



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1206123
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1206123

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Joshua R. Austin

Petroleum Geologist

report for
RAMA Operating CO., Inc



COMPANY: RAMA Operating Company, Inc.

LEASE: Knop #7-30

FIELD: Chase-Silica

LOCATION: Ne-Ne-SW (2310' & 2310')

SEC: 30 TWSP: 19s RGE: 10w

COUNTY: Rice STATE: Kansas

KB: 1778' GL: 1769'

API # 15-159-22775-00-00

CONTRACTOR: Sterling Drilling (rig #4)

Spud: 04/18/2014 Comp: 04/27/2014

RTD: 3700' LTD: 3695'

Mud Up: 2600' Type Mud: Chemical was displaced

Samples Saved From: 2700'-RTD

Drilling Time Kept From: 2700' - RTD

Samples Examined From: 2700' - RTD

Geological Supervision From: 2785' to RTD

Geologist on Well: Josh Austin

Surface Casing: 8 5/8" @ 372'

Production Casing: 5 1/2" @ 3394'

Electronic Surveys: By Pioneer Energy Services

NOTES

On the basis of the positive structural position, drill stem test and and after evaluating the electric logs it was recommended by all parties involved in the Knop #7-30 to run 5 1/2" casing to further test the Arbuckle and Lansing zones and converting the well to a saltwater disposal well if the zones are nonproductive.

RAMA Operating Co., Inc.
well comparison sheet

DRILLING WELL

COMPARISON WELL

COMPARISON WELL

Knop 7-30

Gatton 1-30

Roth 1

1778 KB

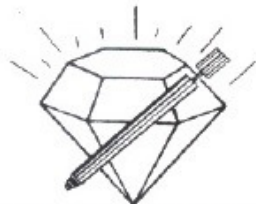
1780 KB

Structural Relationship

1769 KB

Structural Relationship

Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Heebner	2871	-1093	2865	-1087	2879	-1099	6	12	2868	-1099	6	12
Douglas	2904	-1126	2898	-1120	2911	-1131	5	11				
Brown Lime	2993	-1215	2986	-1208	2998	-1218	3	10	2989	-1220	5	12
Lansing	3017	-1239	3010	-1232	3026	-1246	7	14	3013	-1244	5	12
Arbuckle	3299	-1521	3291	-1513	3307	-1527	6	14	3319	-1550	29	37
Total Depth	3700	-1922	3695	-1917	3410	-1630			3283	-1514		



DIAMOND TESTING
 P.O. Box 157
 HOISINGTON, KANSAS 67544
 (800) 542-7313
DRILL-STEM TEST TICKET
 FILE: STCKnop7-30dst1

TIME ON: 15:00:00 4/24/2014
 TIME OFF: 21:00:00 4/24/2014

Company RAMA OPER. CO. INC Lease & Well No. KNOP 7-30
 Contractor STERLING DRILLING RIG 4 Charge to RAMA OPER. CO. INC.
 Elevation 1778 K.B Formation LANSING "F" Effective Pay _____ Ft. Ticket No. J3224
 Date 4/24/14 Sec. 30 Twp. _____ 19 S Range 10 W County RICE State KANSAS
 Test Approved By JOSH AUSTIN Diamond Representative JOHN RIEDL

Formation Test No. 1 Interval Tested from 3092 ft. to 3113 ft. Total Depth 3113 ft.
 Packer Depth 3087 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
 Packer Depth 3092 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

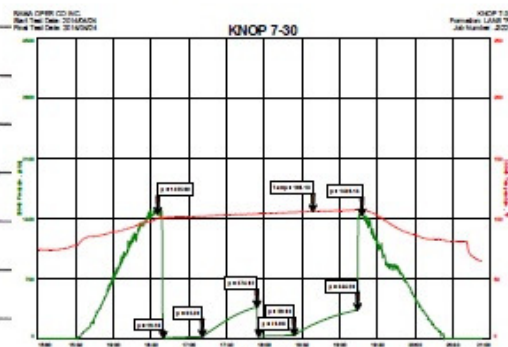
Depth of Selective Zone Set _____
 Top Recorder Depth (Inside) 3095 ft. Recorder Number 30046 Cap. 6000 P.S.I.
 Bottom Recorder Depth (Outside) 3110 ft. Recorder Number 13498 Cap. 4000 P.S.I.
 Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type CHEMICAL Viscosity 58 Drill Collar Length 210 ft. I.D. 2 1/4 in
 Weight 8.8 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in
 Chlorides 1,000 P.P.M. Drill Pipe Length 2862 ft. I.D. 3 1/2 in
 Jars: Make STERLING Serial Number NOT REQUESTED Test Tool Length 20 ft. Tool Size 3 1/2-IF in
 Did Well Flow? NO Reversed Out NO Anchor Length 21 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 (B.O.B 9 MIN.) **NO BB**
 2nd Open: STRONG (B.O.B 25 MIN.) **NO BB**

