Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1150793

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 # 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 ☐ 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 #:

| 06/28/2013 | 07/04/2013 | 07/11/2013 |
|---|---|---|
| Spud Date or Recompletion Date | Date Reached TD | Completion Date or Recompletion Date |

API No. 15 - 15-159-22743-00-00
Spot Description:
N2 - SE - NW - SW Sec. 30 Twp. 19 S. R. 10 ☐ East ☑ West
1810 Feet from ☐ North / ☑ South Line of Section
990 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: Rice
Lease Name: Knop Well #: 6-30
Field Name:
Producing Formation: Arbuckle
Elevation: Ground: 1764 Kelly Bushing: 1777
Total Vertical Depth: 3650 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 352 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: 4000 ppm Fluid volume: 400 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: Pauls Oilfield
Lease Name: Weiss License #: 31085
Quarter NE Sec. 11 Twp. 19 S. R. 12 ☐ East ☑ West
County: Barton Permit #: D26542

**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: 09/27/2013
☑ **Confidential Release Date:** 09/27/2015
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
**ALT** ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 09/27/2013

1150793

Operator Name: Rama Operating Co., Inc. Lease Name: Knop Well #: 6-30

Sec. 30 Twp. 19 S. R. 10 ☐ East ☑ West County: Rice

**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 ☑ Yes ☐ No
*(Attach Additional Sheets)*

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

DUCP
DIL
MEL

☑ Log Formation (Top), Depth and Datum ☐ Sample

| Name | Top | Datum |
|---|---|---|
| Heebner | 2869 | -1092 |
| Toronto | 2891 | -1114 |
| Brown Lime | 2991 | -1214 |
| Lansing | 3019 | -1242 |
| Base Lansing | 3248 | -1471 |
| Arbuckle | 3282 | -1505 |
| RTD | 3650 | -1873 |

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 | 352 | 60/40 Poz | 270 | 2% gel 3% CC |
| Production | 7.875 | 5.5 | 14 | 3424 | AA2 | 125 | |
| | | | | | | | |

ADDITIONAL CEMENTING / SQUEEZE RECORD

| Purpose: | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
|---|---|---|---|---|
| ___ Perforate<br>___ Protect Casing<br>___ Plug Back TD<br>___ 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 *(Amount and Kind of Material Used)* | Depth |
|---|---|---|---|
| 4 | | | 3286 |
| | | | |
| | | | |
| | | | |
| | | | |

TUBING RECORD: Size: 2.375 Set At: 3300 Packer At:

Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. 07/17/2013

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

| Estimated Production Per 24 Hours | Oil | Bbls. | Gas | Mcf | Water | Bbls. | Gas-Oil Ratio | Gravity |
|---|---|---|---|---|---|---|---|---|
| | 20 | | | | 80 | | | |

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
*(If vented, Submit ACO-18.)*

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
3286-88

**Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202**

BASIC energy services, L.P.

# TREATMENT REPORT

| | | | |
|---|---|---|---|
| Customer: Kama Operating Company, Inc. | Lease No. | Date: 6-29-13 | |
| Lease: Knop | Well #: 6-30 | | |
| Field Order #: 8632 | Station: Pratt, Kansas | Casing: 8 5/8" | Depth: 356 Feet |
| County: Rice | State: Kansas | | |
| Type Job: C. N. W. - Surface | Formation | Legal Description: 30-19S-10W | |

| PIPE DATA | | PERFORATING DATA | | FLUID USED | TREATMENT RESUME | | |
|---|---|---|---|---|---|---|---|
| Casing Size: 8 5/8 | Tubing Size: 23 lb/Ft | Shots/Ft | Cement | Acid: 270 sacks 60/40 Poz | RATE: with 20 | PRESS: Gel, | ISIP |
| Depth: 356 Feet | Depth | From | To | Pre Pad: 3% Calcium Chloride, | Max: .25 Lb/sk. | Cellflake | 5 Min. |
| Volume: 22.8 Bbl. | Volume | From | To | Pad: 14.8 Lb. 7 Gal., 5.18 Gal./ | Min: 5 sk., 1.21 cu. Ft./sk. | | 10 Min. |
| Max Press: 350 P.S.I. | Max Press | From | To | Frac | Avg | | 15 Min. |
| Well Connection: Plug Container | Annulus Vol. | From | To | | HHP Used | | Annulus Pressure |
| Plug Depth: 341 Feet | Packer Depth | From | To | Flush: 21.7 Bbl. Fresh Water | Gas Volume | | Total Load |

Customer Representative: Robin Austin | Station Manager: Kevin Gordley | Treater: Clarence R. Messick

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Service Units | 37,216 | 17,686 | 19,905 | 19,907 | 23,768 | | | | | | |
| Driver Names | Messick | Mc | Graw | | Tye | min | | | | | |

| Time AM | Casing Pressure | Tubing Pressure | Bbls. Pumped | Rate | Service Log |
|---|---|---|---|---|---|
| 1:00 | | | | | Trucks on location and hold safety meeting. |
| 3:15 | Sterling Drilling | | start to run 8 Joints new 23 Lb/Ft. 8 5/8" casing. | | |
| 4:17 | | | | | Casing in well. Circulate for 5 minutes. |
| 4:30. | | | | 5 | Start Fresh water Pre-Flush. |
| | | | 10 | 5 | Start mixing 270 sacks 60/40 Poz cement. |
| | -0- | | 68 | | Stop pumping, Shut in well. Release Wooden Plug |
| | | | | | Open Well. |
| 4:45 | 100 | | | 5 | Start Fresh water Displacement. |
| 4:50 | | | 21.7 | | Plug down. |
| | | | | | Shut in well. |
| | | | | | circulated 10 sacks cement to the pit. |
| | | | | | Wash up pump truck. |
| 5:30 | | | | | Job Complete. |
| | | | | | Thank You. |
| | | | | | Clarence, Mike, Tim |



Taylor Printing, Inc. 620-672-3656

# ASiC energy services, L.P.

## TREATMENT REPORT

| | | | |
|---|---|---|---|
| Customer | Rama Operating | Lease No. | Date 7-4-13 |
| Lease | Knop | Well # 6-30 | |

| | | | | | |
|---|---|---|---|---|---|
| Field Order # 8328 | Station Pratt | Casing 5 1/2 | Depth | County Rice | State KS |
| Type Job CNW 5 1/2 LS | | Formation | | Legal Description 30-19-10 | |

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

Customer Representative Randy | Station Manager Keven | Treater JOE

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Service Units | 27463 | | 70959 | 19918 | | 28443 | | | | | |
| Driver Names | Mike | | ARRon | | | JOE | | | | | |

