KOLAR Document ID: 1616498

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 # 34888
Name: Patterson Energy LLC
Address 1: PO BOX 400
Address 2:
City: HAYS State: KS Zip: 67601 + 0400
Contact Person: Zach Patterson
Phone: (785) 259-3717
CONTRACTOR: License # 30606
Name: Murfin Drilling Co., Inc.
Wellsite Geologist: Austin Klaus
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 #:

12/01/2021 Spud Date or Recompletion Date
12/06/2021 Date Reached TD
12/28/2021 Completion Date or Recompletion Date

API No.: 15-009-26323-00-00
Spot Description:
__ - E2 - SE - NE Sec. 36 Twp. 17 S. R. 11 ☐ East ☑ West
1980 Feet from ☑ North / ☐ South Line of Section
330 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: Barton
Lease Name: BRADLEY UNIT Well #: 2
Field Name:
Producing Formation: Arbuckle
Elevation: Ground: 1804 Kelly Bushing: 1815
Total Vertical Depth: 3320 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 369 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: 31000 ppm Fluid volume: 135 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Patterson Energy LLC
Lease Name: Wessler License #: 34888
Quarter SE Sec. 19 Twp. 17 S. R. 9 ☐ East ☑ West
County: Ellsworth Permit #: D33042.0

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:
☐ **Confidential Release Date:**
☑ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Deanna Garrison **Date:** 02/21/2022

Operator Name: Patterson Energy LLC Lease Name: BRADLEY UNIT Well #: 2

Sec. 36 Twp. 17 S. R. 11 ☐ East ☑ West County: Barton

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
Samples Sent to Geological Survey	☐ Yes	☑ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☑ Yes	☐ No
Geologist Report / Mud Logs	☑ Yes	☐ No

List All E. Logs Run:

Comp Density Neutron
Dual Induction
Microresistivity

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

Name	Top	Datum
Topeka	2586	-771
Heebner	2838	-1023
Lansing	2966	-1151
B/KC	3236	-1421
Arbuckle	3241	-1426

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	12.25	8.625	23	369	80/20	180	3%/2%
Production	7.875	5.5	17	3320	Common	175	10%/5%

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: 1/04/2022	Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*					
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity	
	11		1230			

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)*	3241	3247

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)*
4	3241	3247			250 gals 15% MCA

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	Patterson Energy LLC
Well Name	BRADLEY UNIT 2
Doc ID	1616498

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	12.25	8.625	23	369	80/20	180	3%/2%
Production	7.875	5.5	17	3320	Common	175	10%/5%

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071 Cell 785-324-1041 | Home Office P.O. Box 32 Russell, KS 67665 | No. 2620

Date	Sec.	Twp.	Range	County	State	On Location	Finish
12-2-21	36	17	11	Barton	KS		10:00 AM

Location Claflin - 3E to County line

Lease Bradley unit | Well No. #2 | Owner 1/2 N, W5

Contractor Murfin #20 | To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Type Job Surface

Hole Size 12¼" | T.D. 369' | Charge To Patterson Energy

Csg. 8 5/8" | Depth 369' | Street

Tbg. Size | Depth | City State

Tool | Depth | The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 15' | Shoe Joint 15' | Cement Amount Ordered 180 80/20 3%cc 2%Gel

Meas Line | Displace 22 1/4 BLS

EQUIPMENT

Pumptrk 16 No. | Cementer Helper David

Bulktrk 9 No. | Driver Driver Jordan

Bulktrk P.U. No. | Driver Driver Rick

JOB SERVICES & REMARKS

Remarks: Cement did Circulate

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Common	145
Poz. Mix	35
Gel.	3
Calcium	7
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	190
Mileage	
FLOAT EQUIPMENT	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Surface
Mileage	30
Tax	
Discount	
Total Charge	

Thanks

X Signature

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-1071
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 2623

Date	Sec.	Twp.	Range	County	State	On Location	Finish
12-7-21	36	17	11	Barton	KS		9:30 AM

