

Wednesday
May 29, 1957
Partly cloudy

Notes by Glick (working alone)

Drove from Jasper to Searcy, Ark.
Took Walnut road north to Pinyon Creek

Junction Walnut road & Pinyon Creek
reached @ 10:30 am. (Road rough but OK)

Elevation @ Ford is 1200 Feet (from
1:250,000 Russellville map)

Rocks @ Ford dip 16° S. (Atoka P.P.)
Fine to medium-grained sandstone
(non-limy) and siltstone. All is
platy to thin bedded.

Boulders with quartzite pebbles
present in stream

6' of terrace w/ boulders (ss) along
stream

Upstream $\frac{1}{4}$ mile no good
cliffs.

Downstream $\frac{1}{2}$ mi - cliff on
south side. 60' exposed - upper
half mostly massive ss, lower
half mostly black shale with
siltstone and sandstone beds.
Normal fault down to SW
well exposed. Displacement?
Probably not much.

Wednesday Afternoon
May 29
Rain

Parker Ridge Road south of Deer Ark

1220' Basal Atoka ss is 60-100'
thick and forms high 50' tall bluff
Underlain by siltstone. Lower
part of Atoka is coarse-grained ss
with white quartzite pebbles. Upper
part of cliff is slightly finer
grained

990' 3'± X-bedded ls. Trilobite

890' On Big piny 150 yd downstream
from ford $\frac{1}{2}$ on south side
30' silty shale under 30'
massive ss or ls - didn't
get over to it to check
This is ~~2~~ 3 miles upstream
from Hurricane Creek mouth.

Thursday Morning
May 30, 1957
Partly cloudy
Glick alone

Traveled from Jasper toward
Boxley.

9:10 At Low gap School road
along roadcut to East
Sec 33, T 16 N, R 22 W is
fair to good section CH to Atoka
Road & Road-ditches are
best for measuring

11:30 am

About 7 mi S. of Boxley
on mt. in center T 15 N, R 23 W
50' basal Atoka Cliff of
m-c ss (no quartzite pebbles
found but a trace of granules)
Base @ 1700'. Narrow
& other section below not
well exposed along road
To Boone top is less than
400'. @ above 1500'

1:00 pm

Atoka base $1950' \pm 25'$
on State Hwy 21 S. of Massville
CH is thick here and
CH to Atoka = $150' \pm 10'$
PG is ls in part

Thursday
May 30, 1956

1:45 pm Basal Atoka @ 1900' \pm 25'
@ end of road w. of Massville
20' mass in lower ledge
w/ scattered quartzite pebbles
SS looks much thicker across
the Buffalo R.

1/2 mile S. down stream gully
Basal Atoka makes 75' cliff

In this area quartzite pebbles extend
200' + up in Atoka

4:20 pm Deer to Parthenon Road
Atoka base - 1710' \pm 50'

May 31, 1957
Friday
Partly cloudy

10:30 am Collected 3 small pieces
of basal Atoka conglom.
From 20' above Atoka base
in draw on W side of
Mts. in NW Mt. Judea
quadrangle. This draw
probably is slightly
north of Mt. Judea quad.

12:00 Sec 32, T16N, R21W, Harrison
quad.
Good section of CH + PG
in gully to west of rough
road that goes south
from Mt. Sherman - Jasper road
Co. 1.8 mi on rough road
to fork and 0.1 mi on
right branch. Stop in
stream valley and follow
it to basal Atoka cliff.

Prairie-Grove conglomerate
with quartzite pebbles
well developed here

2:00 pm Car @ 2260 on Smith Mt
road + Hwy 7
To East
Atoka base 1850
Some ls in Boyd
Top 30' Boyd covered
Base PG 1650 \pm 25'
Top of PG + base of Boyd
Poor to covered

Further check shows no CH

In next gully north, CH/PG
Contact exposed 1645
30' cliff f-gr yellow sl
limy ss @ base PG
Overlain by pebbly bearing
conglomeratic ls

June 1, 1957
Saturday
Rain

Section 18,
First branch on east side
of Hurricane Creek upstream
from ford

Probable Pitkin top 1270
Definite CH waterfall base 1300
P6 ss - probably base 1430
Top thin bedded ls 1525
(About 75' of this well exposed)
15' bed f-ss @ 1590-1605
Atoka base 1770

Side
gully
to N.

Main gully
Atoka base 1790

Tuesday
June 4, 1957
Cloudy
Notes by Olick

8:15 am

- ① NW NW Sec 29, T16N, R22W
Newton County, Ark

Atoka Base @ 1870' <sup>(1986 85 ft
Topo - R. 1902 7 1/2
Suggests 1920.)</sup>
30' Cliff massive m-gr ss. Less
X-bedded than most Atoka

No good exposures on point

Spring line that may be

P6 base or CH base is 1750
9:40 am (Later check shows this is P6 base)

- ② NW 1/4 SE 1/4 Sec 29, T16N, R22W

In gully between old house on east
and log shed on west (almost
in the gully)

1765: P6/CH contact well exposed
Slope down to 1685 may all
be CH, but base not exposed
Topography indicates 1685 may
be base.

