The Perforators LLC

Company	Kirp Oil Operations		
Well	Lindblom #1		
Field	Ellis		
County	Ellis		
State	Kansas		
Latitude		Longitude	
Elevation		Datum	
Log Date	20-Feb-2012	Log Time	
Run Number	ONE	Depth Reference	KB
Drilling Measured From	KB	Permanent Datum	GL
Elevation	KB 1779 ft	Above Perm. Datum	10 ft
Depth Driller	3900 ft	Depth Logged	3900 ft
Bottom Log Interval	3900 ft	Top Log Interval	3000 ft
Casing Driller	8.625 @ 221 ft	Casing Logged	
Bit Size	7.875 in	Type Fluid in Hole	Chemical
Density	9.2 lb/gal	Viscosity	50 s
Fluid Loss	8.0 cc	Source of Sample	Flowline
Rm	0.77 @ 70 F	Rmf	0.61 @ 70 F
Rmc	0.93 @ 70 F	Source Rmf / Rmc	Calculated / Calculated
Rm @ Meas. Temp.	0.37 @ 122 F	Rmf @ Meas. Temp.	0.29 @ 122 F
Rmc @ Meas. Temp.	0.46 @ 122 F	Max Rec. Temp.	122 F
Equipment	5-Mile	Location	Hays, KS
Recorded By	M. Wise	Witnessed By	Mr. Kirp

COMPENSATED DENSITY NEUTRON LOG

Field Notes

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 The Perforators LLC
Hays, KS 785-621-4604

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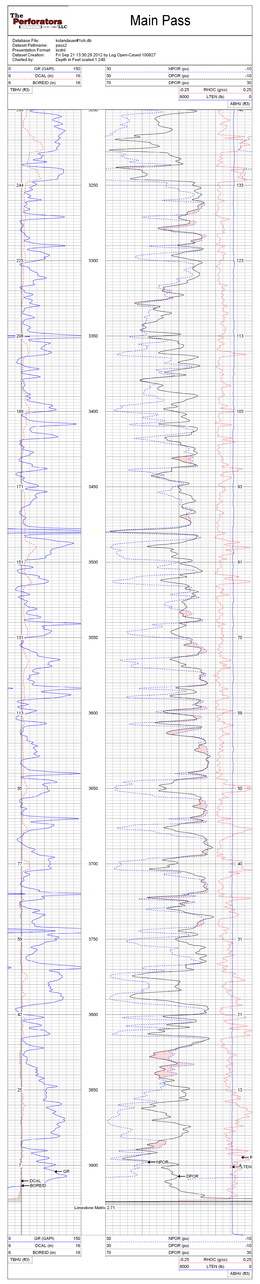
Main Pass

Database File: kolandusen#1sh.db
Dataset Pathname: pass2
Presentation Format: dual induction
Dataset Creation: Fri Sep 21 13:50:29 2012 by Log Open-Caved 100627
Charted by: Depth in Feet scaled 1:240



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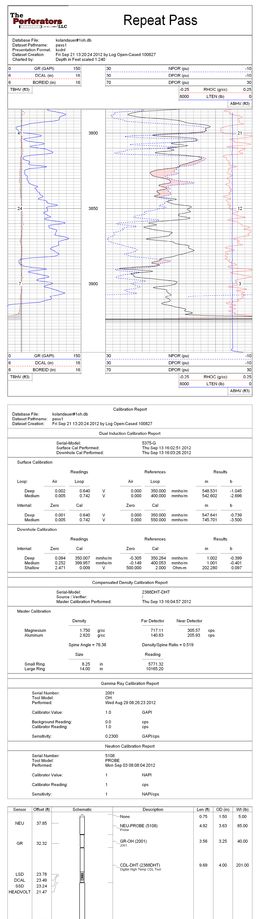
Repeat Pass

Database File: kolandusen#1sh.db
Dataset Pathname: pass1
Presentation Format: dual induction
Dataset Creation: Fri Sep 21 13:20:24 2012 by Log Open-Caved 100627
Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File: kolandusen#1sh.db
Dataset Pathname: pass1
Dataset Creation: Fri Sep 21 13:20:24 2012 by Log Open-Caved 100627

Dual Induction Calibration Report

Serial-Model	5275-G
Borehole Cal Performed	Thu Sep 13 16:02:51 2012
Downlink Cal Performed	Thu Sep 13 16:03:28 2012

Surface Calibration

	Readings			References			Results		
Loop:	Air	Loop		Air	Loop		m	b	
Deep	0.002	0.640	V	0.000	350.000	mmho/m	548.531	-1.045	
Medium	0.005	0.742	V	0.000	400.000	mmho/m	542.602	-2.998	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.001	0.640	V	0.000	350.000	mmho/m	547.641	-0.739	
Medium	0.005	0.742	V	0.000	550.000	mmho/m	745.701	-3.500	

Downhole Calibration

	Readings			References			Results		
Deep	0.004	350.007	mmho/m	-2.300	350.264	mmho/m	1.002	-0.369	
Medium	0.252	399.957	mmho/m	-0.149	450.053	mmho/m	1.001	-0.401	
Shallow	2.471	0.009	V	500.000	2.000	Ohm-m	202.280	0.097	

Compensated Density Calibration Report

Serial-Model	2366DHT-CHT
Source / Verifier	
Master Calibration Performed	Thu Sep 13 16:04:57 2012

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	717.11	308.57	cps
Aluminum	2.820	g/cc	149.63	205.60	cps

Spine Angle = 76.38 Density/Spine Ratio = 0.519

	Size		Reading
Small Ring	8.25	in	5771.32
Large Ring	14.00	in	10185.25

Gamma Ray Calibration Report

Serial Number:	2001
Tool Model:	CHI
Performed:	Wed Aug 29 08:29:23 2012
Calibrator Value:	1.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	1.0 cps
Sensitivity:	0.2300 GAPI/cps

Neutron Calibration Report

Serial Number:	5108
Tool Model:	PROBE
Performed:	Mon Sep 03 08:08:54 2012
Calibrator Value:	1 NAPI
Calibrator Reading:	1 cps
Sensitivity:	1 NAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			None	0.75	1.50	5.00
NEU	37.85		NEU-PROBE (5108) Neutron	4.92	3.63	85.00
GR	32.32		GR-CHI (2001) GR	3.58	3.25	40.00
LSD	23.78		COL-DHT (2366DHT) Digital High Temp CDL Tool	9.69	4.00	201.00
DCAL	23.48					
SSD	23.24					
HEADVOLT	21.47					
			DIL-G (5375) Overload	21.47	4.00	345.00
OLD	10.60					
SP	10.60					
CILM	6.89					
RLL3	1.70					

Dataset: kolandusen#1sh.db: field/redrun1/pass1
Total Length: 40.38 ft
Total Weight: 676.00 lb
O.D. 4.00 in