WP 326
N37 11.820 W80 15.895 el 1661
IRO 6319 N 50 W 30 NE
thk bedded gry dol in old
quarry face? W327 N 37 11 884
W80 15.784 el 1575

IRO 6218 wp 328 N 37 11.710 W80 15.769
el 1860 1980b 120' dia sinkhole
on ridge. Obvious drain in ctr.

IRO 667 very shallow doline form on ridge at WP 329
N37 11.664 W 80 15.922
el 1857 2000'

IRO 651 Thick bedded gray dol ledge on ridge N50W4
WP 330 N37° 11.655 W80° 15.91.
el 1991 (930 r (6)

IRO 652 WP 331 N37°11.658
el 1943 W 80°15.968
very shallow karst depression in saddle ~ 1' closed area
w/ drain to NE

IRO 653 ridge top w scattered blocks of coarse pink "marble of siliceous/calcareous sinter (spring deposit?) WP 332 sp IRO 653
N37 11 649 W 80° 15 023 el 1976

IRO 654 200' by 40' deep sink
at WP 333 N37° 11.595' W 80 16.04
el 1935 N12E to SE thin bedded gray ls, massive bedded ls to West of sinkhole shows tan burrow mottles ~ 0bed

IRO 655 extraordinary ridge top pavement formed on massive

bedded burrow mottled dolomite
in trough of syncline U 14E
S-10 SE at WP 333 E 1871
N 37 11 563 W 80 16 067
Fire ring, Neat Fractures
trend N 8 E N 38 E N 74 W vert
IRO 656 near middle of big
pit blue gray ls w/ mottled shly
parting N 20 W 10 NE on gentle
slope above highwall of WP 334
N 37° 11.435 W 80° 16.069 el 1793
IRO 657 at S end of pit
N 22 W 29 NE lt gry - tan
thin bedded to platy dolosn
WP 335 N 37 11.333 W 80 16.091
el 1731
IRO 658 unicoi cgl
cobbles on ridge
between quarry
an sm WP 336 N
N 37 11 487 W 80 16 121
1775 rain
IRO 659 N 70 W 38 SW
shaly to ribbon banded
elbrook in NW end of pit
N 37 11.570 W 80 16 190 el 1853

3/30/10 N 37 11 565

IRO 693 wp 337 W 80 16.141

massive dol. breccia dk gry w

light gry rexine mtx coarse

dolomite rhombs terraced ledges

N 80W 60 NE heavy red soil

w/ chips of argillite breccia

IRO 691 redux WP 332 N 37 10.396 W 80 15.787

el 1573 yellow orange weathered

dol breccia w/ crinoidal laminae

N 6 W 10 NE

IRO 694 laminated - platy thin bedded

gry dol breccia N 80 E 34 SE in cut

WP 339 N 37° 10 316 W 80 15 643

el 1573

IRO 695 massive gry to lt gry

thin bedded platy dol N 8 W 12 N

at WP 340 N 37° 10. 212 W 80 15.545

el 1514 photo of clay plug

karst, bedding and joint

N 58 E 85 SE N 8 E 85 NW

IRO 696 N 60 E 50 NW Thk

bedded gry dol / w ylw sh'y beds

at WP 341 N 37 10 153 W 80 15 46

el 1563

3/30/10

IRO 681 Folded gray
thin bedded dol w/ thin
c seams N 80W 80 NE Fold
N E-W 20 W WP 342 N 37 10.422 W 80 15 942

IRO 682 ribbon banded blue gray
ls w/ dol burrow mottes
(photo) N 74 E 70 NW WP 343
N 37 10.549 W 80 16.091 el 1558
(upper elbrook) less than 20' is
exposed here

IRO 683 burrow mottled ls bed
is repeted across synclinal
axis N 74 E 44 SE WP 344
N 37 10.647 W 80 16 145 el 1525

IRO 684 gray breccia dol N60W 60NE
ledges along road at WP 345
N 37 10 685 W 80 16 445 el 1638

IRO 6510 W 26W 20NE thin bedded
gry dol ledges below breccia OC (photo)
WP 346 N 37 10 968 W 80 16 609

IRO 642 N 40 E 70 NW thin bed
blue gry algal ls N 37 11 15 W 80 16 764
WP 347 el 1497

IRO 642 upper el N 40 E 50 NW
ribbony gry ls @ WP 348 N 37 11.144'
W 80 16.861' el 1683

3/30/10

IRO 685 N20E 60SE 30' blue grey ribbon banded lime sandwiched between dolomites - breccia toF WP 351 N37 10 415 W80 16 200 el 1592

IRO 686 E-W 15N contact between lt grey dol and ylow-orange argillaceous dol. Faint truncated beds and breccia N50W 40SW at "Arthur" WP 353 N37 10 384 el 1573 W80 16.406

recumbant Fold

hinge plunging N74W at 5 nw

IRO 687 N80W 50 SW mass bed of dol in cut at WP 354 N37 10 361 W80 16.574 el 1553

IRO671 5 blue burrowed ls hinge N10E plunging 5 NE at WP 355 N37 10 296 W 80 16 855 el 1592 Folded breccia layer

