KOLAR Document ID: 1323616

Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 3911
Name: Rama Operating Co., Inc.
Address 1: 101 S MAIN ST
Address 2:
City: STAFFORD State: KS Zip: 67578 + 1429
Contact Person: Robin L. Austin
Phone: (620) 234-5191
CONTRACTOR: License # 5142
Name: Sterling Drilling Company
Wellsite Geologist: Josh Austin
Purchaser:

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover
☑ Oil ☐ WSW ☐ SWD
☐ Gas ☐ DH ☐ EOR
☐ OG ☐ GSW
☐ 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 EOR ☐ Conv. to SWD
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ EOR Permit #:
☐ GSW Permit #:

11/28/2016 Spud Date or Recompletion Date
12/04/2016 Date Reached TD
12/19/2016 Completion Date or Recompletion Date

API No.: 15-185-23974-00-00
Spot Description:
SW - NW - NE - NE Sec. 5 Twp. 25 S. R. 12 ☐ East ☑ West
536 Feet from ☑ North / ☐ South Line of Section
1018 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☑ NE ☐ NW ☐ SE ☐ SW
GPS Location: Lat: (e.g. xx.xxxxx) , Long: (e.g. -xxx.xxxxx)
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Stafford
Lease Name: Molly Brown Well #: 1-5
Field Name:
Producing Formation: Lansing Kansas City
Elevation: Ground: 1891 Kelly Bushing: 1902
Total Vertical Depth: 4250 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 294 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: 2800 ppm Fluid volume: 320 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Pauls Oilfield
Lease Name: Beckerdite License #: 31085
Quarter NW Sec. 21 Twp. 24 S. R. 13 ☐ East ☑ West
County: Stafford Permit #: D26547.0

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: 02/21/2017
☑ **Confidential Release Date:** 02/21/2019
☑ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 02/21/2017

Operator Name: Rama Operating Co., Inc. Lease Name: Molly Brown Well #: 1-5

Sec. 5 Twp. 25 S. R. 12 ☐ East ☑ West County: Stafford

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 *(Attach Additional Sheets)*	☐ Yes	☑ No	☑ Log Formation (Top), Depth and Datum ☐ Sample
Samples Sent to Geological Survey	☑ Yes	☐ No	Name: Attached Top: Attached Datum: Attached
Cores Taken	☐ Yes	☑ No	
Electric Log Run	☑ Yes	☐ No	
Geologist Report / Mud Logs	☐ Yes	☐ No	

List All E. Logs Run:

DUCP
DIL
MEL

CASING RECORD ☑ New ☐ 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
Surface	12.250	8.625	23	294	60/40	300	2% gel 3% CC
Production	7.875	5.5	14	4245	AA-2	150	2% CC

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ Plug Off Zone	-			
	-			

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/ Injection: 01/04/2017	Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL: Top / Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	3809-22 /

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD:	Size:	Set At:	Packer At:	
	2.375	3820		

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Rama Operating Co., Inc.
Well Name	Molly Brown 1-5
Doc ID	1323616

Tops

Name	Top	Datum
Heebner	3390	-1488
Brown Lime	3539	-1637
Lansing	3565	-1663
Base Lansing	3843	-1941
Viola	3974	-2072
Simpson Shale	4086	-2184
Arbuckle	4166	-2264
RTD	4250	-2348

Form	ACO1 - Well Completion
Operator	Rama Operating Co., Inc.
Well Name	Molly Brown 1-5
Doc ID	1323616

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	3809-22	400 gal 15 % MCA	
	CIBP		
4	4166-73		

Form	ACO1 - Well Completion
Operator	Rama Operating Co., Inc.
Well Name	Molly Brown 1-5
Doc ID	1323616

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.250	8.625	23	294	60/40	300	2% gel 3% CC
Production	7.875	5.5	14	4245	AA-2	150	2% CC

Joshua R. Austin

Petroleum Geologist

report for

RAMA Operating CO., Inc

COMPANY: RAMA Operating Company, Inc.

LEASE: Austin # 1-5

FIELD: Wildcat

LOCATION: SW-NW-NE-NE (536' FNL & 1018' FEL)

SEC: 5 **TWSP:** 25s **RGE:** 12w

COUNTY: Stafford **STATE:** Kansas

KB: 1902 **GL:** 1891

API # 15-185-23974-00-00

CONTRACTOR: Sterling Drilling (rig #4)

Spud: 11/29/2016 **Comp:** 12/05/2016

RTD: 4250' **LTD:** 4246'

Mud Up: 2900' **Type Mud:** Chemical was displaced

Samples Saved From: 2900' to RTD
Drilling Time Kept From: 2900' to RTD
Samples Examined From: 2900' to RTD
Geological Supervision From: 3000' to RTD
Geologist on Well: Josh Austin

Surface Casing: 8 5/8" @ 294'
Production Casing: 5 1/2" @ 4245'

Electronic Surveys: By Pioneer Energy Services

NOTES

On the basis of the positive structural position, good sample shows and after evaluating the electric logs it was recommended by all parties involved in the Austin #1-5 to set 5 1/2" production casing to further test the Arbuckle and Lansing zones.