Recovered 420 ft. of GIP
 Recovered 100 ft. of SLGCM WITHOIL SPECKS (10%GAS 90%MUD)
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____

Remarks: TOTAL FLUID REC:100' (100' IN DRILL COLLARS)
TOOLSAMPLE GRINDOUT: (100%MUD)



Time Set Packer(s) 4:40 P.M. A.M. Time Started Off Bottom 7:10 P.M. P.M. Maximum Temperature 106

Initial Hydrostatic Pressure..... (A) 1455 P.S.I.
 Initial Flow Period..... Minutes 30 (B) 19 P.S.I. to (C) 36 P.S.I.
 Initial Closed In Period..... Minutes 45 (D) 375 P.S.I.
 Final Flow Period..... Minutes 30 (E) 39 P.S.I. to (F) 51 P.S.I.
 Final Closed In Period..... Minutes 45 (G) 344 P.S.I.
 Final Hydrostatic Pressure..... (H) 1440 P.S.I.



DIAMOND TESTING
 P.O. Box 157
HOISINGTON, KANSAS 67544
 (800) 542-7313
DRILL-STEM TEST TICKET
 FILE: STCKnop7-30dst2

TIME ON: 14:30:00 4/25/2014
 TIME OFF: 20:50:00 4/25/2014

Company RAMA OPER. CO. INC Lease & Well No. KNOP 7-30
 Contractor STERLING DRILLING RIG 4 Charge to RAMA OPER. CO. INC.
 Elevation 1778 K.B Formation ARUCKLE Effective Pay _____ Ft. Ticket No. J3225
 Date 4/25/14 Sec. 30 Twp. 19 S Range 10 W County RICE State KANSAS
 Test Approved By JOSH AUSTIN Diamond Representative JOHN RIEDL

Formation Test No. 2 Interval Tested from 3255 ft. to 3307 ft. Total Depth 3307 ft.
 Packer Depth 3250 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
 Packer Depth 3255 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

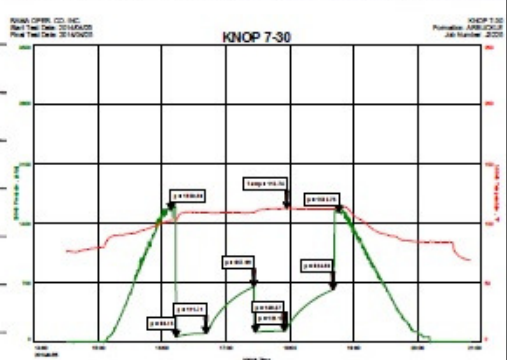
Depth of Selective Zone Set _____
 Top Recorder Depth (Inside) 3258 ft. Recorder Number 30046 Cap. 6000 P.S.I.
 Bottom Recorder Depth (Outside) 3304 ft. Recorder Number 13498 Cap. 4000 P.S.I.
 Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type CHEMICAL Viscosity 48 Drill Collar Length 210 ft. I.D. 2 1/4 in.
 Weight 9.5 Water Loss 9.1 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
 Chlorides 3,000 P.P.M. Drill Pipe Length 3025 ft. I.D. 3 1/2 in.
 Jars: Make STERLING Serial Number NOT REQUESTED Test Tool Length 20 ft. Tool Size 3 1/2-IF in.
 Did Well Flow? NO Reversed Out NO Anchor Length 52 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 (B.O.B 15 MIN.) WK BB (1")
 2nd Open: STRONG (B.O.B 20 MIN.) WK BB(1")

Recovered 250 ft. of GIP
 Recovered 50 ft. of GOM(30%GAS 35%OIL 35%MUD)
 Recovered 190 ft. of G+OCWM (10%GAS 25%OIL 30%WATER35%MUD)
 Recovered 120 ft. of SLO+GCW(%GAS 5%OIL 90%WATER)
 Recovered _____ ft. of CHLORIDES 12,000 pPM
 Recovered _____ ft. of _____


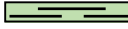



Remarks: TOTAL FLUID REC:360'
TOOLSAMPLE GRINDOUT: (5%OIL 95%)



Time Set Packer(s) 4:10 P.M. A.M. Time Started Off Bottom 6:40 P.M. P.M. Maximum Temperature 113





Initial Hydrostatic Pressure.....	(A)	1559	P.S.I.
Initial Flow Period.....	Minutes	30	(B) 69 P.S.I. to (C) 112 P.S.I.
Initial Closed In Period.....	Minutes	45	(D) 658 P.S.I.
Final Flow Period.....	Minutes	30	(E) 126 P.S.I. to (F) 141 P.S.I.
Final Closed In Period.....	Minutes	45	(G) 625 P.S.I.
Final Hydrostatic Pressure.....	(H)	1533	P.S.I.

