



# AUSTIN B. KLAUS



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

**Well Name:** Leiker Unit #1  
**Location:** Thomas County  
**License Number:** API #15-193-20964-00-00  
**Spud Date:** 7/15/16  
**Surface Coordinates:** Section 12, Township 6 South, Range 33 West  
2,620' FSL & 540' FWL  
**Bottom Hole Coordinates:** Vertical well with minimal deviation, same as above  
**Ground Elevation (ft):** 3,078'      **K.B. Elevation (ft):** 3,086'  
**Logged Interval (ft):** 3,650'      **To:** RTD      **Total Depth (ft):** 4,620'  
**Formation:** Lkc-Miss  
**Type of Drilling Fluid:** Chemical (Andy's)

**Region:** Kansas  
**Drilling Completed:** 7/24/16

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

## OPERATOR

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

## Comments

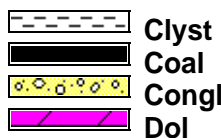
The Leiker Unit #1 well was drilled by Discovery Drilling Rig #1 (Tool Pusher: Cliff Mayfield).

The location for the Leiker Unit #1 well was found via 3-D seismic survey. Geologic samples were collected and evaluated from 3,650'-4,610'. Structurally, the Leiker Unit #1 ran 9' low at the Lansing and 8' low at the Cherokee, to the Schroeder Unit#1, 4,650' to the southwest. Four bottom-hole tests were conducted in the Lansing, all yielding negative results. A bottom-hole test was also conducted to evaluate the Cherokee, which also contained minimal fluid recovery and poor shut-in pressures. Based upon evaluation of sample shows, electric logs, DST results, and low structural position, the decision was made to plug and abandon the Leiker Unit #1 well on 7/25/16.

