

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 # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

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 #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

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

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

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

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

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

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

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: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Patterson Energy  
Mehl # 1  
Ellsworth Co Ks

9-19-20

Moved casing to location

9-20-20

Ran 80 jts of 5 ½ 17# R-3 LT@C new casing, installed centerlizers thru pay zones. Set pipe 3' off bottom at 3351. Cir and rotated for ½ hr. Pumped 500 gal mud flush and 10 bbls KCL water. Plugged rat hole w/ 30 sxs and moush hole lw/ 20 sxs. Cemented w/ 150 sxs common w/ 10% salt and 53 gil. Good cir through out job. Pumping pressure 800# landed plug w/ 1500# Plug down at 5:15 PM Insert held OK Set slips and released rig. 9:15 PM

5 ½ cement guide shoe	1.00	3351
5 ½ shoe jt	29.53	
Total shoe jt	30.53	3320
5 ½ 17# R-3 <u>LT@C</u> new casing 79 jts	3310.49	
Landing jt	13.00	
Total pipe	3354	11' KB
Pipe set 3' Off bottom	3351	

# 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. 2053

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9/16/2020	18	17	9	Ellsworth	Kansas		1:00am

Location ~~Ellsworth~~ Holyrod 3E 1/4 S E into

Lease	Mehl	Well No.	1	Owner	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.
Contractor	Murfin Drilling Rig # 20	Charge To	Patterson Energy		
Type Job	Surface	Street			
Hole Size	12 1/4	T.D.	311		
Csg.	8 5/8	Depth	309		
Tbg. Size		Depth			
Tool		Depth			
Cement Left in Csg.	15'	Shoe Joint	15'	The above was done to satisfaction and supervision of owner agent or contractor.	
Meas Line		Displace	18.5	Cement Amount Ordered <del>190</del> 203+2	

**EQUIPMENT**

Pumptrk	17	No.	Cementer	Tim	Common	150
			Helper		Poz. Mix	40
Bulktrk	15	No.	Driver	Doug	Gel.	3
			Driver		Calcium	6
Bulktrk	PU.	No.	Driver	David		
			Driver			

**JOB SERVICES & REMARKS**

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand
	Handling 199
	Mileage

**FLOAT EQUIPMENT**

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

Cement Did Circulate

Pumptrk Charge Surface  
Mileage 90

X Signature Arriso Lopez

Thanks

Tax	
Discount	
Total Charge	

# 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. 2054

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9/20/2020	18	17	9	Elkworth	Kansas		5:15 pm
				Location Holyrood 3E 1 1/4 S E into			

Lease Mehl	Well No. 1	Owner
Contractor <i>Murfin Drilling Rig #20</i>		To Quality Oilwell Cementing, Inc.
Type Job <i>Production String</i>		You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size <i>7 1/8</i>	T.D. <i>3360'</i>	Charge To <i>Patterson Energy</i>
Csg. <i>5 1/2</i>	Depth <i>3354</i>	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. <i>30.53</i>	Shoe Joint <i>30.53</i>	Cement Amount Ordered <i>200 com 10% salt + 5% gilsonite</i>
Meas Line	Displace <i>77 bbls</i>	<i>500gal mud clear 20BL KCL</i>

**EQUIPMENT**

Pumptrk <i>17</i> No.	Cementer <i>Tim</i>	Common <i>200</i>
	Helper <i>Jim</i>	Poz. Mix
Bulktrk <i>9</i> No.	Driver <i>Doug</i>	Gel.
	Driver <i>Doug</i>	Calcium
Bulktrk <i>PL</i> No.	Driver <i>David</i>	

**JOB SERVICES & REMARKS**

Remarks:	<i>Hulls KCL 2 gal</i>
Rat Hole <i>30 sks</i>	Salt <i>17</i>
Mouse Hole <i>20 sks</i>	Flowseal
Centralizers	Kol-Seal <i>800#</i>
Baskets	Mud CLR 48 <i>500 gal</i>
D/V or Port Collar	CFL-117 or CD110 CAF 38
<i>Set pipe at 3351' Baffle @ 3321'</i>	Sand
	Handling <i>225</i>
	Mileage

