



Joshua R. Austin

Petroleum Geologist

report for

RAMA Operating CO., Inc



COMPANY: RAMA Operating Company, Inc.

LEASE: Pundsack #311

FIELD: Pundsack

LOCATION: 1000' FNL & 2170' FEL SE-SW-NW-NE

SEC: 30 TWSP: 21s RGE: 13w

COUNTY: Stafford STATE: Kansas

KB: 1923 GL: 1910

API # 15-185-23,839-00-00

CONTRACTOR: Sterling Drilling (rig #5)

Spud: 11-08-2013 Comp: 11-15-2013

RTD: 3742 LTD: 3742

Mud Up: 2900' Type Mud: Chemical was displaced

Samples Saved From: 3100' to RTD
 Drilling Time Kept From: 2800' to RTD
 Samples Examined From: 3100' to RTD
 Geological Supervision From: 3200' to RTD
 Geologist on Well: Josh Austin

Surface Casing: 8 5/8" @ 829'
 Production Casing: 5 1/2" @ 3739'

Electronic Surveys: By Pioneer Energy Services

NOTES

RAMA Operating Co., Inc.

well comparison sheet

DRILLING WELL

Pundsack 311

COMPARISON WELL

Pundsack 310

COMPARISON WELL

Brown

Pundsack 311				Pundsack 310				Brown								
1923 KB				1918 KB				1920 KB								
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Relationship	Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Relationship
Heebner	3251	-1328	3252	-1329	3242	-1324	-4	-5								
Toronto	3272	-1349	3272	-1349	3262	-1344	-5	-5								
Douglas	3288	-1365	3288	-1365	3278	-1360	-5	-5								
Brown Lime	3374	-1451	3374	-1451	3364	-1446	-5	-5								
Lansing	3386	-1463	3384	-1461	3376	-1458	-5	-3		3385	-1465	2	4			
Viola	3645	-1722	3647	-1724	3638	-1720	-2	-4		3644	-1724	2	0			
Simpson	3685	-1762	3684	-1761	3680	-1762	0	1		3684	-1764	2	3			
Arbuckle	3739	-1816	N/A		3731	-1813	-3			3738	-1818	2				
Total Depth	3742	-1819	3742	-1819	3735	-1817	-2	-2		3745	-1825	6	6			



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: PUNDSACK311DST1

TIME ON: 2:08 AM
TIME OFF: 9:34 AM

Company RAMA Operating Co., Inc. Lease & Well No. Pundsack #311
Contractor Sterling Drilling Rig #5 Charge to RAMA Operating Co., Inc.
Elevation 1923' KB Formation Lansing "B-F" Effective Pay _____ Ft. Ticket No. F196
Date 13 Nov 2013 Sec. 30 Twp. 21 S Range 13 W County Stafford State KANSAS
Test Approved By Josh Austin Diamond Representative Jake Fahrenbruch

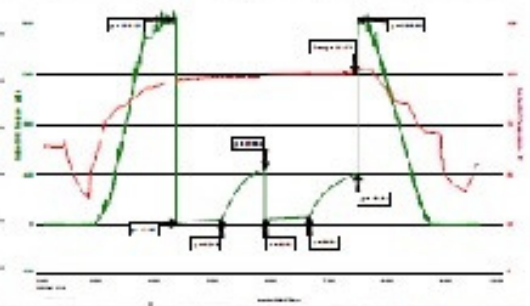
Formation Test No. ONE Interval Tested from 3395 ft. to 3460 ft. Total Depth 3460 ft.
Packer Depth 3390 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 3395 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3381 ft. Recorder Number 0062 Cap. 5,000 P.S.I.
Bottom Recorder Depth (Outside) 3433 ft. Recorder Number 5951 Cap. 5,000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chemical Viscosity 54 Drill Collar Length 329 ft. I.D. 2 1/4 in.
Weight 8.7 Water Loss 7.2 cc. Weight Pipe Length _____ ft. I.D. 2 7/8 in.
Chlorides 1800 P.P.M. Drill Pipe Length 3041 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number _____ Test Tool Length 25 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out NO Anchor Length 65 ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: Strong blow, increased to B.O.B. in 8 minutes. No blow-back.
2nd Open: Strong blow, increased to B.O.B in 9 minutes. No blow-back.

