PSI
PRECISION SURVEY, INC.

Cemeted Bond Log
Gamma Ray-CCL-VDL

Company	Black Raven Energy
Well	Howard Glenn #1-1
Field	Adena
County	Morgan
State	Colorado

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Well	Howard Glenn # 1-1
Field	Adena
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Location	API #: 05-087-09999 Sec: 5 Twp: 3N Rge: 57W
Permanent Datum	Ground Level
Elev.	4472
Log Measured From	Kelly Bushing
Drilling Measured From	Kelly Bushing
Elev.	K.B. 4493 D.F. G.L. 4472

Date	10-Jan-15										
Run No.	One										
Depth Driller	5,100										
Depth Logger	5,100										
Bottom Logged Interval	5,100										
Top Logged Interval	4,000										
Type Fluid in Hole	Water										
Salinity, PPM Cl	0										
Density / Viscosity	8.33										
Max Rec. Temp. Deg. F.	120										
Operating Rig Time	2:00										
Recorded By	Jeff Lee										
Witnessed By	Mr. Howard										

Run Number	Bit Size	Casing Driller	Casing Logger	Casing Weight	Casing Grade	Top Connection	Tool Type	Tool Serial No.	Tool Length	Max Tool OD	Max Rec. Temp.	Equipment Location
One	7.875	5,100	5,100	23	J-55	LTC	CCL/GR/CBL/VDL	0000	30	3.625	120	80

Tool Sketch

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 to the case of gross or wilful 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

Thank You For Using Phoenex Surveys!!
SO#220501

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
CHD	21.25		STNDRD Standard Cable Head	1.00	1.69	1.00
CENT	20.25		BSKCENT Centralizer	2.88	2.75	20.00
WVF3	12.65		CBL-Probe (SSC210) Probe 2.75" Dual Receiver Bond	8.92	2.75	60.00
WVF5	11.65					
CENT	8.46		BSKCENT Centralizer	2.88	2.75	20.00
CCL	4.56		CCL-Ittan01 (TITLOG)	1.92	2.75	
GR	1.13		GR-probe 2.75 (510313)	3.67	2.75	100.00

Dataset: howard_glenn_1-1 db: field\well\run1\pass2
Total Length: 21.25 ft
Total Weight: 201.00 lb
O.D: 2.75 in

Database File: howard_glenn_1-1.db
Dataset Pathname: pass2
Presentation Format: cbl_jf
Dataset Creation: Wed Jan 16 10:13:05 2012 by Log Std Cased\hole 10081
Charted by: Depth in Feet scaled 1:240

0	CCL	+1	0	Amplified Amplitude (mv)	30,200
0	GR (GAPI)	200	0	Amplitude (mV)	1600

Variable Density 1200

DEPTH
CCL
Gamma Ray
Variable Density
Amplified Amplitude
Amplitude

0	CCL	+1	0	Amplified Amplitude (mv)	30,200
0	GR (GAPI)	200	0	Amplitude (mV)	1600

Variable Density 1200