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46 ARKANSAS GEOLOGY COMMISSION

LITTLE ROCK, ARK.


 Savannah


 Mac alester

 Hartshome

 atoka

 faults

 terrace

 alluvium

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 50 "
 51 "
 52 "

Acetate sheet A-1 (w/2 U/3, Blundin Quad 7'2)

NOTES

1. P_n N 08° E / 6° W
2. P_n - P_a contact
3. P_a N 55° W / 6° N well exposed dip slope
4. P_n - P_a contact approx 30' vertically. Buried.

acetate sheet A-2 (E/2, Up/3 Blue Mt. Quad 7 $\frac{1}{2}$)

NOTES

1. black sh, weather brn, P_a
2. lts fm, clean ss, P_h
3. unconformable contact $P_h - P_a$ $N75^\circ W / 8^\circ W$
4. contact $P_h - P_a$ buried by talus & slump. w/cir 10 ft. on map.
5. series of ledges in road, asymmetrical ripples indie current dir at $\sim N 30^\circ W$. $P_h - N 62^\circ E / 13^\circ W$.
6. P $N 47^\circ E / 6^\circ W$
7. about 150 ft upstream from washed out bridge on Cove Cr. @ junct w/ Short Mt. Cr., on north bank, thin ($\sim 6''$ to $2'$) bed, brown-weathering ss that looks like graywacke near creek and ortho-quartzite in ledges about 25'-30' above creek. Quartzite areas are cross bedded and truncated.
8. $P_h - P_a$ contact, $P_h - N 75^\circ W / 8^\circ W$. Contact along branch \Rightarrow exposed in one place & that, poorly. P_a outcrops along east bank, just above the creek bed, below the contact. About 100 ft upstream from confluence of Cove Cr. & branch, a good exposed contact. One also W & N of confluence. P_a disappears shortly to the west.
9. Dipslope in ~~bed~~ ^{road} bed P_h . Very smooth, no ripples. $N 75^\circ E / 5^\circ E$
10. $P_h - P_a$ contact, unconf. $P_h - N 75^\circ E / 16^\circ E$.
11. Zone 6' thick w/ sandstone (graywacke) "pull-aparts" in upper $4\frac{1}{2}$ ft. ^(thin $\sim 1\frac{1}{2}''$) lower $1\frac{1}{2}$ ft, some pull-aparts, ferruginous stains, lignitic plant frag. remains, and cgl of polished limonite siltstone pebbles (to 1" ϕ). Cgl layer about 2" thick at base, just above are "pull-aparts" about 5"-7" thick. Above, good Hartshorn. Below thick to x-bed ss (P_h ?). Lignite seams to $3/8''$ in upper $1\frac{1}{2}'$; discontinuous.

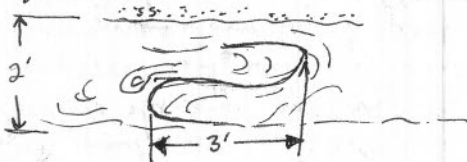
12. Zone of shale-"pull-apart" ss about 8'-10' thick.

— thick bed ss

~4 1/2' thin bed ss w/ "pull-aparts" w/ blk sh between; ss

0-1/2' → massive ss usually < 1/2" thick; sh < 3/4"

2' zone of thin-bed ss w/ blk sh severely contorted. sketch:



2 1/2' thin-bed ss "pull-aparts" w/ blk sh as at top, only thinner
9-9 1/2' massive ripple-marked buff ss w/ some thin sh partings

13 P_{1b}-P_{1a} contact covered. located w/in 15' vertically. S+O east.
from P_{1a}

14 Just below confluence of small, NW-flowing branch. 7' of Qal
w/ about 1/2 blk sh P_{1a} exposed in creek bed.

5
acetate sheet A-3 (W/2 M/3 Blue Mtn 7¹/₂ Quad)
NOTES

1. P_n N 75¹/₂ E / 9¹/₂ S
2. $P_a - P_n$ cont est w/in 20' vert.
3. paleocurrent approx S 15° W (direction of flow)

Acetate Sheet A-4 (E/2 Mid/3, Blue Mt Quad 7 1/2)

NOTES

- 1. P_n - P_a contact well exposed. about 100' black sh P_a partially exposed below, along branch bed. On top of ledge, P_n N15°E/2°E.
- 2. P_n N25°W/15°W
- 3. Black shale exposed in creek bed - 1 1/2' at least
- 4. abundant bits of thin, fluggy, tan bedded ss. P_n or m? overlies blk sh of 3. Larger boulders present. Much leaf coverage
- 5. P_n 2' blk sh bed between thick bedded, ripple-marked (lower) ss. P_n N30°E/3°W
- 6. lignitic ss w/ thin coal lenses + seams. just at P_n - P_a contact.
- 7. P_n - P_a contact approx in 30' vert.

Acetate sheet A-5 (W/2, L/3 Plusmtn 7 1/2' Quad)

NOTES

Acetate Sheet A-6 (E/2, L/3 Blue Mt'n 7 1/2' Quad)

NOTES.

1. P_{a} N65°E/0°N
2. P_{a} st N70°E/12°N
3. P_{n} N65°W/7°N
4. P_{as} N58°E/58°N thin (to 1'ps + weathered sh.
sed flow features on ss. As in note 2, (-).

Acetate Sheet B-1 (w/2, Up/3, Magazine Mt Quad 7E)
NOTES

1. ss & sh outcrop Pa
2. ss, thin bed, fine sand brown → blk sh Pa
3. ss, brown, w/vegs (soln?) Pa
4. Blk sh & cgl ss. Pa
5. Blk sh. Pa
6. ss, lite brn, clam Ph
- ~~7. main line~~
8. Ph-Pa contact, unconformable S45E/14W on Ph
9. Fossil plant fragment 6" long oriented N45°W
10. Asymmetrical ripple marks indicate current flow N40°W
Fracture pattern N10°W.
- 10a. between 10 & 11, several other ripple marks: N65E, N45E
S06°E/8°W on Ph.
11. Ph-Pa contact, unconformable.
12. Ph ledge on road bed - bedding plane N73°W/9°W
13. Ph-Pa contact buried by slump & talus. N45°W/10E on Ph.

Acetate Sheet B-2 (E/2 W/3 Magazine Hill 7 1/2' grid)
W 0 705

1. Ra-Rn cont. exposed in creels. Strike & dip est.
N 15° W / 4° W

17
Acetate Sheet B-3 (W/2, Mid/3, Magazine Mt. Quad 7 $\frac{1}{2}$)

NOTES

1. $P_n - P_a$ contact, unconformable. Blk sh. (P_a) exhibits spheroidal weathering.
2. $P_n - P_a$ contact, unconformable. $N41^{\circ}E/5^{\circ}E$.
3. P_m strike & dip est $N70^{\circ}E/8^{\circ}S$
4. .

19
Acetate Sheet B-4 (E/2, M/3 Magazine) Oct 7¹/₂ 64

NOTES

1. R_n N60°E / 7°S

Acetate Sheet B-5 (~~V~~2, L/3 Magazine cut 7 1/2 d)

NOTES

1. P_s N75°W/9°N
2. P_{ms} N50°E/6°N
3. P_a - P_n contact well exposed N75°W/14°N
4. P_a - P_h N55°E/23°N
- 5.
6. P_{as} N70°E/78°N.

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 Acetate Sheet B-6 (E/2, L/3 Magazine Mt 7¹/₂gd)
 NOTES

1. P_a N74°E/48°N
2. P_n - P_a contact covered, w/in 10' vert.
3. P_a s N74°E/87°N
4. P_n - P_a contact well exposed. Strike & dip est.
N60E/8°N.
5. P_a s N75°E/85°N dip est.

25

AS C-1 (W/2 Upper/3

1/2 road

1. N 70° E / 60° W
2. N 45° W / 55° S to 60° S to 70° S red silty features on base of ss. South side is 70°
3. N 75° E / 60° W
4. N 80° W / 70° S
5. N 85° E / 80° N to 90° S to 100° S - approx. N 80° E / 70° W to 80° S
6. N 80° E / 70° S - silty siltstone
7. N 86° E / 50° N - ss.
8. N 80° E / 50° N - ss.
9. fine gr ss + siltstone, silty siltstone at side of hill. (2.), N 70° E / 70° N, and exposure.

?

?

following of some kind approx 40' from road



20' approx



all in the middle for ss + siltstone

10. N 60° E / 70° N ss / siltstone
11. E-W / 33° S, N 45° W / 38° S, N 50° E / 41° S ss, dirty.

12. contorted, convoluted bed'd siltstone beneath ss.
ss: N 80° E / 72° S
13. ss E-W / 45° S at. ss ridge terminates at E side
of creek bed. Convoluted siltstone across creek
along dia. of strike. Buff med grained ss w/ siltite.
14. N 85° W / 33° S. rocks like note 2 C-1. Sed.
flow features on base. Thin sh.
15. N 64° E / 35° S ss as above
16. N 80° E / 37° S convoluted bed'd siltstone just
north
17. N. 88° E / 35° S buff med grained ss w/ siltite.

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Acetate Sheet C-2 (E/2, U/3 May. Mtn 45W)

47' x 9' good) NOTES

1. N 75° E / 48° S red. flow on ss.
2. N 75° E / 78° N "
3. Fe rich ss SiO₂ reoxidation.
4. N 65° E / 75° S thin 1' ss in blk sh. + fine siltstone.
5. N 80° E / 25° S fine siltstone - good exposure.

29 ~~3~~ Acetate Sheet C-3 (W/2, M/3 mag. with 4 SW 17 1/2'
quad) NOTE

1. Ranch N60°E/19'E
2. N70°E/28'S ss.
3. N65°E/19'S sat siltstone.

30 Corotate Sheet C-4 (E/2, M/3 Mag Netn 4SW 7 $\frac{1}{2}$ g and

NOTES

1. N 73° E / 20° E ss
2. N 80° E / 17° S
3. N 65° E / 24° S ss ledge 3 $\frac{1}{2}$ thick.
4. N 75° E / 21° S thin ss ledges to 1 $\frac{1}{2}$ '
5. N 80° E / 09° S est. ss.

Qcator

30

~~Sheet~~ - sheet C-5 (W/2, L/3, Mag with 950 7¹/₂ quad

NOTES

38 acetate sheet C-6 (E/2, L/3 May 1964 450 7 $\frac{1}{2}$ g wad
NOTES

1. N 15° E / 3' W
2. N 70° E / 12' W
3. N 48° W / 5' S

37 Acetate Sheet D-1 (W/2, W3, Mag. Mfn 4SE 7¹/₂quad)

Notes

1. N70°E/62°N same type rock as @ note 4 C-2
2. N72°E/65°S "

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Acetate Sheet D-2 (E/2, U/3, May Mtn 4 SE $7\frac{1}{2}$ ' quad)

NOTES

1. N 80° W / 37° N sh
2. N 70° E / 60° S sh
3. N 75° W / 10° N sh.
4. N 75° E / 48° N sh
5. N 80° E / dip unknown - soil creep. ss.
sh. just down the hill (south)

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Acetate Sheet 0-3 (w/2, m/s May. Netn 45E 7 1/2' grid
NOTES

43 Acetate Sheet D-4 (E/2, m/3, Mag Mdn 45E 7 1/2' quad)

NOTES

45 Acetate Sheet D-5 (w/2, L/3 Mag Mstr 45E 7 1/2'
g und) NOTES

47

Acetate Sheet D-6 (E/2 L/3 May 1951 4SE 7 1/2' quad
NOTES

49

Measured Section on south flank Magazine Mtn.
marked as AS A-6.

THICKNESS (ft)

DESCRIPTION

- 6 ss. medium gray, very fine grained, very silty even bdd, bds 2 to 24". Ripple marks.
- 5.6 siltstone, sh interbedded. Siltstone med to dark gray irreg bdd. Bds 1 to 10". Sh. dark gray, silty bds to 1/8" in units up to 3". 60% siltstone. *Stygmaria* + *Cydularia* common
- 52.8 sh. dark gray. Bdding to 1/4". Siderite concretions to 1/2" ϕ . Some silty layers to 2" thick. Top of 2' fossiliferous zone 6' from top of unit. 6" siltstone 2' from top.
15. ss light to med gray, very silty, very fine grained. Bdding 1/16 to 3" irreg. Convolute bdding. Upright tree trunk 2' long, 6" ϕ @ base. Bds as much as 6" thick near top.
2. claystone medium gray
40. covered interval
- 30.6 ss very light to light gray, very fine grained, very silty. Silica cement. Fe stain. Soln cavities. Regular bdd. Bds 2 to 12".
6. ss light gray, very fine to fine grained, silty. Reg bdd. Bds 2 to 14".

50 Measured Section (cont'd)

14. ss very light to light gray, very fine to fine grained, silty. Irreg b'd'd, Bds $\frac{1}{4}$ to 6". Most < 3" thick. Well cemented.
9. ss very light gray, very fine to med grain. quartzose. Irreg & convoluted b'd'd. Bds 4" to 10".
11. covered interval
54. ss interbedded w/ siltstone. light to med gray, very fine grained, very silty. Irreg b'd'd. Bds $\frac{1}{2}$ to 2". Siltstone med gray in bds $\frac{1}{8}$ to $\frac{1}{2}$ ". 60% ss. Grades to 80% siltstone at top.

~~top Hartshorn~~
base McAlister

36. Siltstone - med to dk gray. Bds $\frac{1}{8}$ to $\frac{1}{2}$ " thick interbedded w/ dk gray silty sh. 70% siltstone @ base; 30% siltstone @ top
20. sh dk gray. Bds to $\frac{1}{4}$ "
4. ss light to med. gray, very fine grain, very silty, greenish cast on weathered surface. Contact w/ sh sharp.
10. siltstone - med. gray very finely sandy. Irreg b'd'd. Bds $\frac{1}{4}$ to 1". Some convolute bedding.

51 Measured Section (cont'd)

37. siltstone - med gray bds to 1/2" w/dk gray sh.
60% siltstone.
- 229 covered interval
43. siltstone - med gray, irreg bdd. Bds 1/2 to 3".
38. ss light to med gray, fine to med grain,
slightly silty. Bds 1 to 4' thick. Lower
contact sharp. Lens of dk gray sh. 5' from
base. Ss overlying sh has sh pebbles
to 5" ϕ in lower 1'.
13. siltstone - med gray, irreg bdd. Bds 1/4" to 2" thick
8. ss med gray, very fine grained, very silty.
Well cemented. Irreg + convolute bedding.
Bds 1/8 to 3'.
4. ss very fine grain, very silty (almost siltstone)
well cemented. Bds to 1'.
6. covered interval
- 32 sh dk gray silty. Siltstone med gray
Siltstone bds to 1'. 40% siltstone. Upper
3' of unit severely contorted by sediment
flow.

52 Measured Section (cont'd)

6. sh dk gray. Bdding to $\frac{1}{4}$ ". Ironstone concretions $\frac{1}{2}$ " thick x 2 " ϕ .

48. covered interval

4. sh dk gray. Ironstone concretions up to $\frac{1}{2}$ " thick x 2 " ϕ . Stringers of siltstone to $\frac{1}{2}$ " thick.

45. ss. light to med gray, very fine grained, silty - grey bed'd. Ripple marks current from S 20° - 40° E. Bds $\frac{1}{2}$ to 24 ".

100 sh dk gray, poorly exposed. 2 ' siltstone 45 ' above base.

115 sh dk gray bds to $\frac{1}{4}$ ".

top McAlester
base Savannah

112. siltstone - med gray, well cemented. abundant sediment flow features, some ripple marks, load casts. Bds from 1 to 12 " thick. Basal contact sharp.