KOLAR Document ID: 1475175

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 #:

5/17/2019 Spud Date or Recompletion Date
5/21/2019 Date Reached TD
7/1/2019 Completion Date or Recompletion Date

API No.: 15-163-24392-00-00
Spot Description:
__ - NW - NW - NE Sec. 30 Twp. 9 S. R. 19 ☐ East ☑ West
4860 Feet from ☐ North / ☑ South Line of Section
2310 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: Rooks
Lease Name: STAHL Well #: 2-30
Field Name:
Producing Formation: NA
Elevation: Ground: 2146 Kelly Bushing: 2151
Total Vertical Depth: 3700 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 225 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 1570 Feet
If Alternate II completion, cement circulated from: 1570
feet depth to: 0 w/ 255 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 3500 ppm Fluid volume: 160 bbls
Dewatering method used: Evaporated
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:** Karen Ritter **Date:** 10/14/2019

Operator Name: Patterson Energy LLC Lease Name: STAHL Well #: 2-30

Sec. 30 Twp. 9 S. R. 19 ☐ East ☑ West County: Rooks

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:

Compensated Density Neutron
Dual Induction

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

Name	Top	Datum
Arbuckle	3601	-1452

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	225	Common	150	3% cc 2% gel
Production	7.875	5.5	17	3699	Common	150	10% Salt 5% Gel

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)*	3697	3750

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)*

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	STAHL 2-30
Doc ID	1475175

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	225	Common	150	3% cc 2% gel
Production	7.875	5.5	17	3699	Common	150	10% Salt 5% Gel

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 1317

Date	Sec.	Twp.	Range	County	State	On Location	Finish
5-22-19	30	9	19	Rooks	Ks		8:00 AM

Location Zurich 3W to Rd 7 1N 1/2E

Lease STAHL Well No. 2-30

Contractor MURFIN DRLG

Type Job Top Stage

Hole Size 7 7/8 T.D.

Csg. Depth

Tbg. Size Depth

Tool DV Tool Depth 1570'

Cement Left in Csg. Shoe Joint

Meas Line Displace 36 1/2 bbl

EQUIPMENT

Pumptrk #5 No. Cementer Tony P
Helper

Bulktrk 9 No. Driver Craig
Driver

Bulktrk 15 No. Driver Doug
Driver Tony L

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30 SK

Mouse Hole 15SK

Centralizers

Baskets

D/V or Port Collar #52 1570'

Open tod w/ 500 Brak Circ. Plug Rat + Mouse Hole Hook to 5 1/2 Csg. mix 300SK Shut Down Drop plug Displaced to 36 1/2 bls. Release + Held

Closed tool w/ 1500

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.

Charge To Patterson Energy

Street

City State

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

Cement Amount Ordered 300sk 80/20 QMDC 1/4 Flo

Common 300 80/20	
Poz. Mix	
Gel.	
Calcium	
Hulls	
Salt	
Flowseal 75#	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling 300	
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge Prod String Top Stage

Mileage 38

Tax

Discount

Total Charge

X Signature Jim Weems

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 1316
Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
5-22-19	30	9	19	Rooks	KS		6:30 AM

Location Zurich 3W to Rd 7 1N ½E

Lease STAHL Well No. 2-30

Contractor MURFIN DRLG

Type Job Long String DV Bottom

Hole Size Bottom Stage T.D.

Csg. 17# New 5½ Depth 3701.62

Tbg. Size Depth

Tool DV Tool Depth 1570'

Cement Left in Csg. Shoe Joint 20.06'

Meas Line Displace H20/mud 85½ bbl

EQUIPMENT

Pumptrk #5	No.	Cementer	Tony P
		Helper	
Bulktrk 9	No.	Driver	Craig
		Driver	
Bulktrk 15	No.	Driver	Doug
		Driver	Tony L

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers 1, 3, 5, 8, 10

Baskets

D/V or Port Collar 11, 52, 71

Pipe on Bottom break circulation pump 500 gal mud clear + 10 bbl KCL Pump 150 sk Cement Shut down WASH pump + lines, Displace w/ H20 + mud - Release + Held.

