| | |
|---|---|
| Company | Joson Oil Company |
| Well | Hilary #1 |
| Field | Unknown |
| County | Bunker Hill |
| State | Kansas |
| Country | USA |
| Service Date | 10-15-2012 |
| Run Number | ONE |
| Depth Reference | KB |
| Elevation | KB 0 ft, GL 0 ft |
| Log Measured From | KB 0 ft Above Perm. Datum |
| Drilling Measured From | KB |

| Logging Date | 10-15-2012 | | |
|---|---|---|---|
| Run Number | ONE | ONE | ONE |
| Depth Driller | 3500 | 3500 | 3500 |
| Depth Logger | 3496 | 3496 | 3496 |
| Bottom Logged Interval | 3496 | 3496 | 3496 |
| Top Log Interval | 2600 | 2600 | 2600 |
| Casing Driller Size @ Depth | 8 5/8 @ 224 | | |
| Casing Logger Size @ Depth | | | |
| Bit Size | 7 7/8 | | |
| Type Fluid in Hole | GEL CHEM | | |
| Density / Viscosity | 9.2 / 50 | | |
| PH / Fluid Loss | 9.0 / 6.0 | | |
| Source of Sample | FLOWLINE | | |
| Rm @ Meas Temp | 1.1 @ 70 | | |
| Rmf @ Meas Temp | 1.1 @ 70 | | |
| Rmc @ Meas Temp | 1.1 @ 70 | | |
| Source Rmf / Rmc | MEASURED | | |
| Rm @ BHT | 1.1 @ 100 | | |
| Max Recorded Temp | 100 | | |
| Equipment Number | 10-101 | | |
| Location | Hays, KS | | |
| Recorded By | J.Fox | | |
| Witnessed By | Bunker Hill | | |

**The Perforators** LLC

COMPENSATED DENSITY LOG

Company: Joson Oil Company
Well: Hilary #1
Field: Unknown
County: Bunker Hill
State: Kansas
Country: USA
Location: SEC 15 TWP 15S RGE 19W
Elev: KB 0 ft, GL 0 ft
Date: 10-15-2012
Run: ONE
Depth Driller: 3500
Depth Logger: 3496
Bottom Log Interval: 3496
Top Log Interval: 2600
Drill Fluid: GEL CHEM
Density / Viscosity: 9.2 / 50
PH / Fluid Loss: 9.0 / 6.0
Rm @ Meas Temp: 1.1 @ 70
Rmf @ Meas Temp: 1.1 @ 70
Rmc @ Meas Temp: 1.1 @ 70
Rm @ BHT: 1.1 @ 100
Max Recorded Temp: 100
Equipment: 10-101
Recorded By: J.Fox
Witnessed By: Bunker Hill

Remarks: Run 1 Scale 1:200 Log Interval 2600 - 3496

All interpretations are opinions based on inferences from electrical or other measurements and are special and do not guarantee the accuracy or correctness of any interpretation, and we shall not 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 standard terms and conditions as set forth in our current price schedule.

Comments

Bunker Hill 5 to stop sign, E to 170th, S4, W1, NE into.

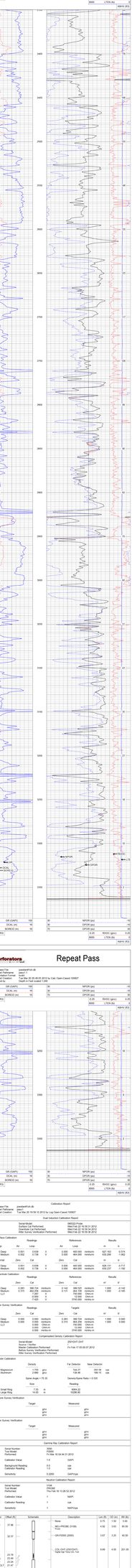
Thank you for using The Perforators LLC
Hays, KS 785-621-4604

## Main Pass

Database File: jasonfed1ch.db
Dataset Pathname: pass1.1
Dataset Presentation: Main Pass
Dataset Creation: Tue Mar 20 19:38:20 2012 by Calc Open Cased 169927
Charted by: Depth in Feet scaled 1:240

| | | | | | |
|---|---|---|---|---|---|
| 0 | GR (GAPI) | 150 | 10 | MPOR (pu) | -10 |
| 6 | DCAL (in) | 16 | 10 | DPOR (pu) | -10 |
| 0 | BDRHO (g/cc) | 3 | 0.25 | BHCC (gm/cc) | 0.25 |
| Depth (ft/in) | | | 0000 | LTDN (lb) | 0000 |

HDAYS (ft/3)




0 GR (GAPI) 150 | 10 MPOR (pu) -10
6 DCAL (in) 16 | 10 DPOR (pu) -10
0 BDRHO (g/cc) 3 | 0.25 BHCC (gm/cc) 0.25
Depth (ft/in) | 0000 LTDN (lb) 0000
HDAYS (ft/3)

## Repeat Pass

Database File: jasonfed1ch.db
Dataset Pathname: pass1.1
Dataset Presentation: Repeat Pass
Dataset Creation: Tue Mar 20 20:45:05 2012 by Calc Open Cased 169927
Charted by: Depth in Feet scaled 1:240

| | | | | | |
|---|---|---|---|---|---|
| 0 | GR (GAPI) | 150 | 10 | MPOR (pu) | -10 |
| 6 | DCAL (in) | 16 | 10 | DPOR (pu) | -10 |
| 0 | BDRHO (g/cc) | 3 | 0.25 | BHCC (gm/cc) | 0.25 |
| Depth (ft/in) | | | 0000 | LTDN (lb) | 0000 |

HDAYS (ft/3)




