KOLAR Document ID: 1587547

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 #:

08/02/2021 Spud Date or Recompletion Date
08/08/2021 Date Reached TD
8/20/2021 Completion Date or Recompletion Date

API No.: 15-185-24086-00-00
Spot Description:
_ - SW - NE - SE Sec. 28 Twp. 23 S. R. 12 ☐ East ☑ West
1650 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: Stafford
Lease Name: KNOCHE Well #: 1-28
Field Name: Bedford
Producing Formation: Arbuckle
Elevation: Ground: 1861 Kelly Bushing: 1872
Total Vertical Depth: 3940 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 327 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: 9000 ppm Fluid volume: 240 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Pauls Oilfield Service
Lease Name: Beckerdite License #: 31085
Quarter NW Sec. 27 Twp. 23 S. R. 12 ☐ East ☑ West
County: Stafford Permit #: D26547

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: 11/23/2021
☐ **Confidential Release Date:** 11/23/2023
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Deanna Garrison **Date:** 11/29/2021

Operator Name: Rama Operating Co., Inc. Lease Name: KNOCHE Well #: 1-28

Sec. 28 Twp. 23 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	327	60/40	350	2% gel 3% CC
Production	7.875	5.5	14	3939	AA-2	125	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:	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)*	3851	3853

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)*
2	3851	3864			
				3858	
2	3862	3864			

TUBING RECORD: Size: Set At: Packer At:

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

Form	ACO1 - Well Completion
Operator	Rama Operating Co., Inc.
Well Name	KNOCHE 1-28
Doc ID	1587547

Tops

Name	Top	Datum
Heebner	3233	-1361
Brown Lime	3374	-1502
Lansing	3406	-1534
Base Lansing	3656	-1704
Viola	3726	-1854
Simp., Shale	3776	-1904
Arbuckle	3841	-1969
RTD	3938	-2066

Form	ACO1 - Well Completion
Operator	Rama Operating Co., Inc.
Well Name	KNOCHE 1-28
Doc ID	1587547

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	327	60/40	350	2% gel 3% CC
Production	7.875	5.5	14	3939	AA-2	125	2% CC

CEMENT TREATMENT REPORT

Customer:	Rama Operating Co Inc	Well:	Knoche 1-28	Ticket:	wp 1670
City, State:	Stafford Kansas	County:	Staffored Kansas	Date:	8/3/2021
Field Rep:	Lanny Saloga	S-T-R:	28-23s-12w	Service:	Surface

Downhole Information	
Hole Size:	12 1/4 in
Hole Depth:	330 ft
Casing Size:	8 5/8 in
Casing Depth:	327 ft
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	19.0 bbls

Calculated Slurry - Lead	
Blend:	60/40 2&3
Weight:	14.8 ppg
Water / Sx:	5.1 gal / sx
Yield:	1.21 ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	75.0 bbls
Total Sacks:	350 sx

Calculated Slurry - Tail	
Blend:	
Weight:	ppg
Water / Sx:	gal / sx
Yield:	ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	0.0 bbls
Total Sacks:	0 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
12:15 AM			-	-	on location job and safety
12:30 AM				-	spot trucks and rig up
				-	
c010				-	
3:30 AM				-	casing on bottom and circulate
				-	
3:35 AM				-	start cement
	3.0	150.0	5.0	5.0	5 bbls fresh
	3.0	150.0	75.0	80.0	mix 350 sacks cement
4:00 AM				80.0	cement in
4:05 AM	3.0	200.0			start displacement
4:15 AM		200.0	19.0		displacement in and shut in well
					plug down at 4:15 a
					cement did circulate

1.0

CREW		UNIT
Cementer:	M Brungardt	918
Pump Operator:	R Osborn	179/522
Bulk #1:	J Travino	181/256
Bulk #2:		

SUMMARY		
Average Rate	Average Pressure	Total Fluid
3.0 bpm	175 psi	99 bbls

ftv: 15-2021/01/25
mplv: 193-2021/07/23

CEMENT TREATMENT REPORT

Customer:	Rama Operating Co Inc	Well:	Knoche 1-28	Ticket:	wp1697
City, State:	Stafford Kansas	County:	Stafford Kansas	Date:	8/8/2021
Field Rep:	Ransy Ginest	S-T-R:	28-23s-12w	Service:	5.5

Downhole Information	
Hole Size:	7 7/8 in
Hole Depth:	3940 ft
Casing Size:	5 1/2 in
Casing Depth:	ft
Tubing / Liner:	In
Depth:	ft
Tool / Packer:	
Tool Depth:	ft
Displacement:	bbls

Calculated Slurry - Lead	
Blend:	H - Long
Weight:	15.0 ppg
Water / Sx:	6.0 gal / sx
Yield:	1.42 ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0.0 bbls
Excess:	
Total Slurry:	31.6 bbls
Total Sacks:	125 sx

Calculated Slurry - Tail	
Blend:	H- Plug
Weight:	13.7 ppg
Water / Sx:	6.9 gal / sx
Yield:	1.43 ft^3 / sx
Annular Bbls / Ft.:	bbs / ft.
Depth:	ft
Annular Volume:	0 bbls
Excess:	
Total Slurry:	12.7 bbls
Total Sacks:	50 sx

TIME	RATE	PSI	STAGE BBLs	TOTAL BBLs	REMARKS
12:45 PM			-	-	on location job and safety
1:00 PM				-	spot trucks and rig up
				-	
				-	centralizers 1,3,5,7,9
				-	
3:00 PM				-	start casingt in the hole
4:55 PM				-	on bottom and circulate
				-	
5:45 PM				-	start flush
	5.0	150.0	5.0	5.0	fresh water
	5.0	150.0	12.0	17.0	mud flush
	5.0	150.0	5.0		fresh water
5:55 PM	2.0	-	12.7		plug rat and mouse hole 30 sacks in the rat hole and 20 sacks in the mouse hole
6:10 PM					start cement down hole
	5.0	300.0	31.6		mix 125 sacks h long
6:20 PM					cement in and shut down
					wash pump and lines
6:30 PM	5.0	200.0			start displacement
	3.0	500.0	90.0		slow rate
7:00 PM	3.0	800.0	95.0		bump plug at 800 psi took up to 1500 and releasded psi float did hold

	CREW	UNIT
Cementer:	M Brungardt	916
Pump Operator:	R Osborne	179/521
Bulk #1:	R Valdez	181/526
Bulk #2:		

SUMMARY		
Average Rate	Average Pressure	Total Fluid
4.1 bpm	281 psi	251 bbls

ftv: 15-2021/01/25
mplv: 196-2021/08/03

Joshua R. Austin

Petroleum Geologist

Report for

RAMA Operating CO., Inc

COMPANY: RAMA Operating Company, Inc.

LEASE: Knoche #1-28

FIELD: Bedford

LOCATION: SW-NE-SE (1650' FSL & 990' FEL)

SEC: 28 **TWSP:** 23s **RGE:** 12w

COUNTY: Stafford **STATE:** Kansas

KB: 1872' **GL:** 1861'

API # 15-185-24086-00-00

CONTRACTOR: Sterling Drilling (rig #4)

Spud: 08/02/21 **Comp:** 08/08/21

RTD: 3940' **LTD:** 3938'

Mud Up: 2700' **Type Mud:** Chemical was displaced

Samples Saved From: 3000' to RTD

Drilling Time Kept From: 2800' to RTD

Samples Examined From: 3000' to RTD

Geological Supervision From: 3000' to RTD

Geologist on Well: Josh Austin

Surface Casing: 8 5/8" @ 327'

Production Casing: 5 1/2" @ 3939'

Electronic Surveys: Midwest Wireline

NOTES

On the basis of the drill stem test, shows in the samples and after reviewing the electric logs, it was recommended by all parties involved in the Knoche #1-28 to set 5 1/2" production casing to further test the Arbuckle and Lansing zones. See typed geo report for recommendations.

