Measured Sections

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOOSE-LEAF FIELD NOTEBOOK

9-137

1. Curtiss section ✓
2. East Cove Creek ✓
3. Sulphur Springs Hollow ✓
4. Calf Creek ✓
5. White Church #1. ✓
6. Upper Richland Creek ✓
7. Juanita School ✓
8. No name section ✓
9. Hersey Powell section ✓
10. White Church #2. ✓
11. Sweet gum Hollow ✓

SW ¼ Sec 2 13N-17W

Sulfur Springs Hollow

p. 1. Curtiss section 12-9-53

Location: ~~West~~ East side sec. 16 - T14N R19W

Gully section. Chisholm & Adkison

5' + C-1 Sh., dk. gy., wet., friss., to platy, base concealed, one layer (½-1") of siltstone in upper third.

5'3" C-2 Sh., as below w/ siltstone beds (½-1") 6" to 1' apart.

14"-2'1" C-3 Ss., F-M gr., limy, lt. gy. to lt. olive-gy., lower layey (3"±) is limy w/ clay stone pebbles, numerous, Ss. above lower 5" is VF to F., top 4"± is similar to lower 3", bedding is lenticular, same thin sh. partings.

4'2" C-4 Ss., Siltstone, sts. is med. gulsh-gy., platy to vy. thin bedded, Ss. beds (1"±) have some clay stone pebbles, lower 1'4 is mainly Sl/St. grades is mainly limy lt. olive-gy. VF-M Ss., vy-thin bedded lenticular.

p. 2 Curtiss section 12-9-53

5' C-5	Sts.-ltgnish-gy., Sh.-dk. gy., SS.-Lt. olive-gy. (limy). SS. beds are ½" to 3", sts. is platy, sh. is platy to fiss.
2' C-6	SS., limy, gnish-gy. sts. lenses (6") VF-F., lt. olive-gy., vy. thin bedded.
2'10" C-7	Sh., wcac. gnish-gy., med. gnish gy., platy,
3'10" C-8	SS., lt. olive gy., limy, clay stone pebbles, VF-M gr., thin bedded, few chert pebbles in top 3".
2'3"	Concealed.
5' C-9	SS., limy, VF-F-M gr., carb. frags., qtz. pebbles, med. dk. gnish-gy., claystone pebbles, vy. thin to thin bedded,
2'6"	Concealed
2'2" C-10	Sh., lt. olive gy, few claystone pebbles, limy,
10'	Concealed,

p. 3 | Curtiss section | 12-9-53

5' C-11	Ss., H.olive-gy, Fgr, limy, med. bedded,
5' C-12	Ss, as below
5' C-13	Ss., wea. brn-gy-, leached, med bedded,
5' C-14	Ss, as below
5' C-15	Ss, as below, thin to med. bedded.
10'6" C-16	Ss, as below
4'4" C-17	Ss., Fgr., limy, med-gy., few crin. frags.
10'	Concealed
3'7" C-18	Sh., med, gy., platy, 1/8"-1" siltstone beds,
5' C-19	Ss., Fgr., few qtzite & mudstone pebbles, med. gy., limy.
5'5"	Interbedded Sh., Sts, tSs, platy to vy. thin bedded, (dk-gy. Sh., gnish-gy. Sts., & lt. olive-gy. Ss.) mostly Sts. & Ss.

p. 4 Curtiss section 12-7-53

5' C-20	Ss. F gr., limy, med. gy., few claystone pebbles, lenticular vy. thin to thin bedded, X-bd in part.
2' 5" C-21	Ss., med. gy., F gr., wea., has partings (up to 1" thick) of sl. sh., lenticular 1" to 4" bedded.
5' 3" C-22	Sl. sh., lt. grnish-gy, not limy, platy to vy. thin bedded.
1' 9" C-23	Ss., F gr., few claystone pebbles, few siltstone beds, vy. thin to med bedded
2' C-24	Sh.-med. gy., & Sl. sh., H. grnish-gy., Sh. is fiss. to platy,
1'	Ss., F-M gr., limy, thin to med. bedded.
1'	Concealed
3' C-25	Siltstone, H. grnish-gy., lenticular platy bedded,
1' C-26 1'10"	Ss., med. gy., VF gr., not limy, Siltstone, as below.
4' C-27	Siltstone as below, has 2" bed of Ss. @ base & 3" Ss. @ top. Top Ss. is VF gr., H. olive-gy. Bottom Ss. is F gr., " " "

p-5 Curtiss section 12-9-53

5' C-28	Siltstone, as below
1'9" C-29	Siltstone, as below
5' C-30	SS, VF gr., lt. olive gy., slightly limy, 1"-9" bedded,
4' C-31	SS., as below, med. bedded.

CURTISS SECTION 12-10-53

C-32 4'10"	Med Lt. gray ss., Limy, f. grain, crinoid frags and other fossil frags. few ironstones in upper half. 1"-3" bedding. v. thin to thin bedded
11'	Concealed zone
C-33 5'	v f grain ss med gy some iron staining. thin to thick bedded.
C-34 2'4"	ss as below mostly thin bedded. top gradational into siltstone.
2'8"	Siltstone med. lt. gy. 1" bedding v. thin bedded. v. finely sandy
C-35 5'	Siltstone as below.
C-36 5'5"	Siltstone as below mudstone pebbles up to ½" thick in upper 7".

P. 6 CURTISS SECTION 12-10-53

C-37 SS- med to Lt gy v. f gr. silty.
4' 6". thick bedded.

7' Concealed Zone

C-38 f grained SS badly iron stained & leached.
5' Med. bedded (3)

C-39 SS as below
4' 6"

C-40 Lt gy siltstone (1' to 2" bedding) v. thin bedded.
4' 6" some beds med gy.

C-41 Med Lt. gy v.f gr SS few iron stone
4' 8" pebbles ¼" thick. v thin to thin bedded.

5' 4" Concealed zone

C-42 siltstone med Lt gy 2" to 4" bedding
5' 8" thin bedded. few clay stone pebbles.
v finely sandy.

5" v. F. Sand. Med. gy v. few iron stone pebbles
Med. bedded

C-43 Med. Dk gy sh. fissile to platy
6" silty in lower 3" (bottom)

3' 5" Siltstone, med gy to dk gy v. thin bedded.
Contains some med. gy shale partings
up to ¼" Few iron stone pebbles up to
½" thick.

8" v. f SS med. gy v. thin bedded. (top)

P.7 Curtiss Section 12-18-53

C-44 2'2" Med gy siltstone v. thin bedded. become finely sandy in upper 6"

C-45 1'4" ss v. f gr. Limy med gy (bottom) med bedded

1'2" siltstone med gy. v.f. Sandy. in part probably leached.

5" Shale DK gy. hard. fissile to platy. (top)

C-46 1'8" v.f gr. SS med Lt gy. Med. bedded.

3'9" Concealed zone

C-47 5' Med gy siltstone with Shale laminae platy bedded irregular wavy bedded.

C-48 2'5" as below siltstone.

5'6" Concealed zone.

C-49 5' SS v.f.gr. med Lt. gy iron stained. 2" to 10" bedding thin to med bedded.