Location Claflin - 3E to C.L., ½N, W/Into

Lease Bradley unit Well No. #2

Owner

Contractor Murfin #20

To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Type Job Longstring

Hole Size 7⅞" T.D. 3320'

Charge To Patterson Energy

Csg. 5½" #17 New Depth 3320'

Street

Tbg. Size Depth

City State

Tool Depth

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 27.50 Shoe Joint 27.50'

Cement Amount Ordered 175 Com 10% Salt 5% Gilsonite ¼# 500 gal mud Clear 48 2 gal KCL

Meas Line Displace 76½ Bbls

EQUIPMENT

Pumptrk 16 No. Cementer Helper David

Bulktrk 9 No. Driver Driver

~~Bulktrk~~ P.U. No. Driver Driver Rick

Common 175

Poz. Mix

Gel.

Calcium 2 gal KCL

Hulls

Salt 14

Flowseal

Kol-Seal 750#

Mud CLR 48 500 gal

CFL-117 or CD110 CAF 38

Sand

Handling 196

Mileage

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30 SX

Mouse Hole 15 SX

Centralizers 1, 3, 5, 7, 9, 11, 13

Baskets 14

D/V or Port Collar Pipe on bottom, break Circulation, Pump 500 gal mud Clear + 10 Bbls KCL, Shut down Plug Rathole + mousehole. Hook to 5½" Casing + mix 130 SX Shut down. Released plug + Displaced w/ 76½ Bbls H2O Final 10 Bbls w/ KCL. Released + held.

Lift pressure 800#

Land plug to 1500 #

FLOAT EQUIPMENT

Guide Shoe

Centralizer 7

Baskets 1

AFU Inserts

Float Shoe 1

Latch Down 1

Rotating head

Pumptrk Charge prod string

Mileage 30

Tax

Discount

Total Charge

X Signature

Thanks

AUSTIN B. KLAUS

Cell 785.650.3629
Work 785.483.3145
Ext 225

PO BOX 352
Russell, KS 67665
austin.klaus@johnofarmer.com

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name:	**Bradley Unit #2**		
API:	**15-009-26323-00-00**		
Location:	**Barton County**		
License Number:		**Region:**	**Kansas**
Spud Date:	**12/01/2021**	**Drilling Completed:**	**12/06/2021**
Surface Coordinates:	**Section 36, Township 17 South, Range 11 West** **1,980' FNL & 330' FEL**		
Bottom Hole Coordinates:	**Vertical well w/ minimal deviation, same as above**		
Ground Elevation (ft):	**1,804**	**K.B. Elevation (ft):**	**1,815**
Logged Interval (ft):	**2,500 To: RTD**	**Total Depth (ft):**	**3,320**
Formation:	**Topeka - Arbuckle**		
Type of Drilling Fluid:	**Chemical (Andy's Mud)**		

OPERATOR

Company: **Patterson Energy, LLC**
Address: **PO Box 400**
Hays, KS 67601

GEOLOGIST

Name: **Austin Klaus**
Company: **John O. Farmer, Inc.**
Address: **PO Box 352**
Russell, KS 67665

Comments

The Bradley Unit #2 well was drilled by Murfin Drilling Company Inc. Rig #20 (Tool Pusher: Jesus Vargas).

Drilling time was recorded and rock samples were collected and evaluated from 2,500'- 3,320'. Oil shows were encountered in the Lansing/Kansas City C, G, J and Arbuckle. Structurally, the LKC top was picked 5/6' high to the comparison well, located 920' east (Grizzell #26 - Grady Bolding Corp, 2010). Structure remained consistent throughout the LKC and the Arbuckle top was also picked 5' high to the comparison well. The Bradley Unit #2 is also 3' high to the nearest producing well (Bloomer #1 - Stepco Oil Co., P&A 1980-96'). After comprehensive evaluation of all oil shows, electric logs, and structural position, it was decided that 5-1/2" production casing be set to further evaluate the Bradley Unit #2 on December 7, 2021.

