Company	LD DRILLING, INC.
Well	NO. 1 BELLER W
Field	HEN WEST
County	NORTON
State	KANSAS
Other Services	DIL, SDL, DSN
Permanent Datum	GL
Elevation	2207 ft K.B. 2205 ft D.F. 2202 ft G.L.
Log Measured From	KB 5 ft Above Perm. Datum
Drilling Measured From	KB
Date	3/12/2016
Run Number	ONE
Depth Driller	3712 ft
Depth Logger	3710 ft
Bottom Log Interval	3710 ft
Top Log Interval	3100 ft
Casing Driller Size at Depth	8 5/8 in @ 224 ft
Casing Logger Size at Depth	8 5/8 in @ 224 ft
Bit Size	7 7/8 in
Type Fluid in Hole	CHEMICAL
Density / Viscosity	9.2 lb/gal 50 s/qt
PH / Fluid Loss	9.0 pH 6.0 cc
Source of Sample	FLOWLINE
Rm @ Measured Temp	0.7 @ 75 °F
Rmf @ Measured Temp	0.6 @ 75 °F
Rmc @ Measured Temp	0.9 @ 75 °F
Source of Rmf / Rmc	MEASURED / CALCULATED
Rm @ BHT	0.3 @ 120 °F
Time Since Circulation	9 hrs
Time Since Last Log	1 hrs
Max Recorded Temp	120 °F
Equipment / Location	5-5 / HAYS
Recorded By	VAN
Witnessed By	MR. BRUNGARDT

COMPENSATED DENSITY/NEUTRON LOG

Field Print

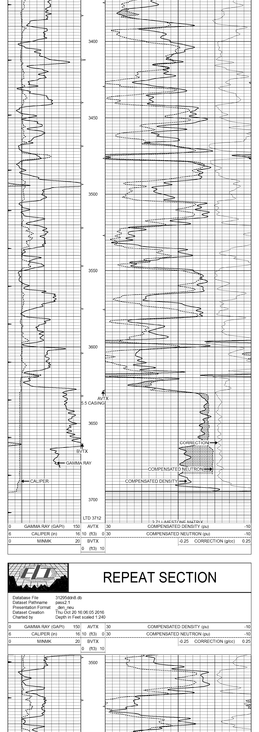
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 forth in our current Price Schedule.

Comments

THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
DIRECTIONS
NORTON KANSAS
WEST EDGE OF TOWN, GO SOUTH ON WI RD TO FIRST ROAD THAT ANGLES SOUTHWEST, GO 1 MILE, 1B SOUTH, WEST INTO

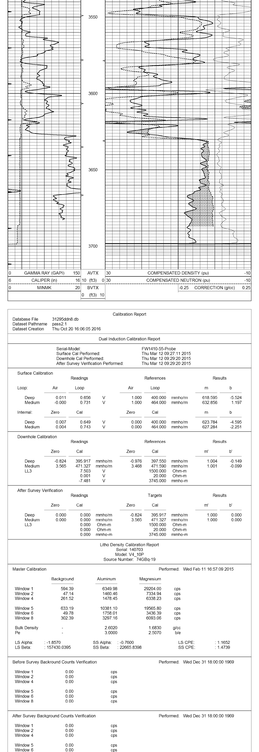
MAIN PASS

Database File 3120Sdddh.db
Dataset Pathname pass1.2
Presentation Format dev_res
Dataset Creation Thu Oct 20 16:17:57 2016
Charted by: Depth in Feet scaled 1:240



REPEAT SECTION

Database File 3120Sdddh.db
Dataset Pathname pass2.1
Presentation Format dev_res
Dataset Creation Thu Oct 20 16:06:05 2016
Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File 3120Sdddh.db
Dataset Pathname pass2.1
Dataset Creation Thu Oct 20 16:06:05 2016

Dual Induction Calibration Report

Serial-Model	FWV45-05-Probe
Calibration Performed	Thu Mar 12 09:29:20 2015
Downhole Cal Performed	Thu Mar 12 09:29:20 2015
After Survey Verification Performed	Thu Mar 12 09:29:20 2015

Surface Calibration

	Readings			References			Results		
Loop	Air	Loop		Air	Loop		m	b	
Deep	0.011	0.856	V	1.000	400.000	mmho/m	418.595	-0.524	
Medium	0.000	0.731	V	1.000	464.000	mmho/m	632.656	1.167	
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	0.710	V	0.000	464.000	mmho/m	627.284	-2.251	

Downhole Calibration

	Readings			References			Results		
	Zero	Cal		Zero	Cal		m'	b'	
Deep	-0.624	395.917	mmho/m	-0.976	397.151	mmho/m	1.004	-0.149	
Medium	1.505	463.917	mmho/m	3.449	463.917	mmho/m	1.000	-0.099	
LL3	.	7.502	Ohm-m	.	1500.000	Ohm-m			
	.	0.001	V	.	20.000	Ohm-m			
	.	7.481	V	.	1740.000	mmho-m			

After Survey Verification

	Readings			Targets			Results		
	Zero	Cal		Zero	Cal		m'	b'	
Deep	0.000	0.000	mmho/m	-0.924	397.917	mmho/m	1.000	0.000	
Medium	0.000	0.000	mmho/m	0.364	463.917	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	.	3740.000	mmho-m			

Litho Density Calibration Report
Tool Type: HLDS-A
Model: V4_50F
Source Number: 7NG8ig 15

Master Calibration Performed: Wed Feb 11 16:57:58 2015

	Background	Aluminum	Magnesium	
Window 1	594.39	6349.98	29204.00	cps
Window 2	1 1.00	1 1.00	1 1.00	cps
Window 3	267.52	1479.45	6338.23	cps
Window 5	633.19	10281.10	19565.80	cps
Window 6	49.78	1758.51	3436.39	cps
Window 8	302.39	3297.10	6600.05	cps
Bulk Density	.	2.6020	1.6830	g/cc
Pe	.	3.0600	2.0570	b/e

LS Alpha	-1.8570	SS Alpha	-0.7600	LS CPE	1.1052
LS Beta	1574.6396	SS Beta	2265.6398	SS CPE	1.4739

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

Window 1	0.00	cps
Window 2	0.00	cps
Window 3	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

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

Window 1	0.00	cps
Window 2	0.00	cps
Window 3	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 16:57:58 2015

Results	Readings		References (in)				Offset
	Low	High	Low	High		Gain	
5280 B	9455.1	.	9.6	14.0		0.0	1.2

Before Survey Caliper Verification Performed:

Reference	Reading
.	.

Caliper (in)

After Survey Caliper Verification Performed:

Reference	Reading
.	.

Caliper (in)

Compensated Neutron Calibration Report

Serial Number	0850DTPMC
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	07050E
Tool Model	Probe1
Performed:	Wed Jun 29 08:29 10 2016
Calibrator Value:	1.0 GAPI
Background Reading	0.0 cps
Calibrator Reading	1.0 cps
Sensitivity	0.3000 GAPI/cps