

1 of 3
pts 1-296



"Rite in the Rain"®

ALL-WEATHER
GEOLOGICAL

No. 540F



Project: ARKANSAS GEOLOGICAL SURVEY
STATE MAP PROJECT
2007-2008

a product of
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[illegible]

138	Abbreviations of Geologic Terms
139	Abbreviations of Geologic Terms
140	Classification and Characteristics of Igneous Rocks
141	Sandstone Composition Classification
142	Measurement Conversions
143	Grain-size Scales
144	Graph for Determining the Size of Sedimentary Particles
145	Graph for Determining the Size of Sedimentary Particles
146	Comparison Chart for Estimating Percentage Composition
147	Comparison Chart for Estimating Percentage Composition
148	Soil Classification
149	Soil Classification
150	Metamorphic Rock
151	Geological Map Symbols
152	Geologic Map Symbols
153	Geologic Map Symbols
154	Geologic Map Symbols
155	Geologic Map Symbols
156	Depositional Texture

Location _____

Date _____

Project / Client _____

① Landis Quad 7-17-07
 Long Creek, west of Landis, AR
 Near Turkey Creek (to South of point)
 35 56 5.7 ± 19
 92 27 34.0

Plattin Limestone:

outcrop ~ 15-20' thick
 thin - med planar bedding
 weathers white
 light to med grey, micritic to
 fine crystalline lmst; some
 possible paleo karst slumping
 in small (~1' x 3') area, beds
 display slight down warp to slump

② Landis Quad 7.17.07
 1:52 pm
 Back toward Landis
 35 56 1.5 ± 22
 92 27 27.5
 outcrop ~ 20-30' off in woods to
 Fernvale Lmst

Location _____

Date _____

Project / Client _____

Scale _____

Fernvale Limestone (paleo karst)
 med to thick beds, (possibly
 slight dip or channel beds)
 weathered to rounded knobs ^(covered) (lichen & moss)
 dark grey to pinkish
 coarsely crystalline light colored
 (less pink than other areas)

N 60° E 2° SE (dr taken on
 Plattin surface
 below)

covered section (with organic debris)
 may contain Kimswick

(photo by R. Hutto)

③ N 10° W 5° E (taken from across bank)
 Long Creek Landis Quad

Plattin Limestone, dipping in Creek
 thin beds weathered white

35 56 0.5 ± 19
 92 28 14.6

photos by E. Smart
 pos. flattened down stream
 @ St Peter

Location _____ Date _____

Project / Client _____

- ④ break b/t St Peter ss to W
with Platin ls to East
(maybe Jasper ls of Everton Fm ??)
- | | | | |
|----|----|------|-------|
| 35 | 56 | 6.0 | |
| 92 | 28 | 20.1 | ± 25' |

definite qtz arenite of St Peter with
what appears to be platin below!

continuing Wist along 263 platin no appears
above the qtz arenite St Peter (photo)

contact @ ⑤

(of flat and
sandstone)

- ⑤
- | | | | |
|----|----|------|-------|
| 35 | 56 | 15.3 | + 21' |
| 92 | 28 | 31.9 | - 15' |

3:30 pm 7-17-07

photos @ wildcat hollow; spring
along NW fork (barely on Harriet @)
contact b/t platin and St Peter

Dp Dse

Location Hwy 65 Date 7-18-07

Project / Client _____

BEAR CREEK

Scale _____

- ✓ ⑥
- | | | | |
|----|----|------|------|
| 35 | 56 | 25.3 | + 22 |
| 92 | 42 | 49.2 | |
- ✓ ⑦
- | | | | |
|----|----|------|------|
| 35 | 59 | 36.2 | + 35 |
| 92 | 42 | 33.6 | - 59 |
- thin to thick bedded; ~ 20' of oc
Vfgr - micritic ls
small stylolites
- ✓ ⑧
- | | | | |
|----|----|------|-------|
| 35 | 59 | 33.1 | + 30' |
| 92 | 42 | 38.5 | - 30' |
- thin, micritic beds (~15')
below massive beds (Pos Boone)
- ✓ ⑨
- | | | | |
|----|----|------|-------|
| 35 | 59 | 36.3 | + 59' |
| 92 | 42 | 33.6 | - 59' |
- sandst/micrite lsst contact
sand is ~ 39 (copied from RH; ??)
- off map ⑩
- | | | | |
|----|----|----------------|-----------|
| 36 | ?? | (see RH notes) | 5.5 + 35' |
| 92 | 43 | 47.4 | |
- 70 SE (dip) N50E strike
flattens out on either side (undulating surf
possibly)
basal ms sandst by road; contact w/ St. Joe
is coarsely x-line w/ black blebs; friable, gln
poor sort sand

Location Marshall SquareDate 7-19-07Project / Client STATE MAP 07-08

✓ ⑪ 35 54 37.4 ± 19
92 37 56.6

Moorefield shale (~10' thick) below Batesville
sndst (~10' thick) capping some across the
road; snd is buff to orange fine gr, vuggy,
iron cemented

✓ ⑫ near Zack above 'spring' and on line
w/ log cabin pos Platten below
Ferrelvale maybe 6-8' of Kimswick b/t

35 57 39.7 ± 36
92 39 59.4

✓ ⑬ 35 57 10.2 ± 20
92 39 39.7

pos pt @ top of Silurian
Boone above St. Joe (~10-15' th)
with Silurian below that; loose
bottom w/ clean contact in creek
there is a dark grey crinoidal lmst
in creek (float) poss St. Joe

Location ZackDate 7-19-07Project / Client Stmap

Scale

✓ ⑭ 35 57 8.2 ± 19
92 39 26.7

gravel pit in Boone lmst
~ 75 x 75 yards

✓ ⑮ 35 56 27.7 ± 18
92 39 40.9

lmst 15 18" - 24"; stylolitic
qtz arenite w/ phosphate pebbles
poss a small window of prems line
(bafferty?) lmst is grey; fine xtal

✓ ⑯ 35 56 31.3 ± 23
92 39 48.8

good section of basal ms snd at
creek level w/ 8-10' of thin
bedded crinoidal pink lmst
w/ tan-green shale partings thru
20' of cherty Boone lmst

✓ ⑰ old Hwy 27 gravel pit
35 55 10.5 ± 17
92 37 55.1

100 yds long next to old Hwy 27

Location Marshall Quad, Brushy Creek Date 7.23.07Project / Client STATE MAP 2007-2008

E. Smart

(18) 35 56 08.3 $\pm$ 19
92 39 25.6 $\pm$ 19

Brushy
Creek

outcrop of crinoidal lmst (St Joe)
in bank of creek upstream
are Silurian Rocks (Brass, St Clair Laff)

St Joe is thin bedded, grey lime, ^{dip 30° N}_{E N strike}
fine xtal crinoidal;

3-8' of outcrop
1-3' of

JOINTS N 75 W
N 85 W
N 30 E

PHOTOS R. HUTTO (2)

Silurian rocks are pink - grey w/
pink 'blebs'; v-f - f xtlime
outcrop ~

(19) "waterfall" area (dry) in Brushy Creek
8-10' of M_{ST}

"reentrant" of Basal M_{ST}, ~ 1-2' exposed

35 56 14.3 $\pm$ 19
92 39 30.8 $\pm$ 19

Location BRUSHY CREEK Date 7.23.07Project / Client STATE MAP 2007-2008

E. Smart

Scale

(19 cont'd)

St Joe is thin bedded, crinoidal lmst
(w/stone - packstone) grey - pinkish grey

M_{ST} is v-f - f med well sorted, white
w/ blackish grains (st / pebbly), calc
med - thin beds

mass + lichens on surface

35 56 21.9 $\pm$ 17
92 39 33.3 $\pm$ 17

"complete" section with Silurian
rocks exposed in creek bed; 1-3' of
basal M_{ST}; 8-10' St Joe, possible
Boone above (covered by veg, less resistant)

[bend in creek extends 30-40 yards]

- Sil rocks are weathered white w/ pink -
greyish xtlime, calcareous vugs, pink blebs

- M_{ST} is calcareous v-f - f med sorted
dark tan to white w/ shaly + phos pebbles
shale 'lense' ~ 4" - 6" b/t silt and M_{ST}
some calc veins

- M_{ST} is thin parallel beds, stylolite surf
weathered grey w/ lichens; lt grey - pinkish
fine xtlime crinoidal wkst - pkst.

Marshall Quad
 Location Brushy Creek Date 7.23.07
 Project / Client STATEMAP 07-08 1:05 pm
E. Smart

20 cont'd	Joints	dip measured on 20W on surf of Mnd
Mnd		strike N65E
N10W		
N7W		

Mnd is exposed in small area at the
 N end of outcrop
 cherty thin-med beds of lsst

② 35 56 4.6 ± 14 (2)
 92 39 19.8

contact on hill side, along
 road (hiking back to Jeep from
 creek)

Silurian, Lafferty type rocks (thick bed)
 in contact w/ mst above (thin bedds)
 pass to S-SW of Home along creek

③ 35 56 6.3 $\pm 40'$ (2D Batteries Low)
 92 39 21.5

contact b/t St Joe + Sil Rex crossing
 the road no Mnd noted, lots of veg.
 almost directly across from Home.

Marshall Quad
 Location Marshall Quad Date 7.23.07
 Project / Client 2:20 pm

Scale

② 35 55 50.3 $\pm 25'$
 92 39 13.3 top of Lafferty

point taken at the exposure of
 'lenticular' bedded micritic - w/ xtl
 line above Lafferty ish beds
 (xtaline lt green w/ pink blebs)

Mystery Rock def sil in creek bed
 poss st clear brass Lafferty

area of chert bed (~1" thick exp)
 approx 30' away. [NO Mst?]

photo by Hutto

④ possible Dea Vine Yellow 8:45 am
 35 55 43.1 ± 21 (or 38')
 92 39 13.2

Boone Reg. lith; Red, cherty

⑤ 35 56 2.1 ± 23
 92 39 11.3

contact on hillside, moderate veg
 Silurian Lafferty (thick bedds) below
 Mst Joe (thin bed outcrops ~1-2')

Location _____

Date 7.23.07

Project / Client _____

(26) 35 56 1.1 $\pm$ 19'
92 39 6.8

- Contact w/ Sil and st JOE
beds strike N45E ⁴⁵
dip $\frac{1}{2}^\circ$ S55W
6°

- ~4' of Msd exposed
well rounded med well sort drns
white - buff (photo, back for snobs)

- Sil is grey w/ pink blobs; ^{interp} Lafferty

✓ (27) 35 55 59.4 $\pm$ 22' 3:50 pm
92 38 59.4

✓ First Boone exposure up from 26
Cherty

(28) 35 56 57.8 $\pm$ 25'
92 39 49.7

Northern most contact where ~~at~~
Batesville Snd / Mansfield Sn are mapped
on the 1962 Quad.

No Snd beds found. Rare float
all tripblitic chert

Location Zack, Marshall Quad Date 7.23-24.07¹³

Project / Client STATEMAP 07-08

E/Smart

Scale

(29) 35 59 59.0 $\pm$ 17'
92 40 58.1

(pass) (~14H) $\rightarrow$
Basal Msd exposed in the road
white wheaten - friable
slt $\rightarrow$ pepper appearance. Hcl is
absorbed immediately; no fizz
~~photo~~ photo by R Hutto

✓ (30) 7.24.07 9:10 am cool/crisp
sunny
52 photos (4+5) rock hammer on
Ok/Op etc ~680

contacts b/t platin (creek bed str)
Kimswick (~4' th) and ~~ker~~ fernvale

RH several photos; 2 hammers showing
Op/Ok/Op contacts; impressive
at platin in creek

point taken in middle of creek

35 57 17.9 $\pm$ 35'
92 39 59.3

- platin is micritic w/ calcite veins; grey - drk gr
- Kimswick is 1/4" for, white - lt grey (wkst)
- fernvale is coarsely xtlime; pink (wkst)
total out crop along bank is ~10-15'

7.24.07

Project / Client STATEMAP 07-08

E. Smart

(30 contd)

Joints in platin

N/S exact

N 50 E

N 40 E

N 33 W

N 75 E

N 45 W

(31) 10:34 am 07.24.07

NPS Road to Brush Creek and Buffalo

River confluence

36 00 00.5 +g

Contacts in the road are 92 41 03.4

indicative of Oc formations

show ~8-12' of interbedded dolomites,

mod-well

cemented snos and limestones. A walk around

the old (overgrown) homestead indicates

contacts w/ St Pete snos (arenites) in some

areas. Series of photos by R. Hutto w/ E. Smart on

(31A) photo by R. Hutto

dipymicritic - of xtaline dolomite w/ white

calcite-filled vugs. Some small fractures / joint

on top of exposure

(Also see 31A.5) grn well cemented snly dolostn

(31B) tan-buff, moderately well sorted subround

to round quartz grns; min or amount of opaque

grains calcite-cemented (modwell-well)

Location NPS Road to Brush Creek and Buffalo

Date 07.24.07

Project / Client

STATE MAP

E. Smart

Scale

(31C)

(32) 35 59 51.4 ± 18'

92 41 16.8

11:08 am; Driven up into Brushy Creek

- photo 6 by E. Smart showing rock hammer resting w/ a sandstone interbed between upper and lower dolostones in

Oc. sandst is white, slight fizz (possibly leached out by weathering as the sand is slightly friable)

unit is ~1-2' thick

- sandst white & well sorted ^{subang-subround} and finegrained qtz arenite, some calc cement and silica cement

- dolomites are of xtaline micritic gray-dark gray

- total exposed area is ~40 yards in length (to 50)

- photo 7 showing R. Hutto where head meets another sandst unit ~4' up in section

possible ~~sn~~ materials in this area indicated by wavy beds [sandst is white-tan weath qtz arenite, no fizz; silica cement mod-well; subang-subround grns well sorted]

- photo 8 showing length of oc

Location Brush Creek, Marshall Quad Date 07.24.07Project / Client STATE MAP 07-08E. Smart

- photos 9, 10, 11 of old railroad trestles and roots on Oc ~ 100 yards down from pt 32 rocks show gtz arenite white w/ greyish bands - v low fizz (pos dolocement) w/ dolostone on top; dolostone is red grey if xtal.