**FLOAT EQUIPMENT**

<i>Est. Circulation Pumped 500gal mud clear 10 bbl KCL Plugged RAT and mouse hole</i>	Guide Shoe
<i>Cement 5 1/2 with 150 sks</i>	Centralizer <i>6</i>
<i>Cleared Line and displaced plug with 1st 10 bbl KCL</i>	Baskets
	AFU Inserts
	Float Shoe <i>1</i>
	Latch Down <i>1</i>
<i>plug landed @ 1500</i>	
<i>Lift Pressure @ 800</i>	

Pumptrk Charge <i>prod string</i>
Mileage <i>40</i>

X Signature *Jim Weasby*

*Thanks*

Tax
Discount
Total Charge

# 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: Mehl #1  
API: 15-053-21374-00-00  
Location: Ellsworth County  
License Number: Region: Kansas  
Spud Date: 9/15/2020 Drilling Completed: 9/19/2020  
Surface Coordinates: Section 18 - Township 17 South - Range 9 West  
1015' FNL & 350' FWL  
Bottom Hole Vertical well w/ minimal deviation, same as above  
Coordinates:  
Ground Elevation (ft): 1,791 K.B. Elevation (ft): 1,802  
Logged Interval (ft): 2,500 To: RTD Total Depth (ft): 3,360  
Formation: Lansing Kansas City - Arbuckle  
Type of Drilling Fluid: Chemical (Andy's Mud)

Printed by StripLog from WellSight Systems 1-800-447-1534 www.WellSight.com

## 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 Mehl #1 well was drilled by Murfin Drilling Company Inc. Rig #20 (Tool Pusher: Arturo Cabezas).

The Mehl #1 was discovered via 3D seismic survey. Drilling time was recorded, and rock samples were collected and evaluated from 2,500' - 3,360'. Oil shows were encountered in the Lansing G, H, I, J, K, and Arbuckle. Structurally, the Heebner top was picked flat to the comparison well, 900' to the northeast (Mehl #1 - 1951-1991). Structural thinning occurred throughout the LKC and below, which resulted in an Arbuckle top picked 8' high to the comparison well. After comprehensive evaluation of the oil shows, electric logs, and structural position, it was decided that 5 1/2" production casing be set to further evaluate the Mehl #1 on 9/20/2020.

### ROCK TYPES

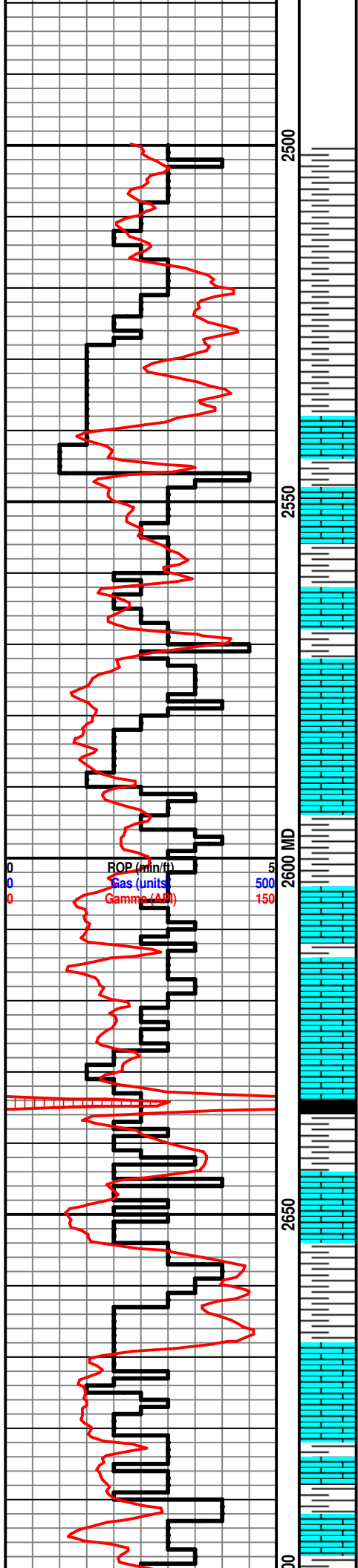
	Anhy		Clyst		Gyp		Mrlst		Shgy
	Bent		Coal		Igne		Salt		Sltst
	Brec		Congl		Lmst		Shale		Ss
	Cht		Dol		Meta		Shcol		Till