C-50 5' ss as below med. bedded. some clay stone pebbles near center of zone

C-51 1'2" V. f SS silty

P.8 CURTISS SECTION 12-10-53

C-52 5'9" Siltstone br gy iron stained. 1" bedding v thin bedded. Few chalkstone balls less than ½". f. sandy. (may grade into f ss in upper ½)

11'2" Concealed zone.

C-53 1'5" ss f to m. gr. Ltgy. abundant brownish IRON specks, few M-mica FLACKS few shale pebbles 1/16" to ¼" thick. few carbonized wood fragments. 1" to 6" bedded v. thin to med. bedded

3'-6" Concealed zone

C-54 10" f grain ss med. Lt. gy IRON SPECKS. v thin bedded.

1'3" Concealed zone

C-55 5' v.f gr. ss Lt. gy. small gastropod (Cerion) Replaced in lower 1' (sl. limy in lower 1") v. thin bedded.

12-11-53

5' C-56 Ss., F gr., iron-stained, ~~v v thin bedded~~, lt. brnish-gy., some X-bedding? thin to med. bedded, bedding rather obscure.

5' C-57 Ss, VF to F gr., as below

p. 9 Curtiss section 12-11-53

5' C-58	Ss., as below, contains few claystone pebbles, wea. badly.
5' C-59	Ss., Fgr., scattered claystone pebbles, as below, bedding still obscure.
5' 5" C-60	Ss., Fgr. to F-M in upper 2'± w/ some mica flakes, otherwise as below, upper part forms a small overhanging cliff.
14' 4"	Concealed
5' C-61	Ss., F-M gr., heavily FeO stained, leached, mostly M gr., mass? bedded.
6' C-62	Ss., as below, few qtz. pebbles in upper 1'±, some x-bedding.
6' C-63	Ss., as below
7' 2" C-64	Ss., as below, some mica, some claystone pebbles (½") in lower 1'±.

Note: C-61 thru 64 forms mass cliff.

"

sec 15, T 14 N, R 19 W,

Note: Section described below is in the 1st gully to (N.) of previous section.

? E ?

82'-83'± Concealed zone from top of Hale Ss. to base of "Horn Mtn. Ss."

p. 10 | Curtiss section | 12-11-53

5' C-65	Ss, F gr., iron-stained, few mudstone pebbles & lenses, mass. bedded.
5' C-66	Ss., as below,
5' C-67	Ss., as below
5' C-68	Ss., as below, some med. grs.
5' C-69	Ss., as below, F gr.
5' C-70	Ss., as below
3'6" C-71	Ss., as below
	Note: C65-71 forms a mass. block w/ no bedding apparent.
38' ±	Concealed zone. About 5' of Ss. (in place?) occurs 10' above base of concealed zone. Concealed to "2nd. Sand" (To base of C-8?)

CURTISS SECTION 12-12-53

P. 11

Location: IN creek bottom IN 1st gully N. OF First CURTISS SECTION.

→ Hale SS.

3'4" concealed zone.

C-72 1' Gy blk shale. Fissile to platy.

C-73 8" Siltstone med. dk gy. thin bedded. trace of pyrite IN upper 3" very hard. olive gy. IRON stones 5" above base

C-74 7' Gy blk shale Fissile to platy has IRON stone courses up to 1" thick about 1' apart. few Lt gy Silt Lamillae IN Shale.

12-12-53

P. 1 EAST CAVE CREEK SECTION

Location: at head of East Fork of Cave Creek.

EC-1 Shale med dk olive gy Fissile to
2" platy Limy.

½" Siltstone Limy, dk gy, platy bedded.

1" Ls. med dk gy f gr silty f ool.
crinoid frags. bryozoa.

1" shale as below

1" Siltstone as below.

1½" Ls as below.

½" shale as below.

1½" Ls as below v. oolitic

1" Shale as below. v. weathered.

6" Ls as below. wl archamedes

EC-2 Ls med dk gy f gran. abundant crinoid
7" Frags, oolitic, brachs,

EC-3 shale. med. olive gy weathered silty. Fissile.
8"

EC-4 med dk gy Ls. f. grn oolitic, few Brachs
1'4" crinoids. med. bedded.

P. 2 EAST CAVE CREEK SECTION 12-17-53

4' 3"	Concealed Zone.
EC-5 3' 2"	v.f silty ss med. Lt gy. irregular wavy bedded. Carbonaceous material on bedding NW Limy in lower part to (v. thin to thin bedded) sl. Limy in upper part. Irregular 1" to 4" bedding.
EC-6 5'	v f ss med gy. Reddish brown iron specks. Leached. Massive bedded
EC-7 5'	v. f gr. ss badly iron stained. massive bedded
EC-8 5'	ss as below massive bedded. probably has plant imprints. f grained.
EC-9 5'	f grained ss plant imprints some cross bedding. Lt. gy SL Limy some iron staining. massive bedding.
EC-10 5'	ss as below. some dk sand grains. massive bedded Some cross bedding. plant fragments.
EC-11 5'	f grain ss plant imprints cross bedded.
EC-12 5'	ss as below cross bedding irregular 3" to 6" bedding thin to med bedded.
EC-13 3'	ss as below badly leached in upper 6" upper 6" has casts of brachs & crinoids few shale pebbles to 1/2" thick in upper 1' thick bedded

12-12-53

EAST FORK CAVE CREEK SECTION

P. 3

42 6"	Concealed zone.
EC-14 5'	f grain Lt gy SS. - leached - (has little cavities) thin to med. bedded. Some very small fossil imprints.
EC-15 5'10"	f grain ss thin to med. bedding few plant imprints in upper 1" some red Lt. pink stain in upper 3"
EC-16 3'6"	V.f ss Lt. gy. - Not Limy - 1" to 4" Lenticular bedded - v. thin to thin bedded. Little carbonaceous (?) material on bedding planes. Slight discontinuity at top of unit contact is gently undulating.
EC-17 5'	f gr. ss. Lt. gy IRon stained. Leached - has few small cavities. Cross bedded. med. to thick bedded.
EC-18 3'6"	ss as below.
EC-19 5'10"	f grain - as below. ss. - some cross bedding. Some cavities - maybe some fossil casts ?-
	- approximate top of HALE ss -

Spring 1954

Chisholm & Frezon
4-17-54

SULPHUR Springs Hollow Section SE¼ SW¼ Sec 3

T. 13 N., R. 17 W.
This section was measured along main stream in SULPHUR SPRINGS HOLLOW.

SS-1 Limestone, med. dk gy, v.f. gr upper part possibly 2'3"

Covered interval - probably dk gy to black sh with medium to thick lime. stone beds in some parts of the interval
Approximately ~~26'~~ 25'

About 5° apparent dip into stream

Recheck 11-10-54 - JCM & EEG - Conglomeratic, single bed; dk-gy v. limy siltstone matrix w/ clearstone pebbles, dk-gy ls. pebbles, fragments of prim. columnals, up to ¾" diameter, fossil frags, plant impressions

SS-2A 0' 2"

SS-2B Dk gy to blk sh with ironstone concretions up to 1½" thick in irregular beds 5' 6" (EEG) ~~4' 8"~~
(lower 1' poorly exposed)

