

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) (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

785-483-1071  
785-324-1041

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

No. 2057

Date	9/24/2020	Sec.	23	Twp.	17	Range	9	County	Ellsworth	State	Kansas	On Location		Finish	3:15 am
Location													C6510 12E to 11Rd 3N Einto		

Lease	I Reed		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	Murkin Rig		20		Charge To	Patterson Energy									
Type Job	Surface				Street										
Hole Size	12 1/4		T.D.	312		City	State								
Csg.	8 5/8		Depth	310'		The above was done to satisfaction and supervision of owner agent or contractor.									
Tbg. Size			Depth			Cement Left in Csg. 15' Shoe Joint 15' Cement Amount Ordered 190 80 3% IC 2% gel.									
Tool			Depth			Meas Line Displace 18.75 bbl									

EQUIPMENT			Common
Pumptrk	17	No. Cementer Helper	150
Bulktrk	15	No. Driver	40
Bulktrk		No. Driver	3
Bulktrk		No. Driver	6

**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

Run 8% and established circulation mixed 190 sfs and displaced

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

Pumptrk Charge	Surface
Mileage	44
Cement Did Circulate	
Signature	Thanks
Tax	
Discount	
Total Charge	

REMARKS  
1: OFF  
2: SLEW  
3: DRIVE  
4: ON/OFF  
5: OFF/OFF

REMARKS  
I determine that the operation of vehicle is not mechanical. Indicate  mechanical.

Quality Oilwell Cementing

# 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. 2104

Date	9-28-20	Sec.	23	Twp.	17	Range	9	County	Edwards	State	KS	On Location		Finish	5:30 AM
Location													Catin E 11th Rd 30 E into		

Lease	Reed	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	Munshu #20				
Type Job	Production String				
Hole Size	7 7/8	T.D.	3280	Charge To	Patterson Energy
Csg.	5 1/2 1#	Depth	3280	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.	23	Shoe Joint	23	Cement Amount Ordered	20000m 10/Salt + 5/4 Gibearte
Meas Line		Displace	75 1/2 BCL	500 gal <del>200 gal</del> Mud Clear	200 LKCL

**EQUIPMENT**

Pumptrk	5	No.	Cement Helper	1
Bulktrk		No.	Driver	1
Bulktrk	15	No.	Driver	1

**JOB SERVICES & REMARKS**

Remarks:

Rat Hole 305K

Mouse Hole 205K

Centralizers

Baskets

D/V or Port Collar

5 1/2 5000 3280 Est. Circulation

Pump 500 gal mud clear + 100 LKCL

Plug Rathole 305K + mouse hole 205K

Cement 5 1/2 with 1505K

Clear lines & Displace Plug 1 1/2 100 LKCL

KCL

Plus lander @ 1500#

L.F. port @ 250#

**FLOAT EQUIPMENT**

Common
Poz. Mix
Gel.
Calcium
Hulls
Salt
Flowseal
Kol-Seal
Mud CLR 48
CFL-117 or CD110 CAF 38
Sand
Handling
Mileage
Guide Shoe
Centralizer 6
Baskets
AFU Inserts
Float Shoe
Latch Down

Pumptrk Charge
Mileage
Tax
Discount
Total Charge

X Signature *Jim W...*



### Comments

The Reed #1 well was drilled by Murfin Drilling Company Inc. Rig #20.

Reed #1 was discovered via 3D seismic survey. Drilling time was recorded, and rock samples were collected and evaluated from 2,400' - 3280'. Oil shows were encountered in the Arbuckle. Structurally, the Heebner top was picked 8' high to the comparison well, located 500' south (Dees #2 - 1935). Structure remained consistent throughout the LKC and below, which resulted in an Arbuckle top picked 9' high 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 Reed #1 on 9/28/2020.