RAMA Operating Company Inc.

well comparison sheet

	DRILLING WELL Austin #1-5				COMPARISON WELL Dudrey #1			
	1902 KB				1900 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Sample	Sub-Sea	Sample	Log
Heebner	3390	-1488	3390	-1488	3388	-1488	0	0
Toronto	3404	-1502	3404	-1502	3402	-1502	0	0
Douglas	3432	-1530	3430	-1528	3429	-1529	-1	1
Brown Lime	3540	-1638	3539	-1637	3540	-1640	2	3
Lansing	3564	-1662	3565	-1663	3564	-1664	2	1
Base KC	3844	-1942	3843	-1941	3844	-1944	2	3
Viola	3970	-2068	3974	-2072	3970	-2070	2	-2
Simpson Shale	4088	-2186	4086	-2184	4082	-2182	-4	-2
Simpson Sand	4092	-2190	4092	-2190	4086	-2186	-4	-4
Arbuckle	4168	-2266	4166	-2264	4167	-2267	1	3
Total Depth	4250	-2348	4246	-2344	4251	-2351		

ROCK TYPES

Cht, Chtcongl, Dolsec, Lmst fw7>, shale, grn, shale, gry, Carbon Sh, shale, red, Ss

OTHER SYMBOLS

DST
- DST Int
- DST alt
- Core
- tail pipe

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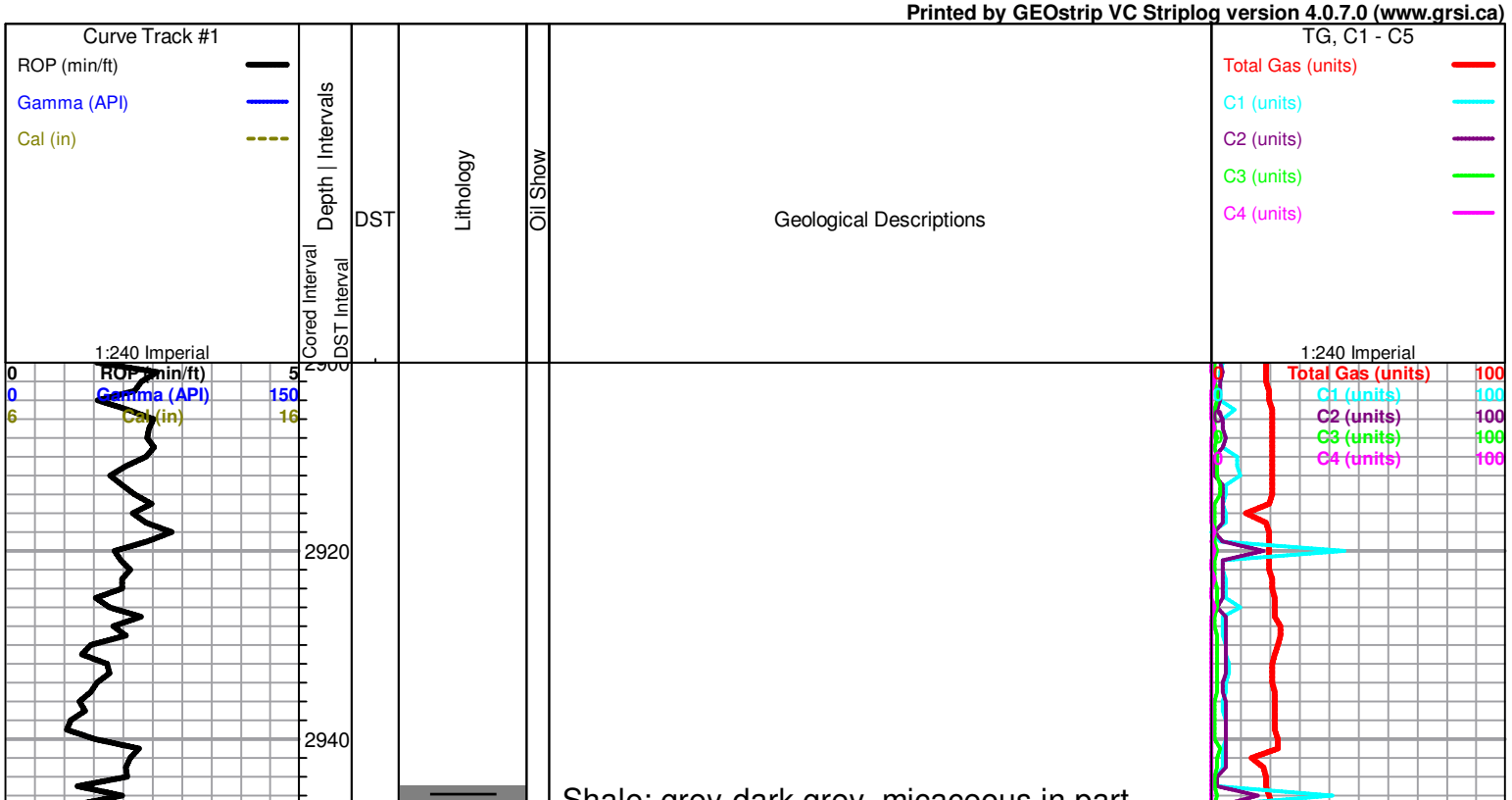
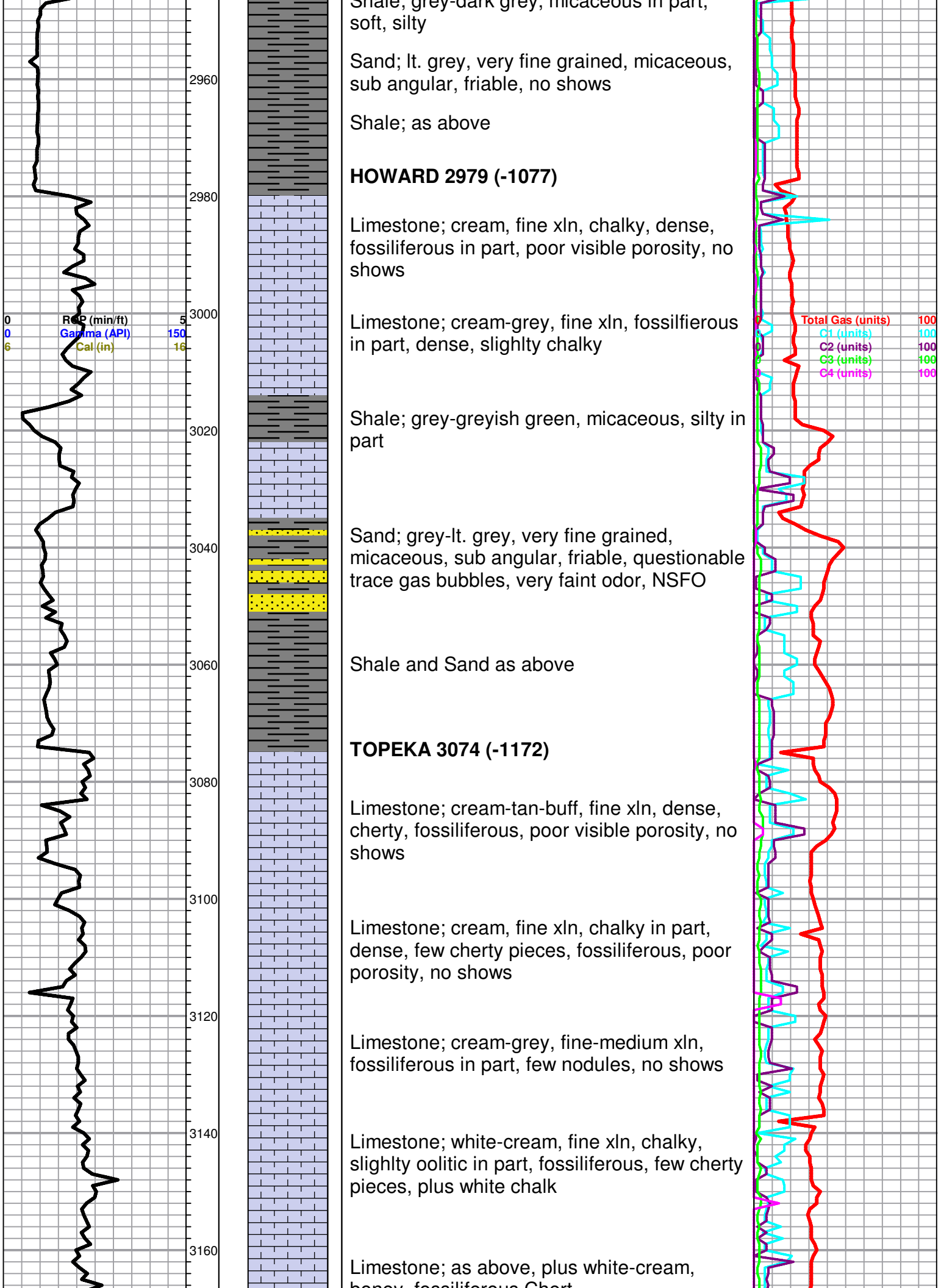