11:35 am

- Calcite cemented vugs in dolostone (fine xtaline med gr) have prolific oolite as described on Jasper Quad (M. Hudson) thin bedded to massive
- Sands are also grey in fresh surface w/ v well cemented by dolomite, v fine grained - fine gr gtz dominant. [each sand/dolomite unit is ~1'-2' thick]

- photos 12, 13, 14 of features in Brush creek "spring" area (Rocks, maple leaf)

- photos 15, 16, 17 during lunch break (upstream, leaves "lilies")

(33) 35 59 53.9 + 40
92 40 58.2

parked at the fence line crossing Brush creek and confluence w/ Cedar hollow (minor water neck) outcrop ~ 40-50' thick (to base of road); maybe along possible bearing to Mnd @ point (29) • photo # 18

Location Marshall Quad, Brush Crk Date 07.24.07Project / Client STATE MAPE. Smart

Scale

33 cont'd

Plattin strike N40E

4° E/SE

(34) 35 59 53.7 + 23'
92 40 55.2 - 23'

1:12 pm Sunny; warmer 80+

point taken after hike up the outcrop from 33; point indicates the first exposure of the Ofenvalle (coarse xtaline pinkish) possible Kimswick b/t last Op; but vegetation is thick (grey fine xtaline fossiliferous) pieces appear as float rather than distinctive beds; also some sandst float similar to Mnd (v small ~1' x 1')

- photo ~ 10 yards from pt (33) showing 19' contact b/t St Pete and Plattin
- photo 20 showing rock hammer resting on shaly surface above a thin bedded, black dolostone; shale (greenish), laminated sand and silt (Op)
- photo 21 c/c b/t friable greenish-grey sand and black rock (shaly, well cemented to silty, dolomite indicated by fizz; bed is ~10" thick mass lenticular possibly contact b/t Op and Oc (below) (above))
- photo 22 spider w/ red symbiotites photo by R. Hutto shows rock hammer hanging from probable St Pete/Plattin c/c; Oc below in E.S. photos 20, 21

Location Marshall Quad, Cedar Hollow Date 07.24.07Project / Client STATEMAP 07-08

E. Smart

(35) 35 59 48.2 $\pm 19'$
92 40 48.9

Op strike / dip R Htto

(36) first visual of Op in Cedar Bend
35 59 46.7 $\pm 20'$
92 40 40.5

large tree down in creek

Op Snd is gray-brn on weathered surface
gray in fresh exposure; slight fine (dolomit?)
medium well sorted subrounded qtz granite
well cemented.

S N5E $\pm 7^\circ$ W

(37) 35 59 35.1 $\pm 25'$ (11 when screen release)
92 40 17.6

contact taken to be Op/Op

(38) 35 59 41.8 $\pm 30'$ • photo 25
92 40 1.3

etc b/c - Ok / Of no plattin around

Ok = 4-5'

Of = 40-15'

Location Longcreek; LANDIS Quad Date 07.26.07Project / Client STATEMAP 07-08

E. Smart

Scale

(39) 35 56 36.2 $\pm 51'$
92 28 47.7

Down stream, adj to Long Creek Bridge
~20' exposure of massive, white,
mod well sorted subround qtz granite
exposure is ~5-10' above creek bed
Snd is also exposed in creek bed

(Flowing dogs, some waterfalls
coming off of bluff.)

photo by R. Hutto of friable
ledge; E. Smart for scale

(40) 35 56 34.2 $\pm 27'$
92 28 51.7

9/24/2 am

contact of Snd (Op) with micritic limestone
(Op) [thick along to off to find point]

(41) 35 50 38.3 $\pm 16'$
92 28 49.5

standing on uppermost Op (mostly some Op and
definite Op above (coarsest, pinkish weather)

pieces and
rounded Snd

Location Near Long Creek, LANDIS Q Date 7.26.07Project / Client STATE MAP 07-08✓ E. Smart

(42) 35 56 41.1 $\pm 25'$ 10:16am
 92 28 50.0

Hiked up the hill side above pt 39 and
 near the top of the slope along a fence line
 Very minor outcrops have Of / ~~Ms~~ Msr
 Characteristic of coarse xtc of Of, pinkish
 in parts, but also greyish like Msr but
 no ~~crinoids~~ crinoids present.

probably Of
 some brachiopods on weathered surf

R. Hutto broke the surface where brachiopods
 on surface, and found some crinoids...
 also noticed ~~st~~ greenish patings

✓ ~~at~~ as seen in ~~Of~~ Msr; Samples taken R.H.

(43) 35 56 42.3 $\pm 25'$ "watch covs"
 92 28 51.7 10:30am

still searching for definitive change b/t
 Of / Msr lithologies

point taken where 'white' xtl 1mst was found
 on a weathered rounded surface w/ lichens

~~any~~ bryozoans
 & (one) no Msr and around. lots of veg
 and leaves...

Location LONG CREEK, LANDIS Q Date 07.26.07Project / Client STATE MAP 07-08✓ ESMART

Scale

(44) 35 56 21.8 $\pm 25'$
 92 28 45.1

✓ ~~at~~ Upstream from Long Creek Bridge
 (Good swim hole)
 w/ Angela + Kristian
 first week

Showing Ospe in creeks; point taken @
 contact ~~st~~ b/t Ospe (st) and
 grey line (med. good size) taken to be
 Op [thin beds, planar, grey micritic]
 veg is more dense than point taken
 downstream from creek.

(45) 35 56 20.8 $\pm 25'$
 92 28 46.0

standing on contact of Op / Of
 on hillside above Long Creek
 upstream from bridge.

Families just arrived @ swim hole

✓ dense veg no rocks taken to be Ok

(46) 35 56 26.6 $\pm 22'$
 92 28 48.4

• photo by R. Hutto

Ospe has vanished from creek bed.
 Standing ~ 70 yards ~~to~~ upstream from
 bridge

Location Long Creek; Landis Date 07.26.07Project / Client STATE MAP 07-08✓ E. Smart

(46 cont'd)

beds in creek are very thin - thin beds
 of apparent limst (~10-15' of crop) changing
 to thick (mod thick) to massive (~10-15")
 of visible outcrop

(47) 35 56 30.6 ± 25'
 92 28 48.6

under bridge on downstream side
 bridge rests on gtz aenite sands of
 Ospe

strike dip by R Hutto

~~A/W~~ 4°-5° N
~~S/A~~ S
~~N/S~~

E/W

Location RR Grade above Brush Creek Date 07.30.07Project / Client STATE MAP 07-08✓ E. Smart

Scale

(48) pseudo Beginning of Os exposure
 along old RR Grade above Brush Creek
 (cr of Cedar Hollow)

35 59 50.2 ± 21' (2D)
 92 41 3.2

[possible Os in Grade just to the N.]

35 59 50.2 ± 17' (3D)
 92 41 2.8

(49) 35 59 45.0 ± 18'
 92 41 04.0

contact on hillside (above PRG crop)

Op / Of rocks; lots of veg

(50) 35 59 44.5 ± 17'
 92 41 5.4

'New Road' (Not on Quad map)

apparent M sand in Road; probably
 in place; below are apparent S. limest
 rocks and Os, most of which looks
 like flint

Location Brush Creek Marsh Road Date 07.30.07Project / Client STATEMAP 0708E. Smart

(51) 35 59 39.2 $\pm$ 24
92 40 59.6

St Joe similar to Hobo Hotel, red, crinoidal.
(10' thick)

Below, is found a 6-8' section of
Silurian Rocks, pinkish fine xtl
lime w/ calcite 'veins'; white w/ pinkish
blobs. Powders when hit w/ hammer
lots of lichen

(52) in drainage; Of looks like sand!
but good exposures are fine coarse xtl
pink-white, not any fossils

35 59 23.1 $\pm$ 18.
92 40 58.6

(53) 35 59 22.8 $\pm$ 37' (-26')
92 40 44.4

creek bed

etc ~~M₁~~ M₁ / M₂

M₁ is crinoidal, dark grey - grey
M₂ is cherty

Location Brush Creek Marsh Rd Date 07.30.07Project / Client STATEMAP 0708E. Smart

Scale

(53 contd)

M₁ is a 7-10' thick
with a ~~6-8'~~ of M₂ sand

(dark - light [st/prop] calc/sil cen
Snd)

(54) c/t b/t
Silurian and M₂ sand (~6 ft)

35 59 23.5 $\pm$ 28.0
92 40 42.0

in creek / drainage bed

(55) 35 59 24.6 $\pm$ 16.
92 40 39.8

c/t b/t D₁ and D₂

thin beds
D₁ is weathered white w/ micritic fine xtl
D₂ is ~~thick - massive~~ weathered w/ lichen and
rounded surfaces; white - pink
fine - coarse xtl one large-ish
cal/prop crinoid M₁ (~4 mm dia)

Location Brush Creek, Marshall Q Date 07-30-07
 Project / Client STATEMAP 07-08
E Smart

(56) 35 59 28.7 ± 21' (8.5 on ext)
 92 40 34.3 28.8
34.2

dip 10° W

N 15 W

Veered from road grade out into "field area"
 walked slightly up stream along

Osp outcrop. Tons of vertical 'icicle'
 features along outcrop

photos by R.H. and E.S.

S+D by R.H.

(57) 35 59 32.5 ± 15'
 92 40 37.3

Large bluff of Osp (photos by ES+
 apparent contact w/ Oc RH!!
 in creek

Oc is dark grey line (slight fizz)

looks like folks hang out here; tables
 and chairs. Rock altar in mid creek
 point taken sitting on only exposure of
 Oc. Rocks have changed dip direction
 as would in a "mound/anticline" area!

Location Buffalo River, Marshall Q Date 7.31.07²⁷
 Project / Client STATEMAP 07-08
E Smart Scale

(57 cont'd) dip on Osp is N10E

there are no "icecicles" 5° W
 on bluff, it's all smooth

also dips do not indicate
 moving; nor do they agree with
 what I perceive with my eyes...

(58) R.H.

✓ (59) 35 58 56.0 ± 27'
 92 40 57.4

Bluff NW of Hwy 65 bridge
 Float Day,

Came ashore on Sil (loaferty);

thin (1-3') of Msnd (slt peppery
 w/ well rounded Qtz) above; ^{Msnd is fr. ab. in weathered surf}

Msnd is seen above the Msnd, but
 lots of vegetation hides the
 contact w/ Mb; smp is lt gray-grey
 crinoidal pack-grst

Mb is ~60-70' thick

• Photos 7+8 (different lighting) by E. Smart

Location BNR, MARSHALL Quad Date 07.31.07Project / Client STATEMAP 07-08E SMART

(60) 35 59 11.8 + 16' point taken @ ctc
92 44 33.7 - 16' b/t sil + Msnd

Downstream from Hwy 65 Bridge (Grinders Ferry)

Large Bluff is Sil (pinkish w/ calcite lens) vugs

40-50' thick, massive

point taken sitting on Sil, w/ basal Msnd

(phosph nodules; silt pep, tan buff, fine gr

well cemented) 1-3' thick

8.27.07: Revisit w/ A.C. ctc bl Sil / Ssc is w/ 1/2 width of face to two Msnd

Msnd is pink-purple m-c xtl w/ calc vugs drk mottled face to two Msnd

Ssc is white-pinkish m-c xtl (some is finer) w/ fine m-c

Msnd outcrops above sand; lt grey-grey small crinoids (water-pack - >10% crinoids) f-mod xtl, w/ iron clasts (rich)

(61) just upstream from "Shineeye bluff"

standing where Sil emerges from river;

Msnd and St Joe slightly 'plunging' into river

(visual est on Msnd to ~50' NNW)

35 59 05.8 + 24'

92 44 03.6 - 24'

Msnd is ~1-3' s tan to lt greenish mod well-well cemented phosphates

Msnd is ~10-15' thick (thin bedded cr.) some pyrite xtl

RH dips 5° W; N10° W for strike

Location BNR, MARSHALL Q Date 07.31.07 29Project / Client STATEMAP 07-08E SMART

Scale

(62) Shineeye bluff (downstream)

~40' of sil bluff, pink m-c xtl calcite in veins, and vugs also, evidence of sand filling in along veins and joints

sometimes appears bedded, but overall massive (to thick bedded)

apparent angular unconformity

w/ Msnd

35 59 20.0 + 21'

92 44 7.9 - 21'

dip on apparent bedding surf reads 18° E

N10W strike

Msnd is ~20-30' above

* b/t 61 + 62

several photos (10-14) of soft sed of Msnd. "churned" appearance

phosphate pebbles (coarse sand - cobble) w/ beds of msnd dipping to N

Sil rock "dip" below into river and back out again.

Location Buff N River Date 7.31.07Project / Client STATEMAP 07-08✓ E. Smart

- (63) first bend @ LANE BEND
 Sil Bluf ~20-25' thick
 thin (10') st Joe above, No Msnd
 Mb above (10-15' thick)

35 59 31.0 + 20-
 92 44 30.0

- (64) 35 59 52.4 + 26
 92 44 4.1

taken @ LANE BEND; Apparent Of
 in the ~~er~~ river bed (deep hole)

pink f-m xtl Crinoidal packst ^{grist}
 Of massive to thick bedded, ~20' of
 exposure

Msnd = ^{white-tan (buff)} ~3' thick exposed w/ shaly
 beds; beds of nodular phosphate

Msj = dark red; lots of crinoids
 crust. ~20' exposed
 pyrite + phos pebs @ base of unit

Mb @ top of hill ~5-8' thick

Location BNR Marshall Quad Date 7.31.07 31Project / Client STATEMAP 07-08✓ E. Smart

Scale

- (65) 35 59 36.2 + 24-
 92 43 45.2

area where Sil rocks appear
 above river level (gravel bar, slump
 mld @ bend is just upstream)

rocks are pinkish-white, white Calcite
 vugs mod at line

No Casan shale as mapped on
 previous quad; possibly covered
 by veg and slumping @ Lane bend.