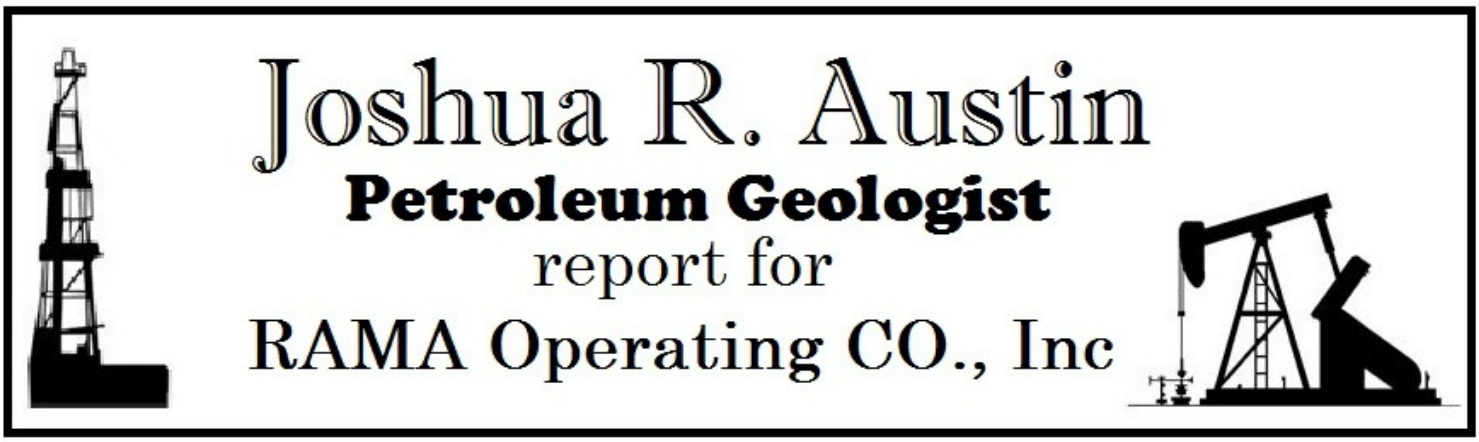
| Time | Casing Pressure | Tubing Pressure | Bbls. Pumped | Rate | Service Log |
|---|---|---|---|---|---|
| 1730 | | | | | ON Loc. / Safety meeting |
| | | | | | Pulling Drill Collars |
| 2045 | | | | | Start Running csg |
| | | | | | Running 82 JTS 14# csg |
| | | | | | Turbo's on TOP OF JT 2-4-6-8 |
| | | | | | Basket on JT 1 |
| 2215 | | | | | casing on Bottom / Breaks circ. with Rig |
| | | | | | |
| 2245 | 100 | | 5 | 5.5 | H20 Spacer |
| | | | 12 | | Mud Flush |
| | | | 5 | | H20 Spacer |
| | 100 | | 32 | 5.5 | Mix 125 SK AA2 cement 15# |
| | | | | 0 | Shut Down / Wash Pump Lines |
| 2310 | | | 0 | 0 | Release Plug |
| | 300 | | 60 | 5.5 | Lift PSF |
| | 400 | | 73 | 4 | Slow Rate |
| 2330 | 1500 | | 83 | 0 | Plug Down |
| | | | | | |
| | | | | | JOB complete |
| | | | | | Thank you |
| | | | | | JOE |

10244 NE Hiway 61 • P.O. Box 8613 • Pratt, KS 67124-8613 • (620) 672-1201 • Fax (620) 672-5383

Taylor Printing, Inc. 620-672-3656

## OPERATOR

| | | | |
|---|---|---|---|
| Company: | RAMA Operating Co., Inc. | | |
| Address: | 101 S. Main St.<br>Stafford, Kansas 67578 | | |
| Contact Geologist: | | | |
| Contact Phone Nbr: | 620-234-5191 | | |
| Well Name: | Knop #6-30 | | |
| Location: | 8 5/8" @ 357' | API: | 15-159-22743-00-00 |
| Pool: | | Field: | Chase-Silica |
| State: | Kansas, Rice County | Country: | USA |




Scale 1:240 Imperial

| | | | |
|---|---|---|---|
| Well Name: | Knop #6-30 | | |
| Surface Location: | 8 5/8" @ 357' | | |
| Bottom Location: | | | |
| API: | 15-159-22743-00-00 | | |
| License Number: | | | |
| Spud Date: | 6/28/2013 | Time: | 6:30 PM |
| Region: | 30-19s-10w | | |
| Drilling Completed: | 7/4/2013 | Time: | 5:50 PM |
| Surface Coordinates: | 1,810' From South Line & 990' From West Line | | |
| Bottom Hole Coordinates: | | | |
| Ground Elevation: | 1764.00ft | | |
| K.B. Elevation: | 1777.00ft | | |
| Logged Interval: | 2800.00ft | To: | 3650.00ft |
| Total Depth: | 3650.00ft | | |
| Formation: | Arbuckle | | |
| Drilling Fluid Type: | Chemical Mud was displaced at 2584' | | |

## SURFACE CO-ORDINATES

| | | | |
|---|---|---|---|
| Well Type: | Vertical | | |
| Longitude: | | Latitude: | |
| N/S Co-ord: | 1,810' From South Line | | |
| E/W Co-ord: | 990' From West Line | | |

## LOGGED BY

| | | | |
|---|---|---|---|
| Company: | Joshua R. Austin, Petroleum Geologist | | |
| Address: | 732 NE 110th Ave<br>Stafford, KS 67578 | | |
| Phone Nbr: | 620-546-3960 | | |
| Logged By: | Geologist | Name: | Josh Austin |

## CONTRACTOR

| | | | |
|---|---|---|---|
| Contractor: | Sterling Drilling | | |
| Rig #: | 5 | | |
| Rig Type: | mud rotary | | |
| Spud Date: | 6/28/2013 | Time: | 6:30 PM |
| TD Date: | 7/4/2013 | Time: | 5:50 PM |
| Rig Release: | | Time: | |

## ELEVATIONS

K.B. Elevation: 1777.00ft
K.B. to Ground: 13.00ft
Ground Elevation: 1764.00ft

## NOTES

On the basis of the positive structural position, drill stem test and after reviewing the electric logs, it was recommended by all parties involved that the Knop 6-30 set and cement 5 1/2" production casing at 3424' KB to test the Arbuckle and Lansing zones with intentions of a SWD before plugging.