Respectfully submitted,
Josh Austin

RAMA Operating Co., Inc.
well comparison sheet

well comparison sheet

	DRILLING WELL Knoche 1-28				COMPARISON WELL Knoche #1 N2-SE-SE 28-23-12w				COMPARISON WELL Knoche #3 28-23-12w			
	1872 KB				1866 KB		Structural Relationship		1864 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Anhydrite	678	1194	673	1199	660	1206	-12	-7				
Howard	2823	-951			2817	-951	0					
Topeka	2920	-1048			2916	-1050	2					
Heebner	3238	-1366	3233	-1361	3233	-1367	1	6				
Toronto	3253	-1381	3250	-1378	3248	-1382	1	4				
Douglas	3273	-1401	3268	-1396	3267	-1401	0	5				
Brown Lime	3378	-1506	3374	-1502	3373	-1507	1	5				
Lansing	3410	-1538	3406	-1534	3405	-1539	1	5	3405	-1541	3	7
Base KC	3661	-1789	3656	-1784	3656	-1790	1	6				
Viola	3739	-1867	3726	-1854	3732	-1866	-1	12	3705	-1841	-26	-13
Simpson	3780	-1908	3776	-1904	3774	-1908	0	4	3774	-1910	2	6
Arbuckle	3846	-1974	3841	-1969	3842	-1976	2	7	3837	-1973	-1	4
Total Depth	3900	-2028	3938	-2066	3846	-1980			3846	-1982		

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Rama Operating Company Inc

101 S Main ST
Stafford KS 67578+1429

ATTN: Josh Austin

28-23s-12w Stafford KS

Knoche #1-28

Job Ticket: 66891 **DST#: 1**

Test Start: 2021.08.07 @ 07:35:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:10:27
Time Test Ended: 16:39:21

Test Type: Conventional Bottom Hole (Initial)
Tester: Spencer J Staab
Unit No: 84

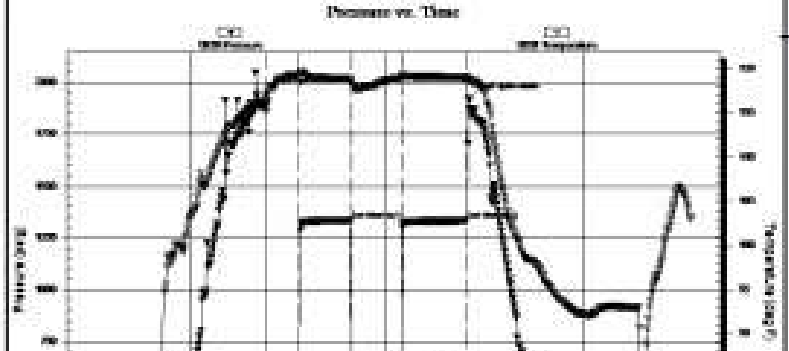
Interval: 3776.00 ft (KB) To 3851.00 ft (KB) (TVD)
Total Depth: 3851.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1872.00 ft (KB)
1860.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 6838 **Inside**
Press@RunDepth: 595.00 psig @ 3779.00 ft (KB)
Start Date: 2021.08.07 End Date: 2021.08.07
Start Time: 07:35:01 End Time: 16:39:21

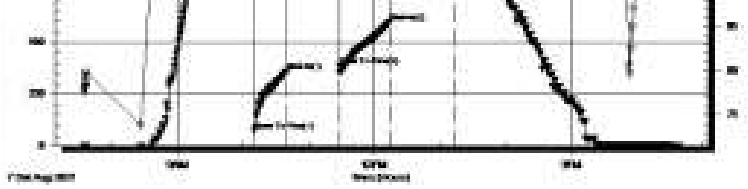
Capacity: psig
Last Calib.: 2021.08.07
Time On Btm: 2021.08.07 @ 10:10:22
Time Off Btm: 2021.08.07 @ 13:15:17

TEST COMMENT: 30-IF-BOB 4 1/2 mins Built to 60"
45-ISI-No Return
45-FF-BOB 5 mins Built to 71"
60-FSI-Weak Surface Died @ 15 mins



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1948.09	116.08	Initial Hydro-static
1	73.42	115.17	Open To Flow (1)
31	365.51	119.27	Shut-In(1)
78	1335.04	118.82	End Shut-In(1)
78	389.88	118.35	Open To Flow (2)
125	595.00	119.03	Shut-In(2)
184	1334.18	119.01	End Shut-In(2)
185	1924.58	118.78	Final Hydro-static



Recovery

Length (ft)	Description	Volume (bbl)
125.00	GMCOW 10G 10M 30 O 50W	0.81
250.00	GSMCOW 35G 5M 20 O 40W	2.89
1010.00	GMCWO 30G 10M 40 O 20W	14.32
15.00	GO 25%G 75%O	0.21
0.00	190 GIP 100%G	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

ROCK TYPES

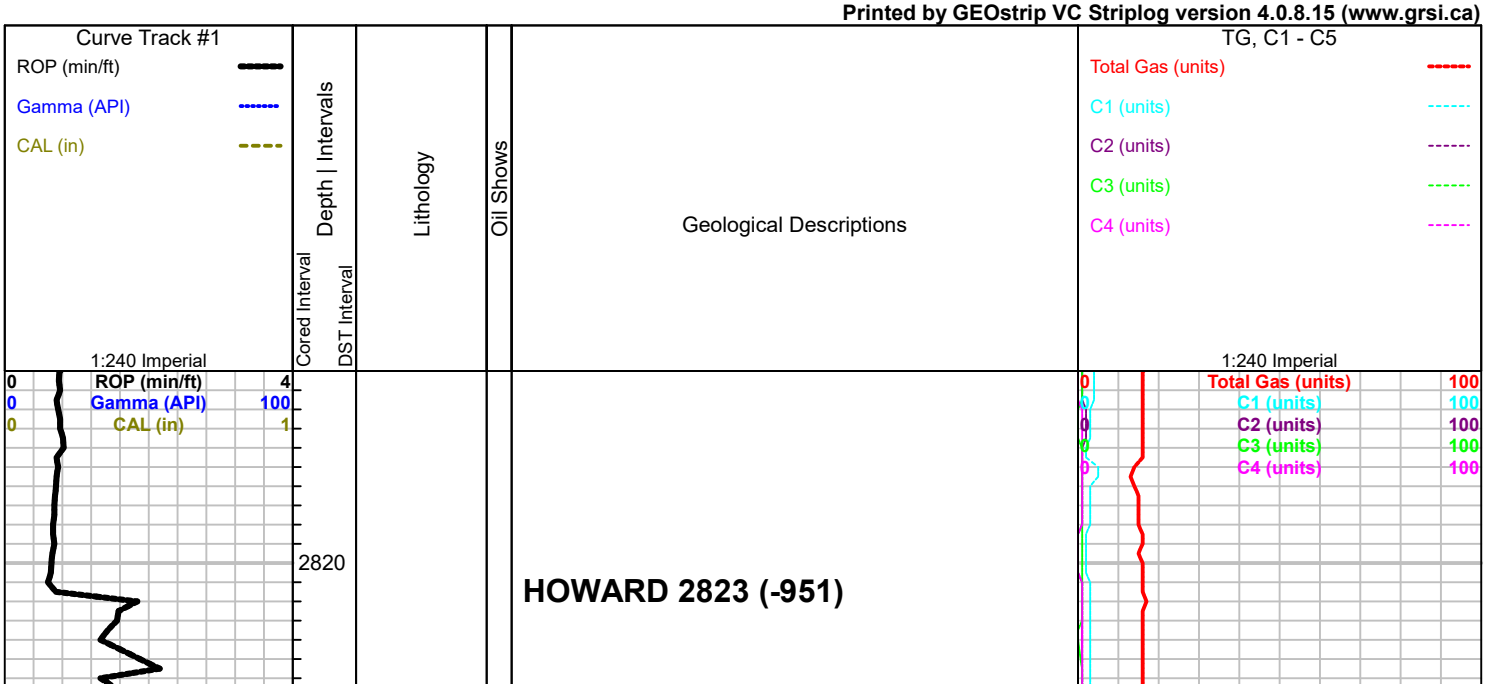
Cht
Coal
Congl
Dolprim
Lmst fw<7
Lmst fw7>
Ss
Shgy
Shblck
Shcol

