



COMPENSATED DENSITY NEUTRON LOG

Company	PATTERSON ENERGY	Well	BERNSTORF-JANKE #10	Location:	990 FNL & 1150 TEL	APL #:	15 009 26320
Field	N/A	County	BARTON	State	Kansas	Other Services	
City	BARTON	County	BARTON	State	Kansas	DIL	
Drilling Measured From	KB 8 AGL	Permanent Datum	KB 8 AGL	Elevation	1912	D.F.	8198
Log Measured From	KB 8 AGL	Ground Level	KB 8 AGL	Elevation	1912	G.L.	8192
Date	12/14/21	Run Number	One				
Depth	3420	Depth Logged	3420				
Tool Joint Material	2620	Tool Joint Material	2620				
Tool Joint Material	8.566/790	Tool Joint Material	8.566/790				
Chain Logger	760	Chain Logger	760				
Bit Size	7 7/8"	Bit Size	7 7/8"				
Type Fluid in Hole	Chemical	Type Fluid in Hole	Chemical				
Density / Viscosity	8.9145	Density / Viscosity	8.9145				
psi / Fluid Loss	9.518	psi / Fluid Loss	9.518				
Source of Sample	1.2 @ 0degF	Source of Sample	1.2 @ 0degF				
Temp @ Mass Temp	1.30 @ 0degF	Temp @ Mass Temp	1.30 @ 0degF				
Temp @ RT	0.70 @ 102degF	Temp @ RT	0.70 @ 102degF				
Source of RT / Fine	6.30 m	Source of RT / Fine	6.30 m				
Time Circulation Stopped	9:45 a.m	Time Circulation Stopped	9:45 a.m				
Time Logged on Station	1:02agr	Time Logged on Station	1:02agr				
Equipment Number	1-905	Equipment Number	1-905				
Location	HAYS, KS	Location	HAYS, KS				
Recorded By	GUS PRANENSKI	Recorded By	GUS PRANENSKI				
Witnessed By	M. Austin Kears	Witnessed By	M. Austin Kears				

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.