1840 Top of fair to good exposure
of Hole ss & arinoidal ls
Crop is weathered but 95%
exposed. Above this is Bloyd
Shale (R) slope

(2) Continued

- 1890 Base of ^{15'} massive bed of ^{c-gr} ss
↖ (Atoke base ^{1000 yds to E. Cliff 25' high and abundant quartz pebbles})
- 1960 Base of another 15' massive bed of c-gr ss
Slope above contains other ss beds up to 10' + thick

(3) In main gully just W of Low Gap junction

- 1740 8' basal CH ss + 5' of overlying shale well exposed
ss is v f-gr. massive (weathers platy) and does not appear to contain shale partings.
Base not exposed
- 1800 P6 ls, base not exposed

(4) On Road $\frac{1}{8}$ mi (+) SW of Low Gap Junction

- 1805 P6/CH contact well exposed
- 1855 Hale/Bloyd contact well (?) exposed
(Bloyd is mostly shale but very purry exposed)
- 1970 Atoke/Bloyd Base not exposed, but Atoke ss Cliff present

Tuesday
Afternoon June 4, 1957
Notes by Glick

Starting East from Low Gap junction
Re set altimeter to 1800 on
P6/CH contact along road east
of Low Gap Junction.
However, contact is 10' higher
here than SW of junction (on road)

Here local P6 has 2' conglomerate
with quartzite pebbles (see
measured section (Low Gap) for
details. here

(5) About center $5\frac{1}{2}$ sec 34, T16N, R22W
P6/CH contact drops from
1800 @ Low Gap Junction to
1760 here

1810 Top of limestone not exposed
but about 1810+
Cephalopod in about middle broke
when attempt was made to
collect it

18.90 Base of 40' cliff of A to R ss

2:30 pm (6) P6/CH @ 1760 on point
off map in sec 34

2:55 pm ⑦ Gully SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec 34, T16N, R22W,
PG/CH about 1790

3:15 pm ⑧ Gully NW NE sec 34, 16N, 22W

1800 PG/CH contact well exposed
underlying 30' of CH well exposed

Hole is to 1860 - looks like top?
In general, poorly exposed to covered

1920 Atoka base (20' cliff)
10' Bloyd shale & siltstone
exposed under it

3:55 ⑨ Main stream NE $\frac{1}{4}$ SE $\frac{1}{4}$ 34, 16N, 22W.
1730 CH/Pitkin Contact

9' of Basal CH SS exposed
Probably shale above
Basal 3" is conglomeratic w/
mostly clay or red ironstone pebbles
Bedding above is platy to medium
Some "rolls" in central part

1740 upstream - PG? No, CH 30
20' CH exposed above

1800 PG/CH well exposed (?)

1870 1/2 w sh under it

1900 D. Ato Ku

Wednesday
June 5, 1957
Cloudy to Clear
Notes by Glick

8:45

NW $\frac{1}{4}$ sec 32, T16N, R21W

(9) ^{E of section only} ^{W of section} 30' cliff of
55' base 100' may be Barro Atoka

Atoka/Bloyd 1500

Bloyd + PG/CH 1400

CH/Pitkin 1320

see
Measured
Section
"Z"

(10) SW sec 30, 16N 21W

PG/CH 1550 (on upside of fault)

10:25

(11) CH shale in main stream @ 1395'
SE corner sec 19, 16N 21W
Dip $\approx 10^\circ$ N 70° E

Atoka base 1500'

No PG - Bloyd exposed in this stream
(one to east)
Some PG (but not much) in
stream to north

5:00 (12) CH shale exposed on Mt Sherman to
Diamond Care road on SW $\frac{1}{4}$ sec 36
16 N 22W

1620 CH shale - lowest exposure
Dips north into Mt 10°+

1660 PG/CH

PG not too well exposed and appears
to be only 30' thick

1690 Bldg shale and siltstone well
exposed to 1735

(2' thick) - to 4' thick

Top bed is fossiliferous silty ls
(thoroughly leached) abundant brachi

Met Garner (Prof) } Vol 4th
Bill Brant (student) }
at breakfast in Jasper

Thursday
June 6, 1957
Clear
Notes by Glick

8:20 At junction Mt Sherman Road and
Diamond Core road

2162 (Ponca 1/2)
Road 2975 = 2175 (from top)
(Subtract 800' for roading)

9:30 am Stream in SE Sec 25, 16N 22W
1950 Atoke base

1930 top of Bloyd siltstone or shale
Upper bed (1' thick) is in part
limy and fossiliferous siltstone
or very silty limestone
At least 15' of siltstone below.

1890 Base of siltstone exposure
(Dips downstream and
points by about 35' of siltstone
exposed)

2670 Road
1870 Base of additional shale & siltstone
Section still dips slightly downstream

2050
1850 55 in place?

2620
1820 Base 5' exposure siltstone & sh

2530
1750 No additional exposures to north
580 1730 on old road to south 5' CH? exposed

11605

On southern hill

2580

1780 Approximate PG/CH contact - no good exposures

(1A) Redescribed - Road section Mt Sherman - Diamond Cave

Reels 2795

@ 1915

Subtract 830

Elevation reading from level carried in by car - readjusted for this description

2450

830

1620

Approximate CH base - no Pt K is exposed & CH is slumped badly. Probably this rock is slump so is much of this hill slope. Otherwise, CH is much too thick here?

2540

830

1710

Base of CH exposure that seems to be nearly in place. Well exposed, but dips into hill as if it slumped a bit. 10' exposed is shaly siltstone

2580

830

1750

PG (base?) Lower bed (8' thick) is decalcified ss. Weathers as a single rounded bed. Sandy ls or limy ss. 30' higher on hill slope. All rather poorly exposed but PG = 40' + 30' +

2630
830
1800

Blond siltstone (and some shale) exposed
from here on up the road ditch.
Well exposed and probably in place
2' of medium bedded dark gray very
silty limestone w/ shale pebbles

2650
830
1820

Siltstone & shale directly above
and below

2665
830
1835

Top of exposure
Upper 3' to 4' (underlain by siltstone
is very fossiliferous decalcified
siltstone or sandstone. Badly
weathered - may be pre-Atoka
weathering.