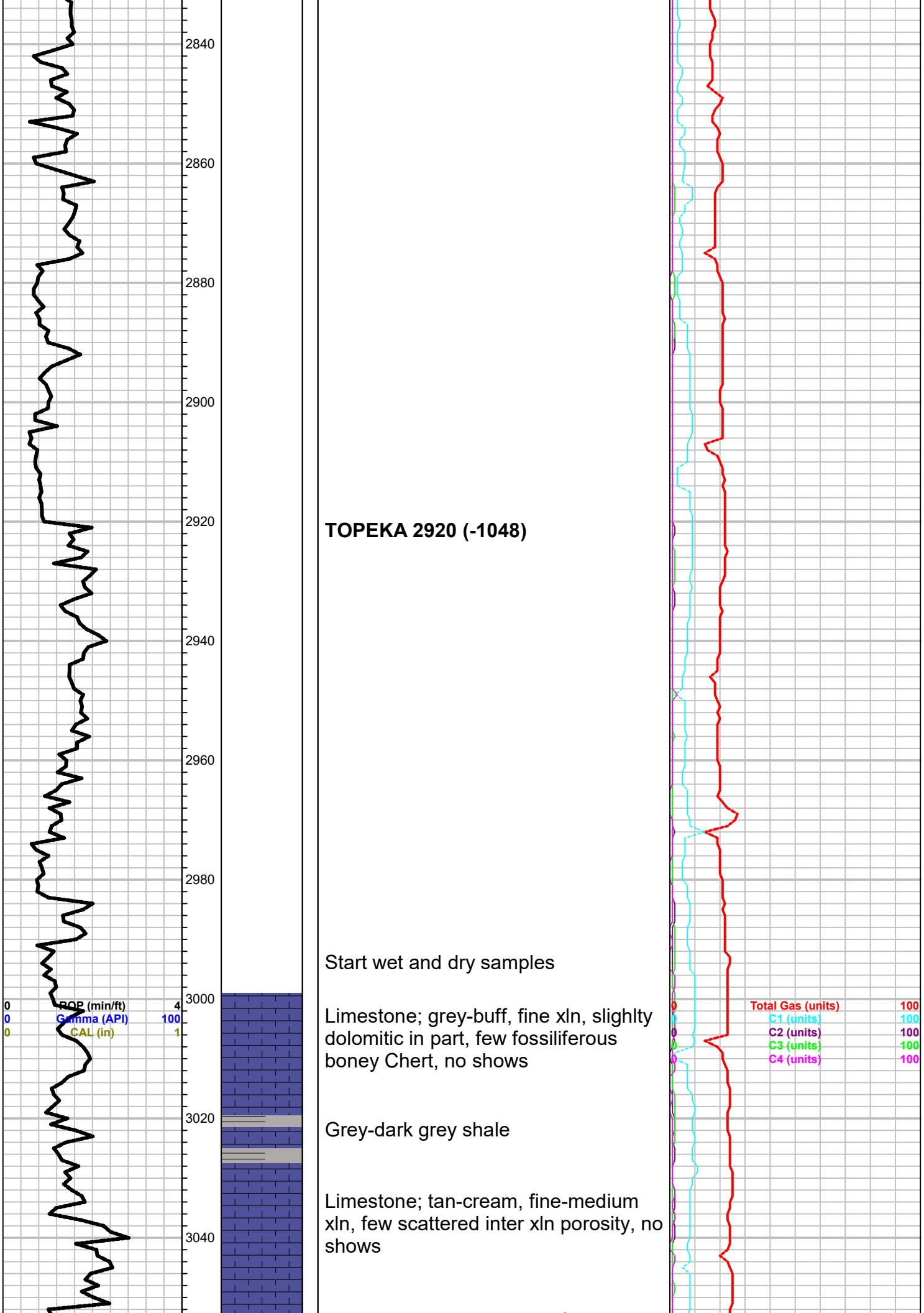
OTHER SYMBOLS

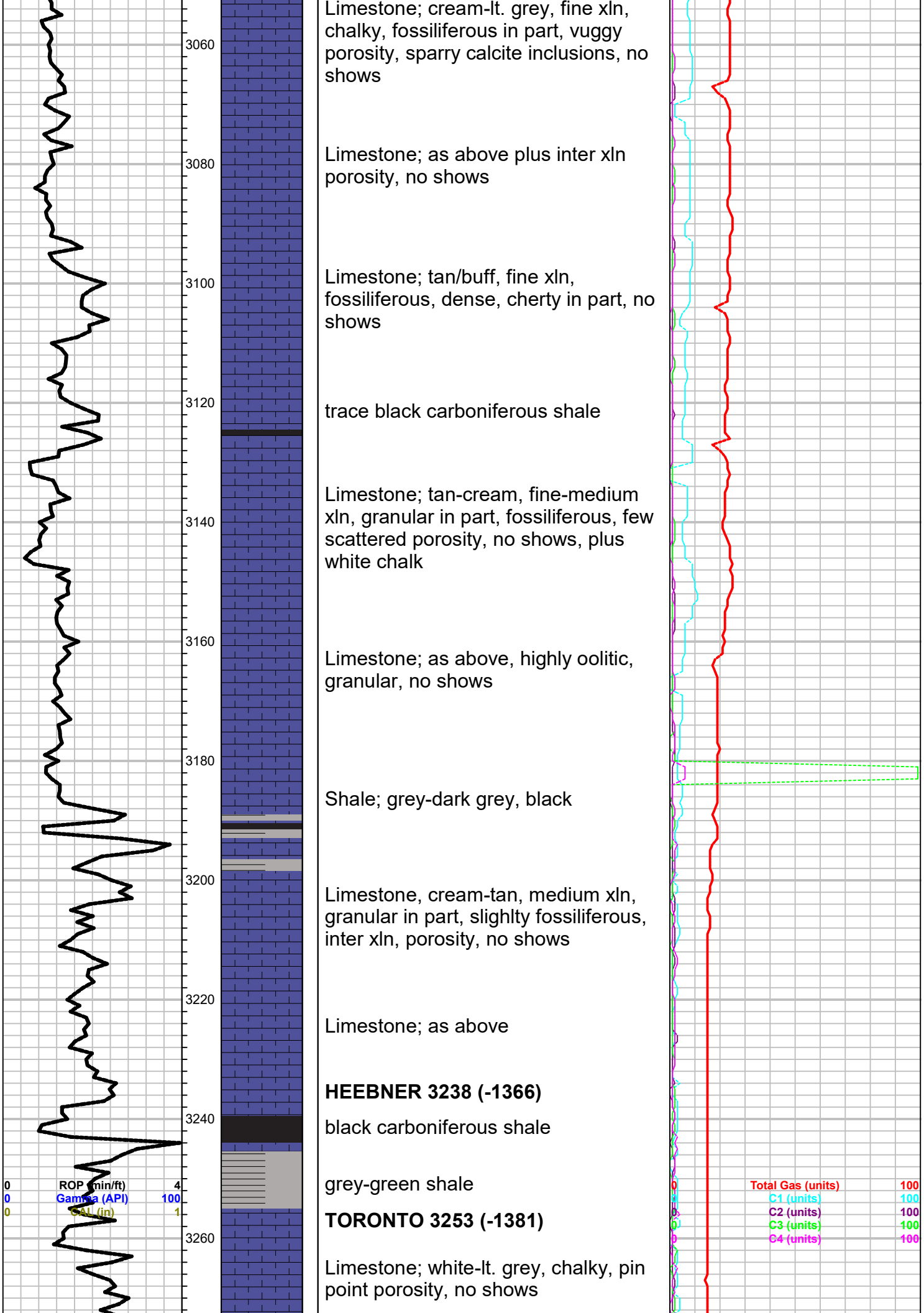
OIL SHOWS
- Even Stn
- Spotted Stn 50 - 75 %
- Spotted Stn 25 - 50 %
- Spotted Stn 1 - 25 %
- Questionable Stn
- Dead Oil Stn
- Fluorescence

