

# AUSTIN B. KLAUS



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

Well Name: Gage #1  
Location: Russell County  
License Number: API # 15-167-23,930-0000  
Spud Date: 12/18/13  
Surface Coordinates: Section 1 Township 15 South Range 14 West  
695' FSL & 690' FEL  
Bottom Hole Coordinates: Vertical well with minimal deviation, same as above  
Ground Elevation (ft): 1,862' K.B. Elevation (ft): 1,870'  
Logged Interval (ft): 2,300' To: RTD Total Depth (ft): 3,400'  
Formation: Lansing  
Type of Drilling Fluid: Chemical (Andy's)

Region: Kansas  
Drilling Completed: 1/9/14

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

## OPERATOR

Company: John O. Farmer, Inc.  
Address: P.O. Box 352  
Russell, KS 67665-0352

## Comments

The Gage #1 well was drilled by Discovery Drilling Rig #2 (Tool Pusher: Terry Wickham).

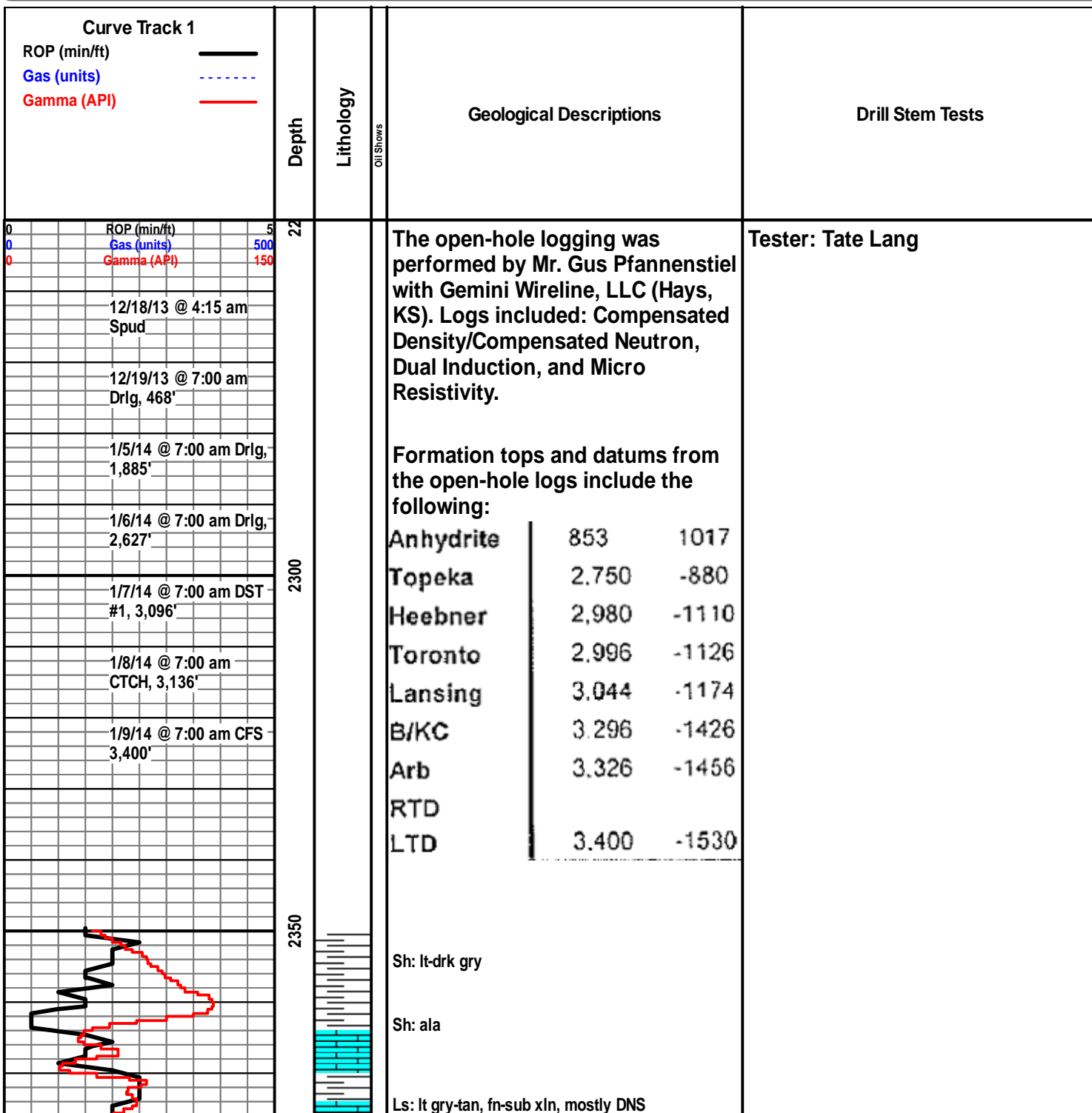
The location for the Gage #1 well was found via 3-D seismic survey. Geologic samples were collected and evaluated from 2,350'-3,400'. Structurally, the Gage #1 ran 10' high to our correlation well at the LNSG. Three bottom-hole tests were conducted in the LNSG, all of which yielded negative results. The Arbuckle horizon was 6' high to the comparison well. Upon completion of the logging operation, a straddle tested was conducted across top 4-14' of ABCK. After all sample, log, and drill stem test data was gathered and evaluated, the decision was made to run 5 1/2" production casing on 1/10/13 to further evaluate the Arbuckle in the Gage #1 well.