SS-3 Med. gray, lenticular siltstone bed with shale bed 4" thick overlying it 2" to 4"

Shale 4"

SS-4 Medium gray, finely granular limestone with, plecy. crins and gastropods (?) in single bed. (a lenticular bed which pinches out; probably incl. as ls. lens in shale above and below) 6" shale overlies lens of limestone 0"-6"

Shale 6"

SS-5 Siltstone, med. gy, lenticular bedded, limy 0' 9"

Sulphur Springs Hollow Section -

SS-6	Shale, dk gy to blk fissile with ironstone bands 3'5"
SS-7	Sandstone, med thick bedded, f. grained limy, iron stained [rusty brown] original color gray? 6'9"
SS-8	Sandstone, lt. olive gray v.f. grained limy, thin bedded, containing plant impressions on bedding planes; crins, plecypods; some shale pebbles 2'0"
	Covered Interval 3'0"
NO SAMPLE	Black shale not sampled Wayne might have to swim for it! 2'0"
SS-9	Siltstone, limy, med. dk gy (5") overlain by dk gy to blk sh with ironstone lenses; sl. limy, platy bedded (1') 1'5"
SS-10	Siltstone to v.f. gr. ss, med. gy limy (1') overlain by (6") dk gy to blk fissile shale 1'6"
SS-11	Limestone, med, br. gy, silty, sandy many shale pebbles; crin. frags grades laterally into limy siltstone lenses with lime predominate 1'2"

Sulphur Springs Hollow section

SS-12 Siltstone, medium dark gray, limy v. thin to thin bedded 1'0"

Covered interval 3'0"

SS-13 Dark gray to black shale with scattered siltstone lenses; contains crushed crin. cols up to 1" in diam. One foot 10" above base 1" dk gy ls with crins, pelecs. and misc fossil frags. 4'6"

SS-14 Limestone, med dk gy, finely granular containing crins. brach. frags. 0'8"

SS-15 Shale dk gy to blk shale; some very fossiliferous with several thin (6") bands fossiliferous ls. which is med. dk gy.

Shale very fossiliferous with crins, bryozoa, brach. gastro(?) pelecy. frags 1'6"

Ditto for ls bands including trilobite tails SS 16 P

Sulphur Springs Hollow Section

SS-16 Limestone, med dk gy, crinoidal f gran., with crins, brach, bryo. Archimedes med. bedded. 0'8"

4/18/54

SS-17 Dk gy to Blk shale fissile Sl. Limy. contains ironstone concretions from ¼" 8'10" diameter and 10" across weathering rusty brown. scattered occurence of ironstone concretions.

10'± Missing interval - seems to be slumpy shale

SS-18 Dk gy to Blk shale containing. 2'6" Sl. limy ironstone concretions Sh. Sl. limy. - ironstone concretions max. 1½" diameter. (v. small) Shale fissile —

SS-19 LS., med dk gy. F gran. v. fossiliferous. — LS. v. Crinoidal. 7" Archimedes, crinoids, blastoid. bryozoa. brachs. pelecypods. Contains some partings of dk gy Limy Shale.

SS-20

6" Dk gy to BLK shale w/ thin silt stringers. Fissile

1'3" Siltstone. Lt gy. Sl. Limy. Sl. Sandy.

1'11" Fissile sh. dk gy to Blk. w/ Numerous v. thin to platy beds Sl. Limy VF gr. ss. to siltstone. In upper 6" shale becomes v. silty and hard.

Sulphur Springs Hollow Section

SS-20 (con't.)

7" Siltstone sl. limy. contains many thin blk shale partings. v. thin bedded to platy. – all siltstones in SS-20 are very similar.

SS-21 5' Shale – dk gy to blk. Fissile to platy. sl. silty.

2'2" above base. Siltstone lens 5" thick dk gy. sl. limy v. hard at base of SS-22 siltstone contains straight cephelopods. brachs. grastropods

SS-22 3"-11" dk gy to blk shale containg small round ironstone concretions

SS-23 1'4'11" Sandstone – med. gy. to lt gy. med. to thick bedded. v. f. gr. Containing few brach. and crinoid columnal molds.

SS-24 2'10" platy to v. thin bedded. – irregularly bedded. med gy sandy siltstone sl. limy. Containing fucoidal markings on bedding planes – bedding surfaces apparently determined by very thin shale laminae basal 8" of unit dominately shale w/ siltstone lenses. upper 8" of unit maybe conglomeratic? Loses bedding features. Contains black pebble material – maybe ironstone

1'4" upper 3" contains scattered fossils – crinoids, pelecypods gastropods.

Sulphur Springs Hollow Section

SS-24 con't 10" from top scattered LS concretions 1½" thick. Siltstone and shale as below.

SS-25 10" Shale dk gy to blk. Sl. silty. Upper 5" contains large siltstone concretions upto 5" thick and 2' in diameter. Shale limy contains bryozoa corals brach impressions. siltstone concretion dk gy, hard contains scattered fossil frags. (brachs, crinoids etc)

SS-26 1' 4" Sh. fissile dk gy to blk, v. sl. limy contains. gastropods, brachs. pelecypod impressions.

SS-27 2" to 6" LS - med gy, F gran., containg brach, bryozoa pelecypods, corals blastoids, crinoids- cephalopods. Lower few inches of shale over LS bed very fossiliferous, are some streaks of ds LS in it- w/ banding as in agates.

SS-28 6' shale dk gy to blk, w/ iron stone concretions. Fissile bedded. Maybe sl. limy. - concretions- from ⅛" up to ½" thick and are lenticular in nature. Sh fissile

SS-29 5' 9" sh. dk gy to blk. fissile trilobite frag. Contains scattered ironstone concretions Sl. Limy. 1' below top of unit LS bed. 3" thick LS. DK gy F grain. w/ brachs. corals and other fossiles contains ds Concretionary material

Sulphur Springs Hollow Section

SS-30 1'4"	V.f. gr. SS or siltstone. V. thin to med. bedded. SS v. hard.
3'±	Covered intravel.
SS-31 2'	Shale – dk gy to blk. upper 1" is conglomeratic silty shale. Contains blk ironstone pebbles Shale sl. limy.
SS-32 14'9"	dk gy to blk shale fissile. Containing few ironstone bands up to 1" thick, lenticular in fairly regular bands.
SS-33 0 – 1'6"	This bed is large lens 200'± Long. Siltstone. [illegible] gy to dk gy. thin bedded. Contains thin bands of ironstones – siltstone has partings of shale.
SS-34 9'-1"	dk gy to blk shale w/ scattered ironstone bands. up to 1½" thick.
SS-35 14'-3"	shale as below w/ ironstone bands as below.
SS-36 10'5"	shale w/ ironstone bands as below. V. fissile.
SS-37 7'9"	Shale w/ ironstone bands as below but more ironstone bands becoming quite Numerous.