- (66) 35 59 19.2 + 19-
 92 43 46.6

~15-20 Sil exposed

~18" Msnd

~5' Mst

exposure in bend

After across ~~no~~ gravel bar

Location BNR MARSHALL QAD Date 07.31.07Project / Client STATEMAP 07-08✓ Esmart

(67) 35 59 6.1 ± 17-
92 43 17.1

along bank just upstream from Gilbert
apparent S. l. Rox in ~~rock~~ Riverbed and
just banking out (up to 10' exposed downst)

Msd is slumping down in blocks
and is intact just below Mst
~1-2' exposed, 18"

Mst dipping 7° SW dip about 1-2' exposed
N45W strike and covered w/
soil and veg

✓ 08.01.07

(68) 35 59 52.8 ± 22
92 41 53.8

[Hot, Humid,
sunny]

float day 2

along horse trail, hiking back to Gilbert
11:05 am; Glory hole in apparent Msd

large is n drainage down to River; looks
like interbedded limestone + sandst
below Msd (Msd is also seen as
float in Road). w. ll have to
check lith of lower strat rox on
float in. Lots of trees and veg in hole

Location BNR MARSHALL QAD Date 07.31.07Project / Client STATEMAP 2007-2008

(68 cont'd) Esmart

Scale

Joins
N10E
N/S

oops! looks more
like Osp base
on pt 69

(69) on bluff N of Confluence w/ Bear
Creek

35 59 50.6 ± 27-
92 42 09.8

Osp sands outcrop from RR Grade/Horse
about ~15' to c/c w/ Osp

still showing worm-to-be 'circle' things
like seen in Bear Brush creek area
also; where contact is noted,
there are calc sand, lime interbeds.

* fine silt/clay; greenish + drk grey
note below (within?) osp.

Perhaps could this be w/ De?

Wright

(70) 35 59 49.6 ± 20-
92 42 8.8

R.H. 10 yards E of
pt 10W

dip w/ 18° N10E on plateau; up from st

5' @ near
pt 69

Location BNR MARSHALL Q Date 08.01.07
 Project / Client STATEMAP 2007-2008
E. Smart

base of
 (71) old spring @ GILBERT
 35 59 19.9 $\pm$ 19'
 92 42 53.0

pp w/ shaly inter bed; all micritic

(72) 1:00 pm just starting on the River
 35 59 19.3 $\pm$ 22'
 92 42 ~~53.0~~ 41.7

platin exposures coming above
 river level ~ 1' exposed

jumped as 2sp on old map?

(73) 35 59 49.3 $\pm$ 20'
 92 42 6.5

Stopped after lunch (almost ran into tree!)
 outcrop (~1-3' exposed) lmst below snls
 (calc cemented snls)

lmst is pass Oe (Jasper member) is
 dr gray to tan w/ (inter bedded)
 lt gray to whitish calc interbeds
 micritic v-fine gr w/ xtl in ~~bed~~ laminations
 and lenses, few fossils

Location BNR MARSHALL Q Date 08.01.07
 Project / Client STATEMAP 07-08
E. Smart Scale

(73) note that latitudes are similar
 to point 70, where beds
 show extreme dipping!

Possible Monocline type feature
 through ordovician.

Also Oe samples have greenish gray
 laminations not apparent in some areas
 possible malachite
 malacite

Osp snls are white if frg, slight
 calcareous - friable (w/ 2" thick)
 (crinoid)

(74) 08.02.07
 35 58 38.1 $\pm$ 23
 38.1
 92 37 44.0

Road to Rocky Creek (Piney Road)

outcrop on hillside exposes ~ 5-8' on N
 side (pass Silveran box)

weathered light buff to gray, covered w/
 lichen and leaves

fresh exposures are firm xtl slightly
 crinoidal, pinkish w/ red blebs (also
 white if m exposed on S side of road)

thin planar beds, slight (~3° dip to SW)

E Smart

✓ ~~75~~ 35 58 31.3 + 13
92 37 51.0 - 13

Old Homestead on Rocky Creek +
Piney Road intersection.

c/c b/t Op and Of above
old terrace gardens

old spring was not located, only
piping (loss gravity fed?)

amazing home accommodates lots of folks!
why not live here?!

Joints taken in creek (trib)

NSW N70W N80W

✓ ~~76~~ dp 7°N N70E

35 58 20.8 + 23
92 37 44.0 - 23

hiked up drainage to Rocky Creek
behind old homestead.

c/c in creek b/t Op and Of; possible
Or found as float-type 'bed' below

E. SMART

Scale

✓ ~~77~~ Boone rex in tributary
35 58 10.8
92 37 39.5 + 30

✓ ~~78~~ 35 58 13.2 + 33
92 37 39.7 - 33

top of apparent Mst

any crinoidal graptolite w/ sawered
bees; possibly the thinnest St Joe
Section to date. also no sighting
of Mndm but w to crinoid
to call latterly... will ask
others in office upon return...

* additional samples taken the area
contain pyrite and greenish shale-
micrite clasts... 50000. prob Mst

79 ✓ ~~79~~ 35 58 17.2 + 35
92 37 41.5 - 35

walking back down stream
first apparent Silurian ROX
white - light pinkish fine - med gr XH
pack-grnst. Shugary texture
possible St Clair

Location Rocky Creek Area, Marshall Date 08.02.07Project / Client STATE MAP 07-08

E-SMART

81 $\begin{matrix} 35 & 58 & 18.9 & + & 28- \\ 92 & 37 & 40.2 & - & \end{matrix}$

exposure of M_{st} (snd absent) in drainage area. Ocrop thickness is ~5-8' until c/c w/ M_B ; white shugary m-coarse r/lite rdx (described in pt 80) one below

M_{st} is grey-greenish grey crinoid Q w/ greenish shaly/micritic "clasts" and surfaces; red "iron" blebs

M_{st} above the c/c is cherty dimst; about 5-8' exposed over ledge (presumed it is also on hillside above)

82 $\begin{matrix} 35 & 58 & 25.4 & + & 19- \\ 92 & 37 & 49.6 & - & \end{matrix}$

c/c Op/Of on hillside; probably boulders that slumped down slightly, but very close to outcrop. sections across the creek are level and appear in place perhaps veg covers to an extent

Location Rocky Creek Area, Marshall Date 08.02.07Project / Client STATE MAP 07-08

E-SMART

Scale

82 $\begin{matrix} 35 & 58 & 31.8 & + & 19- \\ 92 & 38 & 2.4 & - & \end{matrix}$

Rocky Creek, looking for Op c/c w/ Op. found some Op as float! w/ Op in creek bed.

Joints on Op are nearly rectangular
N80E, N2W also N50E
N/S N85E

83 $\begin{matrix} 35 & 58 & 43.1 & + & 55- \\ 92 & 38 & 25.4 & - & \end{matrix}$

Op in creek bed. Apparent dip is opposite direction of previous Platin beds.

Spring above ~ 20'

Location MARSHALL QUAD, BEAR CREEK Date 8.6.07Project / Client STATEMAP 07-08

E. SMART

85 ✓
 35 57 11.5 + 19'
 92 42 49.2 -

Down from cabin; Stacy Hole
 c/c b/t ~~E~~ M_S and M_B; M_S in
 creek bed.

- M_S is light grey to pink; crinoidal
 lnst
- M_B is fine grained-micritic; light grey
 cherty lnst.

86 ✓
 35 57 12.0 + 18'
 92 42 54.5 -

Apparent base of M_B in creek
 [crossing to bluffs @ falls]

Joints
 N 37 E

86 ✓
 87 ✓
 35 57 14.6 + 36'
 92 43 15.9 -

"Hoodoo" area; Hiked into Houma
 M_B

Location BEAR CREEK; Marshall Date 08.06.07Project / Client STATEMAP 07-08

E. SMART

Scale

87 ✓
 35 57 12.3 + 18'
 92 42 44.6 -

First probable Sil rox in creek
 bank:

f-m xtl; light tan to grey-pink
 just downstream are f-m xtl, pinkish
 lnst w/ calc vugs.

probably Lafayette and Brassfield

88 ✓
 35 57 17.4 + 18'
 92 42 38.7 -

c/c b/t M_S (pink f-m xtl
 w/ crinoids, iron
 blebs)

and Sil rox

→ interbedded (thin beds) of
 f-m xtl, light pink - pink w/
 red blebs; one ~~light~~ bed (greyish) also
 observed. Some calc. filled vugs.
 Similar to bluff @ Grinders Ferry.
 probably Brassfield.

Location MARSHALL Quad Date 8.7.07Project / Client STATE MAP 07-08✓ E. Smart

89 35 59 18.6
92 42 37.1 $\pm 22'$

- Sil Rox along NPS road down
to bear Creek / BNR area
only 1-2' exposed.
grey w/ mottled appearance, red
blebs, vf - f xtl

- c/c w/ Msr is a in the
bend of the road ~ 10' away
Msr is darker red, or no. dark
variety

- Sil exposure continues ~ 10' down road
(2-4' exposed) f-m xtl pinkish; interbed
w/ light grey-white m xtl

total exposure along road continues
~ 30' along road; about ~~15-20~~ thick
continues down road
next curve in road ~ 40' xtl

90 35 59 17.6 $\pm 50'$
92 42 41.1

last exposure of sil on roadside

Location MARSHALL Quad Bear Creek Date 8.7.07Project / Client STATE MAP 07-08✓ E. Smart Scale

90A 35 59 19.3 $\pm 18'$
92 42 40.7

continuing down along road,
still seeing Sil Rox; confirming
~ 40' thickness (all along nose)

91 35 59 17.8 $\pm 18'$
92 42 15.8

section of sandst. vf-far, weath
reddish (iron stain / cement) fresh
is lit tan-buff w/ reddish creas
well - med well sorted

looks like Batesville, but
Dsp makes more sense

Dip: ^{40'} 10° N 53° E ^{below} 11" N 45° E

Joints: N 17° W N 10° E
N 30° E N 47° E E/W

some deformation bands noted
through out. possibly some small pipes

→ N 34° E 13° W @ pt

Location MARSHALL Quad Date 8.7.07Project / Client STATEMAP 07-08✓ E Smart

(92) 35 59 12.1 ± 20'
92 42 13.5 - 20'

first Op in place along roadside

weathered white - lt grey,
vf-micritic lmst

exposed in ~ 8" portions (3-4 exposures)
continuing up the road ~ 10' to
corner

• photo # 21 (after tractor photos)

oops... all additional exposures
in the photo, up road from the
GPS point are f-m xtl, white-
pinkish of Op. some bryozoans
and crinoids also noted

~ thickness of Op is ~ 10' - 15'

Op section ~ 50-60' covered b/t

"top" of Ospnd of pts 91

Location Marshall Quad Date 08.07.07Project / Client STATEMAP 07-08

E Smart Scale

✓ (93) 35 59 10.6 ± 23'
92 42 15.7 - 23'

first top of Mnd in place
along the road. ^{shows shaly} pinkish-lt surf.

weathered tan w/ phosph nodules
fresh shows for sand, qtz crenite
~ 6-12" exposed @ point

• photo 22 + 23

M_{ss} (float ^{apparent}) is greenish (shaly) ^{slt}
crinoidal packst-grnst.

✓ (94) 35 59 41.0 ± 19'
92 41 53.0 - 19'

tiny knob of Op exposed in
the road. ~ 2' x 2'

• photo # 30

looked like Bone in the grade
all the way down from the bus;
no other exposures

"just upstream" the bluff is ~ 50'
of Op up to part of Osp. waterfall

95 35 59 43.6 + 27-
92 42 4.3 - 27-

d @ first exposure of Op @
Bear Creek / BNR Confluence
most of creek bed covered in
gravel; point taken @
~10-15' outcrop up the W side
of the Bear Creek bank

smaller oc on the E side
has only ~1' of rock exposed
with beds dipping upstream
dip 10° S, N 75° W strike

this oc extends ~20-30 yds
along the bank back upstream

96 35 59 32.1 + 17-
92 42 1.9 - N80W strike

Op beds dipping opposite direction
just down (stream) from this point
(~10') R.H. is up a small
narrowed area where obasor xtl rocks
are in contact; whiteish, crinoidal

96 cont from "trough" hollow area
R.H. was exploring looked
pretty old Op - esgue vox

there were Op - esgue vox...
werid. may return another
day. Should make contact
w/ July this afternoon.

REVISED DIP @ GPS pt
N80W 11° NNE

MUSE strike 13° SE otherwise take
on strike back to top

97 35 59 25.1 + 28-
92 41 58.2 -

walking upstream still, pt @
small oc of Op in creek bed
~6' (lengthwise) x 4" (height)
well rounded, well sorted gtz crenite

Nice, ~80+ ft, of complete exposure
on east "bank" of creek

cherty nodules of Mb vis. b/c on top
then apparent massive for all the
way down. lots of veg in the way

ES photo #31 boulder @ bottom is Op!
showing "chunky/smooth" etc on bluff

Location Marshall Quad, Bear Crk Date 8.7.07Project / Client STATE MAP 07-08✓ ESmart✓ (98) 35 59 23.9 ± 19'
92 42 13.5

JOINTS

N85W, N60W;
N55E N25EOsp incase k w/ stinky poopoo...
fgr, weathered white white-orange
on fresh; qtz arenitetractors working @ Crane Bottom
apone✓ (99) 35 59 25.5 ± 30'
92 42 21.7outcrop of Op on bank ~10-15'
exposed

(dk) grey vfg - micritic limest, thin beds

✓ (100) 35 59 24.6 ± 38'
92 42 28.3etc of Of and Op on hillside
just down stream from cavebluffs are massive; visible though
vegetated from creek.Location Marshall Quad, Bear Date 8.7.07Project / Client STATE MAP 07-08ESmart

Scale

✓ (101) 35 59 25.9 ± 32'
92 42 28.7etc (above cave fencing and
thru under brush/veg)

Of / Oc / Sil contact

of taken below

Oc is ~1' exposure of greenish
shale below SilSil is massive bluff approx
~20-30' to top; that's all I can
see. Tractors hauling across the
way.

lots of briars to this contact.