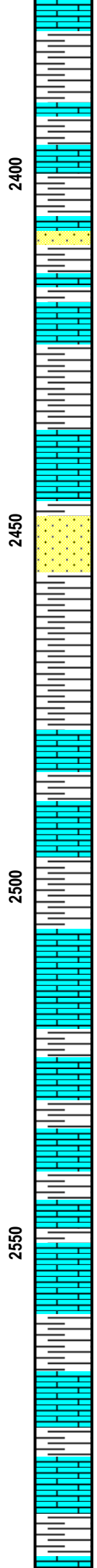
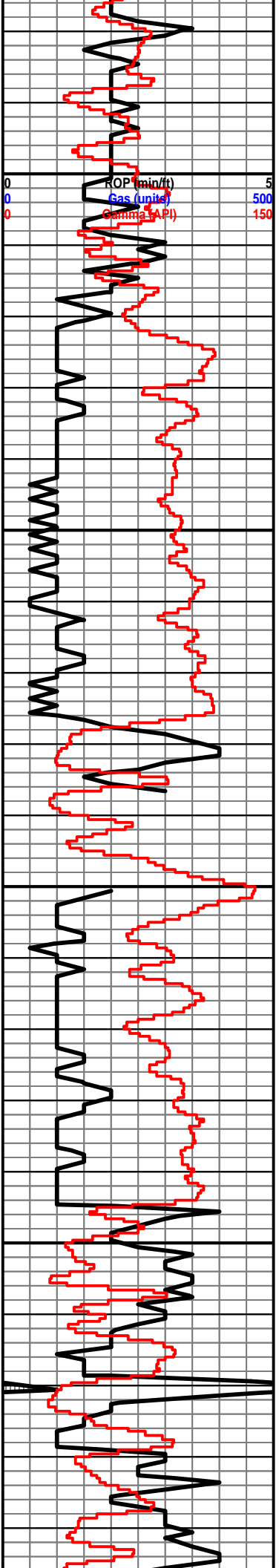
### ROCK TYPES

	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 checked="" type="checkbox"/> Vuggy	<b>ROUNDING</b>	<input checked="" 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 checked="" type="checkbox"/> Even		





Sh: lt-drk gry

Sh: ala

**Grandhaven 2408' (-538)**

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

Ls: ala

Sh: lt-drk gry

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

Ss: tan, fn grn, well rnd, fair int grn porosity, SSFO, lt sat, fair odor, sl odor

Sh: lt-drk gry

Sh: drk gry-brn

**Tarkio 2477' (-607)**

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

Ls: ala

Sh: drk gry

Qtz: ss, lt gry-grn, fn grn, well rnd, poor int grn porosity, SSFO, sl odor, sl chert-off wh

