J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY
COLLAR CORRELATION LOG

Company NOBLE ENERGY INC.
Well STROHAUER PC G 05-28D
Field WATTENBERG
County WELD
State COLORADO

Company NOBLE ENERGY INC.
Well STROHAUER PC G 05-28D
Field WATTENBERG
County WELD State COLORADO
Location: API # : 05-123-34769-00
SHL: 523' FNL & 694' FEL NENE
SEC. 5 TWP. 4N RGE. 65W
BHL: 70' FSL & 2607' FEL SWSE
SEC 32 TWP 5N RGE 65W
Other Services
NONE

Permanent Datum GROUND LEVEL Elevation 4675
Log Measured From KELLY BUSHING
Drilling Measured From KELL BUSHING
Elevation
K.B. 4688
D.F. 4687
G.L. 4675

Date	27-FEBUARY-2012
Run Number	ONE
Depth Driller	7652
Depth Logger	7565
Bottom Logged Interval	7564
Top Log Interval	1040
Open Hole Size	7 7/8
Type Fluid	WATER
Density / Viscosity	—
Max. Recorded Temp.	245
Estimated Cement Top	1390
Time Well Ready	—
Time Logger on Bottom	—
Equipment Number	2405/1 11/16 TECKO
Location	BRIGHTON
Recorded By	HAYES
Witnessed By	MR. JOE BRNAK

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	681
Prot. String				
Production String	4.5	11.6 #	SURFACE	7642
Liner				

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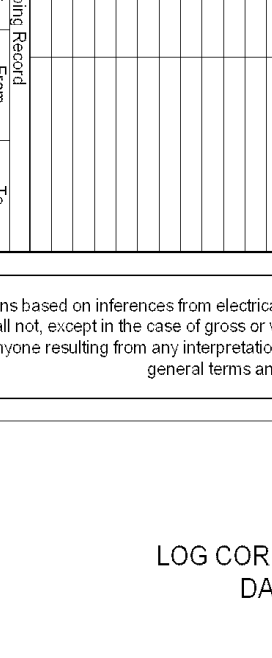
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 CD, CN, ML LOG
DATED 15-FEBUARY-2012

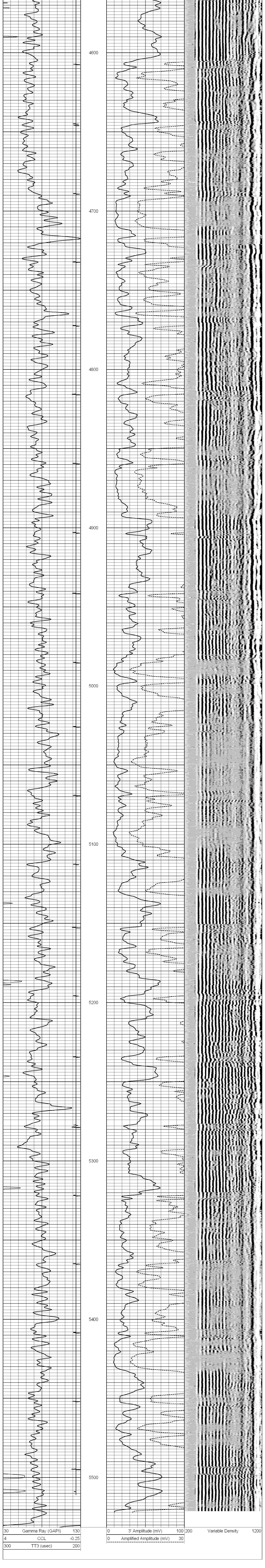
LOG SPLIT FOR CORRELATION PURPOSES

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: strohauer pc g 05-28d.db: field/well/run1/pass3
Total Length: 21.08 ft
Total Weight: 160.00 lb
O.D. 1.69 in

Database File: strohauer pc g 05-28d.db
Dataset Pathname: pass3
Presentation Format: cblx
Dataset Creation: Mon Feb 27 14:02:36 2012 by Log Std Casedhole 10121
Charted by: Depth in Feet scaled 1:240

30	Gamma Ray (GAPI)	130	0	3' Amplitude (mV)	100	200	Variable Density	1200
4	CCL	-0.25	0	Amplified Amplitude (mV)	30			
300	TT3 (usec)	200						



30	Gamma Ray (GAPI)	130	0	3' Amplitude (mV)	100	200	Variable Density	1200
4	CCL	-0.25	0	Amplified Amplitude (mV)	30			
300	TT3 (usec)	200						

Database File: strohauer pc g 05-28d.db
Dataset Pathname: pass2
Presentation Format: cblx
Dataset Creation: Mon Feb 27 13:28:43 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: strohauer pc g 05-28d.db
Dataset Pathname: pass3
Dataset Creation: Mon Feb 27 14:02:36 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:	Mon Feb 27 10:41:33 2012		
Depth:	1458.28	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:	-0.25	0	V
Reading in Free Pipe:	2.5	2.5	V
Gain:	28.4349	31.2784	
Offset:	10.1087	3	