IRO 672 Massive burrowed dol alt w/ ylw orange arg dol and argilite N20W 35SW

5/30/10

IRO 673 thin bedded gray lam argillaceous dol E W 60 N on road in Skillet Hollow at WP 356 N37 10.181 W80 17.146 el 1613

IRO 674 N 68 E 40 SE Blue gray LS

3131/10

IRO 944 3' dol ledge N 20 W 52 SW WP 357 N37 10 182 W80 17 150 el

IRO 945 3' dol ledg N 68 W 62 NE of WP 358 N37 08 352 W80 17 334 el 1605

IRO 9715 slabby tan-gry dol ledge N 10 E 60 SE WP 357 N37 08 324 W80 17 317 2063

IRO 946 thk gry dol bed w/ butcher block weathering on road N54E vert JY jointing? WP 360 N37 08.415 W80 17.457 el 2164

IRO 861 ylw gy weath slty dol interbedded w thk bdd gry dol

3/31/10 thk bded N 12 E 60 SE slaty cleavage N8W 79 NE

IRO 861 = rs u @ WP 361 N 37 08 459 W 80 17.501

IRO 862 Massive bedded gray to light tan Fractured dol ledges N 5W 70 NE @ WP 362 N 37 08 581 W 80 17 757 2057

IRO 863 burrowed gry dol ls N50E 20 SE undulose beds on ridge side near old basement cf barn to N

IRO 947 N5 46 E laminated tan slaty dol on trail above PL cl 2044 WP 363 N 37° 08.501' W 80 17.475 White qtz Float on nose

IRO 949 N 12 E 64 SE lam tan slaty dol chips on knob (948) oc on road embankment @ WP 364 N 37 08 572 W 80 17.394 El 2086 (949)

IRO 9410 N10W vert slaty cleav in y/w weath slaty dol (oc

10 ctdup 365 N 37 08 540' W80 17.224'
el 2109

IRO 9411 N10W 50 NE th bded
gy dol @ WP 366 el 2073
Turkey below N37 08 523 W80 17.203

IRO 9412 red and yellow
ocher colored argillite
chips in soil at WP 367
N37° 08.557 W 80 17 132 el 2165
N76W 22 NE slaty arg in
road bank at saddle
IRO 9413 N 14 W 70 NE
gry grn ylw and some dusky
red slaty argillite in
Fence line cut at WP 368
N37 08 474 W 80 16 958 el 1950
IRO 9414 N 55W 20SW thk
bded gray dol on ridge ledge
at WP 369 N37 08.395 W80 16.955 2085
algal chert in saddle

IRO 9415 arg ocs on road N 55W 50SW
red-gray WP 370 N37° 08.375
hard arg. 2064 W80 17 038

IRO 9916 N 20E 70 SE
ledges of dk gray slaty
argillite w/ sheen on chips
OCS in stream at WP 371
~100' above road 371 N 37 08 300
el 1896 W 80 17 051

IRO 9917 Spring in argillite sap
at roadside WP 372 el 1883
N 37 08 .280 W 80 17.094
ledge on road N 20E 60SE
rd brn weathered argillite w/ slaty cleav

IRO 9918 N 20E 60SE sap of slaty
argillite at WP N 37 08 264
con W 80 17 207

IRO 9919 Concrete spring house
@ 374 N 37 08 291 W 80 17 235
Dol ledges above barn

IRO 9919 slaty dol ledge
N 34 E 60 SE ridge below stn con
WP 375 N 37 09 157 W 80 17 078
el 1624

IRO 9920 N 20 E 60 SE ledge
dk gry weath future block
dark WP 376 N 37 09 259 W 80 17 038
el 1604 Property Parcels

411/10 Ironto Quad Clear

IRO831 WP 377 N37°07.953 W80°17.038
N36E 44 SE bedding Clam
in dark gry limestone bed
sandwiched between gray xline
dolomite layers, algal mottling
deep brn. resid.

IRO832 WP378 springhouse between
th bded lam dol ledges WP 378
37°09.695 W80°17.791 el 1666
N62E 20 NW

IRO 833 Broken dolomite ledge el 1740
massive bedded gry w/ X Fracs
N34E 30SE WP 379 N37°09.546 W80°17.747
clear N54E 60SE

IRO 834 laminated yellow-orange gry
dolomite beds N62E 30NW
WP 379 N37 09 436 W80 17696

IRO 835 lt gry lam dol ledges in
team bank WP 380 N37 09 926 W80 17641
el 1879 N80E 365E

IRO 836 ledge exposed on canyon walls
et WP 381 N37°09.220 W80°17 633 el 1985
minor travertine on ledges [illegible]

IRO 864 thn bded dk gry lite gry weath
dolosn N30E 20SE WP 382 N37°08.996
el 1879 W80°17.687

IRO 865 N10E 40SE gray thn bded
to laminated gray dol. WP 383
N 37 08 947 W 80 17 1731

IRO 866 N8°E 45NW thn bedded gy dolomite
N37 08 792 W80 17 603 el 2024 ledge

IRO 821 WP 385 N 37° 09.292 W 80° 18.361
N 80 E 20NW Massive bedded
Flaggy dolomite ledges