# RAMA Operating Co., Inc.
## well comparison sheet

| | DRILLING WELL Knop 6-30 | | | | COMPARISON WELL Knop 3 | | | | COMPARISON WELL Knop 5-30 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Structural Relationship | | | | Structural Relationship | |
| | 1777 KB | | | | 1775 KB | | | | 1772 KB | | | |
| Formation | Sample | Sub-Sea | Log | Sub-Sea | Log | Sub-Sea | Sample | Log | Log | Sub-Sea | Sample | Log |
| Heebner | 2873 | -1096 | 2869 | -1092 | 2858 | -1083 | -13 | -9 | 2864 | -1092 | -4 | 0 |
| Toronto | 2888 | -1111 | 2891 | -1114 | 2881 | -1106 | -5 | -8 | 2885 | -1113 | 2 | -1 |
| Douglas | 2904 | -1127 | 2900 | -1123 | 2892 | -1117 | -10 | -6 | 2896 | -1124 | -3 | 1 |
| Brown Lime | 2993 | -1216 | 2991 | -1214 | 2981 | -1206 | -10 | -8 | 2984 | -1212 | -4 | -2 |
| Lansing | 3017 | -1240 | 3019 | -1242 | 3009 | -1234 | -6 | -8 | 3013 | -1241 | 1 | -1 |
| Base KC | 3256 | -1479 | 3248 | -1471 | 3239 | -1464 | -15 | -7 | 3244 | -1472 | -7 | 1 |
| Arbuckle | 3285 | -1508 | 3282 | -1505 | 3270 | -1495 | -13 | -10 | 3275 | -1503 | -5 | -2 |
| Total Depth | 3650 | -1873 | 3649 | -1872 | 3285 | -1510 | | | 3283 | -1511 | | |

**DIAMOND TESTING**
P.O. Box 157
**HOISINGTON, KANSAS 67544**
(800) 542-7313
**DRILL-STEM TEST TICKET**
FILE: KNP6-30DST1

TIME ON: 2215 (7/1)
TIME OFF: 0530 (7/2)

Company RAMA OPERATING — Lease & Well No. KNOP #6-30
Contractor STERLING RIG 5 — Charge to RAMA OPERATING
Elevation 1775 KB — Formation LANSING F — Effective Pay ____ Ft. — Ticket No. M518
Date 7/1/2013 — Sec. 30 — Twp. 19 S — Range 10 W — County RICE — State KANSAS
Test Approved By JOSH AUSTIN — Diamond Representative MIKE COCHRAN

Formation Test No. 1 — Interval Tested from 3095 ft. to 3110 ft. — Total Depth 3110 ft.
Packer Depth 3090 ft. — Size 6 3/4 in. — Packer depth N/A ft. — Size 6 3/4 in.
Packer Depth 3095 ft. — Size 6 3/4 in. — Packer depth NA ft. — Size 6 3/4 in.
Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 3077 ft. — Recorder Number 0063 — Cap. 6,000 P.S.I.
Bottom Recorder Depth (Outside) 3107 ft. — Recorder Number 6884 — Cap. 6,275 P.S.I.
Below Straddle Recorder Depth ____ ft. — Recorder Number ____ — Cap. ____ P.S.I.

Mud Type CHEM — Viscosity 48 — Drill Collar Length 331 ft. — I.D. 2 1/4 in.
Weight 9.1 — Water Loss 8.8 cc. — Weight Pipe Length 0 ft. — I.D. 2 7/8 in
Chlorides 1,800 P.P.M. — Drill Pipe Length 2739 ft. — I.D. 3 1/2 in
Jars: Make STERLING — Serial Number N/A — Test Tool Length 25 ft. — Tool Size 3 1/2-IF in
Did Well Flow? NO — Reversed Out NO — Anchor Length 15 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: WSB, INC. TO 3" (NO BB)

2nd Open: WSB, INC. TO 1½" (NO BB)

Recovered 30 ft. of GSOSWM 1% GAS, 1% OIL,2% WTR 96% MUD W/ A SLIGHT ODOR

Recovered 30 ft. of TOTAL FLUID

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Remarks: ____

TOOL SAMPLE: 1% GAS, 1% OIL,2% WTR, 96% MUD

Time Set Packer(s) 12:45 A.M. A.M. P.M. Time Started Off Bottom 3:15 A.M. A.M. P.M. Maximum Temperature 109

Initial Hydrostatic Pressure ..... (A) 1484 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 8 P.S.I. to (C) 19 P.S.I.

Initial Closed In Period ..... Minutes 45 (D) 580 P.S.I.

Final Flow Period ..... Minutes 30 (E) 22 P.S.I. to (F) 29 P.S.I.

Final Closed In Period ..... Minutes 45 (G) 569 P.S.I.

Final Hydrostatic Pressure ..... (H) 1485 P.S.I.



**DIAMOND TESTING**
P.O. Box 157
**HOISINGTON, KANSAS 67544**
(800) 542-7313

**DRILL-STEM TEST TICKET**

FILE: KNP6-30DST2

TIME ON: 1730 (7/2)

TIME OFF: 0925 (7/3)

Company RAMA OPERATING Lease & Well No. KNOP #6-30

Contractor STERLING RIG 5 Charge to RAMA OPERATING

Elevation 1775 KB Formation ARBUCKLE Effective Pay ____ Ft. Ticket No. M519

Date 7/2/2013 Sec. 30 Twp. 19 S Range 10 W County RICE State KANSAS

Test Approved By JOSH AUSTIN Diamond Representative MIKE COCHRAN

Formation Test No. 2 Interval Tested from 3253 ft. to 3298 ft. Total Depth 3298 ft.

Packer Depth 3248 ft. Size 6 3/4 in. Packer depth N/A ft. Size 6 3/4 in.

Packer Depth 3253 ft. Size 6 3/4 in. Packer depth NA ft. Size 6 3/4 in.

Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 3235 ft. Recorder Number 0063 Cap. 6,000 P.S.I.

Bottom Recorder Depth (Outside) 3295 ft. Recorder Number 6884 Cap. 6,275 P.S.I.

Below Straddle Recorder Depth ____ ft. Recorder Number ____ Cap. ____ P.S.I.

Mud Type CHEM Viscosity 50 Drill Collar Length 331 ft. I.D. 2 1/4 in.

Weight 9.1 Water Loss 8.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in

Chlorides 4,000 P.P.M. Drill Pipe Length 2897 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number N/A 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. (32"DP) Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: SSB, BOB 1 MIN (9" BB IN 16 MIN)

2nd Open: SSB, BOB 1¼ MIN (3" BB)

Recovered 700 ft. of GIP

Recovered 1469 ft. of GHOCMW 4% GAS, 33% OIL, 53% WTR, 10% MUD

Recovered 933 ft. of GMW 2% GAS, 90% WTR, 8% MUD W/ A THIN SCUM OF OIL

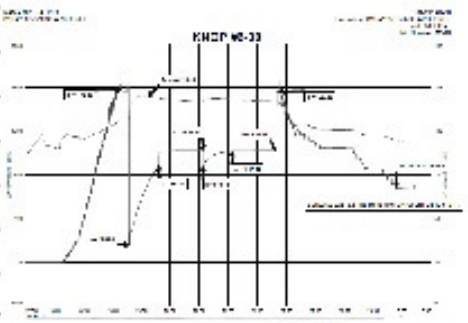
Recovered 2402 ft. of TOTAL FLUID

Recovered ____ ft. of

Recovered ____ ft. of RW: .45 @ 69 DEG

Remarks: CHLOR: 15,000 PPM PH:7.0

TOOL SAMPLE: 2% GAS, 98% WTR, 2% MUD W/ A THIN SCUM OF OIL



Time Set Packer(s) 7:15 P.M. A.M. P.M. Time Started Off Bottom 9:45 P.M. A.M. P.M. Maximum Temperature 120

Initial Hydrostatic Pressure ..... (A) 1578 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 159 P.S.I. to (C) 882 P.S.I.