R. H. took a sample on the
way up (flood) that was
1/2 pink, fgr xtl w/ vfg glue throughout

Location MARSHALL QUAD, BEAR CREEK Date 8.8.07

Project / Client STATEMAP 07-08

E. Smart

102

35 59 21.7 ± 44'
92 43 09.9

Adjacent to Dry Creek, at the
end of the campground, remnant (poss)
of old RR GRADE.

Of rock incut, ~5-8 ft height,
~15' yards long

At pink-white mottled

103

35 59 19.5 ± 23'
92 43 6.3

walking ^{apparent} "downstream" in Dry Creek,
first Op rock in creek; float here,
but boulders on down.

possible undulations of
Op in Dry Creek
will return on
another day. Left
to meet July.

Location MARSHALL QUAD, BEAR CREEK Date 8.8.07

Project / Client STATEMAP 07-08

E. Smart

Scale

104

35 59 22.2 ± 18'
92 42 22.7

July shuttled us to the boundary
of his property. Just down from
the cabin, it's visible on the
hill. Point taken where Sil
rock (w/ ^{very shaly, st. greenish brown gray} ~~carbon below~~ ~2' exposed)
meet the Bear Creek

Sil rock is ~10-15' thick

↳ If gr-micritic ^{lime} waestone
(~8') massive bluff face w/ wavy
thin beds above (~5-6'); high
fizz... fossils are mostly
brachiopods... ~~some bryoz.~~

• photo to and some by R. H.

Wavy beds form ledge; beds are
dipping down into creek upstr.

70 at point increasing to ~13° downstr
(N45E)
thru downstr rock look

like Platten. maybe fossil is OK?
has swag text

Location BEAR CREEK, Marshall Co Date 8.8.07Project / Client STATEMAP 07-05

Esmant

105 35 57 24.5 + 19'
92 42 29.8 -

Op rock downstream (benches) still
Oc in creek bed, only 2' exposed

106 35 57 36.0 + 16'
92 42 47.1 -

Small exposure (10' x 8') of Of
in creek bed, partially submerged
very near where July told us the
stream had eroded his field;
lots of new cotton woods are
growing; also just N of (almost under)
where paved road crosses the creek.

107 35 57 41.6 + 19'
92 42 39.8 -

Op exposed downstream, (powerlines
still insight)

N20W 8°ENE

~1' exposed up out of creek
good gravel bars around.

Location BEAR CREEK, Marshall Co Date 08.08.07Project / Client STATEMAP 07-08

Esmant

Scale

108 35 57 47.1 + 30'
92 42 32.1 -

After lunch, 30-40' Op
ledge/bluff, small cave
and big cat prints!

ONE pass shaly lime bed within

109 35 57 53.5 + 20'
92 42 25.7 -

Op sandst! exposed ~70 yds
along the bank (in the creek
and ~2' thick).

110 35 57 55.8 + 23'
92 42 20.6 -

- Bizzaro world! point taken where

Op meets a grey micritic dmst. (~2 in
to 3')

However there is ~10' of additional
grey arenite sand (looks like 'conglomerate'
texture, pebbly, w/ash)

SUMMIT

N80W

N12E

There looked to be mud cracks and
wavy bedding on the line. →

Location BEAR CREEK, MARSHALL Date 08.08.07Project / Client STATE MAP 07-08ESMART110 contd

the rock above the sand core
Op. esque, grey lsst → shaly lsst
(greenish); interbedded thin-thick
beds (thinner shaly beds, greenish)
grey lsst w/ iron (pyrite?) nodules
(~1-3mm in size), total exposure
in bluff is ~30' thick.

some conpartments under cliff.

upon additional inspection, there
are some very stromatolite surfaces
on the "anastomosing lsst"

• photo by R/H

also sand surface "slumps" over
so as to terminate the "lsst"
looks like it pinches out.

• photos 43+44 showing hammer head
on lsst w/ angle of sand coming
down from above. The lsst here
is coarser gr (vf-f) w/ sugary texture.

Location BEAR CREEK, Marshall Date 08.08.07Project / Client STATE MAP 07-08ESMART

Scale

110 contd lsst looks like it fines
upward and is more
micritic / mudst w/ calc veins (small)
in upper portion before sand.

• add'l photos of contacts...

▲ smpl of "murching" by R. H.

111 35 57 52.6 ± 28
92 42 17.0

Samples of sand taken along
creek bed (several in ~1' up)
Some calc sandst, some dolomitic
sands (high and low fire)

Really dolomites (sandy dolost)
in creek bed, interbedded sandy
areas where @sp is cutting
down in! (Duh)

OE about 15-20' up
from creek is the under

112 35 57 50.6 ± 17
92 42 10.7

Op along bluff (cedar Bend)
Op all the way back to Harris
Hollow

Location BEARCREEK, Marshall Date 08.08.07Project / Client STATEMAP 07-08

E Smart

112 cont'd some poss Of @ very top of bluff... some pinkish areas ~30' up the bluff;

currently interpreted as ~50-60' of Op w/ little Of @ top based on one "rounded" bed.

113 35 57 48.9 + 19'
92 42 27.5 -

on the way out: stopped in the road side behind the old house and pond.

MxTL - coarse, pink - lt pink dmst; Of in road + ^{outcrop} on hill side below; approx thickness is ~15'

114 35 57 45.6 + 18'
92 42 32.3 -

contact of Mst w/ top of Of even saw some Mst float just barely up the road from 113. Some Of rex still appear in road Mst is on 1-2" bc in road cut

Location Road back from Bear Creek Date 08.08.07Project / Client STATEMAP 07-08

Scale

114 cont'd ~30-40 yds from the GPS loc. There is an old spring w/ a trough sitting on black-tan fssile (eroded) shale [poss Dchatanuga] approx 4" thick then Mst above (w/ small greenish bed of shale ~4" thick)

08.14.2007 BEAR CREEK

115 35 56 32.2 + 14'
92 42 31.4 -

walked down creek from H65 bridge. Raft trip failed. It's hot.

Silurian rocks outcrop from creek bed more exposed further down. ~70 yds along creek bed

116 35 56 37.2 + 29'
92 42 32.5 -
thin bedded "slabby" Mst in creek bed. Crinoidal, w/ pyrite

CHECK ATTRIBUTE TABLE!

Location BEAR CREEK; Marshall Date 8.14.2007Project / Client STATE MAP 07-08ESmart

(117) 35 56 41.4 + 7.
92 42 33.7 - 7.

standing in creek; east bank has
etc of Mst and Boone. photo by R.H.

8.20.07

(118) 35 57 46.6 + 23.
92 42 11.8 - 23.

Back along Bear Creek,
driving along bottoms/creekbed
where July brought us.

Outcrop, ~ 8' thick adjacent to
gravel road. ~~is~~ Op
tan, f-m gr. well sorted sn+
weathered grey ledges w/ piths

Location BEAR CREEK; Marshall Date 8.14.07Project / Client STATE MAP 07-08ESmart

Scale

(119) 35 58 4.5 + 12.
92 42 10.8 - 12.

Only Op in creek bed available
to inspect. Passed lots of
overgrown bluffs along the way
that looked like Op; but
some of those beds are tan
bedded Op. Exposure ~ 1-2'
on creek bed. North side of
Bear creek shoe.

(120) 35 58 12.9 + 17.
92 42 24.7 - 17.

Standing on gravel bar where
creek bends sharply to my right
apparent Op bluff ~ 15-20'
thick; med-thick beds of Mst
w/ small (~ 1' thick) bed of
shaly Mst near base. R.H.
took a sample of shaly

Location BEAR CREEK Date 8.21.07
 Project / Client STATE MAP 07-08

(121) 35 58 22.6 + 31-
 92 42 27.6 - 31-

etc of Op and Of in drainage
 closing in on Patterson bottom

(122) 35 58 23.8 + 25-
 92 42 32.4 - 25-

solid Op above the fork
 as shown on previous map

(123) 35 58 22.3 + 10-
 92 42 35.2 - 10-
 basal msnd on bank of creek
 w/ ms

(124) 35 58 21.1 + 40-
 92 42 29.9 - 40-

etc of Op and Of in small
 bk of drainage

Location _____ Date _____
 Project / Client _____

Scale

(125) 35 58 20.3 + 18-
 92 42 17.5 - 18-

Op data pt near Patterson
 bottom. on the way out for
 the day. Grove of oak and
 hickory trees occupy the
 outcrops + 8' exposed in
 ridges 32° dip to NE
 N40W strike

8.21.07

Good weather
 Sunny ~ 75°
 some breeze.

(126) 35 58 23.4 + 28-
 92 42 9.4 - 28-

Op outcrop ~ 5' thick
 N30E 13°NW - 23°

Joints: N55E 10° - 16° just further
 N70W downstr
 N35E

Location BEAR CREEK, MARSHALL Date 8.21.07Project / Client STATE MAP

(127) 35 58 22.6 + ~~30~~ 9.1
 92 42 5.8 -

etc b/t Op and Osp in
 creek bed. pt taken in the middle
 of the stream. Sand is grey to tan
 w/ high fliz.

Mapped on previous as Oe.
 Joints are N45E N55W

Approximate length of exposure
 in creek bed is 40-60 yds

(128) 35 58 22.6 + 17
 92 42 00.6 -

etc of grey micritic lsst w/
 white-tan dolomitic sands. well
 cemented greenish similar to
 Oe @ Bear Creek. no worm tubes
 as seen in previous Osp.

~~N50E~~ 13° W
 N20E
 w/ water surface

Location BEAR CREEK, MARSHALL Date 8.21.07

Project / Client _____

Scale _____

(129) 35 58 28.1 + 25
 92 41 59.3 -

N50E 13° NW

along the bend a large bluff shows
 beds dipping back into the river.
 dip is taken on an Op surface
 just ~ 15 yds down stream is
 an apparent etc of Op and Of.
 only about 1-2' of Op exposed
 w/ ~ 10-15' of Of exposed.

(130) 35 58 31.0 + 21
 92 42 51.9 -

Op/Of etc, dip has ^{apparently} changed

Of has crinoids!

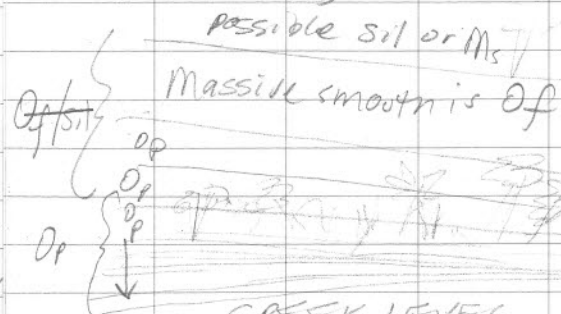
surface of Op shows

N40E 7.5° SE

Location BEAR Creek, MARSHALL Date 8.21.07
 Project / Client STATE MAP 07 08

(131) 35 58 37.3 + 15'
 92 42 21.7 - 15'

sitting on the gravel bar across
 from a large bluff ~80' high
 (R.H. photos, ~50' to 'tree line' above
 smooth area)



extends 700 yds along creek
 bluff's smooth ledge may be sil
 Op is thin bedded @ creek level
 of Right above / behind first tree /
 ~15' thick
 highest tree line is probable Ms / s
 previous map shows thin cason shale
 associated w/ section here...

this is the area we first visited on Bear
 Creek recon trip. canoes and camping here.

Location BEAR CREEK MARSHALL Date 8.21.07
 Project / Client _____

Scale _____

(131) cont'd

R.H. climbed up up, stood behind
 a dead maple tree to find the
 etc. where Op ends (thin - thick
 beds up from creek) to find
 the etc w/ Op (massive face in
 ~30-40' up from creek bed photos)

(132) 35 58 46.8 + 30' (22 after)
 92 42 21.3 - 30'

tried to hike up drainage after
 lunch, but it was overgrown today
 Saw the of outcrop on the way but
 hiked up to confirm. point taken ^{on SW} bank
 just below the exposure is ~5' th.
 w/ more up on hillside, ~20' total.
 Op in drainage to this point

(133) 35 58 47.4 + 19'
 92 42 16.5 - 19'

etc in creek where Op / Asp rocks are
 contact in creek. About 6-8' under water

Location BEAR CREEK, Marshall Date 8.21.07
 Project / Client STATEMAP 07-08

133 cont'd

beds are dipping to the NE (est)
 Osp is f-m gr tan-white w/black
 Pl and some shales, Op is grey micrite

134

35 59 4.5 ± 22'
 92 42 14.2 ± 22'

point taken on gravel bar across from
 bluff on the N side of Bear creek.
 this area was previously mapped
 as Oe, but since the last point
 (Op/Osp) we never saw evidence of
 this (NO Oe anywhere) there appears
 to have been some significant
 change to the channel location
 as there are eroded soil banks
 and downed trees all along this
 one from Gobblers Knob to Crane
 Bottom

The bluff is ~ 80' high. Carbonate rock
 of Ordovician, but trees conceal contacts.
 Revisit in fall.

Location Bear Creek Date 8.21.07
 Project / Client STATEMAP 07-08

Scale

135

35 ~~58~~ 59 3.0 ± 22'
 92 42 24.3 ± 22'

on south side of bank ~ 8'-10' of
 rocks exposed (mainly slumped + displaced)
 are grey dolomitic ~~beds~~ / sandy dolostone
 R.H. climbed through veg ~ 30' up
 to find "erosional contact" b/t
 overton and saint pete

Oe

Osp

Shugary / v. fine

point taken to be overton in creek
 bed.

R.H.
 photos showing contact + Osp digging
 down into Oe; samples also showing b/t
 Oe is grey, shugary / v. ~~fine~~ and dolostone
 some peridotitic to slightly (low fire)
 Osp is white v. fine (mod well-sorted)
 mod micrite, none - low fire sorted

136

etc in creek bed b/t
 Osp and Op downstream

35 59 6.3 ± 21'
 92 42 28.9 ± 21'

N 65 E

7-11° dip NW

Location Bear Creek Date 8.21.07Project / Client STATE MAP136 contd

bluff along creek downstr
from point is ~100' high
will be good to view when leaves
fall. ~~top~~ top look like
smooth weathered Op like at
point 131. it appears to form
the top of the bluff, a waterfall
probably cascades down here
(~40-50 yds from GPS loc)

137

35 59 12.5 ± 22-
92 42 32.8

walking along creek bed, found beds
of ^{very} coarsely xtl crinoidal / brachiopod
redish ^{grey} limst. point taken where these
Fennellian rocks overlie Op (micritic)
in creek bed. etc is submerged in ~6"
of water.