IRO866 Med-thk bded gray dol N37 09 195
N 20 E 20SE at WP 386 W80 18 296
el 1737

IRO 867 old abandoned dol quarry ✓
at WP 387 N37° 09.077 W80°.18.305
el 1753, S+D mass beds N80E 20SE
Clearage N65E 80 NW

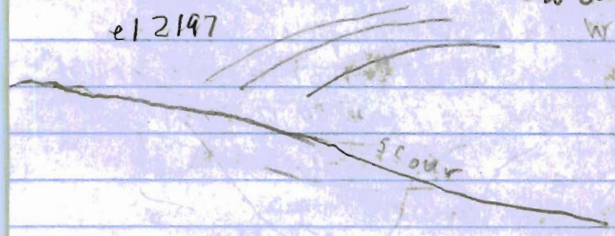
IRO 851 gray massive bedded dol
ledges along roadside
and in quarry now used
as waste transfer site N37 08 74
N34E 30SE WP 388 W8018 521
el 1866 Photos

IRO 852 N 40 E 30SE Massive
bedded gry dol, Fracture
system breaks OC N 12 W 80 SW
WP 389 N37 08 556 W 80 18 620 1734

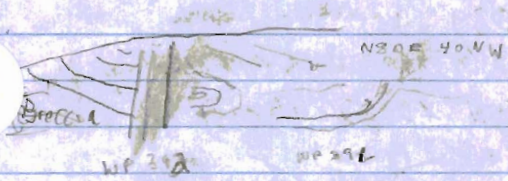
4/1/10

IRO 853 ledge above road
dol thk bedded gray N72E 24SE
at WP 390
N 37° 08 478 W 80 78

IRO 854 massive tan-gray
qtz sandstone bed outcrop
in curve Bedding N78E 30SE
cross beds up side down
Photo tco WP 391 N 37 08 .410
W 80 78 .083
el 2197



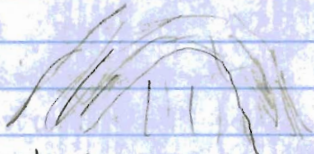
IRO 837 Lelbrook w/ massive
breccia beds Photos E side WP
N 37 09 939 W 80 17 534 El 1626.



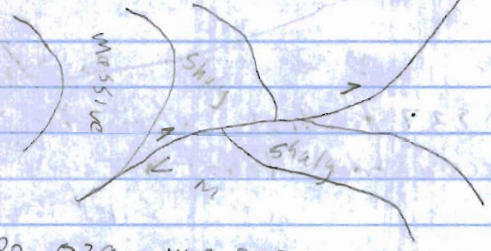
N37 09 937 steep ductile fault
W80 17 352 zone cuts recumbent
Folds N30W 74 SW

N40W to NE steep faults
cutting recumbent structures
WP 393 N37 09 941 W 80 17 587 1624
Brittle faults at NE END OF Window?

IRO 638

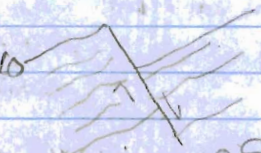


anti-formal hinge surrounded
by breccia hinge plunging
S20W 30 SW hinge Massive blue
gray dol WP 394 N37 09 892 el 1672
W80 17 731



IRO 639 WP 395
N37 09 880 W80 17.768 el 1650
N50W 40 SW thrust

IRO 8310



Blue gray
algal ls
of Sett by Fault

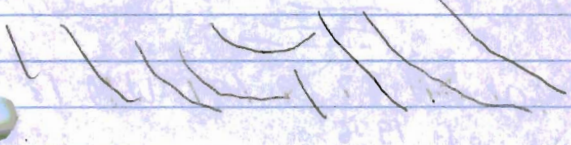
45 N30E 60NW
Fault N70W 60SW

IRO 8311 blue gry ls N40E 20SE
underlain by gry dol grading
downward into brecciated thin
laminated dol (Cel lower
WP 396 N37 09 815 W80 17 911

IRO 8312 N 43E 60NW algal ls/bgray
overlain by light gry platy brecciated
dol WP 397 N 37 09 748 ell 667
Photo of quarry N 80° 18.126

IRO 8313 N40W 20SW massive
blue gray algal ls above brecciated
slaty dol sect WP 398 N37 09.724 W80 18 250 1689

IRO 8314 N20W 30SW thk bedded
dol section overlies brecciated
platy zone (photo from RR)



IRO 8315 Photo of Fold hinge
just W of (11) multiple
rabbit ear fold

plunges S50W 10 SW N 30E 40 NW AP

IRO868 wp399
N 37 09 725 W 80 18 .256
big spring from dol
along road

IRO 869 N18W 20 NE
Creme colored to light
gray massive, sandy
dolomite w/ fine qtz
sand grains weathered in
relief as rust colored
ribs on joint faces
WP 400 N 37 08 .982 el 1907
W 80 18 .256
IRO 8610 N 20E 20 SE dk
gry fine grained dol (slaty
to thin bedded w/ arg
partings (upper Ecr)?

