J-W WIRELINE COMPANY

Company NOBLE ENERGY INC.
Well BOOTH STATE C 36-69HN
Field WATTENBERG
County WELD
State COLORADO

CEMENT BOND GAMMA RAY COLLAR LOG

Company NOBLE ENERGY INC.
Well BOOTH STATE C 36-69HN
Field WATTENBERG
County WELD State COLORADO
Location: API #: 05-123-35796-00
SHL: NE NE
SEC. 36 TWP. 4N RGE. 64W
BHL: 75' FNL & 535' FWL
SEC TWP RGE
Other Services NONE

Permanent Datum GROUND LEVEL Elevation 4758
Log Measured From KELLY BSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 4771
D.F. 4771
G.L. 4759

Date	11-OCTOBER-2012
Run Number	ONE
Depth Driller	10910
Depth Logger	6967
Bottom Logged Interval	6960
Top Log Interval	SURFACE
Open Hole Size	8 3/4
Type Fluid	WATER
Density / Viscosity	--
Max. Recorded Temp.	205
Estimated Cement Top	1250
Time Well Ready	--
Time Logger on Bottom	--
Equipment Number	2405/WHITE
Location	BRIGHTON
Recorded By	HAYES
Witnessed By	MR.ERIC KLEMM

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9 5/8	36#	SURFACE	650
Prot. String				
Production String	4.5	11.6#	6970.2	10895
Liner	7.0	23#	SURFACE	7076

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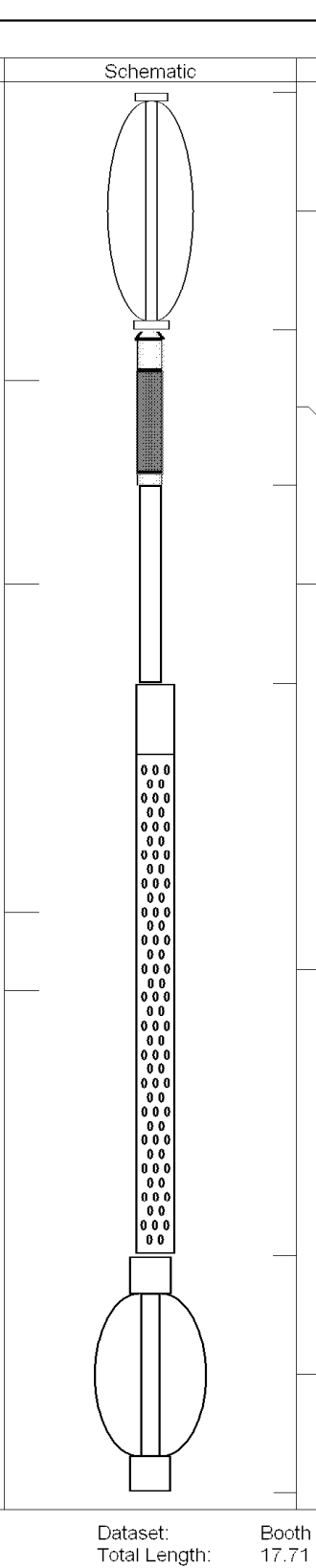
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		CENT-A (1)	3.00	1.69	10.00
CCL	14.06	CCL-275tekco (2.75TEKCO) 2 3/4 TEK CCL Earth Mag	1.96	2.75	20.00
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: Booth state c 36-69h.db: field/well/run1/pass1
Total Length: 17.71 ft
Total Weight: 197.00 lb
O.D. 2.75 in

Database File: booth state c 36-69h.db
Dataset Pathname: pass1
Presentation Format: cblx
Dataset Creation: Fri Oct 12 00:25:37 2012 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File:	Booth state c 36-69h.db
Dataset Pathname:	pass1
Dataset Creation:	Fri Oct 12 00:25:37 2012 by Log SCH 111116

Cement Bond Log Calibration Report

Serial Number:	001		
Tool Model:	3_5		
Performed:	Thu Oct 11 18:34:52 2012		
Depth:	842.242	ft	
Casing Diameter:	7	in	
	3' Spacing	5' Spacing	
Signal Zero:	3	3	mV
Calibrated Amplitude:	62.1651	62.1651	mV
Reading at Signal Zero:	0	0	V
Reading in Free Pipe:	2.5	2.24241	V
Gain:	23.666	26.3846	
Offset:	3	3	

Gamma Ray Calibration Report

Serial Number:	t001	
Tool Model:	s_t001	
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