J-W WIRELINE COMPANY

CEMENT BOND GAMMA RAY COLLAR CORRELATION LOG

Company	NOBLE ENERGY INC.
Well	IRVINE PC E 02-18
Field	WATTENBERG
County	WELD
State	COLORADO

Company NOBLE ENERGY INC.
Well IRVINE PC E 02-18
Field WATTENBERG
County WELD State COLORADO
Location: API #: 05-123-33632-00
1411' FNL & 2507' FEL
SW NE
SEC. 2 TWP. 6N RGE. 65W
SEC TWP RGE

Other Services
NONE

Permanent Datum GROUND LEVEL Elevation 4830
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 4843
D.F. 4843
G.L. 4830

Date	29-FEBUARY-2012
Run Number	ONE
Depth Driller	7328
Depth Logger	7235
Bottom Logged Interval	7234
Top Log Interval	1970
Open Hole Size	7 7/8
Type Fluid	WATER
Density / Viscosity	--
Max. Recorded Temp.	245
Estimated Cement Top	2098
Time Well Ready	--
Time Logger on Bottom	--
Equipment Number	2405/1 11/16 TECKO
Location	BRIGHTON
Recorded By	HAYES
Witnessed By	MR. MIKE CONREY

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8 5/8	24#	SURFACE	699
Prot. String				
Production String	4.5	11.6#	SURFACE	7318
Liner				

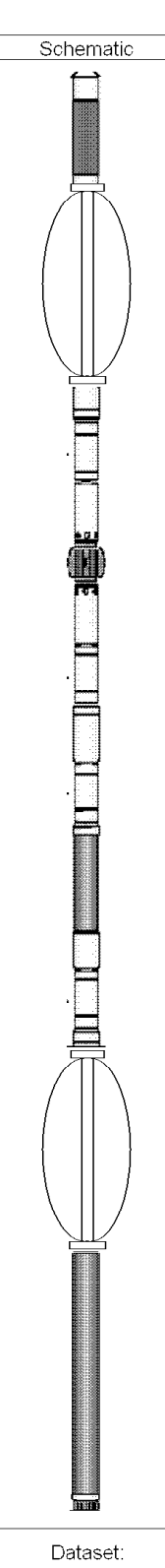
<<< Fold Here >>>

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 AC, TR, SD, DSN LOG
DATED 15-FEBUARY-2012

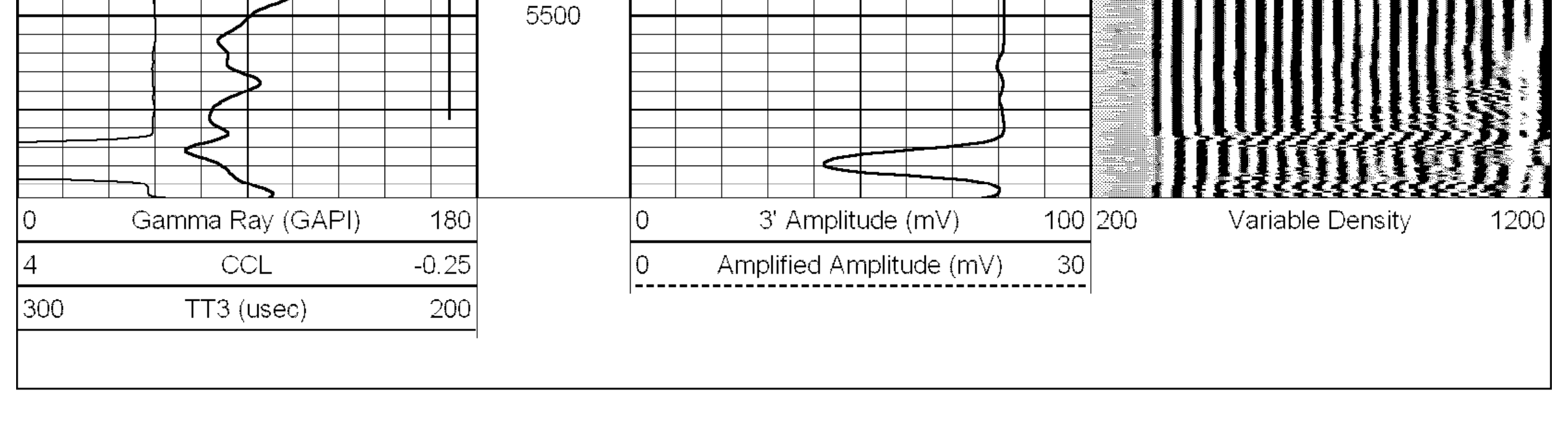
LOG SPLIT FOR CORRELATION PURPOSES



Sensor	Offset (ft)	Schematic	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
WVF3	11.00		CBL-3-5tekco169 (1) 1 11/16 Tekco w/o Temp	9.75	1.69	70.00
WVF5	10.17					
			CENT-TekCo (1 11/16 Adj.) (002) 1 11/16" Tekco Cent	2.92	1.69	10.00
GR	1.00		GR-1.69TEKCO (576) 1 11/16 Tekco Logging GR	3.83	1.69	50.00

Dataset: irvine pc e 02-18.db: field/well/run1/pass2
Total Length: 21.08 ft
Total Weight: 160.00 lb
O.D. 1.69 in

Database File: irvine pc e 02-18.db
Dataset Pathname: pass2
Presentation Format: cblx
Dataset Creation: Wed Feb 29 11:19:48 2012 by Log Std Casedhole 10121
Charted by: Depth in Feet scaled 1:240



0 Gamma Ray (GAPI) 180	0 3' Amplitude (mV) 100	200 Variable Density 1200
4 CCL -0.25	0 Amplified Amplitude (mV) 30	
300 TT3 (usec) 200		

Database File: irvine pc e 02-18.db
Dataset Pathname: pass1
Presentation Format: cblx
Dataset Creation: Wed Feb 29 10:53:01 2012 by Log Std Casedhole 10121
Charted by: Depth in Feet scaled 1:240

0 Gamma Ray (GAPI) 180	0 3' Amplitude (mV) 100	200 Variable Density 1200
4 CCL -0.25	0 Amplified Amplitude (mV) 30	
300 TT3 (usec) 200		

0 Gamma Ray (GAPI) 180	0 3' Amplitude (mV) 100	200 Variable Density 1200
4 CCL -0.25	0 Amplified Amplitude (mV) 30	
300 TT3 (usec) 200		

Calibration Report

Database File: irvine pc e 02-18.db
Dataset Pathname: pass2
Dataset Creation: Wed Feb 29 11:19:48 2012 by Log Std Casedhole 10121

Gamma Ray Calibration Report

Serial Number:	576	
Tool Model:	1.69TEKCO	
Performed:	Thu Jan 12 13:03:35 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:	Wed Feb 29 10:37:54 2012		
Depth:	1410.34	ft	
Casing Diameter:	4.5	in	
	3' Spacing	5' Spacing	
Signal Zero:	3	3	mV
Calibrated Amplitude:	81.1961	81.1961	mV
Reading at Signal Zero:	-0.2	0	V
Reading in Free Pipe:	2.5	2.5	V
Gain:	28.9615	31.2784	
Offset:	8.7923	3	