Sulphur Springs Hollow Section

SS-38 5'9"	Shale as below w/ numerous siltstone and ironstone bands up to 1½" thick
	4/20/54
SS-39 11'0"	Shale as below w/ fewer siltstone & ironstone bands in upper 7'0"
SS-40 11'0"	Shale as below (dk gy to black fissile shale w/ rare siltstone bands)
SS-41 11'0"	Shale as below w/ few ironstone bands
SS-42 16'0"	Shale as below w/ few or no ironstone bands
53'±	Covered interval - probably shale.
SS-43 16'0'	Shale, dk gy to blk, fissile w/ lenticular platy siltstone beds or bands
8'0"	Covered interval - probably shale
SS-44 22'0"	Shale as below; little or no siltstone

Sulphur Springs Hollow Section

SS-45 11'0" — Dk gy to blk fissile shale with some platy siltstone beds; some ironstone concretions

SS-46 6'0" — Shale as below - siltstone content (bedded) increases upward - 50% siltstone in upper 2 feet
siltstone is medium grey to medium dark grey.
Overlain by sandstone
Measured on opposite side of Sulphur Hollow

SS-47 5'0" — Sandstone, f to m gr, med. olive gray limy, massive; soft & weathered?
some scattered shale pebbles -
fracturing with calcite vein filling
Some plant fragments

SS-48 5'0" — Sandstone as below - pitted weathering suggests ss is limy. Some shale pebbles
Not top of SS

Fri 4-20-54 11:50 AM

CALF CREEK SECTION 4-21-54

Location: NW¼, NW¼, sec. 7, T 13 N, R 17 W. Measured up hillside from stream bottom.

CC-1 22'0" Shale, dark gray fissile w/ sandstone bands up to 1" thick approx 3' apart

CC-2 22'0" Shale as below

CC-3 22'0" Shale as below - no sandstone bands present

CC-4 22'0" Shale as above containing scattered fissile to platy, medium gray siltstone

CC-5 22'0" Shale as below w/ siltstone as below

CC-6 21'0" Shale as below with siltstone as below
Some fucoidal markings on bedd plains
Some concretionary limestone layers near top of unit
Siltstone bed 3" thick 2' below top of unit, slightly limy, dark gray, thin bedded

Location of base of P.C. part of section:
NE¼, NE¼, sec. 12, T 13 N, R 18 W. Section measured along small side stream in a NW direction

Calf Creek Section (Cont'd)

CC-7 5'8"	Sandstone, medium light gray slightly limy, fine to medium grained, platy to thin bedded, contains shale pebbles. This ss appears to be deeply weathered. Few irregular shale partings present in upper ½ half of unit. Upper 4" contains plant & pelecy. impressions
CC-8 1'4"	Sandstone, medium gray fine grained platy to v thin bedded sandstone and dark gray to black fissile to platy shale in lenticular beds up to 6" thick
CC-9 2'5"	Sandstone f-m grained medium gray limy; few shale partings between very thin to thin irregular beds
CC-10 2'2"	① Base dk gy to blk fissile 6" ② Sandstone, medium grained limy, pelecypods, shale pebbles medium gray (iron stained) 8" thin to v thin bedded ③ Shale as ① 6" ④ Sandstone fine to medium grained top limey, shale pebbles, crin. cols. casts 1 bed, medium gray, 6" pelecy. casts.

Calf Creek Section (Cont'd)

2'6"	Covered interval
CC-11 13'10"	Shale, dk gy to blk, fissile, contains siltstone laminae Upper 2' has siltstone beds (numerous) 2" thick and lenticular
CC-12 ≤'0"	Sandstone, sl. limy, med. grained w/shale & quartzite pebbles, molds of crin. cols, thin to medium in upper part, irregularly bedded w/sh & siltstone partings Quartzite pebbles seem to be restricted to lower 2'0"
CC-13 5'0"	Sandstone, m. grained, medium gray sl. limy, w/ few shale partings, thin to med. bedded. Thin lenticular shale patches
CC-14 5'3"	Sandstone, brownish gray (ironstone) fine to medium grained, limy (very) medium to thick bedded; crin. cols. Some qtz. pebbles in upper part with m-coarse grs of sand
CC-15 5'6"	Sandstone, v. limy, f to coarse grained crinoid fragments; some quartz granules medium to thick bedded, con forms some shale pebbles, con forms few quartz pebbles, gastropods, pelecypods Many crins near top.

Calf Creek Section

CC-16 5'8"	Sandstone, as above. w/ gast, pelecy and numerous crins. Upper part is sandy ls to limy sandstone Weathers v. thin bedded
CC-17 4'6"	~~Sandstone as below~~ LS v thin bedded, m-c grained numerous crins.
CC-18 5'0"	Sandstone, v f to f grained very thin, flaggy bedded medium gray (s to brown (brown due to iron stain) considerably leached locally; crin col. casts.
Not Sampled 4'0"	Sandstone as below
CC-19. 4'0	Upper 3" - shale, dk gy to blk fissile Sandstone as below
CC-20 5'6"	Sandstone, f to med grained, medium gray, iron stained, leached, limy, some coral colonies, medium to thick bedded

Calf Creek Section

CC-21 7'6" Sandstone as below.
Upper 4" Sandstone, V fine to fine grained, contains numerous shale pebbles

2'0" Covered interval

No Sample 2'4" DK gy to blk fissile, weathered shale

CC-22 4'2" Sandstone, medium grained, heavily leached thick bedded, v limy where not leached, heavily iron stained. Unweathered color medium gray.

28' Cover interval

CC-23 4'0" 2' (Lower) Gray, fissile shale
2' DK gray to black shale with much med gray limy siltstone as stringers and irregular beds

CC-24 7'4" Siltstone, sandstone, shale in very thin beds.
Upper 17 inches is a dk gy to blk fissile shale

Medium gray siltstone
Medium gray fine grained sandstone

Calf Creek Section (Cont'd)

CC-25 5'6"	Sandstone, v f to f grain very thin to thin irregularly bedded with some irregular siltstone beds & dk gy to blk shale partings
CC-26 5'0"	Sandstone, v f to fine grained lt olive gray, ironstained, platy to thin lenticular bedding irregular,
CC-27 5'6"	Sandstone, fine grained medium to thick bedded fine grained, containing shale pebbles
CC-28 9'0"	Sandstone, fine to medium grained massive, v heavily ironstained leached; medium bedded in lower 2'
CC-29 11'0"	Sandstone as below; very limy when not leached, fossil casts in upper 2' - crins, brachs.? gastro pelecy.?
	4-22-54
8'10"	Covered interval
CC-30 5'5"	Sandstone, very thin to thin bedded soft & badly weathered, very limy once, f-m gr silty; in upper 1' 2" streaks of silty shale
21'0"	Covered interval

Calf Creek Section (Cont'd)

CC-31 5'0"	Shale dk gy to black, fissile, interbedded w thin to v thin bedded medium gray siltstone
CC-32 4'8"	Siltstone, medium gray, thin bedded hard; has few shale beds 3" in thickness (dk gy to blk sh.)
26'0"	Covered interval At 19'-1' silty fg ss not sampled
CC-33 6'0"	Sandstone, v fine grained, silty, leached?, massive bedded; contains shale pebbles - rather poorly exposed at foot of 15' waterfall v limy except where leached
CC-34 5'6"	Sandstone as below; forms cliff face; cross laminated
CC-35 5'4"	Sandstone as below
CC-36 7'0"	Sandstone as below - top of waterfall
38'0"	Covered interval

Calf Creek Section

CC-37 6'0" Sandstone, thick to massive bedded coarse to very coarse grained plant impressions; contains shale pebbles; X bedded base concealed - probably not over 10' to base of unit

CC-38 20'0" Sandstone, massive, light brown siliceous, coarse grained, trace of plant material, micaceous in upper 2'

CC-39 40'0" Sandstone, coarse grained, thick to massive bedded, micaceous; contains plant material.