INTERVALS
- Core
- DST

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)




2840
2860
2880
2900
2920
2940
2960
2980
3000
3020
3040
0 ROP (min/ft) 4
0 Gamma (API) 100
0 CAL (in) 1
TOPEKA 2920 (-1048)
Start wet and dry samples
Limestone; grey-buff, fine xln, slighlty dolomitic in part, few fossiliferous boney Chert, no shows
Grey-dark grey shale
Limestone; tan-cream, fine-medium xln, few scattered inter xln porosity, no shows
0 Total Gas (units) 100
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100



Limestone; cream-lt. grey, fine xln, chalky, fossiliferous in part, vuggy porosity, sparry calcite inclusions, no shows

Limestone; as above plus inter xln porosity, no shows

Limestone; tan/buff, fine xln, fossiliferous, dense, cherty in part, no shows

trace black carboniferous shale

Limestone; tan-cream, fine-medium xln, granular in part, fossiliferous, few scattered porosity, no shows, plus white chalk

Limestone; as above, highly oolitic, granular, no shows

Shale; grey-dark grey, black

Limestone, cream-tan, medium xln, granular in part, slighlty fossiliferous, inter xln, porosity, no shows

Limestone; as above

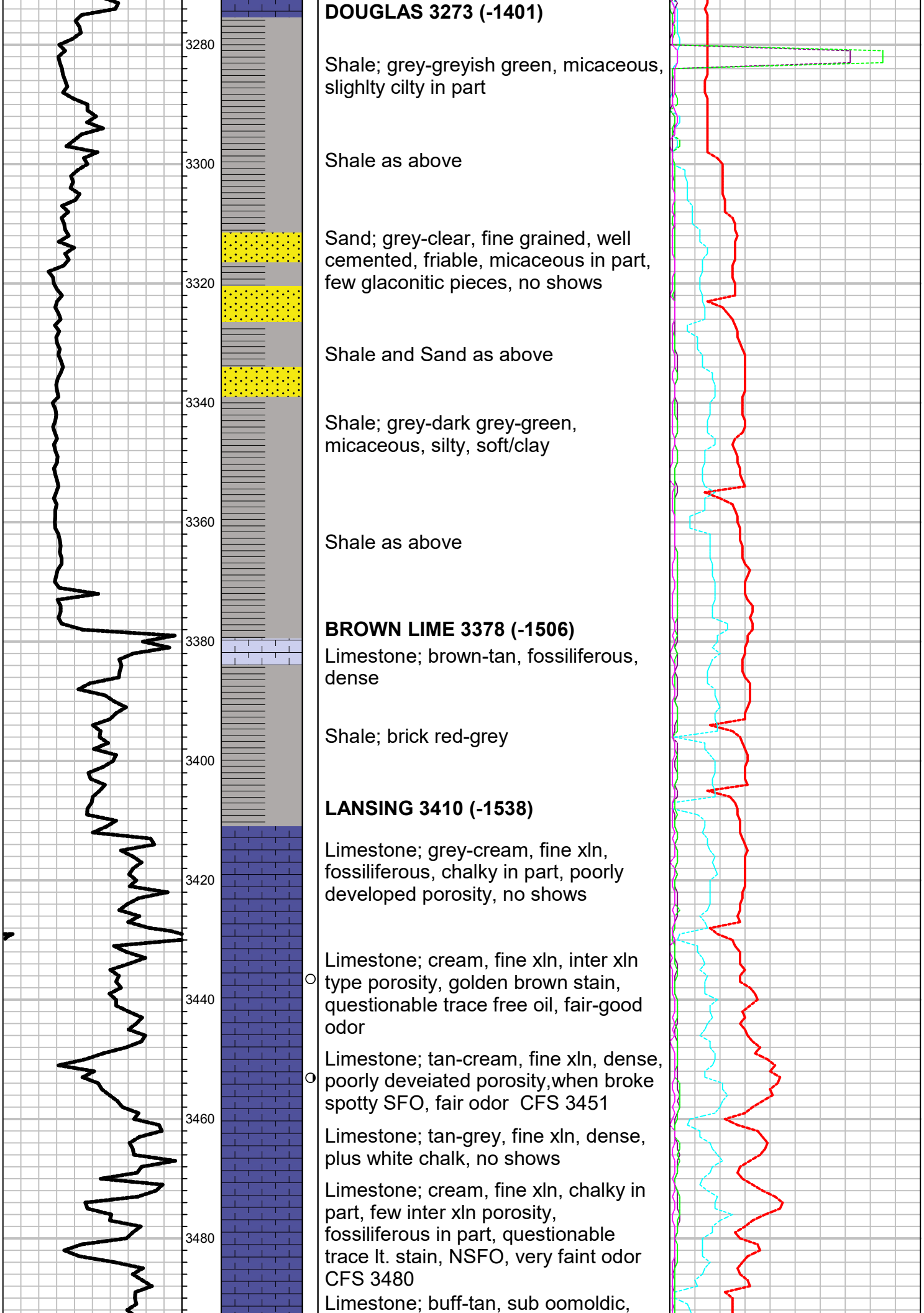
HEEBNER 3238 (-1366)

black carboniferous shale

grey-green shale

TORONTO 3253 (-1381)

Limestone; white-lt. grey, chalky, pin point porosity, no shows



DOUGLAS 3273 (-1401)

Shale; grey-greyish green, micaceous, slighlty cilty in part

Shale as above

Sand; grey-clear, fine grained, well cemented, friable, micaceous in part, few glaconitic pieces, no shows

Shale and Sand as above

Shale; grey-dark grey-green, micaceous, silty, soft/clay

Shale as above

BROWN LIME 3378 (-1506)

Limestone; brown-tan, fossiliferous, dense

Shale; brick red-grey

LANSING 3410 (-1538)

Limestone; grey-cream, fine xln, fossiliferous, chalky in part, poorly developed porosity, no shows