Op is reddish in water dries to grey w/
red blebs.

Location Bear Creek Date 8.21.07Project / Client STATE MAP

Scale

137 contd

hammering on some Op (like) just
~70 yds down stream from etc.
there are tows of brachs in
this section big over small ones
almost grainstone; crinoids too
but abundant brachs.

138

35 59 20 ± 16-
92 42 16.4

middle of hay field Op just a
few inches exposed.

139

35 58 31.2 ± 23-
92 42 24.5

Driving a 'new road' out. just
up [] from where we had
lunch. The drainage is adj to the
(131) road; we are on the S side of
The drainage. There are small (<1')
exposures along the road bed
for ~10' thick. Then beds along
the cut are thin bedded, moss covered,
grey-red bleby crinoidal f-coarse xtl
limst. looks more like Mss than Op.

Location BRUSH CREEK, ZACIC Date 8.22.07
 Project / Client STATE MAP 07 08

(140) 35 57 31.4 + 100.
 92 39 54.8 -

Approximate Location of

~10-15' Blowing cave; Used to store
 above strawberries when Rail Road
 creek level (MNA) came through in early

20th Century. Cave is formed

in Op Joints N50W, N60E are
 joints in cave

→ Kids obviously hang out. Most formations
 are broken, trash, fire pits and soot
 on walls; some horse trails above
 the cave hill; there is even a
 box spring rusting on the ground!
 road crosses creek and comes
 right up to the cave; several btrls

(141) 35 57 31.9 + 65' (20)
 92 39 53.4 -

etc b/t Op and Op; followed 'horses'
 up onto hillside, looks like were
 just above the cave

Location BRUSH CREEK, ZACIC Date 8.22.07
 Project / Client STATE MAP 07 08

Scale

(142) 35 57 58.0 + 24'
 92 40 6.1 -

Smith Hollow Hike; pt
 taken @ exposure of OSp w/
 Op. There is a 'lense' ~.5'
 thick of the black-tan
 shale w/ shale bed of white-
 greenish sand (no fizz)

Visible Op is ~1-2' thick, grey
 micritic

• photo by R.H.

Op is tan-puff w/ slight fizz
 w/ visible deformation bands
 1-2" thick grey

Outcrop extends ~40' long (15-20'
 yds)

One deformation band appeared
 to cut through OSp and Op above

• photo R.H.

(143) 35 58 5.0 + 16'
 92 39 56.6 -

Got to the apparent 'flat' area of forks
 in Smith Hollow but it was too over-
 grown. Followed an old road that runs
 adjacent to the drainage, ~~and~~

Location Brush Creek (Smith Hollow) Date 8.22.07Project / Client STATE MAP 07-08ESMAP143 cont'd

on closer inspection, R.H. found
Op still above this point, but
then Op was apparent higher
up. ~10-15' above the GPS point
(~one contour) and ~20-25'
above the creek (Smith) bed

The rocks here are Op (m-cxtl)
and some possible Ok (white ^{crinoidal})
white f-mxtl w/ ^{crinoidal} ~~white~~ ^{crinoidal}
some larger calcite tte (wk-pr)
Ok is about 5-8' thick; crystalline limestone

144 35 58 4.1 ± 19' N60E
92 40 11.9 ± 19' N40W } Joints

Lunched here where Osp pgs
up in Brush Creek. Exposure
extends about ^{20 yards} 60 yards. Some
warm tube corals, fine-mgd grain, mod^{low to 2}
cemented (low fizz); tan/buff-greenish
white, well sorted subround-round.
some creek-washed surfaces are very white
no significant dip

Location Brush CreekDate 8.22.07Project / Client STATE MAPESMAP

Scale

144 cont'd

There is a transitional 'layer'
about 6" thick where sandy lime of
is present then Op forms small
"3-4" caps on top of the Osp.

Osp continues down along the original
est 60 yds but has greenish gray
color in fresh sample w/ high fizz

Gravel mining is apparent in the area

145 35 58 32.7 ± 30'
92 40 37.0 ± 30'

USGS gauging station at
springs. holding tanks, pumps
for water supply! Also, wooden trestles
for old bridge
across creek

146

Location BNR w/ AngelaDate 8.27.07Project / Client STATE MAP 07-08SS MAPHwy 65 Bridge
GRINDERS FERRY

Afternoon hike down to ~~SHINEEYE~~
BLUFF looking to find the contact
between the Brassfield and the
Saint Clair. There appears to be
approximately 20-30' of the
Brassfield (dark red ^{RH 259} pink w/ blebs)
up from river m-coarse xtl w/ chrinoids
calate ruggs

Contact w/ St Clair is said to
be stylolitic but we didn't see much
of this (pos too much veg debris)
but the Brassfield appears to be
more pink, less red on the way up
> (~40-50' from river <sup>one ceadon on
etc add tone that
is down</sup>)
the St Clair is possibly w/ less
blebs, but goes completely white
offine med xtl, branches ~30-40'
up the river edge. ~5-8' ^{thick} before
the sand.

(146) 35 59 08.3 + 17.
92 44 40.9 -

Location BNR field w/ A.C. 8.27.07Project / Client STATE MAP 07-08F. Smart

Scale

(146 contd) point taken standing on
Siliceous in creek bed where ~2-3"
calcite/snd (Mmm) vein runs N80E
through the Sil; where sil in river
bed is covered by Qz is ~35' upstream
various thicknesses of sand filled veins,
joints and/or solution cavities are filled
w/ apparent M sand areas visible @
this location and down stream @ SHINEEYE
sand veins are var cemented and range
in thickness to 1/2" to mm in size..
WAY COOL, runs through St. Clair
(and into Sp. @ bluff there j in Sp here
@ Grinders Ferry

Sand in veins is vf-f gr w/ black
specks, well rounded, well sorted.

Location Field w/A.C. Date 8.28.07
 Project / Client STATEMAP 07-08

(12/7) 35 59 52.7 $\pm$ 19'
 92 41 22.2

(pt taken in creek across from bend/oc)
 BEAR CREEK BEND INTO BNR. Outcrop
 25-35' thick exposed for ~50 yards
 (vegetated up the hill, total ^{thickness} exposure is
 ~50-60' thick)

interpreted to show the contact (photos by A.C.)
 b/t ^{with Fe-~~tan~~ slight dolomite} Oe (black dolost + sandy dolost) and Osp
 (well rounded/sorted sandst). Op is ~8-10' thick,
 Osp is ~25' thick. Op/Osp is covered
 but Op is ~30' up from creek.

Osp doesn't 'cut' down into the Oe as well
 as it does in some places... but is similar
 to other interpreted ~~OC's~~ OC's in Bear Creek

there is a small spring coming down the
 slope ~30 yds from the point, where
 R.H. climbed up to ~~Op~~ Osp/Op etc

Location LANDIS Quad: Field w/A.C. Date 8.28.07⁷⁷
 Project / Client StateMap 07-08

Scale

(148) 35 56 12.9 $\pm$ 22'
 92 30 45.8

Good Of on Hwy 74 (adj to long
 Creek?)
 white-pinkish w/ blebs; coarsely
 Xtl w/ barrel crinoids; ^{also extends}
 ~50 yards along road; only 3-4' thick
 [R.H. thinks he sees Mrs. float]

also has some greenish areas (possibly
 weathered w/ silty clay etc material) some
 brachiopods also noted.

behind the hill w/ bee boxes...
 looked for the upper etc w/ sil or Mn ore
 but could not find it today.

(149) 35 56 16.3 $\pm$ 18'
 92 30 51.1

top of Of on hill side (point taken in road
 behind up from creek)
 Of was spotted in the road cut along 74
 road continues up, Boone ~~etc~~ rubble above

(150) 35 56 17.3 $\pm$ 18'
 92 30 53.9

top of Op where jeep was parked.

(151) 35 56 22.0 $\pm$ 23'
92 30 58.0 $\pm$ 23'

• photos by A.C.

Osp (white-tan
m well rounded (sarcinoidal) sandst)
etc. w/ Op

point taken @ large road cut where Osp.
"dome up" total thickness of cut
is ~50' x 50 yards

at most, Osp is ~8' thick but
pinches out @ ends of cut where
dip in Op ~~is~~ beds are changing

etc is massive Osp w/ grey thin bedded
Op above (photos by A.C.)

possible ~~dry~~ spring

(152) 35 56 25.1 $\pm$ 19'
92 31 4.2 $\pm$ 19'

etc of Oe / Osp along Hwy 74
Osp appears to cut down into Oe. top
of Oe is sugary limestone
• photos by A.C.

(152 cont'd) Osp top dips into the road and
151 and bottom is up @ 152
18° dip to the E (R.H.) N/S strike
70° E / NE

(153) 35 56 37.4 $\pm$ 20'
92 31 29.9 $\pm$ 20'

Walked east along Hwy 74 road cut
Mb to point. GPS taken where
Ocaron is exposed (~1' thick) w/ Msnd
(~1-2' thick) and Mss (~5' thick) and
Mb (~5-8' thick) above

looks like road cut ends @ bend
in the road to my right (just before
house. Have
disappear the street)

~~Silt rock exposed to that point~~
Eventually Of rises up (~15-20')

Op / Of etc is exposed (see next pt)

(154) 35 56 36.1 $\pm$ 20'
92 31 26.1 $\pm$ 20'

heads up
digitized Op / Of etc @ end of Road cut.

Location Hwy 74, field w/ A.C. Date 8.28.07

Project / Client STATE MAP 07-08

155 35 56 37.7 ± 17-
92 32 38.5

Small ~ 2-3' or along Hwy 74, adj to
Big Creek orig map has ~ 20-40' of
Sil ex but we can not see any of it
only ~~of~~ of / Mss etc w/o
Mend! There is also a small hollow
on this South side of the
road next to a School Bus
sign.

156 35 57 57.7 ± 18-
92 29 5.4

We gained access to BIG CREEK through
a private gate on WILD CAT SPRINGS.
we drove up through creek bed and
upon to some slopes trying to
find access to Hwy 14 but didn't
find it. the point is taken @ of -
saw some cool Osp pipes @ the
family's camp ground.

point taken where small knob of
Op is visible in field.

Location BIG CREEK, LANDS Date 9.28.07

Project / Client STATEMAP 07-08

Scale

157 35 58 0.2 ± 20-
92 29 9.4

pt taken on road back down
from the Op knob. I am
sitting on a big (~ 3' dia) sandst
pipe in Osp! this is the
last exposure of Osp at this
hillside.

WAY cool sandst pipe; another
~ 20 yds down from mine
• photos by K.H. and A.C.

158 35 58 13.2 ± 20-
92 29 16.0

pt taken in road where Osp surface
is visible. Prob the top of Osp, missed
the Op / Osp etc b/c there is just
too much rubble and float and
veg covering the "road cut" Op knob
in road is ~ 20 yds uphill.

159 36 58 13.1 ± 20-
92 29 18.3

A.C. took a GPS @ Op knob

(160) 35 58 14.1 $\pm 17'$
92 29 22.4

Of cut in road.

8.29.07

(161) 35 59 17.7 $\pm 26'$
92 43 4.8

Dry Creek Hike (w/A.C.)
point taken where Op lines the
creek bed ($\sim 5-10'$ thick) and
is up the bank. the Of etc
is $\sim 8'$ up the oc. Of exposed on
the oc is $\sim 10-12'$ thick.

R.H. found a great raynoceous
just upstream in Of float.

- Joints taken ~ 30 yds from pt in Of
NSW 180E, NSSW, NSOW, N70W
NSS'E, 65W

Strike: EWSS A.C.
dip: 65SW

Hiking downstream from 161 The shaly
sections noted in upper Op are present
along the bank / bed etc; (limonite calc.)
• photos by A.C.

(162) 35 59 13.6 $\pm 30'$
92 43 9.7

pt taken where Of rex contact
the creek bed

coarse xtl, pinkish grey, stylolitic
soil present in weathered surface

There is about 6" of Op exposed
(below Qal) where crack meets
BNR, but any Op in river is
under water; rocks along bank
(North bank of BNR) are Of

(163) 35 59 24.8 $\pm 20'$
92 43 11.0

pt taken where Of rex apparently
'cut' down into Op. small shaly,
sugary bed pinches out below.

• photos by A.C.

Location Dry Creek, Mason Date 8.29.07
 Project / Client STATE MAP 07-08

~~164~~ 35 59 31.1 $\pm 40'$
 92 43 11.0 $\pm 40'$

N65W 70SSW

N80W 50SSW

just up stream: (just adj to Hwy 233)
 (road is ~ 20' above us)

Joints N/S N80W ~40-50 yds to WBridge

~~165~~ 35 59 35.8 $\pm 35'$
 92 43 17.8 $\pm 18'$ Op/Of

pt taken where a few inches of
 Op are exposed below Of, mostly
 covered by Gal. Gilbert pop sign
 is visible near road.

~~166~~ 35 59 44.0 $\pm 18'$
 92 43 28.0 $\pm 18'$
 Op are exposed in creek bed

~ 25' x 12' exposed, crusty surf.
 surrounded by Gal

~~167~~ 35 59 53.1 $\pm 20'$
 92 42 35.6 $\pm 20'$

Of in creek bed and up on bank; Oc
 on bank is ~15'-20' thick

Location _____ Date 9.4.2007
 Project / Client _____ light Rain ~80°

Scale _____

~~168~~ 35 58 44.1 $\pm 22'$
 92 27 36.3 $\pm 22'$

pt taken on Hwy 27 Roadcut where
 Boone / St. Joe etc hits the road. Ms/Mo
 total oc is ~18' thick w ~5-8' Ms
 and ~10-15' of Mo (stood on S side of
 road to get point)

within this cut there are two small
 faults ~8' apart. displacement on

the most western (left-most) fault

is ~1-2'. the easterly fault shows

~6" of displacement, fault is

visible through MB and Ms beds

Orientation (RH.) ~N50°E down

dip to NW (down dip to N!)

also, spotted another one ~20 yds

to west along bend in the road

still ~N70E w/ ~1-2' displacement

(vertical faults)
 Ms appears to be one more massive
 turning to greenish grey.

