



Geologist's Report

Company: LD Drilling, Inc  
 Lease: McCune #3-18  
 Field: Bunyan Northeast  
 Surface Location: SW-SW-NE-NE (1031' ENL & 1150' FEL)  
 Sec: 18 Twp: 25S Rge: 12W  
 County: Stafford State: Kansas  
 GL: 1901' KB: 1906'

Contractor: H2 Drilling Co., Rig #1  
 Spud: 5/29/15 Comp: 6/4/14  
 RTD: 4290' LTD: 4289'  
 Mud Up: +/- 3100' Mud Type: Chemical Displaced

Drilling Time Kept From: 3200' to RTD  
 Samples Saved From: 3200' to RTD  
 Samples Examined: 3200' to RTD  
 Geological Supervision: 3500' to RTD  
 Geologist on Well: Kurt Talbott

Surface Casing: 8 5/8" @ 232'  
 Production Casing: 5 1/2" @

Wireline Logs: By Nabors: CNL/CDL, DIL

Well Comparison 25

FORMATION	MCCUNE 3-18 1906 KB		MCCUNE 2-18 1905 KB	
	Log	Log SS	Log	SS
ANHYDRITE			747	1158
BASE ANHY			761	1144
TOPEKA			3074	-1169
HEEBNER	3412	-1506	3403	-1498
TORONTO	3427	-1521	3420	-1515
DOUGLAS	3450	-1544	3441	-1536
BROWN LIME	3566	-1660	3564	-1659
LANGING	3587	-1681	3582	-1677
BASE KC	3876	-1970	3871	-1966
VIOLA	4002	-2096	4005	-2100
SIMPSON SHALE	4096	-2190	4103	-2198
ARBUCKLE	4192	-2286	4168	-2263
TOTAL DEPTH	4289	-2383	4308	-2403

**ROCK TYPES**

Cht	Lmst fw<7 shale, gm shale, gry	Carbon Sh shale, red Shcol
Cht vari		
Dolprim		

OTHER SYMBOLS

**EVENTS**

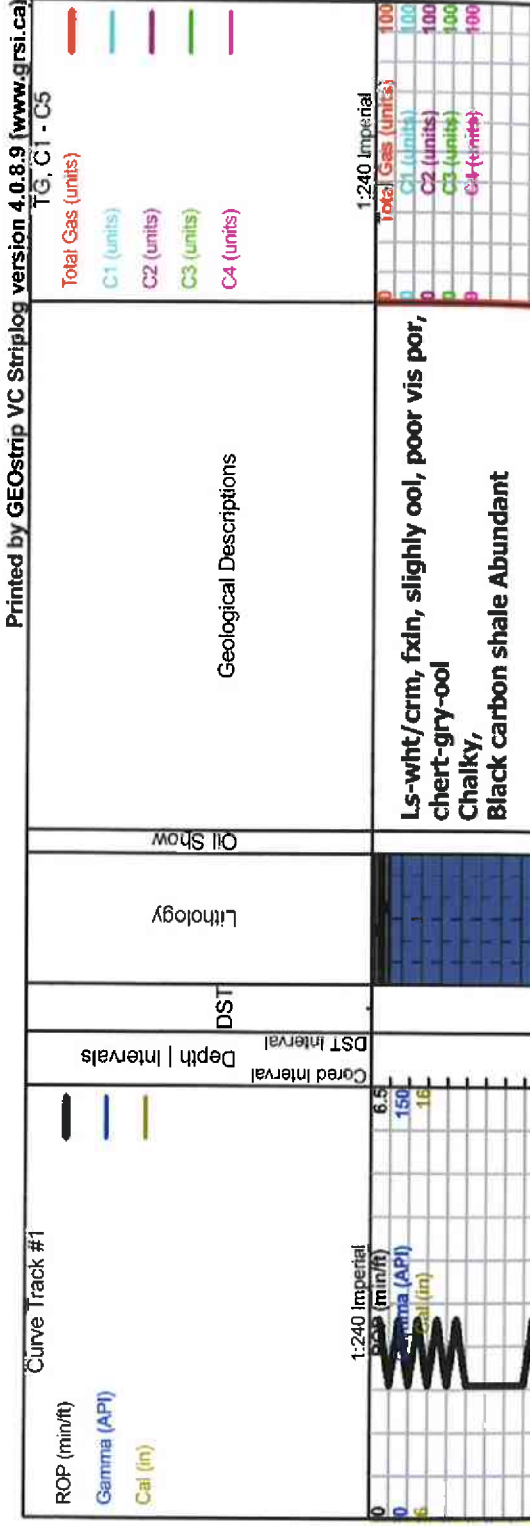
- ▲ Casing Shoe
- ▶ RTF
- ▶ Sidewall
- ▲ Left Casing Shoe
- ▼ Right Casing Shoe