ROCK TYPES

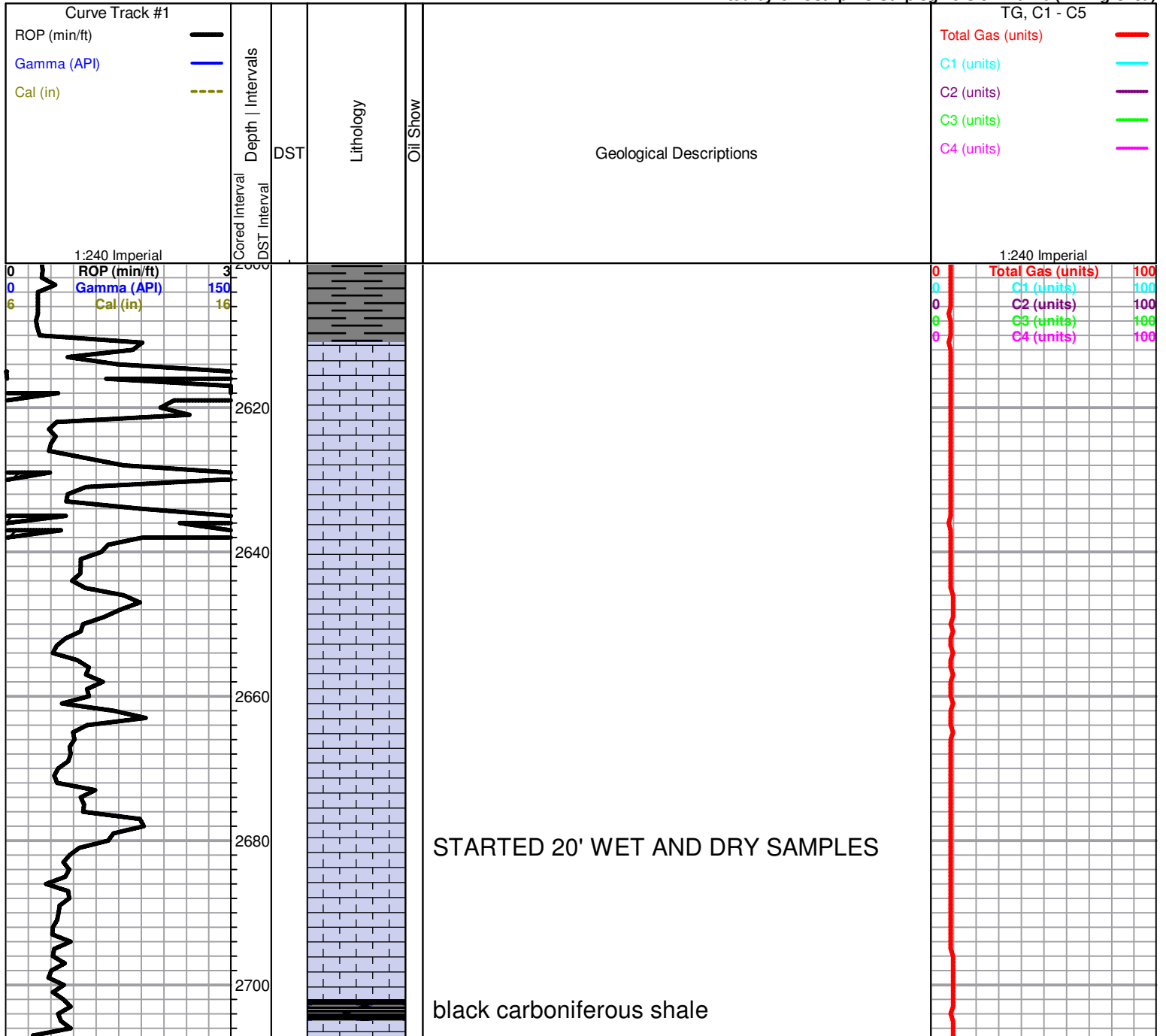
	Dolsec		shale, grn		Carbon Sh
	Lmst fw7>		shale, gry		