Recovered 90 ft. of Very slightly oil specked mud (less than 1% oil)
Recovered _____ ft. of 400' Gas In Pipe
Recovered _____ ft. of Tool Sample: Gassy SOSM
Recovered _____ ft. of 15% gas, 1% oil, 84% mud
Recovered _____ ft. of _____
Recovered _____ ft. of _____



Remarks: _____
_____ 4:24 AM A.M. _____ 7:24 AM A.M. _____ 101 Deg F

Time Set Packer(s) 4:24 AM P.M. Time Started Off Bottom 7:24 AM P.M. Maximum Temperature 101 Deg F

Initial Hydrostatic Pressure..... (A) 1639 P.S.I.
 Initial Flow Period..... Minutes 45 (B) 17 P.S.I. to (C) 42 P.S.I.
 Initial Closed In Period..... Minutes 45 (D) 451 P.S.I.
 Final Flow Period..... Minutes 45 (E) 43 P.S.I. to (F) 61 P.S.I.
 Final Closed In Period..... Minutes 45 (G) 409 P.S.I.
 Final Hydrostatic Pressure..... (H) 1637 P.S.I.



DIAMOND TESTING
 P.O. Box 157
HOISINGTON, KANSAS 67544
 (800) 542-7313
DRILL-STEM TEST TICKET
 FILE: PUNDSACK311DST2

TIME ON: 5:12 PM
 TIME OFF: 12:58 PM

Company RAMA Operating Co., Inc. Lease & Well No. Pundsack #311
 Contractor Sterling Drilling Rig #5 Charge to RAMA Operating Co., Inc.
 Elevation 1923' KB Formation Lansing "H&I" Effective Pay _____ Ft. Ticket No. F197
 Date 13 Nov 2013 Sec. 30 Twp. 21 S Range 13 W County Stafford State KANSAS
 Test Approved By Josh Austin Diamond Representative Jake Fahrenbruch

Formation Test No. TWO Interval Tested from 3495 ft. to 3535 ft. Total Depth 3535 ft.
 Packer Depth 3490 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
 Packer Depth 3495 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
 Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3481 ft. Recorder Number 0062 Cap. 5,000 P.S.I.
 Bottom Recorder Depth (Outside) 3500 ft. Recorder Number 5951 Cap. 5,000 P.S.I.
 Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chemical Viscosity 53 Drill Collar Length 329 ft. I.D. 2 1/4 in.
 Weight 9.0 Water Loss 8.0 cc. Weight Pipe Length _____ ft. I.D. 2 7/8 in.
 Chlorides 6000 P.P.M. Drill Pipe Length 3141 ft. I.D. 3 1/2 in.
 Jars: Make STERLING Serial Number _____ Test Tool Length 25 ft. Tool Size 3 1/2-IF in.
 Did Well Flow? NO Reversed Out NO Anchor Length 40 ft. Size 4 1/2-FH in.
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. ALL PERF
 Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: Strong blow, increased to B.O.B. in 7 minutes. Blowback increased to 2".
 2nd Open: Fairly strong blow, increased to B.O.B. in 21 minutes. Blowback increased to .5".

Recovered 30 ft. of Gssy MO 25% g, 40% o, 35% m
 Recovered 60 ft. of GC SWC OCM 10% g, 20% o, 10% w, 60% m
 Recovered 240 ft. of OS SMCW 2% o, 88% w, 10% m
 Recovered _____ ft. of 250' Gas In Pipe
 Recovered _____ ft. of Total Recovered Fluid: 330'



DIAMOND TESTING
 P.O. Box 157
HOISINGTON, KANSAS 67544
 (800) 542-7313
DRILL-STEM TEST TICKET
 FILE: PUNDSACK311DST3

TIME ON: 8:48 AM
 TIME OFF: 2:10 PM

Company RAMA Operating Co., Inc. Lease & Well No. Pundsack #311
 Contractor Sterling Drilling Rig #5 Charge to RAMA Operating Co., Inc.

Contractor Sterling Drilling Rig #5 Charge to RAMA Operating Co., Inc.
 Elevation 1923' KB Formation Lansing "L" Effective Pay _____ Ft. Ticket No. F198
 Date 14 Nov 2013 Sec. 30 Twp. 21 S Range 13 W County Stafford State KANSAS
 Test Approved By Josh Austin Diamond Representative Jake Fahrenbruch