ROCK TYPES



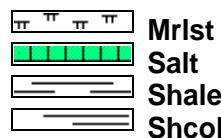
Anhy  
Bent  
Brec  
Cht



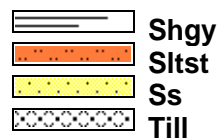
Clyst  
Coal  
Congl  
Dol



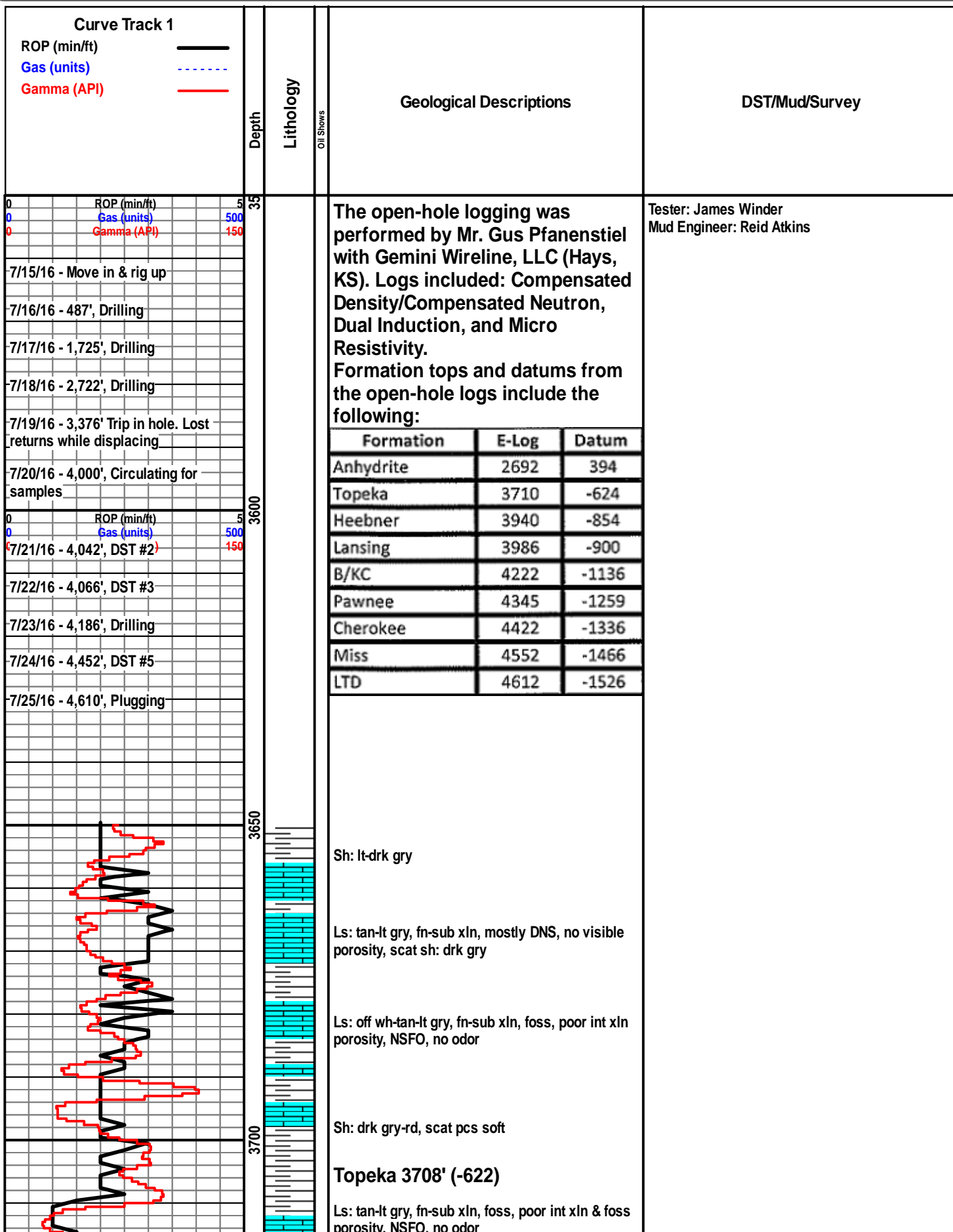
Gyp  
Igne  
Lmst  
Meta



Mrlst  
Salt  
Shale  
Shcol



Shgy  
Sltst  
Ss  
Till



**Curve Track 1**

ROP (min/ft) —————

Gas (units) - - - - -

Gamma (API) —————

Depth

Lithology

Oil Shows

Geological Descriptions

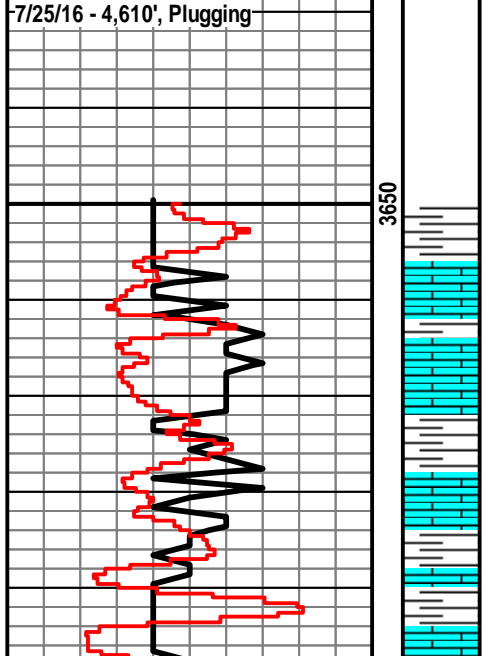
DST/Mud/Survey

0	ROP (min/ft)	5
0	Gas (units)	500
0	Gamma (API)	150
-7/15/16 - Move in & rig up		
-7/16/16 - 487', Drilling		
-7/17/16 - 1,725', Drilling		
-7/18/16 - 2,722', Drilling		
-7/19/16 - 3,376' Trip in hole. Lost returns while displacing		
-7/20/16 - 4,000', Circulating for samples		
0	ROP (min/ft)	5
0	Gas (units)	500
0	Gamma (API)	150
-7/21/16 - 4,042', DST #2		
-7/22/16 - 4,066', DST #3		
-7/23/16 - 4,186', Drilling		
-7/24/16 - 4,452', DST #5		
-7/25/16 - 4,610', Plugging		

The open-hole logging was performed by Mr. Gus Pfanenstiel with Gemini Wireline, LLC (Hays, KS). Logs included: Compensated Density/Compensated Neutron, Dual Induction, and Micro Resistivity. Formation tops and datums from the open-hole logs include the following:

Formation	E-Log	Datum
Anhydrite	2692	394
Topeka	3710	-624
Heebner	3940	-854
Lansing	3986	-900
B/KC	4222	-1136
Pawnee	4345	-1259
Cherokee	4422	-1336
Miss	4552	-1466
LTD	4612	-1526

