

Petroleum Geology
212 Main Street, Claflin KS

Geologist's Report

Company: L.D. Drilling, Inc.
 Lease: BH Farms #1-20
 Field: Mueller
 Surface Location: SW-NW-NE-SW (2052' FSL & 1552' FWL)
 Sec: 20 Twp: 21S Rge: 12W
 County: Stafford State: Kansas
 GL: 1860' KB: 1865'

Contractor: Petromark Drilling Rig #2
 Spud: 1/10/15 Comp: 1/16/15
 RTD: 3675' LTD: 3674'
 Mud Up: +/- 2700' Mud Type: Chemical Displaced

Drilling Time Kept From: 2900' to RTD
 Samples Saved From: 2900' to RTD
 Samples Examined: 2900' to RTD
 Geological Supervision: 3150' to RTD
 Geologist on Well: Kurt Talbott

Surface Casing: 8 5/8" @ 372'
 Production Casing: 5 1/2"@

Wireline Logs: By Nabors: CNL/CDL, DIL, MEL

Well Comparison

FORMATION		WELL BEING DRILLED		OFFSET	
		LD DRILLING		SAGE	
		BH FARMS #1-20		#1 LUCY WALTER	
		1865 KB		1870 KB	
FORMATION	LD	LD	SS	LD	SS
ANHYDRITE	673			677	1193
BASE ANHYDRITE	694				
HEEBNER	3122	.1257		3118	-1248
TORONTO	3140	-1275		3138	-1268
DOUGLAS	3154	-1289		3152	-1282
BROWN LIME	3252	-1387		3249	-1379
LANSING	3268	-1403		3265	-1395
BASE KC	3484	-1619		3484	-1614
VIOLA	3500	-1635		3504	-1634
SIMPSON SHALE	3530	-1665		3521	-1651
ARBUCKLE	3583	-1718		3579	-1709
TOTAL DEPTH	3674	-1809		3680	-1810

