GAMMA RAY C.C.L.
CEMENT BOND V.D.L.
SECTOR MAP

PIONEER
Pioneer Energy Services

Company KERR-MCGEE OIL & GAS ONSHORE LP
Well DUTCHER ROY UNIT 2
Field WATTENBERG
County WELD
State COLORADO

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Well DUTCHER ROY UNIT 2
Field WATTENBERG
County WELD State COLORADO

Location: API #: 0512310067
NE NW
SEC 24 TWP 2N RGE 67W

Other Services

Permanent Datum GL Elevation 4,879'
Log Measured From KB
Drilling Measured From KB

Elevation
K.B. 4,889'
D.F. 4,888'
G.L. 4,879'

Date	09-APR-2014
Run Number	ONE
Depth Driller	8,022'
Depth Logger	7,140'
Bottom Logged Interval	7,140'
Top Log Interval	6,290'
Open Hole Size	7-7/8"
Type Fluid	WATER
Density / Viscosity	8.33 PPG
Max. Recorded Temp.	190° F
Estimated Cement Top	6,509'
Time Well Ready	PM
Time Logger on Bottom	14:17
Equipment Number	75
Location	FORT MORGAN
Recorded By	LEROY HOBBS
Witnessed By	MR. RIGO MACIAS

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8.63"	24#	SURFACE	679'
Prot. String				
Production String	4-1/2"	10.5#	SURFACE	8,022'
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

THANK YOU FOR USING PIONEER ENERGY SERVICES.

CORRECTED TO PIONEER'S CEMENT BOND, V.D.L.
GAMMA-RAY, C.C.L. LOG DATED 4-5-14.

S.O.# 2-206123

Database File: dutcher_roy_unit#2.db
Dataset Pathname: pass1
Presentation Format: scbl02
Dataset Creation: Wed Apr 09 14:13:53 2014 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: hobbs.db
Dataset Pathname: pass6
Dataset Creation: Wed Apr 09 13:58:47 2014 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number:	130608	
Tool Model:	GRCCLTEMP	
Performed:	Wed Dec 11 15:55:10 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Temperature Calibration Report

Serial Number:	130608	
Tool Model:	GRCCLTEMP	
Performed:	Wed Dec 11 15:55:18 2013	
	Reference	Reading
Low Reference:	100.00 degF	6509.65degF
High Reference:	350.00 degF	27350.70degF
Gain:	0.01	
Offset:	21.91	
Delta Spacing	1	

Segmented Cement Bond Log Calibration Report

Serial Number:	Base	
Tool Model:	Probe	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	4498.575	ft

Master Calibration, performed Wed Apr 09 13:56:56 2014:

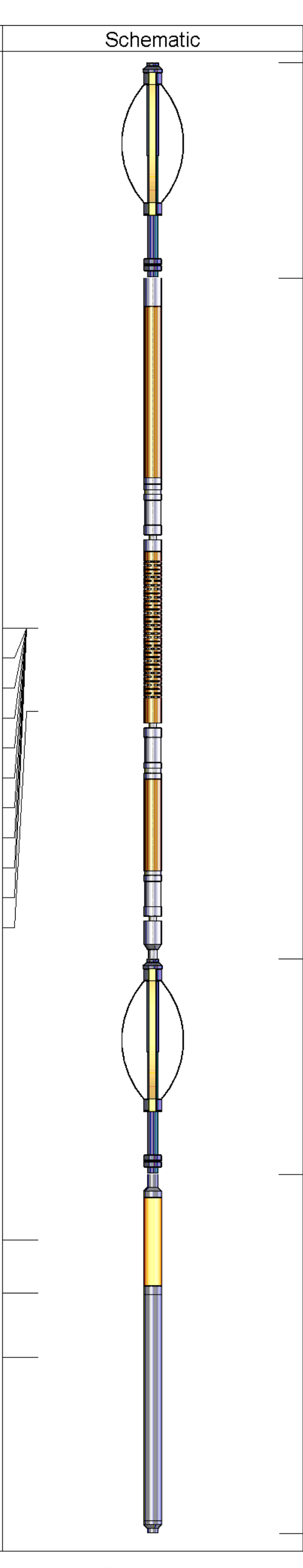
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.013	1.879	1.400	81.196	42.774	0.824
CAL	0.013	0.350				
5'	0.013	1.548	1.400	81.196	51.988	0.720
SUM						
S1	0.014	1.781	0.000	93.000	52.611	-0.716
S2	0.014	1.876	0.000	93.000	49.941	-0.680
S3	0.013	1.910	0.000	93.000	49.044	-0.658
S4	0.014	1.907	0.000	93.000	49.118	-0.673
S5	0.013	1.869	0.000	93.000	50.102	-0.664
S6	0.014	1.819	0.000	93.000	51.510	-0.712
S7	0.013	1.743	0.000	93.000	53.759	-0.715
S8	0.014	1.765	0.000	93.000	53.097	-0.719

Internal Reference Calibration, performed Wed Aug 21 11:08:58 2013:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.013	0.350	1.000	0.000

Air Zero Calibration, performed Mon Dec 09 06:54:41 2013:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			PTS275	2.83	2.75	
WVF3FT WVFCAL WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF5FT	11.86 11.86 11.86 11.86 11.86 11.86 11.86 11.86 11.86 11.86 10.78		RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
			PTS275	2.83	2.75	
CCL TEMP GR	3.84 3.14 2.30		GCT-GRCCLTEMP (130608) Probe GCT	4.69	2.75	100.00

Dataset: dutcher_roy_unit#2.db: field/well/run1/pass1
Total Length: 19.27 ft
Total Weight: 190.00 lb
O.D. 2.75 in