Shale; grey-dark grey, micaceous in part, soft, silty

Sand; lt. grey, very fine grained, micaceous, sub angular, friable, no shows

Shale; as above

HOWARD 2979 (-1077)

Limestone; cream, fine xln, chalky, dense, fossiliferous in part, poor visible porosity, no shows

Limestone; cream-grey, fine xln, fossilfierous in part, dense, slighlty chalky

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

Sand; grey-lt. grey, very fine grained, micaceous, sub angular, friable, questionable trace gas bubbles, very faint odor, NSFO

Shale and Sand as above

TOPEKA 3074 (-1172)

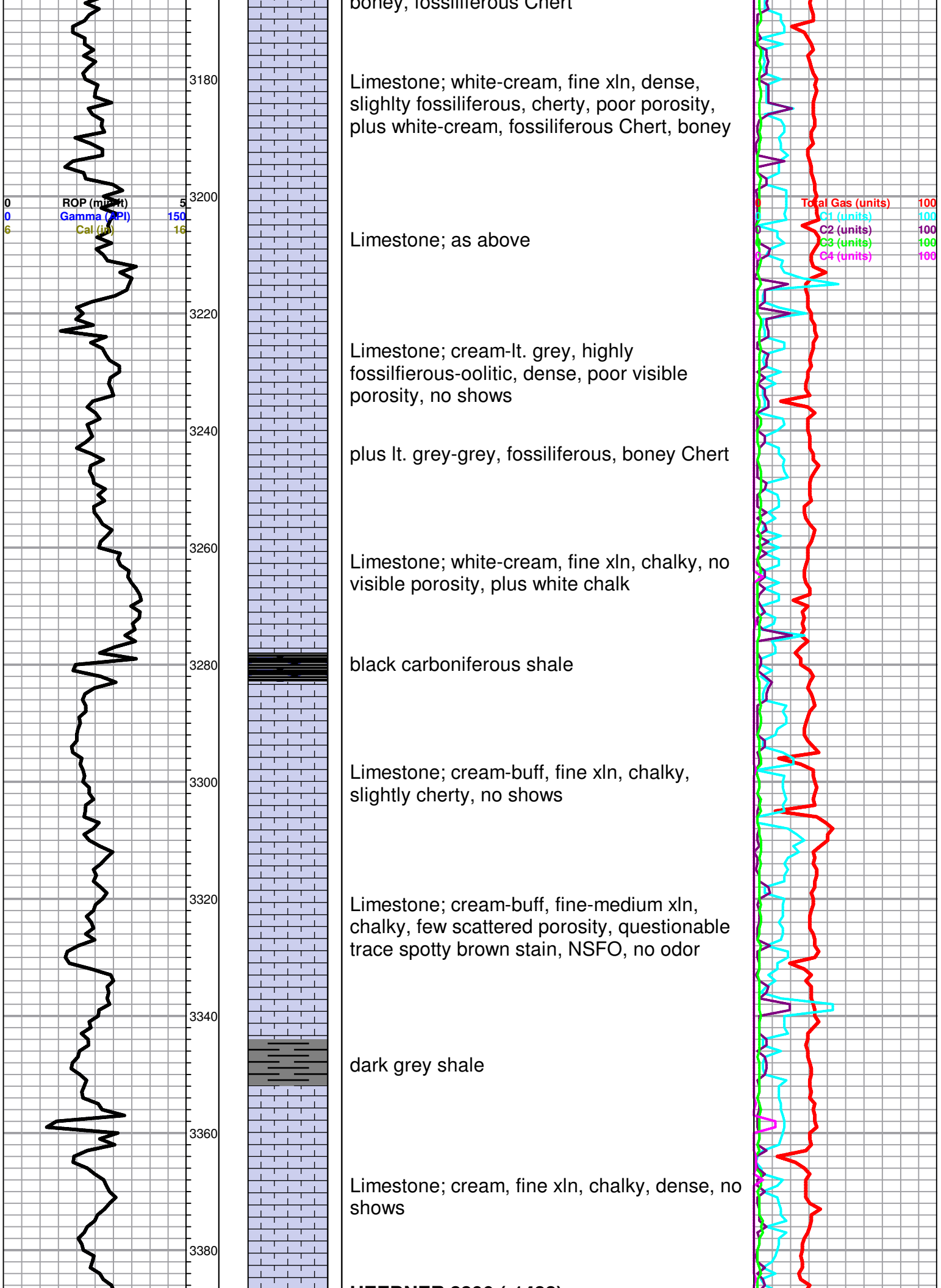
Limestone; cream-tan-buff, fine xln, dense, cherty, fossiliferous, poor visible porosity, no shows