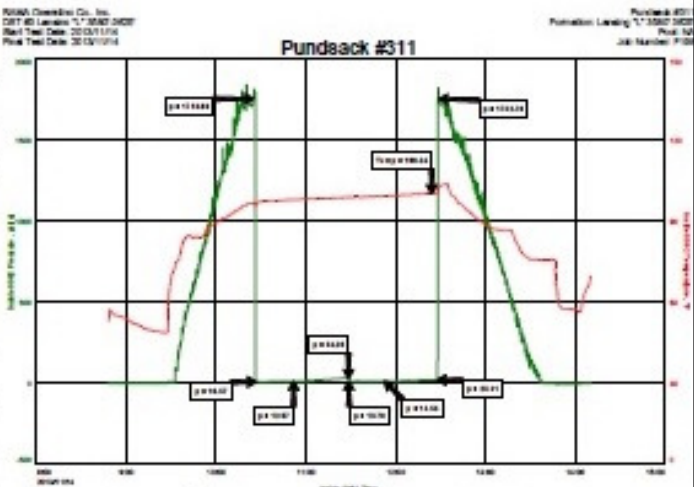
Formation Test No. THREE Interval Tested from 3580 ft. to 3625 ft. Total Depth 3625 ft.
 Packer Depth 3575 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
 Packer Depth 3580 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
 Depth of Selective Zone Set _____

Top Recorder Depth (Inside) _____ 3566 ft. Recorder Number 0062 Cap. 5,000 P.S.I.
 Bottom Recorder Depth (Outside) _____ 3590 ft. Recorder Number 5951 Cap. 5,000 P.S.I.
 Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chemical Viscosity 54 Drill Collar Length 329 ft. I.D. 2 1/4 in.
 Weight 9.3 Water Loss 8.4 cc. Weight Pipe Length _____ ft. I.D. 2 7/8 in.
 Chlorides 5800 P.P.M. Drill Pipe Length 3226 ft. I.D. 3 1/2 in.
 Jars: Make STERLING Serial Number _____ Test Tool Length 25 ft. Tool Size 3 1/2-IF in.
 Did Well Flow? NO Reversed Out NO Anchor Length 45 ft. Size 4 1/2-FH in.
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: Surface blow, increased to .5" in bucket.
 2nd Open: No blow.

Recovered 5 ft. of Drilling Mud
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Remarks: _____



Time Set Packer(s) 10:25 AM A.M. P.M. Time Started Off Bottom 12:25 PM A.M. P.M. Maximum Temperature 100 Deg F
 Initial Hydrostatic Pressure..... (A) 1754 P.S.I.
 Initial Flow Period..... Minutes 30 (B) 11 P.S.I. to (C) 13 P.S.I.
 Initial Closed In Period..... Minutes 30 (D) 34 P.S.I.
 Final Flow Period..... Minutes 30 (E) 14 P.S.I. to (F) 15 P.S.I.
 Final Closed In Period..... Minutes 30 (G) 23 P.S.I.
 Final Hydrostatic Pressure..... (H) 1753 P.S.I.



DIAMOND TESTING
 P.O. Box 157
 HOISINGTON, KANSAS 67544
 (800) 542-7313
DRILL-STEM TEST TICKET
 FILE: PUNDSACK311DST4

TIME ON: 8:39 PM
 TIME OFF: 2:17 AM 11-15

Company RAMA Operating Co., Inc. Lease & Well No. Pundsack #311
 Contractor Sterling Drilling Rig #5 Charge to RAMA Operating Co., Inc.

Elevation 1923' KB Formation Effective Pay Ft. Ticket No. F 199
 Date 14 Nov 2013 Sec. 30 Twp. 21 S Range 13 W County Stafford State KANSAS
 Test Approved By Josh Austin Diamond Representative Jake Fahrenbruch

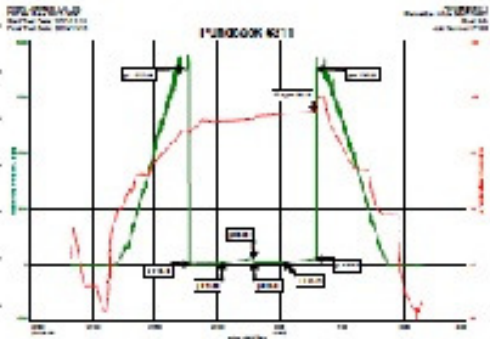
Formation Test No. FOUR Interval Tested from 3647 ft. to 3690 ft. Total Depth 3690 ft.
 Packer Depth 3642 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
 Packer Depth 3647 ft. Size 6 3/4 in. Packer depth ft. Size 6 3/4 in.
 Depth of Selective Zone Set

Top Recorder Depth (Inside) 3633 ft. Recorder Number 0062 Cap. 5,000 P.S.I.
 Bottom Recorder Depth (Outside) 3655 ft. Recorder Number 5951 Cap. 5,000 P.S.I.
 Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type Chemical Viscosity 54 Drill Collar Length 329 ft. I.D. 2 1/4 in.
 Weight 9.3 Water Loss 8.4 cc. Weight Pipe Length ft. I.D. 2 7/8 in.
 Chlorides 5800 P.P.M. Drill Pipe Length 3293 ft. I.D. 3 1/2 in.
 Jars: Make STERLING Serial Number Test Tool Length 25 ft. Tool Size 3 1/2-IF in.
 Did Well Flow? NO Reversed Out NO Anchor Length 43 ft. Size 4 1/2-FH in.
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. ALL PERF Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: Surface blow, increased to 2" in bucket. No blow-back.
 2nd Open: Surface blow, increased to 2" in bucket. No blowback.