Tester: James Winder  
Mud Engineer: Reid Atkins

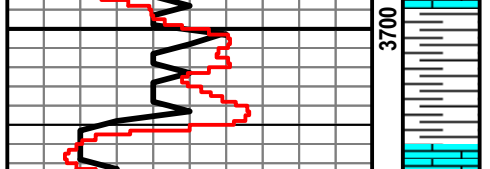


Sh: lt-drk gry

Ls: tan-lt gry, fn-sub xln, mostly DNS, no visible porosity, scat sh: drk gry

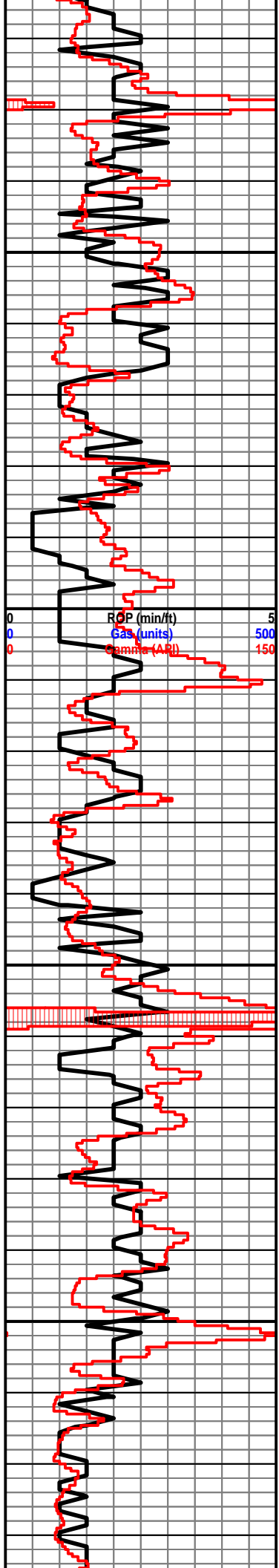
Ls: off wh-tan-lt gry, fn-sub xln, foss, poor int xln porosity, NSFO, no odor

Sh: drk gry-rd, scat pcs soft



**Topeka 3708' (-622)**

Ls: tan-lt gry, fn-sub xln, foss, poor int xln & foss porositv. NSFO, no odor



porosity, NSFO, no odor

Ls: tan-lt gry, fn-sub xln, mostly DNS, no visible porosity, NSFO, scat chalk

Ls: ala, scat sh: drk gry

Ls: off wh-tan, fn xln, poor int xln & pp porosity, scat dead oil stn, NSFO, no odor, scat chalk

Sh: drk gry-brn-rd, soft

Ls: tan-lt gry, fn-sub xln, poor int xln porosity, mostly DNS, scat dead asph stn, NSFO, no odor

Ls: ala, scat sh: drk gry

Ls: off wh-tan, fn xln, foss, scat fair int xln & int foss porosity, mostly barren, NSFO, no odor

Sh: drk gry-rd-grn, soft

Sh: ala

Ls: tan-lt gry, fn-sub xln, mostly DNS, no visible porosity, chalky

Sh: drk gry-brn

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

Ls: ala

Sh: drk gry-blk, carb

Ls: off wh-tan, fn xln, poor int xln porosity, mostly barren, few pcs asph stn, chalky in part

Sh: drk gry-brn-grn

Sh: drk gry-blk, carb

Ls: off wh-tan, fn xln, scat fair int xln porosity, mostly barren, scat blk asph stn, scat chalk

Ls: off wh-tan, fn-md xln, fair int xln porosity, foss, mostly barren, scat asph stn, scat chalk

Wt: 8.9  
Vis: 45

Wt: 9.0  
Vis: 46

Wt: 9.0  
Vis: 47

DST 3,936-4,023' (Lansing A-C)  
30"-30"-30"-30"  
IF: BOB in 3.5 minutes, no blow on shut in  
FF: BOB in 4.5 minutes, no blow on shut in  
Rec: 948' Mud Cut Water (8%M, 92%W) 510'  
Muddy Water (35%M, 65%W), 32' Mud  
FP: 48-446, 448-692#  
SIP: 1,223-1,219#  
HP: 1.969-1.906#

Heebner 3939' (-853)

Sh: blk, carb, fissile

Sh: drk gry-brn-grn

Sh: ala

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

Sh: lt-drk gry

Lansing 3987' (-901)

Ls: off wht-tan, fn xln, scat poor-fair int xln & vuggy porosity, scat brn stn, VSSFO, fnt odor, scat chalk

Ls: off wh-tan, fn-md xln, poor int xln porosity, mostly barren, NSFO, no odor

Sh: drk gry

Ls: off wh-tan, fn-md xln, some pcs ool, poor-fair int xln & vuggy porosity, fair drk brn stn, VSSFO, fnt odor

Ls: off wh-tan, fn-md xln, fair int xln & pp vuggy porosity, fair-good drk brn stn, SSFO, FSFO in cup, fnt odor

Ls: tan-lt gry, fn-sub xln, mostly DNS, no visible porosity, NSFO

Ls: off wh-tan, fn xln, ool, poor int xln porosity, scat fair drk stn, VSSFO, fnt odor

Sh: drk gry-brn-grn

Ls: off wh-tan, fn-md xln, fair int xln & vuggy porosity, fair-good oil stn, SSFO, fair odor

Sh: drk gry-brn

Ls: off wht-tan, fn-md xln, poor-fair int xln porosity, hvy chert gry-wht, mostly barren, NSFO

Sh: blk, carb

Sh: drk gry-brn w/ red

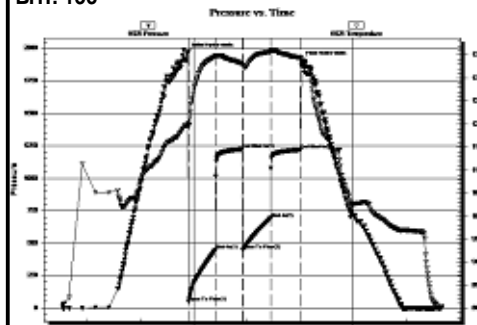
Ls: off wh-tan, fn-md xln, poor int xln porosity, mostly barren, NSFO, no odor, hvy chert-off wht

Sh: drk gry-brn

Sh: drk gry-drk brn-rd, silty, soft

Ls: off wh-tan, fn-md xln, fair int xln & pp vuggy porosity, scat drk oil stn, SSFO, fair odor, scat chalk

BHT: 133



DST #2 4,019-4,042' (Lansing D)

30"-30"-30"-30"

IF: BOB in 26 minutes, no blow on shut in

FF: BOB in 29 minutes, no blow on shut in

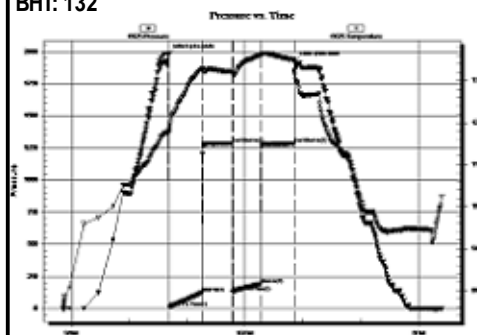
Rec: 311' Mud Cut Water (8%M, 92%W) 74' Muddy Water (39%M, 61%W)

FP: 12-122, 129-191#

SIP: 1,287-1,284#

HP: 1,982-1,926#

BHT: 132



DST #3 4,038-4,066' (Lansing F)

30"-30"-60"-60"

IF: Weak blow, built to 1.25", no blow on shut in

FF: Weak blow, built to .5", no blow on shut in

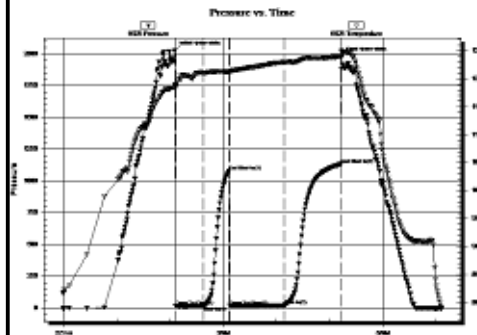
Rec: 15' SG&MCO (2%G, 6%M, 92%O) 15' O&GCM (2%G, 15%O, 83%M)

FP: 15-16, 17-22#

SIP: 1,078-1,133#

HP: 2,026-1,976#

BHT: 125



DST #4 4,117-4,160' (Lansing J)

30"-30"-30"-30"