Initial Closed In Period ..... Minutes 45 (D) 1021 P.S.I.

Final Flow Period ..... Minutes 30 (E) 879 P.S.I. to (F) 1018 P.S.I.

Final Closed In Period ..... Minutes 45 (G) 1020 P.S.I.

Final Hydrostatic Pressure ..... (H) 1567 P.S.I.



## ROCK TYPES

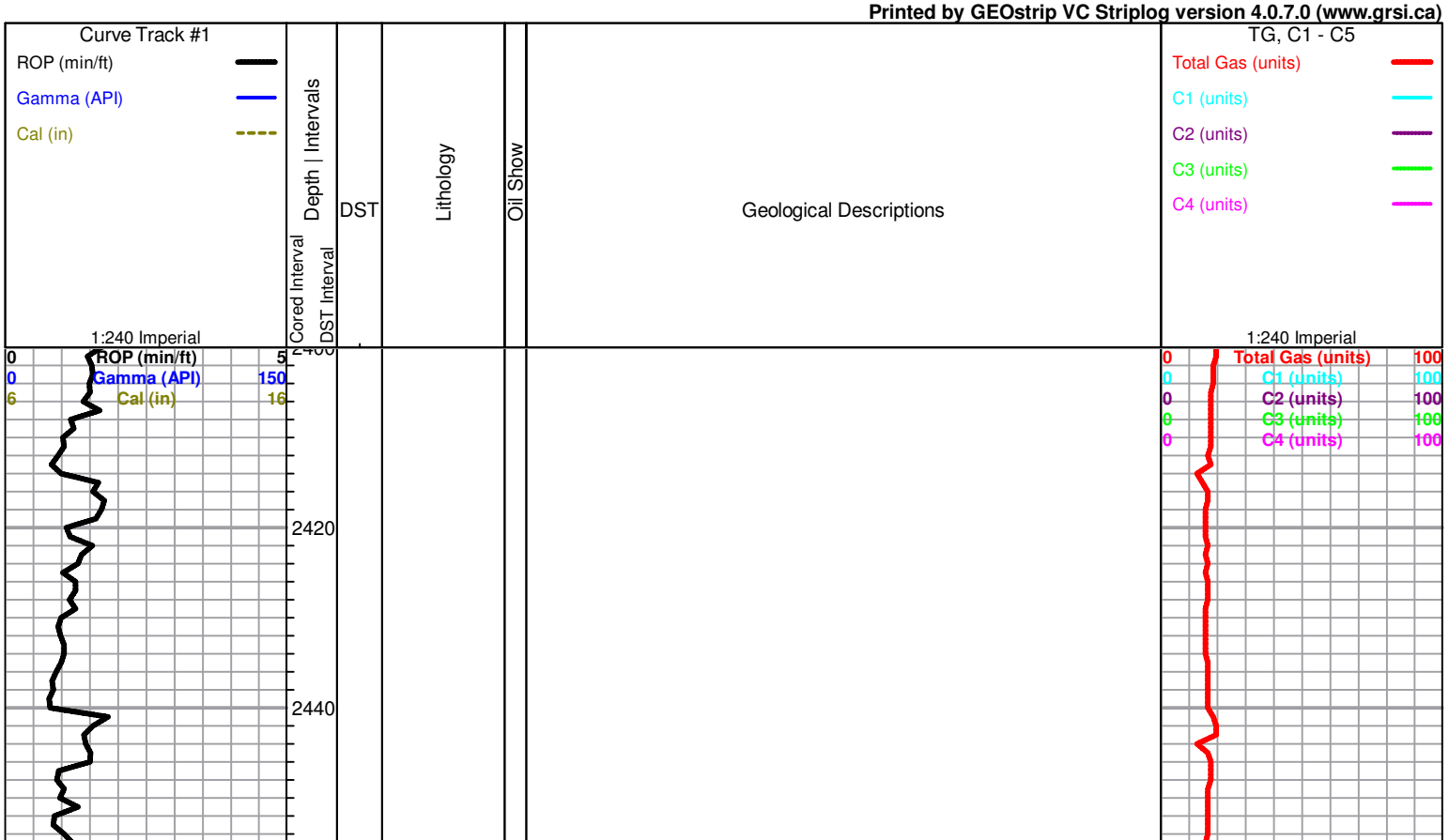
Dolsec
Lmst fw7>
shale, grn
shale, gry
Carbon Sh
Sltst