Lift pressure @ 800
Land Plug @ 1700
Open Tool w/ @ 500
Break Circulation

X Signature Jim Wentling

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.

Owner

Charge To Patterson Energy

Street

City State

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

Cement Amount Ordered 150 Com 10% salt 5% gil ~~300 gal H20 Gyp Flo~~ 500 gal mud

Common 10 BBL KCL 150

Poz. Mix KCL 1 Gal

Gel.

Calcium

Hulls

Salt 13

Flowseal

Kol-Seal 750#

Mud CLR 48 500 gal

CFL-117 or CD110 CAF 38

Sand

Handling 170

Mileage

FLOAT EQUIPMENT

Guide Shoe

Centralizer 5

Baskets 3

AFU Inserts

Float Shoe 1

~~Latch Down~~ DV Tool 1 LD

Pumptrk Charge Prod String Bottom Stage

Mileage 38

Tax

Discount

Total Charge

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 231

Date	Sec.	Twp.	Range	County	State	On Location	Finish
5-15-17	30	9	19	Rooks	KS		10:00pm

Location Zurich 2W 8N 1W ½W Sinto

Lease Stahl Well No. 1-30

Contractor Discovery #4

Type Job Surface

Hole Size 12¼ T.D. 221

Csg. 8⅝ Depth 221

Tbg. Size Depth

Tool Depth

Cement Left in Csg. 10' Shoe Joint

Meas Line Displace 13⅓ BL

EQUIPMENT

Pumptrk 5 No. Cementer Craig
Helper Brett

Bulktrk No. Driver
Driver

Bulktrk 9 No. Driver
Driver Jordan

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

8⅝ on Bottom. Brk Circulation. Mix 150sk. Displace. Cement Circulated.

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.

Charge To American O.I.

Street

City State

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

Cement Amount Ordered 150 60/40 3%cc 2%gel

Common 120

Poz. Mix 30

Gel. 3

Calcium 6

Hulls

Salt

Flowseal

Kol-Seal

Mud CLR 48

CFL-117 or CD110 CAF 38

Sand

Handling 159

Mileage

FLOAT EQUIPMENT

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge Surface

Mileage 37

Tax

Discount

Total Charge

X Signature John Gerber

Quality Oilwell Cementing

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 168
Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
5-21-17	30	9	19	Rooks	Ks		6:45 AM

Location Zurich - 2W, 1N, 1/2 W, S/Side

Lease Stahl Well No. 1-30

Contractor Discovery #4

Type Job Bottom Stage

Hole Size 7 7/8" T.D. 3680

Csg. 15½# 5½" new Depth 3680'

Tbg. Size Depth

Tool DV Depth 1562'

Cement Left in Csg. 19' Shoe Joint 19'

Meas Line Displace 87 BBLS

50 water 37 mud

EQUIPMENT

Pumptrk 16	No.	Cementer	Rick
		Helper	
Bulktrk 9	No.	Driver	Tony
		Driver	
Bulktrk 19	No.	Driver	
		Driver	David

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers 1,3,5,7,9,51

Baskets 52

D/V or Port Collar 52 1562'

pipe on bottom, break Circulation pump 500 gal mud Clear 48, pump 10 BBLS water spacer mix 175 sk Cement shut down wash pump & lines Displaced plug w/ 87 BBLS of Fluid. Released held Lift pressure 700# Land plug to 1500#

Drop Dart open tool 1000#

Pumptrk Charge Prod String

Mileage 37

Signature Aron Weaver

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.