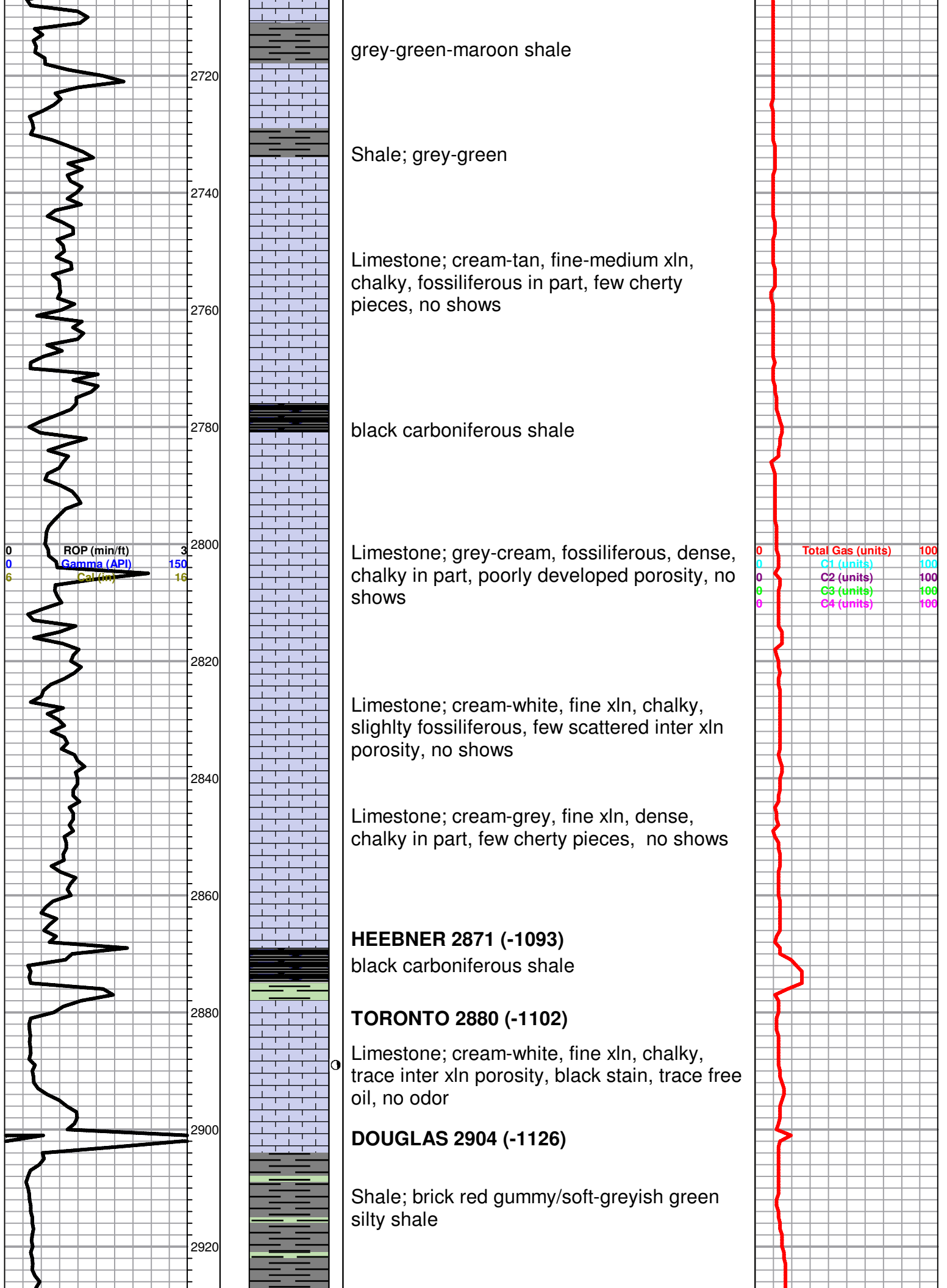
OTHER SYMBOLS

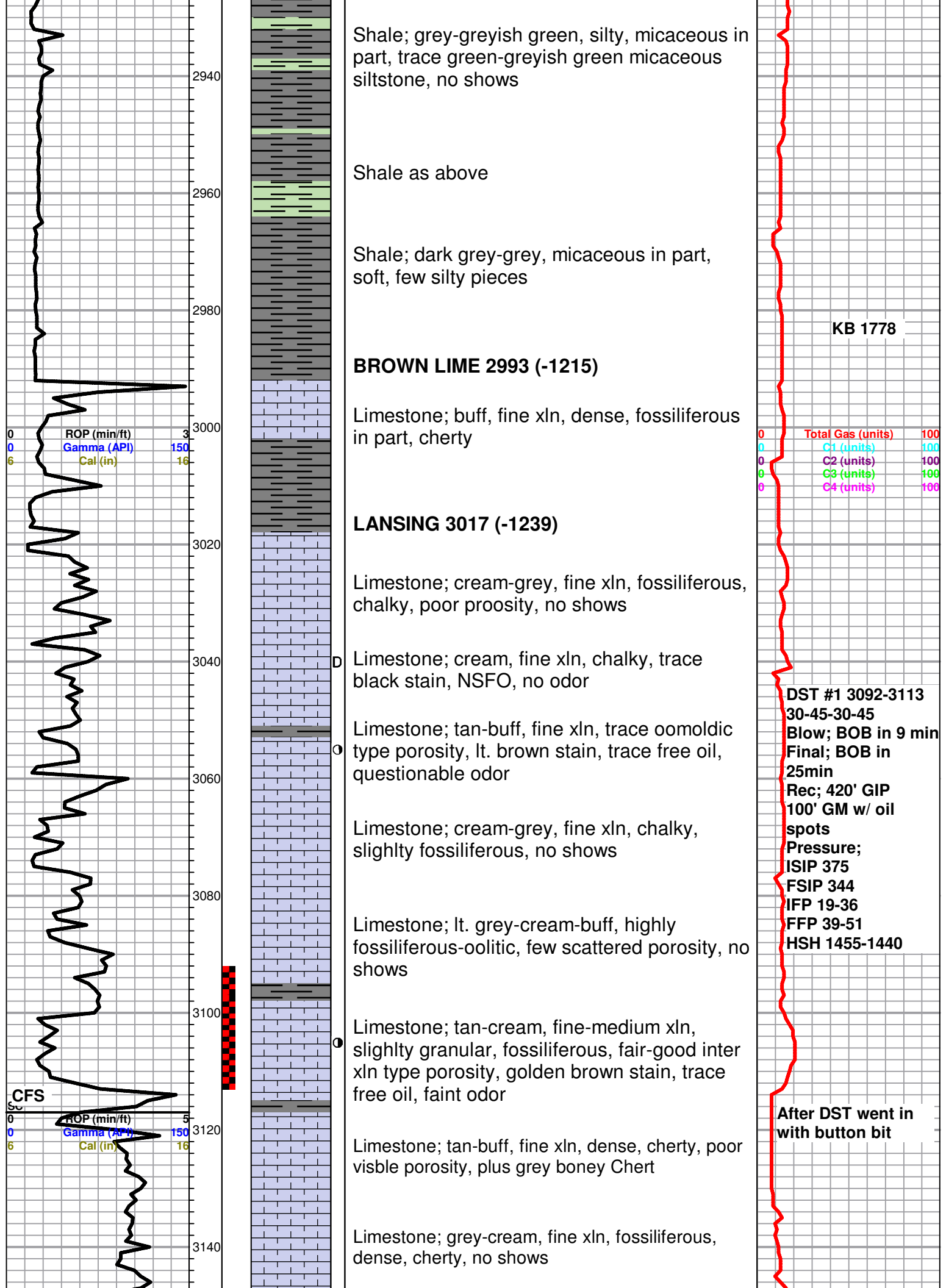
DST

	DST Int
	DST alt
	Core
	tail pipe

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)







Shale; grey-greyish green, silty, micaceous in part, trace green-greyish green micaceous siltstone, no shows

Shale as above

Shale; dark grey-grey, micaceous in part, soft, few silty pieces

KB 1778

BROWN LIME 2993 (-1215)

Limestone; buff, fine xln, dense, fossiliferous in part, cherty

LANSING 3017 (-1239)

Limestone; cream-grey, fine xln, fossiliferous, chalky, poor proosity, no shows

Limestone; cream, fine xln, chalky, trace black stain, NSFO, no odor

Limestone; tan-buff, fine xln, trace oomoldic type porosity, lt. brown stain, trace free oil, questionable odor

DST #1 3092-3113
30-45-30-45
Blow; BOB in 9 min
Final; BOB in 25min
Rec; 420' GIP
100' GM w/ oil spots
Pressure;
ISIP 375
FSIP 344
IFP 19-36
FFP 39-51
HSB 1455-1440