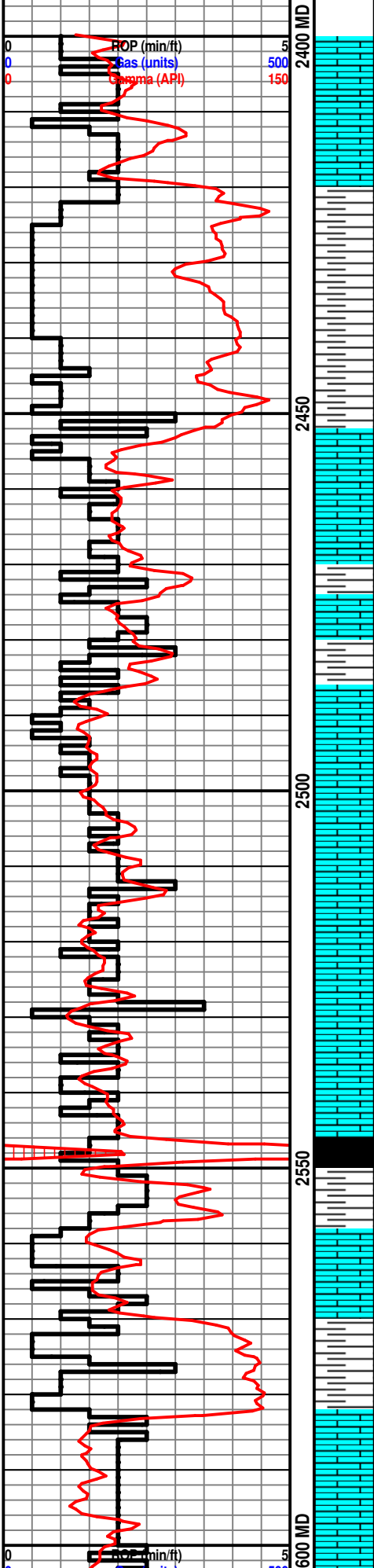
### ROCK TYPES

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

### OTHER SYMBOLS

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

Curve Track 1	MD	Lithology	Geological Descriptions	DST/Mud/Survey																				
ROP (min/ft) <span style="color: black;">—</span> Gas (units) <span style="color: blue;">- - - -</span> Gamma (API) <span style="color: red;">—</span>																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">0</td> <td style="width: 10%;"></td> <td style="width: 10%;">ROP (min/ft)</td> <td style="width: 10%;"></td> <td style="width: 10%; text-align: right;">5</td> </tr> <tr> <td style="text-align: center;">0</td> <td></td> <td style="color: blue;">Gas (units)</td> <td></td> <td style="text-align: right;">500</td> </tr> <tr> <td style="text-align: center;">0</td> <td></td> <td style="color: red;">Gamma (API)</td> <td></td> <td style="text-align: right;">150</td> </tr> </table>	0		ROP (min/ft)		5	0		Gas (units)		500	0		Gamma (API)		150	23		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:	Mud Engineer: Brandon Mendez					
0		ROP (min/ft)		5																				
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9/23/2020 MIRT																								
9/24/2020 WOC, 312'																								
9/25/2020 Drilling, 1,745'																								
9/26/2020 Drilling, 2,730'																								
9/27/2020 Drilling, 3,280'																								
9/28/2020 Plug Down, 3,280'																								
	2350		<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>Topeka</td> <td style="text-align: center;">2453</td> <td style="text-align: center;">-681</td> </tr> <tr> <td>Heebner</td> <td style="text-align: center;">2712</td> <td style="text-align: center;">-940</td> </tr> <tr> <td>Lansing</td> <td style="text-align: center;">2849</td> <td style="text-align: center;">-1077</td> </tr> <tr> <td>B/KC</td> <td style="text-align: center;">3142</td> <td style="text-align: center;">-1370</td> </tr> <tr> <td>Arbuckle</td> <td style="text-align: center;">3169</td> <td style="text-align: center;">-1397</td> </tr> <tr> <td>LTD</td> <td style="text-align: center;">3283</td> <td style="text-align: center;">-1511</td> </tr> </tbody> </table>	Formation	E-Log	Datum	Topeka	2453	-681	Heebner	2712	-940	Lansing	2849	-1077	B/KC	3142	-1370	Arbuckle	3169	-1397	LTD	3283	-1511
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Ls: tan-gry-buff, fn-sub xln, mostly DNS

