DUAL INDUCTION LOG

Company	WOOLSEY OPERATING COMPANY, LLC
Well	McFADDEN "B" #1
Field	WILDCAT
County	KIOWA
State	KANSAS

Company WOOLSEY OPERATING COMPANY, LLC.
Well McFADDEN "B" #1
Field WILDCAT
County KIOWA State KANSAS

Location: API #: 15-097-21835-0000
2300' FNL & 740' FEL
SEC 22 TWP 28S RGE 19W

Other Services
CDL/CNL/PE
SONIC

Permanent Datum	GROUND LEVEL	Elevation 2272	Elevation
Log Measured From	KELLY BUSHING 12' A.G.L		K.B. 2284
Drilling Measured From	KELLY BUSHING		D.F. 2282
			G.L. 2272

Date	1/28/18		
Run Number	ONE		
Depth Driller	5135		
Depth Logger	5140		
Bottom Logged Interval	5138		
Top Log Interval	00		
Casing Driller	10 3/4" @ 352		
Casing Logger	352		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6000 PPM	
Density / Viscosity	9.3/62		
pH / Fluid Loss	10.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.50 @ 55F		
Rmf @ Meas. Temp	.37 @ 55F		
Rmc @ Meas. Temp	.60 @ 55F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.21 @ 126F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	126F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	BILL KLAVER		

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
DIRECTIONS
GREENSBURG, KS. - 3 WEST TO 21ST RD. - 1/2 SOUTH - WEST INTO

MAIN SECTION

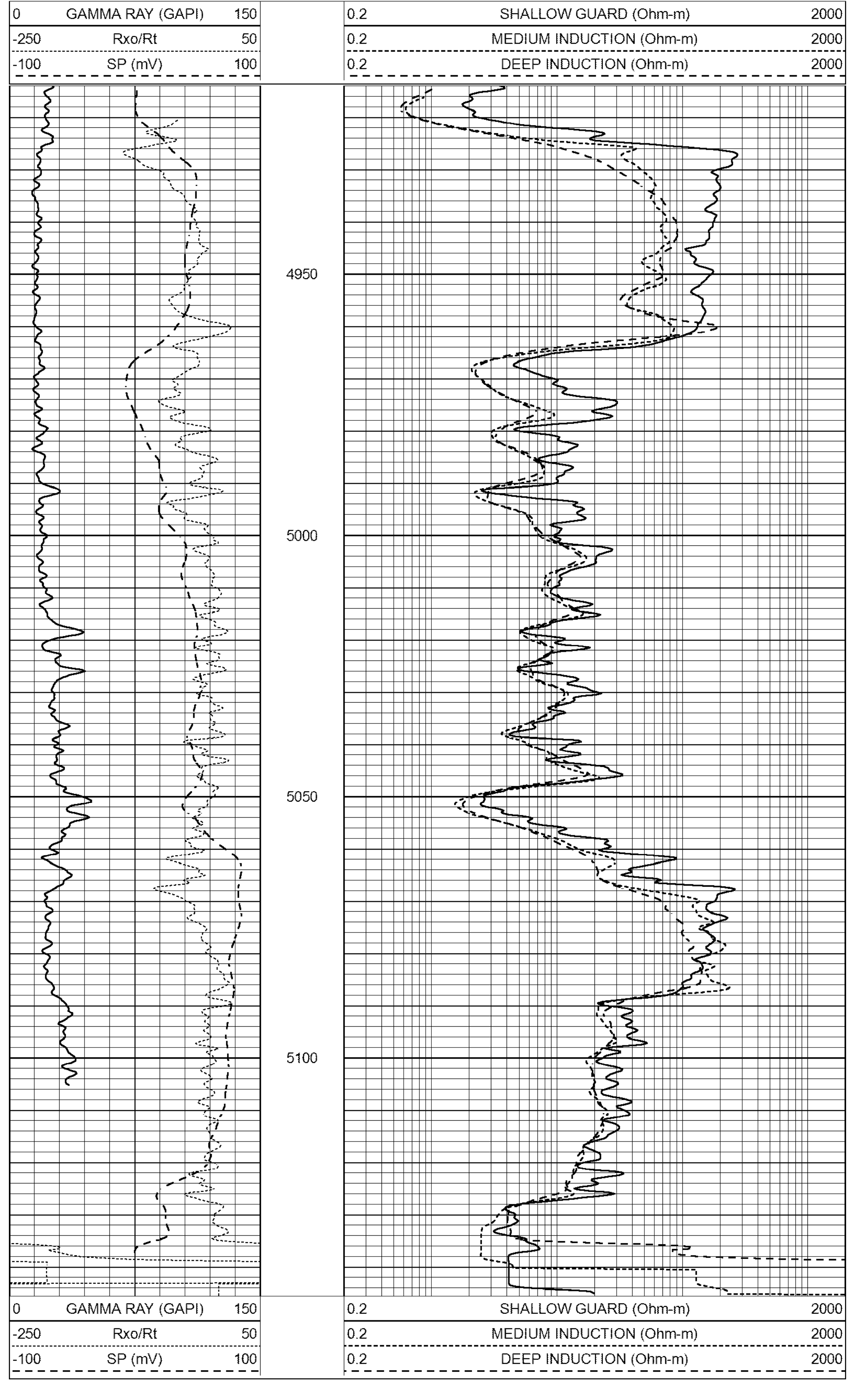
Database File	2361pe8.db
Dataset Pathname	pass3.2
Presentation Format	_dil2
Dataset Creation	Sun Jan 28 07:38:16 2018
Charted by	Depth in Feet scaled 1:600

