J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY
COLLAR CORRELATION LOG

Company	NOBLE ENERGY INC.
Well	NEI C18-20D
Field	WATTENBERG
County	WELD
State	COLORADO

Company NOBLE ENERGY INC.
Well NEI C18-20D
Field WATTENBERG
County WELD State COLORADO

Location: API # : 05-123-34398-00
SHL: 2489' FSL & 2049' FWL NESW
BHL: 2525' FSL & 1331' FWL NESW
SEC. 18, TWP. 4N RGE. 64W
SEC TWP RGE

Other Services
NONE

Permanent Datum GROUND LEVEL Elevation 4834
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 4847
D.F. 4847
G.L. 4834

Date	04-JAN-2012		
Run Number	ONE		
Depth Driller	7376		
Depth Logger	7288		
Bottom Logged Interval	7287		
Top Log Interval	1700		
Open Hole Size	7 7/8		
Type Fluid	WATER		
Density / Viscosity	---		
Max. Recorded Temp.	250		
Estimated Cement Top	1874		
Time Well Ready	---		
Time Logger on Bottom	---		
Equipment Number	2405/ 1 11/16 TEKCO		
Location	BRIGHTON		
Recorded By	HAYES/KRAL		
Witnessed By	CASEY RUPPEL		

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	650
Prot. String				
Production String	4.5	11.6#	SURFACE	7346
Liner				

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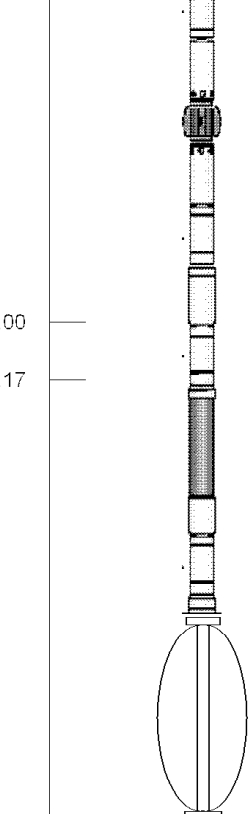
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 10-NOV-2011

LOG SPLIT FOR CORRELATION PURPOSES

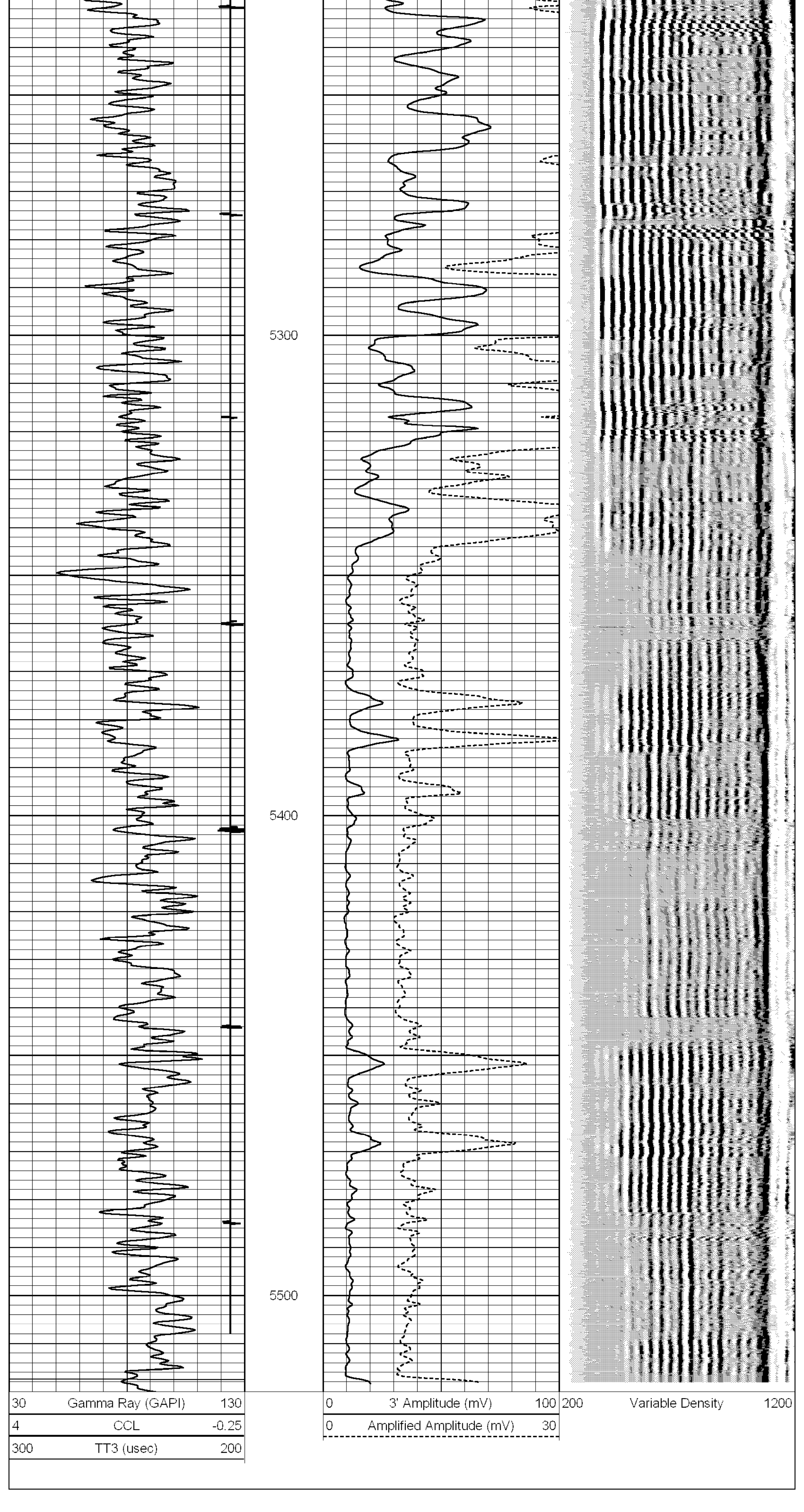


Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
CCL	20.25		CCL-169TEKCO (169) 1 11/16" Tekco Logging	1.67	1.69	20.00
			CENT-TekCo (1 11/16 Adj.) (001) 1 11/16" Tekco Cent	2.92	1.69	10.00
WVF3	11.00		CBL-3-5tekco169 (1) 1 11/16 Tekco w/o Temp	9.75	1.69	70.00
WVF5	10.17					
			CENT-TekCo (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: nei c 18-20d.db: field/well/run1/pass3
Total Length: 21.08 ft
Total Weight: 160.00 lb
O.D. 1.69 in

Database File: nei c 18-20d.db
Dataset Pathname: pass3
Presentation Format: cblx
Dataset Creation: Wed Jan 04 09:16:17 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				



Database File: nei c 18-20d.db
Dataset Pathname: pass2
Presentation Format: cblx
Dataset Creation: Wed Jan 04 08:44:24 2012 by Log Std Casedhole 10121
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: nei c 18-20d.db
Dataset Pathname: pass3
Dataset Creation: Wed Jan 04 09:16:17 2012 by Log Std Casedhole 10121

Gamma Ray Calibration Report

Serial Number:	576	
Tool Model:	1.69TEKCO	
Performed:	Sun Jun 13 14:33:21 1993	
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 Jan 03 12:01:30 2012		
Depth:	971	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:	-0.7	0	V
Reading in Free Pipe:	2.5	2.5	V
Gain:	24.4363	31.2784	
Offset:	20.1054	3	