Ozone

Sections

Ozone Quadrangle, Ark
Sections

Spadra Creek 1-6
Rock Creek 1-12
Narrows Faultblock 1-50
Hagarville Mountain 1-5
Atoka Base 1-30
Steep Ozone 1-20
Strawberry II 1-3
Narrows West 1-3

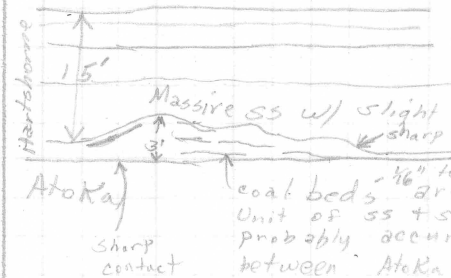
Sections

Monday
Oct 5, 1959

Colony Mtn - NW edge
Ozone - Knoxville quad boundary
T10N R22W - NE corner Sec 26

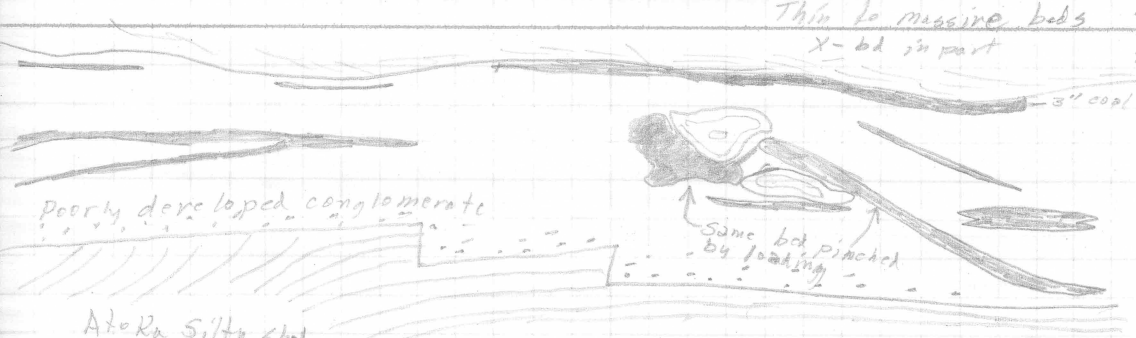
Sample Hartshorne 1-G
Sandstone may be 75' thick
Contact with Atoka shale sharp
and well exposed. May be 2
sandstone dike in Atoka
Hartshorne cross bedding in
lower 15' of unit averages
S30°W. Samples from this
lower 15'. Sandstone seems
to have abundant white chips
and other non-quartz minerals
At no place is sandstone
weathered to white, pink, or
brown -- it is all grey

G-2-59 - Photo by Merewether - HP-1
NE Corner of Colony Mtn, Ozone quad



6-3-59 Merewether photo HP-2

NE corner of Colony Mtn. South of 6-2-59. Much the same relationship as described. About 2 to 4 feet of coal-bearing shale, sandstone, and siltstone between Atoka shale and massive Hartshorne. Loading has bent the coal beds slightly to conform to the massive ss bottom. This is a zone of coal lenses - here and elsewhere, no coal can be traced more than 10' before it pinches out. See sketch on following page



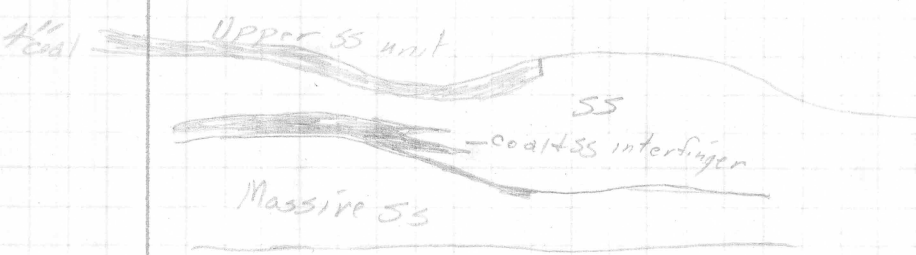
Atoka Silty Shale
Definite angular unconformity

Tuesday, Oct 6, 1959

G-4-59 West side of Colony Mtn, Ozone Quad

Hartshorne sandstone
Lower 40'± of unit holds up a bench around edge of mountain. On point (G-4-59) beds are more massive than usual. Lower 30' at least is in beds 5' to 10' thick. These form cliff. They show cross bedding where weathered and dip is mostly southwest. Sand is well sorted and v f to f gr.