(169) 35 58 46.1 + 16'
92 27 42.0 - 16'

etc b/t Op and Of. I am standing
down in the ditch beside the road.
etc is eye level ~~at my feet~~.

21' of Of exposed Op at my feet.

(170) 35 58 45.2 + 25'
92 27 41.2 - 25'

walked up to meet R.H. on hillside
to another op / Of etc there
is a pond below us ~ 15' down
its platin all the way down

Of exposure is ~ 13' thick

upper etc are exposed w/veg.

(171) 35 58 44.8 + 18'
92 27 46.6 - 18'

continued up the hillside always
looking for upper etc w/ Of.

pt taken where m-coarse xtl me
fast w/ crinoids, brachs and some
greenish blebs is outcropping along

(171 cont)

the dirt road just w of power line
pinkish whiteish to light gray w/ pinkish
"blobs" texture is waxy-pink.

Chunks of w/ Mst esq. qualities

R.H. wonder is Silurian

there is a small knob of M₆
~ 15' up the road from this
point and R.H. fr is pyroclastic
M₆ flatter (very green)

(172) 35 58 46.2 + 22'
92 27 44.5 - 22'

O.K. we're orama. pt taken
where looking South. Of is on
my right Op is to my left

"fault" taken to trend N80W
down dip to NW

(173)

Location LANDISQ. Hwy 27 KC Date 9.11.2007Project / Client STATEMAP 07-08(173) 35 58 49.3 $\pm 20'$
92 27 44.6pt taken @ Op / Op etc on hillside
along the N side of the Hwy.Op beds in S road cut appear to
dip to the NNE. R.H. took
dips on the Op beds near this
pt showing N10E 8-10° ESE(174) 35 58 51.1 $\pm 16'$
92 27 46.7etc @ Op / Msj. rocks look
(some very similar (pinkish grey x+line)
except for bedding and weathering(23) Msj is thin bedded, more crinoids w/
fine-m xtl and grey, some p. nite(23) Op is massive, rounded w/ lichens
slightly coarser xtl; generally more
pinkish

Project / Client

Scale

(175) 35 59 00.6 $\pm 25'$
92 28 2.3etc of Op w/ some mysterious
coarse xtl, pink w/ some white calc
veins and veins...weathering looks like Op w/
visible x-bed and up ~~to~~ from the
etc there are rounded (weathered) w/
lichen ~ 8-10' up on the hillsidepossible fault surface visible here
on maybe another area whereOp is cutting down into the Op. ^{though} most surf
is planar

Op type rocks are ~ 20-25' thick

- Dip N of fault N20E 6° NE
taken @ road to Shepard of the Ozarks (Shepard
Rd)
Op etc is ~ 15-20' up on hillside

- Dip on E side of fault is N50E 11° NW

etc appears to be welded @ this dip loc.
also dip along faulted area.

Several photos by R. Ho. Op has thin bedded interbedded a-3" shales

176 35 59 8.1 $\pm 18'$
92 28 25.9

pt taken where Osp / Oe etc rises
at road surface. There is a small
drainage to the West of the point
and Osp rises to (~5-8') steady oc
along road cut until a sudden rise in
Osp ~~continues to the~~ appears to
truncate along Op bed.

and deeper gorge along N side of road
R. / want down in creek; all Osp

Osp has the small, ~6" bed of ^{green} shaly sand.
(sun has come out)

177 35 59 9.4 $\pm 17'$
92 28 38.6

photos by R.H.

fault rocks near
vertical again

pt taken @ sudden rise in Osp
etc w/ Oe is ~15 yds due W of
trap point. (sandy dolostone)

Osp exposed is ~25' thick, massive

Oe continues to rise up on around in road to
>10' etc is undulatory w/ some cherty

178 35 58 41.7 $\pm 15'$ cloudy
92 28 54.4

pt marks an overhang (w/ lots
of graffiti). lower portion of the
exposure is Oe (~5-8' thick from
base of the road) w/ Osp cutting
in (may appear to truncate some Oe beds)
→ top of Oe is blackish (grey, fresh)
dolostone w/ fluting and grains

Osp is ~35' thick to top of ledge
(massive w/ some beds on weathered surf
worm tubes, well rounded, sorted, qtz cement)

Small cabin on S side of road.
bridge over creek (big?) to the east.

179 35 58 46.1 $\pm 50'$
92 28 49.7

photos by R.H.
maidenhair ferns

Oe / Osp @ waterfall east
(and on S side) of bridge

greenish cherty (iron. fers. etc) calc. near

Osp ledge is ~15' to top of visible ledge

Oe is ~20' down to dirt road (peak over
ledge is ~30')

Location CANDISO Hwy 14 oc's Date 9.5.2007

Project / Client _____

(180) 35 58 48.3 $\pm 18'$
92 29 4.8

coming up along Hwy 14. First
exp of Op above Osp. Contact
is not quite visible, only assumed
we can see "top" of Osp just
around the bend in the road
below the old house.

(181) 35 58 45.4 $\pm 15'$
92 29 24.0

Raining
pt taken in
deep

first exposure of Op is in culvert
area ~ 30' back from point. Contact
w/ Op is prob ~ 50 back covered by
grass.

first oc of Msj is ~ 50 up from point

(182) 35 58 45.4 $\pm 30'$
92 29 26.5

visible Msj w/ phosphate & pebbles

etc is mostly covered but there

is evidence of Op to this pt.

conical
on a flatter w/ a naut. vid pass 21?

Location HARRET / LANDISDate 9.10.07Project / Client INTERMAP 07-08

Scale _____

from pt 16

(183) 35 58 49.2 $\pm 34'$
92 30 6.4

pt marks (probable) etc of

Msj and Mb. Exposures here are
small (2' x 3') and thin (~ 1-2" thick)

Msj is thin bedded, grey-pinkish
crinoidal lmst; some iron/pyrite evidence
micritic

Mb is grey, shagony texture ~~etc~~ lmst

we just pulled down wildcat sp. 20

pt 17

(184) 35 58 46.4 $\pm 34'$
92 30 5.6

standing where last evidence (float)
of Msj is visible in road ditch. Top
of Op outcrops ~ 1-2' thick.

etc w/ Op is visible ~ 35 yds down in
road. 35 yds down is a pt in Mb

(185) 35 58 44.6 $\pm 17'$
92 30 6.6

etc of Op / Op

Op is pinkish w/ barrel crinoids
Op is thin bedded micritic on way down

Spring water
is cloudy today
big dead snail

Location HARRIS / LANDIS Date 9.10.07Project / Client STATE MAP 07-08G. Smart(186) 35 58 37.2 ± 50°
92 29 55.8 ± 50°pt makes the spring (cloudy, stinky)
where Osp/Op is exposed

Osp is ~5' thick w/ Op above (25' to top of ridge)

~5 gal - 10 gal pm

(187) 35 58 39.3 ± 24°
92 29 41.3 ± 24°pt marks first exposure of ^{possible Op} De
knob in the road. the unit thickens
down to where we parked the jeep
by the outcrop of De. De oc is
~5' thick then covered by veg.
driving over, we followed theOsp/Op etc then suddenly it
was all covered by veg.R.H. climbed up the hill where,
on the same level Op turns into
Osp. Osp/Op etc upon hill looks
like ~35-40' upLocation HARRIS / LANDIS Date 9.10.07Project / Client STATE MAP 07-08G. Smart

Scale

(187 cont'd) pt is probable location
of a fault. R.H. says Rocks
dip ~6° into the face of the hill
(NNW) there are Osp floats
along the road w/ deformation bands.(188) 35 58 39.2 ± 37°
92 29 39.0 ± 37°De coming up out of road visible
Oc is ~5' thick. Need to come
back to verify the Osp etc when
leaves fall.(189) 35 58 35.3 ± 25°
92 29 35.4 ± 25°
etc of Osp/Op.possible STD
N15E 3° WNW
very questionable
surface.Osp is very greenish in fresh exposures
weathered tan; worm tubes visible along
road up
Op is gray micrite.

Location HARRIS / LANDISDate 9.10.07Project / Client STATE MAP 07-08E. Smart

(190) 35 58 33.0 + 19'
92 29 37.3 - 19'

in road c/c of Op / Q

9.11.2007

(191) 35 59 21.2 + 80'
92 28 5.9 - 80'

Shepherd of the Ozarks road
LANDIS Quad,

Drove up the road, very few oc
along the road saw a tiny
nub of rock in the road, it was
Op visible to this point the
nub turned out to be

Mst. dark grey - redish here
small exposure on E hillside is
~1' thick; nub is ~6" - 8"

(192) 35 59 39.1 + 77'
92 28 40.3 - 77'

Wow! Op / Msd / Msi; No Q

Op = ~5' exposed

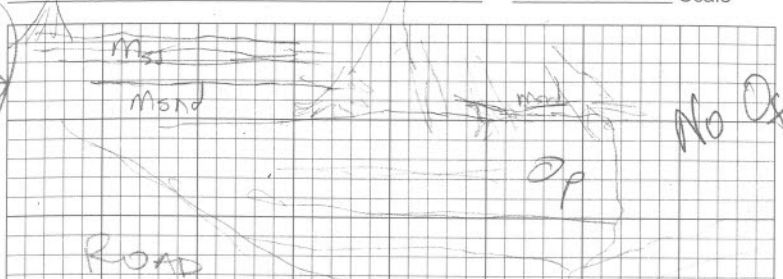
Msn = 6-8"

Mw = 15' est to veg.

Location LANDISDate 9.11.2007Project / Client STATE MAP 07-08E. Smart

Scale

(192)
LANDIS



wp # 26

(193) 35 59 29.8 + 19'
92 28 40.5 - 19'

c/c of Op / Msd / Msi

Msd is var well cemented w/ phos pebbles
porulitic texture; ~2-3" only
can see Op down the hill on bluff
any Op is covered or absent as
in 192. Msi exposed is ~2-3" then veg.

these are all new roads dozed in
the last month or so by Shepherd
of the Ozarks couldn't drive down
b/c of loose debris on road

Beautiful Day.

E. Smart

(194) 35 59 31.9 + 19'
92 28 34.8 -

Op/Msj no shd visible here
possibly ~1-2" of a vfg limy sand or
sandy lime, but no good grains or
phos pebs to determine if its sand
or not...

wpt 28-29?

(195) 35 59 30.6 + 24'
92 28 33.2 -

ctc of Osp and Op.

Op is thin bedded at bottom, massive
on up

Osp is tan-greyish white, well rounded
greenish or weathered w/ worm
tubes.

could be ~15-20' thick from
where we first noticed it, but
haven't seen Oe ctc.

Standing on ~~Op~~ Osp/Op etc. very
thin distinctive l.l.

Scale

(194) ctc on hike up from 125
we encountered a 2-3" oc of
the sample from ~~195~~ 194
it is more distinctively sandy
but there are obvious micritic
lime clasts (Op?) reworked
in some beds. still ~~W~~ Rgr. no
phos pebs

Dip on Op is N35E strike
30 NW

(196) 35 59 59.9 + 17'
92 28 25.7 -

Edge of map. Standing in the
filled in dam (a Shepherd at
the Ozark (Soto) Route are Osp.

wpt 31

(197) 35 59 56.5 + 72'
92 28 24.7 -

Assumed ctc b/t Osp/Op, the ctc
is mostly covered in this loc due
to trail maintenance, power line &
veg. but good Op oc are ~25' above
the pt w/ Osp ~25' below the pt
etc continued along the bluff where
we had lunch below.

Location LANDIS QUAD Date 9.11.07Project / Client STATE MAP 07-08E Smart

(198) 35 59 59.7 $\pm 26'$
 92 28 22.5

- standing on top of Op, butt sits on Op
- great Op bluff / oc $\sim 20'$ high to top dips 60° due SE (into bluff face) N 70 E
6 S SE
- lots of M_g regolith / soils covering tops of ledges, still kind of muddy from rain.
- there is a great trail following the bluff; lots of scripture. $\dot{\cup}$

(199) 36 00 1.9 $\pm 136'$
 92 28 18.8

- photos by R.H. (standing on first Op bed)
- etc bt Op / Op standing just above where we had lunch. great view out!

Op appears to be undulating, as do Op thin beds above. Ops / just off the map. buzzards are coming for us.

Location LANDIS QUAD Date 9.11.07Project / Client STATE MAP 07-08E Smart

Scale

(200) 35 59 54.9 $\pm 30'$
 92 28 26.6

first exposure of M_{ss} up from road (WILDERNESS PAINTRAIL). only saw Op and along ^{main} road.

Op is probably covered

M_{ss} is crinoidal, grey - greenish. some pinkish blebs in the grey crinoidal. Grst. also shaly part is greener. pinkish w/ pyrite.

pass Bachelor / Chattanooga... maybe

(201) 35 59 50.4 $\pm 18'$
 92 28 48.7

Op $\sim 15-20'$ up from creek bed

Op $\sim 20-25'$ to top of bluff

looks like it plunges back toward the west (upstream) etc / creek was covered by veg...

Dips $\sim 35^\circ$

Great swim hole.

Location WANDIS QUAD, SOTO Date 9.11.07Project / Client STATIONARY

wpt 36

(202) 35 59 39.9 ± 22
92 28.42 ± 22

ctc b/t Op / Op, small spring just above the ctc. Hearing the falls down bluff. n to BIG CREEK. GREAT DAY!

We have hiked back over to where we began the day (saw the "HAPPY TRAILS" horse barn), the ctc is just SSW of there. (pass?)

(203) 35 59 52.7 ± 19
92 28 34.7

more Op / Op just adjacent to road.

(ctc) is small one (~1' noticeable) but the road is sand, and there is a good (~10' high) Op oc just SSW of here.

(204) 35 59 59.6 ± 22
92 28 6.0

Op / Op. ctc is just adjacent to the road end in road (white, friable). Op is oc N of road thin bedded, ~20-25' exposed, then veg 25-30 R.H.