WP 401 N 37 09 107 W 80 18 173
el 1946
IRO 8315 N 60E 40 SE oolitic
chert, Fg Feld SS Float
and OC ON W slope
IRO 8316 N 10E 5 SE gray compact
crystalline dol w fine prtng

WP 402 N 37 09 241 W 80 18 229
el 1978

IRO 8317 N 76 E 20 NE ribbon laminated lt gray dolomitized limestone typical Cco but dol. WP 402 N 37 09 279
el 1780 W 80 18 326

IRO 8318 Massive, Fractured lt gry - creme dol N 48 E 40 NW bedding? through going surface WP 404 Photo N 42 E 20 SE
N 37 09 376 W 80 18 369
el 1700

4/05/10 IRO 8319 air strike from NS rr N 34 W 8 NE mass bedded light gray dol w/ dark gray inter beds in quarry highwall

IRO 822 breccia layer exposed on 4 wheeler trail, thin bedded to ribbon laminated gray dol over lain by massive dol ls above along old fence (Ecl) E-W 50° NE
WP 405 N 37 09 719 W 80 18 448 el 1894

IRO 823 N80W 30-35 NE.
thin bedded - lam dol
w/ thick breccia whale
back exposures along
4 Wheeler trail large
black snake, imitated
Actor by shaking his tail
in leaves - he was scared!
WP 406 N 37° 08.754 W 80° 18.635
el 1972

IRO 824 slaty argillite and
dolomite chips in thin.
silty soil on knob @ WP 407
N 37° 09.857 W80° 18.857 el 2043

IRO 581 air strike from NBL
N80E 20 NW thk brecciated
dol beds, small Fault or
fold hinge N66W 40 SW el 1867
N68W 20 SW at WP 408 on NBL
thin bedded ribbon lam dol N 37° 10.087 W80° 18.907

IRO 8112 N 46 W 20 NE thk
bded gry dol sits above
breccia section in cut WP 409
N37 09 830 W 80 19 206 el 1887

IRO 8113 N 50 W 40 NE highly
fracked gray thk to thn el 1806
bedded dol at WP 410 N37 09 613
W 80 19.259

IRO 8114 N 30 E 50 SE
at least 10' blue gry ls
interlaged w/ dol just beyond
saiboat WP 411 N37 09 548 W 80 19 255

IRO 825 N 60 W 40 NE thk
bedded gray dol at E
tunnel portal
IRO 842 Thk bedded dol N60E
30 SE looks like Eco
160 E 40 SE ribbon burrowed
blue gry ls facies
IRO 843 N 60 E 30 SE ledge of
ribbon banded gray dol omits
IRO 844 N 60 E 40 SE dk gray
Fine grained laminated dolomite
WP 412 N 37 [illegible] W 80 19 506 el 1960

IRO 855 Laminated to thin bedded gray dolomite (Eco) photos of typ Conocoheague ribbon rock strat
N 50E 29 SE WP 413 N 37° 08.685'
el 213' W 80° 19.052

IRO 856 laminated to thin bedded gray dolomite with Conococheague like Fabric
WP 414 N37 08.816 W 80 18.847
el 2073

IRO 857 WP 415 N 37° 08.892
el 2102 N 40E 18SE W 80° 18.810
Creme colored thin layered dol (Eco)

IRO 858 photos of Eco fabrics of peritidal origin in gray dolomite
Facies N 30E 20 SE WP 416
N 37° 08.904' W 80° 18.876 el 2058

IRO 859 slickensides on joint indicate right lateral movement N 25E 88 SE
plunge 52 0W 3° SW N 30E° 75 SE
dk gy dol is w/ tan dol
WP 417 N 37 08 911 W 80° 18.815 el 1963

IRO 8510 · lt gray sandy dol
weathers friable brn SS at WP
WP 418 N 37 09 066 W 80 18.750
cl 1918

IRO 8511 N30 W 26 NE Photos
of tan sandy dol beds in
very light gray weatered
microxline dolomite,
peritidal bedding features above
including rip ups, channel
scours sandy beds, upside dnw?

IRO 8319 N80W 16 NE lam dol
pavement in junk yard
N 37 09.186 W 80 18.560 E 1798

IRO 8512 Soil Pipe on 11-460 SBL
at WP 420 N 37 08 968 cl 1994
at farm access W 80 18 641
road 1/2 way up Cburg Mtn

April 6 2010 WP 421 cl 1870
IRO 761 N72E 28 SE N 37 09 164 W 80 20.22
6' tan to white weathed sandy dol or "Sandstone" ledge in embankment and along RR tracks to NE where cross bedding may be inverted

IRO 781 Massive gray laminated butcher block dolomite overlying thin bedded (slaty) orange to tan-gray dolomite N75W 50NE at WP 422, N 37 09 229 W 80 20.063 cl 1868 Eel ?

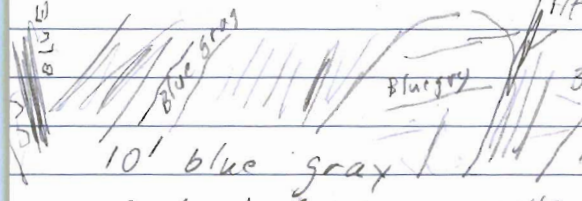
IRO 8115 Thin bedded - slaty gray to yellow weathering agillite or argillaceous dolomite N80W 40 NE with punky tectonic breccia in top of cut much breccia ft at WP 423 N 37 09 234 W 80 20.012 cl 1872 Eel (1)

IRO 8116 assymetric syn fold in thin bedded platy dol or argillite plunging S20E at 20, much breccia at WP 424 N 37 09.243 W 80 19.915

IRO 8117 highly cleaved light gray to tan massive dolomite beds N 80W to SW at WP 425 N 37 09.786 W 80 19.763 cl 1818 Ecl?

