



Musgrove

Petroleum Geology
212 Main Street, Claflin KS

Geologist's Report

Company: American Warrior, Inc
 Lease: Michael #1-10
 Field: NA
 Surface Location: 1672' FSL & 2292' FWL
 Sec: 10 Twp: 18S Rge: 10W
 County: Rice State: Kansas
 GL: 1779' KB: 1787'

Contractor: Duke Drilling Co., Rig #8
 Spud: 10/3/14 Comp: 10/8/14
 RTD: 3400' LTD: 3400'
 Mud Up: +/- 2800' Mud Type: Chemical Displaced

Drilling Time Kept From: 2700' to RTD
 Samples Saved From: 2700' to RTD
 Samples Examined: 2700' to RTD
 Geological Supervision: 2850' to RTD
 Geologist on Well: Kurt Talbott

Surface Casing: 8 5/8"@ 413'
 Production Casing: 5 1/2" @

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

Well Comparison

Spot Location

ROCK TYPES

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

OTHER SYMBOLS

EVENTS

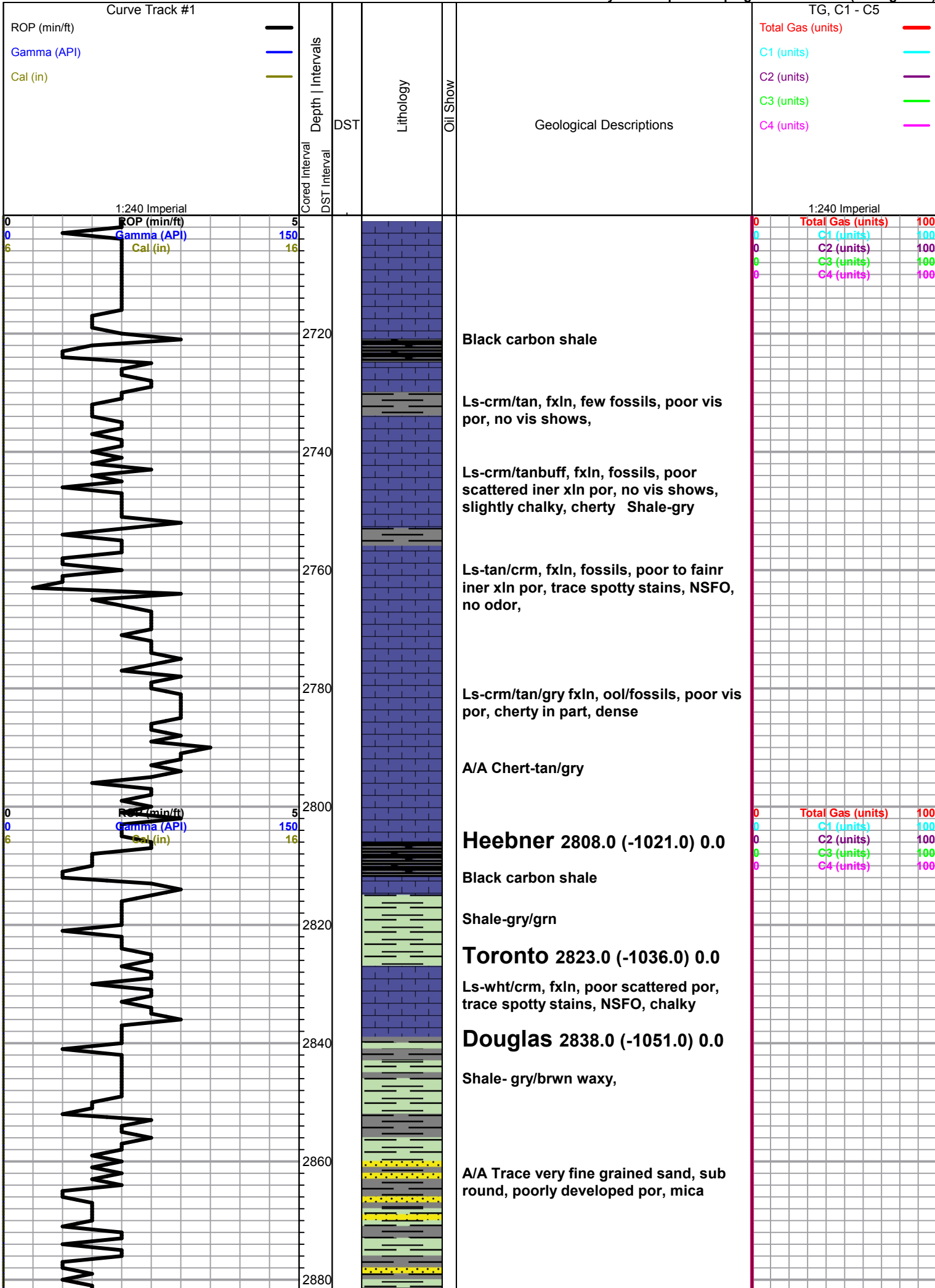
- ⌋ Casing Shoe
- ▽ RTF
- ▶ Sidewall
- ▲ Left Casing Shoe
- ▼ Right Casing Shoe

