DUAL INDUCTION LOG

Company NEC OPERATING - KANSAS, LLC.
Well WRANGLER #6
Field SHAW CREEK
County TREGO State KANSAS

Location: API # : 15-195-23159-0000
600' FNL & 400' FWL
SE - NW - NW - NW
SEC 4 TWP 12S RGE 22W

Other Services
CDL/CNL/PE
MEL/SON

Permanent Datum GROUND LEVEL Elevation 2405
Log Measured From KELLY BUSHING 7' A.G.L
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2412
D.F. 2410
G.L. 2405

Company	NEC OPERATING - KANSAS, LLC.
Well	WRANGLER #6
Field	SHAW CREEK
County	TREGO
State	KANSAS

Date	6/13/23	
Run Number	ONE	
Depth Driller	4250	
Depth Logger	4249	
Bottom Logged Interval	4247	
Top Log Interval	00	
Casing Driller	8 5/8" @ 306	
Casing Logger	306	
Bit Size	7 7/8	
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,000 PPM
Density / Viscosity	9.1/56	
pH / Fluid Loss	11/8.8	
Source of Sample	FLOWLINE	
Rm @ Meas. Temp	1.10 @ 75F	
Rmf @ Meas. Temp	.825 @ 75F	
Rmc @ Meas. Temp	1.32 @ 75F	
Source of Rmf / Rmc	MEASUREMENT	
Rm @ BHT	.700 @ 118F	
Time Circulation Stopped	2 HOURS	
Time Logger on Bottom	12:15 P.M.	
Maximum Recorded Temperature	118F	
Equipment Number	8916	
Location	HAYS, KANSAS	
Recorded By	COLE ROBBEN	
Witnessed By	KEATON JONES	

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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:
FROM OGALLAH, KANSAS GO NORTH ON 330 AVENUE TO 'H' ROAD, WEST FOR 2 MILES TO 310TH AVENUE, NORTH 3/4 MILE, EAST INTO

MAIN SECTION

Database File 7594pe.db
Dataset Pathname pass6MN
Presentation Format _dil2
Dataset Creation Tue Jun 13 14:37:56 2023
Charted by Depth in Feet scaled 1:600

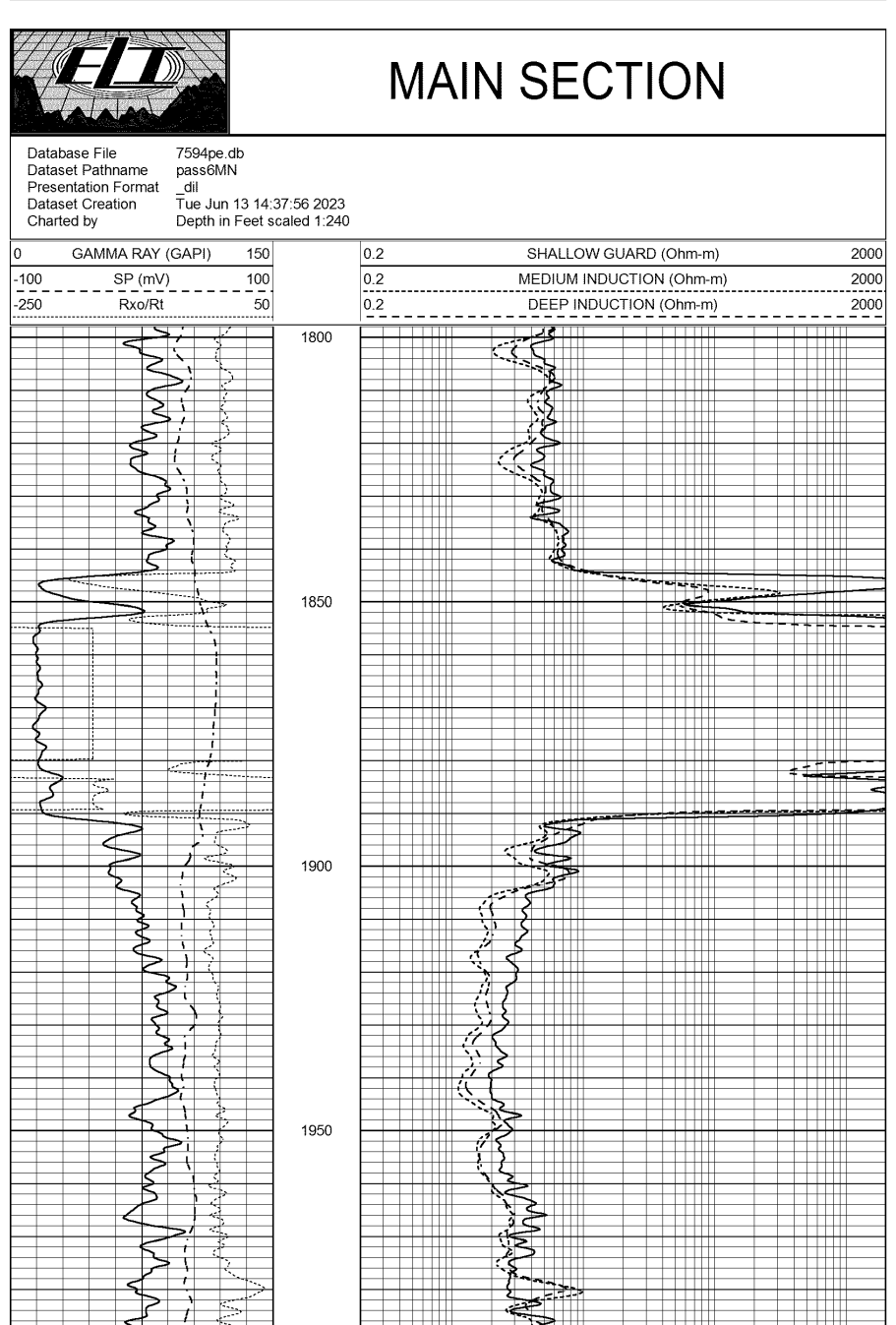
0 Gamma Ray (GAPI) 150
-100 SP (mV) 100
1000 CILD (mmho/m) 0
0 RLL3 (Ohm-m) 50
0 Deep Induction (Ohm-m) 50
50 RILD X10 (Ohm-m) 500
50 RLL3 X10 (Ohm-m) 500