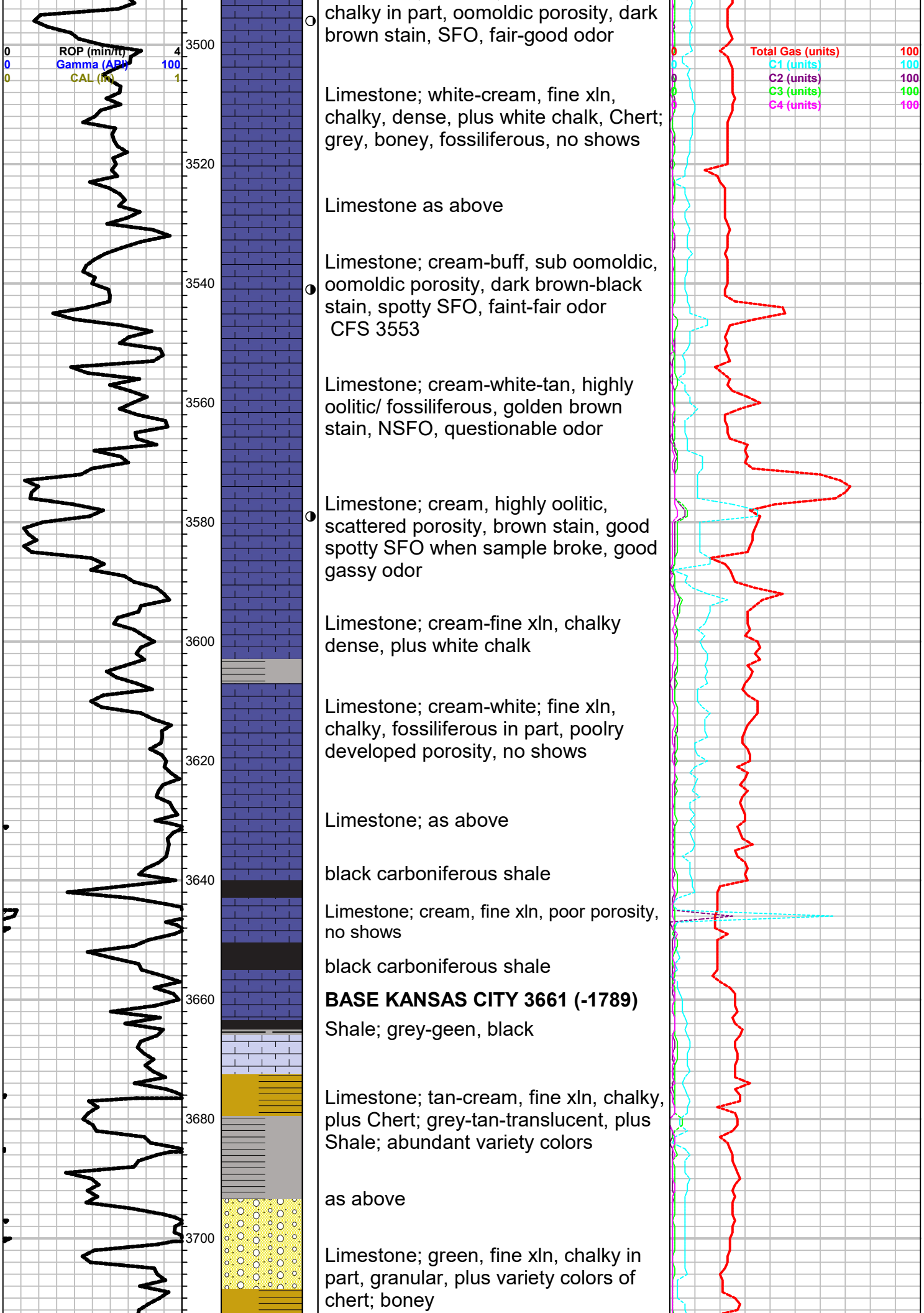
Limestone; cream, fine xln, inter xln type porosity, golden brown stain, questionable trace free oil, fair-good odor

Limestone; tan-cream, fine xln, dense, poorly deveiated porosity,when broke spotty SFO, fair odor CFS 3451

Limestone; tan-grey, fine xln, dense, plus white chalk, no shows

Limestone; cream, fine xln, chalky in part, few inter xln porosity, fossiliferous in part, questionable trace lt. stain, NSFO, very faint odor CFS 3480

Limestone; buff-tan, sub oomoldic,



chalky in part, oomoldic porosity, dark brown stain, SFO, fair-good odor

Limestone; white-cream, fine xln, chalky, dense, plus white chalk, Chert; grey, boney, fossiliferous, no shows

Limestone as above

Limestone; cream-buff, sub oomoldic, oomoldic porosity, dark brown-black stain, spotty SFO, faint-fair odor
CFS 3553

Limestone; cream-white-tan, highly oolitic/ fossiliferous, golden brown stain, NSFO, questionable odor

Limestone; cream, highly oolitic, scattered porosity, brown stain, good spotty SFO when sample broke, good gassy odor

Limestone; cream-fine xln, chalky dense, plus white chalk

Limestone; cream-white; fine xln, chalky, fossiliferous in part, poolry developed porosity, no shows

Limestone; as above

black carboniferous shale

Limestone; cream, fine xln, poor porosity, no shows

black carboniferous shale

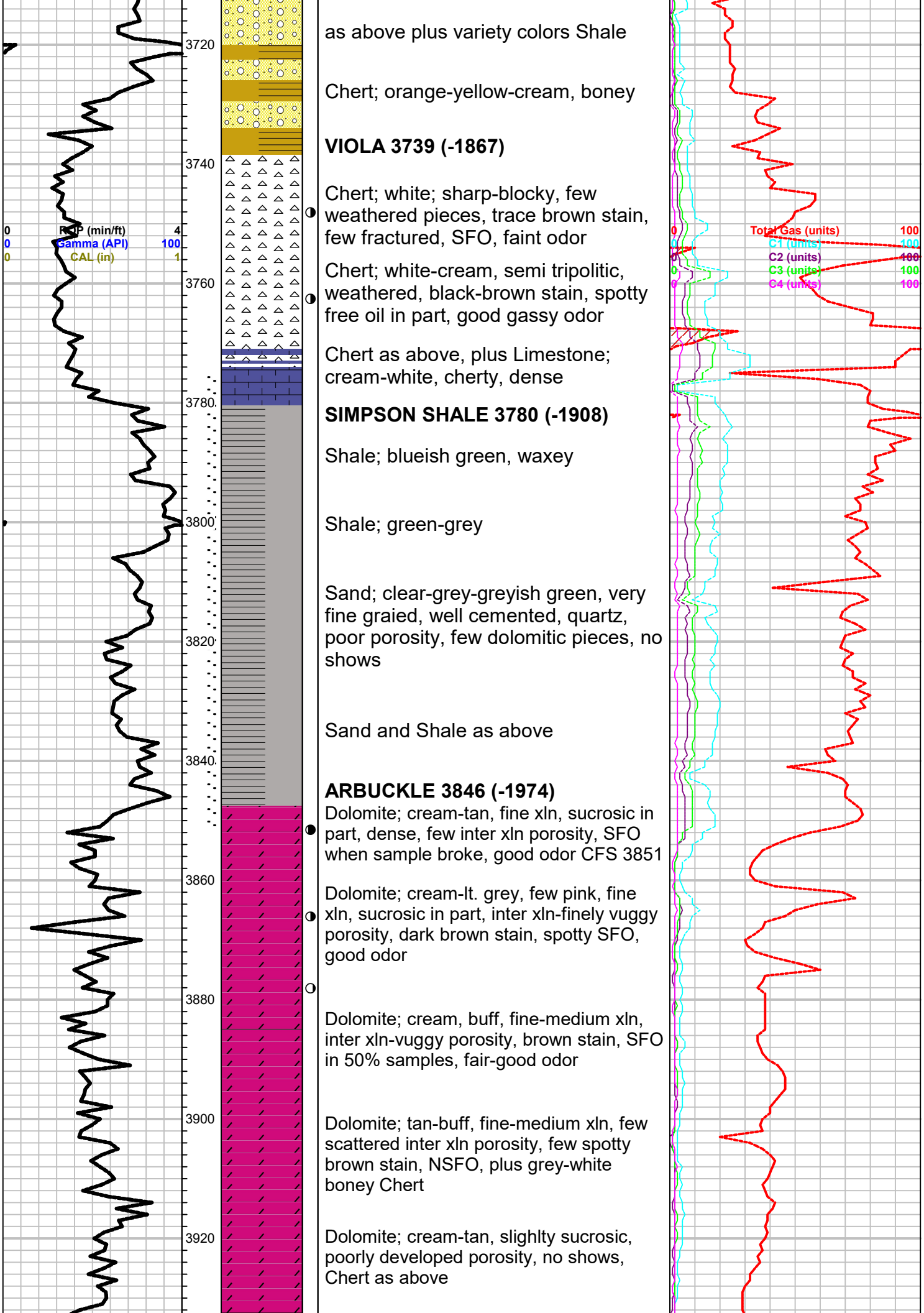
BASE KANSAS CITY 3661 (-1789)