2670
830
1840

About ($\pm 10'$) base of Atoka

1915 Top of massive Basal Atoka ss
in road @ sharp turn. High cliff
on point south of road

2575
830
1745

PG/CH contact - No CH exposed

2480
830
1650

Basalt(?) CH ss probably near CH Base
Just above old lay house

2:30 pm

Major SW flowing stream in

~~SE 26~~ 16N, 22W
NE 35

2500

Lowest exposure of CH(?) ting
f-gr ss.

2560

Upper part of continuous exposure
Some quartz granules in a
conglomeratic zone near middle

Although most of this looks
in place, it probably is slump

2635

Siltstone in place below waterfall

2670

Top of waterfall over PG

Some sandstone & much fossiliferous
limestone in cliff below falls

Probably 20' well exposed.

Caprock for falls is f-gr ss

Directly above siltstone (20') is
exposed in stream bed & another
falls

2710

Top of well exposed siltstone

~~2735~~

Base of Atoka well exposed

2735

30' waterfall - 50' + cliff

4:05 pm Starting west into stream
valley in SE 26, 14N, 22W

2800 Atoke base

2710 PG base? 10' ss base with
limestone above

2735 Top of ls & ss -
siltstone above - 5' exposed
ls flat slightly above silt. beds
siltstone 90% exposed to 2770

2770 Base of lindy zone

E. branch {
 sdy ls 4'
 sils 2'
 sdy ls 1' } fossils mostly in
 upper zone

Slightly better exposures and
probably thicker ls in main
stream or left fork

2820 No additional exposures to
here - which probably is
Atoke base - 20' silty, platy
to med bedded ss

Friday June 7, 1957
Clear & warm
Notes by glock

(14)

8:30 am

NE Sec 18 T. 16N, R. 22W

1810

CH/?

1850

Top basal CH ss - well exposed
Upper 10' shale well exposed, lower shale? covered

1878

PG/CH well exposed
about 50' solid exposure ss/lis
Above that to 1940 some
limestone beds & some covered
interval (50% each)

1940

Base first definite exposure
of black shale

2040

Basal Atoka (but perhaps not the
base) well exposed in road cuts
on each side of road. Dip
tends to make this upper 100'
too thick.

1990

Directly above 1940 is top
Base of Atoka \pm 10'

Shale probably makes up this 20'
interval, but it is poorly exposed
to covered. No ls. Flint seen

(15)

NENE Sec 34 16N, 23W

Along old road

1960 Atoka base - poorly exposed

1900 Top exposure of ls - poor
(1910 in road) Pentremites

1790 Approximate base of basal
CH SS - over ?

Almost all a gentle, covered
slope to Atoka. Only trace
of CH in gully + P6 ls on
slope.

Note - all elevations to here slightly low
to correct OK on BM @ 11:20am

1125

(16)

Ridge in SW $\frac{1}{4}$
174
Sec ~~23~~ 16N 23W to ~~sec 26 + 20~~

~~2045~~
~~1945~~ Atoka base + 10'

2015 first ls in road (Pentremites)

1960 ls or ss (weathered & pitted) cliff
extends to at least 1960 behind
old barn. Dip increases thickness
base not exposed, probably near 1960

1900 CH base - 25' ss exposed - shall
slope above

1:30 pm

(7) Starting down road from top of ridge from sec 23 to sec 25
F 1/4 N, R 23 W

1975 Basal Atoke in road

1825 CH[?]? 10' ss exposed

@ tip of ridge, (sec 25) house under construction @ 1820 on CH
Bulldozed area around house shows silty shale. Above house, PG has been blasted (for light line?)
Loc to open large spring in gully

1775 Beneath house is 25' cliff platy to med bedded silty f-gr CH ss.
@ 1775 is basal? conglomerate.
Nothing below exposed

1855 Basal(?) massive ls. large spring here
Very fossiliferous ls including pentamerites

1885 Top exposure ls. All but upper 5' well exposed - No shale exposed above

1920 Base ^{10'} ls bed -
(Under Atoke blocks near light line)
1970 Atoke base

Along NE side of this
ridge P6 is well exposed
in part but ^{underlying} C11 & overlying
Bloyd are covered in almost
all places

4:00 pm

On Hwy 2) NW of Boxley

No ^{good} exposures of Morrow
except upper 10' of Bloyd sh
under Atoki cliff @ 1980,
(Atoki base)

(1)

6-8-57

Location: Hwy. 7, sec. 2-15N-21W,
near center of section, see geol. map
for exact location; section meas.
along Hwy. in several rather slumpy
crops. Thicknesses in any one
crop are probably OK, but over-all
thickness of Pitkin & Cane Hill is
questionable.

- J1 5'6" Sh. dk. gy. to blk. fiss., sub-conch.
fr. in part, otherwise brn. & badly
wea.; ~~5'6" above base is base of a~~
base not exposed,
- J2 4' Sls. or mudstone, dk. gy. fiss. to
med. bd., sdy. throughout, hard,
apparently not limy, more wea.
& more brn. in upper half, upper 1'
of unit contains linguloid impressions
on bd. pl.
- J3 1'6" Ls, lt. to med. gy., no bd. breaks
apparent; matrix is med. gy.
ds. silty ls.; scat. throughout &
almost touching each other are

Jasper Hwy. 7 section

(2)

Innumerable pebbles?, concretions?, or other? of dk-gy, dc, tiny ls., more dense ones contain fracture fillings that resemble septarian fr. fillings; origin, cause, & nature unknown.

