Company	KERR-MCGEE OIL & GAS ONSHORE LP
Well	MULGA 29C-23HZ
Field	WATTENBERG
County	WELD
State	CO

PIONEER

Pioneer Energy Services

RADIAL
SECTOR BOND LOG
WITH GAMMA RAY

Company **KERR-MCGEE OIL & GAS ONSHORE LP**

Well **MULGA 29C-23HZ**

Field **WATTENBERG**

County **WELD** State **CO**

Location: API # : 0512339253

SHL: 275' FSL & 2176' FWL
SESW

SEC 23 TWP 2N RGE 67W

Other Services

JBGR
Caliper

Permanent Datum GL Elevation 4947

Log Measured From KB

Drilling Measured From KB

Elevation
K.B. 4972
D.F. 4972
G.L. 4947

Date of Service	AUGUST 15, 2014		
Run Number	ONE		
Depth Driller or PBTD	12593		
Depth Logger	7110		
Bottom Log Interval	7109		
Top Log Interval	SURFACE		
Open Hole Size	8+7/8"		
Type Fluid	WATER		
Fluid Level	SURFACE		
Fluid Density	8.33		
Max. Recorded Temperature	NA		
Max. Wellhead Pressure	2800 PSI		
Wellhead Connection	10K WELL HEAD		
Estimated Cement Top	SURFACE		
Unit Number	59		
Wireline Size	9/32"		
Location	FT MORGAN, CO		
Recorded By	SCHUMAN		
Witnessed By	MR. TREVOR DANIELS		

	Size	Wt/Ft	Top	Bottom
Tubing Record				
Surface Casing	9+5/8"	36#	SURFACE	1251
Production Casing	7"	26#	SURFACE	7962
Liner Record	4+1/2"	11.6#	7044	12577

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

THANK YOU FOR USING PIONEER Energy SERVICES

Your Pioneer Energy Services Crew
Engineer: Shaun
Operator: Geno
Operator: Igor
Operator:

Tool Data - Services	Serial Number
Sector CBL	111206

MULGA 29C-23HZ

LOGGED UNDER 2800 PSI

PIONEER

Pioneer Energy Services

Database File: mulga29c-23hz_rbl.db
Dataset Pathname: RBL/pass3
Presentation Format: scbl02
Dataset Creation: Fri Aug 15 16:30:08 2014 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

PIONEER
Pioneer Energy Services

MULGA 29C-23HZ

LOGGED UNDER 2800 PSI
MAIN PASS

Calibration Report

Database File: mulga29c-23hz_rbl.db
Dataset Pathname: RBL/pass3
Dataset Creation: Fri Aug 15 16:30:08 2014 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number:	111211	
Tool Model:	Probe	
Performed:	Tue Aug 12 07:49:53 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	Base	
Tool Model:	Probe	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	624.692	ft

Master Calibration, performed Fri Aug 15 16:03:17 2014:

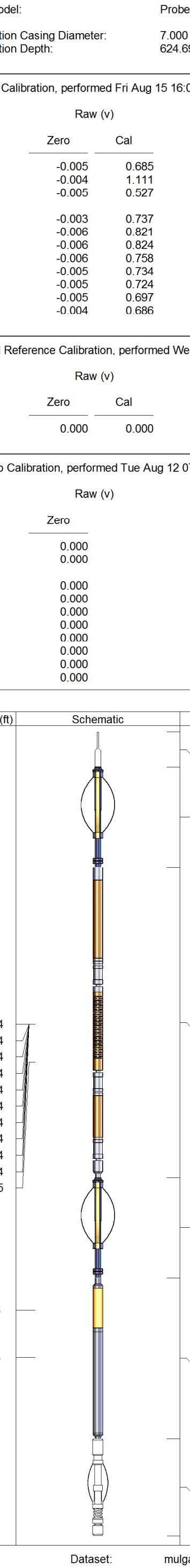
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.005	0.685	1.500	62.165	87.937	1.904
CAL	-0.004	1.111				
5'	-0.005	0.527	1.500	62.165	114.159	2.017
SUM						
S1	-0.003	0.737	0.000	95.000	128.406	0.382
S2	-0.006	0.821	0.000	95.000	114.912	0.673
S3	-0.006	0.824	0.000	95.000	114.496	0.661
S4	-0.006	0.758	0.000	95.000	124.365	0.712
S5	-0.005	0.734	0.000	95.000	128.459	0.654
S6	-0.005	0.724	0.000	95.000	130.306	0.681
S7	-0.005	0.697	0.000	95.000	135.445	0.635
S8	-0.004	0.686	0.000	95.000	137.523	0.596

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	-0.004	1.111	1.000	0.000

Air Zero Calibration, performed Tue Aug 12 07:50:37 2014:

	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)
			STNDRD Standard Cable Head	1.00	1.69	10.00
			PTS275	2.83	2.75	
WVF3FT WVFCAL WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF5FT	14.44 14.44 14.44 14.44 14.44 14.44 14.44 14.44 14.44 14.44 13.35		RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
			PTS275	2.83	2.75	
CCL GR	6.36 5.03		GR_CCL-Probe (111211) Probe Gamma CCL	4.54	2.75	100.00
			2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00

Dataset: mulga29c-23hz_rbl.db: field/well/RBL/pass3
Total Length: 22.69 ft
Total Weight: 225.00 lb
O.D. 2.75 in