Charge To American Oil

Street

City State

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

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

Common	175	
Poz. Mix		
Gel.		
Calcium		
Hulls		
Salt	15	
Flowseal		
Kol-Seal	875#	
Mud CLR 48	500 gal	
CFL-117 or CD110 CAF 38		
Sand		
Handling	199	
Mileage		

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	5 turbos 1 Reg
Baskets	1
AFU Inserts	
Float Shoe	1
Latch Down	DV Tool

Bottom Stage

Tax

Discount

Total Charge

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 169
Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
5-21-17	30	9	19	Rooks	Ks		9:00 AM

Location Zurich - 2W, 1N, ½W, S/into

Lease Stahl Well No. 1-30

Contractor Discovery 4

Type Job Top Stage

Hole Size 7 7/8" T.D. 3680'

Csg. 15½# 5½" New Depth 3680'

Tbg. Size Depth

Tool DV Depth 1562'

Cement Left in Csg. Shoe Joint

Meas Line Displace 37 BBL

EQUIPMENT

Pumptrk 16 No. Cementer Helper Rick

Bulktrk 19 No. Driver Driver David

Bulktrk 9 No. Driver Driver Tony

JOB SERVICES & REMARKS

Remarks:

Rat Hole 30 SX

Mouse Hole 15 SX

Centralizers

Baskets

D/V or Port Collar 1562' # 52

Pipe on bottom break Circulation Pump 10 BBL water spacer Plug Rathole w/ 30 SX mouse hole w/ 15 SX Cement 5½" w/ 305X Cement shut down wash pump + lines Released Plug + Displaced w/ 37 BBL H2O Lift pressure 500 # Closed tool 1500 #

Released + held Cement did Circulate

X Signature Ann Wemmley

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.

Charge To American oil

Street

City State

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

Cement Amount Ordered 350 80/20 QMDC ¼# Flo

Common 350 80/20 QMDC

Poz. Mix

Gel.

Calcium

Hulls

Salt

Flowseal 87#

Kol-Seal

Mud CLR 48

CFL-117 or CD110 CAF 38

Sand

Handling 350

Mileage

FLOAT EQUIPMENT

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Pumptrk Charge Prod String Top Stage

Mileage 37

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:	Stahl #2-30		
Location:	Rooks County		
License Number:	API #15-163-24392-00-00	**Region:**	Kansas
Spud Date:	5/17/2019	**Drilling Completed:**	5/21/2019
Surface Coordinates:	Section 30, Township 9 South, Range 19 West 330' FNL & 2,310' FEL		
Bottom Hole Coordinates:	Vertical well w/ minimal deviation, same as above		
Ground Elevation (ft):	2,144	**K.B. Elevation (ft):**	2,149
Logged Interval (ft):	3,000 To: RTD	**Total Depth (ft):**	3,700
Formation:	LKC-Arbuckle		
Type of Drilling Fluid:	Chemical (K.D.T)		

OPERATOR

Company: Patterson Energy, LLC
Address: P.O. Box 400
Hays, KS 67601

GEOLOGIST

Name: Austin Klaus
Company: John O. Farmer, Inc.
Address: 370 W. Wichita Ave.
Russell, KS 67665

Comments

The Stahl #2-30 well was drilled by Murfin Drilling Rig #8.

The location for the Stahl #2-30 was discovered via 3D seismic survey. Rock samples were gathered and evaluated from 3,000'-3,700'. Oil shows were encountered in the LKC C,F,J,K and Arbuckle. Structurally, the Lansing top was picked 6' low to the comparison well, 660' to the east (Stahl #1 -30 - 2017). Structure remained relatively consistent through the LKC, which resulted in an Arbuckle top 5' low to the comparison well. Fair oil shows were observed throughout the top 25-30' of the Arbuckle. All Lansing-Kansas City oil shows should also be evaluated prior to P&A. After complete evaluation of all oil shows and electric logs, it was decided that 5 1/2" production casing be set to further test the Stahl #2-30 on 5/22/19.

