

East Barber Section

Sec 20 T6N R28W Logan Co.
Measured from Approx loc of
Carter #1 Turner to Mansfield ss.

C&D.

40.25 Covered

11.5 dkgy silty f-m mica sh pl-th bed.

11.5 Intbed dkgy vt ss slts f-m mica
thin bed and m-dkgy v silty
vt ss f-m mica.

161.0 Covered

it mgy vsilty ^{avg.} + mica vt ss. 1/2" shale pbbles

57.5 Covered

.8 m-dkgy v silty vt-m mica vt ss.

885.5 Covered

60.7
422.7

1.0 it-m gy, f mica vt ss. irr bed
Third sand below Mansfield

54.4 Covered

8.6 mgy silty f mica vt ss. mbedd Top of 3rd
ss below Mansfield

Same General section only west of above

73.0 intbed dk slts and dkgy v silty very f ss
ply-th bed irr bed.

silty

- 2.0 mgyt mica vt ss
- 5.75 Covered
- 5.0 mgyt mica vt ss top of 3rd ss below Mansfield sand

Same section as above study more west

- 2209.1
- 17.2 dkgy sl silty sh vt mica pty bdd
- 2191.9
- 34.5 dkgy siltstone mica pty - thin bds ripple mtd. irr bdd
- 2159.4
- 7.75 dkgy v silty mica vt ss. ripple mtd irr bdd. thin-medium bdd.
- 2149.7
- 23.0 Int bdd dkgy siltst and dkgy v silty vt ss. platy - thin siltst m bdd ss.
- 2126.9
- 26.6 Covered
- 2100.1
- 25.9 m-dkgy mica v silty vt ss irr y thin mtd bdd. 4th sand below Mansfield
- 2074.2
- 65.2 Int bdd dkgy siltst and v silty vt ss. v thin - m bdd
- 2009
- 310.5 Covered Top of 3rd sand below Mansfield

11-2-56

Location: sec. 18 - 4N-28W,
Scott Co., Ark.
Petit Jean creek.

Rocks dip 10°S, mea s. corr. for dip

- 2' ~~519.8~~ Med-gy. silty VF ss., med. bd.,
ripple marks.
- 23' ~~521.6~~ Concealed
- 16' ~~442.9~~ Med. gy. silty VF ss., F mic.,
irreg. bd., med. to mass. bd., cross
bd.
- 23' ~~476.9~~ Concealed
- 92' ~~483.9~~ DK. gy. sh., poorly exposed in lower
part, platy to vy. thin bd., thin
ironstone concretions
- 20.5' ~~361.9~~ Interbd. dk. gy. sts. & dk. gy. sh.,
vy. thin bd.,
- 14.6' ~~341.4~~ DK. gy. sh., vy. thin bd., contains
elongate sts. concretions which are
up oriented, concr. are up to 3 long &
 $\frac{1}{2}$ " dia.
- 326.8

12.1
326.0 Interbd. dk. gy. sts. + dk. gy. sh.,
contains elongate sts. concretions
which are unoriented, size 3' long
& $\frac{1}{2}$ " dia.

Note: A series of med. to dk. gy.
sts. lenses arranged in a layer-cake
fashion are present in upper 6' of
14.6' dk. gy. sh. unit on p. 1 and in the
lower 2.8' of unit above. Lenses are
up to 7' long and up to 1' thick; they
are separated by sh. + sty. sh.
up to 3" thick. Plant impressions
are present in sts. lenses.

21.7'
374.7 DK. gy. sh., thin bd., ironstone
concretions, some beds are medium bd.
(claystone)

6.6'
293.0 Vy. H. gy. - F-M ss., blk. sh. pebbles
up to $\frac{1}{2}$ " dia., vy. irreg. bd., thin to
thick bd., ripple marks, F-M mica.

5.286.4 Lt. gy. VF-F ss., dk. gy. sh. pebbles
up to $\frac{1}{2}$ " dia., F-M mica.

76.3'
281.4 Concealed

36.5
205.1

Lt. To med. gy. silty vF ss.,
med. to mass. bd., irreg. bd.,
cross bd., ripple marks.

1' 168.4

Med. gy. vy. silty vy. argill. vF ss.

2' 147.6

Interbd., dk. gy. sh. & med. gy. silty,
platy to thin bd.

4.3'
165.6

Med. gy. vy. silty vF ss., thin
to thick bd., irreg. bd., cross
bd. ripple marks, stringers
of dk. gy. silty sh. up to 4"
thick.

14.6'
160.8

Interbd. med. gy. vy. silty vF ss.
& med. gy. sh. & silty sh., ss. up
to 12" thickness, sh. units up to
1 1/2' in thickness, irreg. bd.,
ripple marks, ss. are vy.
lenticular, abnd. Annularie
in upper 2' ±,

9.7'
146.2

Interbd. med. gy. vy. silty vF ss. &
med. to dk. gy. sl. silty sh., platy
to med. bd., many ripple marks,
flow casts, plant foss. (Annularie
& Calamites), irreg. bd.

136.5

- 6.1' 136.5 Interbd med-gy. vy-silty VFSS., thin to thick bd.; and a med. to dk-gy. sh., platy to thin bd.
- 6.1' 130.4 Med-gy. vy. silty VFSS., mass. bd. to med. bd., base is channel-scour type
- 11.5' 124.4 Med. gy. silty sh., bd. obscure, ironstone concretions near top.
- 5.7' 112.9 Concealed
- 3.8' 101.2 Interbd dk-gy. silty sh. & dk-gy. sts.,
- 2.4' 103.4 Med-gy. sts., contains irreg. shaped concretions (6" x 2" x 2")
- 2' 101.0 DK-gy. sh., thin bd.,
- 5.7' 99.0 Med-gy. vy. silty VFSS., Fmica, thin to mass. bd., irreg. bd.,
- 2' 93.3 Concealed
- 5.7' 91.3 Ss. as below
- 8.6' 85.6 Concealed
- 3.9' 77.0 DK-gy. sh.

- 28.7' 13.1 Concealed
- 13.6' 44.4 DK-gy. sh., vy. thin bd.
- 2.4' 25.8 Med. to dk. gy. argill. sts., platy to thin bd., irreg. bd.
- 5.6' 23.4 Interbd. dk. gy. sh. & med. to dk. gy. sts.,
- 4.3' 17.0 Interbd. dk. gy. sh. (platy to vy. thin bd.) & a med. to dk. gy. argill. sts., sts. is vy. irreg. bd., one 2" bed of sts. at base of unit grades into l. 2' lense, has irreg. shaped silt-iron concretions up to 5" thick.
- 8.5' 13.5 DK-gy. sl. silty sh., thin bd., upper 4.3' poorly exposed
- 5' Lt. gy. VF-F ss., irreg. thin to thick bd.

End of section

Location: sec. 24 - 5N - 29W,
Jennings Mtn. section

- 30' ± No dip
Slumpy dk. gy. sh.
- 3' Med. gy. VF sdy. sts., vy. thin to
thin irreg. bd.
- 0.5' Med. gy. vy. silty VF ss., thin bd.
- 3' Ss. as below, one bed
- 3.1' Concealed, prob. contains sts
- 1.2' Med. gy. VF sdy. sts., vy. thin
bd., irreg. bd., ripple marks
- 5.4' Med. gy. vy. silty VF ss., irreg. bd.,
abndt. ripple marks, thin to med. bd.
- 16.2' Concealed
- 12.7' DK. gy. sh., vy. thin to platy bd.
- 0.2' BLK. carb. sh.
- 0.5' Ironstone concretions

- 0.4' Med. gy. sh., thin bd.
- 0.4' Lt. gy. sts., many plant frags.,
thin irreg. bd.
- 7.7' Med. gy. silty sh.
- 4' Interbd med. gy. silty sh. & lt.
gy. sts., sh. is platy to thin bd.,
sts. is thin to med. bd. & has
plant frags.
- 11.5' Gyish-blk sh., platy bd.
- 0.5' Coal, thick banded, much vit.
- 0.2' Blk. vy. carb. sh. w/ coal streaks.
- 1.4' Blk. sh.,
- 5' Med. gy. silty sh., VF mic., thin bd.
- 4' Interbd med. gy. silty sh. & argill
VF sdy. sts., sh. is platy to
thin bd., sts. is thin to med. bd.
Top of Atoka fm.
- 4.2' Lt. gy. vy. silty VF ss., plant frags.,
thin to med. bd., gyish-wh. color. on breaks.
Hartshorn ss.

6' +

Lt. gy. silty VFSS, FM mica, thin to
mass. bd., gy:wh. color on break,
ripple marks.

Top of section

Location: Bethel cemetery section,
Little Petit Jean ck.
sec. 12-4N-31W, Sebastian Co., Ark.

10.8' ^{130.3} Lt. gy. VF ss., ironstone concretions,
corr. for dip F+M mic., cross bd., irreg. bd.

Dip 22° S.

301.9, 618.5

~~806~~

not corr. for
dip

Concealed

.7, 314.4

2

DK. gy. sh.

NCfd

307.9 315.9

~~823~~

Concealed

NCfd

8'

corr. for dip

Med. to dk. gy. v. silty VF mic. VF ss.,
irreg. bd., thick bd.

Ministick section
Taken along Coop Creek and North
section on the road of S 1, R 3W, T 4N

UP

↓
Ft. 1b

152.6
20 20.0

Man 1-2 shale weathered to gray tan
fissile to thin bedded,
becomes silty near the top.

132.6
51 11.0

Man 3-7 siltstone weathered to gray tan
fissile to thin bedded,
occasional sandy layers to
about 1" thick. Weathers
in a concoidal pattern
in the ditch.