Limestone; cream-grey, fine xln, chalky, slightly fossiliferous, no shows

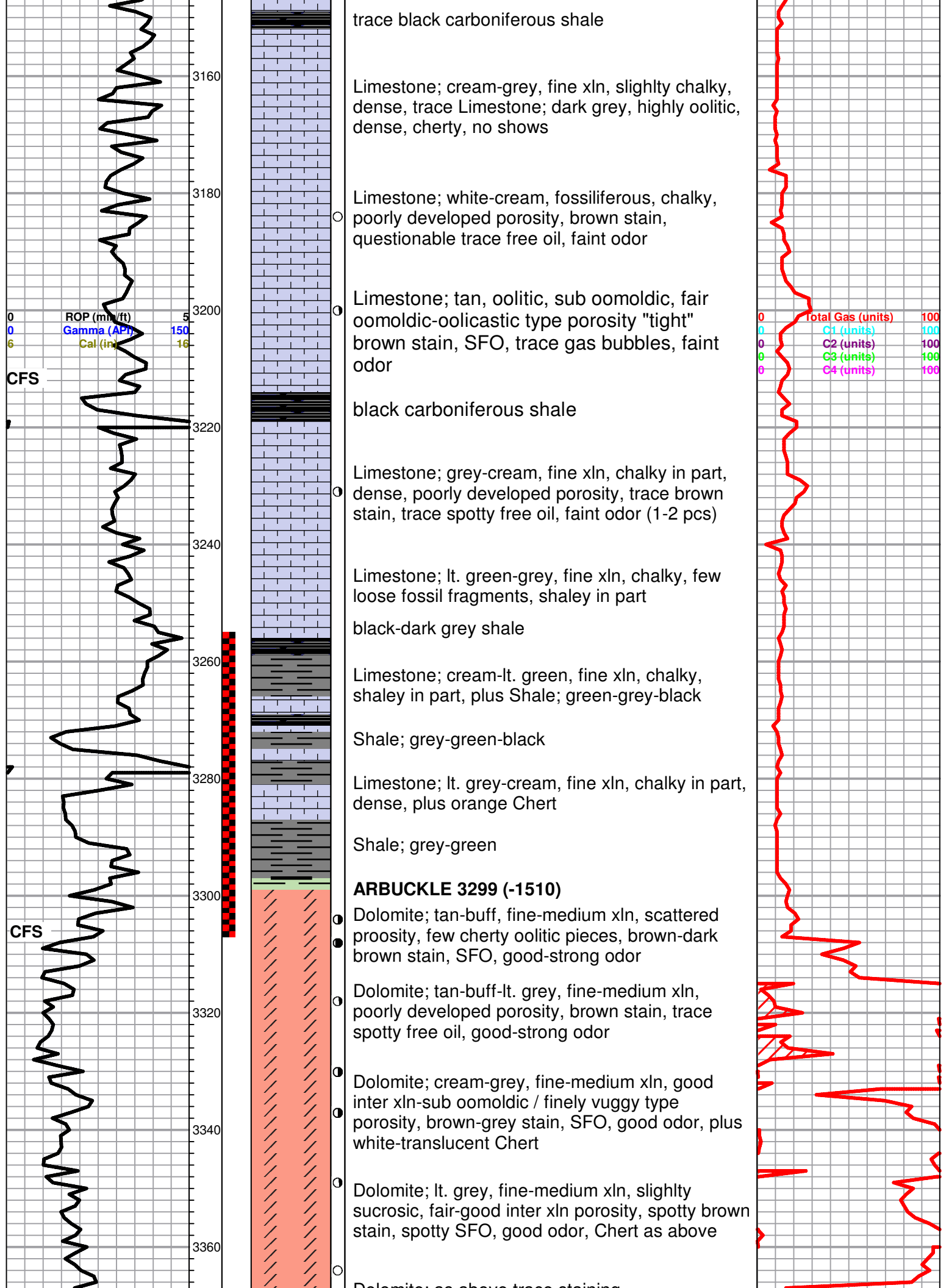
Limestone; lt. grey-cream-buff, highly fossiliferous-oolitic, few scattered porosity, no shows

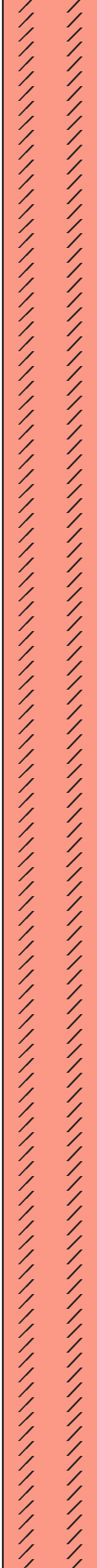
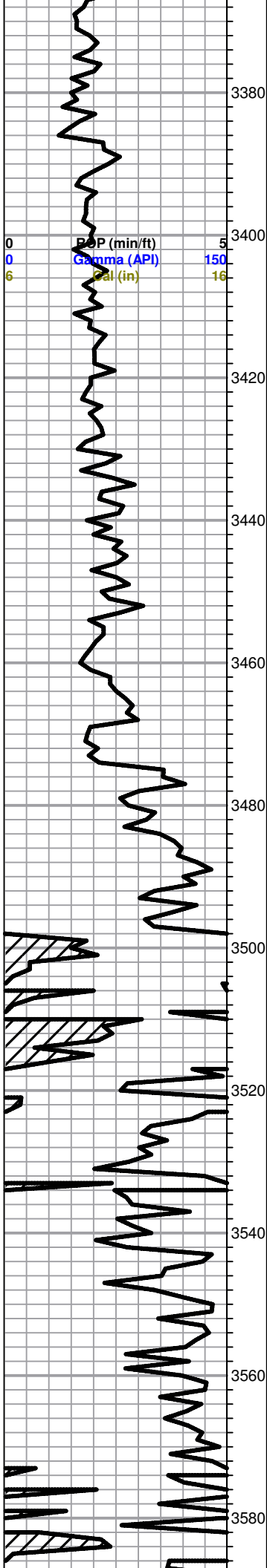
Limestone; tan-cream, fine-medium xln, slightly granular, fossiliferous, fair-good inter xln type porosity, golden brown stain, trace free oil, faint odor

