



## Geologist's Report

Company: LD Drilling, Inc

Lease: Chisholm #2

Field: Chase-Silica

Surface Location: N/2- N/2- NE (330' FNL & 1320' FEL)

Sec: 12 Twp: 20S Rge: 12W

County: Barton State: Kansas

GL: 1786' KB: 1791'

Contractor: Petromark Drilling Co Rig #2

Spud: 6/20/14 Comp: 6/27/14

RTD: 3460' LTD: 341'

Mud Up: +/- 2700' Mud Type: Chemical Displaced

Drilling Time Kept From: 2800' to RTD

Samples Saved From: 2800' to RTD

Samples Examined: 2800' to RTD

Geological Supervision: 2900' to RTD

Geologist on Well: Jim Musgrove and Kurt Talbott

Surface Casing: 8 5/8"@ 225'

Production Casing: 5 1/2" @

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

## Well Comparison 25

FORMATION	LD DRILLING		CHISHOLM #1	
	CHISHOLM #2		1791 KB	
	1791 KB		1791 KB	
	Log	Log SS	SAMPLE	SS
HEEBNER	2963	-1172	2948	-1157
BROWN LIME	3088	-1297	3070	-1279
LANSING	3106	-1315	3088	-1297
BASE KC			3310	-1519
ARBUCKLE	3348	-1557	3328	-1537
TOTAL DEPTH	3461	-1670	3338	-1547

