

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. 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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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. 2804

Date	4-20-22	Sec.	5	Twp.	18	Range	10	County	Rice	State	Ks	On Location		Finish	6:30 PM
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Location **Clafin - 4 1/2 E, 5/4 into**


Lease	Habigec		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	Discovery #2					
Type Job	Surface					
Hole Size	12 1/4"	T.D.	394'		Charge To	Patterson Energy
Csg.	8 5/8"	Depth	394'		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.	20'	Shoe Joint	20'		Cement Amount Ordered	180 80/20 3%cc 2%Gel
Meas Line		Displace	23 3/4 BLS			

EQUIPMENT			Common
Pumptrk	18	No. Cementer Helper David	145
Bulktrk	21	No. Driver Doung	35
Bulktrk	p.u.	No. Driver Rich	3
			Calcium 7

JOB SERVICES & REMARKS		Hulls
Remarks:	Cement did Circulate	Salt
Rat Hole		Flowseal
Mouse Hole		Kol-Seal
Centralizers		Mud CLR 48
Baskets		CFL-117 or CD110 CAF 88
D/V or Port Collar		Sand
		Handling 190
		Mileage

FLOAT EQUIPMENT	
	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

Pumptrk Charge	Surface
Mileage	40 31

 X Signature	Tax
	Discount
	Total Charge

Thanks

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. 2773

Date	4-24-22	Sec.	5	Twp.	18	Range	10	County	Rice	State	KS	On Location		Finish	5:45 PM
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Lease	HABIGER	Well No.	1	Owner	Clg Flu 4 E
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Contractor	Discovery	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	3220				

Hole Size		T.D.		Charge To	Patterson Energy
Csg.	5 1/2	Depth		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.		Shoe Joint	38.54	Cement Amount Ordered	1754 10% salt 5% oil
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Meas Line		Displace	76.9	500 gal Flush	
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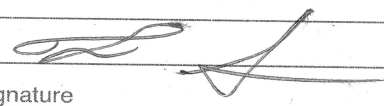
EQUIPMENT					
Pumptrk	16	No.	Cementor Helper	Bill	Poz. Mix
Bulktrk		No.	Driver	Wick	Gel.
Bulktrk	9	No.	Driver	Jordan	Calcium

JOB SERVICES & REMARKS			
Remarks:		Hulls	
Rat Hole		Salt	14
Mouse Hole	15	Flowseal	
Centralizers	30	Kol-Seal	750#
Baskets		Mud CLR 48	500 gal
D/V or Port Collar		CFL-117 or CD110 CAF 38	
		Sand	
		Handling	191
		Mileage	

JOB SERVICES & REMARKS			
pipe set e	3270		
shoe J	38.54		
Insert	3231.46		
pump	500 gal flush		
Cemt	1354		
pump plug w	76.9 bbls		
Land plug e	1500 *		
Float	did hold		

FLOAT EQUIPMENT			
Guide Shoe			
Centralizer	- 5		
Baskets	- 1		
AFU Inserts			
Float Shoe	1		
Latch Down	1		

Pumptrk Charge	Prod String
Mileage	40

 X Signature	Tax	
	Discount	
	Total Charge	



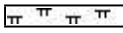

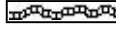




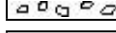
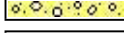
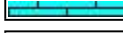
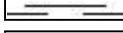
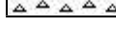

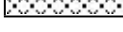
Thanks

Comments

The Habiger #1 well was drilled by Discovery Drilling Rig #2 (Tool Pusher: Travis Schmidt).

Drilling time was recorded, and rock samples were collected and evaluated from 2,700'-3,270'. There were several zones in the Lansing-Kansas City that exhibited good porosity development with oil stain (see below). Significant porosity development and good oil shows were encountered in the Arbuckle. Structurally, the LKC top was picked flat to the comparison well, located 74' west, Habiger #5 (5/1985). Structure thinned throughout the LKC, but thickened just below the B/KC, and the Arbuckle top was also picked flat to the comparison well. 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 Habiger #1 on April 24, 2022.