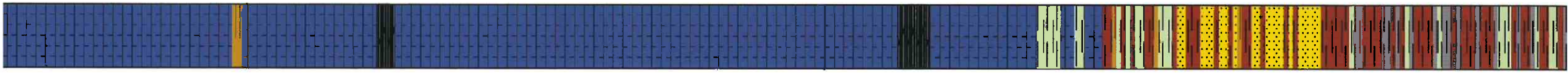
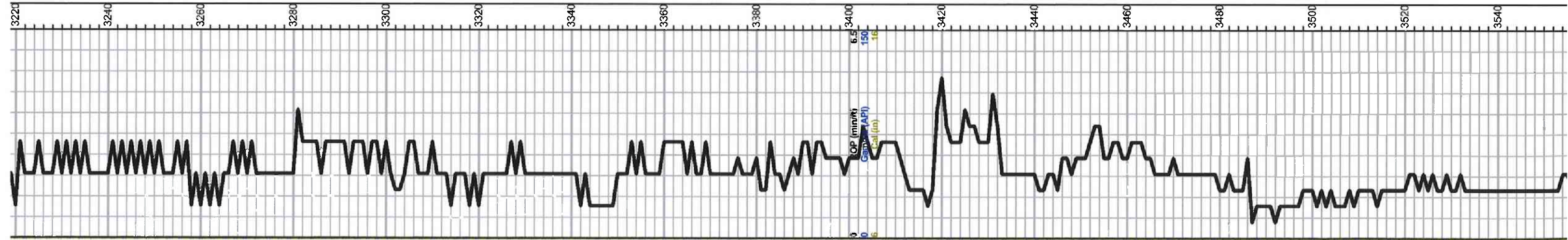
**INTERVALS**