## ROCK TYPES

 Dolprim
  shale, grn
  Carbon Sh

### OTHER SYMBOLS

#### EVENTS

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

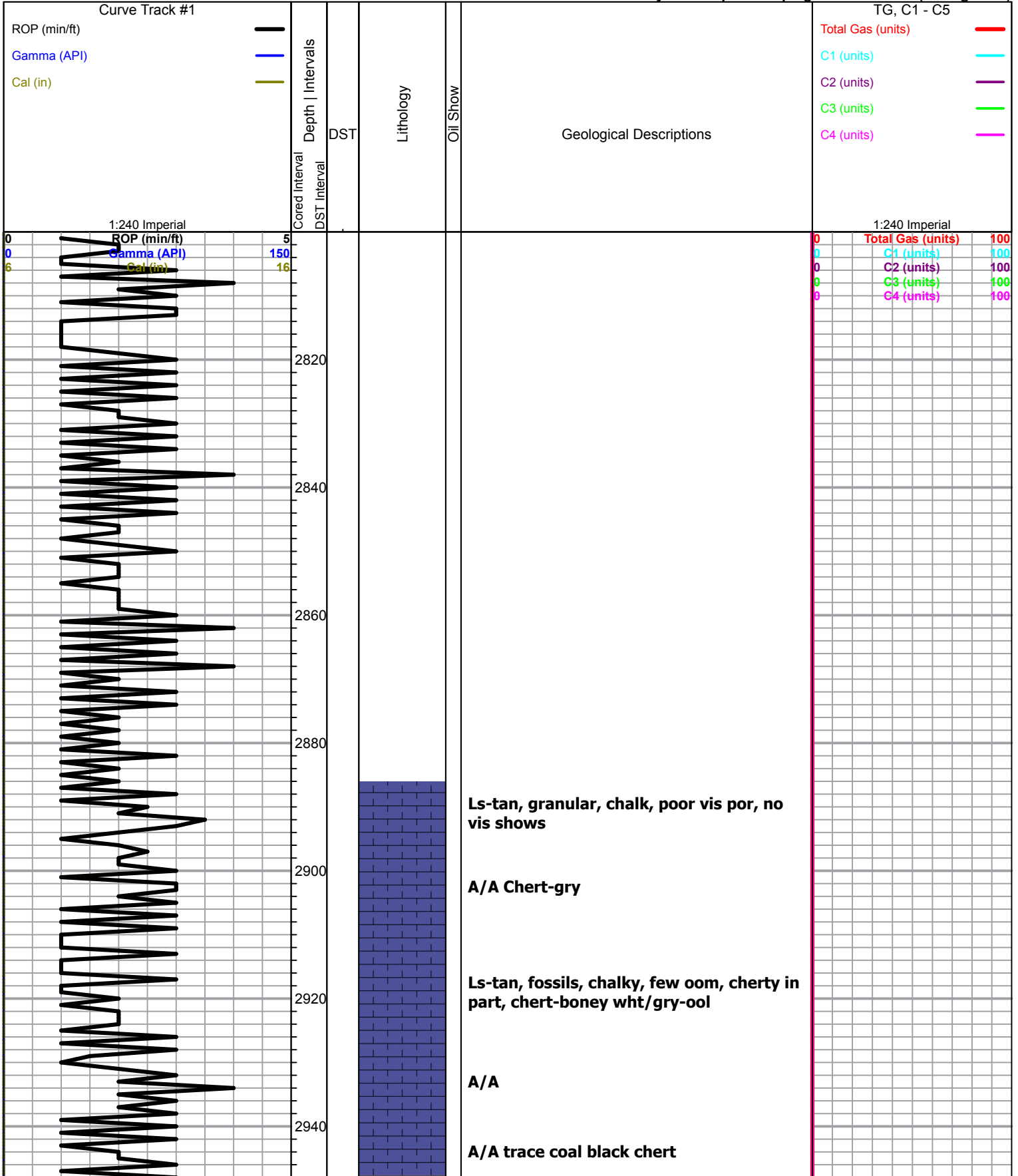
#### INTERVALS

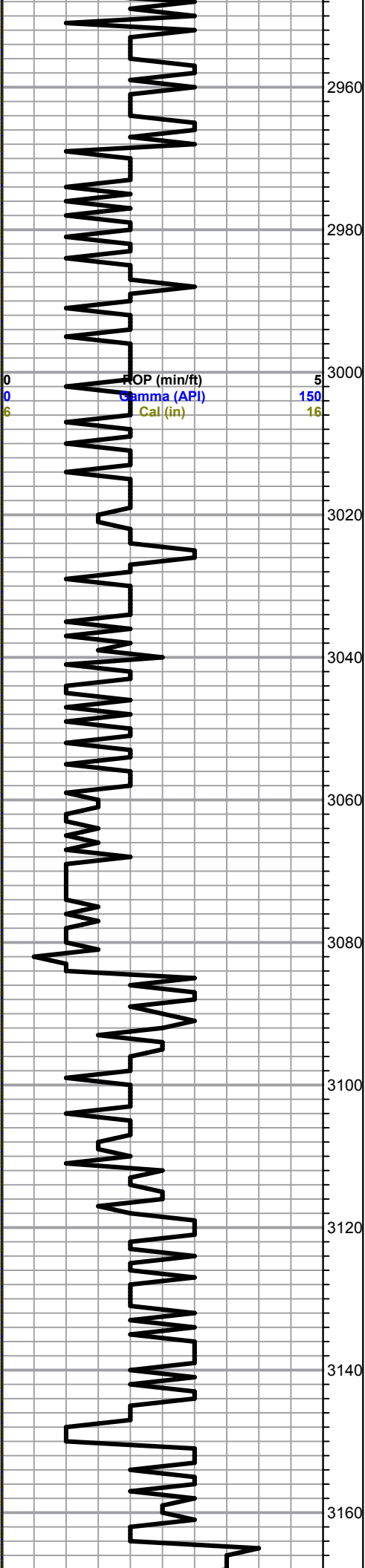
- Core
- ⋅ DST

#### DST

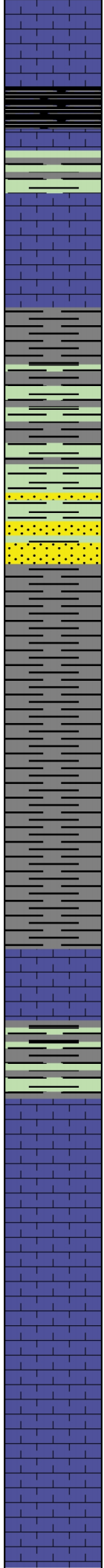
- DST Int
- DST alt

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0 ROP (min/ft) 5  
 0 Gamma (API) 150  
 6 Cal (in) 16