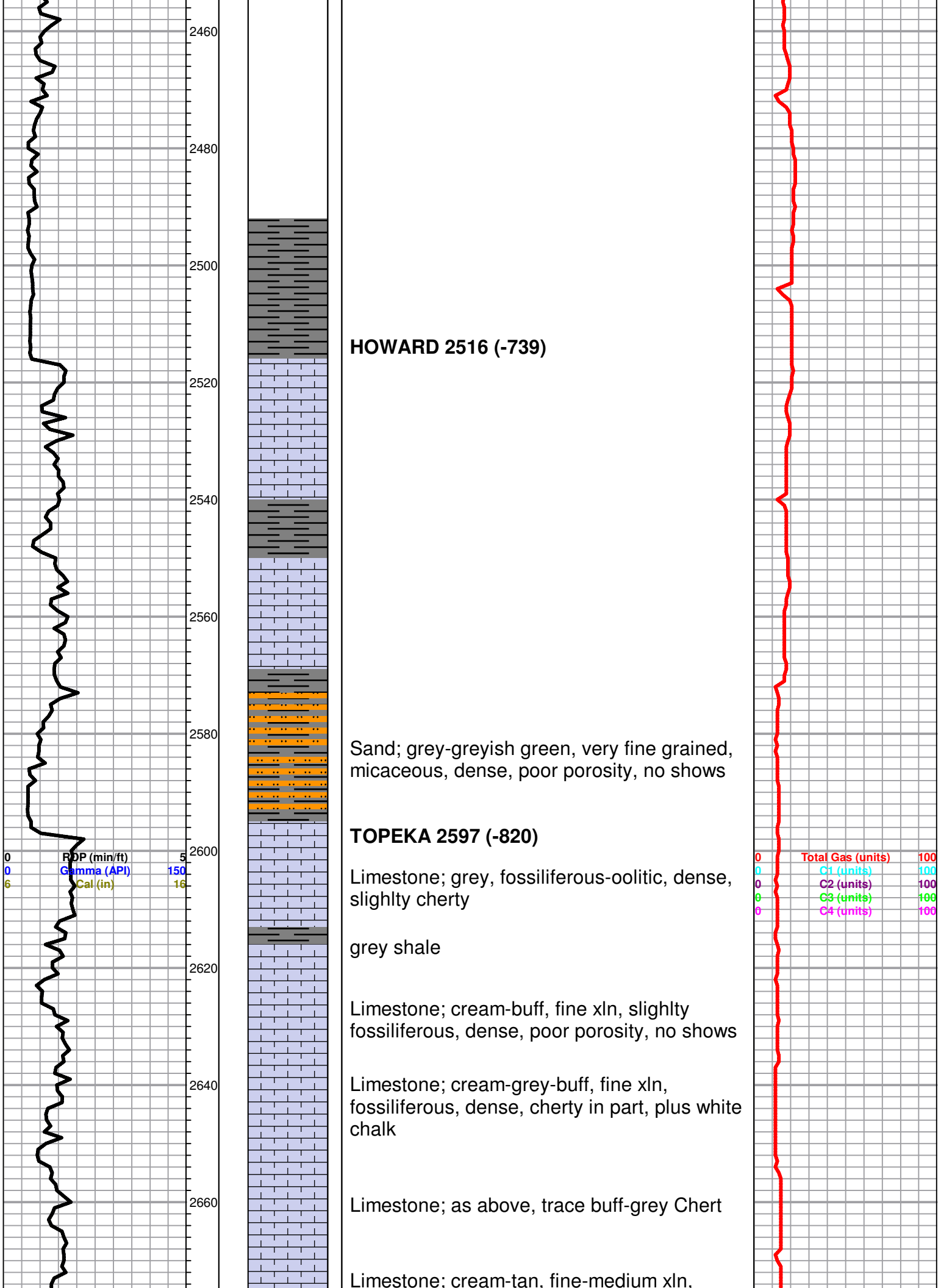
## OTHER SYMBOLS

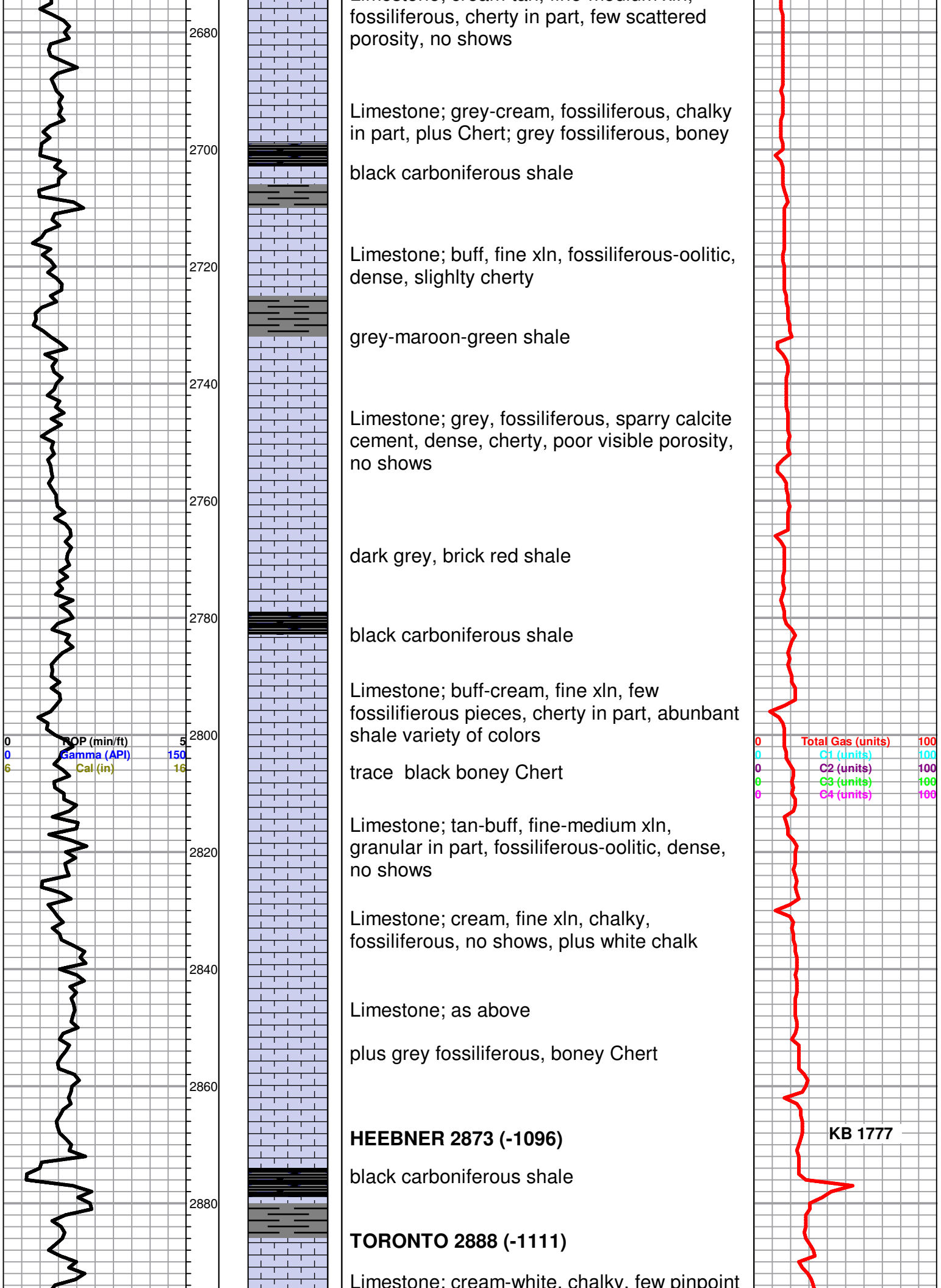
**Oil Show**
- Saturated oil show
- good oil show
- fair oil show
- poor oil show
- Questionable Stn
- Dead Oil Stn
- Fluorescence
- Gas