IRO 8118 Very light gray crystalline dolomite ledges massive ~ 2m thk N20E 36 NW. Eco? big Spring Station member

IRO 8119 Section of lowelbrook



10' blue gray mgls bed is repeted as mega boudins or fold cores in tectonic melange Mapped SW contact as Fault as massive blue gray ls beds are truncated N 80E 80NW at UP 426 N37 09 365 cl 1851 W80 4.641

IRO 8120 N60W80SW 20' gray - blue gray ls in platy dol Sect

stromatolites in blue gray dol/ls are facing SW, coarse breccia (P) at N end of cut or base of section

IRO 81 21 N 80E 80 SE long section of lower Elbrook facies standing on end NW of I 81 Bridge includes ribbon banded blue gray ls to dol to platy dolomite, orange weathered slaty argillite (20' see) thick bedded massive dol and breccia layers beneath bridge where dip is down to 76°

at WP 427 N 37 09 462 W80 19.397

IRO 8122 WP 428 N 37° 09.479 W80° 19.577

Thick bedded blue gray laminated ls overlain by thick and thin bedded gray dol N 40W dipping 20 NE

IRO 8123 spring on IKE property WP 429

N 37 09 522 W 80 19 604 el 1677

IRO 8124 thin bedded slaty dolomite alternating w massive algal dol and blue gray limestone

WP 430 N 37 09 408
N10E 40 W 80 19 660 el 1837
IRO 8125 E-W 70 N thk bed
dk gry ls interbedded w/
thin platy dolomite
WP 431 N37 09 388
W 80 19 694
IRO 8126 N 37 09.283 el 1685
site of W 80° 19.789
big spring at IKE Park

IRO 751 mostly ∡ chert some
round cobbles on this old el 2091
strath WP 433 N 37 08 493 W 080 21 587
IRO 752 N 84E 64 NW dk tan
to gray butcheblock text.
dolomite ledges in woods
dk gray micrite float WP 434
N 37°08.741 W 80° 21 511 el 2101
IRO 753 N 60E 80 SE Vertical
cross beds in white to tan
weathered sandy dolomite w/ sandy
stringers (Eco at WP 435
N 37 08 863 W 80 21.519

IRO 754 DK gray laminated on weathered light gray microcrystalline, thin siliceous partings (Cco?) Beds E-W 80N at Walknut Creek Pump Sta

IRO 755 Massive thick bedded med gray butcher block dolomite in creek at WP 436 (Photo N37 08 [illegible] W 80 21 612 el 2009 N 86E 80N

IRO 756 Massive gray butcher block dol ledges N60-80W 30N above dam dam at WP 437 N37 08 902 W80 21 593 el 2011 on dam 20' above stm

IRO 757 ledges in creek, below dam N74E 60SE at WP 438 N37 08 820 W80 21 579 el 1975

IRO 758 thin bedded ribbon laminated dolomite ledges in creek grade downward into thick bedded laminated ls + dol. Photo WP [illegible] N 37 09 029 W80 21 554 el 1941 E W 65 N photo of lam - Thin bedded is Ribbon Rock

IRO 759 WP 440 thick blue gry ribbon-banded limestone
photos in creek N37 09.063
CO el 915 E-W 805 W80 21.568

IRO 7510 WP 441 N37 09 095
el 1925 E-W 655 W80 21 592
Photos of field of alt ls
+ dol.

IRO 7511 Massive lt gry creme dol w/ oolitic cht over lies platy dol along RD
WP 442 N 37 09 132 W80 21 487
el 1906 N 80W 78 S

IRO 7512 E-W 78N white lt gy creme dol w thn silicic partings WP 443
N 37 09 066 W80 21 676 2047

IRO 7513 lt gry Sandy dol ledge CS pl WP 444
N 37 09 068 W80 21 621 el 1972
E-W 80S

IRO 7514 N 80W 30 SW
Mass dol ledge in front yard

IRO 844 N35E 30SE
lam irreg layered ribbon dol

IRO 826 N38E 30 SE
Massive crenulated laminatio
dol ; rusty brn, light
gray

IRO 827 thick bedded gry
wp dolomite ledge w/ white fracture
filling silicic ribbing laminae
N 70E 20 NW

IRO 828 crenulated
gray laminated dolomite
crenulations plunge N 30 W 18 nm

IRO 829 platy dolomite
(Cel. very deformed crenulated
ledges trend N60W 74°SW
cleav EW 90 N fold hinges
plunge S 30E 14 SE

IRO 851B N60E 20SE thk bedded
creme to gray dol, oolite Flt
above sink hole

IRO 85 14 several cobbles and bldrs on stone pile appear to be local. Some egg size rounded qtz, fe in soil (Photos)