IF: BOB in 16.25 minutes, no blow on shut in

FF: Weak blow, built to 7.5", no blow on shut in

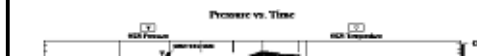
Rec: 2' MCO (6%M, 94%O) 125' O&GCWM (5%O, 9%G, 29%W, 57%M) 187' O&GCMW (4%O, 13%G, 29%M, 54%W), 62' O&GCMW (2%O, 2%G, 18%M, 88%W)

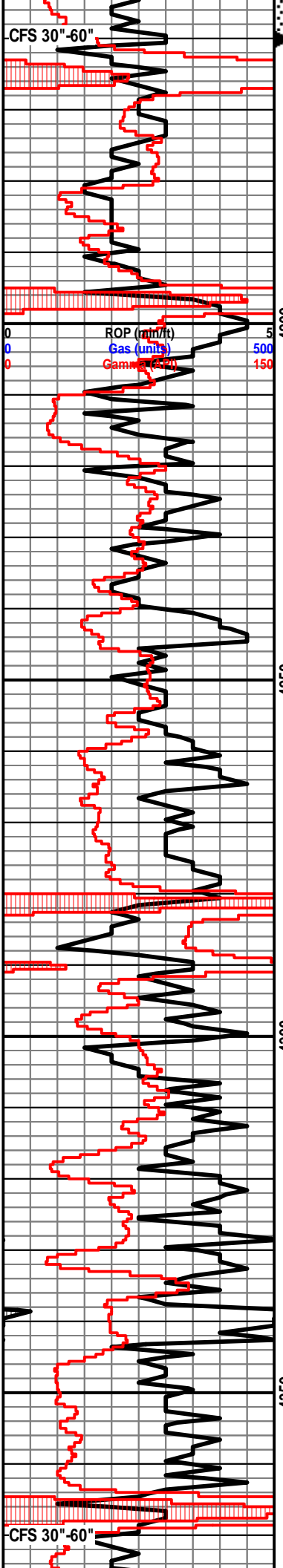
FP: 25-145, 152-183#

SIP: 398-385#

HP: 2,125-2,033#

BHT: 131





Sh: blk, carb

Sh: drk gry-brn-grn

Ls: off wh-lt gry, fn-md xln, scat fair int xln porosity, NSFO, scat chalk

Ls: ala

Sh: drk gry-blk, carb

Sh: drk gry-brn

Ls: off wh-lt gry, fn-md xln, scat chalk, poor-scat fair int xln porosity, NSFO, scat chert-off wh

**B/KC 4223' (-1137)**

Sh: drk gry-brn

Sh: gry-brn

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

Sh: red-brn, scat gry

**Marmaton 4260' (-1174)**

Ls: off wh-tan, fn xln, poor int xln porosity, scat hvy drk stn in porosity, no odor