### OTHER SYMBOLS

<b>POROSITY</b>	<input type="checkbox"/> Vuggy	<b>ROUNDING</b>	<input type="checkbox"/> Spotted	<b>EVENT</b>
<input type="checkbox"/> Earthy		<input type="checkbox"/> Rounded	<input type="checkbox"/> Ques	<input type="checkbox"/> Rft
<input type="checkbox"/> Fenest	<b>SORTING</b>	<input type="checkbox"/> Subrnd	<input type="checkbox"/> Dead	<input type="checkbox"/> Sidewall
<input type="checkbox"/> Fracture	<input type="checkbox"/> Well	<input type="checkbox"/> Subang		
<input type="checkbox"/> Inter	<input type="checkbox"/> Moderate	<input type="checkbox"/> Angular	<b>INTERVAL</b>	
<input type="checkbox"/> Moldic	<input type="checkbox"/> Poor		<input type="checkbox"/> Core	
<input type="checkbox"/> Organic		<b>OIL SHOW</b>	<input type="checkbox"/> Dst	
<input type="checkbox"/> Pinpoint		<input type="checkbox"/> Even		

Curve Track 1	MD	Lithology	Geological Descriptions	DST/Mud/Survey																								
ROP (min/ft) ——— Gas (units) - - - - - Gamma (API) ———																												
0 ROP (min/ft) 5 0 Gas (units) 500 0 Gamma (API) 150	2400		The open-hole logging was performed by Mr. Casey Patterson with Gemini Wireline, LLC (Hays, KS). Logs included: Compensated Density Neutron, Dual Induction, Microresistivity, and Radiation Guard.  Formation tops and datums from the open-hole logs include the following:	Mud Engineer: Brandon Mendez																								
	2450		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Formation</th> <th>E-Log</th> <th>Datum</th> </tr> </thead> <tbody> <tr><td>Anhydrite</td><td>520</td><td>1282</td></tr> <tr><td>Topeka</td><td>2540</td><td>-738</td></tr> <tr><td>Heebner</td><td>2794</td><td>-992</td></tr> <tr><td>Lansing</td><td>2925</td><td>-1123</td></tr> <tr><td>B/KC</td><td>3204</td><td>-1402</td></tr> <tr><td>Arbuckle</td><td>3238</td><td>-1436</td></tr> <tr><td>LTD</td><td>3354</td><td>-1552</td></tr> </tbody> </table>	Formation	E-Log	Datum	Anhydrite	520	1282	Topeka	2540	-738	Heebner	2794	-992	Lansing	2925	-1123	B/KC	3204	-1402	Arbuckle	3238	-1436	LTD	3354	-1552	
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LTD	3354	-1552																										