G-5-59 Colony Mtn
Coal in lower part of Hartshorne. Here the coal bearing lower unit is 6' thick. It contains sandstone beds 2' thick and probably is separated from overlying sandstone unit, but separation is not as obvious as at G-3-59



Slightly silty SS

Wed Oct 7, 1959

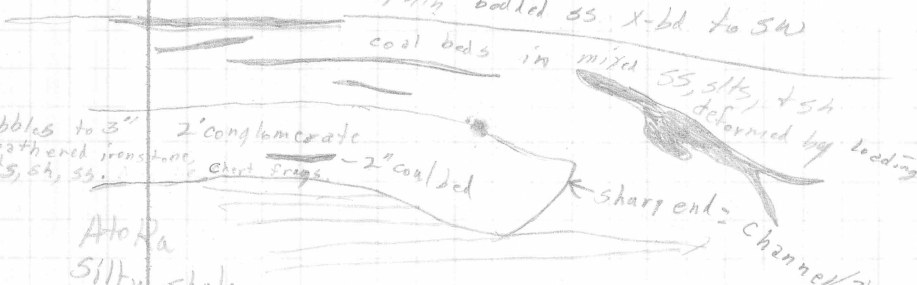
See p. 31, NF 45 & 46

G-6-59 West side of Soul Mtn, Ozone quad

Massive sandstone with base @ 670 channels into underlying silty shale. It cuts down at least 15' in 100 yards and contact clearly shows the cutting out of the underlying shale.

The massive sandstone of the channel is not cross bedded. Farther north along the outcrop, faint cross bedding to fair cross bedding developes in thinner bedded ss. Some of the sandstone is shaley even 20' above the base. Lower part of unit (2'-3') contains some thin coal streaks, up to ¼" thick.

Good photo about center of west side of Soul Mtn.

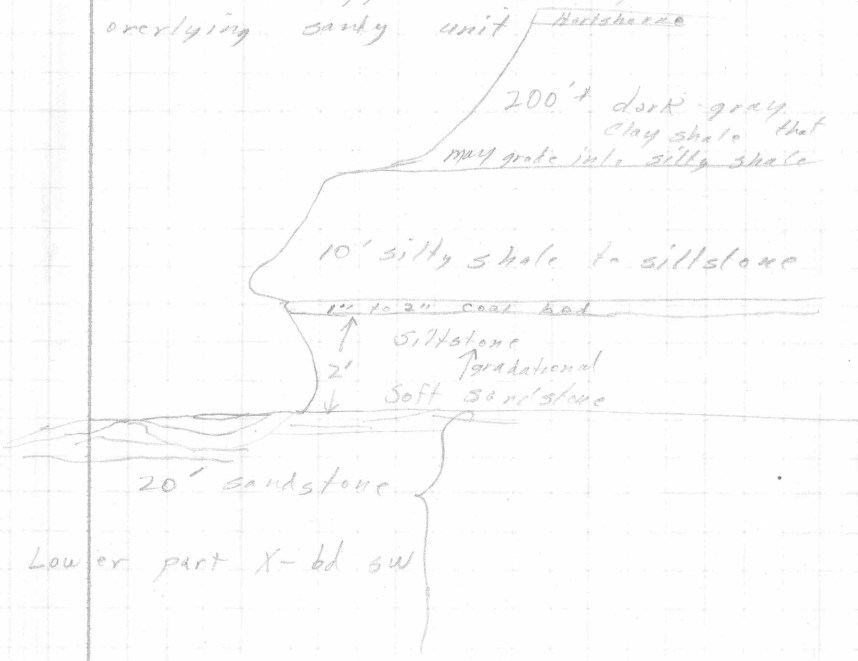


6-7-59

Good spot for photo

1 Mile east of Hagarville on east bank of Little Piney Creek south of 489 elevation

Upper Atoka sandstone is about 20' thick here. vf-f gr, thin-bedded, med gray. Grain size rather even and sandstone is fairly clean. Weathers to irregular slabs 8" thick with uneven, upper and lower surfaces. Top of unit makes bench along stream and appears to be separated from overlying sandy unit