**Heebner 2961.0 (-1170.0) -1172.0**

Black carbon shale

**Toronto 2979.0 (0.0) 0.0**

Ls-tan, fxln, few fossils, poorly developed por, no vis shows, Trace wht chalky Ls, Scattered ppt to vug por, blk dead stains NSFO no odor

Shale-gry/grn, slightly silty,

A/A trace very fine grained sand, mica, poorly developed

Shale-gry/dark gry

A/A

**Brown Lime 3085.0 (-1294.0) - 1297.0**

Ls-tan, fxln, few fossils, poor vis por, cherty in part, dense

**Lansing 3104.0 (-1313.0) -1315.0**

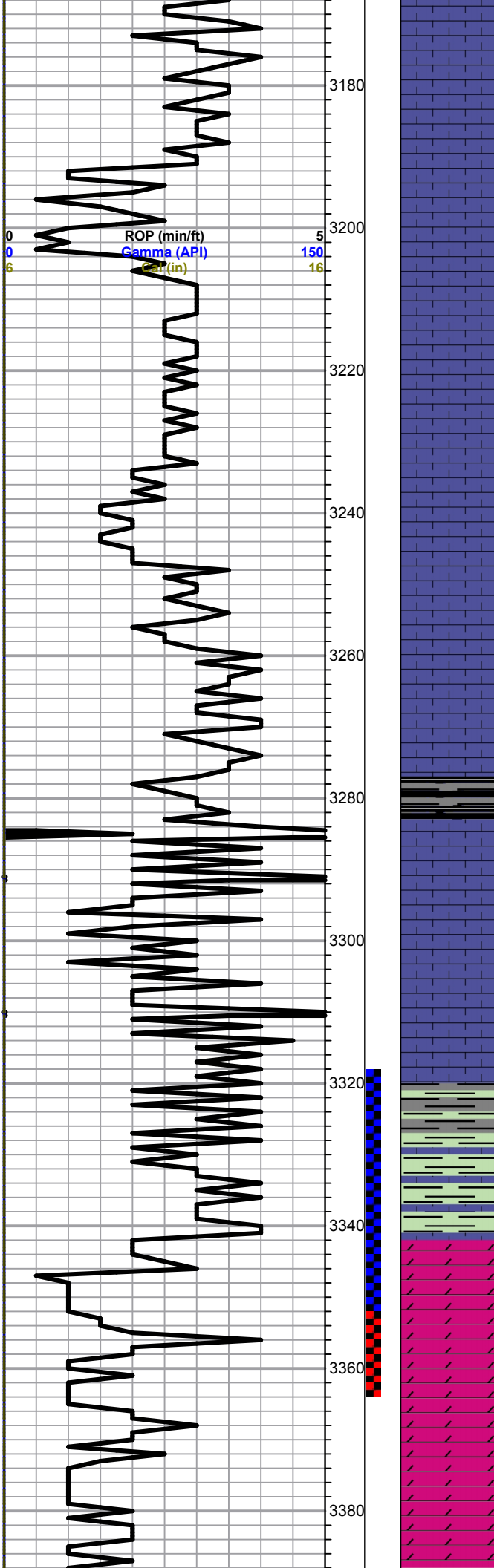
Ls-wht/gry, fxln, chalky, poor vis por, trace black stains, NSFO, faint odor

Ls-tan/lt gry, fxln, ool, dense, poor vis por, slightly cherty, slightly chalky

Ls-tan, fxln, ool/fossils, poor scattered iner xln to finely vug por, trace spotty stains, NSFO, chalky

Ls-crm/tan, fxln, ool/fossils, scattered ppt pot, trace stpott stains, NSFO, chalky

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



A/A

Ls-crm/wht/ light gry, fxln, ool/oom, trace dark brown to black stains, NSFO, slightly chalky