Shale; grey-geen, black

Limestone; tan-cream, fine xln, chalky, plus Chert; grey-tan-translucent, plus Shale; abundant variety colors

as above

Limestone; green, fine xln, chalky in part, granular, plus variety colors of chert; boney



as above plus variety colors Shale

Chert; orange-yellow-cream, boney

VIOLA 3739 (-1867)

Chert; white; sharp-blocky, few weathered pieces, trace brown stain, few fractured, SFO, faint odor

Chert; white-cream, semi tripolitic, weathered, black-brown stain, spotty free oil in part, good gassy odor

Chert as above, plus Limestone; cream-white, cherty, dense

SIMPSON SHALE 3780 (-1908)

Shale; blueish green, waxey

Shale; green-grey

Sand; clear-grey-greyish green, very fine graied, well cemented, quartz, poor porosity, few dolomitic pieces, no shows

Sand and Shale as above

ARBUCKLE 3846 (-1974)

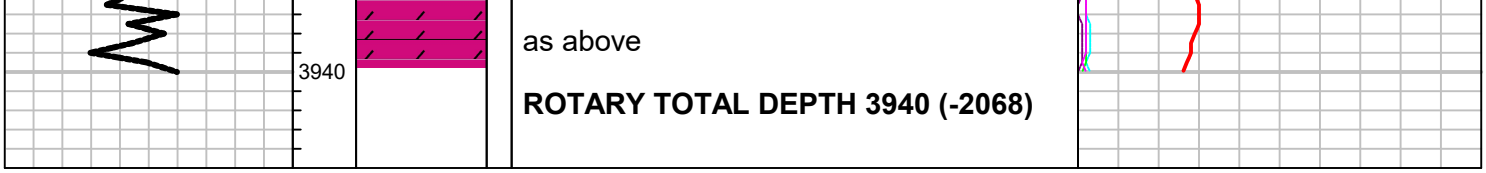
Dolomite; cream-tan, fine xln, sucrosic in part, dense, few inter xln porosity, SFO when sample broke, good odor CFS 3851

Dolomite; cream-lt. grey, few pink, fine xln, sucrosic in part, inter xln-finely vuggy porosity, dark brown stain, spotty SFO, good odor

Dolomite; cream, buff, fine-medium xln, inter xln-vuggy porosity, brown stain, SFO in 50% samples, fair-good odor

Dolomite; tan-buff, fine-medium xln, few scattered inter xln porosity, few spotty brown stain, NSFO, plus grey-white boney Chert

Dolomite; cream-tan, slighlty sucrosic, poorly developed porosity, no shows, Chert as above



as above

ROTARY TOTAL DEPTH 3940 (-2068)

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Rama Operating Company Inc**

101 S Main St
Stafford KS 67578+1429

ATTN: Josh Austin

Knoche #1-28

28-23s-12w Stafford,KS

Start Date: 2021.08.07 @ 07:35:00
End Date: 2021.08.07 @ 16:39:21
Job Ticket #: 66891 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2021.08.11 @ 11:26:08

DRILL STEM TEST REPORT

Rama Operating Company Inc

101 S Main St
Stafford KS 67578+1429

ATTN: Josh Austin

28-23s-12w Stafford,KS

Knoche #1-28

Job Ticket: 66891 **DST#: 1**

Test Start: 2021.08.07 @ 07:35:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:10:27
Time Test Ended: 16:39:21

Test Type: Conventional Bottom Hole (Initial)
Tester: Spencer J Staab
Unit No: 84

Interval: 3776.00 ft (KB) To 3851.00 ft (KB) (TVD)
Total Depth: 3851.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

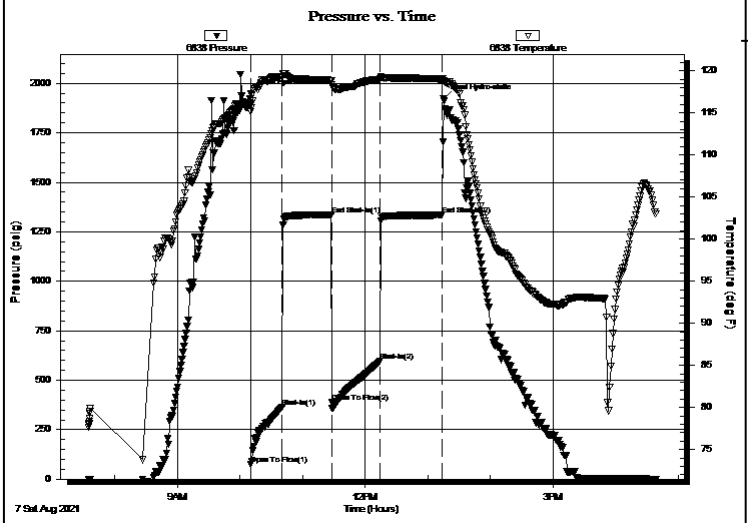
Reference Elevations: 1872.00 ft (KB)
1860.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 6838 **Inside**

Press@RunDepth: 595.00 psig @ 3779.00 ft (KB)
Start Date: 2021.08.07 End Date: 2021.08.07
Start Time: 07:35:01 End Time: 16:39:21

Capacity: psig
Last Calib.: 2021.08.07
Time On Btm: 2021.08.07 @ 10:10:22
Time Off Btm: 2021.08.07 @ 13:15:17

TEST COMMENT: 30-IF-BOB 4 1/2 mins Built to 60"
45-ISI-No Return
45-FF-BOB 5 mins Built to 71"
60-FSI-Weak Surface Died @ 15 mins



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1948.09	116.08	Initial Hydro-static
1	73.42	115.17	Open To Flow (1)
31	365.51	119.27	Shut-In(1)
78	1335.04	118.82	End Shut-In(1)
78	389.88	118.35	Open To Flow (2)
125	595.00	119.03	Shut-In(2)
184	1334.18	119.01	End Shut-In(2)
185	1924.58	118.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
125.00	GMCOW 10G 10M 30 O 50W	0.61
250.00	GSMCOW 35G 5M 20 O 40W	2.69
1010.00	GMCWO 30G 10M 40 O 20W	14.32
15.00	GO 25%G 75%O	0.21
0.00	190 GIP 100%G	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

Rama Operating Company Inc

101 S Main St
Stafford KS 67578+1429

ATTN: Josh Austin

28-23s-12w Stafford,KS

Knoche #1-28

Job Ticket: 66891 **DST#: 1**

Test Start: 2021.08.07 @ 07:35:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:10:27
Time Test Ended: 16:39:21

Test Type: Conventional Bottom Hole (Initial)
Tester: Spencer J Staab
Unit No: 84

Interval: 3776.00 ft (KB) To 3851.00 ft (KB) (TVD)
Total Depth: 3851.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