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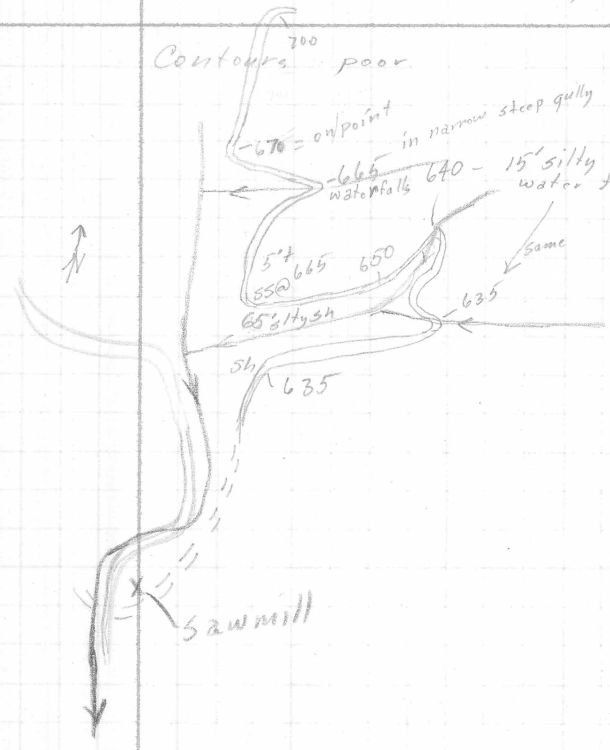
Thursday, Oct 8, 1959

East side of Little Granny Creek, Ozone field



Saturday, Oct 9, 1959

Spadra Creek section

Center NW¼ Sec 31, T 11N, R 23 W.
Starts on tributary to Spadra creek.
Measured by Haley, recorded by Glick

SC-1
19' 7"
Shale, dark gray, slightly silty; fine to medium grains of mica; beds 1/16" to 1/4" thick; upper 11" is not silty; Contact between this shale and overlying unit is sharp - channel type contact

Spadra creek - tributary junction

SC-2
24' 6"
Sandstone, light-gray (limonite stained), fine to medium grained; coarse mica; abundant red ironstone nodules to ½" in diameter by 1" long, oroid; Unit is massive and is about all one bed but has trace of loading structures and hint of cross bedding; forms overhanging cliff on west side of creek and up west side of tributary; 3'0" (4'7" above base) with zone ironstone and dark-gray shale layers to ½" thick. Shows cross bedding -- current from N 45° E Some features on base of beds look like alined flute casts, but may be load structures. Unit may be stream deposit

SC-3 4' 6"	Sandstone, weathers to olive-gray, medium-grained; abundant coarse to very coarse sand grains; also silt and very fine sand; abundant ironstone pebbles ½" thick and as much as 2" long; cross bedding shows current from NE. This is part of cliff forming unit starting with SC-2 -- grains of SC-3 are larger. Both units show poorly developed ripple marks.
SC-4 5' 6"	Sandstone, olive-gray, fine- to medium-grained, silty; abundant ironstone concretions in layers ½" thick and as much as 6' long. Thin layers to ½" dark-gray to gray shale; contains thin carbonaceous streaks, almost coal, with coarse flakes of mica. Top of unit undulates and is slightly ripple marked. Sharply separated from SC-5.
	(About 85' from top of this sandstone to base of overlying sandstone)

SC-5 5' 6"	Sandstone, siltstone, and shale interbedded 60% Sandstone, medium-gray, fine-grained; irregular beds ½" to 8" thick. Top of beds are ripple marked. Bottoms are in part poorly fluted and one prod mark found N-S 15% Siltstone, medium-gray in irregular beds ⅛" to ½" thick 25% Shale is dark-gray in beds to ⅛" Top of unit is 9" bed of clean quartzose sandstone with grains that range from coarse silt to very fine sand.
SC-6 28' 9"	Shale, siltstone, and sandstone, interbedded Sandstone, medium-gray, silty, very fine to fine grained, quartzose; irregular beds to 3" thick. Sandstone in lower 3' of unit Siltstone, medium-gray, beds irregular to up to ½" thick Shale, dark-gray, beds to ¼"

SC-6 (cont)

Lower 3' 6" = 20% ss, 30% slts, and 50% shale.

Next 4' 0" = 60% shale, 40% slts

Entire unit grades upward from coarser grains to finer grains

End of section

(12)

Oct 11, 1959

Rock Creek section -- upper Aloka shale and lower Hartshorne sandstone. Measured by Haley & Glick

SW Corner NW ¼, sec 5, T10N, R23W

From first Aloka sandstone top to Hartshorne base is about 240'. This section, therefore, starts 160' ± above/31 Aloka ss

RC-1 17' 7" Shale, weathers yellowish-brown and light gray; beds as much as ½" thick; contains plant fragments; upper 4" is weathered ironstone band with ostracods, gastropods, pelecypods ? and brachiopods ?

RC-2 23' 0" Shale as RC-1; dark gray where fresh. Weathers to a "splintery" mass that stands 20' high in the road cut.

RC-3 11' 6" Siltstone, weathers to light olive gray; beds ⅛" to 3/4"; coarse-grained silt that may be in part vf sandstone; 20% of unit may be silty shale, weathered light gray;