J4

6"

Ls., brn-ish-gy, single bed, ool. to finely gran., abndt. macerated crin. & other debris, most of crin. columnals are v. small.

5

6'

Sh. or mudstone, lt. gy. to lt. brn-ish-gy., wea., no apparent bd., 18" above base is a 1" ironstone band, upper half contains abndt. lt. brn-ish-gy. ls. nodules up to 3" dia, mostly smaller; top not exposed south along outcrop

~~Top of slump block; moved up road. Prob. all fitkin so far; no. 1~~

5' away is a 4" brn-ish-gy. Fool. ls. bed, base is 5' above J4, top not exposed.

Top of slump block; moved up road 100 yd.; no specific connection

(3)

Jasper Hwy. 7 section

vertically between J5 & J6

J6 about 1' Congl., brnsh-gy, thin to med. bd., limy, abndt. iron limonite, foss. debris,ool. Pitkin pebbles, upper surface contains many kidney-shaped ironstone concretions

J7 1' Sh., blk., fiss. top slumpy.

3'6" Covered, may have gone from one slump block to another??

J8 4'3" ^{VF gr.} SS., brnsh-gy., thin bd., vy. silty, mic, wea.; 2'7" above base is about 3" of badly wea. lt. gy. sh. overlain by 4" of ironstone bands & an upper bed of 5" of silty VF ss. w/ ironstone lenses & pebbles.

Note - Above J8 appears to be silty sh. w/ ironstone bands - all badly slumped. End of this slump block. Moved up road. J8 & J9 are not connected

J9 9' Sh. dk. gy. to blk., fiss., abndt. ironstone bands to 1" thick.

Jasper Hwy. 7 section

Slump area above J9 prob. contains more of same. Moved up road. J9 & J10 are not connected.

J10 8' 7" Sfts., platy to thin bd; med. gy. to lt. brnsh-gy.; upper 1' of unit is med. bd, harder, & contains more silt-size gtz. grains, prob. is a bench-former.

J11 16' Covered, mostly, 18" of dk-gy. to blk sh. in lower part sampled, contains ironstone concretions

J12 7' Sfts. & sh. interbd; sh. is dk-gy. & fiss. sfts. is platy to thin bd. & brnsh-gy.; unit is prob at least 60% shale.

J13 5' 10" Sfts., platy, med. lt. gy., trace of sh. in thin partings; prob. 20% sh., sh. beds in upper 1' are badly wea. - Pre-Prairie Grove? or water seeping thru basal P.G. ss.

Top of Cane Hill

Jasper Hwy-7 section

J14 6'6" Congl., brn. sh. gy., mass., essentially de-calcified, wea., matrix is silty F-M gr. ss. w/ abndt. clay, ironstone & prob. other pebbles & quartz granules throughout.

J15 9' Ss., brn. sh. gy., mass., M-C gr. & de-calcified in lower 4'±, prob. grades upward to finer gr.; upper 5' is de-calcified & mostly Mgr., wea. to friable mass, little more resistant than lower 4'.

Next outcrop is 100 yd. up road & tied in w/ hand level.

6-10-57

J16 6'9" Ss., heavily ironstained, Fgr., F-M glauc., de-calcified, thick bd., top undulating.

J17 4'11" Ss., dk. gy., VF-Fgr., mass. bd., limy, dk. gy. sh. laminae.

J18 4'8" Ss., dk. gy. to ironstained, Fgr., limy, med. to thick bd., laminae of dk. gy. sh. & slts., ironstone concretions to 1/2", top contact sharp.

Jasper Hwy. 7 section

- J19 4' Interbd. dk. gy. fiss. sh. + med. to dk. gy. thin bd. slts.;
- J20 4' 1" Ss, heavily iron stained, limy, Fgr., qtz pebbles to 1/4", ironstone pebbles to 1/2"
- J21 5' 9" Interbd. dk. gy. sh., heavily ironstained limy Fgr. ss., & slts.; lower 3' poorly exposed
- J22 2' 4" Ss, med. gy., Mgr., ry. limy, stringers of dk. gy. slts. & sh.; has a lense of lt. gy. Fgr. ss. 6" thick.
- 89' 8" Top of outcrop
Hand leveled to base of Atoka
- J23 5' Ss, Mgr, heavily ironstained, qtz pebbles to 1/2" dia., basal ss. of Atoka, base of Atoka lies in upper 3' of 89' 8" covered; approx. 40' of basal ss. above J23

Section continues in back part of this book.
 Note: The Atoka section is fresh & in place.