Spot Location



ROCK TYPES



OTHER SYMBOLS

EVENTS

- JL Casing Shoe
- RTF
- ▲ Sidewall
- ▲ Left Casing Shoe
- ▲ Right Casing Shoe

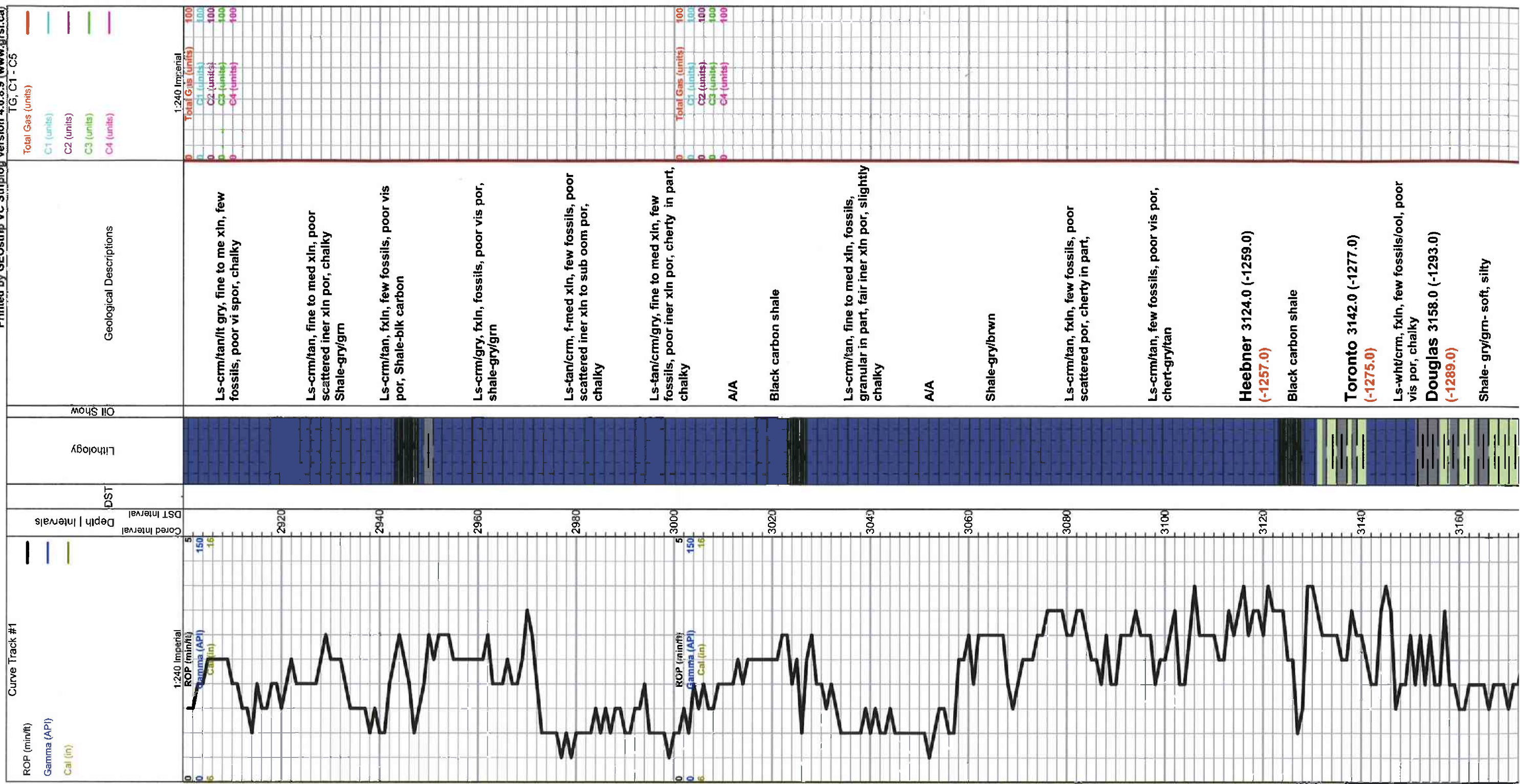
INTERVALS

- Core
- ★ DST

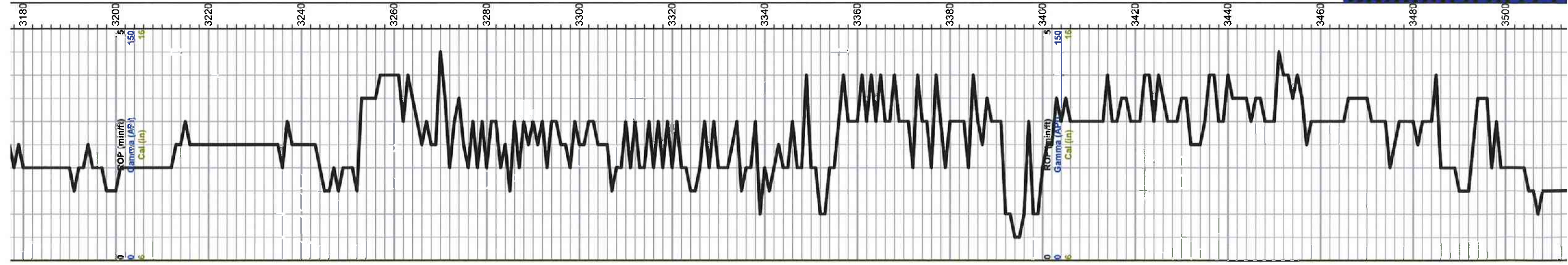
DST

- DST int
- DST alt

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 TG, C1 - C5



Geological Descriptions	Total Gas (units)	C1 (units)	C2 (units)	C3 (units)	C4 (units)
Ls-crm/tan/lt gry, fine to me xln, few fossils, poor vis spor, chalky	100	100	100	100	100
Ls-crm/tan, fine to med xln, poor scattered iner xln por, chalky Shale-gry/grn	100	100	100	100	100
Ls-crm/tan, fxln, few fossils, poor vis por, Shale-blk carbon	100	100	100	100	100
Ls-crm/gry, fxln, fossils, poor vis por, shale-gry/grn	100	100	100	100	100
Ls-tan/crm, f-med xln, few fossils, poor scattered iner xln to sub oom por, chalky	100	100	100	100	100
Ls-tan/crm/gry, fine to med xln, few fossils, poor iner xln por, cherty in part, chalky	100	100	100	100	100
A/A	100	100	100	100	100
Black carbon shale	100	100	100	100	100
Ls-crm/tan, fine to med xln, fossils, granular in part, fair iner xln por, slightly chalky	100	100	100	100	100
A/A	100	100	100	100	100
Shale-gry/brwn	100	100	100	100	100
Ls-crm/tan, fxln, few fossils, poor scattered por, cherty in part,	100	100	100	100	100
Ls-crm/tan, few fossils, poor vis por, chert-gry/tan	100	100	100	100	100
Heebner 3124.0 (-1259.0) (-1257.0)					
Black carbon shale					
Toronto 3142.0 (-1277.0) (-1275.0)					
Ls-wht/crm, fxln, few fossils/ool, poor vis por, chalky					
Douglas 3158.0 (-1293.0) (-1289.0)					
Shale- gry/grm- soft, silty					