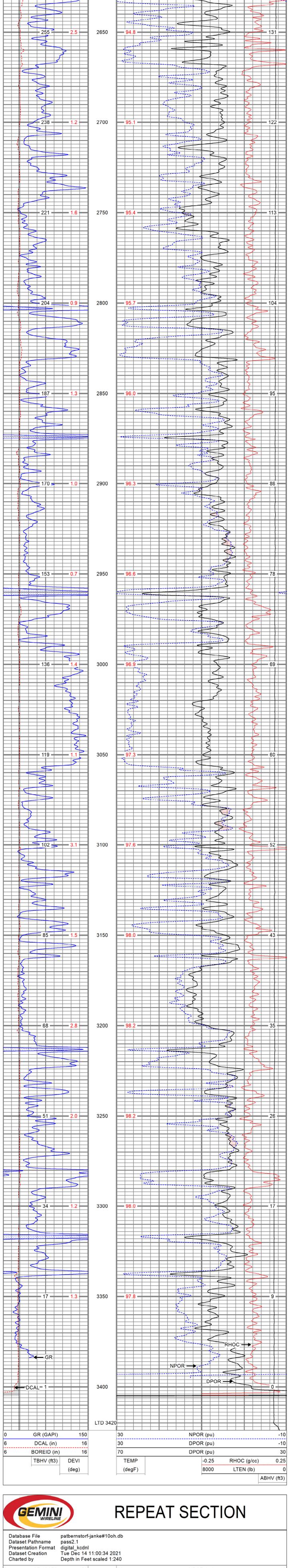
Comments

7 MILES NORTH OF CLAFLIN, WEST 1/4, SOUTH INTO.

Thanks for using Gemini Wireline LLC
785-625-1182

MAIN PASS

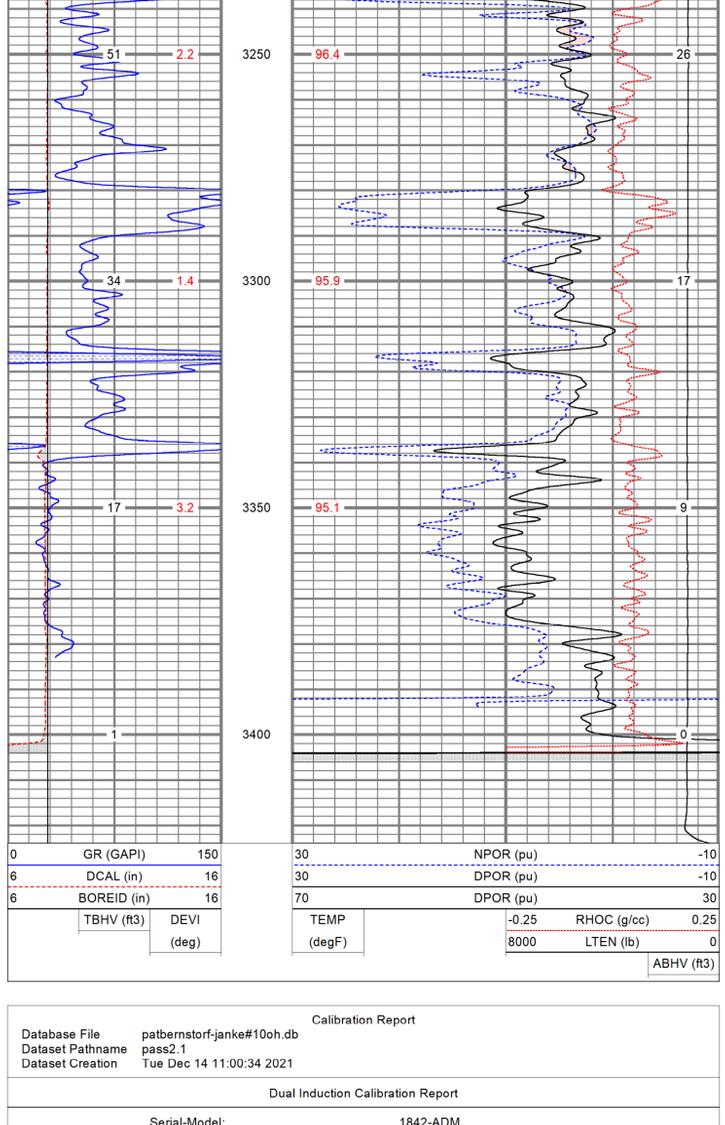
Database File: patbernstorf-janke#10oh.db
 Dataset Pathname: pass3.1
 Presentation Format: digital_kcdnl
 Dataset Creation: Tue Dec 14 10:56:33 2021
 Charted by: Depth in Feet scaled 1:240



0	GR (GAPI)	150	30	NPOR (pu)	-10	
6	DCAL (in)	16	30	DPOR (pu)	-10	
6	BOREID (in)	16	70	DPOR (pu)	30	
	TBHV (ft3)	DEVI (deg)	TEMP (degF)	-0.25	RHOC (g/cc)	0.25
				8000	LTEN (lb)	0
						ABHV (ft3)

REPEAT SECTION

Database File: patbernstorf-janke#10oh.db
 Dataset Pathname: pass2.1
 Presentation Format: digital_kcdnl
 Dataset Creation: Tue Dec 14 11:00:34 2021
 Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File: patbernstorf-janke#10oh.db
 Dataset Pathname: pass2.1
 Dataset Creation: Tue Dec 14 11:00:34 2021

Dual Induction Calibration Report

Serial-Model: 1842-ADM
 Surface Cal Performed: Mon Sep 20 22:00:42 2021
 Downhole Cal Performed: Mon Sep 20 22:00:24 2021
 After Survey Verification Performed: Mon Sep 20 22:05:52 2021

Surface Calibration

Loop:	Readings		References	Results			
	Air	Loop		m	b		
Deep	0.018	0.672	V	0.000	350.000 mmho/m	535.475	-9.896
Medium	0.003	0.769	V	0.000	400.000 mmho/m	522.607	-1.745

Internal Calibration

Internal:	Readings		References	Results			
	Zero	Cal		m	b		
Deep	0.018	0.672	V	0.000	350.000 mmho/m	535.240	-9.549
Medium	0.003	0.768	V	0.000	550.000 mmho/m	718.637	-2.088

Downhole Calibration

Internal:	Readings		References	Results				
	Zero	Cal		m	b			
Deep	-0.219	349.905	mmho/m	-0.343	349.810	mmho/m	1.000	-3.124
Medium	-0.118	399.722	mmho/m	-0.226	399.745	mmho/m	1.000	-3.108
Shallow	2.536	0.025	V	500.000	2.000	Ohm-m	180.330	-1.504

After Survey Verification

Internal:	Readings		Targets		Results			
	Zero	Cal	Zero	Cal	m'	b'		
Deep	0.000	0.000	mmho/m	-0.219	349.905	mmho/m	1.000	-3.124
Medium	0.000	0.000	mmho/m	-0.118	399.722	mmho/m	1.000	-3.108
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Neutron Calibration Report

Serial Number: AD5139
 Tool Model: AD5139
 Performed: (Not Performed)

Calibrator Value: 1 NAP1
 Calibrator Reading: 1 cps
 Sensitivity: 1 NAP1/cps

Temperature Calibration Report

Serial Number: WithMC
 Tool Model: WMC
 Performed: Fri Apr 19 12:15:04 2019

Reference:	Reading	
	degF	degF
Low Reference:	0.00	0.00
High Reference:	1.00	1.00

Gain: 1.00
 Offset: 0.00
 Delta Spacing: 1

Inclinometer Calibration Report

Performed: Wed May 5 19:20:48 2021

	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	205.00	1843.00	-1.00	1.00	gee
Y Accelerometer	205.00	1843.00	-1.00	1.00	gee
Z Accelerometer					gee

Gamma Ray Calibration Report

Serial Number: WithMC
 Tool Model: WMC
 Performed: Wed May 5 19:21:08 2021

Calibrator Value: 1.0 GAPI
 Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps
 Sensitivity: 1.0000 GAPI/cps