①

Deer section

6-10-57

Location: Sec 5, R21W.; T13N
Gravel road between Deer and
Limestone, measured from Pitkin
to Atoka Sample D-1 to D57
(Haley and Adkison)

- D1 1' Ls., med. gy., many crin. frags., more
Pitkin ls. below.
- D2 2'4" Sh., dk. gy., has dk. gy. silty sl. limy
concretions up to 2" thick.
- D3 2'4" Ls., dk. gy., apndt. crin frags.
up to 1" dia., grayish-bk. ool.,
petroliferous odor.
- D4 2'8" Ls., med. gy., ds to Fxl., ry. ool.,
ool. are dk. gy. to blk., many crin frags.,
top contact irreg.
Top of Pitkin ls.
- D5 5" Ss., VF gr., badly leached in part,
brachs, crin. frags., small stringer
of dk. gy. crinoidal ls. 2" thick,
thin streaks of carb. ? mat'l.
- D6 3" Ss., VF gr., med. to dk. gy., ry. silty,
- D7 9" Congl., VF-Meand; ool. ls. pebbles
to 2"; pebbles of yel-brn tightly cem.
VF gr. limy ss.; pebbles of ironstone

Deer section

(2)

† sh. to $\frac{1}{2}$ " dia., all one bed

- D8 7" Ss, med gy, VF gr, limy, thin irreg. bd., brach., crin.
- D9 7' 5" Interbd. dk. gy. sh. & med. to dk. gy. slts., fiss. to platy, 80% slts. prob.,
- D10 11" Ls., dk. gy, VF sdy, abnd. crin. frags., one bed.
- D11 5' 9" Sh., dk. gy., fiss., ironstone beds up to 1" thick,
- D12 5' 9" Sh. as below
- D13 7' 10" Sh. as below,
7' 2" Covered, prob interbd. sh. & slts.
- D14 2' 11" Interbd. dk. gy. sh. & med. gy. slts.; some ironstone beds to 1" thick,
- D15 5" Slts., med. gy., sh. pebbles to $\frac{1}{2}$ " limy ironstone concretions up to 2" dia.
- D16 3" Congl., heavily ironstained, pebbles of ironstone to 1", ironstone concretions to 2", VF-F sand, plant

Deer section

(3)

- foss., slts, pebbles to $\frac{1}{4}$ " crin., brach.
- D17 6" Sh., dk. gy., fiss. bd
- D18 1'6" Interbd dk-gy. sh. & med-gy. slts.;
sh. is fiss., slts. is thin bd. &
ripple marked
- D19 5" Ss., v. f. gr., vy. silty, limy, med. bd.,
plant foss., ripple marked
- D20 5'9" Sh., dk. gy., fiss., ironstone beds
to 1"; about 1" above bottom is
a silty ironstone layer containing
pebbles (?) of ironstone.
- D21 5'9" Sh. & ironstone as below.
- D22 7'1" Sh. & ironstone as below
- D23 1'7" Interbd lt. gy. slts. & med-gy. sh.;
slts. is thin bd., ripple marked; sh.
is platy bd.
- D24 6'2" Sh., dk-gy., fiss., ironstone beds up
to 1" thick.
- 43' 3" Covered

Deer section

(4)

- D25 5'9" Interbd. dk-gy. sh. & med. gy. slts., platy bd., prob. 80% sh.
- D26 5'9" Interbd. sh. & slts. as below, 80% sh.
- D27 5'9" Slts. & sh. as below, 50% sh.
- D28 5'9" Slts. & sh. as below, about 2' above base is a 1" bed of ironstone
- D29 5'9" Slts. & sh. as below, no ironstone
- D30 5'9" Slts. & sh. as below, 70% slts.
- D31 5'9" Slts. & sh. as below 70% sh.
- D32 5'9" Slts. & sh. as below, few ironstone beds to 3/4" thick.
- D33 7' Slts. & sh. as below
- CH-165'5" Top of Cane Hill
- D34 10" Ss. med. gy., ironstained, M gr., limy, crin. frags., sh. pebbles 1/2" x 1", granule-size qtz., brachs., grades upward into next unit.

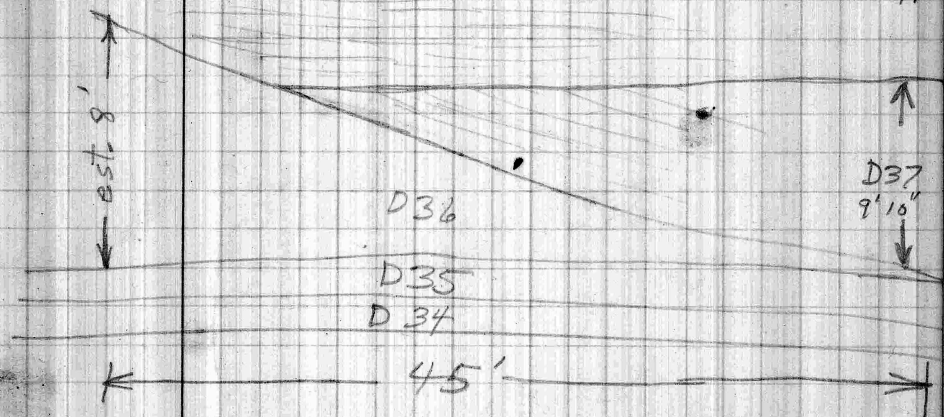
Deer section

(5)

D35 4'5" Ss, Fgr, ironstained, crin. frags, C
 gl. grains, ironstone pebbles
 1/4" x 1/2"

S.

N



D37
 9'10"

D36 0 to 8' Ss, as below, cut out on N. side
 of outcrop by channel-filling.

D37 9'10" Ss, Fgr, sl. limy, ironstained, pinches
 out to S.