Location WANDIS QUADDate 9.11.2007 103

Project / Client _____

Scale _____

(205) 35 59 57.6 ± 17
92 28.11.3

Within time! but we found some Op (front only). Largest 'boulder' is $3 \times 5 \times 2$; some other small pieces beside the road. There is a drainage to the west of the boulder where there is good Op and some Mst. lots of brush + veg in the drainage ctc's could be covered...

even find another smattering on bearing ~ N40E from ~~the~~ pt. (on other side of road)

wpt 40

9.12.2007

(206) 35 59 25.8 ± 35
92 29 58.9

pt marks the contact b/t Op / Mst. ctc is covered by veg + debris but there is an oc of Op ~ 3-5' thick and an oc of Mst ~ 3-5' thick above.

~~207~~ 35 59 28.9 $\pm 17'$
92 29 55.1

etc on upper road where Of and Mst
are visible in the road. $\sim 2'$ exposed
of each.

wpt 42

~~208~~

35 59 35.9 $\pm 28'$
92 29 49.6

Ose/Of in old Mt View Lodge road
near Bratton Creek / trip area

wpt 43

~~209~~

35 59 39.2 $\pm 20'$
92 29 45.3

- hiked up the old Road to Mt. View
cabin, ran in place on the road
so we explored the hill slopes
below. found Of / Of / mst etc
at this point (standing on Of / mst)

Only $\sim 25'$ Of be fine mst exposure
Only $\sim 1'$ of mst visible

there are a bunch of M. pikes all
around. most oc's are covered
in the over. Hard to est thickness

wpt 44

~~208~~

35 59 37.1
92 29 48.4
N80E N10W
N35E N5E

Joints in
Ose

~~210~~

35 59 39.6 $\pm 30'$
92 29 47.4

Near Lower Pond (not on old map)
but followed road around a bit.
the road pretty much follows
the Ose / Of etc. The Pond appears
to be a captured spring.

photos by R. H.

wpt 46

~~211~~

35 59 40.2 $\pm 24'$
92 29 48.4

hiked back down to original road
here in the drainage we see
Ose sitting down into Oe

Oe/Ose: Oe continues on down the
bluff in the drainage $\sim 15'$ high

Location

LANDIS QUAD

Date

9.12.07

Project / Client

STATE MAP 07-08

E. Smart

Wp
47

212 35 59 54.4 + 50' 54.7
92 29 40.0 40.9 ± 32

Bratton Cave; lower portion of
cave is Oe, upper portion of cave is
Osp. "Cave" forms out of an enlarged
solution joint.

Osp rises ~30-40' up before break
in Oe.

? is this former property of SOTO?
signs look similar.

• photos by R. H.

213 36 00 7.2 + 26' Oosp
92 29 54.6

great Oe we in Bratton Creek Bend
Osp etc looks to be on the top of the
ledge or on up 50+ feet.

Location

LANDIS QUAD

Date

9.12.07

Project / Client

STATE MAP 07-08

E. Smart

Scale

214 35 59 5.9 ± 22
92 29 19.5

very major Oe / Msj etc.
in a road, w/ small exposures
of Oe in place. Msj is questioned
in place?

215 35 59 5.4 ± 27
92 29 5.5

last exposure of Oe before

"slobs" of Osp below.

probably a hunting camp here
nobody home.

get st

216 35 59 8.3 ± 18' Oe/Osp
92 29 3.2

first Oe visible in Road Osp just
above

217 35 58 43.2 ± 30'
92 29 23.1

top of Oe. Great bluff below
w/ pos Oe. wrecked cars @ bottom

some Oe float but no Oe around
(only seen in road cut) New
GATE + Key
on road

Location _____ Date _____

Project / Client _____

(218) 35 58 44.6 $\pm 26'$
92 29 32.9

rather spring @ Osp/Op! (Mud Day to Day)
hiked over the gate. Nice "Hunting"
Cabin. Spring house has 200 gal
tanks, insulated, lit. Nice Place.

(219) 35 58 41.3 $\pm 40'$
92 29 29.8

hiked on their trail down below
the bluffs (will try to find cars)

found Oc/Osp

• photos R.H.

Osp cuts down into Oc. There are
thin beds of dark dolomite, large
clasts reworked within, w/which well
rounded sandst below... we red
channel reworkings... Oc Osp look
like they are intermingled

Location LANDIS QMD Date 9.12.07

Project / Client _____

Scale _____

(220) 35 59 4.8 $\pm 23'$
92 28 49.5

Drove up old 4 wheeler road.
Didn't see the Osp/Op etc as
marked on the map. pt marker
the first Op beds exposed
at the turn.

Osp/Op

R.H. found Op in

Road just on up from

the turn (E from turn Op
W from turn Op)

(221) 35 59 8.1 $\pm 20'$
92 28 34.9

Stopped along "it's road" where ~~first~~
MSJ is located/visible in road

Op is all over drainage just west

of here ($\pm 5-10'$ thick) no

Op noticed yet.

(222) 35 59 7.4 $\pm 20'$
92 28 33.6
top of MSJ in quarry ^{MSJ}

~~223~~35 59 6.6 ± 18
92 28 29.4

etc in Road (down from quarry) of
Op / Msj; very good etc but still
no Op or Msnd!

Msj is crinoidal grist, pink-red, v. cool.
oc is ~8' thick; Op exposure is
arenob in road ~3' x 5'.

total Msj exposure along road shows
~20-30' thick; lighter (white-pink)

upt 59 at the upper most unit

~~224~~35 59 4.5 ± 27
92 28 21.3

yeah! Op! exposed as small
knob in road bed w/ a few pieces of
float on down, just near the thuy.
No msnd; Op to Op is ~10'

~~225~~35 58 4.6 ± 32 (18)
92 26 26.6

Down Rd
pt marks area on road where
Msj rocks are exposed. There
is def Mb above, but the
"transition" between the two
is not clear. R. H. collected
some samples. Will evaluate
further

~~Msj~~ Msj is greyish-greenish
w/ rusty spots

above is crinoidal w/ blackish
matrix and rusty spots

total exposure is ~6' thick in the
ditch.

S/D on top of Mb: ~12° NE
N85W

The drainage below here about
6' of Op, before etc is covered

upt 61

~~226~~35 58 3.4 ± 37 etc Op/or
92 26 26.6

OK, we find Op back in ditch below
msj etc @ pt 625

~~227~~ 35 58 11.7 $\pm 18'$
92 26 12.2

west end of quarry. its 200+ yds long
all M_B ; no other fossils
all flat dy_{grax}

wpt 6/3

~~228~~ 35 58 5.8 $\pm 28'$ 6.0 $\pm 15'$
92 26 21.1 21.1

first M_{sj} visible in creek bed. M_B
all the way down from quarry
thickness is $\sim 2-3'$; M_{sd} below
then O_f .

 $M_{sj} \sim 2-3'$

NS strike
4° E dip

 $M_{sd} \sim 8-10'$ $O_f \sim$

~~229~~ 35 57 59.8 $\pm 28'$
92 26 27.2

got ticks, ran away
got caught by the
landowner. nice
lady!
told us about Eva
Pimbertos

first O_{sp} in creek; no good O_{sp}
anywhere near here. covered by O_{al}
 O_{sp} N55W 12° NE

~~229 contd~~

Joints

N80 E N32 E

wpt 6/5 N10 W

~~230~~ 35 57 49.6 $\pm 18'$
92 26 41.6

first O_e in creek. looks like its
"coming up" O_{al} w/ O_{sp} bluffs down
to here. $\sim 10-15'$ of O_{sp} above the etc

Joints

N55 E N40 W

N80 E

S/D

N50W 12° NE

~~231~~ →

(231) 35 57 45.5 + 17'
92 26 5.9 -

M_B Quarry on the side of the road
~80-100 long by 20 yds wide

previous (tick) land owner told us about
mine, brother didn't get paid

(232) 35 57 21.3 + 27'
92 25 9.9 -

top of M_B. M_m is visible in
road ditch ~15' thick, 60 yds up the
road. M_m is

(233) 35 57 19.6 + 48' 19.6 + 9'
92 25 5.9 - 6.0 - 9'

top of M_m etc w/ M_{BV}
is redish tan-buff but w/ gr

(234) 35 56 19.6 + 21' 12:25 pm
92 26 57.1 -

long creek. walked upstream
to this point where O_{sp} rocks
outcrop. etc w/ O_p is covered
by much Qal to here.

only little oc ~3-5' thick
w/ watercross and some flowing
water. doesn't appear to be dipping
N30W 2° NE (hard to tell) much

(235) 35 56 29.0 + 15'
92 26 22.9 -

long Creek Road (Coed # 64)

Stopped to wade in long creek
pt marks area where O_p
rocks line the creek bed. Surround
oc is under water
by Qal

pink M-C xtl some
crinoids

Location LANDIS QUAD Date 9.17.07Project / Client STATEMAP 07-08ESmart

(236) 35 56 30.6 $\pm 16'$
92 26 18.6

hiked upstream from 235, found some Op lining creek bed ($\sim 5'$ thick) w/ Mst above.

Op/Mst $Op/Msd/Mst$

Msd is $\sim 4-6''$ thick whitish-tan w/ phosphate pebbles and grains

Mst is greyish-pink w/ iron-pink rusties and high Cr crinoids (pale-grainstone)

there is a weird cow pond/gravel mine here. dug out surrounded by electric fence.

spearmint on the ground

(237) 35 56 22.8 $\pm 16'$ N15W 12'E
92 26 33.9

walked back downstream to find Op etc.
PT marks $\sim 5-10'$ thick Op of Op
 Op photos by RTH; right next to they #4

Location LANDIS QUAD Date 9.17.07Project / Client STATEMAP 07-08ESmart

Scale

(238) 35 56 24.6 $\pm 22'$
92 26 35.8

Op comes up (undulating) from creek just ~~west~~ westerly from here. Then dips back down (following the undulation) and is in etc w/ Op at the point.

at the point Op comes down to cover Op (slumping, etc) but we followed the etc one to here.

- where Op comes up, there are many bundles of deformation bands. photos by RTH. many are offset!
 Op is $\sim 15-20'$ thick

N55W N75E N55E
mostly sine $\rightarrow$

(239) 35 56 23.8 $\pm 27'$
92 26 39.3

Standing at top of Op etc w/ Op at the top of the fold described in 238. (undulations)

def bands also seen in Op as collected by RTH

(239 contd)

looks like Op plunges
right back into creek
not 25-30' from the pond.

wpt 7

(240)

35 56 21.7 + 20'
92 26 34.9 - 20'

first Op exposed on S side
of road E of old house.

Op exposed is a small knob in
the bank of the road. Old house
is built on Op dome! Op
rx were dipping to West

Op rx are dipping?

N30W 16 NE

(241)

35 56 17.5 + 30' (15')
92 26 31.5 - 30' (15')

Small knobs on small roadside
ditch one taken to be Op

grey-pinkish m-c wake-pedertone
(darker pink ~ 20' yds
up the road w/ clay
as seen in pt #256)

etc w/ Mss is

(242)

35 56 12.3 + 15'
92 26 30.7 - 15'

etc of Op w/ Mss

Mss is dark grey, red bleb w/
crinoids, minimal rust.

Wow! thick Op. Some lighter
beds of the Op (whiteish) may be

Ok, but are not f-m xtl; instead
one m. coarse xtl; some brachs
and crinoids observed.

- some points of this Op or really
look similar to Sbras. - stylolitic
dark pink, w/ calcite veins + vugs
and even has 'clay' lenses...
also it would be an awfully
thick Op ... maybe it is Sil...

wpt 10

(243)

35 55 59.2 + 30'
92 27 29.5 - 30'

Tur Key Creek Rd; just S of house
etc in road b/t Op and Op. Op is 20'
strikes toward the creek. thick

R.H. found darker that looks just like

Silicate

243 would

However,
bigger pieces of float ~~etc~~
look like across of Op and Mst!
weird assemblage. grey-pink f-m xtl

waterstone iron-pyrite
sample ← blebs; clay lenses

244

35 55 55.7 + 16'
92 27 20.0 - 16'

opponent etc of Op / Mst
etc is mostly covered by grass
bit of rocks as below (w/ bluff
on turkey creek below) and
Mst esq. rocks as on hill slope
above.

Mst is non classic grey-pink
(pink blebs) w/ low chn. v. d.
fine med xtl.

245

35 55 52.0 + 22'
92 27 17.1 - 22'

back to Op. Op was on ~5-10'
thick above the ~~to~~ point, back
down the road. Mst really be
a small mst occ.

246

35 55 37.9 + 16'
92 26 55.6 - 16'

still searching for top of column.
pt makes assumed etc b/t
Op / Op. Op not line turkey
creek below Op rocks visible
in hillside

9.18.2007

up to 4

247

35 55 49.8 + 25'
92 33 43.6 - 25'

Davis Creek Road Drive on
Harriet Quad Looking for
Mbr / Fayetteville etc.

On the top of the hill. Highest
OC is Mbr

f-m or tan-buff, iron stained
etc. calcite; med well sub round-sub ang
mod cement

Location Harnett Quad, Davis Creek Date 9.18.07

Project / Client _____

wpt 15

248

35 55 48.5 $\pm 16'$
92 33 40.6

Limestone (w/akestone) ~~at the below~~
The Batesville. Oa's visible in ditch
along side road

grey-tan micritic - f/m xtl, few
fossils. some iron pyrite ($< 1\%$)
Galc. replaced slight petroliferous odor
~~possibly the Moore field?~~

Some other area beds are crinoidal and
cherty. so assessment is:

Mb = light grey-whiteish fm xtl
w/ cherty beds is common.

Mm = grey-tan micritic - fine
w/akestone. ~~is present~~

point taken @ Mm w/ Mb below
(walking down the hill.)