Sh: drk gry-brn

Sh: ala

Sh: lt-drk gry, few pcs soft

Sh: ala

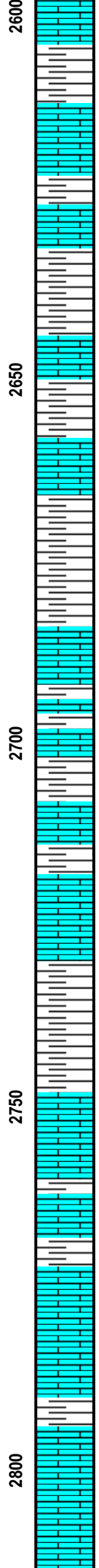
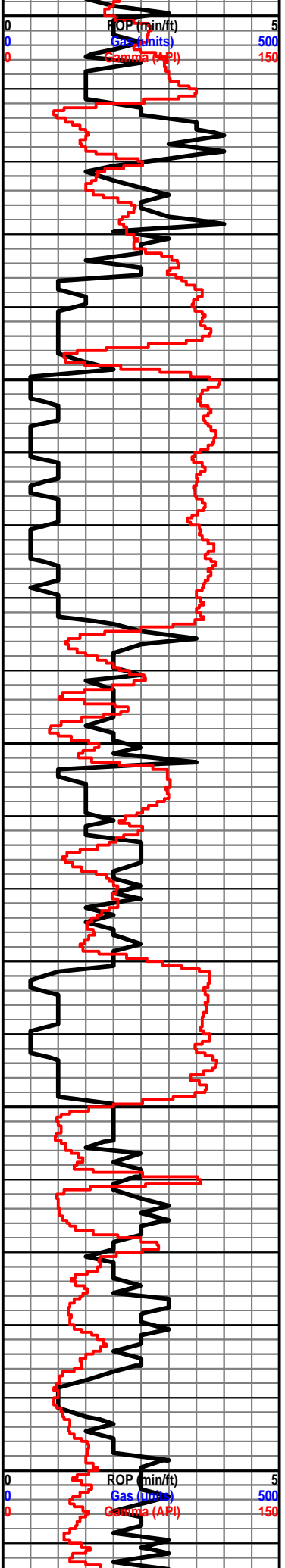
Ls: off wh-tan, fn xln, mostly DNS

Sh: lt-drk gry, scat ls

Sh: gry

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

Sh: lt gry



Ls: tan-gry, fn xln, mostly DNS, scat pp porosity, sl chalky

Ls: ala

Sh: lt gry, soft

Sh: ala

Sh: lt-drk gry, soft

Ls: off wh-tan, fn-sub xln, mostly DNS, sl chalky, scat pyrite

Sh: lt gry

Sh: ala

Ls: tan-gry, fn xln, scat pp porosity, NSFO, scat chert-off wh, scat pyrite, sl chalky

Sh: lt-drk gry

Sh: gry

Ls: tan-gry, fn xln, mostly DNS, sl chalky

Sh: gry

**Topeka 2752' (-882)**

Ls: tan-lt gry, fn xln, mostly DNS, sl chalky

Ls: ala

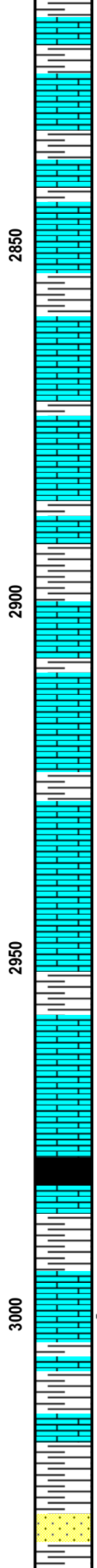
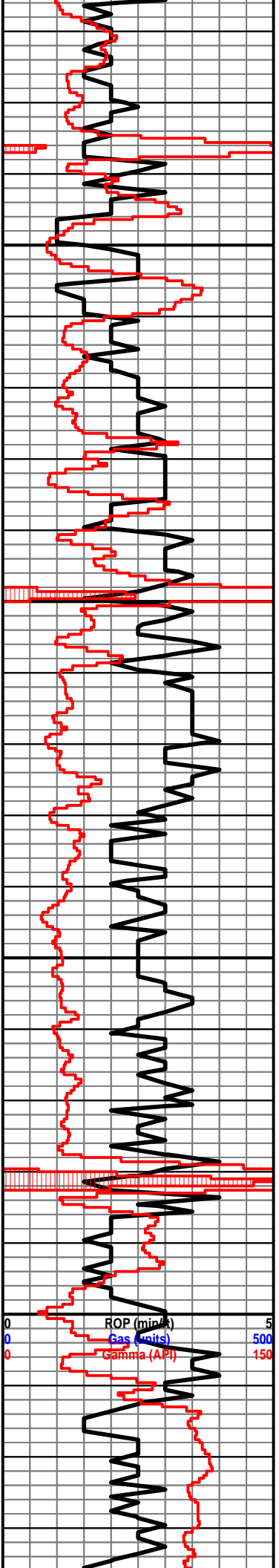
Sh: lt-drk gry