D38 4'10" Ss, med. gy., Fgr, ironstained,

Deer section

(6)

- D39 4' Ss, Fgr., ironstained, sh. pebbles to 1/4", tiny
- D40 46' 3" Covered
- D40 5' 9" Ss, Fgr., med. gy. to ironstained, ironstone pebbles 1/4" x 1/2", mass. bd.
- D41 7' 3" Ss, as below.
- 57' 6" Covered, dk. gy. sh. in ditch @ 5 1/2' above base; top of Prairie Grove lies in lower 5' 9" of concealed zone.
- D42 1' 6" Sh., dk. gy., fis. to platy bd., may be uppermost part of Bloyd.
- D43 5' 11" Sls., med. gy.; has 8" bed of dk. gy. sh. 8" above base, 2" layer of F ss. containing slts. & ss. pebbles (up to 1/2") 16" above base; thin stringers of med. gy. sh.

Deer section

⑦

- D44 1' Ss, med. gy., VF gr., silty;
- D45 4'5" slts, med. gy., mass. bd., has some flow structure, limy;
- D46 1'4" slts, med. H. gy., in 3 beds (9", 5", 2"),
- D47 6'2" Interbd. med. gy. slts. & lt. gy. VF ss., ss. & slts. grades together laterally & vertically, limy, dk. gy. sh. pebbles 1/2" x 2",
- D48 4' Ss, H. gy., Fgr., sl. limy, mass. bd.
- D49 4'8" Ss., ironstained, VF-F gr., vy. silty, may have been limy, mass. bd.
- D50 6'8" Ss., VFgr., ironstained, vy. silty, mass. bd.
- D51 8'2" Ss. as below, one bed.
- D52 2'3" Ss., VFgr., silty, ironstained
- D53 5'9" Ss., vy. heavily ironstained, F-M gr., has a banded appearance of once being interbd. limy ss. & sdy. ls.

Deer section

(8)

- D54 12' 6" Badly wea. F-M sdy. zone, has stringers of iron-stained F-M ss.
- D55 5' 9" Sh. med to dk. gy., badly ironstained surfaces, fiss. to platy bd.
- D56. 9' 6" Sh., as below
- 17' 3" Covered, @ about 12' above base is poorly exposed dk. gy. sh. in ditch. Base of Atoka is prob. in upper 3' of covered unit.
- D57 6' + Ss, F-M, lt. gy., gtz pebbles to 1/2", mass. bd., basal part of Atoka. Ss. cliff directly above is at least 60' high.

Pine Ridge section

(1)

6-11-57

305.6 - Total Samples PR1 - PR61

Location: Sec 1, R. 22W., T. 12N. Jutting Johnson County measured in draw about 400' below ford on Pincy creek. Measured from Pincy Creek southward and upward to Atoka base (Haley and Addison).

- PR1 6'9" Interbed. dk. gy. sh. & med. gy. slts.,
327.23 platy to fiss. bd., lower 1' under water.
- PR2 5'9" Sh. & slts. as below, few ironstone
320.58 beds & lenses to 1/2" thick,
- PR3 5'9" Sh. & slts. as below
314.78
- PR4 5'9" Dk. gy. sh., fiss. to platy bd.
308.98
- PR5 6'9" Sh. as below
303.23
- PR6 5'9" Sh., dk. gy. to gyish-blk., fiss. bd.,
296.48 few ironstone concretions 1/2" x 4"
- PR7 2'6" Sh. as below except platy bd., top
290.73 contact sharp.

Top of Cane Hill

Pine Ridge section

(2)

- PR8 5'9" 288.23 Ss, med. gy, Mgr, abndt qtz. pebbles up to 1/4", sh. pebbles to 1", mass. bd.
- PR9 3'7" 282.48 Ss, lt. gy, Mgr, sh. stringers to 3" thick, thick bd.
- PR10 4' 275.90 Ss, lt. gy, VFgr, med. irreg. bd, upper part becomes Fgr.
- PR11 3'2" 274.90 Ss, lt. gy, Mgr, qtz. pebbles to 1/4" dia, Crin. frags, once limy?
- ~~PR12~~ 2' 271.73 Covered
- PR12 1'4" 269.75 Ss, ironstained, VF-Fgr, limy, med. bd.
- PR13 4' 268.40 Ss, lt. gy, Mgr, qtz. pebbles to 1/4", abndt crin., few brach., mass. bd.
- PR14 1'10" 264.40 Ls, lt. gy, F-M sdy, crin., mass. bd.
- PR15 2'3" 262.57 Ss, lt. to med. gy, Mgr, scat. qtz. granules, limy.

PR16 2' 8" LS., med gy, M sdy, abndt. brach. &
260.32 crin. frags,

PR17 5' Ss., Fgr., limy, H. gy., mass. bd.,
257.65

PR18 4' 1" Interbd dk gy. sh. & med gy. ls.; /s. is
252.65 F-M sdy., platy to thick bd., abndt.
crin. frags, 25% sh;

PR19 5' 10" Ss., med gy., Fgr., limy, crin. frags. thin
248.59 to mass. bd.

PR20 12' Covered
242.74

PR20 2' 8" Ss., med to dk gy., VFgr., limy, becomes
230.74 silty & clayey @ top.

PR21 5' 9" Ss., ironstained, VFgr., silty, mass. bd
228.09

PR22 5' 4" Ss. as below, sh. lenses up to 2"
222.57 thick, mass. & X bd.

PR23 6' 4" LS., med. gy., VF-F sdy, abndt. crin.
216.99 frags, brach., thin bd, some VF
gr. ss. streaks up to 3" thick, bryoz.

PR24 Thin to thick bd.