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
- Inter
- Moldic
- 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)

Depth | Lithology | Oil Shows | Geological Descriptions | DST/Mud/Survey

0 ROP (min/ft) 5
0 Gas (units) 500
0 Gamma (API) 150

5/17/2019 MIRT

5/18/2019 260', Drilling

5/19/2019 2,050', Drilling

5/20/2019 3,125', Drilling

5/21/2019 3,605', Drilling

5/22/2019 3,700', Cementing 5 1/2"

29

3000

0 ROP (min/ft) 5
0 Gas (units) 500
0 Gamma (API) 150

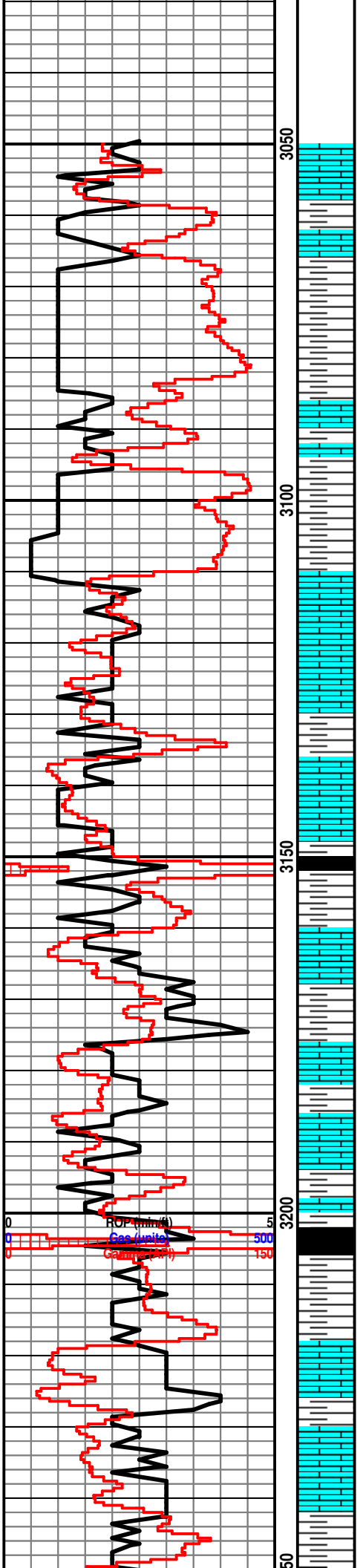
The open-hole logging was performed by Mr. Casey Patterson with Gemini Wireline, LLC (Hays, KS). Logs included: Compensated Density Neutron, Dual Induction, & Microresistivity.

Formation tops and datums from the open-hole logs include the following:

Formation	E-Log	Datum
Anhydrite	1562	587
Topeka	3110	-961
Heebner	3315	-1166
Toronto	3339	-1190
Lansing	3355	-1206
B/KC	3574	-1425
Arbuckle	3601	-1452
LTD	3693	-1544

Mud Engineer:
Chris Keas
Ken Rupp

Tester:
No Drill Stem Tests



Sh: lt-drk gry

Sh: lt gry, scat slt

Topeka 3110' (-961)