Sh: drk gry

Sh: ala

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

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

Ls: ala

Sh: lt-drk gry, scat brn

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

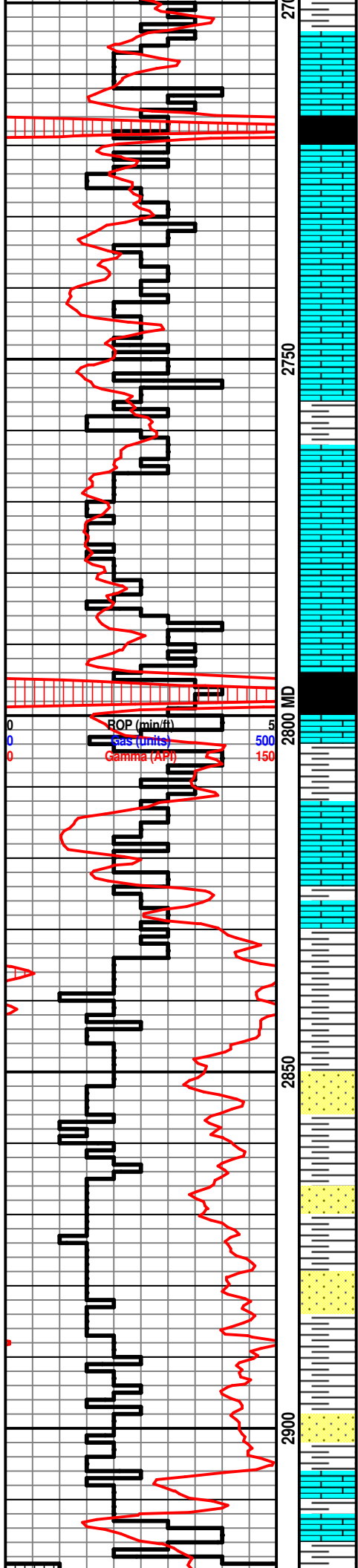
Sh: drk gry-blk

Ls: ala

**Topeka 2546' (744)**

Ls: off wh-lt gry, fn-sub xln, mostly DNS

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



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

Sh: drk gry-blk

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

Ls: ala

Sh: lt-drk gry

Ls: off wh-tan, fn xln, poor-fair int xln porosity, scat oil stn, VSSFO, vry fnt odor, dull yel fluor

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

**Heebner 2800' (-998)**  
Sh: blk, carb, fissile

Sh: lt-drk gry

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

Ls: off wh-tan-lt gry, fn xln, mostly DNS

Sh: lt-drk gry

Sh: ala

Ss: lt gry, fn-vry fn grn, rnd, fairly friable, scat sh: lt gry

Ss: ala

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

Weight: 9.1  
Vis: 50

# Lansing 2932' (-1130)

Ls: off wh-tan, fn xln, ool, fair oom porosity, mostly barren

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

Sh: lt drk gry

Ls: off wh-tan, fn xln, ool, fair oom porosity, scat dead oil stn, NSFO, dull yel fluor

Sh: drk gry-blk

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

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

Sh: lt-drk gry

Ls: off wh-tan, fn xln, mostly DNS

Ls: off wh-tan, fn xln, ool, fair-good oom porosity, fair oil sat, sl-fair odor, SSFO, fair yel fluor

Ls: off wh-tan, fn xln, ool, fair oom porosity, scat fair oil stn, VSSFO, fair odor, fair-dull yel fluor

Ls: off wh-tan, fn xln, mostly DNS, NSFO

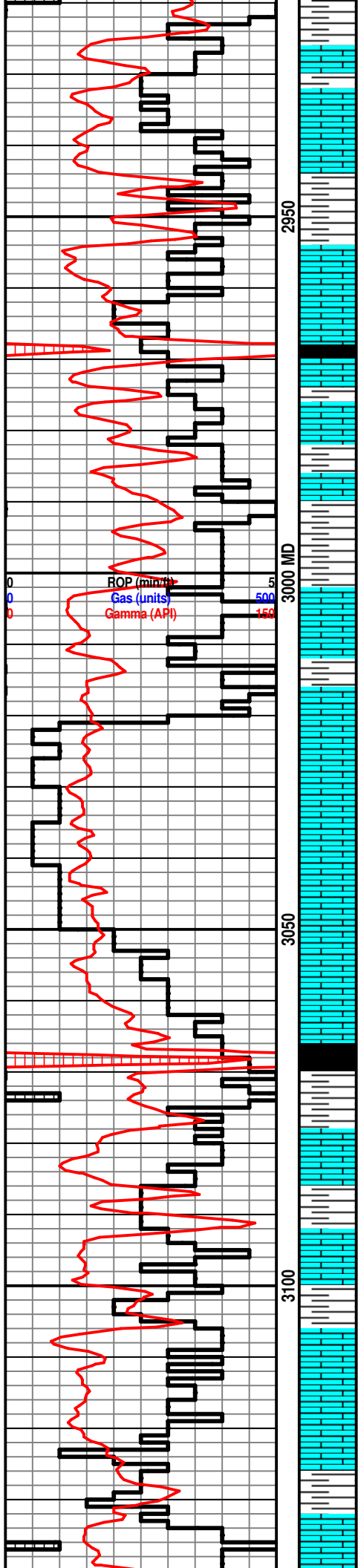
Sh: lt drk gry

Ls: off wh-tan, fn xln, poor-fair int xln porosity, scat dead oil stn, VSSFO, vry fnt odor