Pine Ridge school

- PR24 2' 4" Sh., dk. gy., fiss. bd., one 1" bed of
210.66 dk. gy. crin. ls. 1" ± below top.
- PR25 2' 2" Ss., med. gy., Fgr., sl. limy,
208.33
- PR26 5' 1" Interbd. dk. gy. fins. sh. & med. gy.
206.18 fiss. To thin bd. slts.; 60% sh.;
- PR27 3' 1" Ss., ironstained, F-M gr., limy, crin. frags.,
201.08 sh. pebbles to 1/2"
- 3' 9" Poorly exposed, contains dk. gy. sh.,
198.00 no sample.
- PR28 6' 5" Ss., lt. gy., Fgr., mass bd., limy,
194.25
- PR29 4' 8" Ss., med. gy., Fgr., limy, thin to
187.83 thick bd.
- PR30 6' 7" Ss., ironstained, Fgr., med. gy., limy,
183.16 thin to thick bd.
- 29' 5" Covered
176.58
- PR31 5' 9" Sh., dk. gy., fiss. bd., ironstained
147.16 surfaces,

Pine Ridge section

- PR32 7'5" Sh., dk. gy., fiss. bd.
141.41
- PR33 2' Sa., med. gy. to ironstained, Fgr.;
silty, limy.
133.89
- PR34 1'4" Sh., dk. gy., fiss. bd., thin stringers &
lenses of med. gy. slts.
131.89
- PR35 2'3" Slts., med. gy., VF sdy. in lower 8";
130.66
- PR36 3'8" Interbd. med. gy. slts. & dk. gy. sh.;
slts. is platy to thick bd., sh. is
fiss. bd.
128.41
- PR37 3'10" Slts. lt. to med. gy.,
124.74
- PR38 12" Ss., VF gr., med. gy., vy. limy., pebbles
of ironstone, slts. & VF ss. up to 1/2"
dia.
120.91
- PR39 5'9" Ss., med. gy., VF gr., limy, mass. bd.
119.74
- PR40 5'9" Ss., ironstained, VF gr., thick to
mass bd.,
113.99
- PR41 1'6" Ss., med. gy., VF gr., limy, med. to
thick bd., thin stringers of dk.
gy. sh. in upper 1'
108.24

Pine Ridge section

(2)

- PR42 4' 4" Sh, dk. gy., fiss. bd, stringers of
106.74 dk. gy. VF limy ss. up to 2" thick.
- PR43 3' 2" Sls., med. gy., med. to thick bd, ripple
102.41 marked
- PR44 5' 9" Ss., med. gy. to ironstained, limy, crin.
99.24 frags, VF gr.
- PR45 7' 4" Ss., med. gy., VF gr., limy, trilobites,
93.49 crin., brach., mass. bd.
- PR46 2' 10" Ls., med. gy., VF xln.; thin laminae
86.16 of VF gr. ss. & dk. gy. sh;
- PR47 4' Ss., VF gr., limy, med. gy.,
83.33
- PR48 5' 9" Sh, dk. gy., thin stringers &
79.33 concretions of med. to dk. gy.
slts., fiss. bd.
- PR49 5' 9" Sh, dk. gy., fiss. bd.
73.58
- PR50 5' 9" Sh as above, ironstained
67.83 surfaces.
- PR51 7' 2" Sh, as below
62.08

(7)

Pine Ridge section

- PR52 5'9"
54.91 Interbd. dk. gy. sh. & med. gy. slts., fiss. to platy bd., 50% sh.
- PR53 5'9"
49.16 Sh. & slts. as below.
- PR54 5'9"
43.41 Sh., dk. gy., fiss. bd.
- PR55 6'6"
37.66 Sh. as below
- Top of Bloyd - base of Atoka
- PR56 11"
31.16 Ss., lt. gy., M. gr.; ss, sh., & ironstone pebbles up to 3" dia.
- PR57 1'8"
30.08 Interbd. dk. gy. sh. & lt. to med. gy. slts.,
- PR58 11'6"
28.75 Ss., lt. gy., v. Fgr., 18" above base is a 3" zone containing slts. & sh. beds up to 1/2" thick, thin to thick bd.
- PR59 5'9"
17.25 Ss., v. lt. gy., Fgr., abnd. M-C grains, scat. qtz pebbles to 1/2" dia., thin to thick bd.
- PR60 5'9"
11.5 Ss. as below,
- PR61 5'9"
5.75 Ss. as below

(7)

Jasper Hwy section (Cont. 6-12-57)

- J24 5' 4" Ss, Mgr, iron stained, scat. qtz, pebbles to 1/4", one bed
- J25 7' 1" Ss, as below, sh. stringers to 1" thick,
- J26 5' Ss, lt. gy., Mgr, sh. stringers to 3" in lower 18", X bd, foreset bd, thin to mass. bd
- J27 4' 2" Ss, lt. gy., VFgr, thin to thick bd, X bd, foreset bd
- J28 5' 4" Ss, lt. gy., VFgr, v. silty, thin to med. bd, ripple marked, thin streaks of carbon? residue, sh. pebbles 1/8" x 1/4", some foreset bd. (Haley took it in the finger-again)
- J29 6' 3" Ss. as below, top sharp
- J30 6' 9" Ss, gyish-wh., Mgr, qtz pebbles to 1/2", one bed
- J31 — Collection of qtz pebbles from J30
- J32 6' 6" Interbd. Ss., lt. gy., & sh., dk. gy.; one 8" bed of ss. @ base is Mgr, rest of ss. is VFgr, & thin to thick bd. w/ sh. pebbles up to 4", carbon? res.

