J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY
COLLAR LOG

Company NOBLE ENERGY INC.
Well FIVE M E28-69HN
Field WATTENBERG
County WELD
State COLORADO

Company	NOBLE ENERGY INC.		
Well	FIVE M E28-69HN		
Field	WATTENBERG		
County	WELD	State	COLORADO
Location:	API #: 05-12334797-00 CL: NW NW SEC. 28 TWP. 6N RGE. 65W BHL: 100' FNL & 2105' FWL SEC TWP RGE	Other Services	NONE
Permanent Datum	GROUND LEVEL	Elevation	4712
Log Measured From	KELLY BUSHING	Elevation	K.B. 4736 D.F. -- G.L. 4712
Drilling Measured From	KELLY BUSHING		

Date	26-DECEMBER-2012
Run Number	ONE
Depth Driller	14060
Depth Logger	7233
Bottom Logged Interval	7226
Top Log Interval	SURFACE
Open Hole Size	8 3/4
Type Fluid	WATER
Density / Viscosity	--
Max. Recorded Temp.	205
Estimated Cement Top	888
Time Well Ready	--
Time Logger on Bottom	--
Equipment Number	2405/WHITE
Location	BRIGHTON
Recorded By	HAYES
Witnessed By	MR. BILL MANSFIELD

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	780.9
Prot. String				
Production String	7.0	23#	SURFACE	7381.6
Liner	4.5	11.6#	7276	14050

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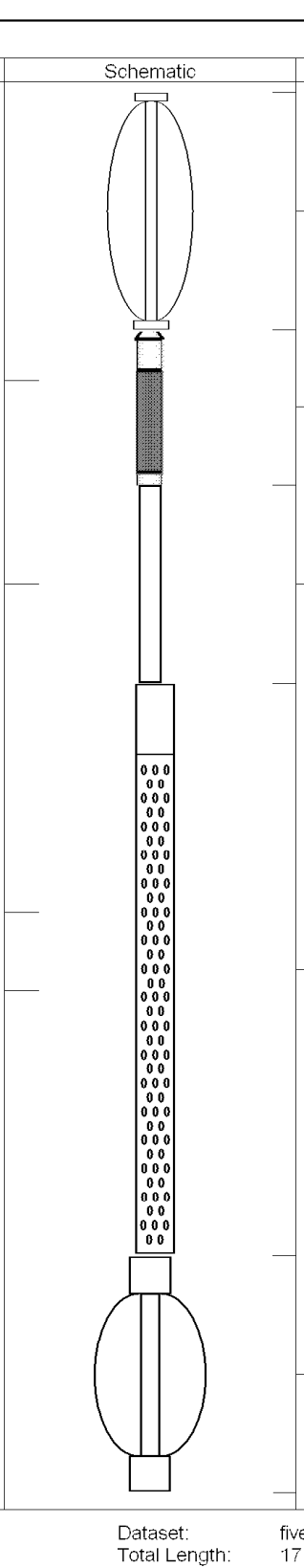
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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: five m e28-69hn.db: field/well/run1/pass3
Total Length: 17.71 ft
Total Weight: 197.00 lb
O.D. 2.75 in

Database File: five m e28-69hn.db
Dataset Pathname: pass3
Presentation Format: cblx
Dataset Creation: Wed Dec 26 21:38:13 2012 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	180	0	3' Amplitude (mV)	100	200	Variable Density	1200
15	CCL	-0.25	0	Amplified Amplitude (mV)	30			
300	TT3 (usec)	200						

Calibration Report

Database File: five m e28-69hn.db
Dataset Pathname: pass3
Dataset Creation: Wed Dec 26 21:38:13 2012 by Log SCH 111116

Cement Bond Log Calibration Report

Serial Number: 001
Tool Model: 3_5
Performed: Wed Dec 26 21:18:28 2012

Depth: 814.783 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	2.32974	V
Gain:	23.666	25.3956	
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