Sh: lt gry

Sh: ala

**Topeka 2451' (-679)**

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

Ls: ala

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

Ls: off wh-tan-gry, fn xln, poor-fair int xln porosity, mostly barren

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

Ls: ala

Sh: drk gry-blk

Sh: lt-drk gry

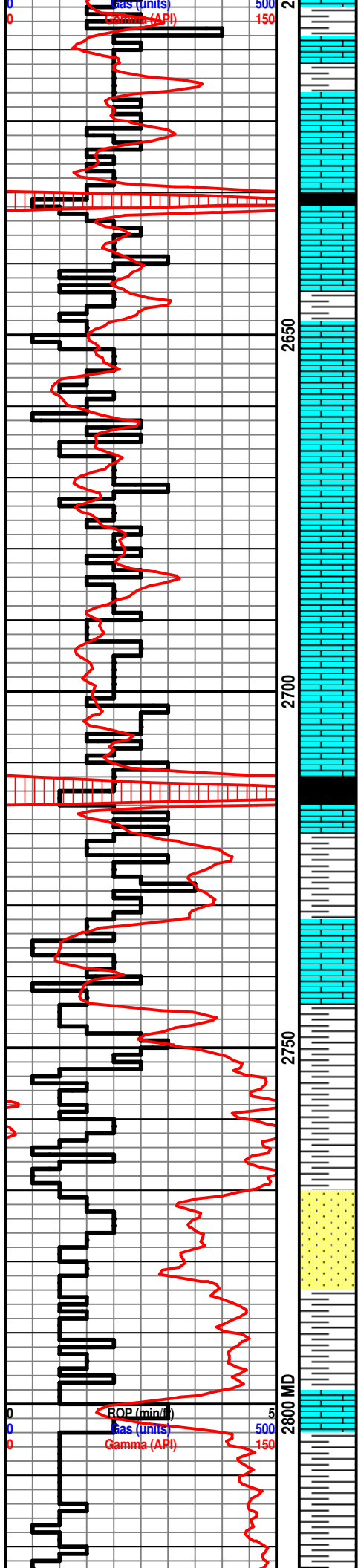
Ls: tan-gry, fn-sub xln, mostly DNS

Sh: lt-drk gry

Ls: off wh-tan-gry, fn xln, scat int xln porosity, mostly barren, scat chalk

Ls: tan-buff, fn-sub xln, scat-poor int xln porosity, scat chalk





Ls: ala

Sh: drk gry-blk

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

Ls: tan-gry, fn xln, mostly DNS

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

Ls: off wh-tan-lt gry, fn xln, scat fair int xln porosity, barren, scat foss

**Heebner 2712' (-940)**

Sh: blk, carb, fissile

Sh: lt-drk gry

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

Sh: lt gry-brn

Sh: ala

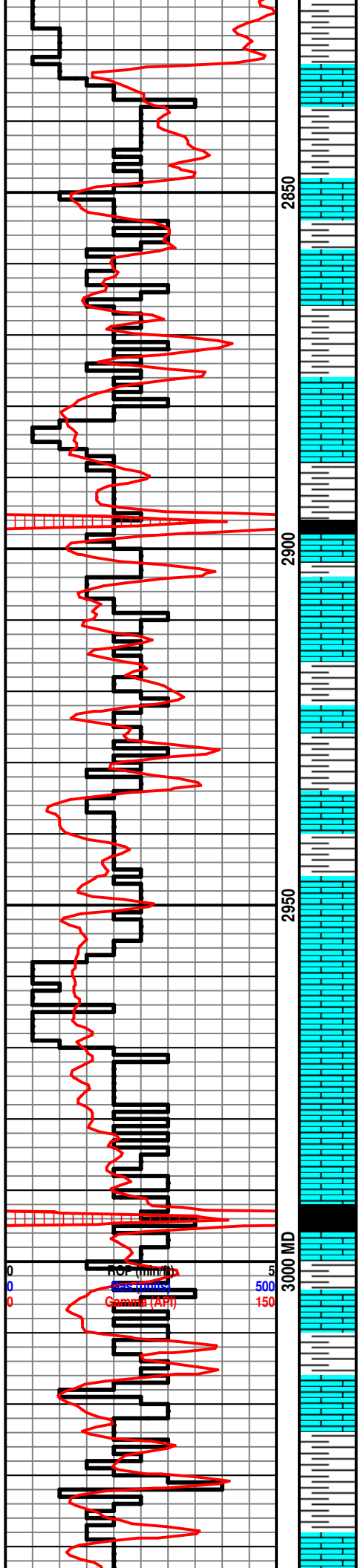
Sh: lt gry

Sh: ala

Sh: lt-drk gry

Sh: lt gry

Weight: 8.9  
Vis: 54



Sh: ala

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

**Lansing 2852' (-1080)**

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

Sh: lt-drk gry

Ls: tan-gry, fn xln, mostly DNS

Ls: off wh-tan, fn xln, ool, fair-good oom porosity, scat dead oil stn in porosity, NSFO