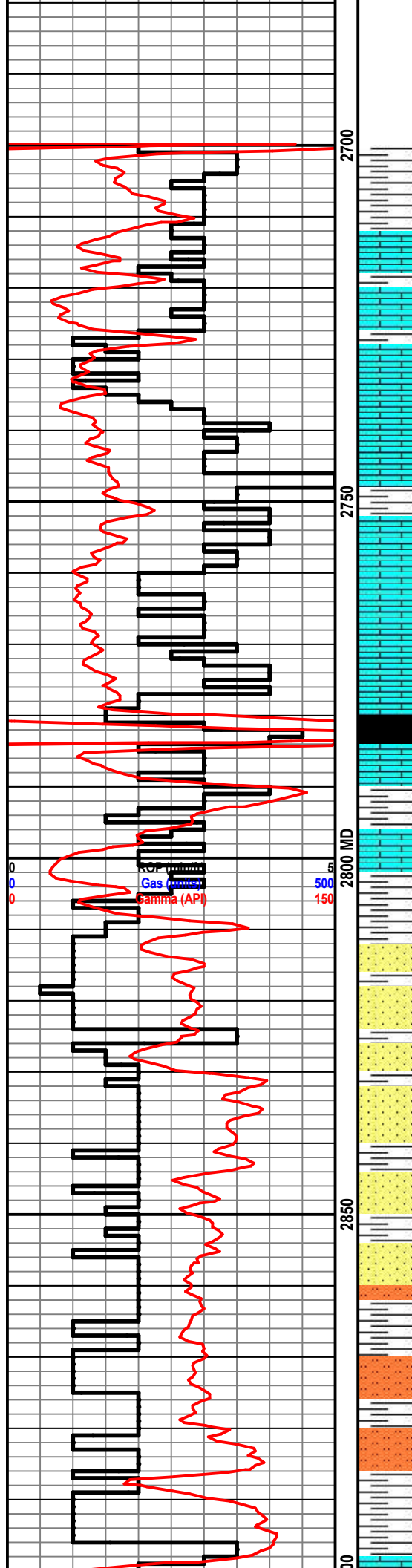
ROCK TYPES

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

OTHER SYMBOLS

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

Curve Track 1	MD	Lithology	Geological Descriptions	DST/Mud/Survey																								
ROP (min/ft) —— Gas (units) - - - - Gamma (API) ——																												
0 ROP (min/ft) 50 0 Gas (units) 500 0 Gamma (API) 150	2600		The open-hole logging was performed by Mr. Gus Pfanenstiel 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: <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>Formation</th> <th>E-Log</th> <th>Datum</th> </tr> </thead> <tbody> <tr><td>Heebner</td><td>2780</td><td>-1008</td></tr> <tr><td>Toronto</td><td>2799</td><td>-1027</td></tr> <tr><td>Brown Lime</td><td>2900</td><td>-1128</td></tr> <tr><td>Lansing</td><td>2915</td><td>-1143</td></tr> <tr><td>B/KC</td><td>3188</td><td>-1416</td></tr> <tr><td>Arbuckle</td><td>3201</td><td>-1429</td></tr> <tr><td>LTD</td><td>3274</td><td>-1502</td></tr> </tbody> </table>	Formation	E-Log	Datum	Heebner	2780	-1008	Toronto	2799	-1027	Brown Lime	2900	-1128	Lansing	2915	-1143	B/KC	3188	-1416	Arbuckle	3201	-1429	LTD	3274	-1502	Mud Engineer: Brandon Mendez
Formation	E-Log	Datum																										
Heebner	2780	-1008																										
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LTD	3274	-1502																										
4/19/2022 MIRT																												
4/20/2022 Spud																												
4/21/2022 867', drilling																												
4/22/2022 2,479', drilling																												
4/23/2022 2,948', drilling																												
4/24/2022 3,270', logging																												
4/25/2022, 3,270', complete	2650																											



Sh: lt-drk gry

Ls: tan-gry, fn-sub xln, scat chert-off wh

Ls: ala

Ls: tan-gry, fn-sub xln, DNS, scat chert-off wh, scat sh: drk gry

Heebner 2777' (-1005)

Sh: blk, carb

Toronto 2796' (-1024)

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

Sh: lt gry

Ss: lt gry, vry fn gm, md, fair int gm porosity, friable, scat sh: lt gry

Ss: ala

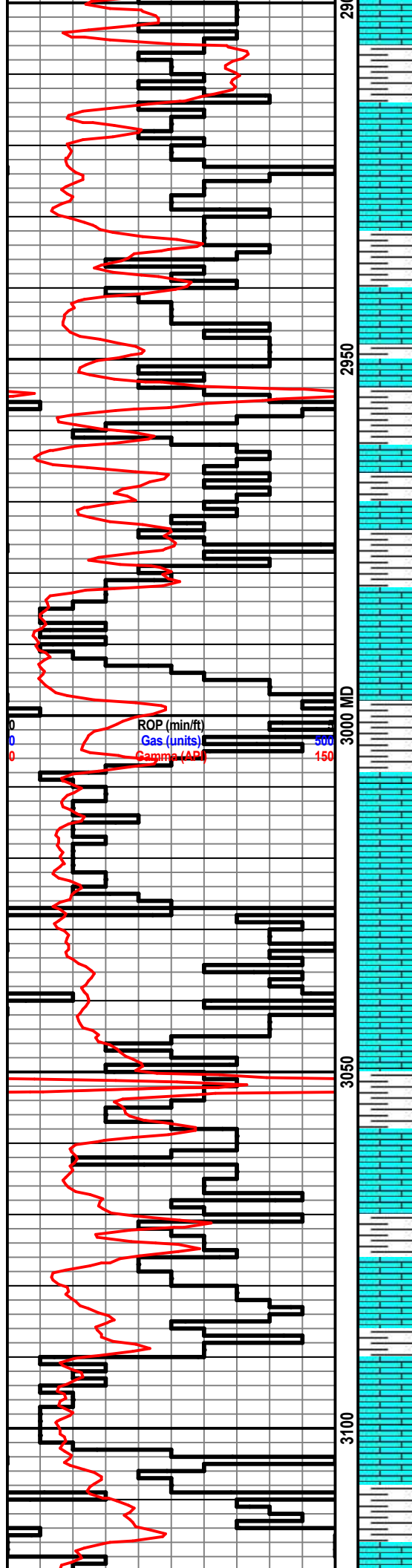
Ss: lt gry, fn gm, md, scat fair int gm porosity, friable, scat sh: lt-drk gry

