Company	NOBLE ENERGY INC.
Well	THOMPSON D 20-31 D
Field	WATTENBERG
County	WELD
State	COLORADO

J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY
COLLAR CORRELATION LOG

Company	NOBLE ENERGY INC.		
Well	THOMPSON D 20-31 D		
Field	WATTENBERG		
County	WELD	State	COLORADO

Location: API #: 05-123-31307-00
SHL: 251' FSL & 269' FWL SW/SW
BHL: 1450' FNL & 150' FEL SE/SW
SEC. 17 TWP. 3N RGE. 64W
SEC TWP RGE

Other Services
NONE

Permanent Datum	GROUND LEVEL	Elevation	4763
Log Measured From	KELLY BUSHING		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 4778
D.F. 4777
G.L. 4763

Date	20-OCTOBER-2010
Run Number	ONE
Depth Driller	8025
Depth Logger	7887
Bottom Logged Interval	7880
Top Log Interval	790
Open Hole Size	7 7/8
Type Fluid	WATER
Density / Viscosity	---
Max. Recorded Temp.	240
Estimated Cement Top	974
Time Well Ready	---
Time Logger on Bottom	---
Equipment Number	2405/YELLOW
Location	BRIGHTON
Recorded By	HAYES
Witnessed By	MR. ARMSTRONG

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	645
Prot. String				
Production String	4.5	11.6 #	SURFACE	8013
Liner				

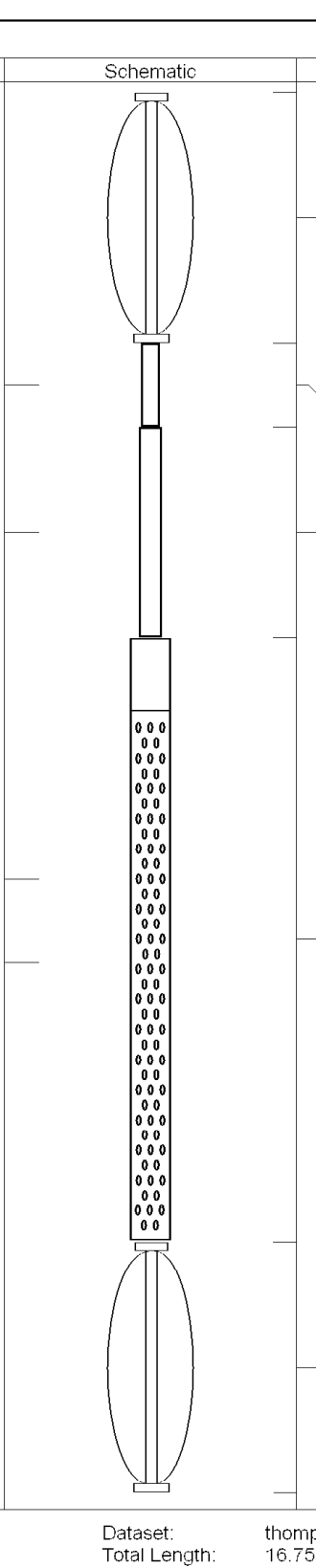
<<< Fold Here >>>

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-OCTOBER-2010

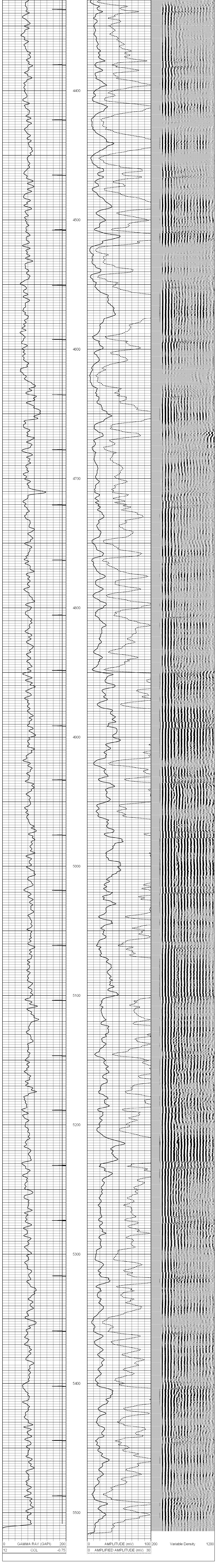
LOG SPLIT FOR CORRELATION PURPOSES



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 WVF3	7.34 6.34	CBL-3_5 (001)	7.23	2.44	127.00
		CENT-B (2)	3.00	1.69	10.00

Dataset: thompson d 20-31d.db: field/well/run1/pass2
Total Length: 16.75 ft
Total Weight: 188.00 lb
O.D. 2.44 in

Database File: thompson d 20-31d.db
Dataset Pathname: pass2
Presentation Format: cblx
Dataset Creation: Wed Oct 20 08:55:25 2010 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240



Database File: thompson d 20-31d.db
Dataset Pathname: pass1
Presentation Format: cblx
Dataset Creation: Wed Oct 20 08:11:43 2010 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: thompson d 20-31d.db
Dataset Pathname: pass2
Dataset Creation: Wed Oct 20 08:55:25 2010 by Log Std Casedhole 08121

Cement Bond Log Calibration Report

Serial Number:	001		
Tool Model:	3_5		
Performed:	Wed Oct 20 07:39:15 2010		
Depth:	1046.8	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	1.95967	V
Gain:	31.9168	39.9027	
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