JW WIRELINE COMPANY

CEMENT BOND GAMMA RAY COLLAR CORRELATION LOG

Company	Sundance Energy Inc.
Well	HFE 24-22
Field	Wattenburg
County	Weld
State	CO

Company Sundance Energy Inc.
Well HFE 24-22
Field Wattenburg
County Weld State CO
Location: API #: 05123357100000
SHL: 1120' FSL & 840' FWL SW SW
BHL: 713' FSL & 1969' FWL SE SW
SEC 22 TWP 4N RGE 68W

Other Services: NONE

Permanent Datum: Ground Level Elevation 4920'
Log Measured From: Kelly Bushing 16' A.G.L
Drilling Measured From: Kelly Bushing

Elevation
K.B. 4936'
D.F. 4935'
G.L. 4920'

Date	Oct 09, 2012
Run Number	One
Depth Driller	7547'
Depth Logger	7512'
Bottom Logged Interval	7512'
Top Log Interval	3380'
Open Hole Size	7 7/8"
Type Fluid	Water
Density / Viscosity	///
Max. Recorded Temp.	///
Estimated Cement Top	3526'
Time Well Ready	R.O.A
Time Logger on Bottom	///
Equipment Number	3011
Location	Brighton
Recorded By	C. Sisneros
Witnessed By	Jeremy Rogers

Borehole Record

Run Number	Bit	From	To

Tubing Record

Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8.63"		00'	593'
Prot. String				
Production String	4.5"	11.6	00'	TD
Liner				

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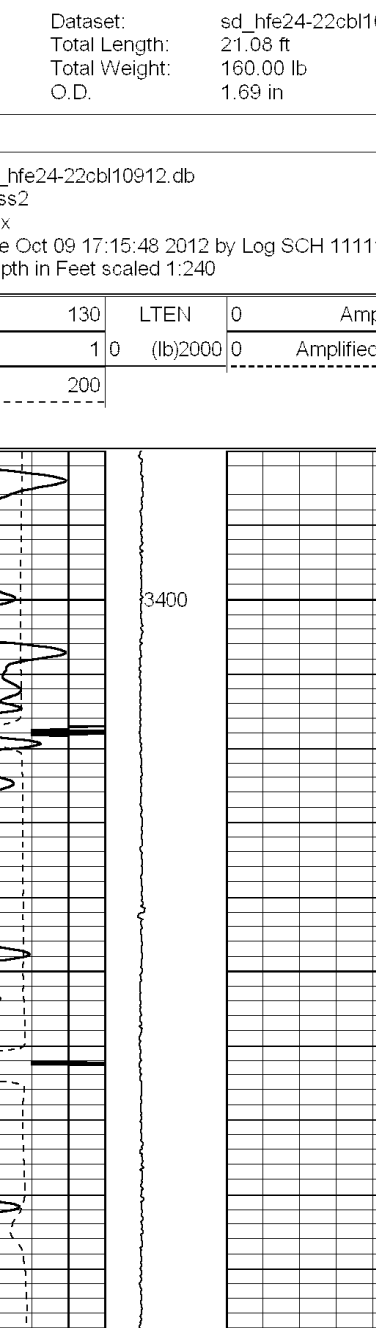
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

Log correlated to HR Induction CD/CN log dated September 30, 2012.
Log split for correlation purposes.



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
CCL	20.25	CCL-169TEKCO (169) 1 11/16" Tekco Logging	1.67	1.69	20.00
		CENT-TekCo (1 11/16 Adj.) (001) 1 11/16" Tekco Cent	2.92	1.69	10.00
		CBL-3-5tekco169 (1) 1 11/16 Tekco w/o Temp	9.75	1.69	70.00
WVF3	11.00				
WVF5	10.17				
		CENT-TekCo (1 11/16 Adj.) (002) 1 11/16" Tekco Cent	2.92	1.69	10.00
		GR-1.69TEKCO (576) 1 11/16 Tekco Logging GR	3.83	1.69	50.00
GR	1.00				

Dataset: sd_hfe24-22cbl10912.db: field/well/run1/pass1
Total Length: 21.08 ft
Total Weight: 160.00 lb
O.D. 1.69 in

Database File: sd_hfe24-22cbl10912.db
Dataset Pathname: pass2
Presentation Format: cblx
Dataset Creation: Tue Oct 09 17:15:48 2012 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

30 GR (GAPI) 130	LTEN	0 Amplitude (mV) 100	200 Variable Density 1200
-9 CCL 1	0 (lb)2000	0 Amplified Amplitude (mV) 30	
300 TT3 (usec) 200			

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-9 CCL 1	0 (lb)2000	0 Amplified Amplitude (mV) 30	
300 TT3 (usec) 200			

Database File: sd_hfe24-22cbl10912.db
Dataset Pathname: pass1
Presentation Format: cblx
Dataset Creation: Tue Oct 09 16:46:26 2012 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

0 GR (GAPI) 180	LTEN	0 Amplitude (mV) 100	200 Variable Density 1200
-9 CCL 1	0 (lb)2000	0 Amplified Amplitude (mV) 30	
300 TT3 (usec) 200			

Calibration Report

Database File:	sd_hfe24-22cbl10912.db
Dataset Pathname:	pass1
Dataset Creation:	Tue Oct 09 16:46:26 2012 by Log SCH 111116

Gamma Ray Calibration Report

Serial Number:	576	
Tool Model:	1.69TEKCO	
Performed:	Mon Oct 01 07:57:11 2012	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Cement Bond Log Calibration Report

Serial Number:	1	
Tool Model:	3-5tekco169	
Performed:	Tue Oct 09 16:27:21 2012	
Depth:	3509.69	ft
Casing Diameter:	4.5	in

	3' Spacing	5' Spacing	
Signal Zero:	1	1	mV
Calibrated Amplitude:	81.1961	81.1961	mV
Reading at Signal Zero:	0.06	0	V
Reading in Free Pipe:	2.5	2.5	V
Gain:	32.8673	32.0784	
Offset:	-0.972035	1	