Ls: tan-lt gry, fn-md xln, scat int xln porosity, scat oil st, NSFO, sl odor, sl chalky

Sh: lt-drk gry

Ls: off wh-lt gry, fn-md xln, mostly DNS, scat pp porosity, chalky

Sh: arv



Sh: ala

Sh: lt-drk gry, soft

Ls: tan-lt gry, fn-sub xln, mostly DNS, no visible porosity, scat chert-off wh

Ls: ala

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

Sh: lt gry-grn, soft

Ls: off wh-tan, fn xln, scat int xln porosity, scat oil st, sl odor, scat chert-off wh, chalky

Sh: lt-drk gry

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

Ls: ala

Sh: drk gry

Ls: lt gry, fn-md xln, scat int xln porosity, lt scat oil st, VSSFO, sl odor, chalky

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

Sh: lt gry

Ls: tan-lt gry, fn-md xln, scat int xln porosity, scat oil st, sl odor, sl fossil, chalky

Ls: tan-lt gry, fn-md xln, vry DNS, no visible porosity, sl chalky, sl fossil

**Heebner 2981' (-1111)**

Sh: drk gry-blk, carb, fissile

Ls: tan-gry, fn xln, mostly DNS

Sh: gry-grn, soft

**Toronto 2997'(-1127)**

Ls: off wh, fn-md xln, poor int xln porosity, lt scat oil st, VSSFO, sl odor, scat chert-off wh

Sh: lt-drk gry

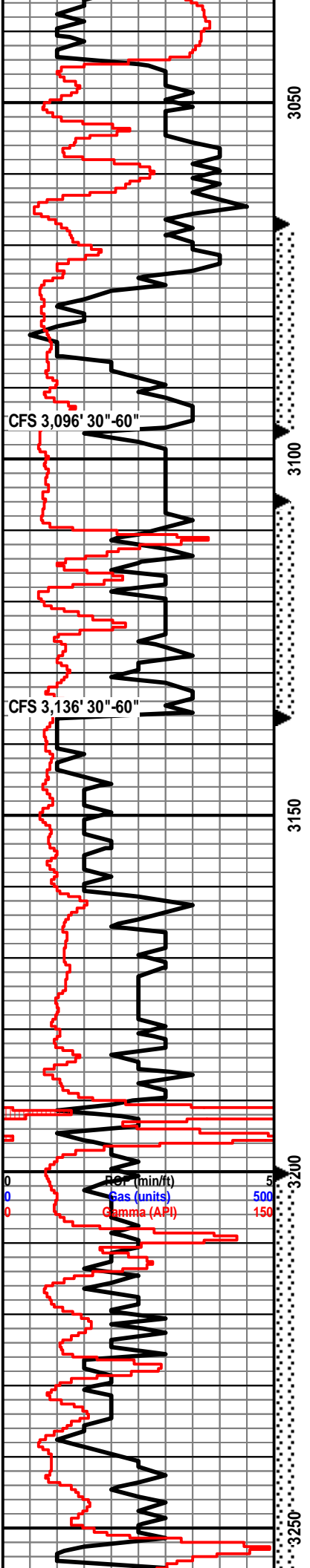
Ls: tan-lt gry, fn-sub xln, mostly DNS, fossil, scat chert-off wh

Sh: lt gry-brn-grn, vry soft

Ss: off wh, fn-md grn, poor int grn porosity, scat oil sat, VSSFO, sl-fair odor

DST #1 3,067'-3,096' LKC "C"  
30"-30"-60"-60"

IF: Weak blow, built to 1.5"  
FF: Weak blow, built to .75"  
Rec: 10' Mud w/ oil spots



Sh: drk gry-grn, vry soft

**Lansing 3048' (-1178)**

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

Sh: drk gry

Ls: off wh-tan, fn xln, poor int xln porosity, vry lt oil st, NSFO, vry lt odor

Sh: lt gry

Ls: off wh-tan, fn xln, ool, fair oomoldic porosity, fair-good oil sat, SSFO, fair odor, sl chert-off wh

Ls: off wh, fn xln, scat int xln porosity, NSFO, no odor

Sh: drk gry

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

Sh: drk gry

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

Sh: lt-drk gry

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

Ls: off wh-tan, fn xln, ool, good oom porosity, mostly barren, NSFO, chalky, sl chert-off wh

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

Ls: off wh-tan-lt gry, fn xln, ool, fair oom porosity, mostly barren, NSFO, vry chalky, scat chert-off wh

Ls: tan-gry, fn-sub xln, vry DNS, hvy chert-off wh, sl chalky

Ls: ala

Sh: blk, carb, fissile

Ls: off wh-lt gry, fn xln, poor int xln porosity, scat oil st, NSFO, no odor, scat chert-off wh

Sh: lt-drk gry

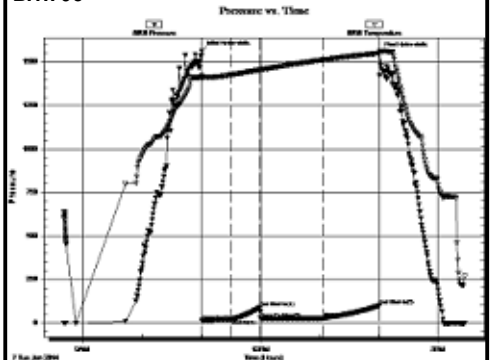
Ls: off wh-tan, fn xln, poor int xln porosity, vry lt scat oil st, NSFO, no odor, vry chalky

Sh: gry

Ls: off wh-tan, fn-md xln, poor-fair int xln porosity, sl-fair oil st, VSSFO, sl odor, sl chalky, fossil

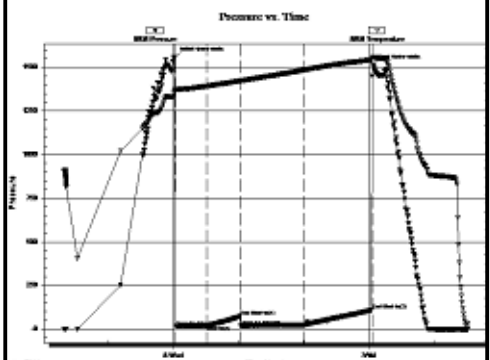
Sh: drk gry-blk

FP: 13-22, 26-28#  
 SIP: 90-99#  
 HP: 1,563-1,554#  
 BHT: 98



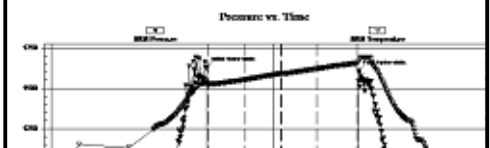
**DST #2 3,106'-3,136' LKC "E & F"**  
 30"-30"-60"-60"

