Company	Anadarko Petroleum Corporation
Well	Ranch Federal 24-18
Field	WATTENBERG
County	WELD
State	COLORADO

C&C ENERGY SERVICES

GAMMA RAY / CCL
CEMENT BOND VDL

Company: Anadarko Petroleum Corporation
Well: Bronco Federal 24-18
Field: WATTENBERG
County: WELD
State: COLORADO
API#: 05123335344
Date: 10/31/2019
Run: 1
Service Order: 0
Depth Driller: 8227
Depth Logger: 8227
Bottom Logged Interval: 8227
Top Logged Interval: 0
Casing Driller: 8.625 @ 1170
Casing Logger: 1170
Bit Size: 7.875
Type Fluid in Hole: WBM
Density / Viscosity: 9.2 / 40
PH / Fluid Loss: 9.5 / 6
Source of Sample: FLOWLINE
Rm @ Meas Temp: 0.07 @ 70
Rmf @ Meas Temp: 0.06 @ 70
Rmc @ Meas Temp: 0.09 @ 70
Source of Rmf / Rmc: CALC / CALC
Rm @ BHT: 0.04 @ 180
Time Since Circulation: 4.5
Time on Location: 10/31/2019 10:00
Recorded By: Chase Simmons
Witnessed By: Jeff Robertson

	Run 1	Run 2	Run 3
Density Tool	DSN-A		
Serial Number	1170		
Detector to Source	13		
Neutron Tool	CNC-A		
Serial Number	1170		
Detector to Source	13		
Gamma Ray Tool	GR-A		
Serial Number	1170		
Detector to Source	13		
Cable Head	CCL-A		
Serial Number	1170		
Cable Head to Source	13		
Logging Equipment Number	1170		
Logging Unit Number	3		
Logging Truck Number	3		
Logging Engineer	Chase Simmons		
Operating Rig Time	4.5		

	Top	Bottom
Depth	0	8227
Log	0	8227
Interval	8227	0

	Primary	Repeat	Base
Date	10/31/2019		
Time	14:33:12		
Max Recorded Temperature	180		
Equipment Number	1170		
Location	GREELEY, CO		
Recorded By	Chase Simmons		
Witnessed By	Jeff Robertson		

	Primary	Repeat	Base
Run Number	1		
Logging Speed	30		
Sensitivity	1		
Tension	1.5		
Gamma Ray	GR		
Neutron	CNC		
Density	DSN		
Cable Head	CCL		
Other Services			

	Primary	Repeat	Base
Run Number	1		
Logging Speed	30		
Sensitivity	1		
Tension	1.5		
Gamma Ray	GR		
Neutron	CNC		
Density	DSN		
Cable Head	CCL		
Other Services			

	Primary	Repeat	Base
Run Number	1		
Logging Speed	30		
Sensitivity	1		
Tension	1.5		
Gamma Ray	GR		
Neutron	CNC		
Density	DSN		
Cable Head	CCL		
Other Services			

Bowspring

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 CHOOSING C&J!!
LOG NOT CORRELATED
Logged Under 500psi

Calibration Report

Database File: 123.db
Dataset Pathname: pass3
Dataset Creation: Thu Oct 31 14:33:12 2019 by Calc 7.0 B1

Gamma Ray Calibration Report

Serial Number: FW1806-550
Tool Model: FGT
Performed: Thu Oct 31 13:48:34 2019

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps

Temperature Calibration Report

Serial Number: FW1806-550
Tool Model: FGT
Performed: Fri Aug 24 13:22:34 2018

	Reference	Reading
Low Reference:	100.00 degF	6176.05degF
High Reference:	200.00 degF	20317.78degF

Gain: 0.01
Offset: 23.34
Delta Spacing: 1

Segmented Cement Bond Log Calibration Report

Serial Number: FW1804-090
Tool Model: 1.70

Calibration Casing Diameter: 3.500 in
Calibration Depth: 460 /08 ft

Master Calibration, performed Thu Oct 31 13:52:46 2019.

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.006	1.874	1.500	94.517	46.467	1.796
CAL	0.006	0.146				
5'	0.006	1.242	1.500	94.517	74.537	1.947
SUM						
S1	0.006	1.383	0.000	94.517	68.046	0.402
S2	0.006	1.740	0.000	94.517	54.131	0.323
S3	0.006	2.010	0.000	94.517	46.575	0.265
S4	0.006	1.715	0.000	94.517	55.101	0.328
S5	0.006	1.709	0.000	94.517	55.101	0.328
S6	0.006	1.296	0.000	94.517	72.587	0.432
S7	0.006	1.586	0.000	94.517	59.552	0.474
S8	0.006	1.198	0.000	94.517	78.510	0.464

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969

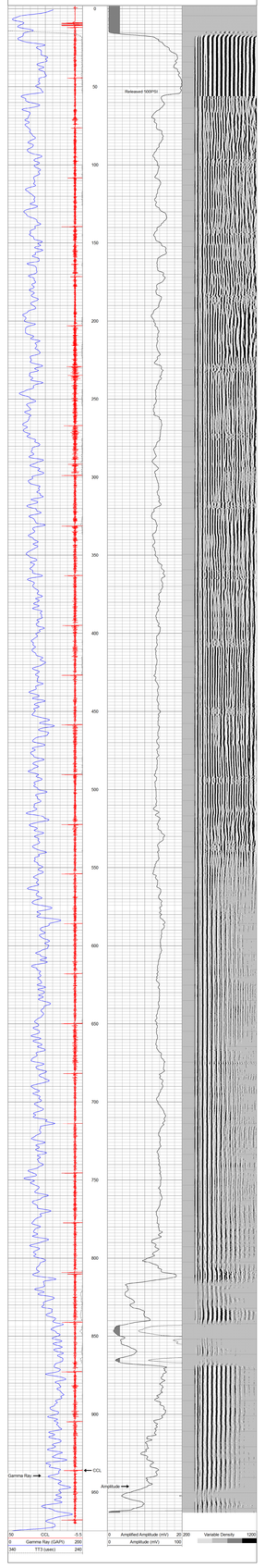
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.006	0.146	1.000	0.000

Air Zero Calibration, performed Mon Apr 08 10:03:02 2019

	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

Database File: 123.db
Dataset Pathname: pass3.1
Presentation Format: anadarko
Dataset Creation: Thu Oct 31 14:33:12 2019 by Calc 7.0 B1
Charted by: Depth in Feet scaled 1:240

50 CCL -5.5 | 0 Amplified Amplitude (mV) 20 | 200 Variable Density 1200
0 Gamma Ray (GAPI) 200 | 0 Amplitude (mV) 100
340 TT3 (usec) 240



50 CCL -5.5 | 0 Amplified Amplitude (mV) 20 | 200 Variable Density 1200
0 Gamma Ray (GAPI) 200 | 0 Amplitude (mV) 100
340 TT3 (usec) 240