Company	ANADARKO PETROLEUM CORPORTATION
Well	BUTTERBALL 30C-15HZX
Field	WATTENBERG
County	WELD
State	CO

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RADIAL CEMENT BOND LOG WITH GAMMA RAY/CCL/VDL AND CEMENT MAP

Company ANADARKO PETROLEUM CORPORTATION
Well BUTTERBALL 30C-15HZX
Field WATTENBERG
County WELD State CO

Location: API #: 0512337870
FSL 438' & FWL 557'
SEC 10 TWP 2N RGE 67W

Other Services: NONE

Permanent Datum GROUND LEVEL Elevation 4996'
Log Measured From KELLY BUSHING
Drilling Measured From KB = 17'

Elevation
K.B. 5013'
D.F. 5012'
G.L. 4996'

Date	7 DEC 2013
Run Number	FOUR
Depth Driller	12568'
Depth Logger	7074'
Bottom Logged Interval	7066'
Top Log Interval	38'
Open Hole Size	8.75"
Type Fluid	WATER
Density / Viscosity	~8.34#
Max. Recorded Temp.	225 Deg Fht
Estimated Cement Top	SURFACE
Time Well Ready	7:00
Time Logger on Bottom	7:20
Equipment Number	59
Location	FT. MORGAN
Recorded By	A BELGUM
Witnessed By	MIKE ASPA

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9.625"	36#	SURFACE	1020'
Prot. String				
Production String	7"	26#	SURFACE	7852'
Liner	4.5"	11.6#	6983'	12553'

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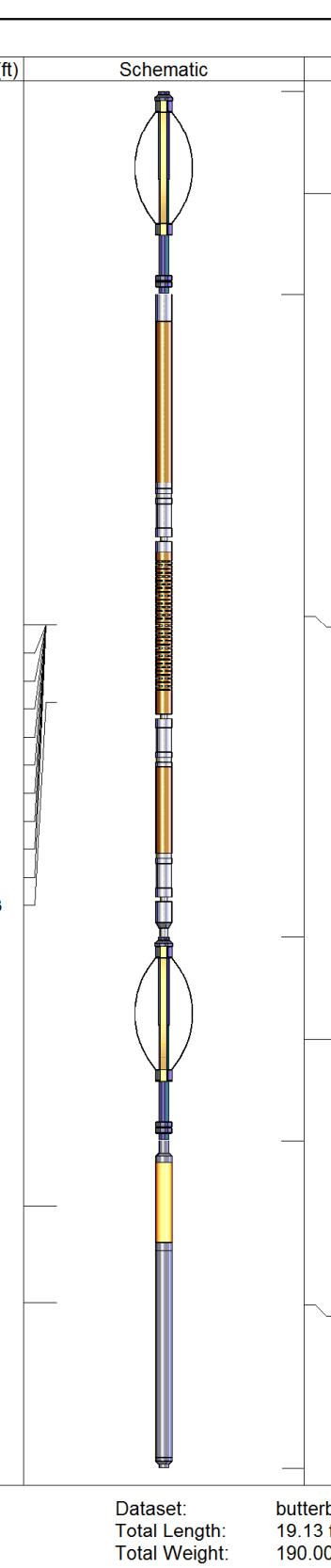
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		PTS275	2.83	2.75	
WVF3FT WVFCAL WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF5FT	11.71 11.71 11.71 11.71 11.71 11.71 11.71 11.71 11.71 11.71 10.63	RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
		PTS275	2.83	2.75	
CCL GR	3.63 2.30	GR_CCL-Probe (111211) Probe Gamma CCL	4.54	2.75	100.00

Dataset: butterball-15n-10hz.db: field/well/run3/pass1
Total Length: 19.13 ft
Total Weight: 190.00 lb
O.D. 2.75 in

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MAIN PASS

LOGGED WITH 2800 PSI APPLIED AT SURFACE

Database File: butterball-15n-10hz.db
Dataset Pathname: run3/pass1
Presentation Format: scbl02
Dataset Creation: Sat Dec 07 07:55:19 2013 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: butterball-15n-10hz.db
Dataset Pathname: run3/pass1
Dataset Creation: Sat Dec 07 07:55:19 2013 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number:	111211	
Tool Model:	Probe	
Performed:	Fri Nov 08 12:58:35 2013	
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:	7072.142	ft

Master Calibration, performed Sat Dec 07 07:42:26 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.014	0.612	2.000	62.165	96.114	3.354
CAL	1.000	1.036				
5'	0.164	0.729	2.000	62.000	106.261	-15.467
SUM						
S1	-0.068	0.589	0.000	95.000	144.598	9.768
S2	-0.077	0.633	0.000	95.000	133.946	10.254
S3	-0.042	0.667	0.000	95.000	133.922	5.621
S4	-0.030	0.687	0.000	95.000	132.608	3.954
S5	-0.043	0.664	0.000	95.000	134.302	5.805
S6	-0.047	0.627	0.000	95.000	141.063	6.575
S7	-0.030	0.599	0.000	95.000	151.152	4.504
S8	-0.077	0.570	0.000	95.000	146.713	11.338

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	1.000	0.892	1.000	0.000

Air Zero Calibration, performed Sat Nov 09 07:23:33 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

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