- Core
- DST

**DST**

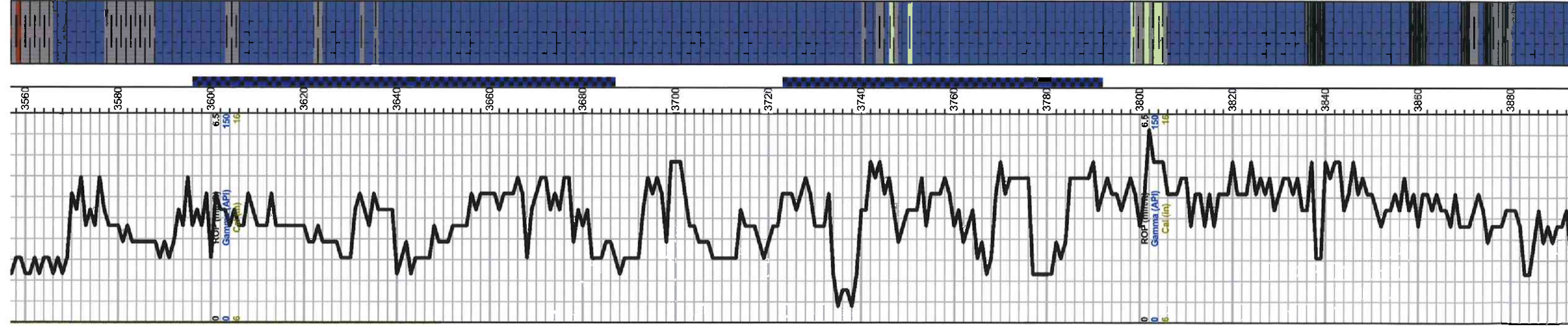
- DST Int
- DST alt





<p>ls-crm/tan, fxln, poor vis por, dense, chert- A/A slightly chalky</p> <p>A/A Scattered poor to fair inner xin por,</p> <p>ls-wht/crm/tan, fxln, dense, poor vis por, few fossils/ool, chert-boney wht/tan</p> <p>A/A trace Black carbon shale</p> <p>ls-crm/tan, fxln, few fossils/ool, poor inner xin por, no vis shows,</p> <p>ls-tan/buff, f-med xin, few fossils, scattered poor inner xin to vug por, no vis shows, slightly chalky</p> <p>ls-crm/tan, fxln, fossils, dense, poor vis por, chert-gry/tan</p> <p>ls-A/A</p> <p>ls-crm/tan, fxln, few fossils, poor scattered por, cherty in part</p> <p>Heebner 3413.0 (-1507.0) -1506.0</p> <p>Black carbon shale</p> <p>Toronto 3432.0 (-1526.0) -1521.0</p> <p>ls-wht/lt gry, f-med xin, few fossils, poor vis por, chert-boney wht</p> <p>Douglas 3452.0 (-1546.0) -1544.0</p> <p>Shale-gry/grm/maroon</p> <p>Shale-A/A Sand- gry very fine to fine grained, sub ang. mostly friable, mica, poor inner gran por</p> <p>A/A</p> <p>Shale-gry/grm/maroon</p> <p>A/A plus turq.</p>	<p>Total Gas (units) 100</p> <p>C1 (units) 100</p> <p>C2 (units) 100</p> <p>C3 (units) 100</p> <p>C4 (units) 100</p>
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A/A

Brown Lime 3568.0 (-1662.0) -1660.0

Ls-gry/buff, fxdn, dense, poor vis por,

Lansing 3590.0 (-1684.0) -1681.0

Ls-wht/crm, fxdn, slightly ool, poor scattered iner xln por, chalky, no vis shows

Ls-crm/wht, fxdn ool, poor ppt to iner xln por, scattered dark brown stns, TrSFO, chalky

Ls-crm/wht, fxdn, ool, dense, poor vis por

Ls-crm/tan, fxdn, ool, poor to fair oom por, dark brown stains, SFO, fair odor

Ls-crm/wht/tan, fxdn, fossils/ol, poor scattered iner xln por, dark brwn to blk stns, TrSFO

Ls-crm/tan, fxdn, ool/fossils, scattered iner ool to oom por, dark brown stains, SFO, odor

Ls-crm/tan, fxdn, ool/fossils, scattered oom por, dark brown to blacks stains, TrSFO, faint odor

Ls-crm/tan, fxdn, ool, oom por, chalky no vis shows,

Ls-crm/tan, fxdn, ool, scattered oom por, chalky, chert-tan/crm

Ls-crm/tan, fxdn, ool, oom, trace dark brown stains, TrSFO, faint odor

Ls-crm/wht, fxdn, ool/fossils, scattered iner part. por, trace stains, TrSFO, faint odor  
Shale- gry/gm

Ls-crm/tan, fxdn, ool oom por, dark brown to black stains, TrSFO, faint odor,

Ls-wht/crm, fxdn, ool, oom por, golden to dark brown stains, SFO, odor

Shale-gry/brown

Ls-crm/tan, fxdn, ool, poor vis por, slightly chalky, Shale- A/A

Ls- A/A

Black carbon shale

Ls-crm/tan, fxdn, ool, dense, poor scattered sub oom por, trace spotty stains NSFO,

Ls-crm/tan, fxdn, dense, poor vis por, cherty in part Shale-gry/maroon abundant

Base KC 3881.0 (-1975.0) -1970.0

Ls and Shale A/A

Total Gas (units)	100
C1 (units)	100
C2 (units)	100
C3 (units)	100
C4 (units)	100

DST #1 3596-3685  
30-45-45-61  
IF: BOB 45-sec  
ISI: Built to 6"  
FF: GTS 6 1/2 min  
  
Recovery:  
2676' Gas In Pipe  
238' SGM (4g 96m)  
248' OVCW (20g-60-16w 58m)  
186' MW (4g-92w-4m)

Pressures:	
LSIP	1066 psi
FSIP	1053 psi
HFP	68-156 psi
FFP	161-283 psi
HSH	1741-1741 psi

DST #2-3724-3794  
30-45-45-60  
IF: BOB 1 1/2 min  
ISI: No return

Recovery:  
2792' Gas In Pipe  
64' GOCWM  
(20g 100 30w 40m)  
124' GOCMW  
(14g 60 60w-20m)  
124' HOCMW  
(4g 24e 50w-12m)

Pressures:	
LSIP	943 psi
FSIP	909 psi
HFP	49-90 psi
FFP	97-150 psi
HSH	1817-1812 psi