Recovered 35 ft. of HOCM 35% oil, 65% mud
 Recovered ft. of 90' GIP
 Recovered ft. of Tool Sample: HOCM 40% oil, 60% mud
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of



Remarks:

Time Set Packer(s) 10:33 PM A.M. P.M. Time Started Off Bottom 12:33 AM A.M. P.M. Maximum Temperature 102 Deg F
 Initial Hydrostatic Pressure (A) 1747 P.S.I.
 Initial Flow Period 30 Minutes (B) 11 P.S.I. to (C) 19 P.S.I.
 Initial Closed In Period 30 Minutes (D) 65 P.S.I.
 Final Flow Period 30 Minutes (E) 18 P.S.I. to (F) 22 P.S.I.
 Final Closed In Period 30 Minutes (G) 59 P.S.I.
 Final Hydrostatic Pressure (H) 1747 P.S.I.



DIAMOND TESTING
 P.O. Box 157
 HOISINGTON, KANSAS 67544
 (800) 542-7313
DRILL-STEM TEST TICKET
 FILE: PUNDSACK311DST5

TIME ON: 9:41 AM
 TIME OFF: 4:30 PM

Company RAMA Operating Co., Inc. Lease & Well No. Pundsack #311
 Contractor Sterling Drilling Rig #5 Charge to RAMA Operating Co., Inc.
 Elevation 1923' KB Formation Arbuckle Effective Pay Ft. Ticket No. F200
 Date 15 Nov 2013 Sec. 30 Twp. 21 S Range 13 W County Stafford State KANSAS
 Test Approved By Josh Austin Diamond Representative Jake Fahrenbruch

Formation Test No. FIVE Interval Tested from 3680 ft. to 4742 ft. Total Depth 3742 ft.

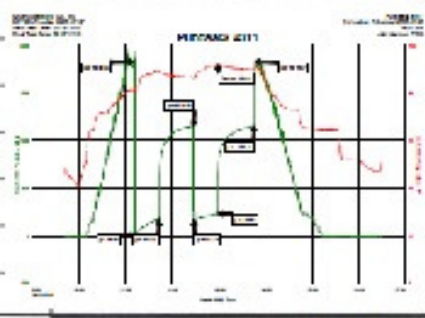
Formation Test No. 1152 Interval Tested from 3680 ft. to 4742 ft. Total Depth 5742 ft.
 Packer Depth 3675 ft. Size 6 3/4 in. Packer depth ----- ft. Size 6 3/4 in.
 Packer Depth 3680 ft. Size 6 3/4 in. Packer depth ----- ft. Size 6 3/4 in.
 Depth of Selective Zone Set -----

Top Recorder Depth (Inside) 3666 ft. Recorder Number 0062 Cap. 5,000 P.S.I.
 Bottom Recorder Depth (Outside) 3686 ft. Recorder Number 5951 Cap. 5,000 P.S.I.
 Below Straddle Recorder Depth ----- ft. Recorder Number ----- Cap. ----- P.S.I.

Mud Type Chemical Viscosity 54 Drill Collar Length 329 ft. I.D. 2 1/4 in.
 Weight 9.3 Water Loss 8.4 cc. Weight Pipe Length ----- ft. I.D. 2 7/8 in.
 Chlorides 5800 P.P.M. Drill Pipe Length 3326 ft. I.D. 3 1/2 in.
 Jars: Make STERLING Serial Number ----- Test Tool Length 25 ft. Tool Size 3 1/2-IF in.
 Did Well Flow? NO Reversed Out NO Anchor Length 62 ft. Size 4 1/2-FH in.
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: **Strong blow @ BOB in 14.5 minutes. Surface blow-back.**
 2nd Open: **Strong blow @ BOB in 15.5 minutes. Half-inch blow-back.**

Recovered 50 ft. of Free Oil 100% oil
 Recovered 180 ft. of G&WCOM 10% gas, 30% oil, 20% wtr, 40% mud
 Recovered 240 ft. of OSMCW 2% oil, 88% wtr, 10% mud
 Recovered --- ft. of Total Recovered Fluid: 470'
 Recovered --- ft. of Tool Sample: SO&MCW 5% oil, 85% wtr, 10% mud
 Recovered --- ft. of 60' +/- Gas In Pipe