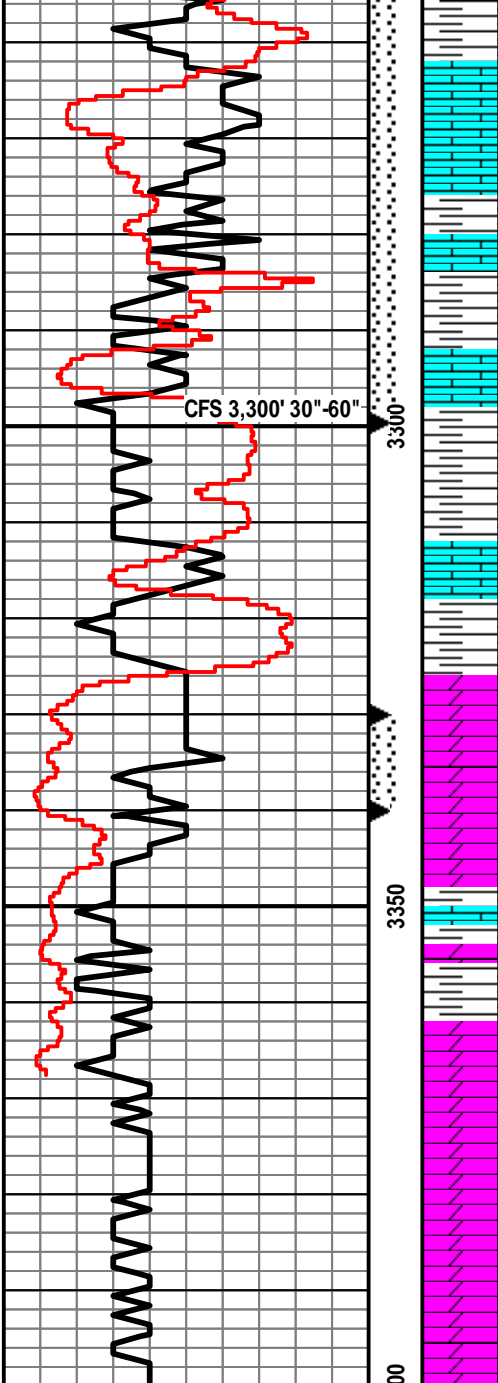
IF: Weak blow, built to 5"  
 FF: Weak blow, built to 6.5"  
 Rec: 30' GIP, 30' OCM (8% O, 92% M)  
 FP: 14-20, 16-23#  
 SIP: 72-108#  
 HP: 1,559-1,513#  
 BHT: 96



**DST #3 3,200'-3,300' LKC "I-L"**  
 30"-30"-30"-30"

IF: Weak blow, built to 1"  
 FF: Weak surface blow  
 Rec: 10' Mud w/ oil spots  
 FP: 15-19, 20-22#  
 SIP: 134-61#  
 HP: 1,631-1,606#  
 BHT: 94



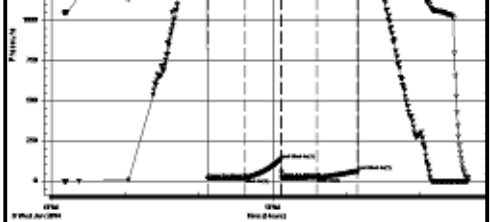


Ls: tan-lt gry, fn xln, scat int xln porosity, scat oil st, NSFO, no odor, sl chalky

Ls: ala

Sh: gry, scat blk

Ls: off wh-tan-gry, fn-md xln, poor int xln porosity, NSFO, no odor, sl fossil  
**B/KC 3298' (-1428)**  
 Sh: lt-drk gry-grn, soft  
 Sh: lt-drk gry-brn, soft, earthy  
 Sh: drk gry-brn-grn, vry soft  
 Sh: ala  
**Arbuckle 3326' (-1456)**  
 Dolo: off wh, fn-md xln, fair-good int xln porosity, lt oil sat, VSSFO, sl-fair odor  
 Dolo: off wh, fn-md xln, poor-fair int xln porosity, lt-fair oil sat, SSFO, good-strong odor  
 Dolo: off wh, fn-md xln, poor int xln porosity, lt oil sat, VSSFO, fair-good odor  
 Sh: drk gry-brn, scat ls: off wh-tan, fn-sub xln, mostly DNS  
 Sh: ala  
 Dolo: off wh, fn-md xln, fair int xln porosity, fair oil sat, SSFO, good-strong odor  
 Dolo: wh, fn-md xln, fair int xln porosity, lt oil st, VSSFO, strong odor, chalky, scat sh: drk gry  
 Dolo: wh, md xln, fair-good int xln porosity, mostly barren, strong odor, scat chalk



DST #4 3,330-3,340' Top 4-14' Arbuckle  
 30"-30"-30"-30"  
 IF: BOB in 11 minutes, .5" blow back on shut in  
 FF: BOB in 30 minutes, surface blow back on shut in  
 Rec: 270' GIP, 150' GO (20% G, 80% O), 60' G&OCWM (5% G, 5% O, 30% W, 60% M)  
 FP: 29-65, 75-95#  
 SIP: 620-498#  
 HP: 1,742-1,765#  
 BHT: 109