IRO 761 mass is lodge burrow mottled dolomite

N70E 40SE just before "Blake Forest Sink

IRO 762 30' deep 100' wide sink at end of Wood ridge angular white chert float

IRO 763 Massive gray dol ledges w/ butcher block fabric, lamination weathered in relief (Eco E-W 36 S

IRO 764 N80W 30 SW thg bed of dol in front yard

RO 765 N80E 60 SE lam gray dol on sink wall

April 9/10

IRO 845 Massive bedded gray Fine grained dolomite w/ butcher block weathering creme color w brn mottles = thrombolite

N 37 08 740 W 80 19 737 N 52E 105E el 2050. Brown to lite gry burrow mottles

IRO 846 along ridge line gray dol ledges N 62 E 40SE w/ WP 446 N37 08 821 W80 19 700 el 2117 el 2

IRO 847 300' dia sink 20' closure active subsidence (photo) WP 446 el 2054 N37 08 901 W80 19 657 Course brecciated dolomite ledges dk-med gray cherty reg. ledge on Rim N72E 70SE

IRO 848 mass gray butcher block dol N60E 20SE el 2024 WP 448 N 37° 08.996 W80° 19.568 interbedded w dk gry ribbon layered micritic ls w purple reddish and white calcite partings at least one short (.5m cycle)

seems inverted ~.5m

IRO 849 Massive bedded gray dolomite ledges in creek

W80E 40 SE @ WP 448

Brown algal coating, butcher block texturis on weathered surface

look like Obeek N37 04 142 W80 19 537

IRO 8410 WP 449 large spring flow from talus covered e| 1985 cave entrance ~ 1000 gpm

Photo @ N37 09 160 W80 19 546

deep red terra rosa soils on slopes above ~ Obeek

IRO 8411 photo of 4' burrow el 1815 banded ls section in creek

at WP 450 N37°09,065' W80° 19,501'

N80 W 25 SE

IRO 8412 photo of inverted ripple banded silty ls beds

thin brn silt ribbons lite gry dolls

WP 451 el 1964 N37 09 015 W80 19 502

more burrowed US, N70E 20SE

IR08413 perched alluvium above nik-point on the massive dol sect in lower Knox / beek N70E 25SE WP 452. el 2007 N37°08.961' W80° 19'490'

IR08414 Massive dol cliffs where ledges cross drainage at WP stream is dry from IR08412 upstream, WP 452 el 1931 N 37 08 851 W80 19 514

IR08415 masive dol in stream bed end of cliffs above. dol, very light gray to white weathered micro crystalline gray dolomicrite N50 W 22 SW WP 453 el 1976 N37 08 817 W 80 19.550 round chert chert float

IR08416 N70E 20SE v. thick beds of ribbon laminate dolomite. WP 454 N 37°08.723 W80 19 601 el 1970

IR08417 20' water fall in contin section of thk bedded. WP 455 gray dol N 37 08 575 W80 19 629 el 1950 beds strike N60E 28SE

con fracs = N20E 80SE
N10W 70SW

IRO 8417 6' bed of cherty laminite blue ls ordol is wave lamination typical of Eco photo at WP 456 N 37 08 601 W 80 19 627 el 2040

IRO 8418 6' ledge of lam dol w/ silicoas parting covered w. th rounded chert "heads" From soil residua WP 457 N 37 08 641 W 80 19 667 el 2019

IRO 771 new house site in yellow gray residual clay

IRO 772 angular chert blocks along fence line

BBG 961 dk grey lam, thin bedded backestone to grainstone ledges on knob N 80E 80SE bedding WP 458 N3708485 W80 22 664 el 2173 Lincolnshire? or Conacacheague (stone henge)

BBG 962 Sinkhole in ls at
WP 459 N37 05 576 W 80 22 749
el 1493. ledge of typical
fco ribbon banded ls w/bx
N60E 80SE

IRO 661 WP 304 el 1431
N 37 11.416 W 80 15 104 1320 b

large ledg above 15' fall

IRO 662
N 70W 5 sw blk + wh dol breccia ledge 3'd

WP 305 N 37 11 325 W 80 15 326
el 1494

IRO 663 el 1427
N 37 11.350 W 80 15 341
6' travertine dam el 1360 b

IRO 664 N 20 W 05 NE 3' dol ledge on slope
N 37 11 305 W 80 15 444 el 1529
dark gry burrowed ls w/ old quarry site.

IRO 665 spring at WP 307
N 37 11 259 W 080 15 585
1520 old foundation

IRO 666 med bedded gray lm dol WP 308
N 37 11 404 W 80 15.645 el 1634
Spring heads up on other prop

IRO
WP 309 N 37 11 301 W 80 15 502 el 1493
Big dam

WP 310 N37 11.534 W80 14.813

NS 69 E 1356

spring

IRONTO Clear, cool

March 1 IRO 621

Ocs in cut at N end of bridge gray fractured dol. then coarse brecciated dol w thin bedded interval 30' above road EW 30N

IRO 622 thin bedded argillaceous dol w/ribbon ls banding disrupted by slaty cleavage in argillaceous beds N 30 E 60 SE WP 163 N 37° 11.816' much tan to el 1858 W 80° 16.209' pink argillaceous chippy float on slope below strong NW joint set N 68 W 80 SW