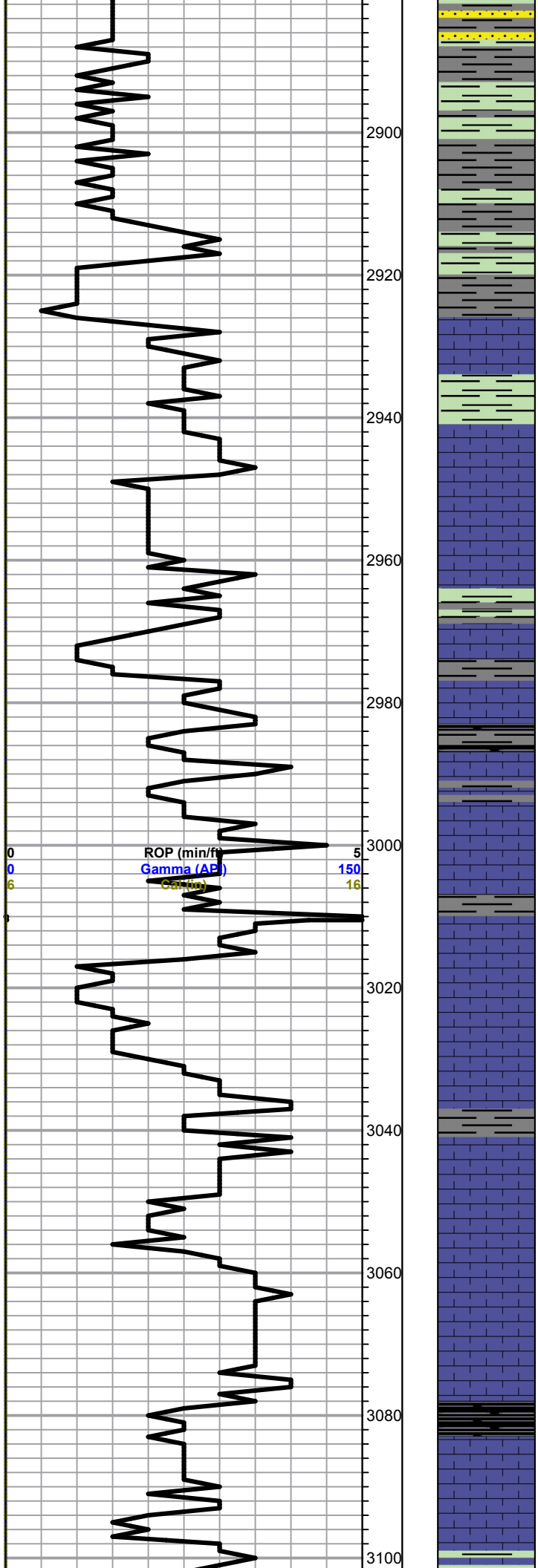
INTERVALS

- Core
- ⋅ DST

DST

- DST Int
- DST alt





Shale and Trace Sand A/A

Shale-gry/grn, silty, mica

**Brown Lime 2926.0 (-1139.0)
0.0**

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

Lansing 2942.0 (-1155.0) 0.0

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

Ls-wht/crm, fxln, slightly ool, good iner xln to sub oom por, dark brown stains, broken open very weak SFO, very faint odor Shale-gry/grn

Ls-wht, fxln, sucrosic, slightly ool, poor scattered por, no vis shows, cherty in part, Shale-gry/blk