ROCK TYPES

Anhy, Bent, Brec, Cht, Clyst, Coal, Congl, Dol, Gyp, Igne, Lmst, Meta, Mrlst, Salt, Shale, Shcol, Shgy, Sltst, Ss, Till

OTHER SYMBOLS

POROSITY
- E Earthy
- Fenest
- F Fracture
- I Inter
- Moldic
- O Organic
- P Pinpoint
- V Vuggy

SORTING
- W Well
- M Moderate
- P Poor

ROUNDING
- R Rounded
- r Subrnd
- a Subang
- A Angular

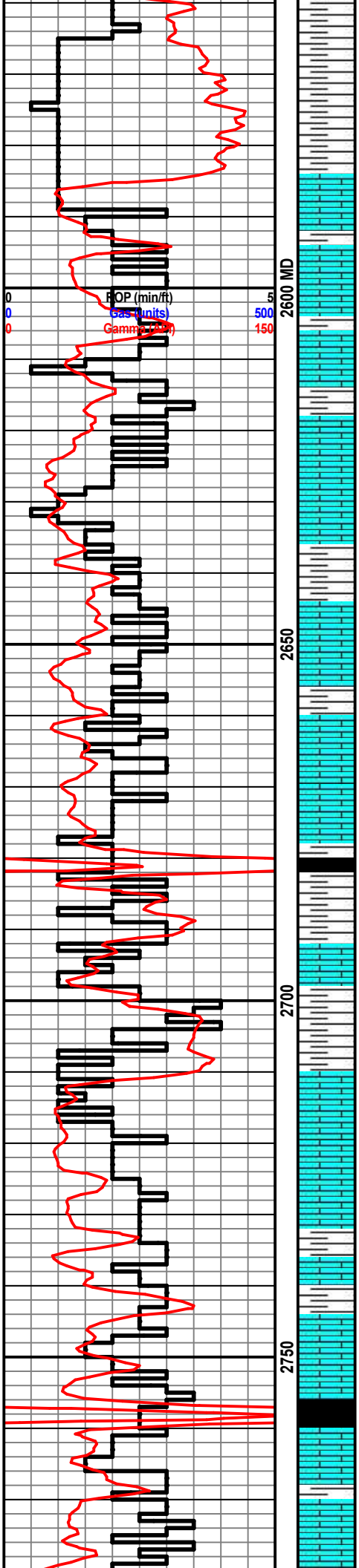
OIL SHOW
- Even
- Spotted
- Ques
- D Dead

INTERVAL
- Core
- Dst

EVENT
- Rft
- Sidewall

Curve Track 1 ROP (min/ft) Gas (units) Gamma (API)	MD	Lithology	Oil Shows	Geological Descriptions	DST/Mud/Survey
0 ROP (min/ft) 5 0 Gas (units) 500 0 Gamma (API) 150	2500 2550			The open-hole logging was performed by Mr. Casey Patterson with Gemini Wireline, LLC (Hays, KS). Logs included: Compensated Density Neutron, Dual Induction, and Microresistivity. **Formation tops and datums from the open-hole logs include the following:**	

Formation	E-Log	Datum
Topeka	2586	-771
Heebner	2838	-1023
Lansing	2966	-1151
B/KC	3236	-1421
Arbuckle	3241	-1426
LTD	3320	-1505



Sh: lt-drk gry

Topeka 2587' (-772)