4-22-54 10:50 AM

White Church Section

Location: NW¼, SE¼ Sec. 11, T 13 N, R 18 W; This section measured northward along small tributary to one of the main forks of Bobtail Creek.

CH-1 1'0" — Sandstone, medium brown, limy? silty. As much as 5' exposed in the main gully to the S.W.

CH-2 7'6" — Shale dk gy, v thin bedded to fissile with thin bedded medium gray siltstone. Shale may be silty

CH-3 4'3" — Sandstone, f to m grained, lt brownish gray glauconitic; contains calc. fossils base of cliff. Contains some coarse sand grains - Appears to be a clastic limestone.

CH-4 1'5" — Sandstone as below - more X laminated

CH-5 2'0" — Sandstone, light brownish gray, fine to medium grained, some X lamination

P sample — Gastropods concentrated near base; scattered throughout - rests with bedding break on underlying ss ½" shale at base; gastropods

White Church Section

CH-6 2'0"	Sandstone as above containing crinoids, geniatites, gastropods P sample
CH-7 4'0"	Sandstone as below lt brownish gray, very limy, fine grained massive, x laminated, silty, containing plant impressions and crin. cols.
CH-8 5'0"	Sandstone f-med. grained, lt brown-gray, v. limy, silty, basal 1'0" thk bedded otherwise massive - is thin bedding weathering
CH-9 4'0"	Sandstone, medium br gray, fine to med. grained, very limy containing shale pebbles Thin bedded with thin beds fissile dk gy to blk sh. SS has crins & gastropods; ss contains shale pebbles
CH-10 4'5"	Sandstone and shale as below
CH-11 4'1"	Sandstone as below - appears to be badly leached

White Church Section

CH-12 5'4"	Sandstone & shale as above with thin bedded siltstone. limy.
15'	Covered interval; probably blk. Sh.
CH-13 5'0"	Siltstone, light gray, non-limy, thin to very thin bedded, dk. gy shale partings which are fissile shale Shale beds upto 3" thick
CH-14 5'0"	Siltstone and shale as above
CH-15 3'11"	Siltstone, ¼" thin to medium bedded, light gray, hard, non-limy
CH-16 2'4"	Limestone, oolitic, sandy, light to medium gray fossiliferous (crins, brachs, pelecy(?), gastro.). Are these oolytes or coated sand grains? (SEF) "P" samples taken.
4'0"	Covered interval
CH-17 5'6"	Shale, dark gray, fissile with beds of siltstone ½" to 2" in thickness

White Church Section

CH-18 5'8"	Same as below except siltstone beds increase in thickness and number; some siltstone "rolls"; concretionary?
CH-19 6'0"	Siltstone, thin to medium bedded light gray, hard, v finely sandy interbedded with thin beds of v fg grain sandstone - mostly siltstone
CH-20 4'2"	Siltstone as below
	4-23-54
CH-21 5'3"	Sandstone, medium brownish gray, fine to medium grained, very limy; cross laminated
CH-22 5'3"	Sandstone as below
CH-23 5'3"	Sandstone as below.
CH-24 5'0"	Sandstone as below

White Church Section

CH-25 5'0"	Sandstone as below
CH-26 5'0"	Sandstone as below
CH-27 3'8"	Sandstone as below; badly leached but probably originally limy
41'	Covered interval - probably dk gy to black fissile shale The gully to the north has a 5' exp. of shale about 10' above underlying sandstone
CH-28 2'0"	Shale dk gy to blk, fissile; a good clay shale
N.S.	Sandstone; Horn Mountain at least 50'

At or K3

4-24-54
Frezon & Glick

UPPER RICHLAND CREEK SECTION

Section starts in top of Pitkin limestone about 50' above Richland Creek in SE¼ NW¼ Sec 12 T 13N, R 19W

(Note dip $\overset{S}{\searrow}{}^{30}_{15}{}^{\circ}SE$ taken into account on well exposed lower 100' of section)

UR-1 9' 0"	Limestone, medium dark gray thick bedded finely granular oolitic contains crinoid columnals - both small and large (to ½" in diameter), Archimedes Probably thin black shale partings between some of the limestone beds.
3' 4"	Covered - may be partly shale Pitkin top is in this interval
UR-2 9' 2"	Sandstone, medium gray fine to medium grained massive, conglomeratic, abundant white quartz pebbles to ½" in diameter. Slightly limy
UR-3 6' 7"	Sandstone as #2
UR-4 6' 7"	Sandstone as #2
UR-5 7' 3"	Sandstone as #2
UR-6 8' 5"	Sandstone as #2. Evidence of channeling on a small scale in this unit. One lenticular "Channel" contains silty conglomerate and dark gray lenses of shale

Upper Richland Creek

UR-7 5' 10"	Sandstone, yellowish-gray, fine- to medium-grained, thin- to thick-bedded. Lower ½ of unit is thin bedded - irregular lenticular beds of shale, ¢ss, w/ qtz pebbles. Upper ½ is fine grained sandstone with few quartz pebbles.
	Note: lenticular beds in #7 & #8 containing shale lenses out within 30' along outcrop and leave a solid section of conglomeratic sandstone
UR-8 4' 6"	Sandstone, olive-gray, fine to medium-grained, thick to massive bedded. Conglomeratic - white quartz pebbles - more abundant along bedding - planes - these shale pebbles to 3/4" in diameter
UR-9 6' 0"	Sandstone as in #8 - quartz pebbles are restricted to a few scattered in lower ½ of unit. - upper ½ weathers to a rounded ledge.
	Note - crops above #9 are all bedded and banded in contrast to the much more massive sandstone below. Upper beds cross-laminated toward South-east
UR-10 6' 7"	Sandstone, olive-gray, very thin to medium-bedded, non-limy, very-fine to fine grained. Banded - from weathering - very tiny thin black shale lenses - less than 3/4" across & ¼ inch thick

Upper Richland Creek

UR-11 8' 4"	Sandstone as in #10 - dk gray shale partings to 1" thick.
UR-12 6' 0"	Sandstone, light gray to light olive-gray very thin to thick-bedded very fine to fine grained cross laminated - laminae cut across 1/2" - 6" beds, non-limy free shale partings
UR-13 6' 3"	Sandstone as #12 - beds slightly thicker
UR-14 5' 9"	Sandstone, olive-gray, very thin to medium-bedded, very fine to fine-grained, hard, cross lamination well shown by wind(?) erosion
UR-15 8' 1"	Sandstone as #14 - dark-gray fissile shale partings. to 1/2" thick
UR-16 12' 2"	Sandstone as #15
UR-17 12' 8"	Sandstone, light gray, thick to massive bedded fine to very fine grained, contains only small (1/2" by 1/16") lenses of shale - in lower 1/2 only.
UR-18 6' 0"	Sandstone, light olive-gray, medium to thick bedded, fine to very fine grained, small shale chips and lenses. 10" bed 1' above base contains white quartz pebbles. shale chips make up more than 50% of rock in some lenses to 2' thick

Upper Richland Creek

UR-19 7" 0" — Sandstone as 18. except no pebbles

UR-20 13' 6" — Sandstone, light olive-gray, fine to medium-grained, thin to medium bedded - strongly cross-bedded scattered quartz pebbles; trace shale chips.