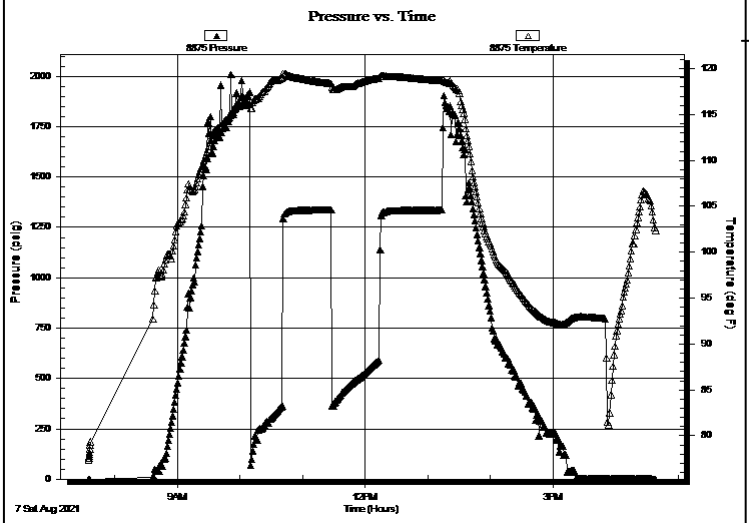
Reference Elevations: 1872.00 ft (KB)
1860.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8875 **Outside**

Press@RunDepth: psig @ 3779.00 ft (KB)
Start Date: 2021.08.07 End Date: 2021.08.07
Start Time: 07:35:01 End Time: 16:39:21

Capacity: psig
Last Calib.: 2021.08.07
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IF-BOB 4 1/2 mins Built to 60"
45-ISI-No Return
45-FF-BOB 5 mins Built to 71"
60-FSI-Weak Surface Died @ 15 mins



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
125.00	GMCOW 10G 10M 30 O 50W	0.61
250.00	GSMCOW 35G 5M 20 O 40W	2.69
1010.00	GMCWO 30G 10M 40 O 20W	14.32
15.00	GO 25%G 75%O	0.21
0.00	190 GIP 100%G	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

TOOL DIAGRAM

Rama Operating Company Inc

101 S Main St
Stafford KS 67578+1429

ATTN: Josh Austin

28-23s-12w Stafford,KS

Knoche #1-28

Job Ticket: 66891 **DST#: 1**

Test Start: 2021.08.07 @ 07:35:00

Tool Information

Drill Pipe:	Length:	3570.00 ft	Diameter:	3.82 inches	Volume:	50.61 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	ft	Diameter:	2.75 inches	Volume:	- bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	217.00 ft	Diameter:	2.25 inches	Volume:	1.07 bbl	Weight to Pull Loose:		79000.00 lb
					Total Volume:	- bbl	Tool Chased		ft
Drill Pipe Above KB:		32.00 ft					String Weight:	Initial	67000.00 lb
Depth to Top Packer:		3776.00 ft						Final	73000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		75.00 ft							
Tool Length:		96.00 ft							
Number of Packers:		1	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3756.00		
Change Over Sub	1.00			3757.00		
Shut In Tool	5.00			3762.00		
Hydraulic tool	5.00		Fluid	3767.00		
Packer	5.00			3772.00	21.00	Bottom Of Top Packer
Packer	4.00			3776.00		
Stubb	1.00			3777.00		
Perforations	1.00			3778.00		
Change Over Sub	1.00			3779.00		
Recorder	0.00	6838	Inside	3779.00		
Recorder	0.00	8875	Outside	3779.00		
Drill Pipe	63.00			3842.00		
Change Over Sub	1.00			3843.00		
Perforations	5.00			3848.00		
Bullnose	3.00			3851.00	75.00	Bottom Packers & Anchor
Total Tool Length:	**96.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Rama Operating Company Inc

101 S Main St
Stafford KS 67578+1429

ATTN: Josh Austin

28-23s-12w Stafford,KS

Knoche #1-28

Job Ticket: 66891 **DST#: 1**

Test Start: 2021.08.07 @ 07:35:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	38 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	31500 ppm
Viscosity:	51.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3500.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	GMCOW 10G 10M 30 O 50W	0.615
250.00	GSMCOW 35G 5M 20 O 40W	2.692
1010.00	GMCWO 30G 10M 40 O 20W	14.317
15.00	GO 25%G 75%O	0.213
0.00	190 GIP 100%G	0.000

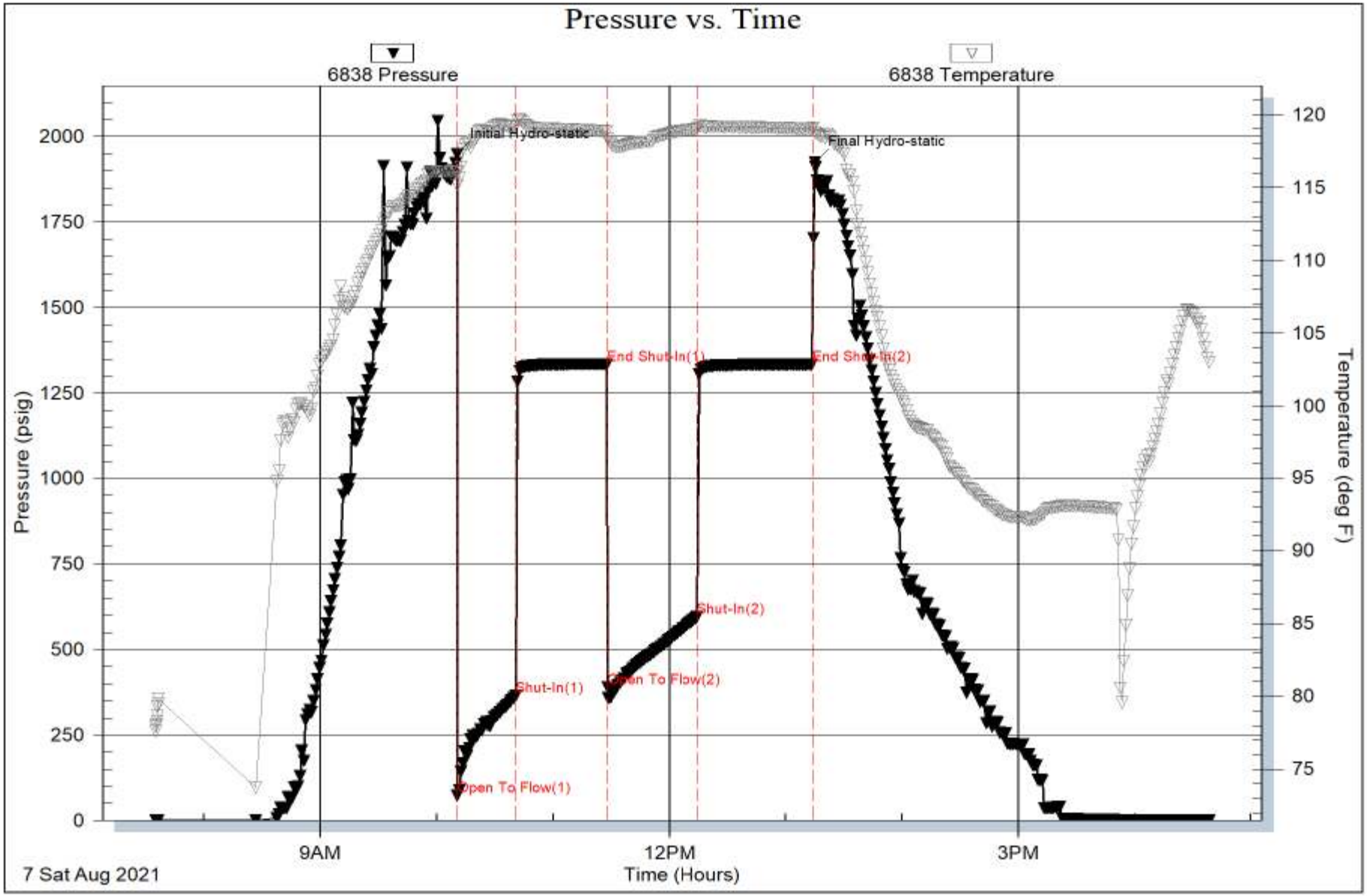
Total Length: 1400.00 ft Total Volume: 17.837 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