Total Gas (units)	100
C1 (units)	100
C2 (units)	100
C3 (units)	100
C4 (units)	100



Ls-crm/tan, fxln, dense, poor por  
Shale- gry/gm

Kinderhook 3913.0 (-2007.0) -2007.0

Ls-tan/gry, fxln, dense, few fossils, poor  
vis por, Trace spotty black stains, NSFO,  
no odor

Shale- gry/brwn

A/A Chert- peach/boney wht

Chert-boney wht/tan,

Ls-crm/tan, fxln, dense, poor vis por,  
cherty in part,  
Chert- A/A

Viola 4000.0 (-2094.0) -2096.0

Ls-wht/crm, fxln, dense, poor vis por,  
cherty in part,  
Chert-boney wht/crm, scattered semi  
trip, black spotty dark brown to black  
stains, NSFO, no odor

Chert-boney wht/crm/tan,

A/A scattered Ls-wht/crm, fxln, dense,  
poor vis por

A/A

Limestone and Chert A/A

Simpson Shale 4098.0 (-2192.0) -  
2190.0

Shale-gry/gm/turq

Trace gry/lt gry fine grain sand, sub  
round, poor iner gran por, mica, no vis  
shows

Shale-gry/gm/maroon/turq

Shale and trace SS A/A No vis shows

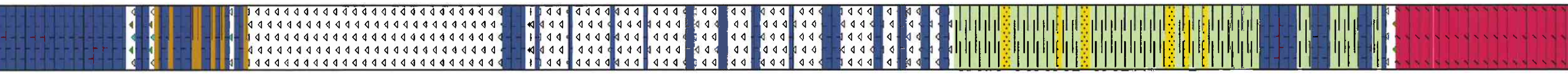
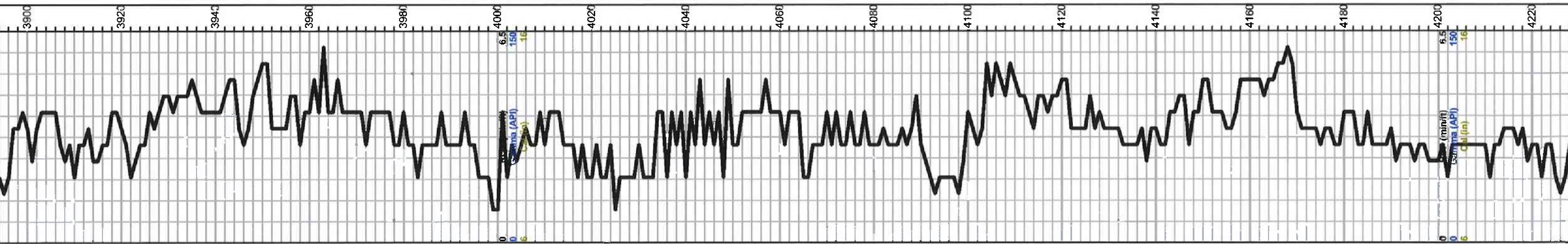
Ls-crm/tan, fxln, dense, poor vis por,  
chert-tan/crm/gry

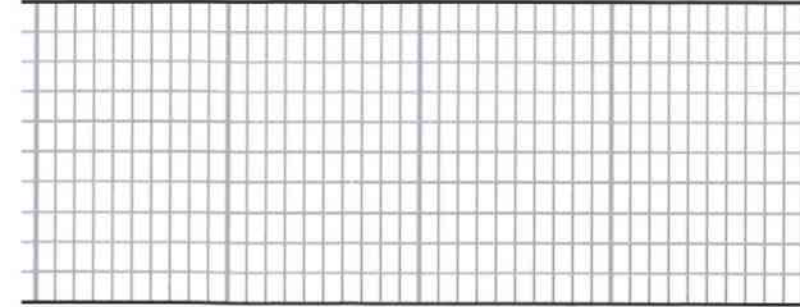
A/A

Arbuckle 4197.0 (-2291.0) -2286.0

Dol- crm/lt gry/wht, fine to few med  
rhomb xln, poor vis por, dense, chert-  
boney wht/crm abundant

A/A





A/A  
Dol-whit/lt gry, fxln, dense, poor vis por, chert A/A slightly chalky  
A/A  
Dol-gry/wht, fine to few med xln, scattered rhomb, scattered iner xln por, dense, slightly chalky  
Total Depth 4290.0 (-2384.0) -2383.0