Ls: off wh-tan, fn xln, scat int xln & vuggy porosity, NSFO, no odor

Wt: 8.8
Vis: 70

Ls: ala

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

Sh: lt-drk gry

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

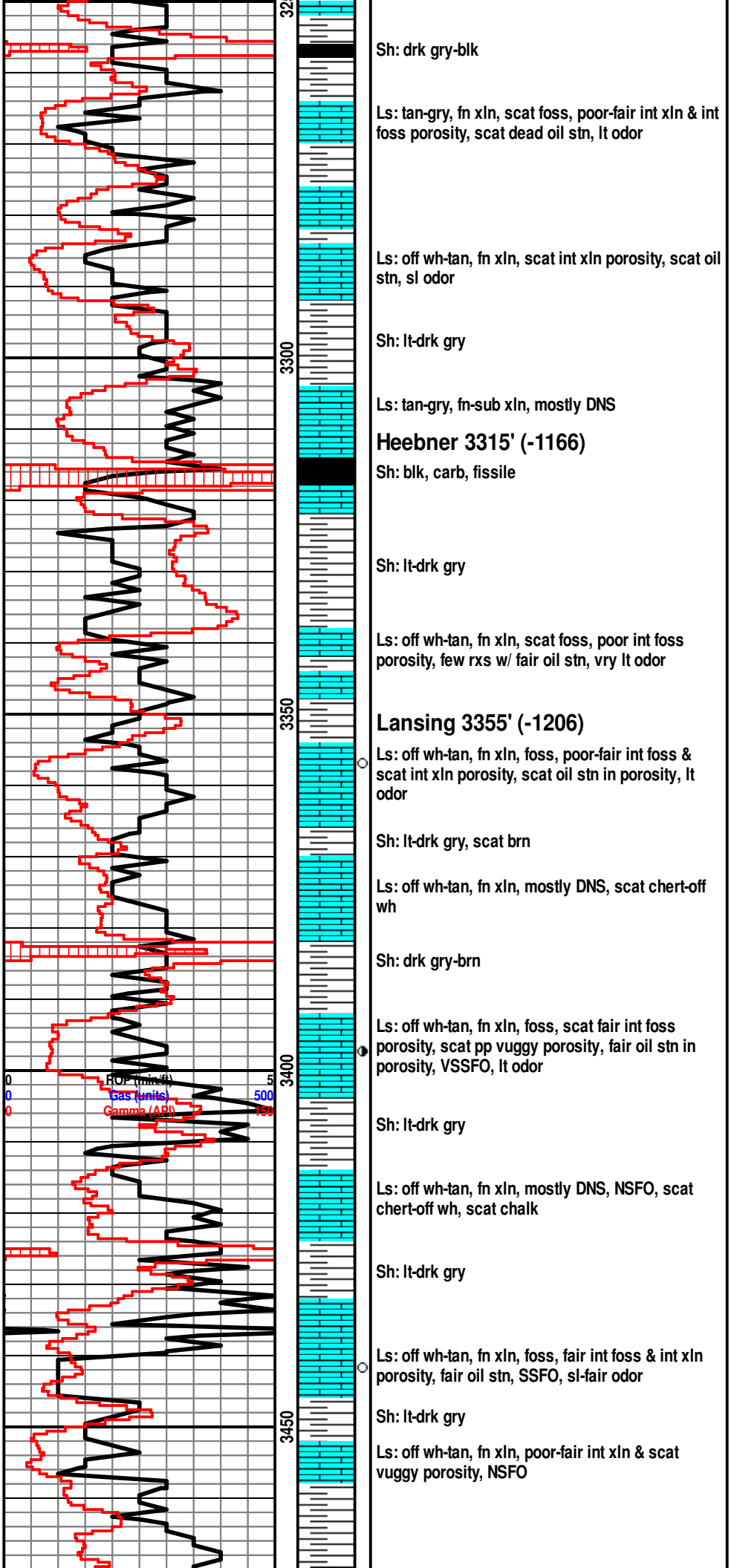
Ls: tan-lt gry, fn xln, scat foss, scat int xln porosity, NSFO

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

Sh: drk gry-blk

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

Ls: tan-gry, fn-vry fn xln, scat int xln porosity, scat dead oil stn



Sh: drk gry-blk

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

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

Sh: lt-drk gry

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

Heebner 3315' (-1166)

Sh: blk, carb, fissile

Sh: lt-drk gry

Ls: off wh-tan, fn xln, scat foss, poor int foss porosity, few rxs w/ fair oil stn, vry lt odor

Lansing 3355' (-1206)

Ls: off wh-tan, fn xln, foss, poor-fair int foss & scat int xln porosity, scat oil stn in porosity, lt odor