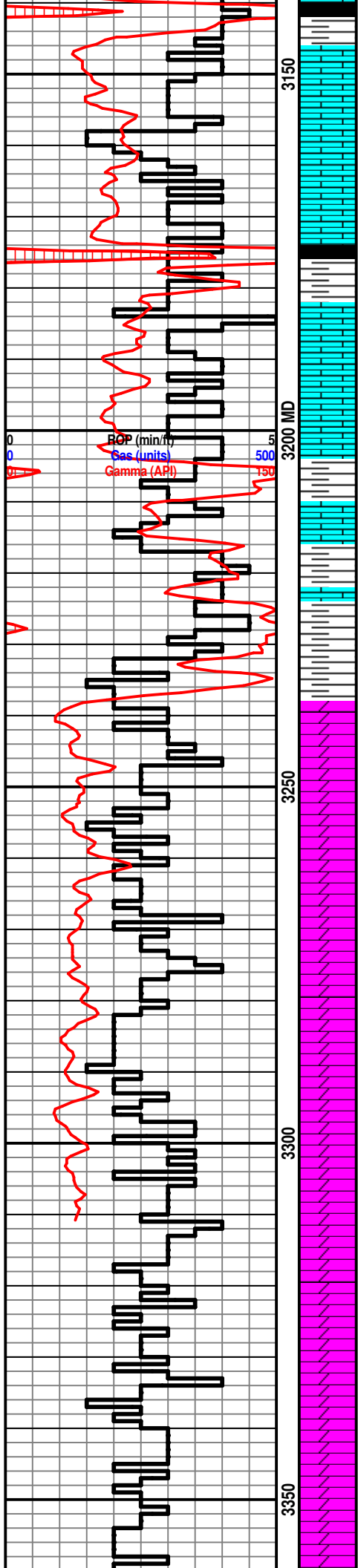
Ls: off wh-tan, fn xln, ool, poor-fair oom porosity, scat oil sat, sl odor, VSSFO, yel fluor

Sh: lt-drk gry

Ls: off wh-tan, fn xln, ool, fair oom porosity, scat-fair oil sat, sl-fair odor, VS-SSFO in few rxns, dull-fair yel fluor



Weight: 9.5  
Vis: 50



Sh: lt-drk gry

Ls: off wh-tan-lt gry, fn xln, scat foss, poor-scat fair int xln & int foss porosity, scat dead oil stn, VSSFO, vry fnt odor

Sh: drk gry-blk

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

Ls: off wh-tan-lt gry, fn xln, poor int xln porosity, NSFO, scat chert, scat foss

**B/KC 3211' (-1409)**

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

Sh: lt-drk gry

Sh: lt-drk gry, grn

**Arbuckle 3250' (-1448)**

Dolo: off wh-tan, fn-scat md xln, poor-fair int xln porosity, fair-good oil sat in few rxs, FSFO in cup, fair-good odor, fair-yel fluor

Dolo: off wh-tan, fn-md xln, fair int xln porosity, fair-good oil sat, SSFO in cup, fair-good odor, fair yel fluor

Dolo: off wh-tan, md-crs xln, fair int xln porosity, few rxs w/ good int xln porosity, fair oil sat, SSFO, fair-good odor, fair yel fluor

Dolo: off wh-tan-brn, md-crs xln, poor-fair int xln porosity, fair oil sat, VSSFO, fair odor, sl-fair yel fluor

Dolo: off wh-tan, md-crs xln, fair int xln porosity, mostly barren, scat chert-off wh

Dolo: off wh-tan-lt gry, md-crs xln, poor-fair int xln porosity, barren, scat chert-off wh

Dolo: ala

Dolo: tan-brn, md-crs xln, poor int xln porosity, barren, chert-off wh

Dolo: tan-brn, md-crs xln, poor int xln porosity, barren, scat chert-off wh