Limestone; cream, fine xln, chalky in part, dense, few cherty pieces, fossiliferous, poor porosity, no shows

Limestone; cream-grey, fine-medium xln, fossiliferous in part, few nodules, no shows

Limestone; white-cream, fine xln, chalky, slighlty oolitic in part, fossiliferous, few cherty pieces, plus white chalk

Limestone; as above, plus white-cream, , fossiliferous Chert



boney, fossiliferous Chert

Limestone; white-cream, fine xln, dense, slighlty fossiliferous, cherty, poor porosity, plus white-cream, fossiliferous Chert, boney

Limestone; as above

Limestone; cream-lt. grey, highly fossilfierous-oolitic, dense, poor visible porosity, no shows

plus lt. grey-grey, fossiliferous, boney Chert

Limestone; white-cream, fine xln, chalky, no visible porosity, plus white chalk

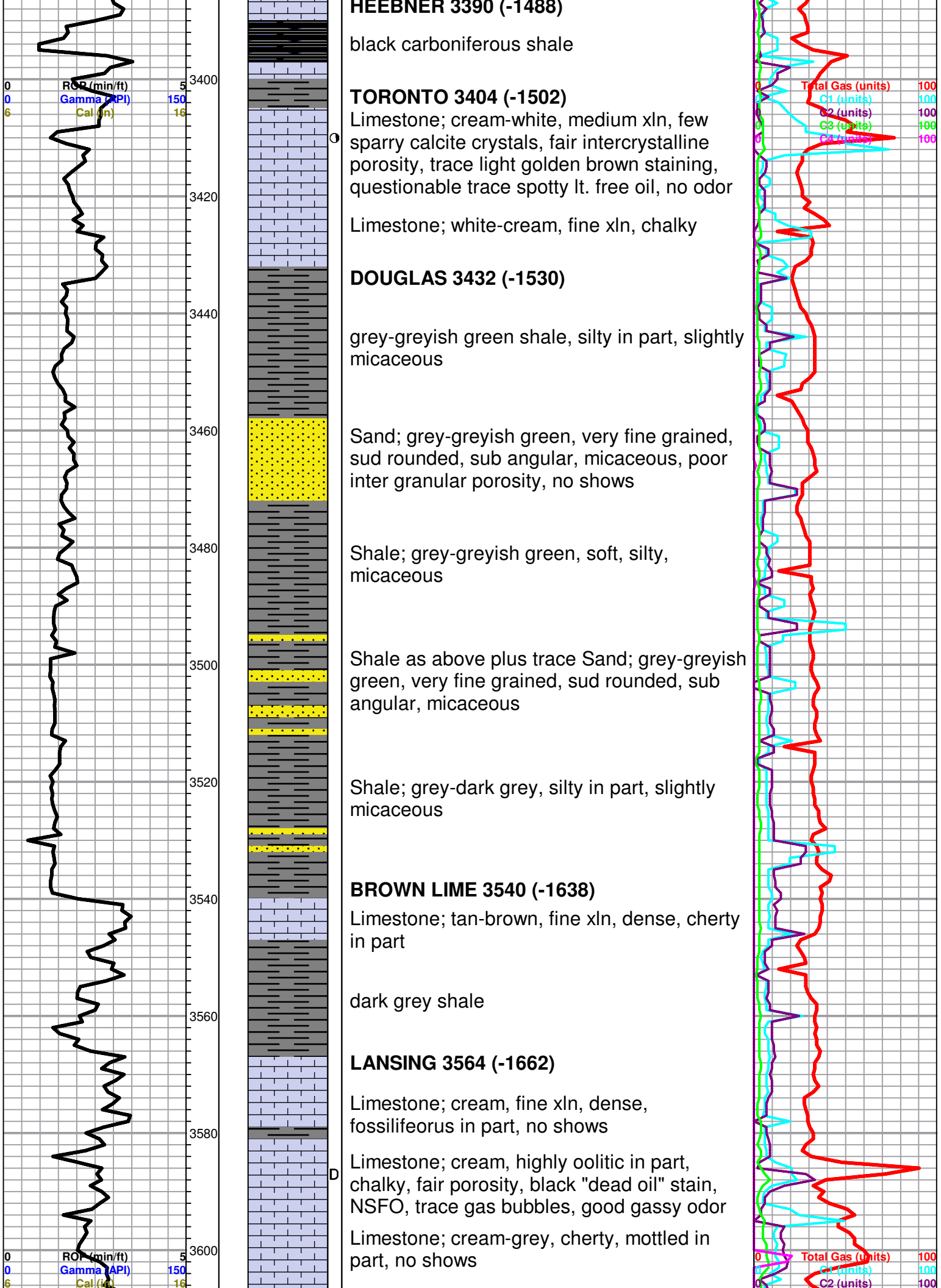
black carboniferous shale

Limestone; cream-buff, fine xln, chalky, slightly cherty, no shows

Limestone; cream-buff, fine-medium xln, chalky, few scattered porosity, questionable trace spotty brown stain, NSFO, no odor

dark grey shale

Limestone; cream, fine xln, chalky, dense, no shows



HEEBNER 3390 (-1488)

black carboniferous shale

TORONTO 3404 (-1502)

Limestone; cream-white, medium xln, few sparry calcite crystals, fair intercrystalline porosity, trace light golden brown staining, questionable trace spotty lt. free oil, no odor

Limestone; white-cream, fine xln, chalky

DOUGLAS 3432 (-1530)

grey-greyish green shale, silty in part, slightly micaceous

Sand; grey-greyish green, very fine grained, sud rounded, sub angular, micaceous, poor inter granular porosity, no shows

Shale; grey-greyish green, soft, silty, micaceous

Shale as above plus trace Sand; grey-greyish green, very fine grained, sud rounded, sub angular, micaceous

Shale; grey-dark grey, silty in part, slightly micaceous

BROWN LIME 3540 (-1638)