After DST went in with button bit

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

Limestone; grey-cream, fine xln, fossiliferous, dense, cherty, no shows





Dolomite; as above trace staining

Dolomite; tan-cream, fine xln, dense, cherty, poor visible porosity, trace brown-black stain, NSFO, fair-good odor, plus white boney Chert

Dolomite; cream-buff, fine xln, dense, cherty, few scattered porosity, no shows, faint-fair odor, plus white boney Chert

Dolomite; as above, tan-cream, cherty, poor-no porosity, no shows, faint odor

plus white boney Chert

Dolomite; cream-lt. grey-white, fine-medium xln, few scattered porosity, cherty in part, no shows, no odor

Dolomite; grey-cream-buff, fine-medium xln, poorly developed porosity, cherty in part, Quartz, no shows, no odor, plus FeS₂

Dolomite and Quartz as above

Dolomite; cream-white, fine-medium xln, poor porosity, cherty, plus white boney Chert

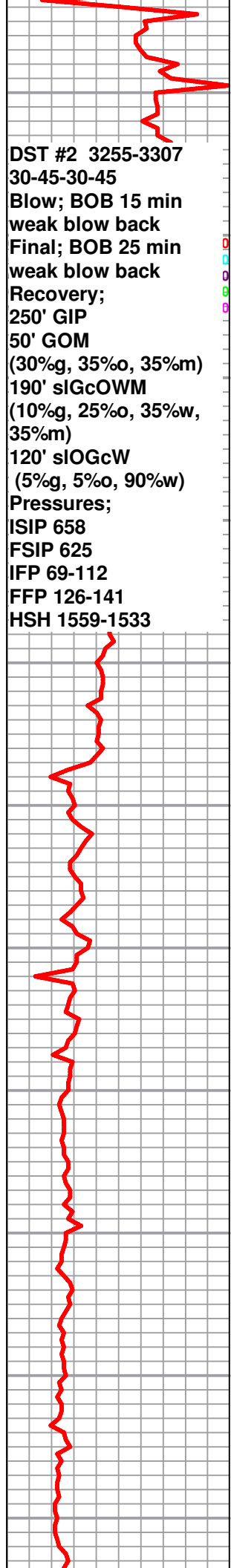
as above

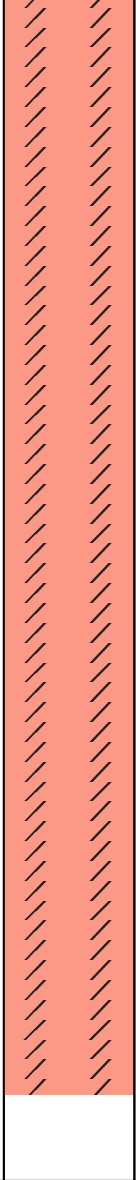
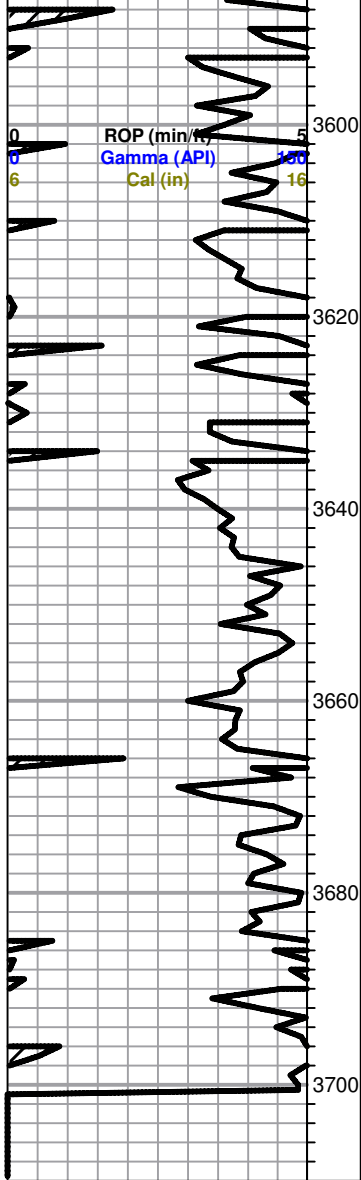
Dolomite; cream-grey, fine xln, few granular pieces, poor porosity, cherty

as above

Dolomite; cream-grey, fine-medium xln, few scattered inter xln porosity, cherty, dense