Note: overlying beds are very thin - no cross bedding

UR-21 7' 3" — Sandstone, light gray - very thin to thin-bedded very fine to fine grained. Irregular black shale laminae and partings to ½" thick

UR-22 6' 6" — Sandstone and shale as in 21 but beds are very thin to fissile - about 50% shale, 50% sandstone (or siltstone) (micaceous)

UR-23 7' 11" — Sandstone and shale as in 22

UR-24 6' 2" — Sandstone light gray to light olive-gray fine to medium grained, thin to medium-bedded, slightly cross-bedded - no shale beds.

184' 0" — Covered interval - dip 10° figured in this interval - appears to be mostly black shale

212' at 15°
134' at level

dip 18° S 60° E
traverse N 70° E

Upper Richland Creek Section

4-25-54

UR-25 10'4" Sandstone, olive gray to medium gray, very thin to medium bedded, f-uf grained w/ dk gy to blk, silty, micaceous shale interbeds (fissile) Some of ss occurs as rolls up to 18" in thickness. Shale and siltstone beds in this interval predominate. Most of the ss has thin shale pebbles(?) in it

UR-26 12'1" Sandstone, medium gray to brownish gray, medium to thick bedded, very fine to medium grained, non-limy, silty, contains some scattered shale chips (pebbles) and v thin interbeds and partings - some shale beds 4" thick Contains scattered plant impressions

UR-27 9'6" Sandstone, massive bedded, weathers yel-brown, f-m grained, slightly X laminated, probably limy, porous where leached, shale chips in lower 18"

UR-28 5'6" Limestone, medium to thin bedded brownish gray, contains abundant f-v c sd grains, crins.

Upper Richland Creek Section.

U.R-29 2'0"	Siltstone, Olive-gray, thin bedded, non-limy, micaceous, with shale partings
U.R-30 10'0"	Sandstone, brown, fine grained, leached, massive bedded; grades into upper 5' of medium gray very sandy limestone containing brachiopods, bryozoa which is sandy.
U.R-31 2'0"	Shale, dark gray to black, fissile.
U.R-32 19'0"	Sandstone, brownish gray, massive, very limy except where leached, m-c grained x laminated; one massive bed on cliff face. Grain size decreases to fine silty sandstone 5' up in unit. Top 3' of unit is gray sandy ls. Transition zone not sampled on cliff face.
U.R-33 8'0"	Sandstone, medium gray, thin bedded very limy; fine to medium grained deeply weathered in part; contains thin blk mic sh. partings and pebbles.
UR 34 8'0"	Sandstone as below, glauconitic; finer grained & more silty Upper 2' slightly coarser sand and very limy

Upper Richland Creek section

UR-35 10'0"	Shale dark gray, fissile, interbedded with v. thin to platy siltstone. Lower part not too well exposed - Appears that number of siltstone beds increase upward
UR-36 8'10"	Siltstone, v thin bedded, brownish gray, hard, interbedded w/ dk gy fissile shale; upper ½ of unit may be v f gr ss interbedded w/ shale
UR-37 6'3"	Sandstone, brownish gray, f to med grained, v. limy, containing coarse sd grains; shale partings & chips x laminated; contains casts, brachs. Thin to medium bedded.
UR-38 10'3"	Sandstone as below 1' non-limy siltstone w/ base 3' from top of unit
UR-39 8'6"	Sandstone, brownish gray, v thin bedded, limy, fine grained interbedded with olive-gray siltstone
UR-40 4'0"	Lower half same as below Upper half med. bedded, yellowish brown, slightly limy, fine grained sandstone.

Upper Richland Creek Section

UR-41 4'9"	Sandstone, fine to medium grained badly leached, probably very limy locally x bedded with coarse ss grains, gastropods, crins, shale pebbles & partings in x'bedded portion
UR-42 3'4"	Sandstone, brownish gray, thick bedded (1 bed) fine to medium grained, very limy
UR-43 3'6"	Sandstone, Thin to medium bedded Olive gray to brown, very fine grained, non-limy, hard siliceous fucoe shale pebbles along bedding planes.
UR44 7'5"	Siltstone, very thin to fissile bedded Olive-gray, contains lens & beds of f-m gr ss up to 4" thick- a small part of the unit
UR-45 16'0"	Sandstone, massive Very limy except where leached, brownish gray V fine to fine grained
9'6"	Covered interval, probably ss as above and below.

Upper Richland Creek section

UR-46 2'10"	Sandstone as in UR-45, contains plant impressions
27'6"	Covered interval
UR-47 15'4"	Sandstone, brownish gray (weathered) massive, v fine to fine grained badly leached.
12'8"	Covered interval
UR-48 3'4"	Sandstone, very thin to medium bedded, brownish gray, silty very fine grained, badly weathered grades upward to siltstone in upper 1'0"
UR-49 8'3"	Sandstone, massive bedded, yellowish brown, badly weathered, v fine to fine grained
10'6"	Covered interval
UR-50 2'10"	sand stone, thick bedded, vf-f grained yellowish brown, badly weathered

Upper Richland Creek Section

10'0"	Covered interval - possibly siltstone
UR-51 3'10"	Siltstone, medium to dk gy v thinbedded to fissile
48'	Covered interval - surface littered with shale frags. Interval is probably black shale
	Atoka sandstone - base not exposed - probably close to base
	Completed 4:50 PM - 4-25-54

4-27-54
Chisholm & Frezon

Juanita School section

Section measured in small stream northwest of Juanita School in C N½ sec 12 T. 15 N., R. 19 W. Newton County Ark.

19W
C2

JS-1 2'6"	Limestone, alive gray dense, numerous clear calcite stringers brecciated? Oolitic?; thin to thick bedded.
JS-2 0'9"	Limestone, medium gray dense w/ few clear calcite stringers; medium bedded
JS-3 0'4"	Limestone; dark to med gray dense to finely xlline; contains brach. frags. A single bed
0' 4"	Covered interval
JS-4 1'6"	Limestone, dk gy to v dk gy v finely granular, small patches secondary calcite; Thin to medium bedded
JS-5 1'8"	Limestone, olive gy to dk gy + v dk gy vf-f granular, contains calcite stringers & xlls; thin to medium bedded - contains brachs; 1" lens black dense chert at base of unit

Juanita School Section

JS-6 2'0" Limestone, olive gray to v dk gy v finely granular to f xlln (in part) v thin to thin bedded irregular.