Remarks: Chlorides: 18,000 PPM
 Gravity: 25 (corrected)
 RW: .32 ohm @ 62 Deg F PH: 7.5

Time Set Packer(s)	<u>11:13</u> AM	A.M. P.M.	Time Started Off Bottom	<u>1:43</u> PM	A.M. P.M.	Maximum Temperature	<u>110</u> Deg F
Initial Hydrostatic Pressure			(A)			<u>1811</u> P.S.I.	
Initial Flow Period	Minutes	<u>30</u>	(B)	<u>19</u> P.S.I. to (C)		<u>176</u> P.S.I.	
Initial Closed In Period	Minutes	<u>45</u>	(D)			<u>1152</u> P.S.I.	
Final Flow Period	Minutes	<u>30</u>	(E)	<u>174</u> P.S.I. to (F)		<u>241</u> P.S.I.	
Final Closed In Period	Minutes	<u>45</u>	(G)			<u>1146</u> P.S.I.	
Final Hydrostatic Pressure			(H)			<u>1811</u> P.S.I.	

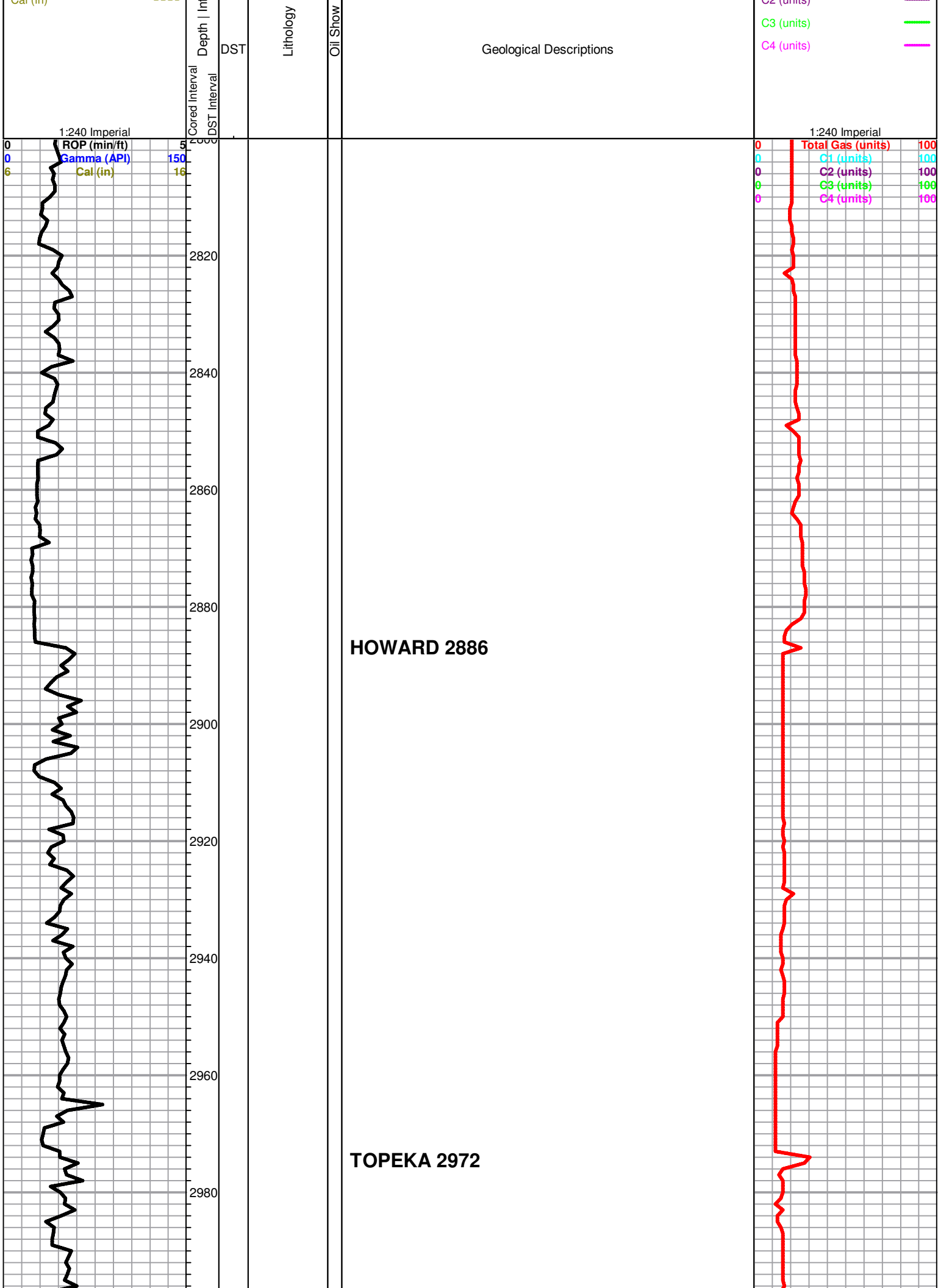
ROCK TYPES

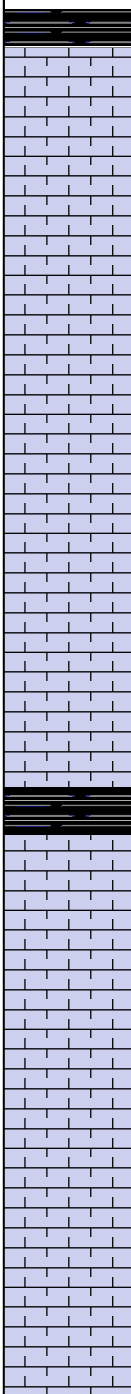
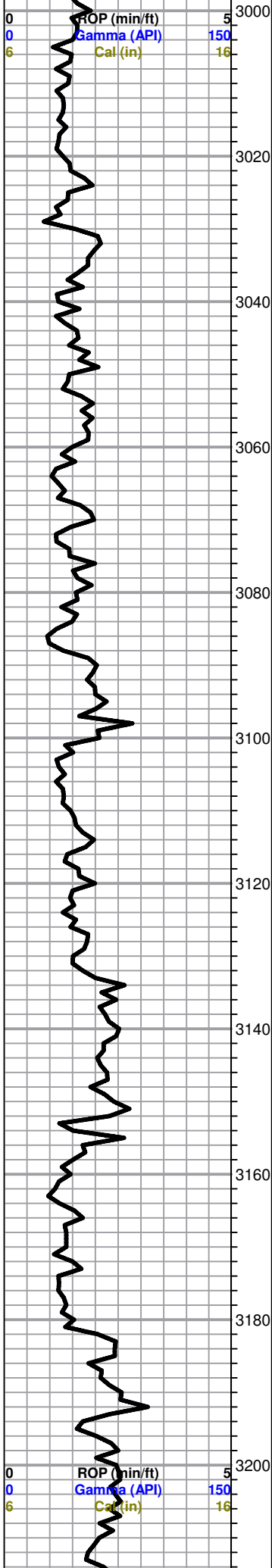