Ls-wht, fxln, slightly ool, poor vis por, chalky

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

Ls-crm/wht, flxn, ool, fair to good oom por, trace spotty stains, NSFO, chalky

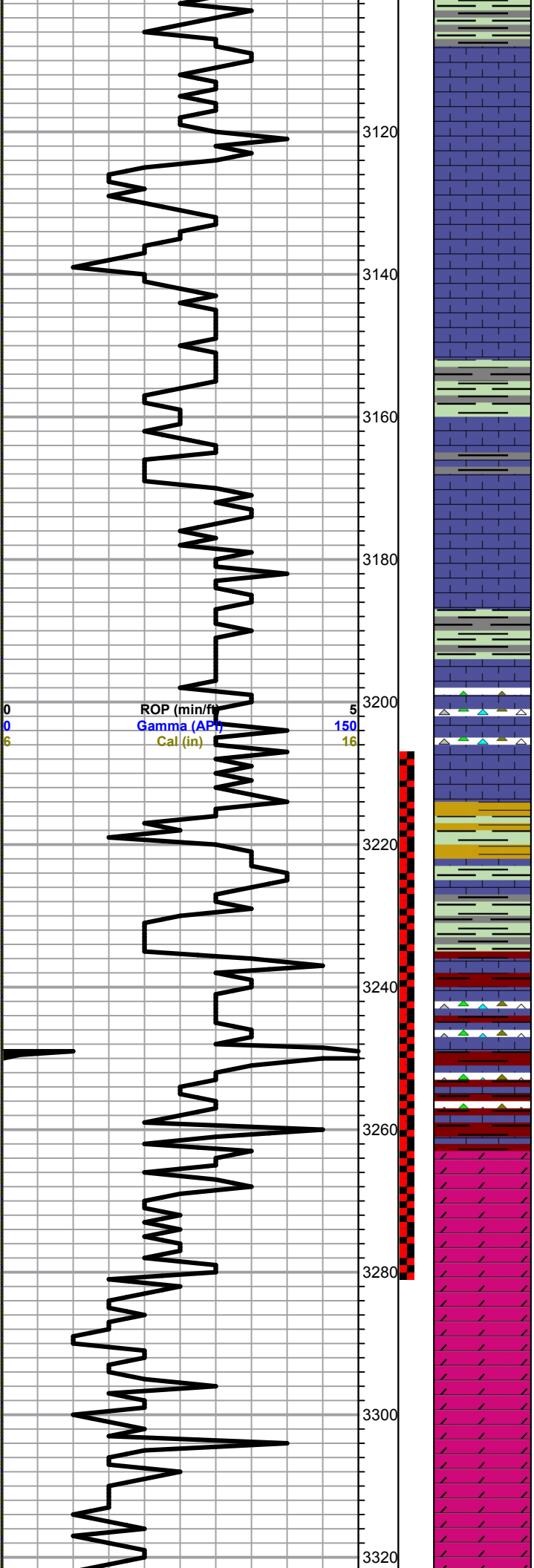
Ls-crm/wht, flxn, ool, poor to fair iner ool to oom por, Trace spotty stains, NSFO, chalky

Ls-crm/wht, flxn ool, fair to good oom por, no vis shows, chalky

Ls-crm/tan, flxn, ool, poor vis por, dense, slightly chalky

Ls-crm/tan/buff, flxn, poor iner xln por, cherty in part, no vis shows, Trace black carbon shale

Ls-crm/wht, flxn, ool, iner ool to oom por, trace spotty stains, NSFO, faint odor



odor
Shale- gry/grn

Ls- crm/wht, fxln, ool poor iner xln por, scattered stains NSFO, chalky

LS-A/A

Ls- crm/wht, fxln, ool, poor iner xln por, trace spotty stains, NSFO, chalky, Shale- gry/grn

Ls- crm/tan, slightly ool, poor vis por, cherty in part, slightly chalky,

Shale- gry/blk/brwn

Ls- tan/lt gry, fxln, poor vis por, dense, cherty in part,

Shale- gry/grn/blk/brwn

Base KC 3230.0 (-1443.0) 0.0

Shale- A/A
Ls- wht/lt gry, fxln, dense, poor vis por,

Chert varying color
Ls- wht/crm, fxln, dense, poor vis por, Shale- red/brwn

Arbuckle 3267.0 (-1780.0) 0.0

Dol- wht/crm sucrosic, fxln, poor iner xln por, trace light stains, NSFO, fair odor