681.0 803

Man 8 shale weathered to gray tan
fissile to thin bedded, jointed
to a marked extent. blk
unweathered.

672.3 91.2

Man 9 siltstone weathered to gray tan
fissile to thin bed. Sandy
2' x 8' from base 1" sand bed
in a group about 8-10" thick

662.2 109.2

Man 10 sandstone lt to med gray v. to f.
gr thin to thick bedded
plant frags thin beds tend
to be silty

Man 11

661.5
107 3

113.4

113.6 3

4 5

118 8

Man 12

sandstone medgy thin to

thick bed the thin beds tend to be silty while the purer bed become more sandy and cleaner xbd abundant ripple marks trending N 60 W

639 117.1

3 6

119 2

Shale blk silty streak (Hgy) up to 1/4" flint & imprints in upper 6"

638 130.1

13 0

130 2

Platy to thin bedded Shale fissile to thin bedded black slightly silty in some layers several 1" or 2" sand beds between 9" or 17"

622 139.9

9 10

129 2

Siltstone and vgr sandstone fissile to thin bed med to dkgy

612

Mansfield section - Part 2.
starts below lake dam.

Rocks dip 17° N.

- 612.7
0.5' 140.4 Med. gy. v. fsdy. sts., thin bd.
Meas. corr. for dip
- 612.2
21.4' 161.4 Med. to dk. gy. sts. interbd. w/
dk. gy. silty sh., v. thin to thin bd.,
F mica, upper 5' ripple marked.
- 90⁰ 4' 166.1 Lt. gy. v. fs., irreg. bd., thin to thick
bd., ripple marks.
- 86.1 51.7' 217.8 Concealed
- 53.4 223.4
~~267~~ 44.2 Concealed
not corr. for dip
- 311⁰ 23' 464.2 DK. gy. sh., platy to v. thin bd.
corr. for dip
- ~~200~~ 18.3
~~340~~ 582.5 Concealed
ncfd
- 191 51.7' 634.2 DK. gy. silty sh., platy to v. thin bd.
corr. for dip
- 118.8 28.7' 662.9 Concealed
cfd
- 89.3 57.5' 720.4 Sh. as below
cfd
- ← Dip 20° N

31.017, ¹3' ³1327 Interbd. med. gy. sts. & VF sdy. sts.,
poorly exposed, platy to thin bd.

14.511, ¹5' ²749 Concealed

3 3' ²752 Med. gy. vy. silty VFSS, mica

Location: Barber section,
SW sec. 1 - 5N - 29W, Logan Co., Ark.

Rocks dip $13^{\circ} S$.

Meas. corr. for dip

- 76' ^{260.} DK-gy-silty sh., platy to thin bd.
- 42.3' ^{184.6} Interbd. dk-gy-silty sh. & dk-gy-
argill-sts., irreg. bd., platy to
thin bd.
- 74.8' ^{142.3} DK-gy-ry-silty sh., platy to thin bd.,
ripple marks.
- 4' ^{69.5} DK-gy-sts., irreg. bd., poorly exposed.
- 13.5' ^{63.5} Concealed
- 10.7' ^{51.0} Med to dk-gy, ry-silty VF ss.,
F-M mic., thin to med. bd., irreg
bd.
- 25' ^{40.3} Concealed
- 15.3' ³ Med. gy. VF ss., thin to mass. bd.
- prob. top of
ss. End of section @ W. end of RR bridge.

Location: Bed of Washburn creek, sec. 26 & 35 - T 6 N - 29 W, Sebastian Co.

Rocks dip 15° S + strike S 75° W
Means. corr. for dip.

64' 919.1

Med. to dk. gy. sts., F-M mica, thin to med. bd.

11.7' 919.7

concealed

44.4' 920.0

Med. gy. v. silty. F ss., F-M mica, thin to mass. bd.

Crossed road to SW.

6.7' 921.0

Ss. as below, irreg. bd.

9' 921.9

Lt. to med. gy. F ss., med. to thick bd.

10.9' 922.9

concealed

3.8' 926.2

Dk. gy. interbd. silty sh. & sts., platy to thin bd.

826.4

- 38.9 ~~856H~~ ^{sl.} med. gy. - VF sdy. sts., F-M mica,
platy to med. bd.
- 6.5 ~~481S~~ Med. gy. silty F mic. VF ss., med. bd.,
48. ~~181.2~~ Med. gy. sts., irreg. bd., platy to
thin bd., F mica, contains thin (< 2")
beds of dk. gy. to blk. sh.
35. ~~133.0~~ Interbd. platy to thin bd. med. gy.
sts. and med. gy. silty VF ss.,
which is thin bd., thin streaks
of coal in ss.; F-M mica in both.
- 17.2 ~~697R~~ Med. gy. F-M mic. sts., platy to
thin bd.
- 3.2 ~~879.9~~ Med. to dk. gy. F-M ss., grains are
sub-rd., thin to med. irreg. bd., prob.
argill., may be foss. - crin.?,
contains thin beds of sts.
- 34.5 ~~1691.7~~ DK. gy. sh., contains thin stringers
of med. to dk. gy. - VF sdy. sts.
- 150 ~~641.2~~ concealed

- 24.4 ~~492~~ DK. gy. sh. w/ med-gy. sts.
stringers
- 7.5 ~~469~~ Lt. gy. silty mic. VF-FSS, thin
to mass. bd.
- 17.6 ~~469~~ Lt. gy. VFSS, Fmic., thick to
mass. bd.
- 32.5 ~~469~~ Concealed
- 9.9 ~~469~~ Lt. gy. VFSS, Fmic., thick,
to mass. bd.
- 2.5 ~~397~~ Ss. as below, med. bd.
- 5.7 ~~397~~ Concealed
- 13.3 ~~397~~ Interbd. med. to dk. gy. sh., dk. gy.
silty sh. (platy to thin or.), and
med. gy. v. silty VFSS, ss. ic ripple
marked, thin to med. bd.
- 10.2 ~~397~~ Lt. gy. VFSS, mic., med. to thick
bd., ripple marks.
- 4.5 ~~397~~ Lt. gy. VF-Fmic. VFSS, v. thin
streaks of carb. sh., at 1.4'
above base is a 4" band
containing coal streaks, med. to
- 407.2 363.1

thick bd.

222.5 ~~365.1~~ Lt. gy. VF-FSS, thick to mass. bd., ripple marks, abndt. plant frags., cross. bd., upper 15' has worm holes (?) as much as 0.2" dia. & 1/2" long & are horiz. to vertical to bd.

6.6 ~~340.6~~ Lt. gy. VF SS, med. to thick bd.

9.2 ~~334.0~~ Lt. gy. FSS, F-VC mica, thin to mass. bd., lower 4' is convolute bd.

10 ~~324.0~~ SS. as below, vy. convolute bd.

~~221.1~~ ~~356.9~~ SS. as below, thin to mass. bd.

Top of abnd. quartz
Moved across ok. to gravel and

11-1-56

Rocks dip 18° S & strike S 30° W

This part of section starts at top of 10' bed of vy. convolute ba. ss. descr. above (this page).

224.3
726 ~~324.8~~ SS. a ^{descr.} slabove & concolated, undiff.

not corr. for dip
100.5

916-B.9 11.1

264, 10.05
not corr. for dip

Lt. gy. c. mic. F ss., irreg. bd. thin to mass. bu., plant frags., upper part poorly exposed.

upper part of 264 unit as exposed in ch. bed

4.7 Med. gy. v. silty F-c mic. VF ss., v. thin to med. bd.

1 DK. gy. v. silty F-M mic. sh., thin bd.

3.2 Med. gy. silty F-c mic. VF ss., thin to med. bd.

corr. for dip
0.3'
0.7'

DK. gy. VF sdy. argill. sts.

DK. gy. argill. sts., F mic., ironstone concretions up to 3/4" dia.

DK. gy. sh., plant frags., ironstone concretions,

DK. gy. to gy.-blk. sh.
Coal, v. bright, banding obscure

1.7'
1'
0.7'

4' 14.5

DK. gy. to gy.-blk. sh., ironstone concretions, plant frags. (Calamite leaves?), thin coal stringers, bdg. obscure.

6.1 10.5

DK. gy. argill. VF sdy. sts., thin to med. bd., some ripple marks.

1.4' 4.4

DK. gy. v. silty VF ss., lower contact of channel-scour type, irreg. thin to thick bd.

3' + 3

Dk. gy. to gy. blk. sh., wea.
spheroidal.

C/D

Concealed

starting on 3rd sand below Mansfield ss.

180.5 29.0 189.5 ^D
mgly silty vt mica vt ss massive bed

170.5 8.1834.8
mgly vt mica vt ss silty thin bed

1696.7 20.1831.9
m-dkgy vt mica silty sh.

1676.6 1818.9
221.4 Concealed

1455.2 63.2 1597.5
vt mica vt f ss f. mica mus bed
2nd ss below Mansfield

1392 1534.5
552.0 Concealed ends at top
of 1st sand below Mansfield.
- 135.8
416.2 or first massive sand at
very beginning of this section

1118.3

977.7
460.2

977.7

Location: Big Creek Narrows
cen. 12-6N-30W, Sebastian Co.

All meas. corr. for dip

- 27.3' 229.6 Lt. gy. silty VF ss., hard as Hell,
cross bd., thin to mass. bd., M mica,
- 19.0' 202.3 Lt. gy. VF ss., contains sts. & VF ss.
pebbles up to 1/2" dia., mass. bd.,
looks like one bed.
- 20.2' 193.3 Lt. gy. VF Mmic. ss., cross bd., thin
to thick bd., many plant frags.,
vy. thin stringers of dk. gy.
sh. & sts. (up to 1/2").
- 4.8' 163.1 Lt. to med. gy. vy. silty VF ss., mjc.,
vy. thin to med. bd., irreg. bd.
- 13.0' 158.3 Med. gy. sts., F mic., irreg. bd., vy. thin
bd., concretion-shaped masses of sts.
(1.5 x 9") @ 2.4' below top.
- 2.5' 145.3 Med. gy. vy. silty VF ss., thin to med.
bd.
- 5.3' 142.8 Dk. gy. vy. silty sh. Interbd. w/ med.
to dk. gy. VF sdy. sts., platy to

thin bd., irreg. bd.

15.3' 137.6

Lt. to med. gy. Fss., m-c mica, thin
to mass. bd., irreg. bd., Sigillaria
impression 2' long & 0.3' wide about
3' above base,

2.6' 124.2
- 23.5

Dk. gy. sh., thin bd., lenses of
VFss. up to 8" thick, partially truncated
by Hartshorn.

1.3' 98.7

Med. gy. VFss., south end has been
truncated by Hartshorn.

1.8' 99.4

Dk. gy. sh., also truncated by
Hartshorn.

Top of Atoka series

28.7' 95.6

Vy. lt. gy. VFss., cross bd., convolute
bd., ripple marks, vy. thin to mass. bd.,

10.8' 66.9

Vy. lt. gy. VFss., has a gy. sh. wh.
powder on breaking, severely
convolute bd., all one bed.

6.1' 56.1

Vy. lt. gy. VF-Fss., scat. M grains,
cross bd., thin to mass. bd.

- 3.5' Lt. gy. VFSS, convolute bd.
- 8.4' 41.0 Lt. gy. VFSS, cross bd., foreset bd., breaks w/ gyish-wh. color.
- 5.7' 38.6 Vy. lt. gy. VF-FSS, convolute bd.
- 5.4' 32.9 Med. to dk. gy. vy. silty sh., platy to vy. thin bd.
- 2.1' 27.5 Interbd. Med. gy. sts. + med. gy. silty VFSS, platy to vy. thin bd.
- 5.8' 26.4 Vy. lt. gy. FSS, cross bd., foreset bd.,
- 4.6' 19.6 Lt. gy. F-MSS, med. to thick bd., irreg. bd., ripple marked,
- 2.7' 15.0 Vy. lt. gy. M SS, sh. + sts. pebbles up to $\frac{1}{2}$ " dia., vc rd. gtz., rests in a channel-scour relationship on unit below, sh. + sts. pebbles only in lower 6"
- 5.5' 12.3 Lt. gy. VFSS, convolute bd.
- 0.8' 6.8 Lt. to med. gy. sh.

b'

Lt. gy. VFSS, rests on sh. w/
channel-scour relationship, irreg.
bd, convolute bd

Top of section

Location: NW 32-7N-28W,
Franklin Co., Ark. Hillside exposure
above abnd. strip mine in Paris coal.

Meas. corr. for dip

14.4'

DK-gy. sh., platy, ironstone
concretions, base concealed
(prob. about 10' above Paris coal)

2.3'

DK-gy. sh. Interbed. w/ silty VF
ss., ss. have rd. nodular concretions,

0.5'

DK-gy. VF sdy. argill. ls., many
foss. (brach., crin.) petroliferous
odor,

15.3'

DK-gy. sh., thin ironstone bands,
foss. ironstone bed @ 7.3' above
base

0.9'

Med. to dk. gy. sts., well cem.,
thin to med. bd.

7.7'

DK-gy. sh., vy. thin bd.,

11.5'

Med. gy. sts., well cem., vy. thin
to med. bd.

- 2' Lt. to med. gy. sl. silty sh.,
- 2.7' Med. to lt. gy. underclay, non-bd.,
- 0.8' Coal, wea.,
- 1' DK-gy. sh.
- 3.7' DK-gy. sh. Interbd w/ silty sh.
which is cem. w/ iron,
- 0.5' DK-gy. argill. VF sdy. ls., many foss.,
many ironstones, gunky bunch of feces.
- 11.5' DK-gy. sh., thin bd
- 11.5' Concealed.
- 8'± Lt. gy. VF silty ss., base poorly
exposed.

Rattlesnake ck. road

17.5

~~35~~ 4140.1 Lt. gy. VF ss., VF mica,
dip N 30°, strike S 85° W, meas.
at right angle to strike along
road.

96

~~198~~ 4307.6 concealed

11'

4200.6 Lt. gy. VF ss., silty; mic., macerated
plant frags., poorly exposed
corr. for dip

14'

4200.6 ss., same as 11' ss., well exposed;
thin to thick bd.
corr. for dip

26.4

4166.6 Lt. gy. VF-F ss., macerated plant
frags., thin to thick bd.
corr. for dip

23

4210.2 Lt. gy. silty VF mic VF ss., macer.
plant frags., thin to mass. bd.
corr. for dip

7'

4239.2 Lt. gy. vy. silty VF-F ss., vy. thin to
thin bd.
corr. for dip

9.9'

4210.2 Lt. gy. silty VF-F ss., thin to med.
bd.,
c for dip

42003

4107.4

All thicknesses are corr. for dip

- 16.8¹ 420073¹ Lt. gy. F mic. VF-Fss., med. to thick bd.
corr. for
- 13.5¹ 4183.5 Lt. gy. silty F-c mica., VF ss., thin bd.
c. for d.
- 7.5¹ Lt. gy. silty VF-Fss., thick bd.
c. d. 4190.0
- 8' 4163.5 Lt. gy. vy. silty VF ss., vy. thin to thin
bd.
- 5.8¹ 4146.5 Lt. gy. VF ss., F-M mica, thin bd.
- 5.3¹ 4144.7 Lt. gy. vy. silty VF ss., F mica,
thin bd.
- 63.9 4144.4 Lt. gy. VF ss., F mica, thin to med bd.,
- 10.6 4100.5 concealed
- 19 4069.9 Lt. gy. vy. silty F mic. VF ss., thin
bd.
- 2.2 4056.9 Lt. gy. silty VF-Fss., M mica, thick bd.
- 21.2 3964.6 Lt. gy. vy. silty F-M mic. VF ss., thin to
med. bd., poorly exposed
2. 4021.5 Lt. gy. silty VF-Fss., widely scat. M
grains,

4025.2
3741.1

- 10.6' 4946.2 concealed, prob. contains VF silty thin bd. ss.
- 5.3' 4944.6 poorly exposed silty VF ss.
- 12.8' 4949.2 concealed
- 15.5' 3992.0 t. gy. silty VF ss.
- 4.4' 3976.3 concealed
- 19.2' 3972.9 Lt. to med. gy. silty F-M mica VF ss.; thin to med. bd., shale pebbles ($\frac{1}{2}$ " long),
- 12.5' 3991.9 t. gy. silty VF ss., thin to med. bd.
- 7.1' 3940.2 Lt. gy. (VF-F) ss., F-c mica, ironstone concretions up to $2" \times \frac{3}{4}"$, thick bd.,
- 10.6' 3992.6 concealed
- 15.3' 3972.5 ss. as below, some M grains
- 10.6' 3919.2 poorly exposed ss. as below.
- 5.3' 3896.6 t. gy. F ss., c mica, mass. bd.

2093.3
3812

26.5' ~~3073.9~~ Lt. gy. VF-F ss., med. to mass. bd.,

16' ~~3066.8~~ Concealed

18' ~~3061.8~~ Lt. gy. VF ss., F mica, thin to thick bd., ripple marks,

Note: Rocks dip N 35° + strike S 75° W.

57.4,

~~100~~ ~~3053.1~~ Concealed

not corr.
for dip

~~131.8~~
~~229.8~~ ~~3046.7~~

Not corr. for
dip

K. gy. to gy.-blk. VF mic. sh., platy to thin bd.

3.6' ~~3643.9~~ Med. gy. v. silty VF ss. interbd.
corr. for dip w/ med. gy. sts., platy to thin bd.,

9.1" ~~3640.3~~ Med. gy. silty F mic. sh., platy to v. thin bd.,

1.9' ~~3630.2~~ Med. gy. interbd. sts. + silty VF ss., ripple marks, v. thin to thin bd.

12.9' ~~3629.2~~ Interbd dk. gy. sh., med. gy. VF sdy. sts., at 70" above base is a 6" ry. sdy. zone.
~~3616.4~~
~~3534.1~~

1.2' 3618.4 Med. gy. vy. silty VF ss., thin bd.,
cf d

4.5' 3619.2 Silty dk. gy. sh.

2.3' 3619.4 Med. to dk. gy. VF-F ss., M mica,
ironstone concretions (max. 2"x1"),
single bed.

1. 3608.4 Med. gy. vy. silty VF ss., vy. thin
to thin bd.

321.2'

~~560~~ 3609.4 Concealed, stuff above 4'35"
is prob. silty dk. gy. sh.
not corr. for dip.

5.8" 3282.2 Lt. to med gy. Fmic. VF-F ss., med
cf d to thick bd. Rocks still dip
N. 35°

4.8' 3280.4 Concealed N. 35°
cf d

2.3' 3275.6 Med. to dk. gy. silty Fmic. VF ss.,
cf d

8' 3273.3 Concealed
cf d

1.3' 3285.3 Med. gy. silty VF ss.
cf d

3187.0
3264.0

Thicknesses core for dip

7.3' ~~32410~~ Concealed

7.2' ~~32411~~ Interbd. med-gy. sts. & ry. silty
VF ss., platy to thin bd.

0.9' ~~32412~~ Med-gy. ry-silty VF ss.

6.1' ~~32413~~ Interbd. sts. & ss. as below.

1.8' ~~32414~~ Med-gy. VF ss., well com., ironstone
concretions up to 1/2" dia.

50,
3' ~~100~~ ~~32415~~ Concealed
not corr.
for dip

62.8' ~~32416~~ DK. gy. silty sh., F mica, ironstone
concretions (8" x 3" thick) at
above base (some are cylindrical
(3" x 8" long) platy to ry. thin bd.

44.7' ~~32417~~ DK. gy. sh., ironstone concretions
corr. for dip (ovoid ones are 3" thick x 8" dia.,
cylindrical ones are 3" dia. & up to
8" long, others are round), platy
to ry. thin bd., concretions are
restricted to lower 4' ±, another
zone of ironstone concretions
(1/2" thick x 6" dia) in a 2' zone
18' above base.

3082.2
3004.2

6.8.5
30° 47' → concealed
not corr. for dip.

13.7' 3095.1 Med. gy. F-M mic. sts., thin bd
corr. dip

6.1' 3095.0 Med. gy. VF sdy. M-C mic. sts.,
ironstone concretions (2" thick x 6"),
platy to med. bd.

2.4' 3095.9 Med. gy. sts., M-C sts., thin bd
cf d

20.3' 3095.5 DK. gy. sh., thin bd
cf d

28
30° 56' 3095.9 Concealed
not corr. for dip.

18.1' 2895.8 Med. gy. sts., M mic., becomes
argill. in upper 6', platy to thin
bd.

45.5' 2895.1 DK. gy. F mic. sl. silty sh., platy,
to thin bd., vs silty in upper 8.

7.2' 2895.4 DK. gy. silty sh. interbd. w/ med.
to dk. gy. sts., platy to thin bd.

9.7' 2895.4 Lt. to med. gy. vy. silty F-M mic.
VF ss., thin to med. bd.

2895.1
2895.0

Thicknesses corr. for dip

2.2' 2017.7 Lt. gy. VF sdy. argill. sts., irreg. bd.,
F-C mica,

4.7' 2018.5 DK. gy. sh., VF mica, platy to
vy. thin bd.

2.7' 2018.8 DK. gy. sh., & dk. gy. sts., interbd.,
platy to thin bd

5.4' 2013.1 Med. gy. ~~VF sdy.~~ F-M mic. sts.,
lower 22" is sdy.

20.9' 2051.9 DK. gy. sh., sl. silty, platy to
thin bd., VF mica,

6.7' 2052.18 Interbd. dk. gy. sh. & med. gy. sts.,
platy to thin bd.

41.1' 2052.11 DK. gy. F mica. sh., platy to thin
bd.

12' 2101.7 Lt. gy. (M mica) VF-F ss., poorly
exposed,

12.7' 2099.1 Ss. as below

28' 2004.4 Lt. to med. gy. vy. silty VF ss.,
thin to med. bd., poorly exposed,
2658.5 2736.4 scat. shale pebbles (1/2")

Corr. for dip.

11.5' ~~2030.4~~ concealed.

11.2' ~~2031.9~~ Lt. to med. gy. silty argill. VF ss; sh. pebbles in lower 3', vy. thin to med. bd, ripple marks.

19' ~~2038.0~~ Lt. gy. VF ss, thin to med. bd, mica, ripple marks.

Note: The following 2 pages were meas. in Rattlesnake Narrows as a supplement to this section.

Location: Rattlesnake Narrows,
sec. 6-6N-23W

All thicknesses corr. for dip.

3.4.9'

Lt. gy. VF-F mic. ss., med. to thick
bd., cross bd. in part.

11.4'

Lt. gy. F ss., widely scat. M-C redd.
quartz, thin to med. bd., cross bd.,
some foreset beds, coalified
plant frags.

6.1'

Lt. gy. silty F-C mic. VF-F ss., thin
to thick bd.

10.5'

Concealed

13.0'

Poorly exposed med. gy. sts. + med.
gy. vy. silty VF ss. interbd., platy to
thin bd.

13.6'

Concealed

12.0'

Poorly exposed lt. to med. gy. vy. silty
VF ss., vy. thin to med. bd., ripple
marks.

6.0'

Ss. as below, well exposed.

61
not corr. for dip

Concealed, not

Corr. for dip

Dip 35° N.

21.5'
cf d

Lt. gy. v. silty F-M mic. VF ss.,
thin to med. bd.

~~Prob. close to top of unit.~~

29'
not corr. for dip

Concealed

6' est.
cf d

Silty ss. + sts., irreg. bd., (seen
in sand cistern on big flat above gully)
Top of section

Back out on gravel road; meas. from top
of 19 ss. on pg.

274.8,
35° 47' 24" concealed.
not corr. for dip (35° N)

23.5,
35° 41' 24" Lt. gy. silty VFSS, poorly exposed
not corr. for dip

Back out on road now.

1.5'
cf'd. ~~2396.5~~ DK. gy. sh.

2.6'
cf'd. ~~2397.9~~ Med. gy. vy. silty F-M mic. VFSS,
thin to thick bd. Note: This
ss. is the same as the 41'
ss. descr. above (this page).

4.4'
cf'd. ^{23.5} ~~2398.4~~ DK. gy. to gy. - blk. sh., platy.

0.2'
cf'd. ~~2399.0~~ Coal, ~~thin bd.~~, mostly vy. thin bd.
vitrain

0.3'
cf'd. ~~2399.8~~ Coal, sh., & bony coal

1.1'
cf'd. ~~2399.5~~ Blk. vy. carb. sh., thin stringers
of coal. Dip 35° N.

14.0'
cf'd. ~~2399.5~~ DK. gy. sh., platy. bd., $\frac{1}{2}$ " layer of
ironstone concretions @ 7.9 above base.

2399.5

44.4 2374.5
36° 26' Poorly exposed dk. gy. sh.
not corr. for dip

103.2
180 2332.1
35° not corr. for dip
Concealed

131.9
230 2329.9
35° not corr. for dip
Poorly exposed dk. gy. sh.

Thicknesses corr. for dip
31.5 2097.0 Lt. gy. VF-F, mic., mass. bd.

5' 2063.5 Concealed

24' 2080.5 Ss. as below

9.7 2020.5 Vy. lt. gy. c. mic. FSS., mass. bd.

11' 2024.8 Concealed

7' 2015.8 Ss. as below

30' 2800.8 Concealed

11.5 1970.8 Ss. as below

9' 1949.8 Concealed

9.5' ~~1893~~ Vy. H. gy. VF-F ss., lower 3.5' is thin to med. bd., rest (6') is thick to mass. bd. & cross bd.

24.2' ~~1893~~ Poorly exposed ss. as below.

12.6' ~~1894~~ Concealed

6.7' ~~1894~~ Inter bd. vy. silty VF ss. & dk. gy. silty sh.

6.4' ~~1895~~ Dk. gy. vy. silty VF ss., F-M mic., platy to thick bd.

1.6' ~~1896~~ Med. to dk. gy. argill. sts., platy to vy. thin bd.

6.6' ~~1897~~ Med. to dk. gy. VF mic. sts., well cem., thin bd.

3.9' ~~1898~~ Med. gy. vy. silty F mic. VF ss., med. to thick bd.

6.3' ~~1899~~ Med. to dk. gy., mic. sts., vy. thin to thin bd.

1.4' ~~1899~~ Med. gy. VF ss. & F mic. sts. thin to med. bd.

1899.1

15' ~~1091~~ 1091.1 Med. gy. Fmic. sts., thin bd. to
vy. thin bd.
Dip 15° N.

38.9
15' ~~150~~ 1091.1 Concealed
not corr. for dip

15' ~~10.3~~ 1091.2 Dk. gy. sh
not corr. for dip

15' ~~40~~ 10.4 1091.9 Concealed
not corr. for dip

15' ~~50~~ 13.0 1091.5 DK. gy. sh
Ncfd

15' ~~370~~ 95.8 1091.5 Concealed
Ncfd

15' ~~10.~~ 2.7 1105.7 Lt. to med. gy. Fmic. VFss., thin to
thick bd.
corr. for dip

3' 1098.0 SS. as below, mass. bd.
All meas. corr. for dip

9.5' 1098.0 Concealed

2' 1098.3 SS. as below

7.9' 1098.5 Concealed

5' 1098.6 SS. as below

8.7' 1098.6 Concealed

1594.9

2.4' 1600.9^{73.6} Ss. as below
cf'd 67 Dip 15° N

15° 31.0' 1600.5
195 ~~195~~ Concealed

not corr. for dip

15° 13' 1600.6 Med. gy. sts., thin bd.

Ncf'd

15° 33.1' 1600.7
295 Concealed

Ncf'd

5.8 1298.1 Lt. to med. gy. silty VF ss., thin to
corr. for dip med. bd., Basal unit of Sarinna fm.

11.5' 1298.2 Interbd med. to dk. gy. sts. + dk.
gy. sh., platy to thin bd.

57.5' 1280.8
1280.8 Concealed

corr. for dip

22' 1223.3
cf'd Concealed ss.?

6.9' 1201.3
cf'd Concealed

3' 1152.3
cf'd Dk. gy. sh., plant frags.

6.6' 1129.3
cf'd Coal, vea., thin to thick banded

11' 1128.7
cf'd Dk. gy. sh., v. thin to thin bd.,
thin stringers of ironstone concretions

11177

8.8' 1111.9 Med. gy. vy. silty argill. VF ss., mic.,
cf'd ry thin bd.

12° ~~1970~~ 379.1 1100.9 Concealed

not corr. for dip

11° ~~11.2~~ 729.0 DK. gy. sh.

not corr. for dip

12° ~~300~~ 62.4 718.6 Concealed

not corr. for dip

12° ~~13.1~~ 63 646.2 DK. gy. sh., ironstone concretions
NCF'd

12° ~~0~~ 4 643.1 Med. gy. silty VF mic. sh.
NCF'd

12° ~~3.3~~ 642.3 Med. gy. VF ss., thin to thick bd., ripple marks,
Dip 12° N, strike S80 E
well cem.

12° ~~73.4~~ 639.0 Concealed

11° ~~6.1~~ 565.4 Lt. gy. VF ss., well cem., thin to med bd
dip 15°?
no corr. for dip
NCF'd

10° ~~129.3~~ 559.5 Concealed

10° ~~7.5~~ 430.2 Med. gy. sts., ry. thin to thin bd.
Dip 10° N

10° ~~28.5~~ 422.7 DK. gy. sh., platy to ry. thin bd.,
interbd. w/ ry. thin beds of silty sh.

394.2

25.2' not corr. for dip
~~18.1~~ 394.2 Sh. as below, poorly exposed

10.7'
~~7~~ 369.0 Sh. as below, good exposure.

55.7'
~~40.0~~ 359.0 Concealed

34.9'
~~27.9~~ 303.3 DK. gy. sh., vy. thin bd. to platy,
Dip 8° N

0.2' 268.4 Ironstone
corr. for dip

0.2' 268.2 Limy ironstone, vy. foss. (brachs,
corr. for dip gastpd)

40.0, not corr. for dip
8° ~~288~~ 268.0 DK. gy. sh. as below.

11.4'
8° ~~200~~ 238.0 Concealed.

Measure corr. for dip

20.7' 116.6 Concealed.

About 5° N. dip

1.3' 95.9 Coal, thin to thick banded, much vit.,
Paris coal

12' 94.6 DK. gy. to gy-blk. sh., platy bd.

10.7' 82.6 DK. gy. sh., thin beds of ironstone
concretions,

11.1

corr. for dip

1.3' 71.9 Lt. gy. silty VF ss., thin to med. bd.

6.3' 70.6 Interbd. dk. gy. sh. & Lt. gy. silty VF ss., ss. appears to be limy,
↑
med. to dk. gy. limy argill. VF ss., abndt. marine foss., abndt ls. concretions.

27.7' 64.3 DK. gy. sh., platy to vy. thin bd., few beds of ironstone concretions.

2' 36.6 Med. gy. sts., thin bd., ripple marks.

18.9' 34.6 Med. gy. silty sh., platy to thin bd.

3.8' 15.1 Med. lt. gy. underclay, non-bd., stigmarian.

0.4' 11.9 Coal, thick banded

1.2' 11.2 DK. gy. to gyish-blk. sh., platy bd.

6.5' 10.5 Lt. gy. argill. sts., platy to thin bd.

4' 4 Lt. gy. vy. silty VF ss., vy. thin to med. bd.

Top of Section

Location: State Hwy. 10, sec. 16-
6 N-30 W.
(Atoka - Hartsborn contact)

9.7' +
87.5 Interbd. med gy. sts. & lt. to med
gy. silty VF ss., all mic., platy
to vy. thin bd.

Note: Underneath this unit is
more similar rocks - poorly exposed.

4'
72.8 Lt. gy. VF ss., F mic., lower contact
is channel-scour type, contains
thin (max. 6") lenses of sts., ss.
is med. to thick bd.

10.6'
68.8 Interbd lt. gy. silty VF ss. & lt. gy.
VF sdy sts., mic., thin bd.

2.9'
58.2 Lt. gy. silty VF-F ss., mic., irreg. bd.,

0.4'
55.3 Lt. gy. silty VF ss., vy. thin irreg. bd.,
abndt. coal streaks (up to 1/4"),

4.1'
54.9 Lt. gy. silty VF mic. VF ss., irreg. bd.

Crossed road to S. side.

0.5' 39.8 Interbd. sh., sts., + VFSS., coal stringers
up to $\frac{1}{2}$ "
Uppermost unit of Atoka fm.

9' 30.3 Lt-gy. F-M mic., VF-F ss., plant
frags., thin to mass. bd., cross bd.,
@ 5.5 there is a 6" lense of
sh., sts., + coal.

1.3' 41.3 Lt-gy. argill. VFSS., abndt. clay
pebbles.

0.9' 41.0 Lt-gy. VFSS.,

0.6" 40.1 Lt-gy. VF sdy. silty sh.

4' 39.5 Vy. lt-gy. VF-F mic. ss., one mass
bed,

1.5' 35.5 Lt-gy. argill. silty VFSS., pebbles of
sts., sh. + VFSS up to $1\frac{1}{2}$ " dia.,

4' 34 Lt-gy. silty VFSS., thin to med
bd., cross bd.,

30'± Poorly exposed lt. gy. ss.

End of section

Descriptions of samples
collected for Vern Swanson

- Sample #1 .012/.042 m/l/r
Sec NW SW Sec 9 TAN R30W
Collected for a horizon about
15' above Hartshorn coal
and about 5' below 1st McAl sand
LE Van Ripper
- 1a. sample of ironstone concretions
in the horizon
 - 1b. sample of claystone and small
stringers of coal in this horizon

Sample #2 SEC NE NE Sec 23 T5N R29W
.013/.048 m/l/r

Sample of 4" coal bed
9' below base of Hartshorn
sandstone
Sec NW NW 24-5N-39W Logan Co.
JP Ivy Rt 2 Booneville

Location: Vache Grasse ch., in
sec. 19-6N-30W.

Section meas. in ch. bed.

Strike E-W; dip-vertical

12.3' 3515.1 Dk. gy. v. fine mic. silty sh.,
wea. chunky.

17.6'
53. 3563.1 Concealed.

24.8'
7.2' 3510.1 Med to dk. gy. sts., platy to thin bd,
thin bd. is argill., plant frags.
present.

35.4'
10.6' 3502.9 Light to med. gy. thin to med. bd. silty
VF gr. ss.

65.4'
30' 3492.3 Concealed.

97.7'
62.3' 3462.3 Wea. brnsh-gy. (prob. dk. gy.) VF mic.
silty sh. bd. unknown.

160.1'
63' 3400.0 Concealed.

169.2'
8.5' 3337.0 Med. gy. silty well cem. VF gr. ss.,
platy to med. bd.

33285

- 181.7
 12 3320.5 Inter bd. med-gy. mic. VF ss.,
 med-gy. sts., & med-to dk-gy. sh.,
 platy to thin bd.
- 194.2
 13 3316.5 DK-gy. silty sh.
- 239.8,
 45.6 3303.5 t. to med-gy. well cem. sts.,
 thin to med. bd.
- 256.4,
 16.6 3259.9 Light to med-gy. silty VF ss.,
 VF mica, well cem.
- 279.0,
 23.4 3241.3 Med to dk-gy. sts., contains med.
 beds of VF sdy. sts., all mic.,
 whole unit is platy to med. bd.
- 36.9.0
 90 3217.9 Concealed
- 39.2.8
 23 3127.9 Med-gy. sts., VF-F mica, well cem, 1/2"
 pyritic nodule about 2' above base.
- 40.9.0
 17 3104.9 Inter bd. med-gy. sts. & VF ss.,
 med. bd., mic.
- 461.2,
 51.4 3087.9 Med-gy. thin bd. sts. & med-gy. med-
 bd. sdy. sts., both mic.,
- Note: There is slickensided dk-gy.
 sh. at top of 51.4 unit.
- 3036.5

484.7

25.5
3036.5

505.7

19.3011.0

530.7

25.2992.0

607.31

76.6
2967.0

612.8

5.5
2890.4

637.1

24.3
2084.9

724.9

87.8
2860.6

754.3

30.4
2772.8

821.3

67.2742.4

847.0

25.7
2675.4

2649.7

Med. gy. VF sdy. sts., mic.,
 DK. gy. sh., thin stringers of
 dk. gy. sts.
 Interbd. dk. gy. sts. & dk. gy. silty sh.,
 thin to med. bd.
 DK. gy. silty sh., has vy. thin to thin
 stringers of sts., vy. thin to
 thin bd.,
 Med. gy. VF sdy. sts., mic.
 DK. gy. silty sh., mic., vy. thin bd.,
 Med. gy. sts., mic., vy. thin to
 thin bd., some med. bd. in lower
 10'
 Concealed
 Med. gy. silty VF ss., vy. mic., F-M mica,
 thin bd., plant frags., well cem.,
 hard as Hell.
 Lt. to med. gy. VF-F ss., thin to med.
 bd., mic., well cem.

852.0

5 244.1

Med-gy. vy. silty VF ss., thin bd.,
mic.,

1357.0

495 264.1

Lt. gy. silty mic. VF ss., thin to
thick bd.,

1589.0

232 2149.7

Concealed

1610.5

21.5

1917.1

DK. gy. sh. silty sh., VF mica, vy.;
thin coal stringers in upper 4;

1633.0

22.5

1890.2

DK. gy. sts., VF mica, well cem.,
VF thin bd

1643.1

10.1

1873.1

Med to dk. gy. vy. silty VF ss., mic.,
thin bd.,

1678.3

35.2

1865.7

Interbd dk. gy. Fmic. sts. &
dk. gy. Fmic. sh.

1682.5

4.2

1828.5

DK. gy. VF sdy. Fmic. sts.,

1767.3

74.3

1824.3

Vy. dk. gy. VF mic. sh., thin bd.

1859.9

92.1

1749.5

Concealed

6' 1656.9 Sh. as below.

1890.9.

31. 1650.9 Med. to dk. gy. ^{vy.} silty sh., mica,
thin bd.

1945.5.

54. 1619.9 Med. gy. VF mic. sts., thin bd., well
cem.)

2006.5

61. 1564.3 Med. gy. silty VF mic. VF ss.,
thin to med. bd.

2033.5

27. 1504.3 DK. gy. silty sh., F mica, thin,
bds. of med. gy. sts. in top 6"

2072.5

39. 1477.3 Concealed

2004.5

12. 1438.3 Vy. dk. gy. sh.

2131.6.

46. 1426.3 Concealed

2139.1

6. 1379.7 DK. gy. sh.

2195.1

58. 1513.1 Concealed

2232.1

37. 1315.7 DK. gy. VF mic. sh.,

2399.6

167.5 1278.9 DK. gy. sl. silty VF mic. sh.

*2520.2,

~~DK. gy. mic. sh.~~

120.6

1111.2 Concealed

25 20.12

(6)

2539.6,

19.4 99.6 DK-gy. mic-sh.

2599.4

60 91.2 Concealed

2614.6,

15 91.2 DK-gy. mic-sh.

2638.6

24.8 96.2 Concealed

2679.4

41 87.2 DK-gy. mic-sh., 1 1/2" ironstone
37' above base, 6" layer of
med gy. VF silty ss. @ 41' above
base.

2704.4

24.8 831.1 Concealed

2710.1

6.3 806.3 Med-gy. silty VF ss.

2731.1

26 800.3 Med-gy. mic-sts., thin to
med bd.

2797.2

65.5 779.3 Concealed

2882.2

55 713.8 DK-gy. sl. silty VF mic-sh., thin
bd.

2894.9

12.6 288 DK-gy. sh. w/ lenses of coal
up to 3/4" thick.

6163

2959.9

65.6 616.1 Concealed

3001.9

42.5 591.1 DK. gy. - VF mica sh.

3099.7

23.8 509.1 Concealed

3272.5

122.8 485.3 DK. gy. sh.; lenses of med. gy. sts. up to 2" thick in a zone 41.5' above base, lense of dk. gy. sts. up to 5" @ 58.3' above base, lense of dk. gy. sts. 4" thick 8.3' above 5" sts.

3259.5

37

~~112.5~~ 362.5 Concealed

3347.5

88.3 375.5 DK. gy. sh.

3371.1

23.6

DK. gy. sh., dips 53° N, strike 80 W.

3468.6

97.5 2139 Concealed

3515.6

47

106.4 Lt. gy. VF ss., cross-bd., v. thin
To med. bd.

corr. for dip

Top of Atoka series

3527.0

12.4

69.4 Lt. to med. gy. VF ss., F-M mica, thin to med. bd.

3527.0

(8)

3564.0

37
corr. for dip ss as above, thick to mass. bd. 59

3584.0

20±

Poorly exposed ss. 20

Conceded.

Abbot-Rock creek section
 Upper part of section taken along
 U.S. 71 Sec 31 T 5 N R 29 W. Lower
 part of section taken along branch

	UP		
F	110		of Rocky creek extending southward
682	8		from Abbot through Sec 4 & 5, 5th sec, 34 N, 30 W
26	6		Shale fissile to thin bedded, slightly silty in upper part
56	2		
58	11		Siltstone thin bed med tology becomes v. gr. ss. or
47	3		
7	10		Siltstone thin bed clay inter-bed with v. gr. medgy sandstone up to 1" thick. Is channelled and 8' ss bed massive v. gr
39	5		
310	7		sandstone and silty shale alternating beds up to 4" most are from 1-2" med tology ss is v. gr.
28	10		
3	10		Sandst bed toke gr + bed med bed has silty, w. bipy, streaks
25+			sandstone thin to massive bed + bed channel deposits scant for get carbonaceous residue plant fragments v. gr. except where massive tends toward ty has silty and clayey lenses up to 2" in some places

Section starting here is from
somewhere on South flank of Hartford
anticline in section

Up	15	a continuation of basal part
ft	10	of section on previous page
		or
1090	2	
1074	0	shale black fissile bed
1046	2	
21	2	sandstone clayey + silty sand bed forms small ridge in creek bed micaceous carbonaceous shks dk gr vt gr
1046	0	
1013	2	shale blk fissile to platy bed
1032	10	
19	1	sandstone sand bed black mica vt grained
1032	9	
1878	6	shale blk fissile to platy bed
954	3	
172	0	shale blk silty ^{slightly} vt gr sandy
952	3	
6247	3	shale blk slightly silty fissile to thin bed.
705	0	
1534	6	siltstone fissile to thin bed med to dark gg has clayey shks
660	6	
1417	3	sandstone ^{med to} dk gr vt gr silty
643	3	makes ridge fissile to thin bed.

643	3	siltstone fissile to thin bed
57	6	med to dk gray carb stks
586	9	
W34	6	siltstone med interbedded shale fissile to planar bed (thin types) Siltstone med to blk Shale blk
551	3	
1176	0	shale blk fissile to thin bedded
505	3	
1027	9	Covered interval probably blk shale and siltstone
477	6	
47	9	Sandstone thin bed dk vf gr ripple marked silty carb stks
469	9	
814	3	covered interval
455	6	May contain ss or may not
17	0	Sandstone thin bed ripple mark med to dk gy silty carb stks may be same as above or different probable
448	6	different
617	3	Covered interval
431	3	
557	6	shale fissile to thin bed blk
393	9	
417	3	covered interval probably blk shale
558	6	
185	46	

356 6
3 120 9

Spoke to the result to this bed

235 9
269

Covered interval probably
all shale

1166 9

Covered interval top of
base of sandstone forming
2nd ridge below Hartshorne

Huntington section (East) taken
along road leading south east
out of Huntington 5030 + 3N R30W

- Fr 10
↓ up
- 148.1
46 10 shale blk fissile bed silty
- 101.3
11 2 siltstone fissile to thin bedded
blk. Fe conc. occasionally thin
- 90.1
0 10 sandstone med bed br medgy
vfg r xbr
- 81.3
9 8 shale fissile bedded drgy to blk
silty
- 71.5
10 sandstone thin to med bed drgy
vfg r xbed intercalated with
thin beds of siltstone and vfg r
sandy siltstone
- 68.1
32 4 shale blk fissile to thin bedded
silty some silty streaks or brown
in color
- 46.4
10 sandstone thick bed (one bed)
Hgy vfg r
- 45.6
6 6 sandstone thin to med bed Hgy vfg r
becomes more silty and clayey
towards the top.

13 39.1
10

shale dk gy to blk fissile to thin bedded silty at base a layer 10" thick 4' from top has appearance of undecayed 2 miles west of this stream and about

Atokan 15.3
Haystack 2

Sandstone lt gy v. gr thin to thick bed xbd rests on underlying shale with a channel type deposit contains ripple marks silty pebbles

8 18.1
1

Sandstone lt gy to v. gr thin to med bed has thin silty layers 1/2" thick

10 7 10

Sandstone med to thick beddy xbedded a two ft bed at top is covered over

Rock Creek section
 taken along Rock Creek in
 Sect 8, R 30W, T 4N

UP
 ↓

Ft 17
 1036 4
 8T30
 1028 4
 991 11
 1026 5
 137 4
 78
 889 1
 21 5
 887 6
 404 3
 883 5
 93 4
 880 1
 27 8
 872 5
 933 1
 869 4
 93 0
 864 4
 24 0
 96

Plotted
 1" = 100'
 1" = 10'

Siltstone gray thin bedded

Sandstone gray vfg silty
 hard ripple marks

Shale blk fissile bedded
 conc. jointed silty zones
 some Fe stn conc.

Sandstone vfg gray
 Thick bedded

Claystone gray thin to med
 bedded slightly silty Fe conc.

Siltstone massive green vety
 hard

Claystone thin bed green Fe conc

Siltstone thin to med bed green hard

Shale gray blk fissile to thin bedded

Sandstone vfg massive vhard
 greenish gray Forms cap rock
 for ridge

862	4	
817	3	Covered interval
		Sandstone as preceding unit
845	1	
964	9	Shale blk fissile to thin bed covered in part but whole interval is blk shale
193	4	
8	10	Shale fissile bed blk very carb
194	6	
9	1	2
		Coal, sandy weathered - seems to be dominantly medium bedded
193	4	
16	1	5
		Shale blk & fissile bed & carb. coal streaks
191	11	
13		4
		Coal dominantly medium bedded
191	7	
14	4	4
		Claystone med gy platy fragments
18	7	3
13	7	4
		9
		Shale block platy becomes silty at top
112	6	
105	5	
		Sandstone thin to medium bed 4 to medgy iff gr x bed
107	1	
118	7	
		Siltstone med gy platy to thin bed
150	10	

	98	6	
10	24	9	shale blk fissile bd percol jointed
	13	9	
9	4	4	sandstone med to thick bed Bridgely x bed Hartshorne
	69	5	
6	17	3	covered interval
	52	2	
6	1	24	unconformity in or no bed
	51	9	
4	1	5	Coal mixture of all types bedding
	49	7	
	1	9	shale blk fissile bd
	47	10	
	2 1/2		Coal commonly med bedded
9	47	8	
	1	11	shale blk fissile bd, has 2-4" coal bands near middle, mostly stks and near carb
	45	9	
6	2	2	Coal poor with thin bands of shale and carb occurring throughout the bed
	43	7	
	1	9	shale blk carb fissile bedded
	42	10	
8	1	3	Claystone gy brown abundant Fe conc predominant carb
	41	7	
	2	7	shale blk fissile bed, carb
	32	46	

3 39
2 +

Thin brown gy. incl. bed

4 37
10 0

Covered with tal.

1 27
1 27 0

Sandstone brn. wt. gr. hard.
Thin one bed top first
ridge above Hartschorne coal

↑ up
↓

Kings Creek section
taken along Kings creek
sect 9 R30W T4N

Fr.	17.
43	9
37	
40	9
1	6
39	3
12	4
26	11
1	2
25	9
6	4
24	5
2	7
22	1
1	0
21	1
3	7
17	6

Plotted
1" = 10' ~~30'~~

Shale blk fissile bedded very
irregular with appearance of
underlying facies of massive
coal. Dominantly thick bedded
thin Hartshorne coal

Shale blk fissile bedded with
silty lenses and thin flat
ironstone concretions from top
down and exclusively in massive shale
part and the coal is 6" thick and shale is 6"
Coal dominantly thick bedded

shale blk fissile bedded ironstone
concretions appearance of
underlying

Ironstone gray thin bedded
some ironstone concretions
plant fragments

Shale blk fissile bedded dominantly
ironstone concretions

Shale blk fissile bedded occasional
ironstone concretions
irregular in spots.

17 6

4 6

abundant or thin thin = bd.
abundant sandstone occasional

13 0

4

shale fissile bed degenerate
occasional ironstone con.

18

2

approximately 1/4 mi above base
of above unit is base of
Upper Ironstone sandstone

Note

———— starting at base of
section

251 9

9 3

siltstone clay thin to medium bed.
vt gr sandy in places ripple
marked. Fe stone conc occasional

242 6

6 7

shale clay fissile to thin bedded
silt layers up to 1" in thickness
Fe conc.

235 11

7

sandstone med gr medium bed
vt gr

235 4

4 1

siltstone thin to medium bed clay
vt gr sandy layers up to 1" thick
ripple marks true N35-45E

231 3

10

sandstone med gr vt gr one bed
ripple marks trending S70W

230	5	
	9	Sandstone platy to dk gy silty vf gr
229	8	
1	5	Sandstone med-bd dk gy ripple mark trending SW NE vf gr
228	3	
8	9	Shale med to dk gy - no bedded ripple marks trending S50W 69" from base in a 10" sandy shale rest of shale is silty
219	6	
14	3	Covered interval probably contains black shale base of coal at top, under clay to top edge
215	3	
	3+	Under clay to top edge
215	9	
213	19	Shale base and str of coal all fissile bed
217	4	Coal dominant, med bed
	4	Shale dk to silty to med bed
	4	Coal dominant, thick bed
211	10	Shale BK fissile med bed
	13	Coal dominant, med bed
210	4	
83	7	Shale thin to med bedded dk gy becomes more silty until the upper 25 ft is a siltstone grades into a vf gr sandstone
127	3	
	8	Sandstone thin to med bed med gy VF gr
126	7	
6	7	Sandstone platy to med bed med gy vf to gr
120	0	

120	0	sandstone of ls for med gr & bd very increased to weather
2	0	
118	0	covered interval
34	6	
83	6	sandstone med gr of fofgr & bd lower unit of L Hartshorne
4	0	
79	6	covered interval
23	0	
56	6	sandstone med gr of fofgr & bd upper unit of L Hartshorne
5	9	
50	9	Base of Hartshorne coal is approximately 10ft above top of this sandstone
40.9		base of Hartshorne coal

246

Elm ...
 Section taken along U.S. 71 in
 Sec 7, T4N, R 29W,

Plotted. Belt
 1" = 10'

Up	2181		
38	107		Under clay
217	8		Shale, bone and coal streaks
37	3		Under clay to gray
	1		Coal badly weathered
6	4		Shale fissile to thin beds gray to
36	3		blk
	7		Under clay contains blobs and
	1		streaks of coal, bone, and shale
35	5		Coal somewhat thick bedded
	2		Shale with streaked partings under clay
34	5		Coal
33	92		Shale and very thin coal bed of bone and
32	5		parting of partings
	10		Shale blk part part bedded
209	7		Shale and silstone thin bedded
31	5		bed in sandy, coarse section
199	2		beds in thin silstone and silstone
30	4		
181	10		sandstone 4 in thin to med bed
29	0		occasional silty or silty bed
177	10		
28	10		sandstone 17 in if med thick
			bedded forms ridge
175	0		

175	0		
172	6		cherty thin bedded blocks fracture could be 3rd or 4th profile temp. event
172	6		
267	0		Sandstone ltgy. vfg. junky bedded some shaly and silty lenses and beds in gap between the sandstone beds
165	6		
263H	6		Covered material has about 10" of vfg. sandstone at top reported 3" of coal in the upper 2' as encountered in well
131	0		
21	5		Shale badly weathered has some silt and mica
129	9		
251	0		Sandstone ltgy. vfg.
128	7		
221	5		Shale badly weathered some horizons has appearance of weathered under clay
227	2		
21	2	2	Sandstone ltgy. vfg. thick to massive bed.
125	0		
20	2	9	Shale weathered some silt
122	3		
19	6		Sandstone ltgy. vfg. one bed
121	9		

151	9	
109	3	shale, weathered, fissile to thin bedded. some silty and some beds are vfg sandy mica throughout.
104	6	Atoka
101	1	lower Hartshorne
171	1	Siltstone 1/2 in. thick bed. vfg sandy, clayey, many plant frags. may be equivalent to lower Hartshorne
103	5	
161	9	shale clay to blk ironstone concentrations upper 3" has appearance of underclay fissile bed.
101	8	
15	2	Coal badly weathered
100	6	
14	10	shale badly weathered
100	8	
1329	6	Covered interval at 4' above base there is about 10" of vfg sandstone 1/2 in. thick this is upper member of lower Hartshorne
11	W	
104	6	lower Hartshorne
104	6	lower Hartshorne
124	0	Shale badly weathered
67	2	
11	2	3 Coal Prominently bedded to thick bedded this is Hartshorne coal

- 4
 7 shale black fissile bd.
 coal streaks in lower 40"
 3 1/2" bed of coal 17" from base
 plant fragments
- 59 7
 95 2 shale black fissile bd coal and
 bone streak 1/4" coal 5" from
 base upper 18" has abundant
 plant fossils ironstone concretions
 in upper 14"
- 64 5
 6 6 coal dominantly thick bedded
- 53 11
 78 8 shale blk fissile bd coal streaks
 abundant plant fragments
 ironstone concretions at
 3' from base. Carbonaceous
 zones at 2' 6" and 5' from
 base
- 45 3
 413 7 claystone, siltstone, & shale all
 interbedded the sandstone
 beds lense and grade into
 the other rock types very
 quickly all are light to color
 fine sandstone is a might
 more persistent in the
 upper 31" med. bd.
- 31 9
 55 3 shale dk gy fissile bedded

26	✓		
41	2	Sandstone Hgr vt of gr	x bed med bed
25	0		
32	3	Siltstone thin to med bed	x bed Hgr sandy & clayey
24	9		
47	0	Sandstone Hgr vt of gr	massive bed x bed channel type deposits
15	9		
23	7	Sandstone Hgr vt of gr	interbedded with thin beds of Hgr siltstone + shale whole unit is extremely x bed
10			
110+		shale gray fissile to thin bedded	ironstone concretions, has lenses of sandstone as thick as 6" + 100 approximately top of 1st Ripley st sandy zone above Hartshorne coal

No. 100
1" = 10' BPA

Calvary Baptist section
 from coal in Hartstorne through
 upper part of Oak
 section along road going north
 across Gibson Ridge in
 Sec 11 4N 30W Arkansas

Col'd
 up
 236 11
 Ft 17
 8 11

Shale - blk. mic., silty, fissile bed.
 Plant stem impressions, some
 of gr sandy in a few horizons
 ironstone nodules appearing (brown)
 sandstone - lt gr, thin to med. bed.
 x bd. dkgy
 shale - dkgy to blk, thin to fissile bed,
 mic. silty. a 2ft. lens of lt gr
 sand occurs at base.
 A few vt to fgr sandy beds in upper
 14 inches these are very thin blk.
 sandstone, dkgy, vt gr thin to med bed
 7 bd. base thin blk shale layers
 Shale blk fissile bed mic. slightly
 silty

228 0
 9
 227 3
 11 8
 215 7
 10
 214 9
 1 3

213	6	
ft	10	
	6	Sandstone dk gy med bd contains fragments of plants black shale and what appears to be a crinoid fragment. vfg. to fgr.
213	0	
21	6	Shale blk fissile to thin bd, dk gy to blk, 2" lense of vf gr sandstone 53" from base, silty in some horizons ironstone concretions (void and as large as 4" in diameter. some of this shale appears to weather in a conchoidal fashion
191	6	
5	8	alternating thin beds of silty shale and vf gr sandstone. It to dk gy sandstone becomes thicker and more dominant in the upper half
185	10	
1	6	Sandstone gr dk gy med to thick bd, very hard and resistant to weathering - kipple marked. vfg.
184	4	
18	3	Concret interval probably contains same rock as described in next description.
167	1	
19	1	alternating fissile to thin bed shale and siltstone It to med gy, mic, some vf gr sand in some beds