Sh: lt-drk gry, scat brn

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

Sh: drk gry-brn

Ls: off wh-tan, fn xln, foss, scat fair int foss porosity, scat pp vuggy porosity, fair oil stn in porosity, VSSFO, lt odor

Sh: lt-drk gry

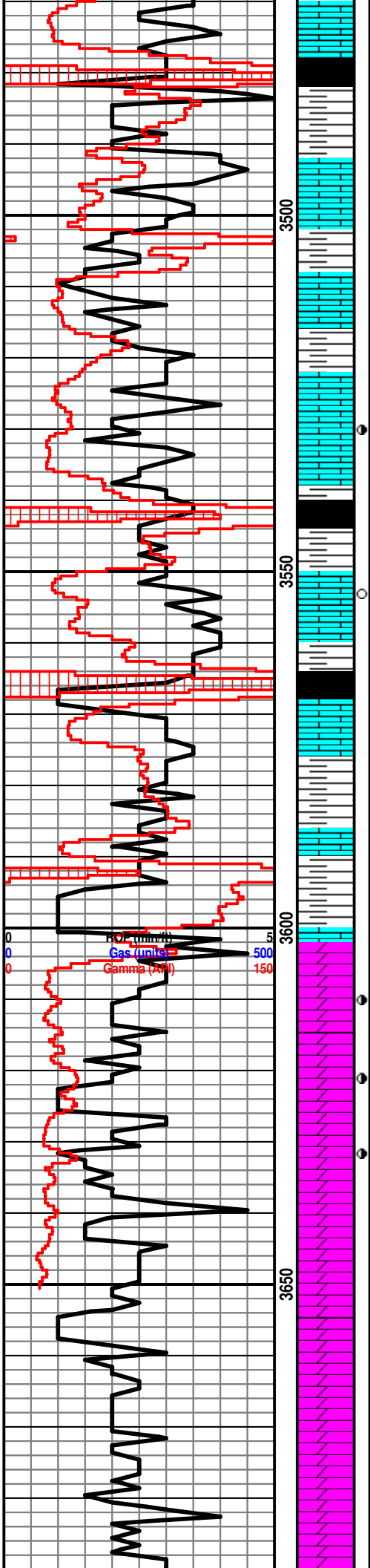
Ls: off wh-tan, fn xln, mostly DNS, NSFO, scat chert-off wh, scat chalk

Sh: lt-drk gry

Ls: off wh-tan, fn xln, foss, fair int foss & int xln porosity, fair oil stn, SSFO, sl-fair odor

Sh: lt-drk gry

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



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

Sh: drk gry-blk

Sh: lt-drk gry, brn

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

Sh: lt-drk gry

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

Sh: lt gry

Ls: off wh-tan, fn xln, poor-fair int xln porosity, scat fair oil stn in porosity, SSFO, fair odor

Sh: lt-drk gry, blk

Ls: off wh-tan, fn xln, foss, poor int xln & scat int foss porosity, scat fair oil stn in porosity, VSSFO, sl-fair odor

Sh: drk gry-blk

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

B/KC 3575' (-1426)

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

Sh: lt-drk gry

Arbuckle 3601' (-1452)

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

Wt: 8.8
Vis: 50

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

Dolo: off wh-tan-brn, fn-md xln, fair int xln, few rxs w/ good sucrosic xln porosity, fair-good oil sat, SSFO, fair-good odor

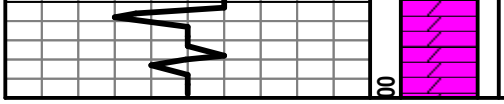
Dolo: off wh-tan, fn-md xln, fair-good int xln porosity, fair-good oil sat, FSFO, sl-fair odor

Dolo: off wh-tan, fn-md xln, poor-fair int xln porosity, sl res oil stn, VSSFO, sl-fair odor, scat chert-off wh

Dolo: off wh-tan, fn-md xln, poor int xln porosity, poor resid oil stn, sl odor

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

Dolo: ala



Beforda