Dol- wht/crm, fine to med xxln, poor to fair iner xln por, trace spotty stains, Light SFO, fair odor

Dol- crm/tan, fine to med xln, sucrosic, poor iner xln to scattered vug por, spotty light brown stains, SFO, fair odor

A/A

Dol- crm/tan, fine to med xln, sucrosic, poor to fair iner xln to vuggy por, trace stains. Spotty SFO. faint odor

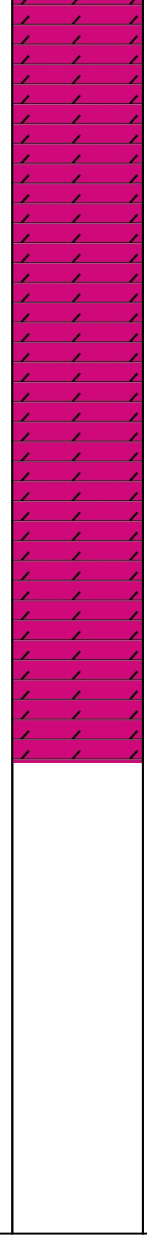
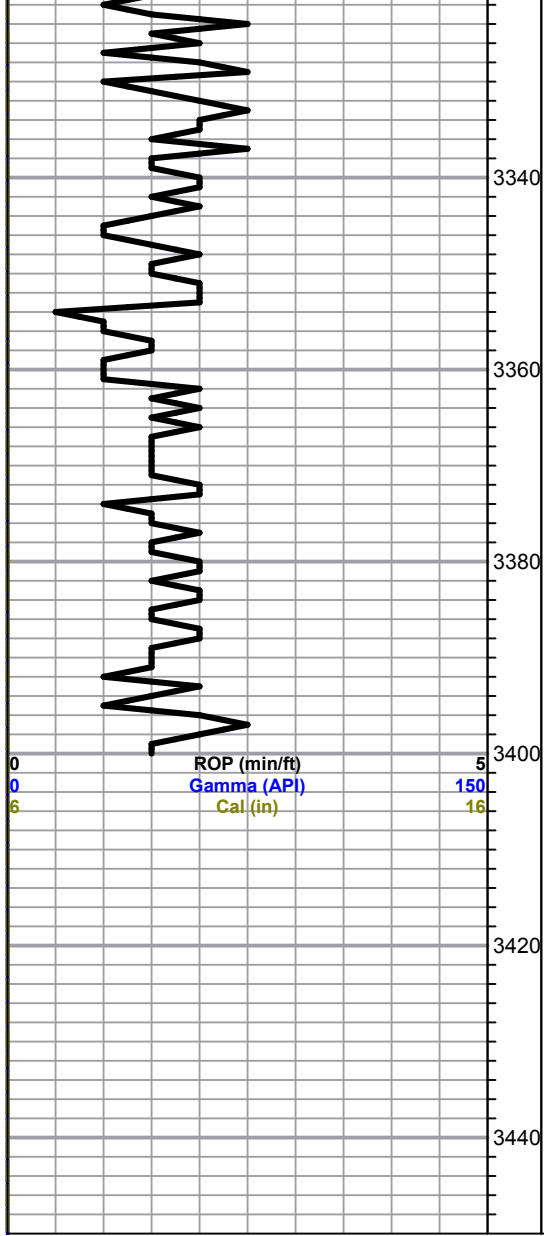
0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

DST #1 3207-3280
30-45-30-60
IF: BOB 1 min

Recovery:
1223' GO (35g 65o)
186' SMC GO (10m 30g 60o)
186' MCGO (30m 20g 50o)

Pressures:
ISIP 1116 psi
FSIP 1117 psi
IFP 75-383 psi
FFP 400-625 psi
HSH 1588-1571 psi

Stains, spots, or ...



Dol- A/A

Dol-crm/wht/tan, fine to med xln, fair to good iner xln to vug por, trace light stains, NSFO, chert-boney wht/crm,

Dol- A/A

Dol-tan fine xln, sucrosic, fair iner vug por, no vis shows, chert- boney wht/crm, pyritic in part,

Total Depth 3400.0 (-1613.0)
0.0

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