Ls: lt gry-crm, fn xln, scat foss, mostly DNS

Ls: ala

Ls: off wh-tan, fn xln, scat foss, fair int xln porosity, NSFO

Sh: lt-drk gry

Ls: tan-gry, fn xln, scat foss, scat poor int xln porosity

Ls: tan-gry, fn xln, poor int xln porosity, scat foss, NSFO

Ls: tan-gry, fn xln, mostly DNS, foss

Ls: ala

Sh: blk, carb

Sh: lt-drk gry

Ls: lt gry-tan, fn xln, mostly DNS, scat foss

Sh: lt-drk gry

Ls: lt gry-tan-crm, fn xln, scat foss, NSFO

Ls: ala

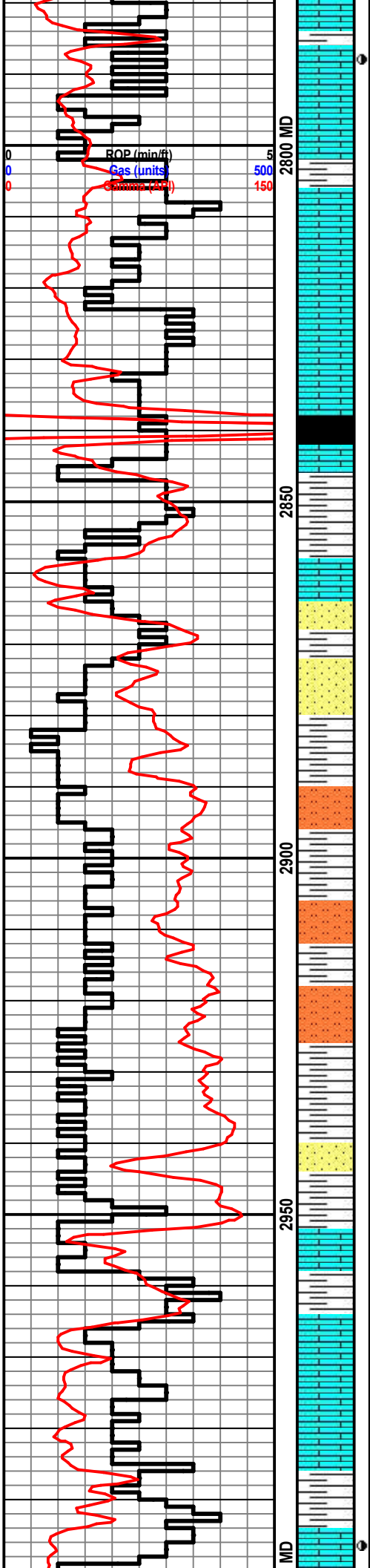
Sh: lt-drk gry

Ls: tan-gry, fn-md xln, scat foss, scat int xln porosity, NSFO

Sh: blk, carb

Ls: tan-gry, fn-md xln, scat foss, NSFO

Ls: ala



Ls: off wh-tan, fn xln, fair vuggy & int xln porosity, scat drk brn stn, scat-FSFO when brkn, fair odor

Ls: tan-gry, fn xln, scat-poor int xln porosity, scat brn oil stn

Ls: tan-gry, fn-sub xln, mostly DNS, scat chalk

Wt: 8.9
Vis: 55

Ls: tan-gry, fn-sub xln, mostly DNS

Heebner 2843' (-1028)

