PIONEER
Pioneer Energy Services

RADIAL SECTOR BOND LOG WITH GAMMA RAY

Company	**Anadarko Petroleum Corp.**
Well	**NRC 2N-8HZ**
Field	**Wattenberg**
County	**Weld**
State	**CO**

Location: API # : 05-123-39095
460' FNL & 1830' FEL
SEC 8 TWP 1N RGE 67W

Other Services: NONE

Permanent Datum	GROUND LEVEL	Elevation 5064'	Elevation
Log Measured From	KELLY BUSHING		K.B. 5089'
Drilling Measured From	KB = 25'		D.F. 5088'
			G.L. 5064'

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Date of Service	13 JUNE 2014
Run Number	2
Depth Driller or PBTD	12686'
Depth Logger	7072'
Bottom Log Interval	707072
Top Log Interval	Surface
Open Hole Size	UNK
Type Fluid	WATER
Fluid Level	FULL
Fluid Density	~8.34 #/Gal
Max. Recorded Temperature	N/A
Max. Wellhead Pressure	2600
Wellhead Connection	7 1/16" 10k flange
Estimated Cement Top	SURFACE
Unit Number	53
Wireline Size	1/4"
Location	Fort Morgan
Recorded By	C.Nelson
Witnessed By	MR. KENT EVERS

	Size	Wt/Ft	Top	Bottom
Tubing Record				
Surface Casing	9 5/8"	26	surface	1224'
Production Casing	7"	26	surface	7978'
Liner Record	4 1/2"	11	6883	12686'

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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.

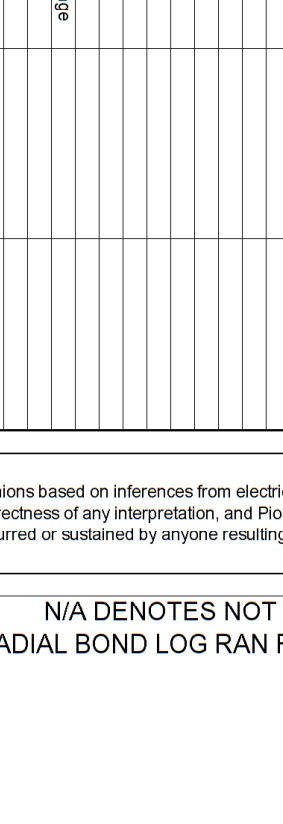
Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.
RADIAL BOND LOG RAN FROM 7072' ESTIMATED TOP WAS TO 9'

THANK YOU FOR USING PIONEER ENERGY SERVICES

Your Pioneer ENERGY Services Crew	Tool Data - Services	Serial Number
Engineer: C.Nelson Operator: Scott Hughes Operator: Cameron Bond Operator:	Radial Bond Log and CCL	

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: nrc2n-8hz61314-rbl.db: field/well/run1/pass36.2
Total Length: 19.27 ft
Total Weight: 190.00 lb
O.D. 2.75 in

Database File: nrc2n-8hz61314-rbl.db
Dataset Pathname: pass36.2
Presentation Format: scbl02
Dataset Creation: Fri Jun 13 15:45:37 2014 by Calc 7.0 B1
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: nrc2n-8hz61314-rbl.db
Dataset Pathname: pass36.2
Dataset Creation: Fri Jun 13 15:45:37 2014 by Calc 7.0 B1

Gamma Ray Calibration Report

Serial Number:	130608	
Tool Model:	GRCCLTEMP	
Performed:	Fri Jun 13 12:21:23 2014	
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:	1465.600	ft

Master Calibration, performed Fri Jun 13 14:37:04 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.004	2.275	1.500	62.165	26.615	1.613
CAL	0.003	0.193				
5'	0.000	2.344	1.500	62.165	25.882	1.500
SUM						
S1	-0.009	2.298	0.000	95.000	41.193	0.358
S2	-0.004	2.304	0.000	95.000	41.163	0.171
S3	-0.005	2.338	0.000	95.000	40.546	0.188
S4	-0.005	2.356	0.000	95.000	40.229	0.210
S5	-0.008	2.361	0.000	95.000	40.099	0.334
S6	-0.008	2.357	0.000	95.000	40.156	0.335
S7	-0.009	2.332	0.000	95.000	40.592	0.359
S8	-0.008	2.289	0.000	95.000	41.356	0.334

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	0.003	0.193	1.000	0.000

Air Zero Calibration, performed Fri Jun 13 11:41:28 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

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