Baker Atlas
BAKER HUGHES

Gamma Ray / Segmented Bond Log

File No:	618785
API No:	31-097-61-200-00-00
Company	Inergy Midstream
Well	# 45
Field	US Salt
County	Schuyler
State	New York
Location	Twp: Reading
SEC	N/A
TWP	
RGE	N/A
Other Services	Jcgr 7.54" o.d.; High Res. Vertilog

Thank You.

Permanent Datum	G.L.	Elevation	537 ft
Log Measured From	M.G.	4 ft	Above P. D.
Drill Measured From	Kelly Bushing		

Elevations: KB N/A; DF N/A; GL 537 ft

Date	December 1, 2011
Run	One
Service Order	618785
Depth Driller	2366 ft
Depth Logger	2350 ft
Bottom Logged Interval	2350 ft
Top Logged Interval	-4 ft
Time Started	13:00
Time Finished	18:00
Operator Rig Time	3
Type of Fluid in Hole	Brine
Fluid Density	N/A
Salinity	N/A
Fluid Level	Full
Logged Cement Top	1014 ft
Wellhead Pressure	0 psi
Maximum Hole Deviation	N/A
Nominal Logging Speed	30 fpm
Maximum Recorded Temperature	N/A
Reference Log	N/A
Reference Log Date	N/A
Equipment No. / Location	9703 / Buckhannon, WV
Recorded By	Grant Riffle
Witnessed By	Barry Moon

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In making interpretations of logs, our employees will give the customer the benefit of their best judgement. But since all interpretations are opinions based on inferences from electrical or other measurements, we cannot, and we do not guarantee the accuracy or correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the customer resulting from any interpretation made by any of our employees.

Borehole Record

Bit Size	From	To

Casing Record

Size	Weight	Grade	From	To
8.625 in	32 lbm/ft	J-55	0 ft	2362 ft

Remarks

Thank you for using Baker Hughes.
The crew on your location: M. Marsh and S. McCourt.
The Jcgr size used was 7.54" o.d. it was ran to 2350'.
N/A = Unknown at the time of the log.

Equipment Data

Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CCL	2346XA	120034	Centralized
1	1	GR	1309XA	046751	Centralized
1	1	TEL	1633EA	173911	Centralized
1	1	PADS	1424XA	115226	Centralized
1	1	VDL	1424PA	179432	Centralized

Normalization Pass

SBT NORMALIZATION RESULTS

CURVE	PARAMETER	VALUE	UNITS	TOP	BOTTOM	COMMENT
ATC1	seg1 cnormf1	0.000	db/ft	1899.750	2350.750	
ATC2	seg2 cnormf2	0.000	db/ft	1899.750	2350.750	
ATC3	seg3 cnormf3	0.000	db/ft	1899.750	2350.750	
ATC4	seg4 cnormf4	0.000	db/ft	1899.750	2350.750	
ATC5	seg5 cnormf5	0.000	db/ft	1899.750	2350.750	
ATC6	seg6 cnormf6	0.000	db/ft	1899.750	2350.750	
ATC1	seg1 dnormf1	-0.374	db/ft	1899.750	2350.750	Good Confidence
ATC2	seg2 dnormf2	0.736	db/ft	1899.750	2350.750	Good Confidence
ATC3	seg3 dnormf3	0.114	db/ft	1899.750	2350.750	Good Confidence
ATC4	seg4 dnormf4	-1.040	db/ft	1899.750	2350.750	Good Confidence
ATC5	seg5 dnormf5	0.508	db/ft	1899.750	2350.750	Good Confidence
ATC6	seg6 dnormf6	0.057	db/ft	1899.750	2350.750	Good Confidence

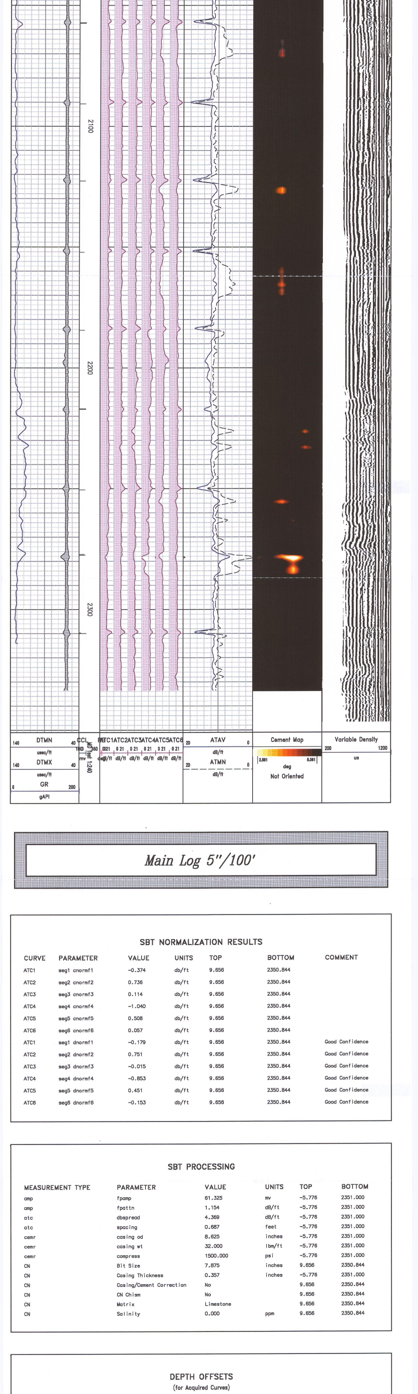
SBT PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
amp	fpamp	61.325	mv	1884.318	2351.000
amp	fpattn	1.154	dB/ft	1884.318	2351.000
atc	dbspread	4.369	dB/ft	1884.318	2351.000
atc	spacing	0.687	feet	1884.318	2351.000
cemr	casing od	8.625	inches	1884.318	2351.000
cemr	casing wt	32.000	lbm/ft	1884.318	2351.000
cemr	compress	1500.000	psi	1884.318	2351.000
CN	Bit Size	7.875	inches	1899.750	2350.750
CN	Casing Thickness	0.357	inches	1884.318	2351.000
CN	Casing/Cement Correction	No		1899.750	2350.750
CN	CN Chism	No		1899.750	2350.750
CN	Matrix	Limestone		1899.750	2350.750
CN	Salinity	0.000	ppm	1899.750	2350.750

