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Radial Cement Bond Log With VDL / CCL / GR And Cement Map

Company	Anadarko Petroleum Corporation
Well	Pettinger 3N-18HZ
Field	Wattenberg
County	Weld
State	Colorado

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Well Pettinger 3N-18HZ
Field Wattenberg
County Weld State Colorado

Location: API # : 05-123-38023
SHL: SWSW 283'FSL & 1062'FWL
SEC 18 TWP 1N RGE 65W

Other Services
JB/GR
Caliper
Set Plug

Permanent Datum Ground Level Elevation 5008'
Log Measured From Kelly Bushing 13' A.P.D.
Drilling Measured From Kelly Bushing

Elevation
K.B. 5021'
D.F. 5021'
G.L. 5008'

Date	21-Mar-2014
Run Number	Two
Depth Driller	12,363'
Depth Logger	7378'
Bottom Logged Interval	7376'
Top Log Interval	Surface
Open Hole Size	8.75"
Type Fluid	Water
Density / Viscosity	8.34
Max. Recorded Temp.	See Caliper Log
Estimated Cement Top	34'
Time Well Ready	15:00
Time Logger on Bottom	15:25
Equipment Number	96
Location	Ft. Morgan
Recorded By	Bruce Miller
Witnessed By	Mr. Dave Peterson

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	1187'
Prot. String				
Production String	7.0"	26#	Surface	7743'
Liner	4.5"	11.6#	6670'	12,353'
See Remarks				

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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

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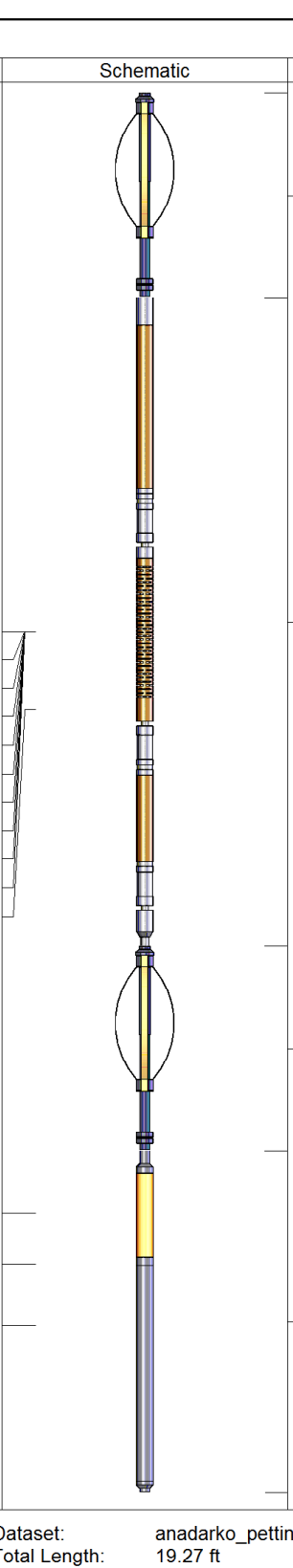
Liner Top Was Found At 6679' On Log.

K.O.P. @ 6805'

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: anadarko_pettinger_3n-18hz_jbgr_log_plug.db: field/well/run2/pass1
Total Length: 19.27 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: anadarko_pettinger_3n-18hz_jbgr_log_plug.db
Dataset Pathname: run2/pass1
Presentation Format: scbl02
Dataset Creation: Fri Mar 21 15:17:10 2014 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: anadarko_pettinger_3n-18hz_jbgr_log_plug.db
Dataset Pathname: run2/pass1
Dataset Creation: Fri Mar 21 15:17:10 2014 by Log SCH 120430

Gamma Ray Calibration Report

Serial Number: 130608
Tool Model: GRCCLTEMP
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

Temperature Calibration Report

Serial Number: 130608
Tool Model: GRCCLTEMP
Performed: Thu Aug 15 08:56:46 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: 7.000 in
Calibration Depth: 627.051 ft

Master Calibration, performed Fri Mar 21 15:46:21 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.053	0.821	2.000	62.165	78.325	-2.161
CAL	0.979	1.019				
5'	0.021	0.707	2.000	62.165	87.690	0.136
SUM						
S1	0.064	0.810	5.000	95.000	120.704	-2.738
S2	0.033	0.847	5.000	95.000	110.567	1.315
S3	0.018	0.843	5.000	95.000	109.103	2.989
S4	0.011	0.818	5.000	95.000	111.508	3.806
S5	0.016	0.802	5.000	95.000	114.568	3.171
S6	0.017	0.791	5.000	95.000	116.298	3.012
S7	0.033	0.786	5.000	95.000	119.516	1.080
S8	0.030	0.813	5.000	95.000	114.916	1.586

Internal Reference Calibration, performed Wed Aug 21 12:08:58 2013:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.979	1.019	1.000	0.000

Air Zero Calibration, performed Tue Mar 04 11:15:55 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

Log Variables

Database:C:\Warrior\Data\anadarko_pettinger_3n-18hz_jbgr_log_plug.db
Dataset: field/well/run2/pass1

Top - 6682.00 ft

CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	CASEOD in	BOTTEMP degF	BOREID in
26	62	2	7	215	8.75

6682.00 ft - Bottom

PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	CASEOD in	PERFS	TDEPTH ft
0	11.6	81	1	0.08	4.5	0	0

BOTTEMP degF	BOREID in
225	6.25

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