IRO 623 N 50 E 70 SE thin bedded argillaceous dolomite ledge WP 164 in old field Fold plunges S N 37° 11.863' 70 Fold at 70° W 80 16.220 el 1916

IRO 624 just S E of gas line ledge of thn bedded dol N 30 E 70 SE WP 165 on gasline N 37° 11.969' W 80° 16.254' el 1969 cell tower on top 100' NW

IRO 625 thk bedded gry dol w/ lamination N 30 E 50 SE OC in road

IRD626 March 1 2010
WP166 N37 12 044 W80 16 261
IRO 627 gently undulose
gray dolomite ledge w/
butcher block N80E 10SE
WP 16 N37 12.315 W80 16 230
IRO 628 N36E 70NW blk and
gry ribbon banded arg dol
WP 16 N37 11 800 W80 16 254
1753
IRO 621 ctd at road level
tension veins EW 80N photo
other veins N20W 80 SW
gray thnlayered dol cleavage
N80E 40 NW
IRO 6210 N 27E 62 SE med thn
bedded gray dol white dol
veins N45W 70 SW
EW 80NE WP173 N 37 11 916
1775 W 80 16 103
IRO 6211 N5E 88NW thl bedded
gry dol coarse granular weath
strongly jointed N80W 20 NE
N54W 315W WP 175
N 37 12.075 W 80 16 051 1774 el

2 march / 10

IRO 6212

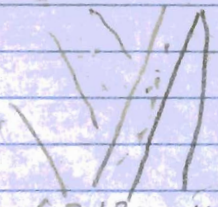
photo of green breccia intrusion N 42W 60 SW

ligy, Thk bedded dol N 36 W 60NE

N 37° 12.207'

W 80 16.013

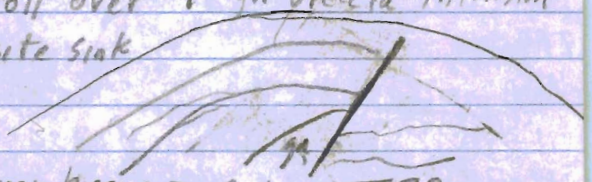
1775



IRO 6213 N 28 W 10 NE

beds near flat after GN intrusion

IRO 6214 Photo of, Fault NBL w roll over + gn breccia intrusion opposite sink



green breccia = carbonatite ??

N 37 12 293 W 80 15 377 el 1762

Fault trends through sink

N 30E 52 NW

IRO 3911 dk gry thn bedded crinkly

N 22E 15NW laminated dol overlies massive gy dol w white veins on joint N 26E 76SE

N 37° 12.622' W 80 15.645' el 1663

big plug of breccia below intact sink

IRO 626 thin argillaceous dol
layers w/thk N 30E 28 SE
much chert float on hill
WP167 N 37 12 233 W 80°10.224
el 1934. 7 [illegible] large cht bk
[illegible] in road
IRO 627 orange ylw clay soils
brecciated gry dol w/
white veins, 1' thk ledge
N 68 W 30 NE on road
at WP 169 N 37° 12 371
el 1969. W 80° 16.185
IRO 628 200' dia 30' deep doline
at WP 170 N 37 12 461
W 80 16.187
IRO 629 ribony layered argillaceous
dol, fractured N 40E 60SE
N 37 11.895 W 80° 6.300
IRO 3912 3/2/10 VDOT Dump
area at WP 179 N 37 12 781
W 080° 15 654
IRO 3913 N 60W 80NE 2' ledge
dk gy cherty dol w shly (ylw)
Float on nose aboe
at WP 180 N 37° 12.842
W 80° 15.673

March 2 '10

IRO 3914 dk gy with dol
ledge ~2' thk N 20E 40 NW
gentle slope below mantled
with cellarlar chert and platy dol chips
WP 181 N 37° 12.926 W 80° 15.743 2196
IRO 3915 top of knob covered w/ blk
of dk gry argillite, slaty dol
and greenish gry meta silt w
fine sandy laminations up to 1cm
1cm N 20W 80SW may not be
in place chanel scours
may be up ripple x lam

IRO 381 gry, massive bded, arg. sitic
dolomite N 30 E 40SE ledge (
bedding) trend at head of steep hollow
great view of Iron Valley
IRO 382 N28E 24 NW dkgy flat bedded
flaggy dol 50 above N
N30E 40 SE flaggy arg.
SS cobbles in soil above
WP N37 12 871 W 80 16 02
snowing! IRO 383 clinch ledge
face top N40 W 40 E photo WP 182
N 37° 12.834 W 80 16.00 el 2106

thin bedded ls and dol
N24W 30 NE on SW face
= OMo?