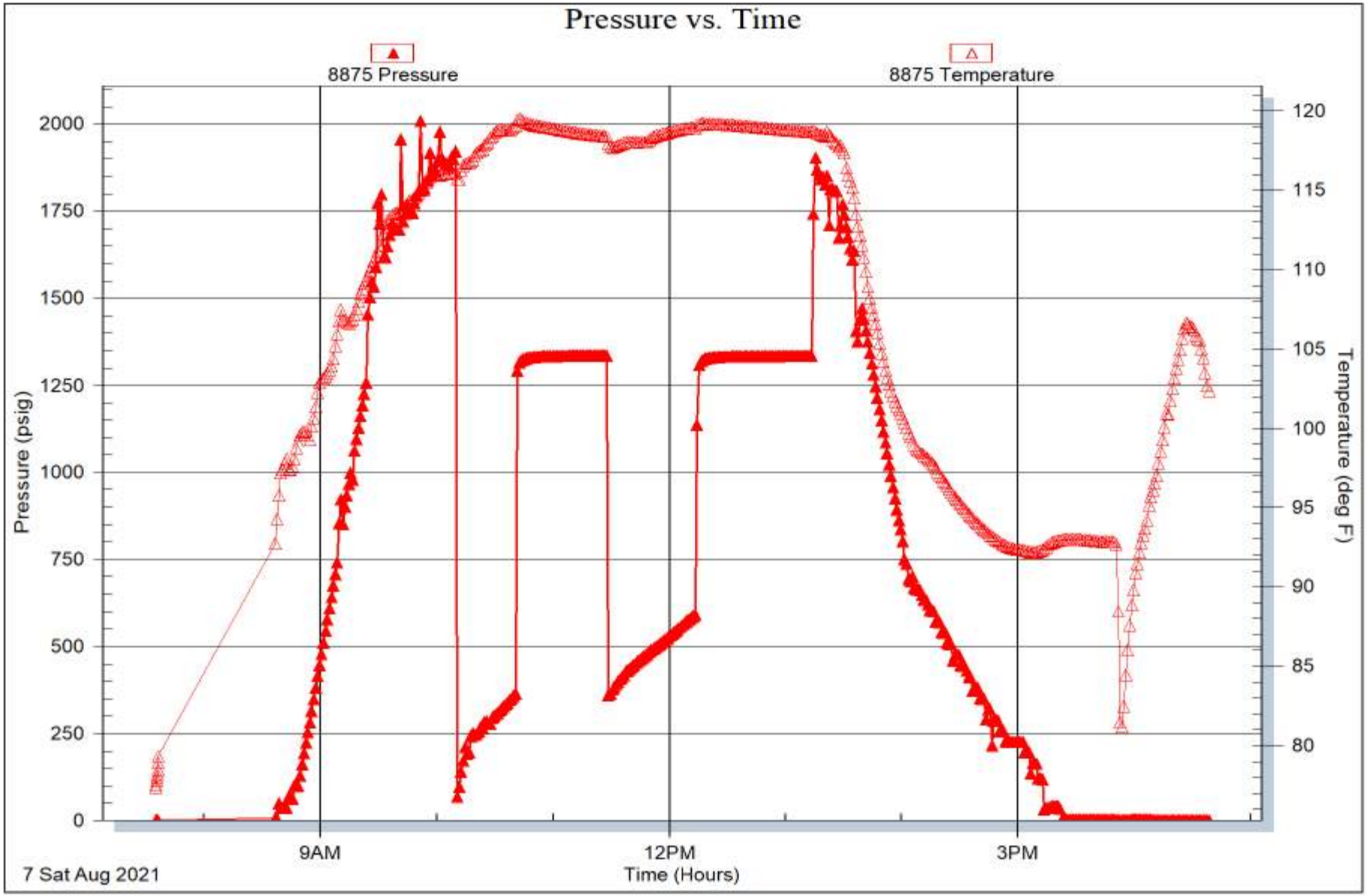
Recovery Comments: 1#LCM
RW=.170@90F

Serial #: 6838 **Inside** Rama Operating Company Inc Knoche #1-28 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 66891 Printed: 2021.08.11 @ 11:26:09

Serial #: 8875 **Outside** Rama Operating Company Inc Knoche #1-28 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 66891 Printed: 2021.08.11 @ 11:26:09

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 66891

Well Name & No. Knoche #1-28 Test No. 1 Date 08/07/2021

Company Kansa Operating Co. Inc Elevation 1872 KB GL

Address 101 S. Main ST Stafford Ks 67578+1429

Co. Rep / Geo. Joshua Austin Rig Sterling #4

Location: Sec. 28 Twp 23s Rge. 12w Co. Stafford State Ks

Interval Tested 3776'- 3851' Zone Tested Arbuckle

Anchor Length 75' Drill Pipe Run 3570' Mud Wt. 9.4

Top Packer Depth 3771' Drill Collars Run 217' Vis 51

Bottom Packer Depth 3776' Wt. Pipe Run - WL 9.6

Total Depth 3851 Chlorides 3500 ppm System LCM 1#

Blow Description IF- BOB 4½ min; Built to 60"

ISI- No Returns

FF- BOB 5 mins; Built to 71"

FSI- Weak Surface; Died @ 15 min

Rec 15'	Feet of GO	25 %gas	75 %oil	%water	%mud	
Rec 1010'	Feet of GMCWO	30 %gas	40 %oil	20 %water	10 %mud	
Rec 250	Feet of GSMCOW	35 %gas	20 %oil	40 %water	5 %mud	
Rec 125	Feet of GMCOW	10 %gas	30 %oil	50 %water	10 %mud	
Rec	Feet of 190' GIP	100 %gas	%oil	%water	%mud	

Rec Total 1400' BHT 119° Gravity 38° API RW .170 @ 90 °F Chlorides 31,500 ppm

(A) Initial Hydrostatic	1949	☒ Test	1300	T-On Location	06:55
(B) First Initial Flow	73	☐ Jars		T-Started	07:35
(C) First Final Flow	365	☐ Safety Joint		T-Open	10:06
(D) Initial Shut-In	1335	☐ Circ Sub		T-Pulled	13:06
(E) Second Initial Flow	389	☒ Hourly Standby	x1 .5hr 50	T-Out	16:35
(F) Second Final Flow	595	☒ Mileage	52RT 65	Comments	Loaded filer
(G) Final Shut-In	1334	☐ Sampler			Lost
(H) Final Hydrostatic	1924	☐ Straddle			
		☐ Shale Packer		☐ EM Tool	
Initial Open	30	☐ Extra Packer		☐ Ruined Shale Packer	
Initial Shut-In	45	☐ Extra Recorder		☐ Ruined Packer	
Final Flow	45	☐ Day Standby		☐ Extra Copies	
Final Shut-In	60	☐ Accessibility		Sub Total	0
		Sub Total	1415	Total	1415
				MP/DST Disc't	

Approved By Our Representative Spencer Thanks!

785-259-0056