J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY
COLAR CORRELATION LOG

Company	NOBLE ENERGY INC.
Well	WELLS RANCH PC AA 22-13
Field	WATTENBERG
County	WELD
State	COLORADO

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Well WELLS RANCH PC AA 22-13
Field WATTENBERG
County WELD State COLORADO

Location: API #: 05-123-29098-00
848' FSL & 594' FWL
SW SW
SEC. 22 TWP. 6N RGE. 63W

SEC	TWP	RGE	
Permanent Datum	GROUND LEVEL	Elevation	4757
Log Measured From	KELLY BUSHING		
Drilling Measured From	KELLY BUSHING		

Other Services: NONE

Elevation: K.B. 4771, D.F. 4770, G.L. 4757

Date	03-FEBUARY-2011
Run Number	ONE
Depth Driller	6995
Depth Logger	6899
Bottom Logged Interval	6892
Top Log Interval	1690
Open Hole Size	7 7/8
Type Fluid	WATER
Density / Viscosity	--
Max. Recorded Temp.	240
Estimated Cement Top	1810
Time Well Ready	--
Time Logger on Bottom	--
Equipment Number	2405/YELLOW
Location	BRIGHTON
Recorded By	HAYES
Witnessed By	MR.MITCH TRIMBLE

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	614
Prot. String				
Production String	4.5	11.6#	SURFACE	6982
Liner				

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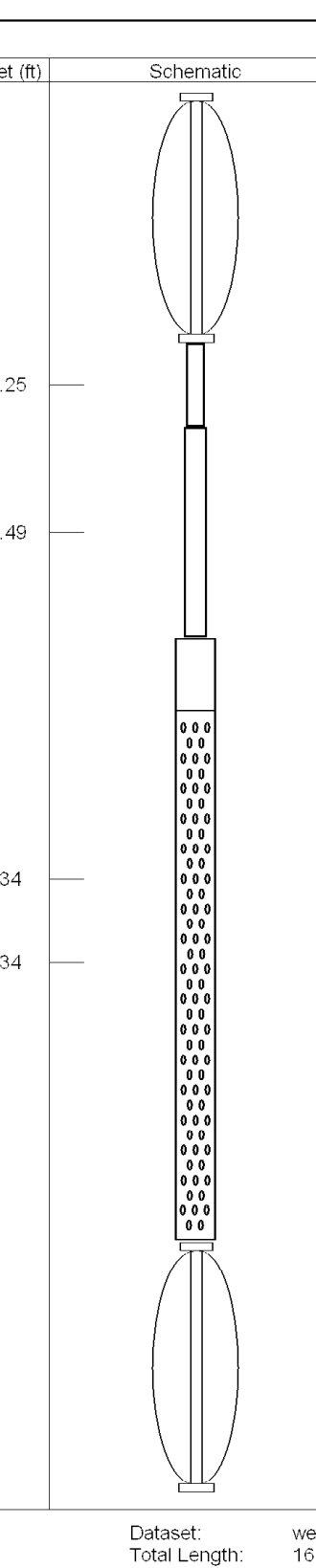
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 20-JANUARY-2011