A/A

Shale-gry/grm, soft, mica, silty,

A/A

Brown Lime 3253.0 (-1288.0)
 (-1387.0)

Ls-tan/buff, fxln, poor vis por, cherty in part,

Lansing 3269.0 (-1404.0)
 (-1403.0)

Ls-crm/tan/lt gyr, fxln, ool, poor scattered iner xln por, chalky

Ls-crm/tan, fxln, slightly ool in part, trace dark brown stains, NSFO, no odor, chalky, Shale-brown/grey

Ls- A/A

Ls-crm/gry, fxln, scattered iner xln por, cherty in part, slightly chalky, Trace stains, NSFO,

Ls-crm/lt gry, fxln, ool, poor iner xln to iner ool por, dark brown stains, NSFO, chalky

Ls-crm/tan, fxln, ool, poor scattered iner ool to sub oom por, trace black stains, NSFO, chalky Shale-gry/grm

Ls-crm/lt gry, fxln, ool, poor scattered iner ool por, chalky, chert-crm/tan,

Ls-crm/wht, fxln, ool, oom por, chalky, spotty stains, NSFO, shale-gry/grm/brwn

Ls-wht/lt gry, fxln, poor vis por, cherty, chalky

Ls-wht/lt gry, slightly ool, fxln, poor scattered iner xln por, cherty in part,

Ls-crm/lt gry/wht, fxln, fossil,s poor vis por, chertyin part, Shale-gry/grm abundant

Ls-crm/wht, fxln, dense, poor vi spor, cherty in part, slightly chalky

Base KC 3486.0 (-1621.0)
 (-1619.0)

Shale-brown/green/grey

Viola 3496.0 (-1631.0)
 (-1635.0)

Chert-boney wht/crm, semi trip in part, Trace dark brown to black stains, NSFO, faint odor,

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

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

DST-#1 3467-3588

30-45-45-60

HF: Built to 4"

ISI: No Return

Recovery:

134°CIP

93°COCM

(160-84m)

Pressures:

ISIP 406 psi

FSIP 642 psi

IFP 17-59 psi

EEP 44-56 psi

ISH 1666-1663 psi

DST-#2 3467-3597

30-45-45-60

HF: BOB 4 1/2 min

ISI: 5 1/2" Return

Recovery:
 977' GIP
 263' HOCM
 (400' 50m)
 372' OH

Pressures:
 ISIP 968 psi
 FSHP 963 psi
 IEP 41-173 psi
 FFP 178-295 psi
 HSH 1667-1662 psi

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

Chert- A/A Trace black stains, NSFO,
 Shale- black carbon

Simpson 3531.0 (-1666.0)
 (-1665.0)

Shale-brwn/aqua green/grey

Shale-maroon/ A/A

A/A

Arbuckle 3582.0 (-1717.0)
 (-1718.0)

Dol-crm/tan, f-med xln, rhomb xln, poor
 iner xln por, dark brown staisn, SFO,
 good odor,

Dol-crm/tan, sucrosic, fine to med xln,
 few rhomb xln, poor to fair iner xln por,
 spotty dark brown staisn, TrSFO, faint
 odor

Dol-wht/crm, med xln, iner xln por,
 spotty dark brown stains, SFO, faint
 odor, chert- tan/crm

Dol-crm/tan, fine to med xln, poor iner
 xln to scattered vug por, Trace dark
 brown stains, Weak SFO, faint odor,
 chert-tan/crm

Dol-crm/tan, sucrosic, fine to med xln,
 poor iner xln por with scattered vug por,
 Trace dark brown to black stains, Trace
 Weak SFO, chert-crm/tan

Total Depth 3675.0 (-1810.0)
 (-1809.0)

