J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY
COLLAR CORRELATION LOG

Company	NOBLE ENERGY INC.	Company	NOBLE ENERGY INC.
Well	BETZ PC G 09-31D	Well	BETZ PC G 09-31D
Field	WATTENBERG	Field	WATTENBERG
County	WELD	County	WELD
State	COLORADO	State	COLORADO

Location: API # : 05-123-32701-00
SHL: 1562' FNL & 1316' FWL SW/NW
SEC.9 TWP.4N RGE. 65W
BHL: 1318' FNL & 64' FEL SE/NE
SEC 8 TWP 4N RGE 65W

Other Services
NONE

Permanent Datum	GROUND LEVEL	Elevation	4712
Log Measured From	KELLY BUSHING		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 4725
D.F. 4725
G.L. 4712

Date	07-FEBUARY-2011		
Run Number	ONE		
Depth Driller	7533		
Depth Logger	7488		
Bottom Logged Interval	7481		
Top Log Interval	1850		
Open Hole Size	7 7/8		
Type Fluid	WATER		
Density / Viscosity	---		
Max. Recorded Temp.	240		
Estimated Cement Top	2000		
Time Well Ready	---		
Time Logger on Bottom	---		
Equipment Number	2405/YELLOW		
Location	BRIGHTON		
Recorded By	HAYES		
Witnessed By	MR. 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	743
Prot. String				
Production String	4.5	11.6#	SURFACE	7528
Liner				

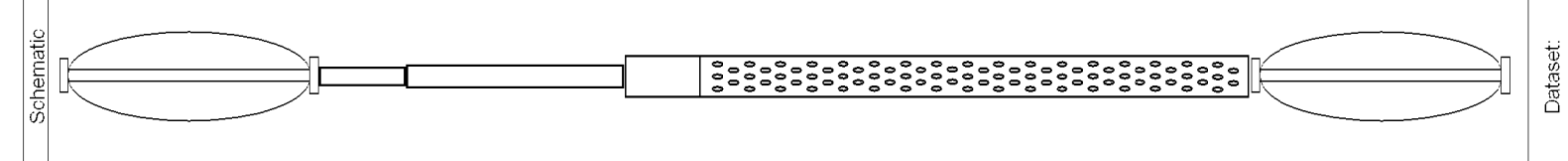
<<< Fold Here >>>

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 SD, DSN, AC, TR LOG
DATED 11-JANUARY-2011

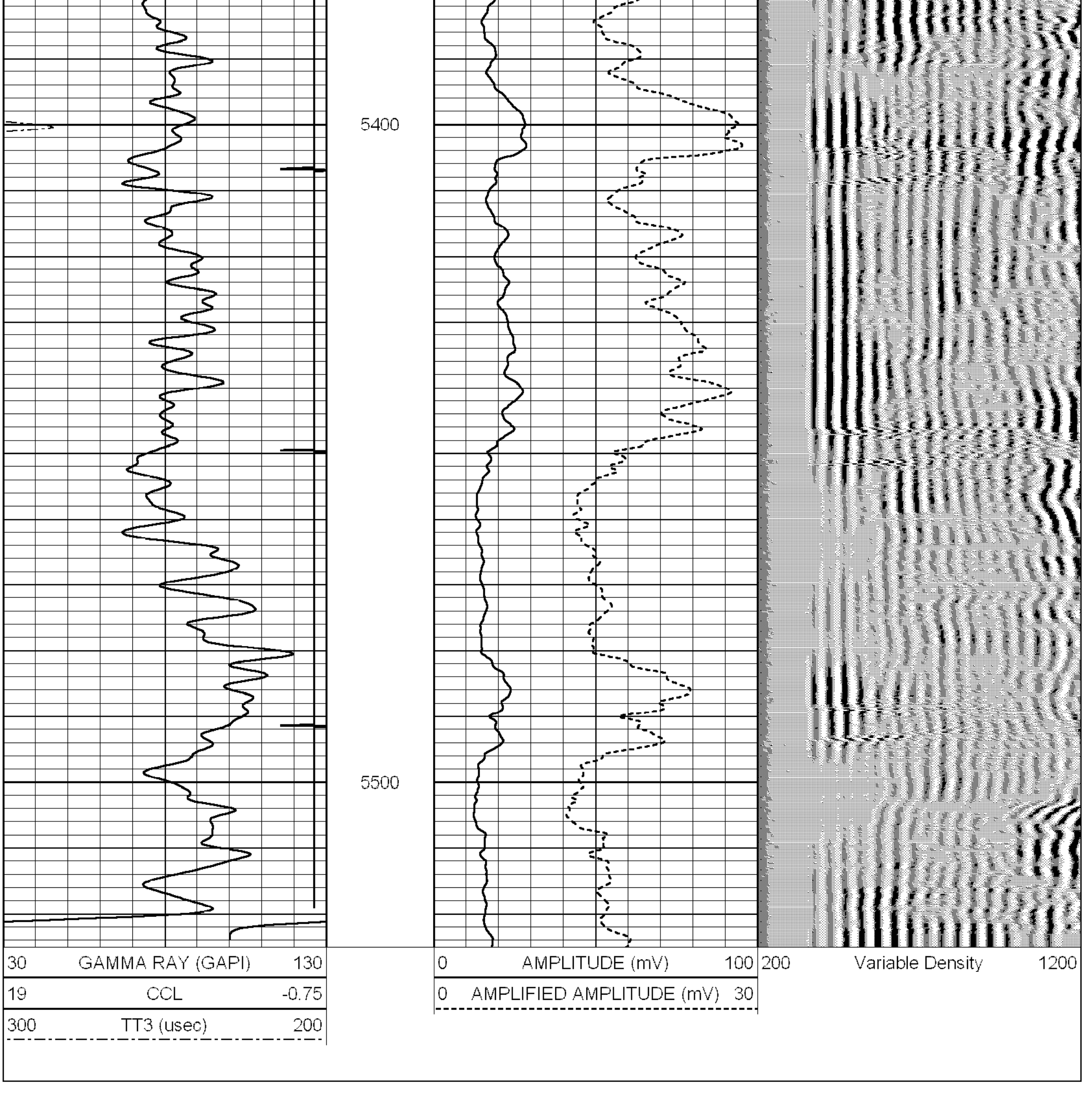
LOG SPLIT FOR CORRELATION PURPOSES



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: betz pc g 09-31d.db: field/well/run1/pass2
Total Length: 16.75 ft
Total Weight: 188.00 lb
O.D. 2.44 in

Database File: betz pc g 09-31d.db
Dataset Pathname: pass2
Presentation Format: cblx
Dataset Creation: Mon Feb 07 12:46:19 2011 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240



Database File:	betz pc g 09-31d.db
Dataset Pathname:	pass1
Presentation Format:	cblx
Dataset Creation:	Mon Feb 07 12:16:42 2011 by Log Std Casedhole 08121
Charted by:	Depth in Feet scaled 1:240

Calibration Report

Database File:	betz pc g 09-31d.db
Dataset Pathname:	pass2
Dataset Creation:	Mon Feb 07 12:46:19 2011 by Log Std Casedhole 08121

Cement Bond Log Calibration Report

Serial Number:	001		
Tool Model:	3_5		
Performed:	Mon Feb 07 11:56:21 2011		
Depth:	1320.92	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:	0.05	0	V
Reading in Free Pipe:	2.5	1.92468	V
Gain:	31.9168	40.628	
Offset:	1.40416	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