IRO 384 very bedded gray thin beds
ls or dol N30W 40NE
in saddle are blocks
of dark ls + dol in deep
brn resid. Just SW of
Boundary at WP 183
N 37° 12 635 W 80 16 057
el 2006
IRO 384 N30W 40NE Thin
bedded gry ls/dol in saddle

3/3/10 IRO 3613 photo, airstrike on
massive dolomite beds along Salem
thrust N80E 20 SE Joints N60W 70 NE
N10E 80NW Fault in photo N45W 72SW

3/3/10/ IRO 3614 photo of
ledges above Roanoke River
apparent strike E 2-5° S
IRO 352 dk gry tan weath shale
w/ 2" sltsn bed EW 80°S
sinstral fold hinges plung
North East N 65E 25 NE
cleavage N 76E 30 SE joints
N50E 70 NW covered w/ red fdn
N60W 50SW - closely spaced
could be millboro on SE side
of tracks
IRO 353 dk gry sh w fine
ss or slsn layers N70E 50NW
WP 184 N 37°12.635' W80°16.058'
ell ss greenish gry qtz epi ch/mica
graywacke w/ grains up to 1.5mm

IRO 354 WP185 N 37°13.501' W 80°16.284'
ell 315 2' unicoi cgl bldrs in the
air strike of bk shale along
river bank (DM) N70E 15SE
strong joint or faults N50W
80 SW hummocky deposit above
erosive strath ~15' above
floodplain photo.

IRO 378 black nodular weathering chert bed outcrops in farm road bed just N of Ford N 45E 25SE

tan weath qtzite ledge outcrops in RR cut to NW ~ 50'

WP187 N 37° 12.614' W 80° 17.083

el 1298

IRO 399 - photo of qtzite ledge below Italian Kitchen

3/3/10 spl IRO 379

pbly white qtzite overlying
black chert (below on river)
WP 190 N 37° 12.616 W80°17.109
1308 ledge ~ 3' thk cgl atta

3/31/80 Ironto

IRO 386 exposure of thin qtzite Pd over sh/ chips view across fault N 30W 30° NE air strike on ledge above river

IRO 371 N 30W 50 NE paper fiss cleavage 11 beds in dk gy blk sh bank

IRO 372 N 8 0W 34 NE photos of dk gry sh w/ ls concretions or boudined beds and new lazer facility @ Ironto

IRO 393 N 70E 20SE air strike on cleavage in stream bank From RR -

IRO 394 N38E 20SE 3' thk black chert and red limonitic SS ocher beds in rail cut blocks of qtzite in colluvium above - 186 WP N 37°12 650 WP017048

IRO 531 Cut w/ ls concretions / boudins N 45 E 20 SE bedding in Dm 1381 WP 88 N 37 12.351 W 80° 17.46'

IRO 611 Millboro beds in cut N40E 30SE // cleavage WP 189 N 37 12 442 W 80 17.318 1381

IRO 793 Photo of Med - thin bedded
WP 77 gray dolomite covered
.12081 with 2' tufa deposit
N 37°08.019' in stream below Fault
80°20.006' N78E 50SE

IRO 872 platy tan dolomite (thin bedded
WP 78 to laminated supra tidal facies
old concrete structure across creek
N 37°07.941 W 80°19.898' el 1997

IRO 873 platy tan dol (thin bedded
WP 79 to laminated w/ thk bedded
N37°07.879 Dol. 50 - 75' alluvial pocket on
W80°19.813 weathed shaley bedrock N80 20SE

IRO 874 thin bedded gray dolomite
w/ white calcite in x fractures
synclinal fold below (Photo
WP 80 N 3708834 W 80°19.771' 2046d
N78E 30 SE N60E 16 SW
Cross joints veins N80 W 80 NE
left lateral movement picture
(photos)

Brecciated dol in stream bed below

IRO 875 N20E 12 SE highly iron
WP 81 black slaty arg or dol inter
N37°07.772 beds in thick bded brn weath dol
W80°19.772

Cr IRO 876 N 50 E 70 NW
rd brn slaty argillite
along stream w/ massive dol (dk gy)
WP 082 N 37° 07.763' W 80° 19.737'
2028

IRO 877 N 60 E 60 SE gray grn, sl
N 37° 07.716 slaty arg. and fract.
W 80° 19.742 dolomite ~ 50 yds upstream
el 1789 from Mobile home

IRO 878 Ledges across stream and in
stream N 40 E 4° NW mass dol.
WP 084 el 1771 N 37° 07.655' W 080 19.672'

IRO 879 N 60 E 20 SE dk grey slaty
argillite ledges on stream across
from ruins of cabin. WP 085
N 37° 07.587' W 80° 19.528' el 1735
Joints N 80 W 80 NE N 20 W 72 NE

IRO 8710 N 66 E 60 SE dol ledges
in stream red brn soil on road
WP 086 el 1797 N 37° 07.621' W 80° 19.501'

IR 8711 N 76 E 70 SE thick dol beds
in strm grn slaty arg on road
[illegible] N 37° 07.790 W 80° 19.500 el 1907

IRO 8712 light tan cherty soil
in cut along Farm Road
WP 88 N 3707969 W 80 19.391 el 1977
IRO 8713 lightan cren dol
FW 60 S WP 89 el 2159
N 37°07.985 W 80 19.611
IRO 8714 Qtzite bldr terrace
below PL WP 90 N 3708012
Oct 27 2008 W80 19.681
IRO 8715 crinkly laminated
to medium gray dolomite with
yellow-orange weathered layers el 2180
N 80E 245E WP 91 N37°08.076' W80° 19.666'
IRO 841 round cobbles at end of
el 2179
road WP 92 N 37 08 427 W80 19.169