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

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




2460
2480
2500
2520
2540
2560
2580
2600
2620
2640
2660
0 ROP (min/ft) 5
0 Gamma (API) 150
6 Cal (in) 16
0 Total Gas (units) 100
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100
HOWARD 2516 (-739)
Sand; grey-greyish green, very fine grained, micaceous, dense, poor porosity, no shows
TOPEKA 2597 (-820)
Limestone; grey, fossiliferous-oolitic, dense, slighlty cherty
grey shale
Limestone; cream-buff, fine xln, slighlty fossiliferous, dense, poor porosity, no shows
Limestone; cream-grey-buff, fine xln, fossiliferous, dense, cherty in part, plus white chalk
Limestone; as above, trace buff-grey Chert
Limestone; cream-tan, fine-medium xln,




fossiliferous, cherty in part, few scattered porosity, no shows

Limestone; grey-cream, fossiliferous, chalky in part, plus Chert; grey fossiliferous, boney

black carboniferous shale

Limestone; buff, fine xln, fossiliferous-oolitic, dense, slighlty cherty

grey-maroon-green shale

Limestone; grey, fossiliferous, sparry calcite cement, dense, cherty, poor visible porosity, no shows

dark grey, brick red shale

black carboniferous shale

Limestone; buff-cream, fine xln, few fossilifierous pieces, cherty in part, abunbant shale variety of colors

trace black boney Chert

Limestone; tan-buff, fine-medium xln, granular in part, fossiliferous-oolitic, dense, no shows

Limestone; cream, fine xln, chalky, fossiliferous, no shows, plus white chalk

Limestone; as above

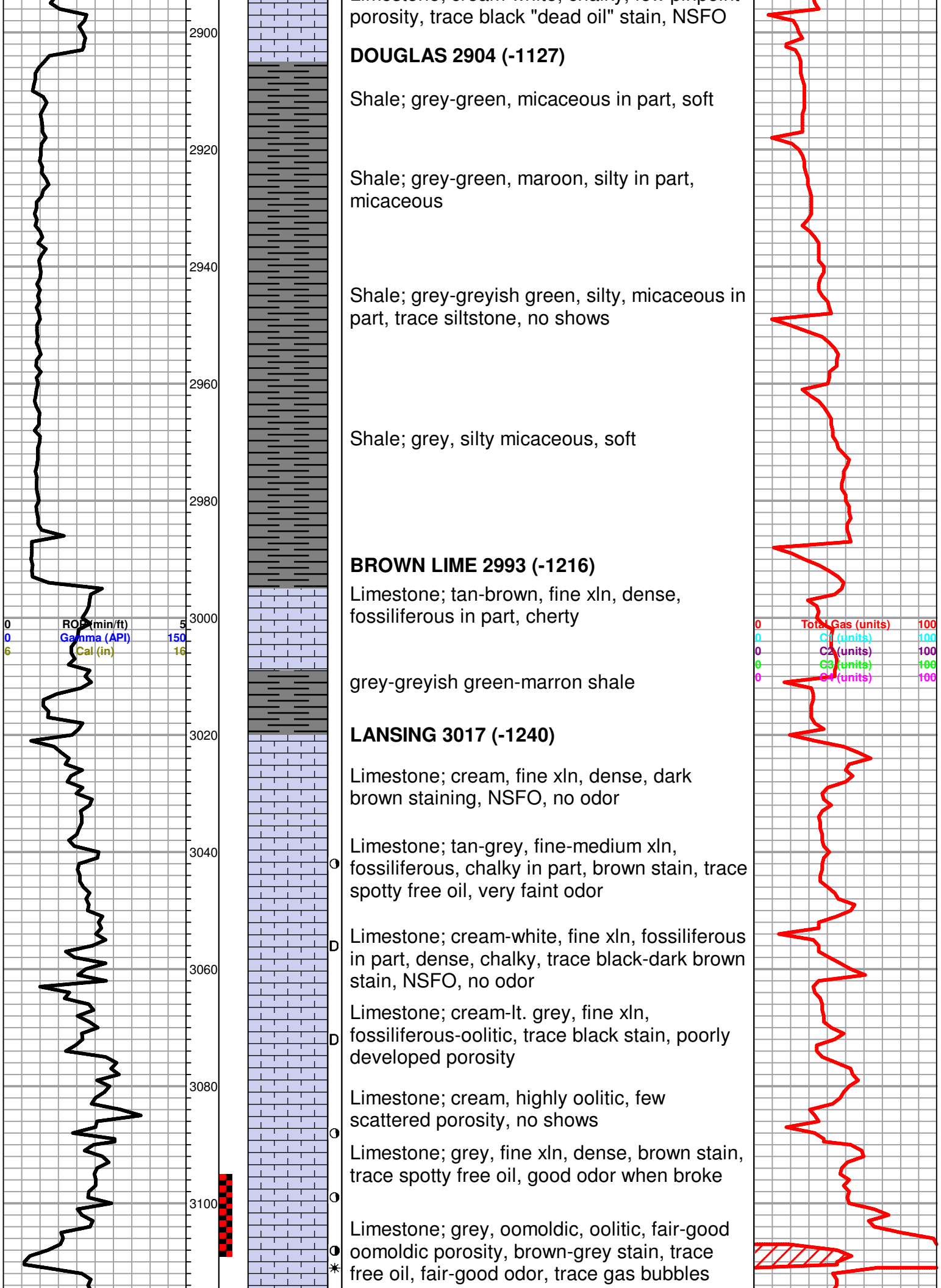
plus grey fossiliferous, boney Chert

**HEEBNER 2873 (-1096)**

black carboniferous shale

**TORONTO 2888 (-1111)**

Limestone; cream-white, chalky, few pinpoint




porosity, trace black "dead oil" stain, NSFO

**DOUGLAS 2904 (-1127)**

Shale; grey-green, micaceous in part, soft

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

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

Shale; grey, silty micaceous, soft

**BROWN LIME 2993 (-1216)**

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

grey-greyish green-marron shale

**LANSING 3017 (-1240)**

Limestone; cream, fine xln, dense, dark brown staining, NSFO, no odor

Limestone; tan-grey, fine-medium xln, fossiliferous, chalky in part, brown stain, trace spotty free oil, very faint odor