Sh: lt-drk gry

Ls: off wh-tan, fn xln, poor-fair int xln porosity, scat ool, vry sl oil stn in porosity, vry fnt odor

Sh: lt gry

Ls: off wh-tan, fn xln, fair-good int foss porosity, scat oil stn, sl odor, scat chalk

Sh: drk gry

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

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

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

Sh: drk gry-blk

Ls: off wh-tan-lt gry, fn xln, scat-poor int xln porosity, vry lt dead oil stn, scat chert-off wh

Sh: lt-drk gry

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

Sh: lt-drk gry

Ls: off wh-tan, fn xln, ool, fair oom porosity, scat fair oil stn in porosity, fnt odor, scat chalk

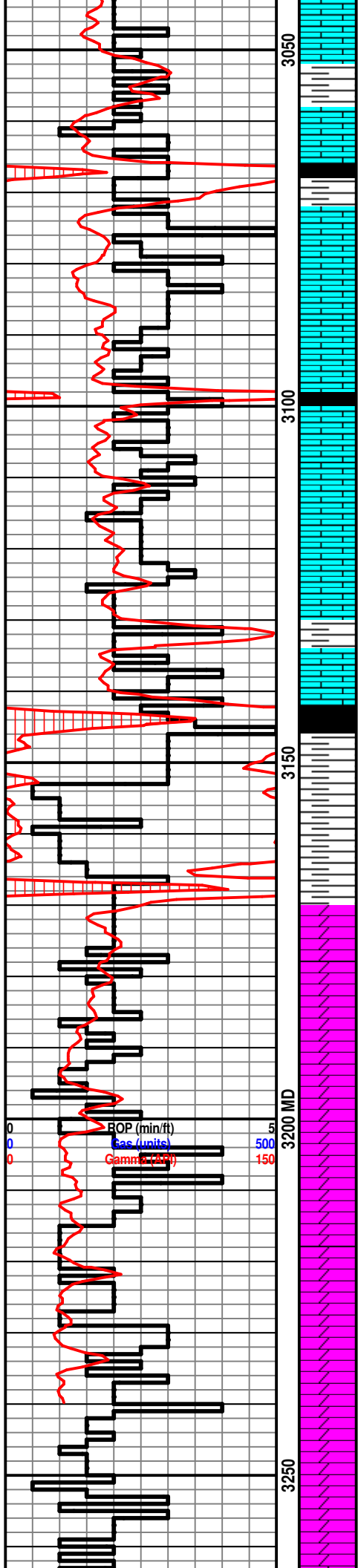
GR (mho-ft) 50  
 Gas (ppmv) 500  
 Gamma (API) 150

3000 MD

2850

2900

2950



Sh: lt-drk gry

Sh: lt-drk gry

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

Sh: drk gry-blk

Ls: off wh-tan-gry, fn xln, scat int xln porosity, barren

Ls: ala

**B/KC 3135' (-1363)**

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

Sh: lt gry

Sh: lt-gry-brn, scat ls: drk gry, mostly DNS, barren

**Arbuckle 3174' (-1402)**

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

Dolo: off wh-tan, vry fn-fn xln, fair, few rxn good int xln porosity, good oil sat, SSFO, good odor, fair yel fluor

Dolo: off wh-tan-brn, fn xln, fair-good sucrosic xln porosity, good oil sat, F-GSFO, good odor, good yel fluor

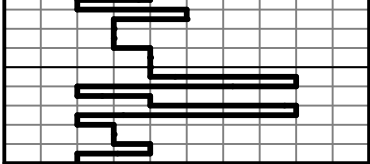
Dolo: off wh-tan-brn, fn xln, fair int xln porosity, fair-good oil sat, FSFO, good odor, fair-good yel fluor

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

Dolo: off wh-tan-brn, fn-md xln, poor-fair int xln porosity, vry lt oil stn, SSFO, fnt odor, scat chert-off wh

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

Dolo: ala



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