Sltst: ala, scat sh: lt gry

Sltst: ala

Sh: lt-drk gry

Brown Lime 2896' (-1124)



Ls: tan-bm, fn xln, poor int xln porosity, scat chert

Lansing 2912 (-1139)

Ls: tan-gry, fn-sub xln, poor vis. porosity, scat chalk, NSFO, scat chert

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

Sh: lt gry

Ls: off wh-tan, fn xln, ool, fair oom porosity, sl-fair oil stn, VSSFO, fnt odor, scat foss

Sh: lt-drk gry

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

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

Sh: lt-drk gry

Ls: off wh-tan, fn xln, ool, good oom porosity, scat fair drk bm oil stn, VSSFO, sl odor

Ls: off wh-tan, fn xln, ool, fair-good oom porosity, barren, scat chert-off wh

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

Sh: lt-drk gry

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

Sh: lt-drk gry

Ls: off wh-tan-lt gry, fn xln, scat foss, no visible porosity, NSFO

Sh: lt gry

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

Sh: lt-drk gry

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

Wt: 9.1
Vis: 53

ROP (min/ft)
Gas (units)
Gamma (API)

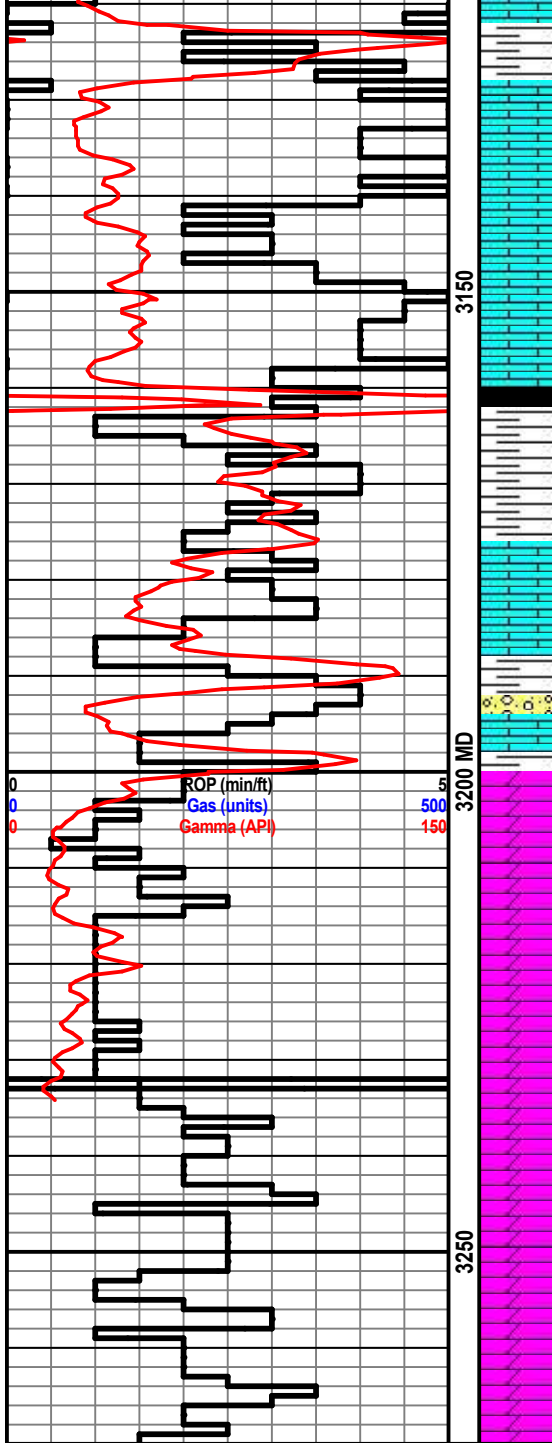
2910

2950

3000 MD

3050

3100



Sh: lt-drk gry

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

Ls: ala

Sh: drk gry-blk

Sh: lt gry

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

B/KC 3185' (-1413)

Sh: gry-gm

Arbuckle 3194' (-1422)

Dolo: off wh-tan, fn-md sucrosic xln, good sucrosic xln porosity, fair lt bm oil stn, S-FSFO, fair odor

Dolo: off wh-tan-bm, fn-md sucrosic xln, good sucrosic xln porosity, vry lt bm oil stn, VSSF0, sl odor

Dolo: off wh-tan-bm, md xln, good int xln porosity, scat lt bm oil stn, NSFO, scat chert

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

Dolo: ala

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

Dolo: ala

Wt: 9.2

Vis: 8.8