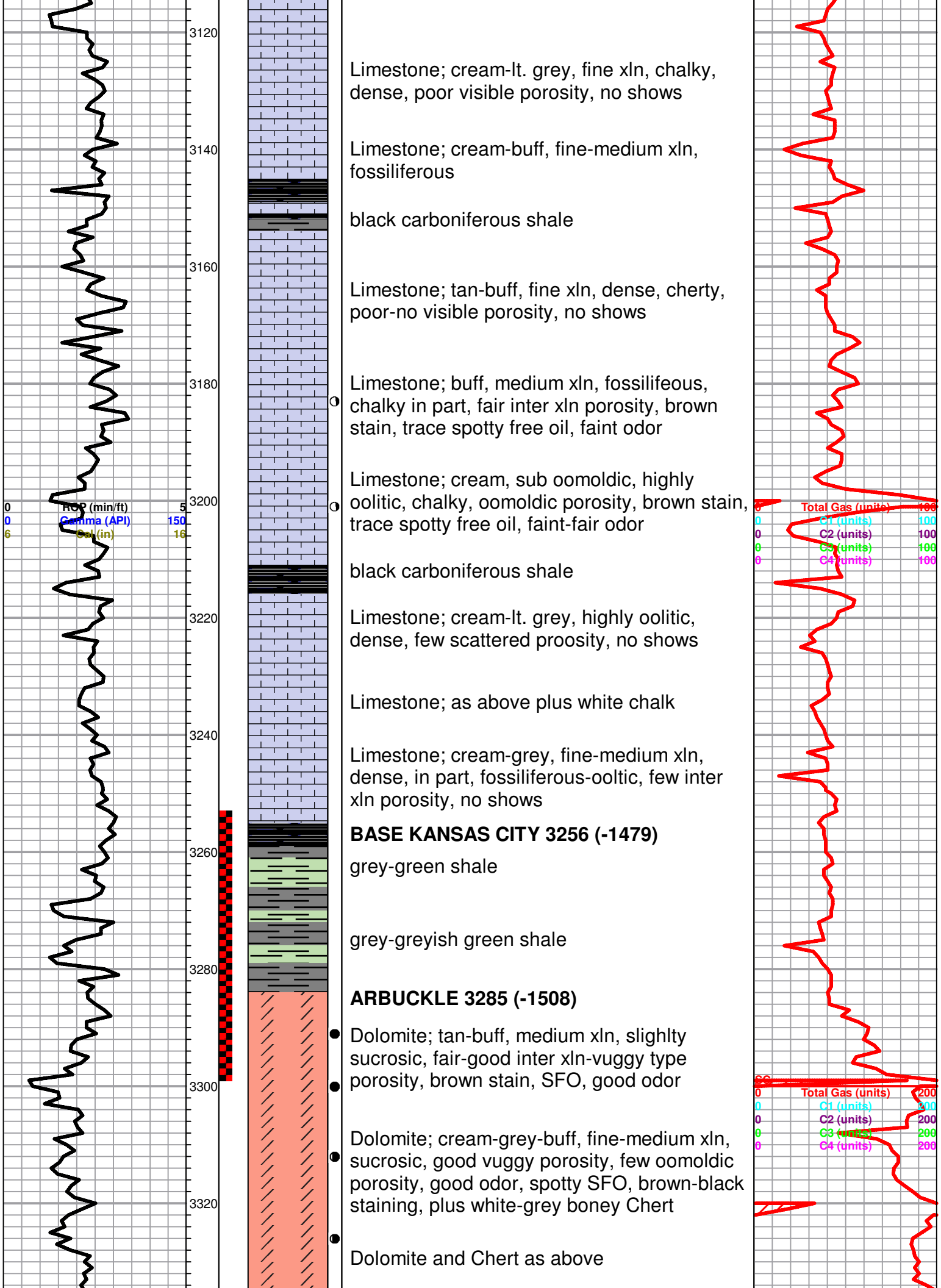
Limestone; cream-white, fine xln, fossiliferous in part, dense, chalky, trace black-dark brown stain, NSFO, no odor

Limestone; cream-lt. grey, fine xln, fossiliferous-oolitic, trace black stain, poorly developed porosity

Limestone; cream, highly oolitic, few scattered porosity, no shows

Limestone; grey, fine xln, dense, brown stain, trace spotty free oil, good odor when broke

Limestone; grey, oomoldic, oolitic, fair-good oomoldic porosity, brown-grey stain, trace free oil, fair-good odor, trace gas bubbles




Limestone; cream-lt. grey, fine xln, chalky, dense, poor visible porosity, no shows

Limestone; cream-buff, fine-medium xln, fossiliferous

black carboniferous shale

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

Limestone; buff, medium xln, fossilifeous, chalky in part, fair inter xln porosity, brown stain, trace spotty free oil, faint odor

Limestone; cream, sub oomoldic, highly oolitic, chalky, oomoldic porosity, brown stain, trace spotty free oil, faint-fair odor

black carboniferous shale

Limestone; cream-lt. grey, highly oolitic, dense, few scattered proosity, no shows

Limestone; as above plus white chalk

Limestone; cream-grey, fine-medium xln, dense, in part, fossiliferous-ooltic, few inter xln porosity, no shows