Limestone; tan-brown, fine xln, dense, cherty in part

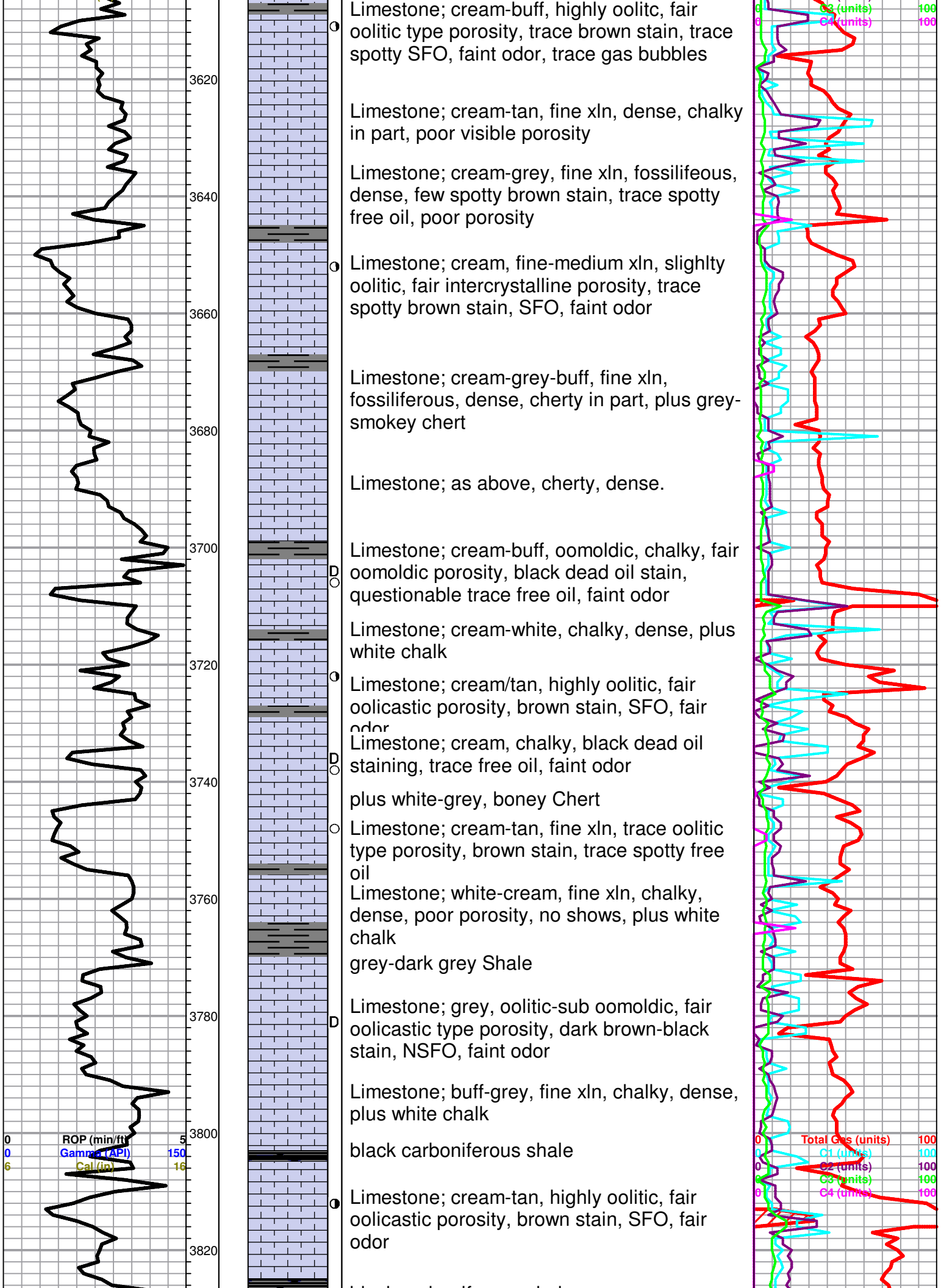
dark grey shale

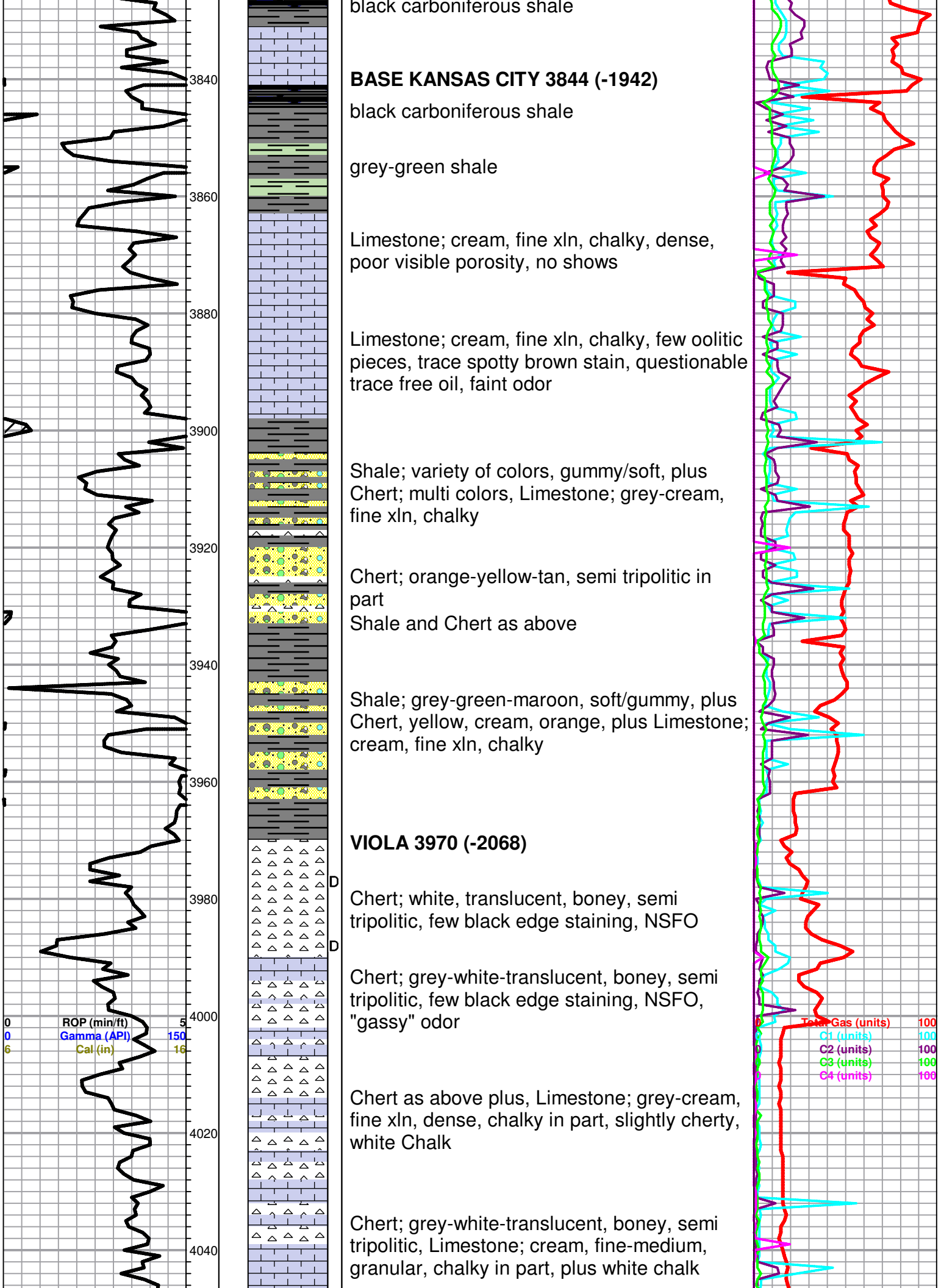
LANSING 3564 (-1662)

Limestone; cream, fine xln, dense, fossilifeorus in part, no shows

Limestone; cream, highly oolitic in part, chalky, fair porosity, black "dead oil" stain, NSFO, trace gas bubbles, good gassy odor

Limestone; cream-grey, cherty, mottled in part, no shows


3620
3640
3660
3680
3700
3720
3740
3760
3780
3800
3820
0
ROP (min/ft)
5
0
Gamma (API)
150
6
Cal (in)
16
0
C3 (units)
100
0
C4 (units)
100
0
Total Gas (units)
100
0
C1 (units)
100
0
C2 (units)
100
0
C3 (units)
100
0
C4 (units)
100
Limestone; cream-buff, highly oolitc, fair oolitic type porosity, trace brown stain, trace spotty SFO, faint odor, trace gas bubbles
Limestone; cream-tan, fine xln, dense, chalky in part, poor visible porosity
Limestone; cream-grey, fine xln, fossilifeous, dense, few spotty brown stain, trace spotty free oil, poor porosity
Limestone; cream, fine-medium xln, slighlty oolitic, fair intercrystalline porosity, trace spotty brown stain, SFO, faint odor
Limestone; cream-grey-buff, fine xln, fossiliferous, dense, cherty in part, plus grey-smokey chert
Limestone; as above, cherty, dense.
Limestone; cream-buff, oomoldic, chalky, fair oomoldic porosity, black dead oil stain, questionable trace free oil, faint odor
Limestone; cream-white, chalky, dense, plus white chalk
Limestone; cream/tan, highly oolitic, fair oolicastic porosity, brown stain, SFO, fair odor
Limestone; cream, chalky, black dead oil staining, trace free oil, faint odor
plus white-grey, boney Chert
Limestone; cream-tan, fine xln, trace oolitic type porosity, brown stain, trace spotty free oil
Limestone; white-cream, fine xln, chalky, dense, poor porosity, no shows, plus white chalk
grey-dark grey Shale
Limestone; grey, oolitic-sub oomoldic, fair oolicastic type porosity, dark brown-black stain, NSFO, faint odor
Limestone; buff-grey, fine xln, chalky, dense, plus white chalk
black carboniferous shale
Limestone; cream-tan, highly oolitic, fair oolicastic porosity, brown stain, SFO, fair odor



black carboniferous shale

BASE KANSAS CITY 3844 (-1942)

black carboniferous shale

grey-green shale

Limestone; cream, fine xln, chalky, dense, poor visible porosity, no shows

Limestone; cream, fine xln, chalky, few oolitic pieces, trace spotty brown stain, questionable trace free oil, faint odor

Shale; variety of colors, gummy/soft, plus Chert; multi colors, Limestone; grey-cream, fine xln, chalky

Chert; orange-yellow-tan, semi tripolitic in part
Shale and Chert as above

Shale; grey-green-maroon, soft/gummy, plus Chert, yellow, cream, orange, plus Limestone; cream, fine xln, chalky

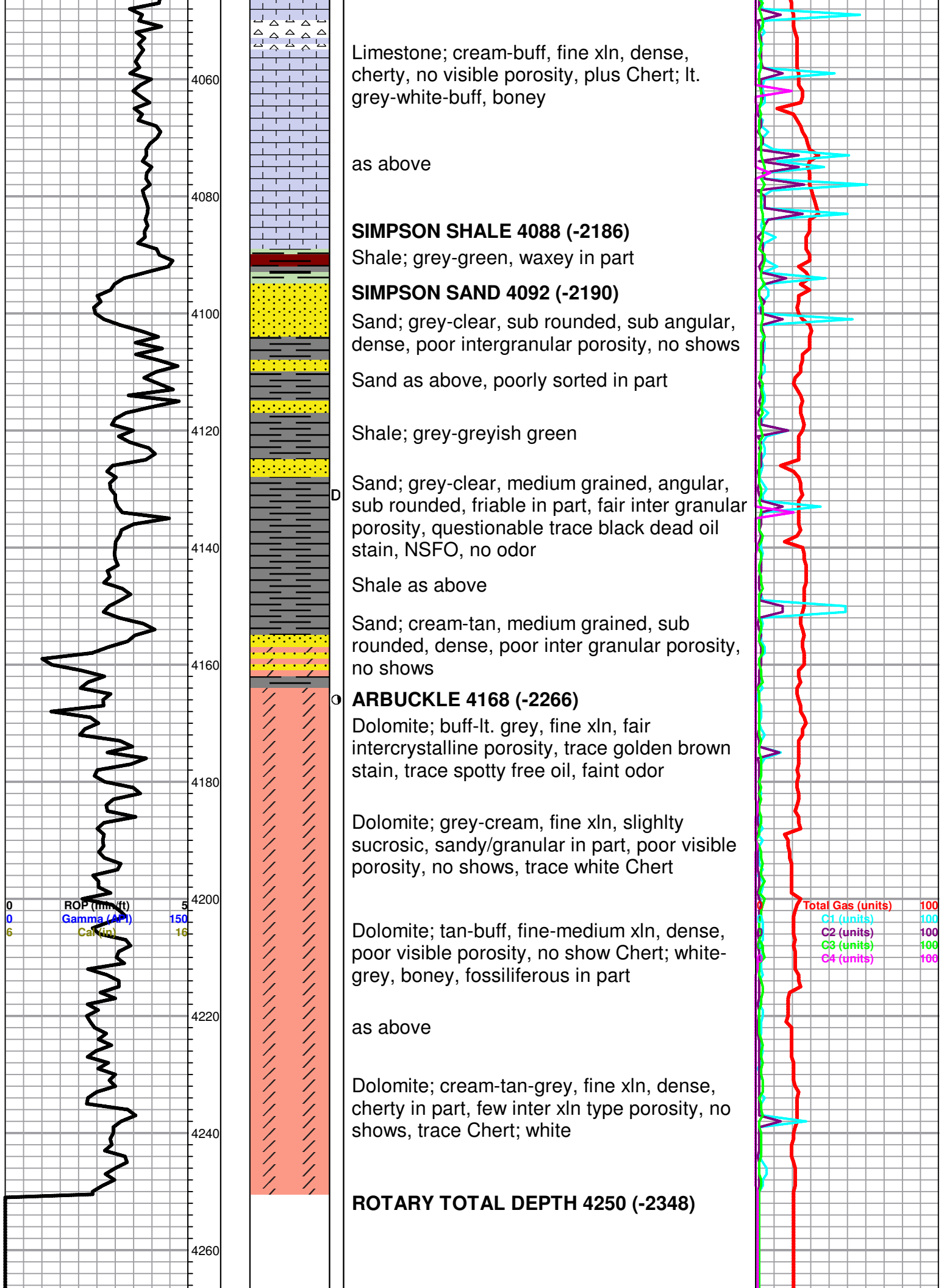
VIOLA 3970 (-2068)

Chert; white, translucent, boney, semi tripolitic, few black edge staining, NSFO

Chert; grey-white-translucent, boney, semi tripolitic, few black edge staining, NSFO, "gassy" odor

Chert as above plus, Limestone; grey-cream, fine xln, dense, chalky in part, slightly cherty, white Chalk

Chert; grey-white-translucent, boney, semi tripolitic, Limestone; cream, fine-medium, granular, chalky in part, plus white chalk



Limestone; cream-buff, fine xln, dense, cherty, no visible porosity, plus Chert; lt. grey-white-buff, boney

as above

SIMPSON SHALE 4088 (-2186)

Shale; grey-green, waxey in part

SIMPSON SAND 4092 (-2190)

Sand; grey-clear, sub rounded, sub angular, dense, poor intergranular porosity, no shows

Sand as above, poorly sorted in part

Shale; grey-greyish green

Sand; grey-clear, medium grained, angular, sub rounded, friable in part, fair inter granular porosity, questionable trace black dead oil stain, NSFO, no odor

Shale as above

Sand; cream-tan, medium grained, sub rounded, dense, poor inter granular porosity, no shows

ARBUCKLE 4168 (-2266)

Dolomite; buff-lt. grey, fine xln, fair intercrystalline porosity, trace golden brown stain, trace spotty free oil, faint odor

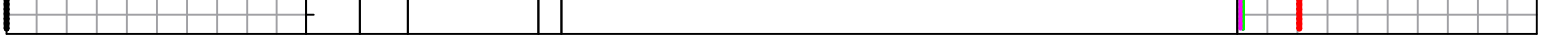
Dolomite; grey-cream, fine xln, slighlty sucrosic, sandy/granular in part, poor visible porosity, no shows, trace white Chert

Dolomite; tan-buff, fine-medium xln, dense, poor visible porosity, no show Chert; white-grey, boney, fossiliferous in part

as above

Dolomite; cream-tan-grey, fine xln, dense, cherty in part, few inter xln type porosity, no shows, trace Chert; white

ROTARY TOTAL DEPTH 4250 (-2348)



BASIC energy services, L.P.

TREATMENT REPORT

Customer: Rama Operating Co Inc	Lease No.		Date: 12/5/11
Lease: Austin	Well #: 1-5		
Field Order #: 24876 A	Station: Pratt KS	Casing: 5 1/2 10.5#	Depth: 4247'
County: Stafford	State: KS		
Type Job: 5 1/2 Long String	Formation	Legal Description	

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size: 5 1/2 10.5#	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth: 4247'	Depth	From	To	Pre Pad	Max		5 Min.
Volume: 103.67	Volume	From	To	Pad	Min		10 Min.
Max Press: 7000	Max Press	From	To	Frac	Avg		15 Min.
Well Connection: 5 1/2	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative: Randy Gaines			Station Manager: Kevin Gridley		Treater: Scott Graves						
Service Units	78450	78987	56776	54950	19660						
Driver Names	Scott	Michael	—	Josh	—						

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
6:15					On Location Safety Meeting Rig up
7:45					Run Float Equipment Tubs #3, 12, 15, 19
9:20					Break Circulation
10:10	250			5	Pump H20 Spacer
10:11	250		5	5	Pump 500 gallons Mud Flush
10:13	200		12	5	Pump H20 Spacer
10:14	150		5	4	Mix 150 sks AA2 15.4#
10:27	0		37.9		Shut down
10:30					Wash pump + lines clean
10:32				4.5	Release Plug Start displacement
10:50	300		75	4.5	Lift Pressure
10:56	600		20	3	Reduce Rate
11:00	750		6	3	Plug landed
11:00	1500				Increase Pressure on Plug
11:00	1500				Shut down Pressure Held
11:02	0				Release Pressure Float Holding
11:10	0		8	3	Plug Rat hole
11:15	0		6	3	Plug Mouse hole
11:20					Shut down
11:20					Wash up Pump
11:30					Job Complete

Taylor Printing, Inc. 620-672-3656

BASIC energy services, L.P.

TREATMENT REPORT

Customer: KAMA OPERATING CO INC	Lease No.	Date: 11-29-16	
Lease: AUSTIN	Well #: 1-5		
Field Order #: 14693	Station: PRATT	Casing: 8 5/8 Depth: 298	County: STAFFORD State: KS
Type Job: 2 42 8 5/8 SURFACE	Formation	Legal Description: 5-25-12	

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size: 8 5/8	Tubing Size	Shots/Ft		Acid: CMT 300 SKS	60/40 POZ	RATE / PRESS	ISIP
Depth: 294.5	Depth	From	To	Pre Pad: 2% gel	Max: 350 cc	1/4 # cc	5 Min.
Volume: 18.7	Volume	From	To	Pad	Min		10 Min.
Max Press: 300	Max Press	From	To	Frac	Avg		15 Min.
Well Connection: S+V	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth: 269.5	Packer Depth	From	To	Flush: 17.1	Gas Volume		Total Load

Customer Representative: Robin Austin | Station Manager: Kevin Goldsberry | Treater: Mike Mattai

Service Units	37586		27463		70959	19862					
Driver Names	MATTAI		HANSON		EDDY						

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
9:15					ON LOCATION / SAFETY MEETING
11:45					RAN 8 5/8 CSNG
12:41					CSNG ON BOTTOM
12:50					HOOK TO CASING / BREAK CIRC W. RIG
1:00	250		3	5.5	PUMP 3 BBL WATER
1:01	250		64	5.5	MIX 300 SKS 60/40 POZ
1:17	250		—	5	START DISPLACEMENT
1:20	250		17.1		PLUG DOWN / SHUT IN WELL
					5 BBL CMT TO PIT

Taylor Printing, Inc. 620-672-3656