Company NOBLE ENERGY INC
Well DINNEL C 27-29D
Field WATTENBERG
County WELD
State COLORADO

J-W WIRELINE COMPANY

CEMENT BOND GAMMA RAY COLLAR CORRELATION LOG

Company NOBLE ENERGY INC
Well DINNEL C 27-29D
Field WATTENBERG
County WELD State COLORADO

Location: API #: 05-123-31948-00
SHL: 608' FSL & 672' FWL SW/SW
BHL: 136' FSL & 1340' FWL SE/SW
SEC. 22 TWP. 4N RGE. 64W
SEC TWP RGE

Other Services NONE

Permanent Datum	GROUND LEVEL	Elevation	4677
Log Measured From	KELLY BUSHING		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 4690
D.F. 4690
G.L. 4677

Date	30-NOVEMBER-2010
Run Number	ONE
Depth Driller	7085
Depth Logger	7017
Bottom Logged Interval	7010
Top Log Interval	2100
Open Hole Size	7 7/8
Type Fluid	WATER
Density / Viscosity	---
Max. Recorded Temp.	235
Estimated Cement Top	2300
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	755
Prot. String				
Production String	4.5	11.6 #	SURFACE	7079
Liner				

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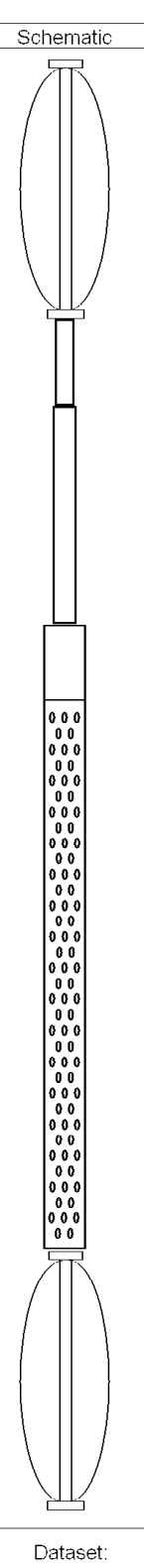
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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, L LOG
DATED 01-NOVEMBER-2010

LOG SPLIT FOR CORRELATION PURPOSES

Sensor	Offset (ft)	Schematic	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: dinnel c 27-29d.db: field/well/run1/pass3
Total Length: 16.75 ft
Total Weight: 188.00 lb
O.D. 2.44 in

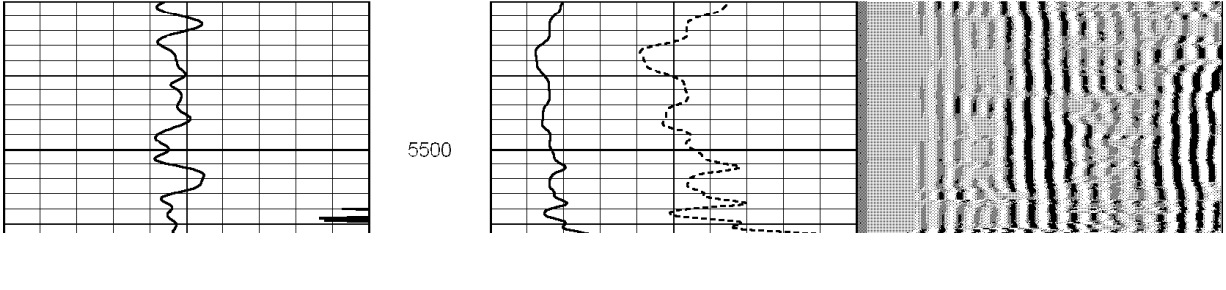
Database File: dinnel c 27-29d.db
Dataset Pathname: pass3
Presentation Format: cblx
Dataset Creation: Tue Nov 30 09:32:31 2010 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240

30 GAMMA RAY (GAPI) 130
15 CCL 0
300 TT3 (usec) 200
0 AMPLITUDE (mV) 100
0 AMPLIFIED AMPLITUDE (mV) 30
200 Variable Density 1200

30 GAMMA RAY (GAPI) 130
15 CCL 0
300 TT3 (usec) 200
0 AMPLITUDE (mV) 100
0 AMPLIFIED AMPLITUDE (mV) 30
200 Variable Density 1200

Database File: dinnel c 27-29d.db
Dataset Pathname: pass2
Presentation Format: cblx
Dataset Creation: Tue Nov 30 09:06:12 2010 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 180
15 CCL 0
300 TT3 (usec) 200
0 AMPLITUDE (mV) 100
0 AMPLIFIED AMPLITUDE (mV) 30
200 Variable Density 1200



Calibration Report

Database File: dinnel c 27-29d.db
Dataset Pathname: pass3
Dataset Creation: Tue Nov 30 09:32:31 2010 by Log Std Casedhole 08121

Cement Bond Log Calibration Report

Serial Number:	001		
Tool Model:	3_5		
Performed:	Tue Nov 30 08:45:28 2010		
Depth:	1584.33	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	2.03875	V
Gain:	31.9168	38.355	
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