**BASE KANSAS CITY 3256 (-1479)**

grey-green shale

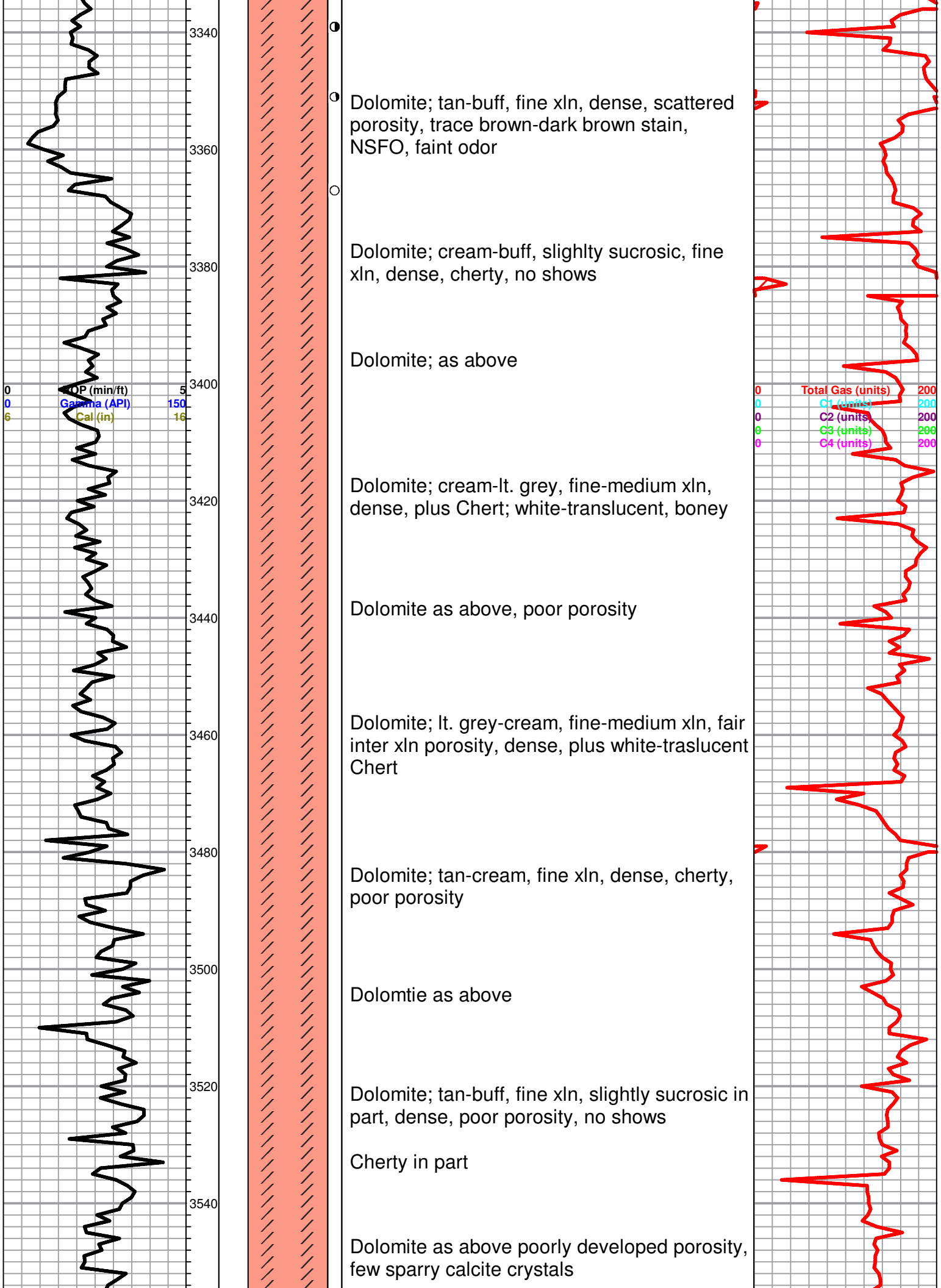
grey-greyish green shale

**ARBUCKLE 3285 (-1508)**

Dolomite; tan-buff, medium xln, slighlty sucrosic, fair-good inter xln-vuggy type porosity, brown stain, SFO, good odor

Dolomite; cream-grey-buff, fine-medium xln, sucrosic, good vuggy porosity, few oomoldic porosity, good odor, spotty SFO, brown-black staining, plus white-grey boney Chert

Dolomite and Chert as above




Dolomite; tan-buff, fine xln, dense, scattered porosity, trace brown-dark brown stain, NSFO, faint odor

Dolomite; cream-buff, slighlty sucrosic, fine xln, dense, cherty, no shows

Dolomite; as above

Dolomite; cream-lt. grey, fine-medium xln, dense, plus Chert; white-translucent, boney

Dolomite as above, poor porosity

Dolomite; lt. grey-cream, fine-medium xln, fair inter xln porosity, dense, plus white-traslucent Chert

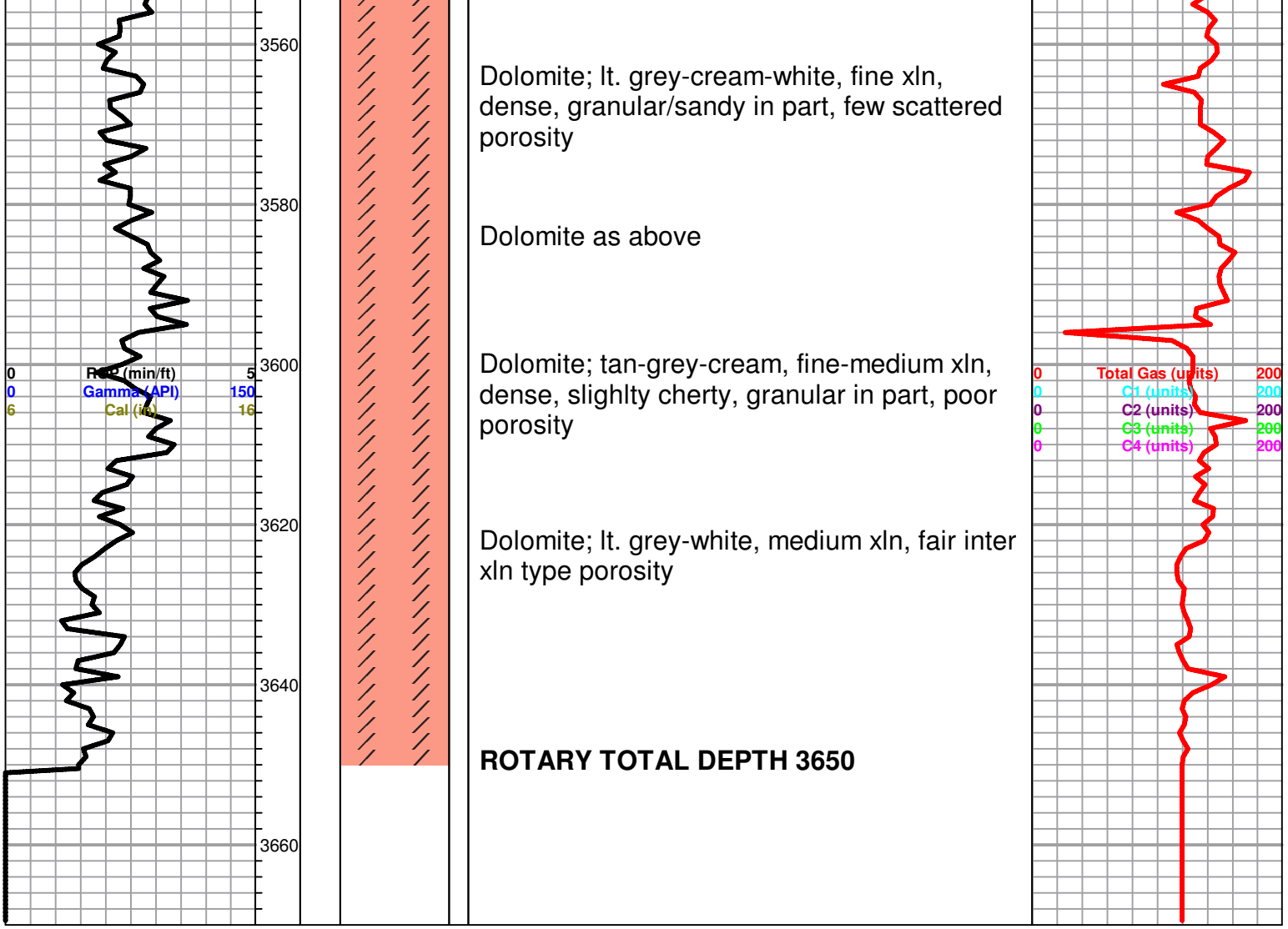
Dolomite; tan-cream, fine xln, dense, cherty, poor porosity

Dolomtie as above

Dolomite; tan-buff, fine xln, slightly sucrosic in part, dense, poor porosity, no shows

Cherty in part

Dolomite as above poorly developed porosity, few sparry calcite crystals




Dolomite; lt. grey-cream-white, fine xln, dense, granular/sandy in part, few scattered porosity

Dolomite as above

Dolomite; tan-grey-cream, fine-medium xln, dense, slighlty cherty, granular in part, poor porosity

Dolomite; lt. grey-white, medium xln, fair inter xln type porosity

**ROTARY TOTAL DEPTH 3650**

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/



September 27, 2013

Robin L. Austin
Rama Operating Co., Inc.
101 S MAIN ST
STAFFORD, KS 67578-1429

Re: ACO1
API 15-159-22743-00-00
Knop 6-30
SW/4 Sec.30-19S-10W
Rice County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Robin L. Austin