148	71	
	D	
1	10	siltstone thin bedded med to dk gy
146	2	
3	5	sandstone med to thick bed, dk gy vf gr breaks into flagstone in some parts. Probably source of barlastone shown in section @ 4N 30W
142	9	
61	5	covered interval of bed of vt gr med gr sandstone occurs about 6' from base
81	74	
37	6	shale and siltstone med to dk gy fissile to thin bedded some ironstone concretions.
46	10	
6	9	limestone gray vf gr thin to med bedded gray or silty and clayey beds.
40	1	
3	4	sandstone dk gy vf gr x bedded appears somewhat similar to Hartshorne in color and texture but weathers like Otoker.
34	4	
		Hartshorne
7	0	sandstone dk gy vf gr med to thick bedded
27	4	
5	11	sandstone dk gy vf gr thin bedded silty
21	5	

21	5	covered interval contains at top a Coal badly weathered, probably 3-4" thick
3	3	
18	2	covered interval contains weathered block shale and a streak of sand at the top
2	0	
16	2	shale blk carb. fissile bedded upper 2" has appearance of underclay being Hgy and plastic
3	0	
13	2	Coal badly weathered
	3	
12	10	shale black fissile bedded
	10	
12		about 12 ft above last shale is a small ridge which could be the upper member of the lower Hartshornie
add 2'		

2 2 1

Description of Core samples

from Gulf Oil Corp #1 Borum
SE - NW-SE 18-68-28W

Representative samples collected
from all cores
fossils collected where present

Bugs Marked GB 1 for
sample and GB 1a for fossils
starting with top of Core 1

Core 1 7593 - 7598.5 one Box

GB 1 R.S. v. ss. to slts, mica,
stg. of drgy mica sh.
206" of core core chips
vary from 1/2 - 2" in thickness

Core 2 - 8256 - 8273

GB 2 as above except
8256 med gy,
8257 back to drgy
Pelecypod stinks

Box 1 8256 - 8258.5

GB 3 Box 2 8258.5 - 8259.8
as above stinks

GB 4 Box 2 8259.8 - 8261
m.-drgy v. silty (v. ss?) ls,
crinoidal (coquina) Bryzoa. stinks

- GB5 Box 3 8261 - 8263
 upper part more of sandy
 rest less sand with much silt
 stinks
- GB6 Box 4 8263.9 - 8265.7
 up ss to silts. may stinks,
 probable limey no crinoids
 below 8265.
- GB7 Box 5 8265.7 - 8267.9
 of ss to silts to lime generally
 fine grained than ss.
- GB8 Core 3 8273 8303
 Box 1 8273 - 8275.6
 Dicky sh of ss silts
- GB9 Box 2 8275.6 - 8278.4
 as above
- GB10 Box 3 8278.4 - 8280.9
 as above
- GB11 Box 4 8280.9 - 8283.5
 as above
- GB12 Box 5 8283.5 - 8286
 as above slickensided planes
 dipping about 45° to core

GB13 Box 6 8286 - 8288.4
as above

GB14 Box 7 8288.4 - 8291
as above

GB15 Box 8 8291 - 8293.8
as above

GB16 Box 9 8293.8 - 8296.1
as above

GB17 Box 10 8296.1 - 8298.5
as above

GB18 Box 11 8298.5 - 8301
as above

GB19 Box 12 8301 - 8303
as above

GB20 sent to PWS for Indent. as GB1
Core 4 8349.5 - 8380

Box 1 8349.1 - 8352
dk gg limy slts f-m sandy
productid. & colored crinoid
frag. up to 1/2" in dia. purely?
elastic. lms.

check a slts
to lms core 4

GB 21 Box 2 8352 - 8354
lm material is smaller pieces
seems to be gradulation

GB 22 ~~Box 2~~ sent to P45 as GB-2
Box 3 8354 - 8356
8354 many Brach frag
some large chn frag

GB 23 Box 4 8356 - 8359.2
8356 - one impression of
Composita sp(?)
probably dirty silty lens
sent to P45 as GB-3

GB 24 ~~Box 4~~ Box 5 8359.2 - 8361.7
alms as above

GB 25 Box 6 8361.7 - 8364.5
as above
upper 1" crinoid material
much smaller and sparser

GB 26 Box 7 8364.5 - 8367
upper 1" crinoid material
smaller

GB 27 Box 8 8367 - 69.4
as above

GB 28 Box 9 8369.4 - 71

G/B 29 — sent to P+S as GB 4
Core 5 8474 - 8505

Box 1 8474 - 76.5

DKgy sh lms shale blebs
and irreg shape shale
particles / ~~cut~~ lg crin

G 30 } sent to P+S as GB-5
Box 2 8476.5 - 78.8

G 300 } as above
fossils come about 8477

G/B 31 — sent to P+S as GB-6
Box 3 8478.8 - 8479.6

G/B 32 Box 3 8479.6 - 8481.3
dkgy - blk sl silty sh

G/B-33 Box 4 8481.3 - 8484.1
as above

G/B-34 Box 5 8484.1 - 86.7
as above

G/B-35 Box 6 8486.7 - 88.2
as above

G/B 36 Box 7 8488.2 - 92.7
as above

G/B 37 Box 8 8492.7 - 94.2
as above

G/B 38 Box 9 8494.2 - 96.4

dk gy sHs?
sh grades into sHs in upper
B.W. of Box. sHs may be
limy but probably is
siliceous. appears to
be limy at 8496 - 96.4
quite. Crin. brach frag

G/B-39 Box 10 . 8496.4 - 98.5
S.H.s (or lms?)

8498 - 98.5 is blk sh

GB 40 / Core 6 8960 - 8974
Box 6 8960 - 8961.9
dkgy vt f sand lms
①

GB 41 / Box 5 8966.7 - 8969
as above
②

GB 42 / Box 4 8964.5 - 66.4
as above
③

GB 43 / Box 3 8962.2 - 64.5
as above
④

Productid 1" in diameter
Boo Coo productids

GB 44 / Box 2 8969.2 - 8971.4
⑤

GB 45 / Box 1 8971.3 - 8973.5
Bottom 2 or 3" is marked
with red horizontal line
⑥

17

15

13

11

9

7

5

3

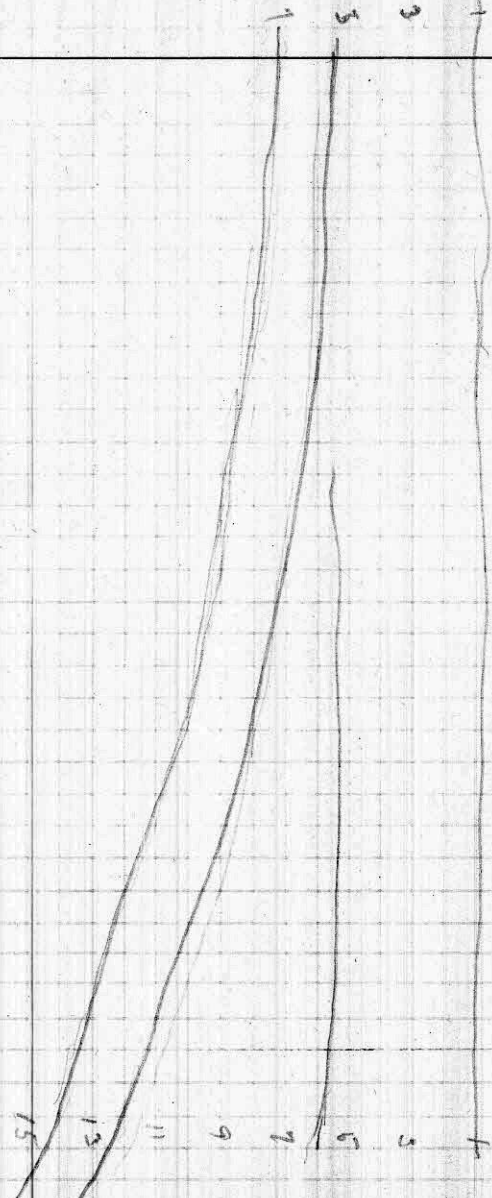
1

1

3

5

7



Samples collected for
fossil identification
from Gulf Borum

B-1 - Core 6 Sent to P+S as GB-7
Box 6 8960-8962

B-2 - Core 6 Sent to P+S as GB-8
Box 5 8962-8964'7"

B-3 - Core 6 Sent to P+S as GB-9
Box 4 8964'7"-66'8"

B-4 - Core 6 Sent to P+S as GB-10
Box 3 8966'8"-69'2"

B-5 - Core 6 Sent to P+S as GB-11
Box 2 ~~8969'2"~~ 8971'2"

B-6 - Core 6 Sent to P+S as GB-12
Box 1 ~~8971'2"~~ 8973'6"

Fossils collected from Borum
per receipt

- 2-GB-1 Core 4 Box 1 8349.5 - 8352.0
- 2-GB-2A } Two sacks
2B } Core 4 Box 3 8354.0 - 8356.0
- 2-GB-3a } two sacks
3b } Core 4 Box 5 8359.2 - 8361.7
8478.8 - 8479.6
- 2-GB-4 Core 5 Box 3 ~~8474 - 8505~~
- 2-GB-5 Core 5 Box 1 8474.0 - 8476.5
- 2-GB-6A } Two sacks
B } Core 5 Box 2 8476.5 - 8478.8
- 2-GB-7 Core 6 Box 1 8971.3 - 8973.5
- 2-GB-8 Core 6 Box 2 8969.2 - 8971.3
- 2-GB-9 Core 6 Box 6 8960-8962
- 2-EB-10A } Core 6 Box 4 8964.6 - 8966.7
B }

Above collection was wrapped and resacked and sent to Dutro on March 17, 1959.

2, 3, 6, and 10 were ~~sent in~~ repacked into one bag.