JS-7 1'8" Limestone, light to medium olive gray, dense with few xlln calcite stringers irregular thin to medium bedded

JS-8 1'8" Limestone, finely granular to finely xlline, light olive gray, thin to medium irregular bedded

JS-9 2'5" Limestone as above - olive gray color

JS-10 1'4" Limestone, dense to v f granular m. olive gray; contains blachs.; some xlln calcite, irregular thin to medium bedded; top contains chert as JS-11

JS-11 2'0" Limestone, medium to light olive gray finely granular, lt olive gray dense chert abundant in upper 4" (above) contains brachs; calcite stringers irregular, thin to medium bedded chert is present in whole

Juanita School Section

JS-12 0'7"	Limestone, olive gray, v f granular to fedeysg, v thin to thin irregular bedded w/ calcite stringers.
JS-13 3'6"	Limestone medium x'lln, medium light olive gray, containing crins breaks, pink x'lls Unit is base of Fernvale ls. thin to medium, irregular ls
JS-14 2'9"	Limestone as below, medium to thick bedded
4'2"	Covered interval
JS-15 5'0"	Limestone Light olive gray, thick to massive bedded, finely granular to medium x'lln w/ pink x'lls. Lower St Clair; crins, breaks. contains c x'lln calcite.
JS-16 5'0"	Limestone as below.
JS-17 3'0"	Limestone as above
JS-18 0'9"	Sandstone, fine to medium grained, m light gray, contains phosphate pebbles black. Iron stained

Fini 4-27-54 11:AM.

No Name Section 4-27-54

Lower part of section measured on east side of Cave Creek in NE¼SE¼ Sec. 14, T. 15N. R. 19W.

N.S. 2'8"	Dolomite, fine grained olive gray (weathers olive gray) sandy, a dolomitic ss in lower part
N.N-1 2'0"	Sandstone, white fine grained friable, greeny weathering stains white to v lt gy, thin to medium bedded slightly lenticular with suggestion of X bedding
NN-2 7'0"	Sandstone as below - massive to thick bedded
NN-3 6'0"	Sandstone as above, thin to medium bedded, X bedded
NN-4 3'8"	2'6" Sandstone as above medium even beds - slightly finer grained
	0'6" Missing interval
	0'8" Sandstone as above

No Name Section

4'8"	Covered interval
NN-5 3'1"	Sandstone, v fine to fine grained med olive gray very limy medium to thick bedded
NN-6 0'6"	Sandstone, very light, v f-fine grained - / bed - medium bedded

4-29-54

Section at upper St Peter sandstone and upper part of middle unit of St Peter in SE¼ Sec 13 T.15 N., R. 19 W. Section measured in main stream channel

NA-1 0'10"	Siltstone, medium gray, thin to medium bedded, v finely sandy, sl. dolic? hard
NA-2 0'7"	Sandstone, medium greenish gray, limey fine grained, thin bedded
NA-3 5'6"	Siltstone, medium gray, v. finely sandy thin to medium bedded, hard
NA-4 1'9"	Thin bedded Sandstone, gn-gy, fine grained ^ 2" Shale, gn-gy, silty, platy-v thin bedded 4" Sandstone, gn-gy, f grained, v thin bedded 1'3"

NA-4

NA-5	Shale, gn-gy, silty, Platy - v thin bedded	0'3"
0'9"	Sandstone, gn-gy, vf-f gr. limy, v thin bedded	0'2"
	Sandstone v lt gy to wh - small gn. lent sh. frags parallel to bedding. v thin bedded	0'4"
NA-6	Shale gn-gy, silty	0'1"
2'3"	Sandstone, gn-gy gn-gy, sl limy v thin-thin bd	2'2"
NA-7	Sandstone, v lt gy, f gr, fairly hard	0'2"
0'10"	Sandstone, med. gn-gy, v thin bd silty, v limy ss	0'8"
NA-8	Sandstone f-m gr, sl limy w/ v small gn shale frags; m lt gy-m lt gn gy. Thin to med. bedded	0'8
NA-9	Sandstone, v lt gy to v. lt gn-gy f gr v limy w/ gn-gn gy v. small shale frags. V. thin bedded	0'5"
2'9"	SS as above, gn-gy, frags of sh larger, more numerous; limy; frags compose up to 50% of the rock.	0'2"
	Sandstone, f-m gr, v limy to v limy lt gn-gy; part is leached; scatt gn sh frags in upper part	2'2"
NA-10	Siltstone, m br-gy; sandy siltstone, with gn patches	1'0"
2'0"	Sandstone, f-m gr, gn-gy w/ gn-gy gn sh frags; limy.	1'0"
NA-11	Shale, gn gy, iron stained, sandy	0'5"
0'10"	lenses, scatt. sd grs.	
NA-12	Sandstone, fine to medium grained, v lt gy thin to medium bedded	0'7"
0'7"		

NA-13 1'5"	Sandstone; lt gy to gn gy mottled, thin bedded, f grained, sl limy w/ emerald gn sh partings 0'10" Shale, gn gy w/scatt sd grs, v. thin bedded to platy 0'7"
NA-14 1'4"	Sandstone, v limy, thin bedded 0'4" Siltstone, dk gy, sl. limy w/scatt sand grains, v thin-thin bedded 1'0"
NA-15 2'10"	Sandstone, v. limy, med lt gn-gy f-m gr. thick bedd (top medium)
NA-16 5'4"	Sandstone, white to v lt gy, gn-gy stained v limy, medium to thick bedded varied from in hardness - hardest limy
NA-17 7'0"	Sandstone as below
NA-18 4'6"	Sandstone as below, v lt gy, non limy stained lt br-gy, f-m gr.
NA-19 6'1"	Sandstone as below
NA-20 4'0"	Sandstone as below w/ irregular patches of dolomitic, dk gy ss
NA-21 6'6"	Sandstone as below w/ f x lm dk gy, dolomite masses; gradational into sandstone; ss is probably thick bedded

NA-22 0'10" Dolomite, med-dk gy, f grain sandy, m. bedded

NA-23 0'8" Sandstone, v lt gy, f to med grained

NA-24 3'0" Dolomite medium gray. Thin to medium bedded, finely granular, sandy dol

NA-25 2'3" Dolomite as below w/ few calcite or dolomite xtls; v sdy to w/scattered

NA-26 3'5" Dolomite, med dk gy, f grain, med bedded dol, sandy. Lower 10" non-sandy

NA-27 0'7" Sandstone medium light gray & medium dark gray mottled light gray, limy; dk gray dolomitic, fine to medium grained

NA-28 2'8" Limestone, v finely granular, medium light olive gray; in top of unit gy-grn sh sticks upper surface uneaven under overlying dolomite, is may be large, lens-like deposit in dolomite.