Dolomite; cream-lt grey, fine-medium xln, poorly developed porosity, cherty, dense





Dolomite; lt. grey, medium xln, fair inter xln porosity, slightly glauconitic in part

Dolomite; as above cream-lt. grey, fair inter xln porosity

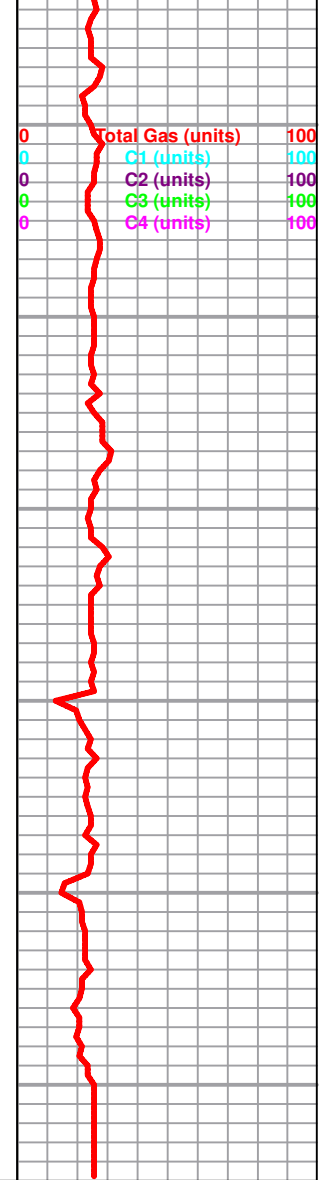
Dolomite; white-lt. grey, medium xln, fair inter xln porosity, slightly rhombic, few quartz pieces

Dolomite; as above

Dolomite; white-cream, fine-medium xln, fair inter xln porosity, slightly rhombic, few quartz pieces, plus white Chert

Dolomite and Chert as above

ROTARY TOTAL DEPTH 3700 (-1922)



Customer <i>Rama Operating Co, Inc.</i>	Lease No. <i>Knop 7-30</i>	Date <i>4-27-14</i>
Lease <i>Knop</i>	Well # <i>7-30</i>	Service Receipt # <i>1998-10651-A</i>
Casing <i>5 1/2"</i>	Depth <i>3384'</i>	County <i>Rice</i> State <i>KS</i>
Job Type <i>5 1/2" Long String (AW)</i>	Legal Description <i>30-19-10</i>	

Pipe Data		Perforating Data		Cement Data
Casing size	Tubing Size	Shots/Ft		Lead
<i>5 1/2"</i>		From	To	<i>Tail in AA2 Cement 125's/sk 15ppg</i>
Depth <i>3384'</i>	Depth			
Volume <i>82</i>	Volume	From	To	
Max Press	Max Press	From	To	
Well Connection	Annulus Vol.	From	To	
Plug Depth	Packer Depth	From	To	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>1000</i>					<i>Called Out</i>
<i>1100</i>					<i>On Location</i>
					<i>Safety Meeting</i>
					<i>Setup</i>
<i>1900</i>					<i>Run Csg & Float Equipment</i>
					<i>Dr Bottom Circ</i>
<i>2110</i>					<i>Test Lines to Rig Floor 2000psi</i>
<i>2115</i>			<i>12</i>	<i>2</i>	<i>Pump 500 gals MF</i>
<i>2120</i>			<i>32</i>	<i>4</i>	<i>Mix & Pump Cement 125's sk 15ppg</i>
					<i>Finished mixing cement</i>
<i>2145</i>			<i>82.2</i>		<i>Wash up Drop Top Plug</i>
<i>2200</i>					<i>Displace 3370' x .0244 = 82.2 BBLs</i>
					<i>Zand Plug Released Float Held</i>
<i>2210</i>			<i>8</i>		<i>Mix & Pump Cement for Rat Hole</i>
<i>2220</i>			<i>6</i>		<i>Mix & Pump Cement for Mouse Hole</i>
					<i>Washup</i>
<i>2230</i>					<i>Job Completed Thanks</i>

Service Units	<i>21755</i>	<i>77686-19905</i>	<i>19960-21010</i>		
Driver Names	<i>Rogon</i>	<i>Michael</i>	<i>Shawn</i>		

Randy Givest
Customer Representative

Kenn W Gaudley
Station Manager

Roger Brown
Cementer