Cht	Lmst fw>	shale, gry	Ss
Dolsec	shale, grn	Carbon Sh	

OTHER SYMBOLS

- DST**
 DST Int
 DST alt
 Core
 tail pipe

Curve Track #1					TG, C1 - C5
ROP (min/ft)		Intervals			Total Gas (units)
Gamma (API)					C1 (units)
Col (in)					C2 (units)





(wet and dry samples started)

black carboniferous shale

Limestone; grey-cream-tan, fine-medium xln, granular in part, slightly fossiliferous, no shows

Limestone; tan-cream, fine xln, dense, cherty, poor porosity, plus white chalk

Limestone; cream-lt. grey, fine xln, chalky, fossiliferous, granular, no shows

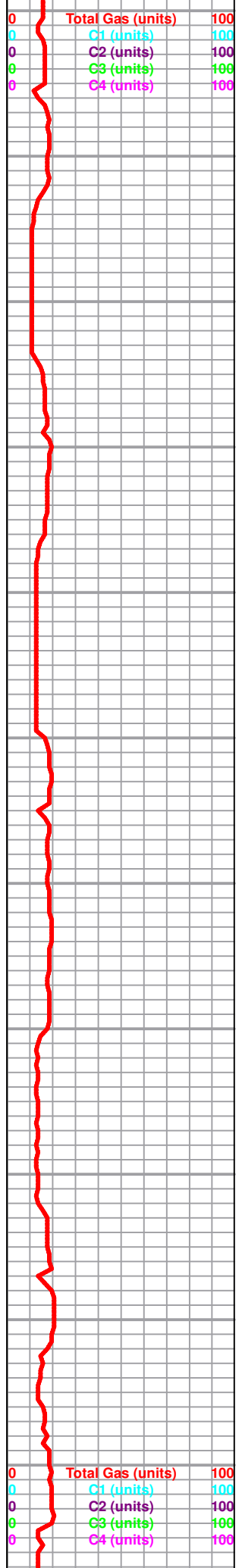
Limestone; as above

black carboniferous shale

Limestone; cream-buff, fine xln, dense, cherty, poor visible porosity, plus grey-opaque, boney, Chert

Limestone; tan-cream, fine xln, dense, cherty, no visible porosity, no shows

Limestone; as above, plus grey boney Chert



3220
3240
3260
3280
3300
3320
3340
3360
3380
3400
3420

Limestone; cream, fine xln, few granular pieces, no shows

HEEBNER 3251 (-1328)

black carboniferous shale

TORONTO 3272 (-1349)

Limestone; white-lt. grey-cream, fine xln, chalky, glauconitic, no shows

DOUGLAS 3288 (-1365)

Shale; grey, maroon, green, micaceous

Shale; as above, silty in part, soft/gummy

Shale; grey-greyish green, micaceous in part, few silty pieces

Shale; grey-green, soft

BROWN LIME 3374 (-1451)

Limestone; tan-brown, fine xln, dense, cherty, few fossiliferous pieces

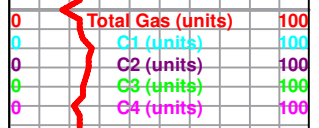
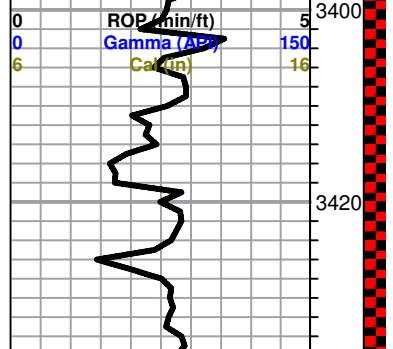
LANSING 3386 (-1463)

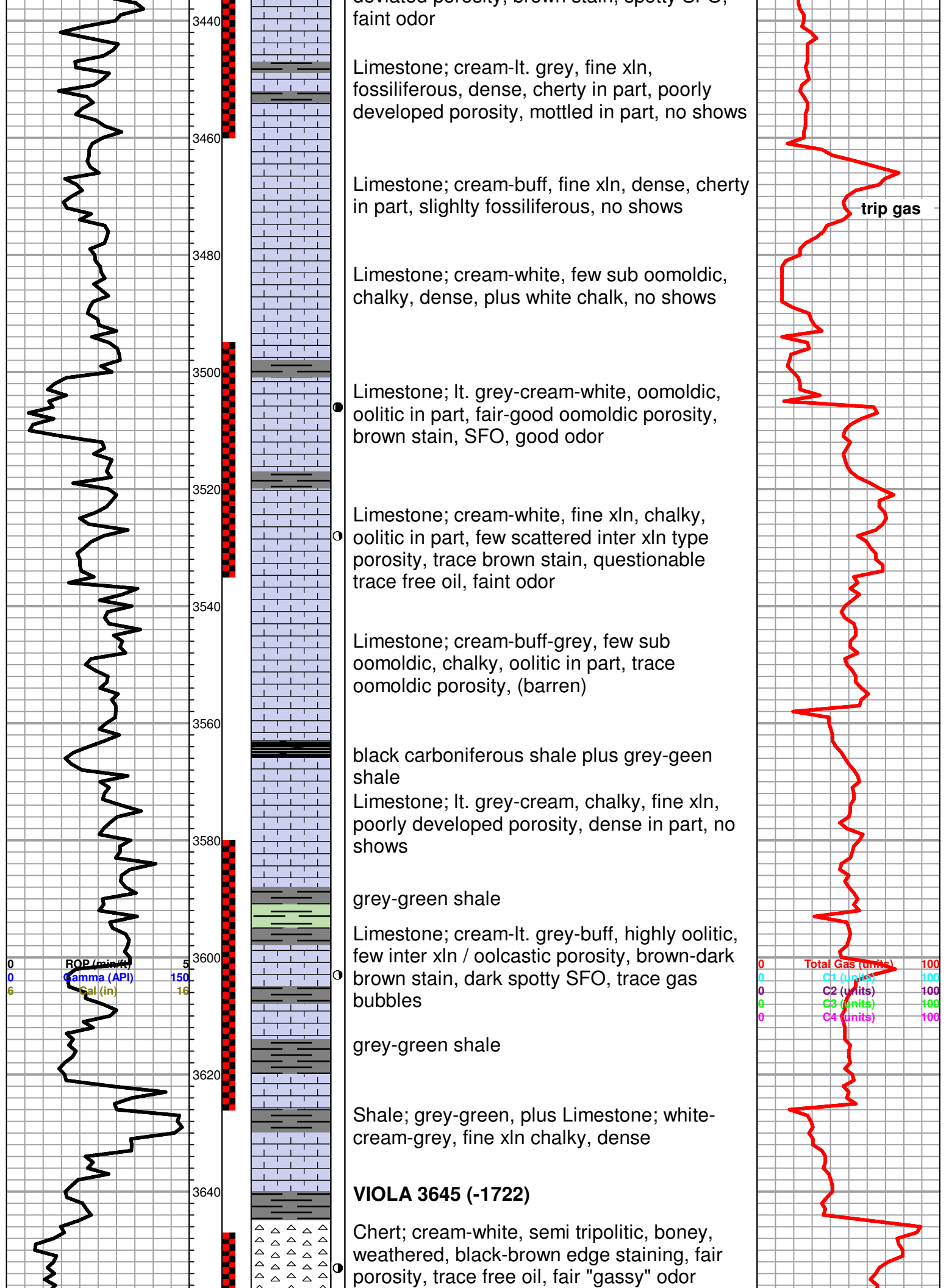
Limestone; grey-cream, fine xln, dense, cherty, poorly developed porosity, no shows

Limestone; cream-lt. grey, fine xln, dense, sparry calcite inclusions, few inter xln porosity, trace brown stain, spotty SFO, faint odor

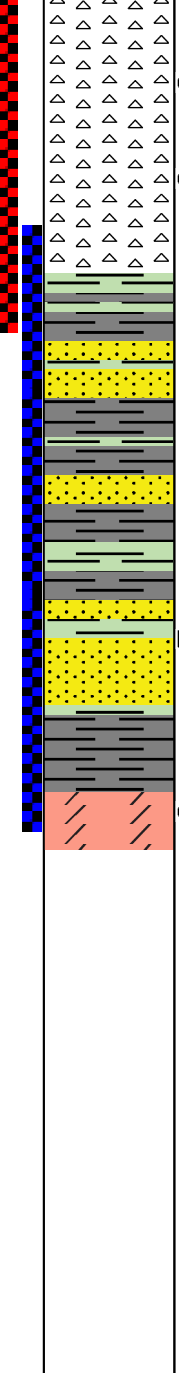
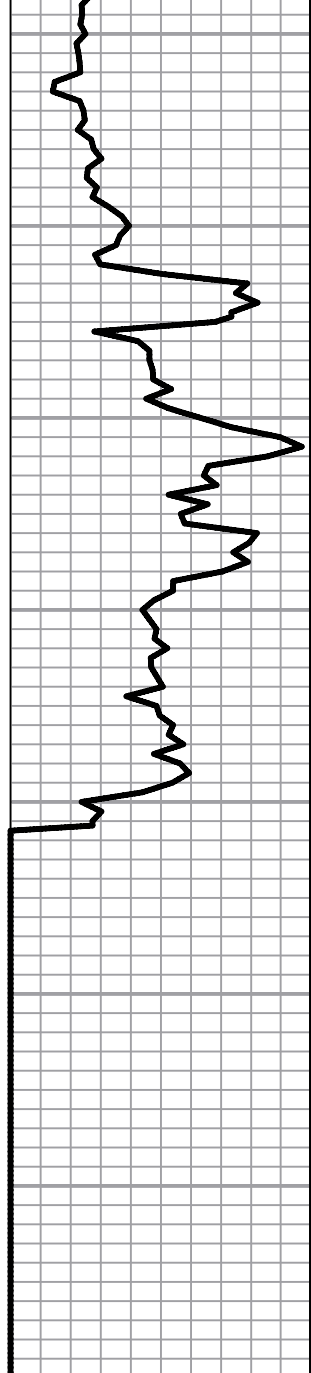
Limestone; cream, highly oolitic, poorly deviated porosity, brown stain, spotty SFO

KB 1923





3660
3680
3700
3720
3740
3760
3780



● Chert; tan-cream, boney, semi tripolitic in part, black-brown edge staining, few weathered pieces, good staining, SFO, fair "gassy" odor
● Chert as above

SIMPSON SHALE 3685 (-1762)

blueish green waxey shale
grey-green-maroon shale, waxey in part
Shale; as above, plus Sand; cream-clear, calcareous, no shows

as above

D Sand; grey-buff-clear, medium grained, sub angular, sub rounded, friable, black stain, trace free oil, faint odor

ARBUCKLE 3739 (-1816)

● Dolomite; grey, fine-medium xln, few rhombic, fair inter xln porosity, dark brown stain, SFO, good odor

ROTARY TOTAL DEPTH 3742 (-1819)