Ls: tan-gry, fn-sub xln, mostly DNS, no visible porosity, NSFO

Sh: drk gry-blk, carb

Ls: tan, fn-md xln, poor int xln porosity, DNS, NSFO

Sh: lt gry-brn, gummy, few pcs soft

Sh: drk gry-brn-rd

Ls: off wh-tan, scat ool, poor porosity, NSFO

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

Sh: lt gry-brn

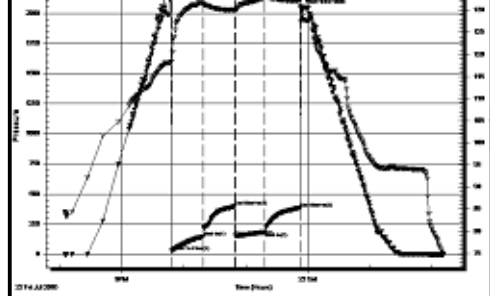
**Pawnee 4342' (-1256)**

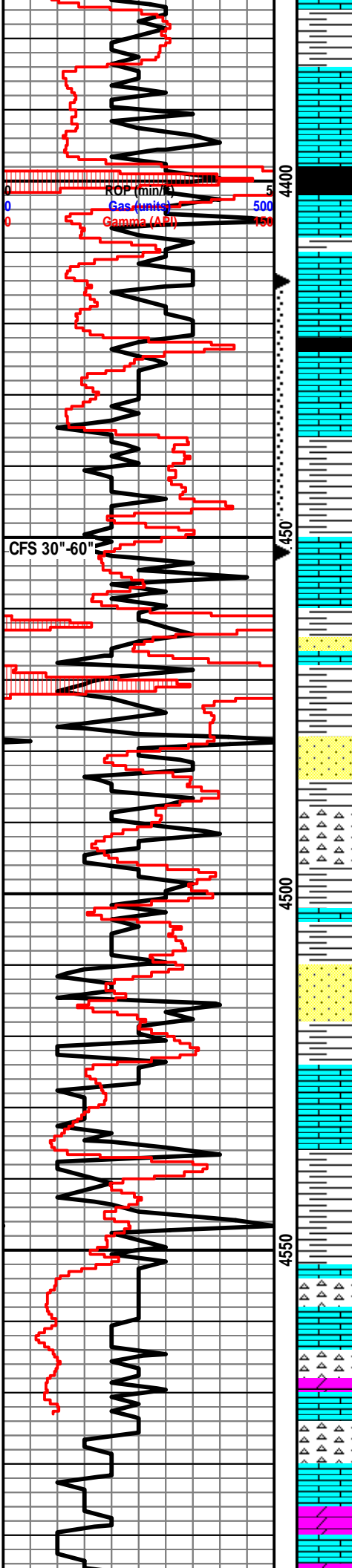
Ls: off wh-tan, fn xln, scat poor int xln porosity, scat foss, mostly DNS, scat chert-off wh, NSFO, no odor

Ls: ala

Sh: blk, carb

Ls: off wh, fn-md xln, mostly DNS, no visible





porosity, NSFO

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

Sh: drk gry-blk

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

Ls: ala

**Cherokee Sh. 4421' (-1335)**

Sh: blk, carb

Ls: off wh-tan, fn-md xln, fair vuggy porosity, lt-fair brn stn, VSSFO, sl odor

Sh: lt-drk gry

Sh: drk gry-brn-rd

Ls: off wh-tan, fn-md xln, poor-fair int xln porosity, fair drk brn stn, SSFO, fnt odor, scat chert-off wh-lt gry

Ss: off wh-tan, fn grn, well rounded, well sorted, poor int grn porosity, sl friable, NSFO

Sh: drk gry-rd

Ss: off wh-clr, fn-md grn, sub ang, poorly sorted, poor-fairly well cemented, poor int grn porosity, NSFO, no odor

Chert: vari-colored, DNS

Sh: drk gry-brn-rd

Ss: fn grn, friable, poor-fair int grn porosity, scat chert-off wh, mostly DNS, NSFO

Ls: off wh-tan, fn-md xln, mostly DNS, scat foss, fair int xln porosity, NSFO, scat chert-off wh

Sh: drk gry-rd

**Mississippi 4552' (-1466)**

Ls: off wh-lt gry, fn-md xln, DNS, scat poor int xln porosity, NSFO, scat dolo: off wh, poor int xln porosity, hvy chert-off wh-tan-lt gry

Ls: ala, scat dolo: ala

Ls: off wh-lt gry, fn xln, mostly DNS, scat int xln porosity, NSFO, scat chert-off wh

Dolo: off wh-tan, fn-md xln, vry DNS, NSFO, hvy chert-off wh, ang, vry DNS

DST #5 4,414-4,452' (Cherokee)

30"-30"-30"-30"

IF: Weak blow built to 1.125", no blow on shut in

FF: No blow

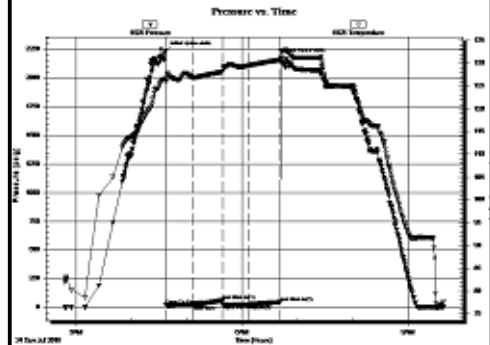
Rec: 30' SG&OCM (2%G, 6%O, 92%M)

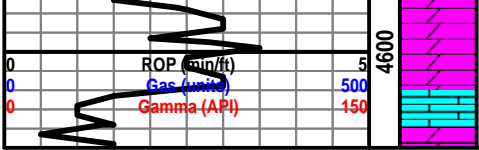
FP: 17-20, 21-25#

SIP: 61-44#

HP: 2,233-2,174#

BHT: 133





Dolo: ala, hvy chert