0 Gamma Ray (GAPI) 150
-100 SP (mV) 100
1000 CILD (mmho/m) 0
0 RLL3 (Ohm-m) 50
0 Deep Induction (Ohm-m) 50
50 RILD X10 (Ohm-m) 500
50 RLL3 X10 (Ohm-m) 500

ANHYDRITE REPEAT

Database File 7594pe.db
Dataset Pathname pass3ANHY
Presentation Format _dil
Dataset Creation Tue Jun 13 12:29:08 2023
Charted by Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 150
-100 SP (mV) 100
-250 Rxo/Rt 50
0.2 SHALLOW GUARD (Ohm-m) 2000
0.2 MEDIUM INDUCTION (Ohm-m) 2000
0.2 DEEP INDUCTION (Ohm-m) 2000



0 GAMMA RAY (GAPI) 150
-100 SP (mV) 100
-250 Rxo/Rt 50
0.2 SHALLOW GUARD (Ohm-m) 2000
0.2 MEDIUM INDUCTION (Ohm-m) 2000
0.2 DEEP INDUCTION (Ohm-m) 2000

MAIN SECTION

Database File 7594pe.db
Dataset Pathname pass6MN
Presentation Format _dil
Dataset Creation Tue Jun 13 14:37:56 2023
Charted by Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 150
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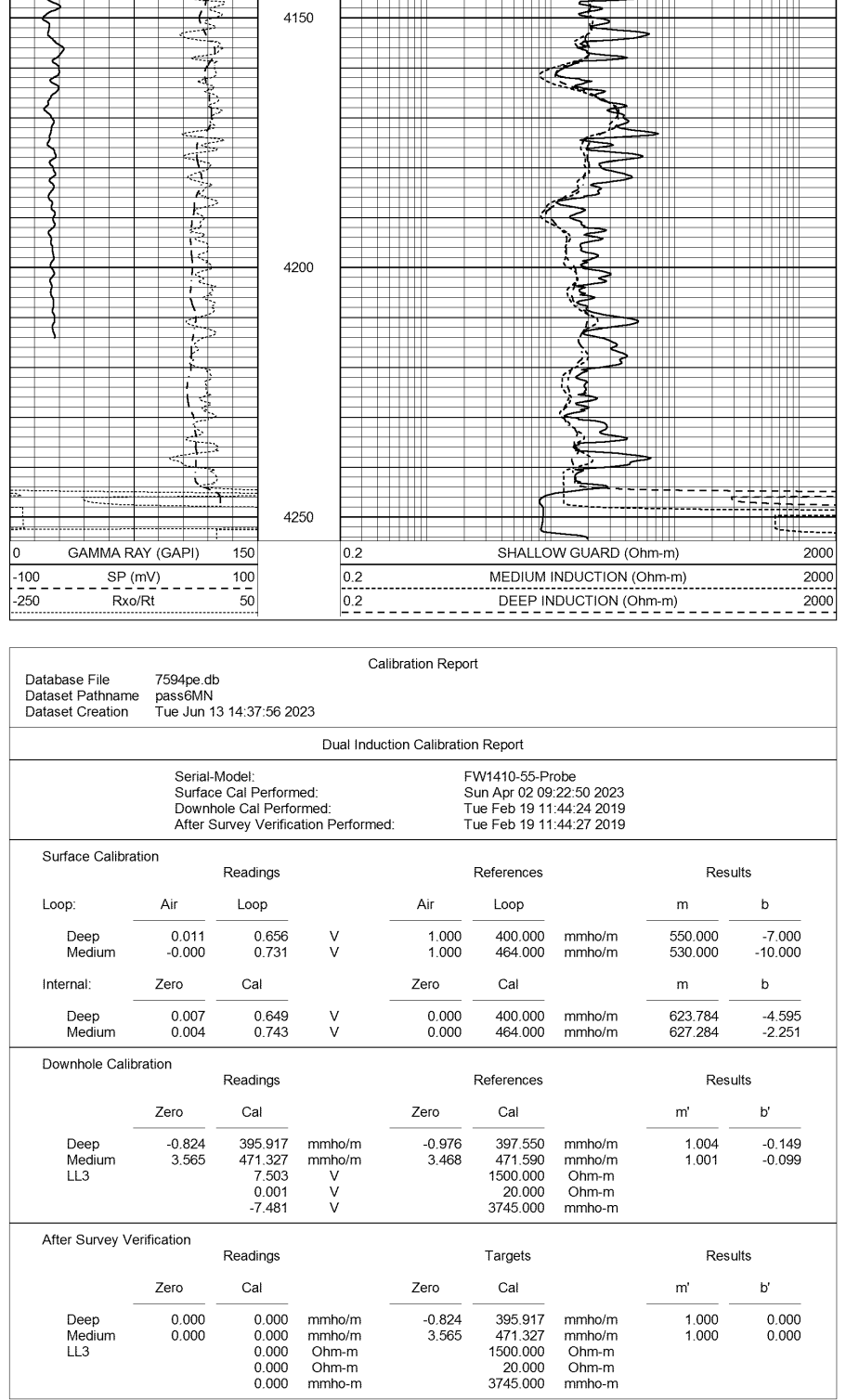
0.2 DEEP INDUCTION (Ohm-m) 2000