Ls-crm/tan, fxln, ool, dense, scattered ppt por, cherty in part, slightly chalky

A/A

Ls-crm/wht/tan, fxln, ool, poor iner ool to finely vug por, trace spotty stains, NSFO, chalky

Ls-crm/lt gry, fxln, ool/fossils, poor vis por

A/A

Shale-gry/black

Ls-tan/lt gry, fxln, ool, poo riner ool to sub oom por, chalky, Trace dark brown to black stains, NSFO

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

A/A Shale-gry/grn

A/A Chert varying

**Arbuckle 3346.0 (-1555.0) -1557.0**

Dol-crm/wht, f-med xln, few rhomb, golden to dark brown stains, SFO, fair iner xln to vug por, good odor

Dol-crm/tan, f-med xln, dense, fair iner xln to vug por, trace stains, SFO, faint odor

Dol-crm/tan, fxln, few med rhomb xln, cherty, poor scattered por, scattered stains, TrSFO, faint odor

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

DST #1 3319-3352  
30-30-30-45  
IF: 1/4" blow

Recovery:  
20' SOCM  
(4% oil 96% mud)

Pressures:

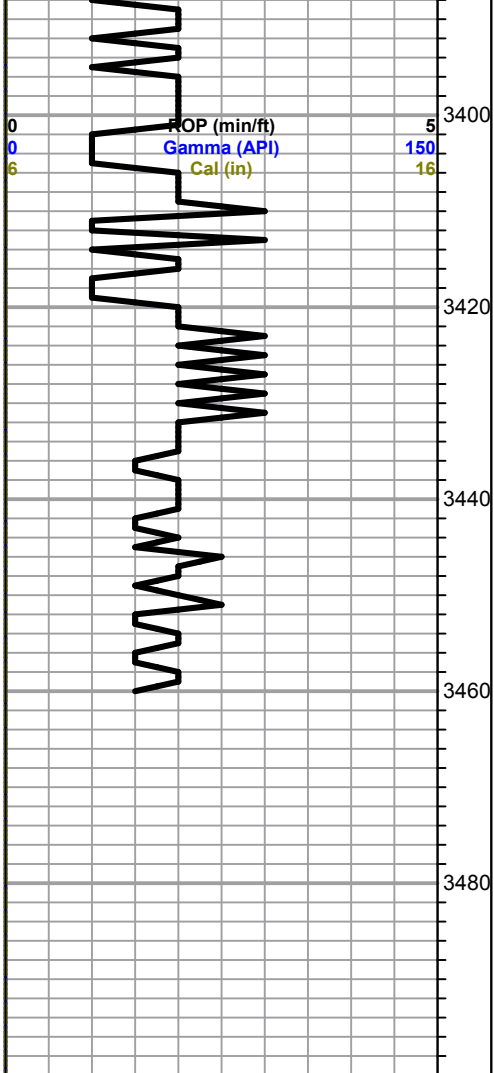
ISIP	876 psi
FSIP	990 psi
IFP	8-13 psi
FFP	14-25 psi
HSH	1603-1617 psi

DST #2 3319-3362  
30-45-45-60  
IF: Built to 10 inches  
No return

Recovery:  
120' Free Oil  
95' OCM (5g 15o 80 m)

Pressures:

ISIP	1014 psi
FSIP	960 psi
IFP	10-61 psi
FFP	67-95 psi
HSH	1621-1620 psi



Dol-crm/tan, fxln, few med xln, slightly sucrosic, fair iner xln por, trace brown stains, TrSFO, fair odor

Dol-crm/tan, f-med rhomb xln, iner xln to finel vug por, dark brown stains, SFO, fair odor, chert-boney wht/crm

Dol-crm/tan, f-med xln, poor scattered por, dark brown to black stains, Weak SFO, faint odor

Dol-crm/tan, f-med xln, scattered iner xln por, black stains, NSFO, faint odor, chert-boney wht/crm

Dol-crm/tan, fxln, dense, no vis shows

**Total Depth 3460.0 (-1669.0) - 1670.0**

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