0 GR (GAPI) 150 | 10 MPOR (pu) -10
6 DCAL (in) 16 | 10 DPOR (pu) -10
0 BDRHO (g/cc) 3 | 0.25 BHCC (gm/cc) 0.25
Depth (ft/in) | 0000 LTDN (lb) 0000
HDAYS (ft/3)

### Calibration Report

Database File: jasonfed1ch.db
Dataset Pathname: pass1.1
Dataset Creation: Tue Mar 20 19:56:10 2012 by Log Open Cased 169927

#### Dual Induction Calibration Report

Serial Model: DIESD Probe
Before Survey Verification Performed: Wed Feb 22 16:39:18 2012
Overview Cal Performed: Wed Feb 22 16:39:18 2012
After Survey Verification Performed: Wed Feb 22 16:39:18 2012

**Surface Calibration**

| | Readings | | | References | | | Results | | |
|---|---|---|---|---|---|---|---|---|---|
| | Loop | Air | Loop | Air | Loop | | m | b | |
| Deep | 0.001 | 0.018 | V | 0.000 | 400.000 | mmho/m | 637.500 | -0.574 | |
| Medium | 0.000 | 0.018 | V | 0.000 | 400.000 | mmho/m | 637.500 | -0.574 | |
| Internal | Zero | Cal | | Zero | Cal | | m | b | |
| Deep | -0.001 | 0.918 | V | 0.000 | 400.000 | mmho/m | 436.101 | -0.117 | |
| Medium | -0.002 | 0.736 | V | 0.000 | 400.000 | mmho/m | 436.207 | -0.192 | |

**Downhole Calibration**

| | Readings | | | References | | | Results | | |
|---|---|---|---|---|---|---|---|---|---|
| | Zero | Cal | | Zero | Cal | | m' | b' | |
| Deep | 0.283 | 284.334 | mmho/m | 0.142 | 396.725 | mmho/m | 1.000 | -0.142 | |
| Medium | 0.215 | 284.334 | mmho/m | 0.110 | 396.725 | mmho/m | 1.000 | -0.165 | |
| CLS | 7.267 | V | | | 750.000 | Ohm-m | | | |
| | 7.267 | V | | | 250.000 | Ohm-m | | | |
| | 7.267 | V | | | 250.000 | mmho/m | | | |
| Deep | 0.000 | 0.000 | mmho/m | 1.283 | 396.724 | mmho/m | 1.000 | 0.000 | |
| Medium | 0.000 | 0.000 | mmho/m | 0.215 | 396.724 | mmho/m | 1.000 | 0.000 | |
| CLS | | 0.000 | Ohm-m | | 750.000 | Ohm-m | | | |
| | | 0.000 | Ohm-m | | 250.000 | Ohm-m | | | |
| | | 0.000 | mmho/m | | 250.000 | mmho/m | | | |

**After Survey Verification**

#### Compensated Density Calibration Report

Serial Model: DSNT
Source: Calibrator
Before Survey Verification Performed: Fri Feb 17 05:55:07 2012
After Survey Verification Performed:

**Master Calibration**

| | Density | | For Detector | Near Detector | |
|---|---|---|---|---|---|
| Magnesium | 2.000 | gcc | 1ns Ct | 20.12 | cps |
| Aluminum | 2.680 | gcc | 15ns Ct | 190.13 | cps |
| | Same Angle = 75.35 | | Density/Same Ratio = 0.535 | | |

**Calibrator Verification**

| | Size | | Reading | |
|---|---|---|---|---|
| Small Ring | 7.50 | in | ARM-22 | |
| Large Ring | 14.00 | in | 102M-80 | |

**Before Survey Verification**

| Target | Measured |
|---|---|
| gcc | gcc |
| gcc | gcc |
| gcc | gcc |
| gcc | gcc |

**After Survey Verification**

| Target | Measured |
|---|---|
| gcc | gcc |
| gcc | gcc |
| gcc | gcc |
| gcc | gcc |

#### Gamma Ray Calibration Report

| | |
|---|---|
| Serial Number | 3108 |
| Last Repair | 4000 |
| Last Service Performed | Fri Mar 16 04:44:31 2012 |
| Calibrator Value | 1.0 NAPI |
| Background Reading | 0.0 cps |
| Calibrator Reading | 1.0 cps |
| Sensitivity | 0.2200 GAPI/cps |

#### Neutron Calibration Report

| | |
|---|---|
| Serial Number | 3108 |
| Last Repair | 4000 |
| Last Service Performed | Thu Feb 16 13:26:32 2012 |
| Calibrator Value | 1 NAPI |
| Calibration Reading | 1 cps |
| Sensitivity | 1 NAPI/cps |

| Sensor | Offset (ft) | Schematic | Description | Len (ft) | OD (in) | Wt (lb) |
|---|---|---|---|---|---|---|
| NEU | 37.96 | | Name | 3.75 | 1.50 | 1.00 |
| | | | NEU-PROBE (3108) Probe | 4.92 | 3.63 | 80.00 |
| GR | 32.17 | | GR-FOXX (2600) | 5.67 | 3.25 | 40.00 |
| | | | CDL CNT (2600/2475) Open Hole Vertical Log Type | 9.99 | 4.18 | 201.00 |
| LSD | 23.78 | | | | | |
| SSD | 23.78 | | | | | |
| DDL | 23.26 | | | | | |
| HEADVOLT | 21.47 | | | | | |
| CLLD | 10.92 | | CIL Probe (2600/2) Probe Cable Section | 21.47 | 4.00 | 345.00 |
| SP | 10.92 | | | | | |
| CLLM | 8.66 | | | | | |
| RLL3 | 1.70 | | | | | |

Dataset: jasonfed1ch.db: fwdattachcurv1pass1
Total Length: 40.48 ft
Max OD: 4.18 in
Max Wt: 345.00 lb