Jasper Hwy. 7 section

(8)

streaks in ss; sh. is fiss. bd. in layers & lenses up to 10" thick; unit 60% ± ss; ss. is ripple marked.

J33 4' 10" Interbd. lt. gy. VF ss, med. gy. VF sh. silty ss, & dk. gy. sh.; ss. is thin to thick bd, ripple marked, & irreg. bd; sh. is fiss. bd. in layers up to 2" thick; 20% ss, 40% silty ss, 40% sh.

J34 7' 2" Interbd. dk. gy. fiss. bd. sh., med. gy. slts., & med. gy. VF dy. slts.; about 33% each; slts. is platy to thin bd. & ripple marked.

J35 6' 5" Interbd. dk. gy. fiss. bd. sh., med. gy. platy to thin bd. slts.; 60% slts., slts. is ripple marked.

J36 5' 4" Interbd. slts. & sh. as above, 70% slts.

J37 5' 4" As below, 70% sh.

J38 7' Interbd. dk. gy. sh. & med. to dk. gy. silty sh., thin to platy irreg. bd.

Jasper Hwy. 7 section

dk. gy. sh.

- J39 2' 1" Interbd. ss, lt. gy., F-Mgr., limy, crin. frags., F-C glauc., qtz pebbles to $\frac{1}{2}$ " sh. & ironstone pebbles to 1", thin to thick bd; sh. is fiss. bd; ss. is in lenses
- J40 1' 4" Ss., lt. gy. to ironstained, Fgr., ironstone & sh. pebbles to $\frac{1}{2}$ ", thin to thick. bd.
- J41 6' 3" Interbd. dk. gy. fiss. bd. sh. & med. gy. fiss. to thin bd. slts; slts. is ripple marked & irreg. bd.; 60% sh.; 13" above base is 4" lense of F-M limy ss.; few 1" lenses of similar ss. scat. thru. unit
- J42 8' Interbd. dk. gy. sh. & med. gy. slts; sh. is fiss. bd., slts. is fiss. to platy bd.; 8" of VF silty med. gy. ss. @ base.
- J43 7' Ss., lt. gy. to ironstained, VF-Fgr., sh. pebbles to $\frac{1}{4}$ ", ironstone pebbles to 1", limy in part, crin. frags., thin to thick irreg. bd., stringers of dk. gy. sh. to $\frac{1}{2}$ " thick.

Jasper Hwy 7 section

(10)

- J44 4'5" Ss, ironstained, Mgr, once limy?,
mass. bd.
- J45 5' Interbd. ss + dk gy. fiss. bd. sh, 60%
ss, few thin stringers of med.
gy. slts.; ss. is lt. gy, Fgr, once
limy?, thin to thick bd; sh.
beds up to 1" thick, ss. is
ripple marked.
- J46 2'3" Ss, F-Mgr, ironstained, one bed
- J47 1'10" Ss, F-Mgr, thin to thick bd, lt. gy.,
has 8" dk. gy. sh. 6" above base
- J48 5'11" Ss, VF-Fgr, lt. gy., once limy?,
thick bd.
- J49 6' Ss, med. gy., VFgr, very silty, thin
irreg. bd, laminae of dk. gy. sh.,
- J50 2'5" Sh., dk. gy., fiss. to thin bd.,
- J51 6' S/lts, clayey, lt. to med. gy.,
lower 4" has many gast. pd., goniatites
pelecys, brachs, has med. gy. Fss.
+ med. gy. slts. nodules up to 1 1/2"
dia., ironstone concretions to 1" dia.,
thin bd.

Jasper Hwy 7 section

- J52 3' 11" Sfts, lt. to med. gy., laminae of dk. gy. sh., ironstone concretions to 1" dia., platy to thin bd., has 5 layer of ironstone concretions @ top.
- J53 3' 6" Sfts, med gy, clayey, bd. obscure, laminae of dk. gy. sh.
- J54 2' 8" Sh, dk. gy., fiss. bd., sl. silty
- J55 2' 3" Ss, VF gr., once limy?, ironstained, gast pds., brachs., one bed.
- J56 8' 11" Sh, dk. gy., fiss. bd., few beds of, silty sl. limy pyritic sh. in top 2"
- J57 2' 2" Sfts, med. gy, argill., bd. obscure
- J58 2' 7" Sh, dk. gy., fiss. bd., limy sfts. nodules up to 2" dia.,
- J59 1' 4" Sfts, argill., med. gy., obscure bd., VF-vc sand in top 4"
- J60 3' 10" Sh, dk. gy., fiss. bd., thin stringers of med. gy. sfts.

- J61 7'5" Interbd. dk. gy. sh. & med. to dk. gy. slts.; sh. is fiss. bd., slts. is platy to thin bd.
- J62 4' Interbd. sh. & F ss.; sh. wea to gyish. wh. & ironstained; ss. is badly wea. & ironstained; sh. may be dk. gy. when fresh.
- J63 — collection of upper 3" of J62 unit made for Glick's gunk study.
- J64 5'9" Ss., heavily ironstained, Fgr, abndt M-C qtz., once limy?, bd. obscure - prob. massive.
- J65 3'4" Ss., VFgr, heavily ironstained, concs ironstone layer 3' above base, prob. mass. bd.
- J66 2'5" Ss. lt. gy. to ironstained, F-Mgr., once limy?, abndt vc to granule size qtz., thin to thick bd.
- J67 4'4" + Ss., Fgr., heavily ironstained, once limy?, abndt M-C qtz., scat. vc to granule-size qtz., thin to thick bd.

Top of section