Sh: blk, carb, fissile

Ls: tan-gry, fn xln, scat foss, no visible porosity

Ls: tan-gry, fn xln, mostly DNS, NSFO

Ss: lt gry, fn gm, m-sub md, sl friable

Ss: lt gry, fn gm, slt, md-sub md, friable, scat sh: lt-drk gry

Sh: lt gry, scat slts: gry-gm and ss: ala

ala

Slst: lt gry, vry fn gm scat ss and sh: gry-blk, scat chalk

Slst: ala

Ss: lt gry, fn gm, md-sub md, sl friable

Ss: ala

Sh: lt-drk gry, soft

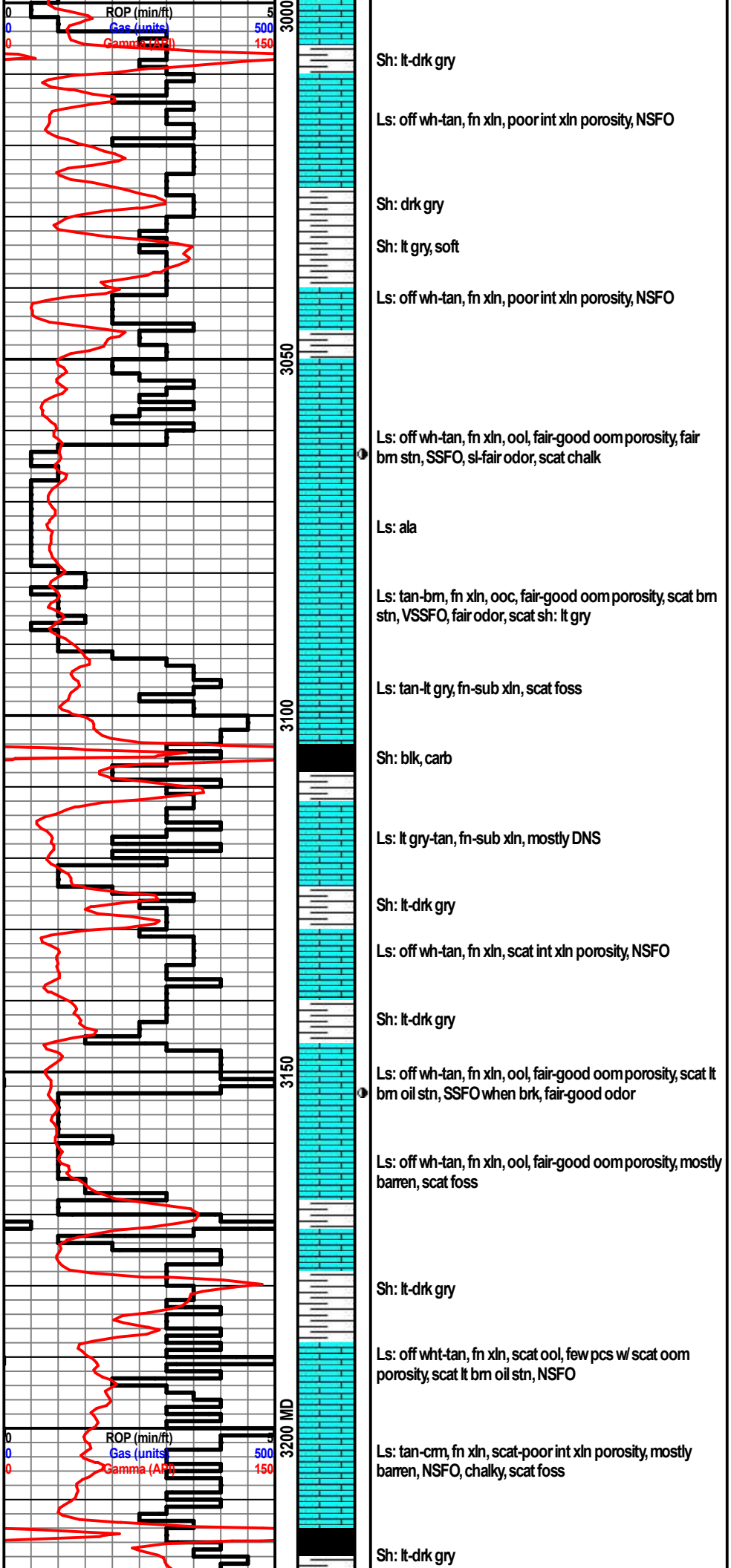
Lansing 2972' (-1157)