NA-29 2'7" Dolomite, medium to dark gray, finely granular, sandy to very sandy. Upper 1' Contains white limy ss stringers

NA-30 Dolomite, medium olive gray, dense 4"
Dolomite as below, with sdy orthoquartzite with small pockets of dolomite as below 3"
Dolomite, med dk gy, f grain, sdy 1'1"
med bed in all

NA-31 1'4"	Dolomite, v f granular w/ scattered sand grains, calcite stringers; near base 6 x 1/2 in calcite
NA-32 2'0" chert at	Limestone, light gray, v f granular w/ small calcite veinlets; contains chert lenses; light blue gray v f granular chert.
	Location: NW 1/4, SW 1/4, Sec. 18 R 18 W, T 15 N this section measured in small side gully trending in a Eastward Direction very close to the western border of Sec. 18.
	St Peter Sandstone - Not sampled
7'6"	Covered interval
NB-1 6'6"	Limestone, light olive gray dense w/ small stringers of clear calcite (some patches); v thin to med. bedded
NB-2 5'10"	Limestone as below - some green weathering streaks; appears to be thin bedded
NB-3 2'1"	Limestone, medium gray, v f gran - dense w/ dense lighter spots, med - thin bedded.
NB-4 5'9"	Limestone, dense, med. light olive gray with few calcite stringers, thin to medium bedded
NB-5 2'6"	Limestone light olive gray, dense with stringers of crystalline calcite, medium to thick bedded

NB-6 4'9	Ls as below; lower bed (3") medium gray v f gran-dense w/ few scatt. calcite crystals and stringers. Upper 4'6" Limestone, light olive gray dense with few calcite stringers; medium bedded
NB-7 1'4"	Limestone, medium gray, f-v f gran. v. thin to thin bedded
NB-8 4'6"	Limestone, v thin to thin bedded dense light olive gray to medium gray w/ scatt calcite blebs.
NB-9 5'3"	Limestone as below; thick to medium bedded — contact sharp with Fernvale ls
6'8"	Fernvale Limestone — not sampled Top is good
2'3"	Covered interval
NB-10 2'7"	Shale light brownish gray, limy platy to v thin bedded
1'5"	Covered interval
NB-11 11'0"	Shale, medium gray, weathers br-gy, platy to v thin bedded - gn-gy where dry
NB-12 6'5"	Sandstone, f-m gr, contains black phos. grs, calc. limy, wh. to v lt gy
	St Joe limestone Complete 4-29-54 3:30 PM

Checked & changed by E.G.E. SFF

HERSEY Powell SECTION T 16 N R 19 W

→ SW ¼ SE ¼ Sec 36 APRIL 28, 1959

Location: NW ¼, NE ¼ Sec. 1, T. 15 N, R 19 W. This section was measured along a small stream starting 1' above the level of the Buffalo River. This section was measured in a N NW direction.

base of section 1'± above Buffalo River

HP-1 5'-3"

Dolomite, very thin to thin bedded. Lt gy to Lt. yellowish gy F gran. weathers v. Lt. yellow gy to v. Lt. gy. Chalky surface silty. Lower 1'-6" appears to be more weather w/ fissile to platy bedding (?). surfaces. before weathering thicker bedded Appearance - med. to thick bedded.

HP-2 5'-3"

Dolomite as below

HP-3 5'-3"

Dolomite as below

HP-4 5'-3"

Dolomite as below

HP-5 2' 0"

Dolomite as below.

Top of Powell Dolomite apparently no weathering break between Powell and Everton.

HP-6 1'

Dolomite F. gran., to very F. xlln v. sandy F to med sand grains. Lower 5" contains irregular angular chert fragments which run generally less ¼" diamater w/ a few up to 1" Long. med. bedded

Hersey Powell Section

HP-7 2'-3"	dol. med gy. ~~[illegible]~~ thin to med. bedded. F. gran. to F xlln. Upper 2"-3" contains vugs. there maybe scattered sand grains. some coarsely xlln dol. scattered through unit.
HP-8 3'-1"	dol. bedding as before F. gran. to F xlln., sandy. med dk gy.
HP-9 3'	dol. as below. Lower 6" non-sandy
HP-10 3'-11"	dol. as below sandy. Sand rang everywhere from v. sandy to scattered sandy.
HP-11 5'-9"	dol. med gy. bedding as below. F gran to F xlln. containing only widely scattered sand grains. most of unit non-sandy. covered interval 1'2"
HP-12 6'-8"	med gy to dk gy. dol. bedding as below. F gran. to F xlln. Containing scattered sand grains but non- sandy for the most part. Darker colors seem to more coarsely xlln than lighter. 2' below top of unit red weathering surface may have been channel ?

HP-13 4" Sandstone med. gr. white single bed. weathers reddish brown

HP-14 1'8" Dolomite Lt g. VF xlln to F gran. thin to med. bedding

14"-1" Covered interval

HP-15 2'-9" Dol. thin to med. bedded F xlln. med to Lt. gy.

HP-16 1'-11" SS. bedding thin to med irregular. White, Friable F to med gr. Limy. or dolomitic? Contains pebbles and cobbles semi-angular of gy F xlln. dol. Max. diameter 8" + may be secondary, origin as some type of Epithole OR Sink ?

4'-10" Covered interval

HP-17 2'-11" dol. v. hard thin to med. bedded DK gy. F gran. to F xlln. Non-Sandy.

HP-18 5'-1" SS thin to med. bedded White F. gr. SOFT friable

Top OF section ends on Flat- no more exposures.

May 6, 1957

White Church Section # 2

Location: In gully about 200' North and parallel to white church section # 1 The base of this section is equivalent to the base of the White church section This section was measured along the stream bottom, up the stream.

NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 11, T 13 N, R 18 W.

CHS-1 9'-2" SS - thin to thick irregular bedded Cross-Laminated, brownish gy VF to F gr, Limy, Contains Shale chips, plant impressions base not exposed.

CHS-2 2'-11" very thin to thin SL. irregular bedded SS - Similar below. bR gy VF to F gr Limy except where Leached.

CHS-3 6'-11" V. thin to Fissile bedded Silty shale, Lower 2' more silty - above shale w/ Siltstone streaks.

40' Limy SS measured in Section # 1

CHS-4 4'-8" SS, - Cross-Laminated V thin to thin bedded. SS has Shale partings & stringers, br gy to Khaki colored, VF to F gr V. Limy NO break (Lithologic) between this and 40' of SS below.

CHS-5 10'-4" Shale, dk gy, Fissile w/ some bands of Siltstone up to 3" thick.

May 6, 1954

White Church section # 2

12'-6"	Not sampled as samples already taken in white church section #1 in the equivalent zone.
	(Total of 67'-6" from base of goniotite ss bluff to base of LS- have 2 samples at top of LS in white church section #1)
Ch5-6	LS- thick to massive bedded Lenticular along the outcrop From 5" to 10" in thickness For total
10'	unit in vicinity where section was sampled. Med to dk gy v. Sandy in part, Sand F gr. Fossiliferous cross-laminated., brachs, bryozoa & gastropods in LS- top 1' of unit very Foss. Ls. F grain.

APRIL 28, 1954

SWEET GUM HOLLOW

SG-1 2'-10" med gy F. gran to F xlln. thick to massive LS. contains brachs. Scattered throughout outcrop are lenticular nodules of chert ranging from ½" up to 2" in thickness chert is dk br. gy - (in this unit SG-1) Chert seems to occur along bedding planes - tends to form bands.

top of platform LS.

SG-2 2'-5" LS- med to thick bedded- F gran to med xlln. probably med gy color. w/ pinkish xls weathering to Lt gy w/ pink xls. contains crinoids.

SG-3 4'-5" LS. as below. contains- crinoids, brachs, coiled cepalopod, and straight cephalopods.

Top not exposed - concealed interval.

Location: NE ¼, SE ¼ SEC. 31, R18 W, T16 N. measured along along hill slope very near eastern border of sec. 31