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
2346XA	-43.500	CCL					
1309XA	-34.557	GR					
1424XA	-15.432	ATC1	ATC2	ATC3	ATC4	ATC5	ATC6
		ATAV	ATMN	ATMX	AMAV	DEV	DTMN
		DTMX	RB	XATT	YATT		
1424PA	-4.070	CHV	CYQ	SIG			
2435XA	0.000	LSN					
2435XA	0.000	NEU	SSN				

Created by : SBT, v5.0.003
Plotted by : PlotMgr, v5.4.504
Company : Inergy Midstream
Well : # 45
File Name : C:\WELLDATA\45\NORM.xtf
Mode : PlotMgr 5.4.504
Interval : 1900.00 - 2351.00 feet UP
Created : 12/1/2011 2:17:17 PM



Main Log 5"/100'

SBT NORMALIZATION RESULTS

CURVE	PARAMETER	VALUE	UNITS	TOP	BOTTOM	COMMENT
ATC1	seg1 cnormf1	-0.374	db/ft	9.656	2350.844	
ATC2	seg2 cnormf2	0.736	db/ft	9.656	2350.844	
ATC3	seg3 cnormf3	0.114	db/ft	9.656	2350.844	
ATC4	seg4 cnormf4	-1.040	db/ft	9.656	2350.844	
ATC5	seg5 cnormf5	0.508	db/ft	9.656	2350.844	
ATC6	seg6 cnormf6	0.057	db/ft	9.656	2350.844	
ATC1	seg1 dnormf1	-0.179	db/ft	9.656	2350.844	Good Confidence
ATC2	seg2 dnormf2	0.751	db/ft	9.656	2350.844	Good Confidence
ATC3	seg3 dnormf3	-0.015	db/ft	9.656	2350.844	Good Confidence
ATC4	seg4 dnormf4	-0.853	db/ft	9.656	2350.844	Good Confidence
ATC5	seg5 dnormf5	0.451	db/ft	9.656	2350.844	Good Confidence
ATC6	seg6 dnormf6	-0.153	db/ft	9.656	2350.844	Good Confidence

SBT PROCESSING

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
amp	fpamp	61.325	mv	-5.776	2351.000
amp	fpattn	1.154	dB/ft	-5.776	2351.000
atc	dbspread	4.369	dB/ft	-5.776	2351.000
atc	spacing	0.687	feet	-5.776	2351.000
cemr	casing od	8.625	inches	-5.776	2351.000
cemr	casing wt	32.000	lbm/ft	-5.776	2351.000
cemr	compress	1500.000	psi	-5.776	2351.000
CN	Bit Size	7.875	inches	9.656	2350.844
CN	Casing Thickness	0.357	inches	-5.776	2351.000
CN	Casing/Cement Correction	No		9.656	2350.844
CN	CN Chism	No		9.656	2350.844
CN	Matrix	Limestone		9.656	2350.844
CN	Salinity	0.000	ppm	9.656	2350.844

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
2346XA	-43.500	CCL					
1309XA	-34.557	GR					
1424XA	-15.432	ATC1	ATC2	ATC3	ATC4	ATC5	ATC6
		ATAV	ATMN	ATMX	AMAV	DEV	DTMN
		DTMX	RB	XATT	YATT		
1424PA	-4.070	CHV	CYQ	SIG			
2435XA	0.000	LSN					
2435XA	0.000	NEU	SSN				

Created by : SBT, v5.0.003
Plotted by : PlotMgr, v5.4.504
Company : Inergy Midstream
Well : # 45
File Name : c:\welldata\45\mn05.xtf
Mode : PlotMgr 5.4.504
Interval : -4.00 - 2351.00 feet UP
Created : 12/1/2011 2:49:52 PM

Repeat Section

SBT NORMALIZATION RESULTS

CURVE	PARAMETER	VALUE	UNITS	TOP	BOTTOM	COMMENT
ATC1	seg1 cnormf1	-0.374	db/ft	2149.750	2350.594	
ATC2	seg2 cnormf2	0.736	db/ft	2149.750	2350.594	
ATC3	seg3 cnormf3	0.114	db/ft	2149.750	2350.594	
ATC4	seg4 cnormf4	-1.040	db/ft	2149.750	2350.594	
ATC5	seg5 cnormf5	0.508	db/ft	2149.750	2350.594	
ATC6	seg6 cnormf6	0.057	db/ft	2149.750	2350.594	
ATC1	seg1 dnormf1	0.291	db/ft	2149.750	2350.594	Good Confidence
ATC2	seg2 dnormf2	0.526	db/ft	2149.750	2350.594	Good Confidence
ATC3	seg3 dnormf3	-0.003	db/ft	2149.750	2350.594	Good Confidence
ATC4	seg4 dnormf4	-1.167	db/ft	2149.750	2350.594	Good Confidence
ATC5	seg5 dnormf5	0.247	db/ft	2149.750	2350.594	Good Confidence
ATC6	seg6 dnormf6	0.107	db/ft	2149.750	2350.594	Good Confidence