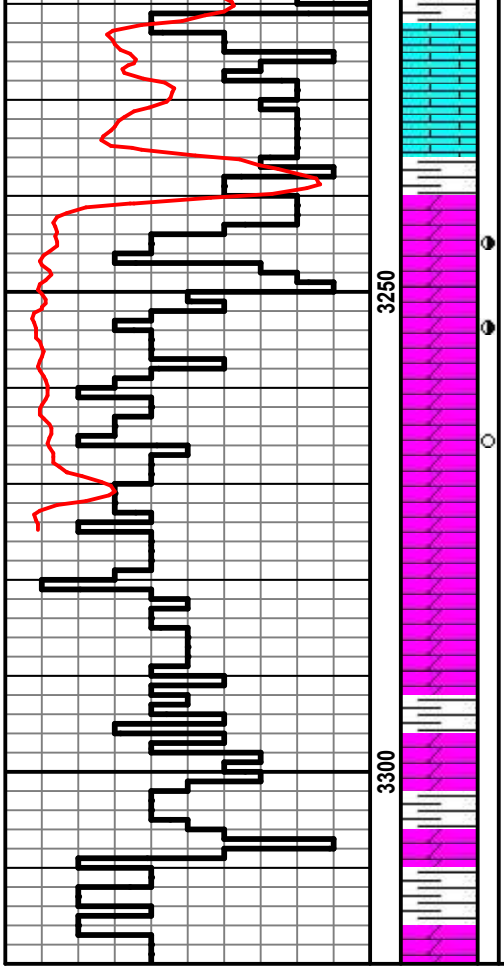
Ls: tan-lt gry, fn xln, poor int xln porosity, few pcs w/ lt brn stn, NSFO

Ls: tan-gry, fn xln, poor-fair int xln porosity, dead oil stn, NSFO

Sh: lt-drk gry

Ls: off wh-tan, fn xln, ool, fair-good oom porosity, scat-fair drk brn oil stn, SSFO when brk, fair odor, foss


0
ROP (min/ft)
5
0
Gas (units)
500
0
Gamma (API)
150
3000
3050
3100
3150
3200 MD
Sh: lt-drk gry
Ls: off wh-tan, fn xln, poor int xln porosity, NSFO
Sh: drk gry
Sh: lt gry, soft
Ls: off wh-tan, fn xln, poor int xln porosity, NSFO
Ls: off wh-tan, fn xln, ool, fair-good oom porosity, fair brn stn, SSFO, sl-fair odor, scat chalk
Ls: ala
Ls: tan-brn, fn xln, ooc, fair-good oom porosity, scat brn stn, VSSFO, fair odor, scat sh: lt gry
Ls: tan-lt gry, fn-sub xln, scat foss
Sh: blk, carb
Ls: lt gry-tan, fn-sub xln, mostly DNS
Sh: lt-drk gry
Ls: off wh-tan, fn xln, scat int xln porosity, NSFO
Sh: lt-drk gry
Ls: off wh-tan, fn xln, ool, fair-good oom porosity, scat lt brn oil stn, SSFO when brk, fair-good odor
Ls: off wh-tan, fn xln, ool, fair-good oom porosity, mostly barren, scat foss
Sh: lt-drk gry
Ls: off wht-tan, fn xln, scat ool, few pcs w/ scat oom porosity, scat lt brn oil stn, NSFO
0
ROP (min/ft)
0
Gas (units)
500
0
Gamma (API)
150
Ls: tan-crm, fn xln, scat-poor int xln porosity, mostly barren, NSFO, chalky, scat foss
Sh: lt-drk gry



Ls: off wh-tan, fn xln, poor int xln porosity, NSFO

B/KC 3243' (-1428)

Arbuckle 3245' (-1430)

Dolo: off wh, fn-md xln, fair-good int xln porosity, lt brn lt-fair oil stn, S-FSFO when brkn, fair-good odor

Dolo: off wh-wh, fn-md xln, fair-good sucrosic xln porosity, lt oil stn, SSFO when brkn, good odor

Dolo: off wh-wh, fn-crs xln, fair-good sucrosic xln porosity, lt brn stn, VSSFO, fair odor, scat sh: drk gry

Dolo: wh, fn-crs xln, scat fair-good int xln porosity, mostly barren, scat sh: drk gry

Dolo: off wh-tan, fn-md xln, scat int xln porosity, barren, sh: drk gry

Dolo: ala, scat sh: drk gry-brn

Dolo: off wh-tan, fn-md xln, scat int xln porosity, barren, hvy sh: drk gry