MAIN SECTION

Database File	2361pe8.db
Dataset Pathname	pass3.1
Presentation Format	_dil
Dataset Creation	Sun Jan 28 06:45:38 2018
Charted by	Depth in Feet scaled 1:240

REPEAT SECTION

Database File	2361pe8.db
Dataset Pathname	pass2.1
Presentation Format	_dil
Dataset Creation	Sun Jan 28 06:17:50 2018
Charted by	Depth in Feet scaled 1:240



Calibration Report

Database File	2361pe8.db
Dataset Pathname	pass2.1
Dataset Creation	Sun Jan 28 06:17:50 2018

Dual Induction Calibration Report

Serial-Model:	FW1410-56-Probe
Surface Cal Performed:	Tue Jul 25 12:15:33 2017
Downhole Cal Performed:	Tue Jul 25 12:15:37 2017
After Survey Verification Performed:	Tue Jul 25 12:15:38 2017

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.008	0.765	V	1.000	400.000	mmho/m	527.061	-3.201
Medium	-0.056	0.761	V	1.000	464.000	mmho/m	567.187	32.510
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.005	0.624	V	0.000	400.000	mmho/m	645.611	-3.034
Medium	0.012	0.721	V	0.000	464.000	mmho/m	653.591	-7.532

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.647	301.329	mmho/m	-0.780	336.378	mmho/m	1.117	-0.058
Medium	38.256	411.013	mmho/m	39.046	441.706	mmho/m	1.080	-2.280
LL3		7.471	V		2500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.085	V		5000.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.647	301.329	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	38.256	411.013	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Litho Density Calibration Report

Serial: 140704
Model: V4_10P
Source Number: 74GBq-19

Master Calibration — Performed: Wed Feb 11 18:53:41 2015

	Background	Aluminum	Magnesium	
Window 1	613.01	6027.40	27508.60	cps
Window 2	48.21	1424.77	7132.66	cps
Window 4	266.48	1373.19	5767.15	cps
Window 5	622.07	10090.30	18937.90	cps
Window 6	49.07	1682.84	3271.18	cps
Window 8	298.04	3248.38	5980.58	cps
Bulk Density	-	2.6020	1.6830	g/cc
Pe	-	3.0000	2.5070	b/e

LS Alpha: : -1.8451
LS Beta: : 138648.8473
SS Alpha: : -0.7542
SS Beta: : 21960.9250
LS CPE: : 1.0882
SS CPE: : 1.5181

Before Survey Backround Counts Verification — Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

After Survey Background Counts Verification — Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

Lithodensity Caliper Calibration — Performed: Wed Feb 11 18:53:41 2015

Results Readings		References (in)			
Low	High	Low	High	Gain	Offset
1107.5	7124.1	8.0	15.0	0.0	6.3

Before Survey Caliper Verification — Performed:

	Reference	Reading
Caliper (in)		

After Survey Caliper Verification — Performed:

	Reference	Reading
Caliper (in)		

Compensated Neutron Calibration Report

Serial Number:	080621PMC
Tool Model:	NABORS

PRE-SURVEY VERIFICATION

Detector	Readings		Measured		Target	
Short Space		cps				
Long Space		cps		pu		pu

POST-SURVEY VERIFICATION

Detector	Readings		Measured		Target	
Short Space		cps				
Long Space		cps		pu		pu

Gamma Ray Calibration Report

Serial Number:	070558	
Tool Model:	Probe1	
Performed:	Tue Jul 25 12:16:33 2017	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.4000	GAPI/cps