249

35 55 35.4 $\pm 19'$
92 33 45.4

Quarry in MB: point for Mike

Location Harnett QuadDate 9.18.07

Project / Client _____

Scale _____

wpt 17

250

35 55 53.3 $\pm 30'$
92 32 4.8

Hiking in Davis Creek
pt marks etc b/t Msj / Mb

Msj is dark grey w/ some pinkish
blebs. crinoidal (palestone)

Outcrops right at the water level /
extends down stream ~ 30-40 yds

Mb bluff above is slightly covered
~ 20-25' high to top.

wpt 18

251

35 56 1.7 $\pm 25'$
92 32 2.6

Msj / Of etc; No msnd visible

Apone only exposed ~ 2-4' at
the pt. but there is a ~ 10'
thick oc of Of at the creek.

wpt 19

252

35 86 7.4 $\pm 17'$
92 31 53.4

Op / Of

pseudost NW SW
SOME dip

Small ~ 1-2' oc of Op at creek bed /
(grave of trees and dry hole) Of boulders
above.

Location HARRIET AND DAVIS CR Date 9.18.07
Project / Client STATE MAP 07 OR

(258) cont'd

N65W N10E N80W

took some joints on a nice, flat
of Op just a short way down

wpt 20 from the pt.

(259) 35 56 12.3 $\pm 19'$
92 31 46.9

Op/Of ctc up on hillside, in
The Road.

wpt 21

(260) 35 56 9.6 $\pm 19'$
92 31 47.7

Upper most of exposed in the road.
Mss covered before mps is everywhere

(261) 35 56 15.2 $\pm 25'$
92 31 44.6

another Op/Of ctc @
creek level. Of continues
to dip down to creek level

N40E
70SE

There is a ~15' oc down str from

wpt 23 here. Undulations

(262) 35 56 13.1 $\pm 18'$
92 31 23.1

Op/Of @ creek lvl. Op = -3-5'

N5W
50W

Location DAVIS CREEK HARRIET Q Date 9.18.07
Project / Client _____

Scale _____

wpt 24

(263) 35 56 15.7 $\pm 28'$ (13')
92 31 18.0

Op emerges as a reentrant
here below Osp. Grey sandy
dolostones w/ some wavy beds
(stromatolites?) exposure continues
downstream as far as I can
see (~50 yds then bend)

one conglomeratic (sandy Pbls) lense
(~1-2' thick) deformation bands
throughout. Osp bluff above is
~20-25' to visible top. good bluff

wpt

(264) 35 56 10.9 $\pm 22'$
92 31 18.5

climbed up on hill behind/adj to
Osp bluff in bend. pt marks the
ctc 6 ft Op/Of. lots of talus
on the climb up covers most Op oc.
Op is at least 15-20' thick.
Then a more massive bluff face
rises ~10-15'. could be more of
could be mss/mg?

Location HARRIS + 0 Mears Crk Date 9.18.07

Project / Client _____

wpt 26

~~(259)~~ 35 55 47.3 $\pm 30'$
92 31 15.5

standing on small bed of Msnd
(~1' thick) Mst outcrops below.
small bed of (poss) Statedy above
(~12-14" thick) then Of
Of / Sc / Msnd / Mst

bed b/t Msnd and Of is grey micritic -
w/ red blebs, some clay streaks through.

N50W 150NE JOINTS
N50E
N62E
N/S

wpt 27

~~(260)~~ 35 55 31.3 $\pm 10'$
92 31 43.8

Back to Mst. small bed
of Msnd below. Mst is about
3-4" thick (some beds are underwater)

Mb is above. Snd maybe underwater.
Mst = grey mudsupported crinoidal w/ some
pyrite; w/ red blebs

there is a well house here w/ Mst / Mb

Location MEER'S CRK, HARRIS Date 9.18.07

Project / Client _____

Scale _____

~~(261)~~ 35 55 17.5 $\pm 22'$
92 31 48.8

ended on hike up Meers Crk.

wpt 29 Mb to this point.

~~(262)~~ 35 55 44.7 $\pm 34'$
92 31 25.9

Road side pit/quarry; apparently
in Mb. Its too grainy to (succinifer)
to really tell.

wpt 30

~~(263)~~ 35 59 6.8 $\pm 15'$
92 35 34.2

Driving down old road to Dry Prong Creek
saw Of on road (small nub) and some
down hillside into drainage. No Mst visible
nearby. Covered by Mg reg. and veg. Assumed
top of Of, but covered. Some Of is brownish.

~~(264)~~ 35 58 58.8 $\pm 18'$
92 35 28.7

top of Mst. pt marks c/c w/ Mb.
total Mst exposed is ~5'

Mst is white w/ pink blebs; crinoidal w/
iron pyrite stain. White Mb chert above.

wpt 31

~~(265)~~ 35 58 50.9 $\pm 34'$
92 35 38.7

Drive up to S of Dry Prong. pt marks the
c/c of Msnd and Mst. Mst is deep black red w/
iron pyrite stain. Of comes up a creek rocks the
way small trickle of water

wpt 34

(266) 35 58 52.1 ± 22-
92 35 34.3 ± 22-

Hiking down dry PRONGS creek. Hiked
thru of at pt 265, found top of
Op. Pt marks Op/Of etc in creek
small amt of Qal b/t two beds (~20')

wpt 35 Op has stylolites

(267) 35 58 58.4 ± 22-
92 35 24.3

DRY
Osp/Op in PRONG CREEK. wte little
waterfall over Osp beds!

wpt 36

(268) 35 59 46.8 ± 24
92 35 20.0 - 24

good
indian
shell
Oe/Osp in creek; sandy dolostone/dolo
Oe or is a small nub (~1-2') on the
west(?) side of creek. not really
apparent on other side at the point.

(269) 35 59 13.0 ± 22-
92 35 18.2 - 22-

Oe/Osp in small over hang ~15' up from
creek bed. Osp visible on hillslope
opposite of pt.

great stromatolites on upper surface
of Oe. thin bedded, wavy, sandy.

Dr. Crossing/intersecting joints + def bands.
stress is apparent
vertical soln in sp N 25 E N 35 W → ~60°/30°

wpt 38

(270) 35 59 9.3 ± 22-
92 35 22.8 ± 22-

top of Osp w/ 1" Op beds (knobs in road)
Osp must be extr. thick! Green friable
snds seen on the way up. Hiking up the
old road (presume it's the one on the old top)
Mc is visible only in the road. ~~covered~~ w/ some oc
hillside. (~10' thick)

wpt 39

(271) 35 59 7.8 ± 16' Op dips 15° E/Wstr
92 35 24.7 - 16'

Hiked just ~20-30 yds up the road
to find the first Of knob in the road
pt stands b/t last Op bed and first Of
some of also visible (rounded boulders) on
hillside (~15' up)

(272)

35 59 9.3 ± 16
92 35 23.9 ± 16
hiked up to where R.H. took S/D.
there was another Op/Op etc up
on the hillside!

wpt 41

(273) 35 58 52.7 ± 22-
92 35 38.4

top bed of Mss observed in drainage
(back @ Jade). Bottom of Mss w/ M and
p # 265. Note Mss thickness

wpt 42

(274) 35 59 20.6 ± 35' (20°)
92 35 18.0

Drove back down to old Kimball Creek
still on Dry Prong. pt marks Oe/Op etc
similar to pt # 269 stromatolites dark chert
etc etc
Creek level in 50-60 yds down st.

Project / Client _____

not
43

(275) 35 59 35.8 ± 25
92 35 16.8 = 25

not
44

Hiked up some branch... 220' up Run creek
pt marks O_e / O_{sp}
(276) 35 59 43.8 ± 34
92 35 32.0 = 34

Hiking up Kimball Ck. following O_{sp} / O_e
etc. pt marks O_e / O_{sp} etc 25' up
from creek bed. O_e ~ 4" thick from
pt # to etc w/ O_{sp} (O_{sp} ~ 10" to top)
really beautiful down here
flowing creek, steps of O_e
 O_e ...

dip on O_{sp} N55W 80SW

(277) 35 59 45.0 ± 21
92 35 43.0 = 21

Hiked as far as we could go. ~15' high
waterfall over O_{sp} / O_e etc. WAY
COOL. Bluffs around here ~ 10-15' O_{sp}
w/ 5-8' O_e visible. Looks like
it might dip to SW...

O_{sp} has
beaut
thin
bedded
green
sand

great over bank where channel
used to flow. collapse cut it off
"travertine natural bridge"

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seep 132

Scale

(278) 36.00 00.0 ± 10
92 30 37.9 = 10

Just drove on to the map area. Pt marks
the location of O_e beds in creek

(279) 36.00 00.0 ± 10
92 30 41.0 = 10

Old Quarry in the Ordovician. Pretty
crain up but sections from Miss. chert
 O_e are exposed on face. O_{sp} boulders
around

OK, Reassess bottom of Quarry in O_e 250'

O_{sp} 8-10' (pinches out to E) not really
undulating

O_e ~ 20'

O_e ~ 8-10'

• photos by R.H.

O_{sp} ~ 8' (small ~ 10" th of Miss.)

pinkish texture w/
phosphate pebbles

What we are taking to be O_{sp} bed is
thin (2-5-8" th) not classic O_{sp} bed
V far, well-mad well cemented, less

quite arenitic... some blackish coloring
(speckles/blotches) possibly organic or
opaque... ?? some iron staining;
Calcareous (mm-few cm th) calcareous iron pink
blebs, larger (4" x 18") faces of calcite
on exposed bluff edges. Very different
but sections seen on road in are more classic

not
48

in nature w/ wavy tubes in spots. also
fits in strat. section sequence.

(280) 36.00 6.9 ± 44 (24)
92 30 29.7 = 44

Back up Bee Hollow Rd. O_e / O_{sp} etc (section 15
similar to that in quarry.

wpt 49

(278) 35 59 59.1 $\pm$ 24-
92 30 36.7 $\pm$ 24-

Osp in creek. have to edit all previous finds of Oe/Osp in quarry!!! makes for a weird sandy shale bed in Op. Very classic dsp here. Bottom of Quarry is dsp just covered up. editing from previous 278, b/c we were so close to the etc.

(281) 35 59 50.7 $\pm$ 19-
92 30 27.4

Op/Osp w/spring! AGAIN

(282) 35 59 52.7 $\pm$ 25-
92 30 19.9

walking through roads on old, trashy, stinky homestead. Hiked up to Mst/Mo missed Op, found sandy/shaly Op along the way up

(283) nearby (~3' above) is top of Op, no Op around, and not much ran for it anyway. small bed of Mnd (detrital w/ black str.) Snd is white (cemented); we shared 15. maroon (crumble) lots of mottled, pinkish brown Phos pebs

wpt 50

(283) 35 59 56.5 $\pm$ 22-
92 30 21.4

Op/Mnd/Mst NO Op! HA!
base of Mst is grey-pink conoidal there is an old pit above here w/ dark shaly Mst.

(284) 35 59 50.1 $\pm$ 20-
92 30 26.4

Oe/Osp at creek level!

wpt 1

(285) 35 52 49.3 $\pm$ 35-
92 37 23.3

on south mountain

Hiked up "Kelley" Creek to find the Mp etc w/ Mr. Saw several fossiliferous (greenstone/biolite) beds in the MF. First definitive Mp bed is at this point! All others were interbedded w/ Mp shales + micrites

(286) 35 52 50.1 $\pm$ 19-
92 37 25.9

pt marks etc b/t Mp/Pch green yellowish / redish brown sandst.

Pch det as boulders all along the top of the hill, but there are no good dc's also appears to dip to SE but not any bed in place...

Location MARSHALL Q. South Mt Date 9.25.07
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(286)
contd

N85E NSE Joints in MF

35 52 39.3 ± 21'
92 37 17.1

Anomalous bed, apparently in MF

almost a fiss. Hg/asm Extremely fossiliferous, bioclast/granston bed (another bedic on upstream almost equivalent in comp and size)

~18" in th; laminated (wavy lam.) w/

up 4 dark sh micrite below. small shaly sand in creek bed.

(288) 35 52 27.9 ± 23'
92 37 11.3

Near Edge of Map (MARSHALL). MF lines creek bed.

5° NNE N75W - 80° NNE

up 5 Joints N60E, N25E, N80E

(291) 35 52 37.7 ± 17'
92 36 52.7

leaving South Mt. Road at shows etc b/t MP / Pch

up 6

(290) 35 59 16.6 ± 42'
92 33 58.7

OLD MILL SPRING RD. at pt; Qf / Mst (no sand)
Qf all the way down to the road

Location MARSHALL Q. dom. W. Sp. Date 9.26.07
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Scale _____

(290 contd)

OC @ pt is ~ 4' thick thin beds (one bed of white w. m. xtl); slope down broad. small cave + spring below, at road.

(291)

35 59 18.7 ± 45'
92 33 58.2

pt marks etc of Qp / Qf on hillside couldn't see the etc in the road. small stream follows the road.

up 5

(292)

35 59 23.2 ± 21'
92 33 57.9

Spring @ Qsp / Qp etc (pt taken in rd) Very pretty, travertine falls @ spring. Same Qsp etc. One are ~ 10-15' thick massive beds R.F.

photos by RH SVD taken on Qsp etc on the opposite side of drainage. N80E N70W 4° N, 10° SW road ~ 15' high even looks like a dome surface.

(293)

35 59 32.8 ± 19'
92 34 2.4

1/2 Qsp

1/2 Qe

Nice ladder down the Qe / Qsp etc. Qsp thickness ~ 15' / wormy stp w/ thin - thick beds. A dolomite below.

photos by RH. Nice trail from ladder to water fall. SSS @ water fall 25' below etc is stromatolite

(293 cont'd)

NSE N65E

wpt 10

(294)

35 59 27.7 $\pm 30'$

92 34 10.7

250 yds down from where Oe/Osp
crosses the creek bed. Standing on
"talus" slope where c/c meets
slope. Bluffs here are ~ ~~15~~ 20'

wpt 11

28' of Oe then ~10' of Osp

(295)

35 59 12.3 $\pm 17'$

92 34 17.8

old

Found a new road out on the M. H. Springs
fork. pt marks c/c of Osp/Oe
have one knob of Osp in road (w/
som otcp in creek below; thin
bedded Op above, visible also
at same lvl on opposite hill slope.

(296)

35 59 1.4 $\pm 21'$

92 34 15.6

hiked up old road (hoping for Op) but
no c/c's visible. Mg rubble all around
us. Thunder is closer w/ darker clouds
now