0 GAMMA RAY (GAPI) 150
-100 SP (mV) 100
-250 Rxo/Rt 50
0.2 SHALLOW GUARD (Ohm-m) 2000
0.2 MEDIUM INDUCTION (Ohm-m) 2000
0.2 DEEP INDUCTION (Ohm-m) 2000

REPEAT SECTION

Database File 7594pe.db
Dataset Pathname pass5.7
Presentation Format _dil
Dataset Creation Tue Jun 13 12:57:01 2023
Charted by Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 150
-100 SP (mV) 100
-250 Rxo/Rt 50
0.2 SHALLOW GUARD (Ohm-m) 2000
0.2 MEDIUM INDUCTION (Ohm-m) 2000
0.2 DEEP INDUCTION (Ohm-m) 2000



0 GAMMA RAY (GAPI) 150
-100 SP (mV) 100
-250 Rxo/Rt 50
0.2 SHALLOW GUARD (Ohm-m) 2000
0.2 MEDIUM INDUCTION (Ohm-m) 2000
0.2 DEEP INDUCTION (Ohm-m) 2000

Calibration Report

Database File 7594pe.db
Dataset Pathname pass6MN
Dataset Creation Tue Jun 13 14:37:56 2023

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
Surface Cal Performed: Sun Apr 02 09:22:50 2023
Downhole Cal Performed: Tue Feb 19 11:44:24 2019
After Survey Verification Performed: Tue Feb 19 11:44:27 2019

Surface Calibration

Loop:	Readings Air	Readings Loop		References Air	References Loop		Results m	Results b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	550.000	-7.000
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	530.000	-10.000
Internal:	**Zero**	**Cal**		**Zero**	**Cal**		**m**	**b**
Deep	0.007	0.649	V	0.000	400.000	mmho/m	623.784	-4.595
Medium	0.004	0.743	V	0.000	464.000	mmho/m	627.284	-2.251

Downhole Calibration

	Readings Zero	Readings Cal		References Zero	References Cal		Results m'	Results b'
Deep	-0.824	395.917	mmho/m	-0.976	397.550	mmho/m	1.004	-0.149
Medium	3.565	471.327	mmho/m	3.468	471.590	mmho/m	1.001	-0.099
LL3		7.503	V		1500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.481	V		3745.000	mmho-m		

After Survey Verification

	Readings Zero	Readings Cal		Targets Zero	Targets Cal		Results m'	Results b'
Deep	0.000	0.000	mmho/m	-0.824	395.917	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	3.565	471.327	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: Fri May 12 10:26:47 2023

	Background	Aluminum	Magnesium	
Window 1	521.46	5212.91	23528.37	cps
Window 2	43.81	1175.90	6160.42	cps
Window 4	226.45	1217.97	4891.35	cps
Window 5	519.17	8959.34	17037.10	cps
Window 6	39.35	1453.85	2926.68	cps
Window 8	253.66	2919.24	5361.51	cps
Bulk Density	-	2.6020	1.6830	g/cc
Pe	-	3.0000	2.5070	b/e

LS Alpha: : -1.7699
LS Beta: : 101708.6271
SS Alpha: : -0.7448
SS Beta: : 19263.5258
LS CPE: : 1.1844
SS CPE: : 1.5835

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: Fri May 12 10:26:47 2023

Results Readings Low	Readings High	References (in) Low	References (in) High	Gain	Offset
7228.5	10151.9	8.0	14.0	0.0	-7.0

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: 7
Tool Model: Probe1
Performed: Sun Apr 02 09:22:40 2023

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.4000 GAPI/cps