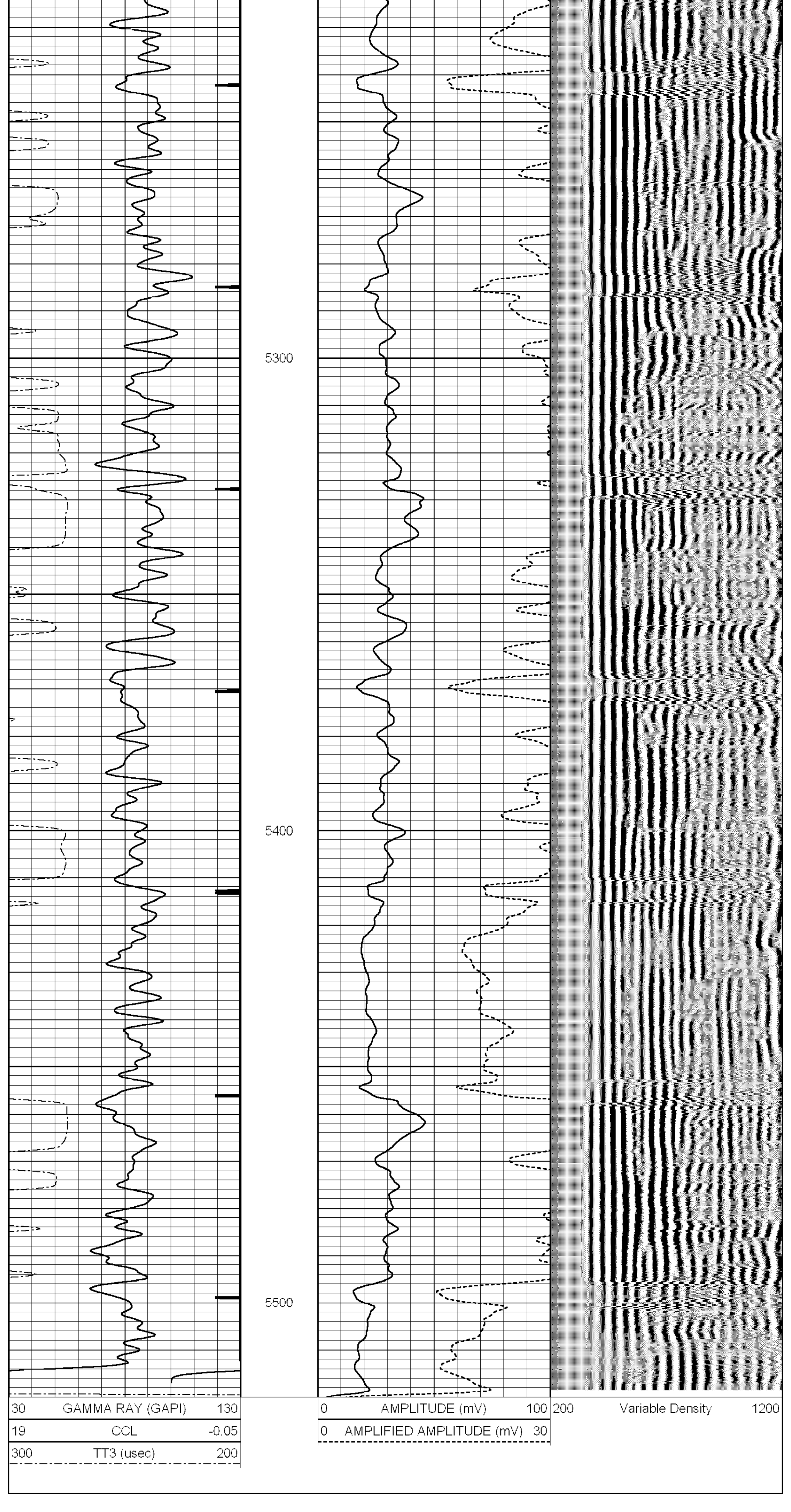
LOG SPLIT FOR CORRELATION PURPOSES



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		CENT-A (1)	3.00	1.69	10.00
CCL	13.25	CCL-GR_1_3/8 (001) 1 3/8 titan ccl	1.00	1.38	11.00
GR	11.49	GR-s_t001 (t001)	2.52	1.69	30.00
WVF5	7.34	CBL-3_5 (001)	7.23	2.44	127.00
WVF3	6.34				
		CENT-B (2)	3.00	1.69	10.00

Dataset: wells ranch pc aa 22-13.db: field/well/run1/pass4
Total Length: 16.75 ft
Total Weight: 188.00 lb
O.D. 2.44 in

Database File: wells ranch pc aa 22-13.db
Dataset Pathname: pass4
Presentation Format: cblx
Dataset Creation: Thu Feb 03 12:59:29 2011 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240



Database File: wells ranch pc aa 22-13.db
Dataset Pathname: pass3
Presentation Format: cblx
Dataset Creation: Thu Feb 03 12:34:44 2011 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: wells ranch pc aa 22-13.db
Dataset Pathname: pass4
Dataset Creation: Thu Feb 03 12:59:29 2011 by Log Std Casedhole 08121

Cement Bond Log Calibration Report

Serial Number:	001		
Tool Model:	3_5		
Performed:	Thu Feb 03 12:12:10 2011		
Depth:	1622.92	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	0	V
Reading in Free Pipe:	2.5	2.16941	V
Gain:	31.2784	36.0449	
Offset:	3	3	

Gamma Ray Calibration Report

Serial Number:	t001	
Tool Model:	s_t001	
Performed:	Sun Jun 13 13:33:21 1993	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps