SUPERIOR WELL SERVICES

SUPERIOR
Mercer, PA
Shelocta, PA
Owego, NY
Buckhannon, WV
Painstville, KY

GAMMA RAY / NEUTRON DENSITY / TEMPERATURE ACOUSTIC SURVEY INDUCTION

Company HAUGHT ENERGY CORP.
Well W-1605
Field MURPHY DISTRICT
County RITCHIE
State W.VA

Company	HAUGHT ENERGY CORP.
Well	W-1605
Field	MURPHY DISTRICT
County	RITCHIE
State	W.VA

Location: API # : 47-085-09906

SMITHVILLE 7.5 QUAD

SEC TWP RGE

Other Services: TIFF

Permanent Datum	GROUND LEVEL	Elevation	1102 FT.
Log Measured From	GROUND LEVEL		
Drilling Measured From	K.B. 7 FT.		

Elevation
K.B. 1109 FT.
D.F. 1109 FT.
G.L. 1102 FT.

Date	10 JAN 2011		
Run Number	ONE		
Depth Driller	5749 FT.		
Depth Logger	5800 FT.		
Bottom Logged Interval	1600 FT.		
Top Log Interval	SURFACE		
Casing Driller	2031 FT.		
Casing Logger	2034 FT.		
Bit Size	6.375 IN.		
Type Fluid in Hole	AIR/GAS		
Density / Viscosity	N/A		
pH / Fluid Loss	N/A		
Source of Sample	N/A		
Rm @ Meas. Temp	N/A		
Rmf @ Meas. Temp	N/A		
Rmc @ Meas. Temp	N/A		
Source of Rmf / Rmc	N/A		
Rm @ BHT	N/A		
Time Circulation Stopped	5 HOURS		
Time Logger on Bottom	N/A		
Maximum Recorded Temperature	N/A		
Equipment Number	230		
Location	BUCKHANNON WV		
Recorded By	MARK LEWIS		
Witnessed By	WARREN HAUGHT		

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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

CREW: J.PUMPHREY / M.LEWIS
MATRIX DENSITY: 2.71
FLUID DENSITY: 1.0
TEMPERATURE / AUDIO RAN IN HOLE !
THANK YOU FOR USING SUPERIOR WELL SERVICE !
TICKET # 35-002644

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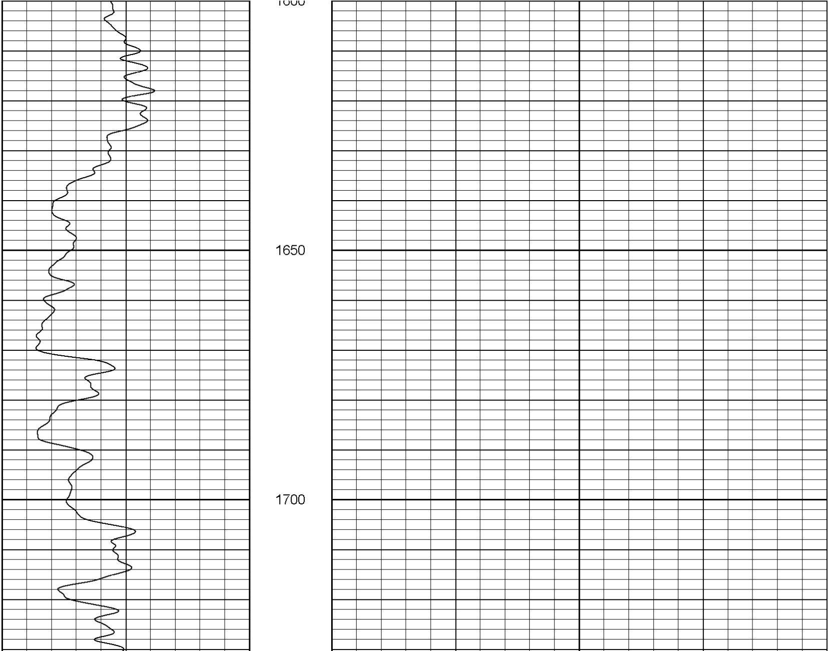
5 INCH MAIN LOG

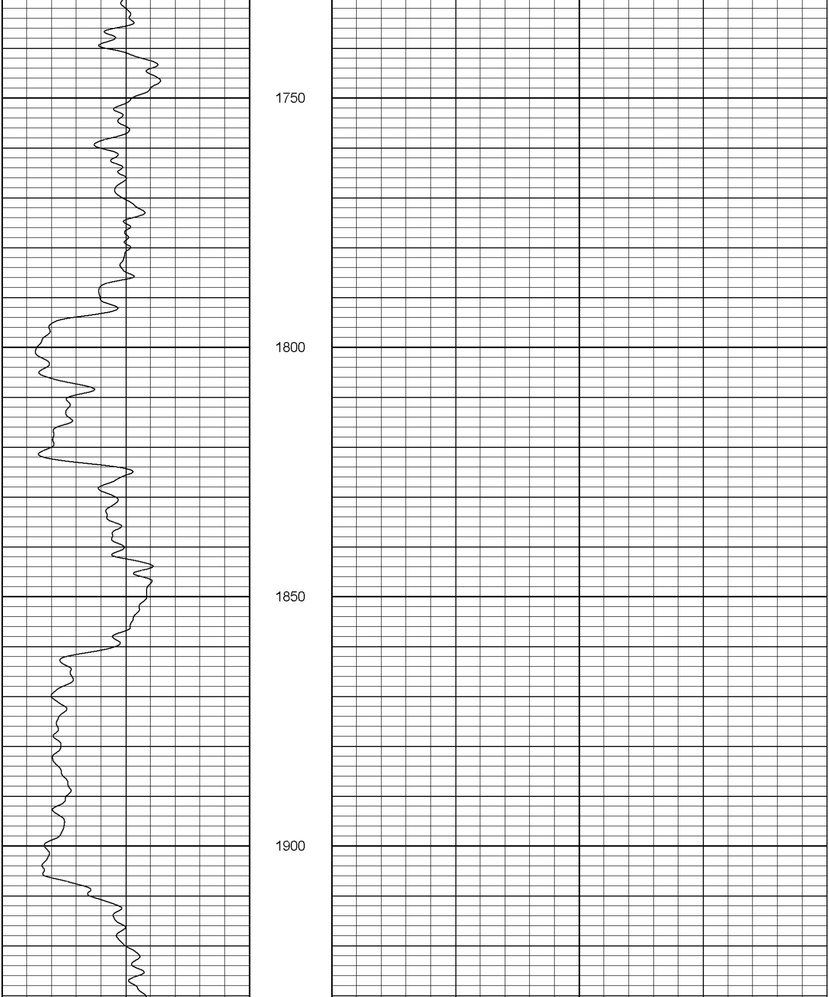
Database File:	haught energy w 1605.db
Dataset Pathname:	pass3.2A
Presentation Format:	audioup
Dataset Creation:	Tue Jan 11 00:43:11 2011
Charted by:	Depth in Feet scaled 1:240

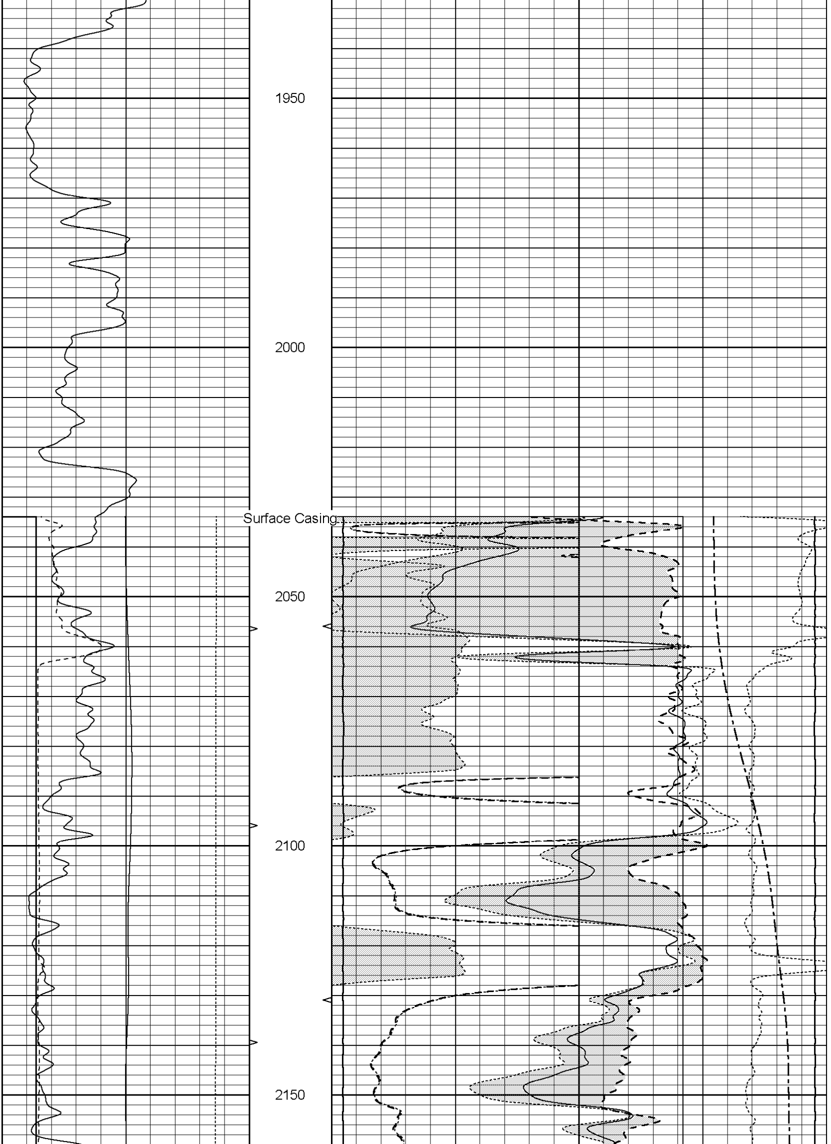
Left	Curve	Right
5	CALIPER (in)	15
0	GAMMA RAY (GAPI)	200
200	GR BACK UP (GAPI)	400
5	BIT SIZE (in)	15
5000	LTEN (lb)	0
-0.25	DTMP (degF)	0.25

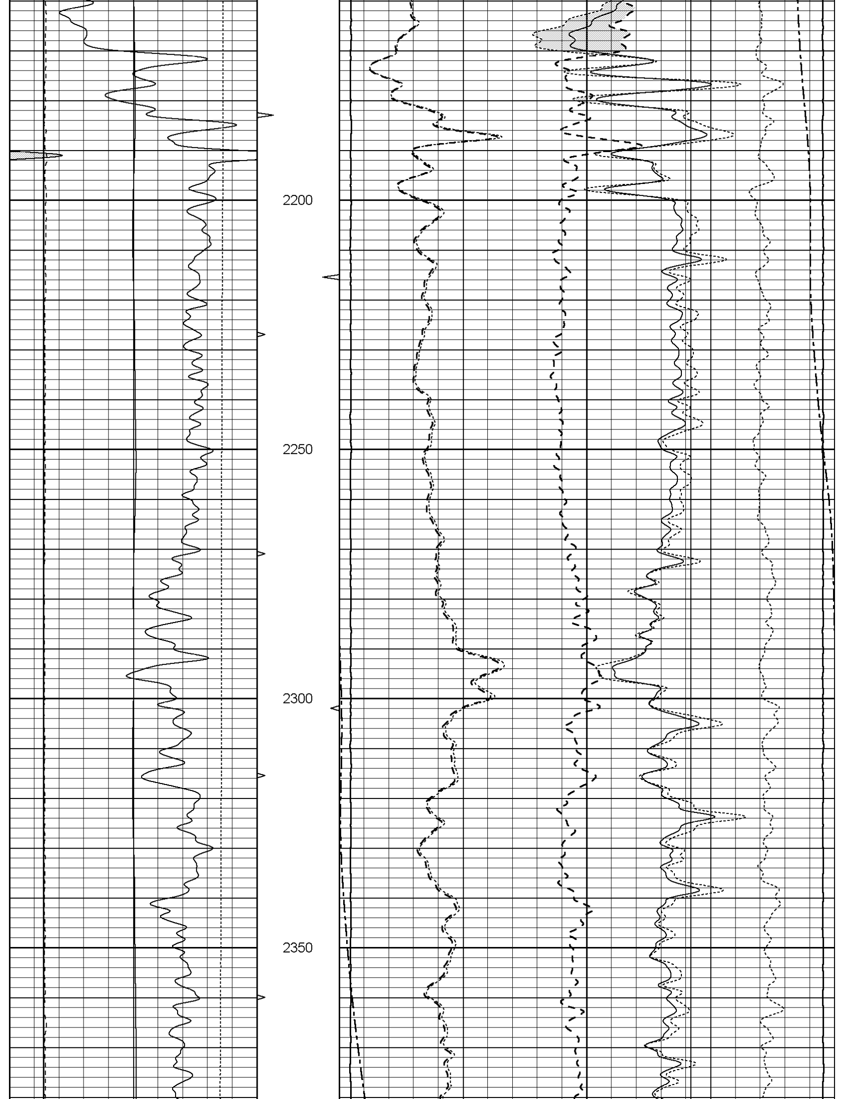
TBHV
ABHV

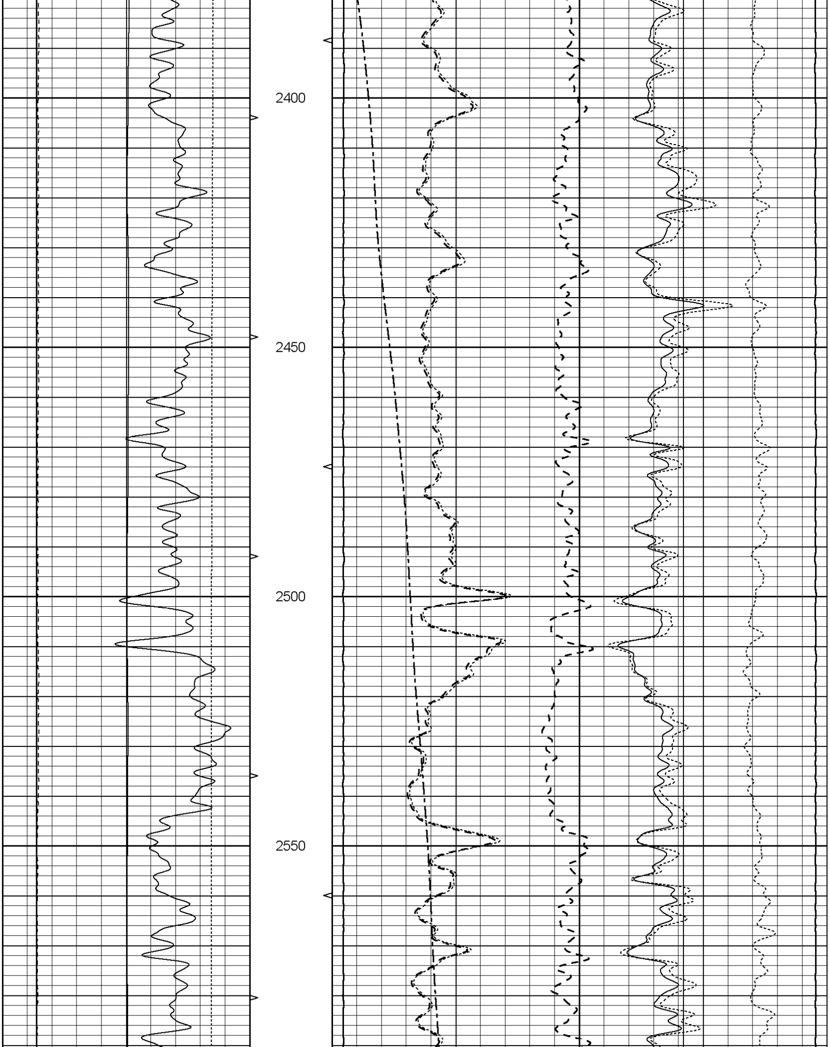
Left	Curve	Right
	MEDIUM RESISTIVITY	
0	DEEP RESISTIVITY (Ohm-m)	100
-0.3	CORRECTION (g/cc)	0.2
2	BULK DENSITY (g/cc)	3
30	DENSITY POROSITY (pu)	-10
100	RILD (Ohm-m)	1000
2	MATRIX DENSITY (g/cc)	3
65	TEMPERATURE (degF)	70
1000	UPPER NOISE ( )	0
0	LOWER NOISE ( )	1000
30	NEUTRON POROSITY (pu)	-10

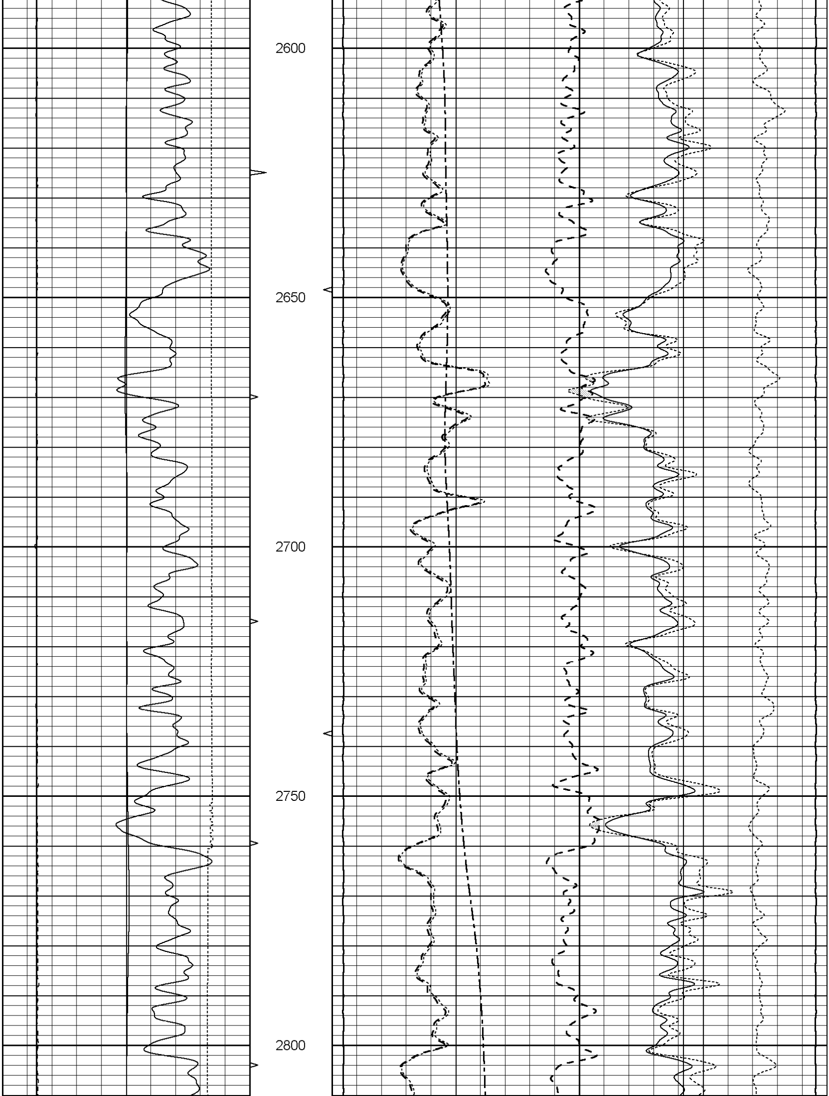


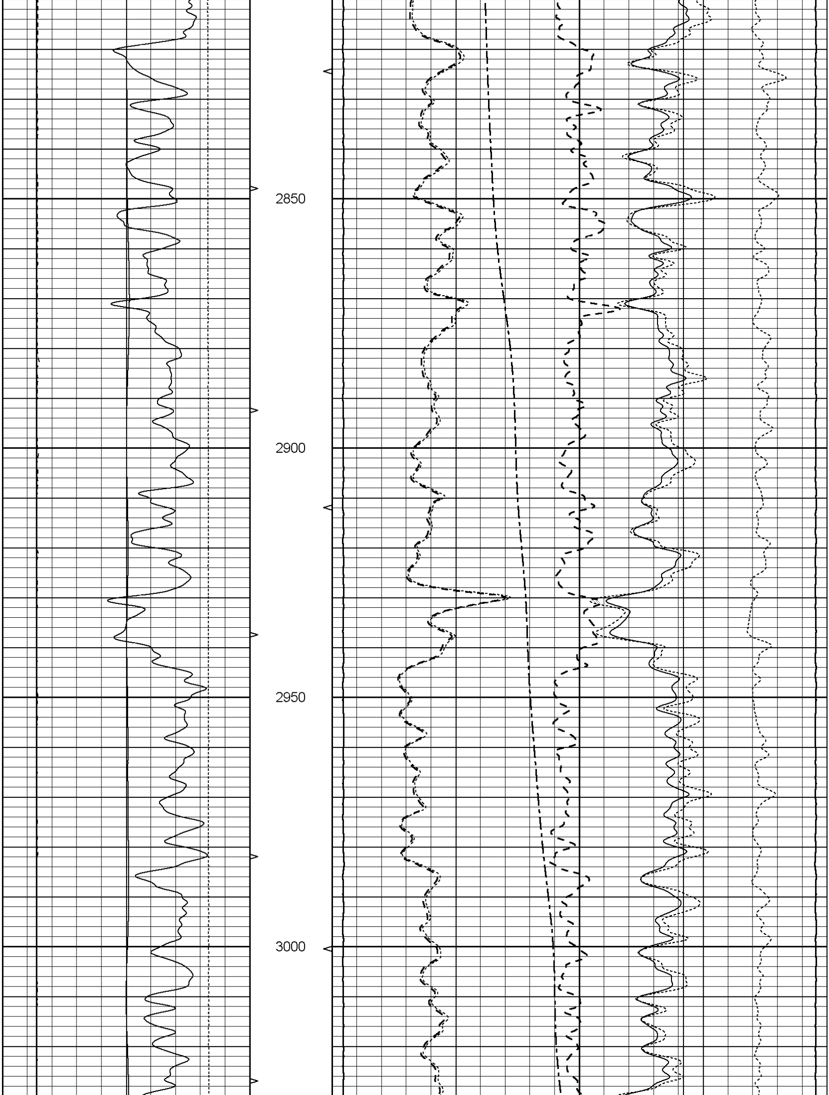


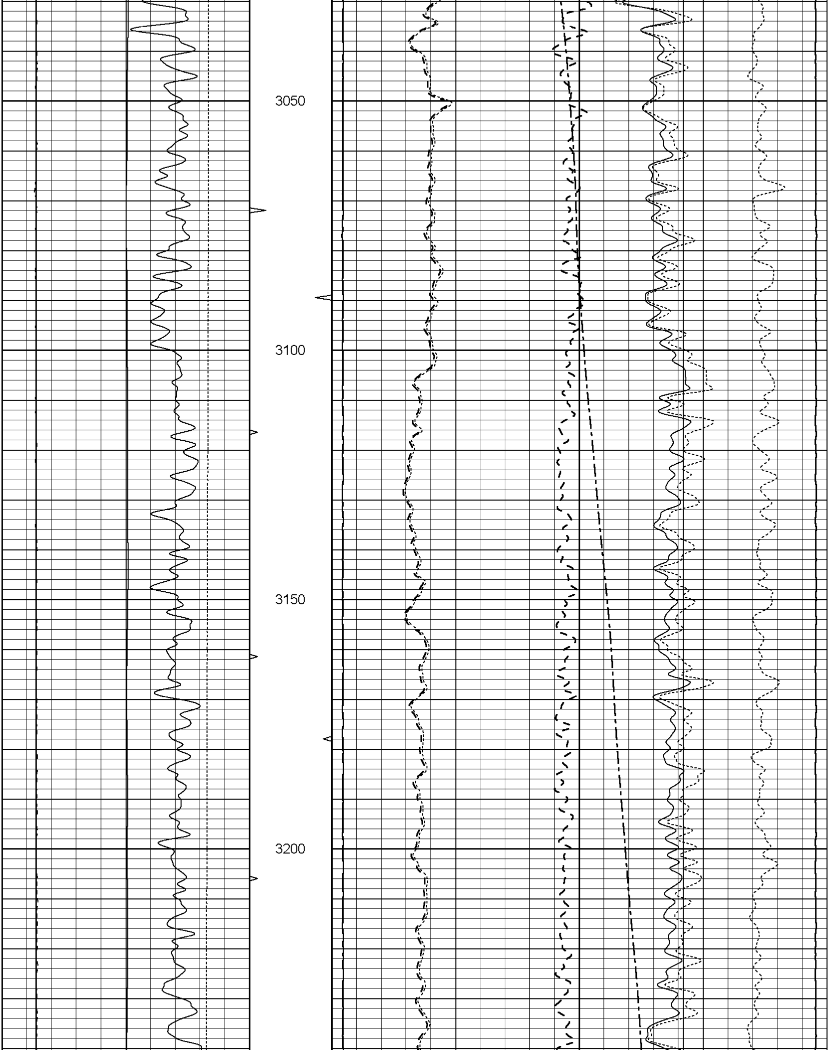


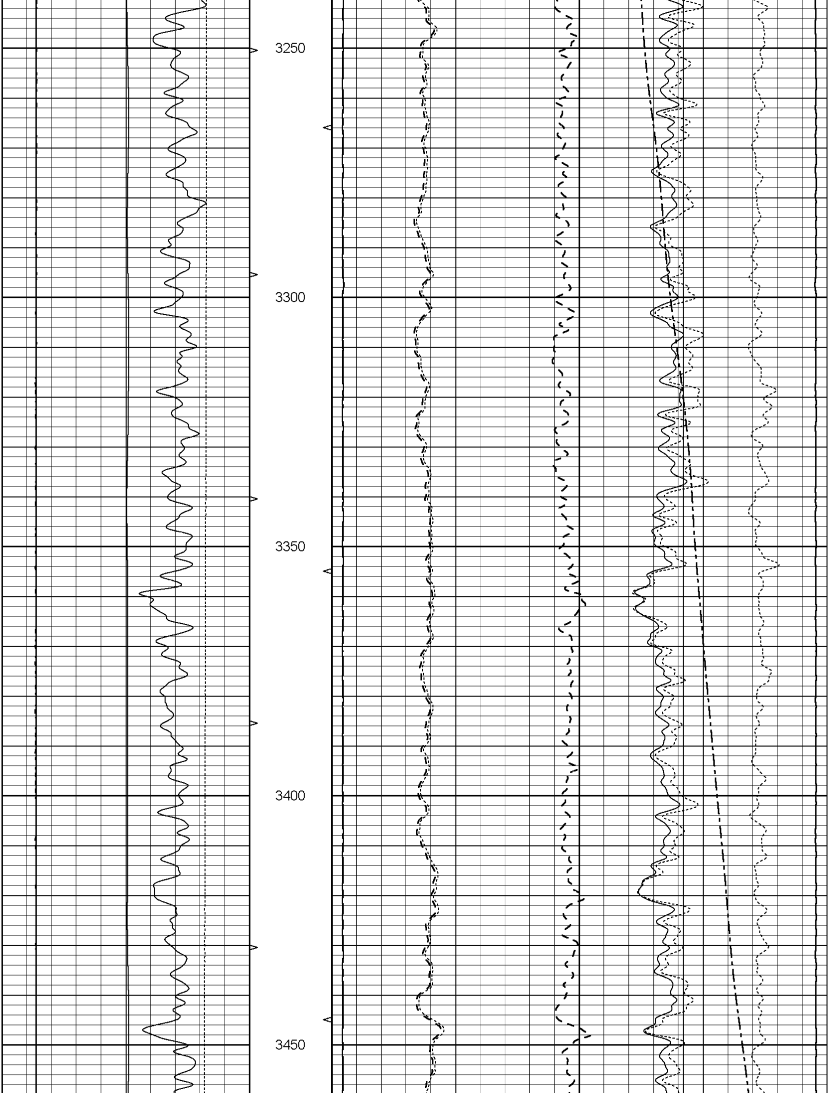


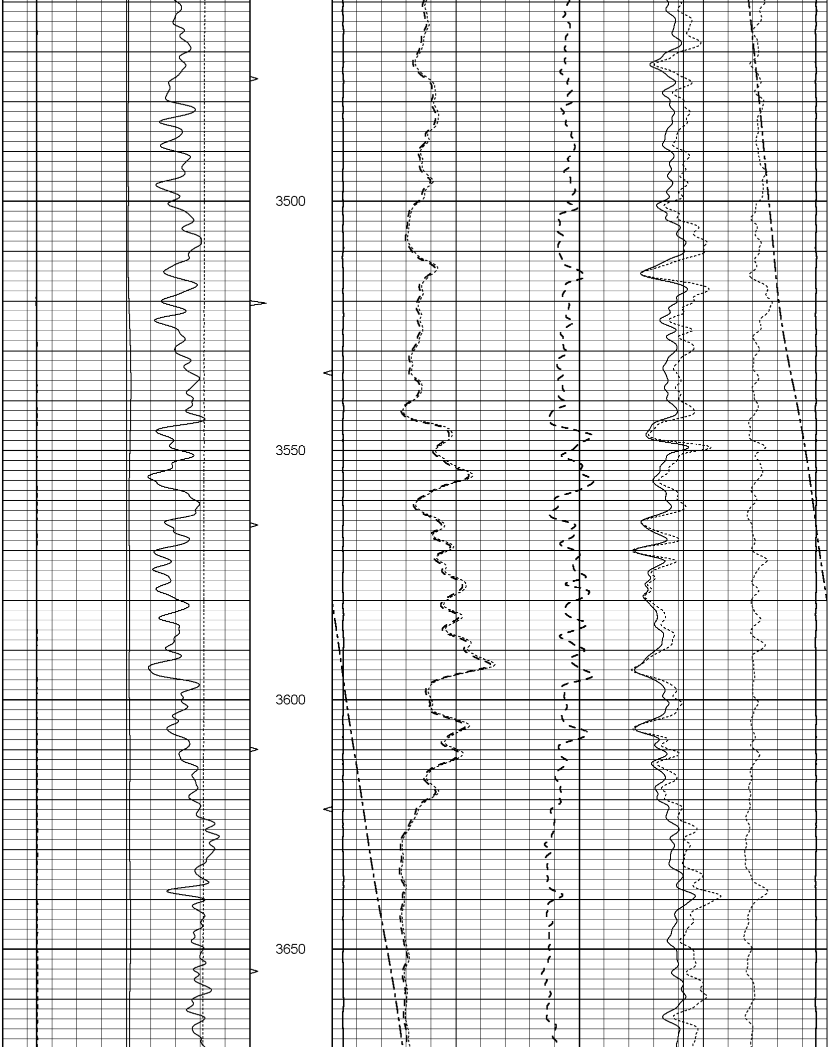


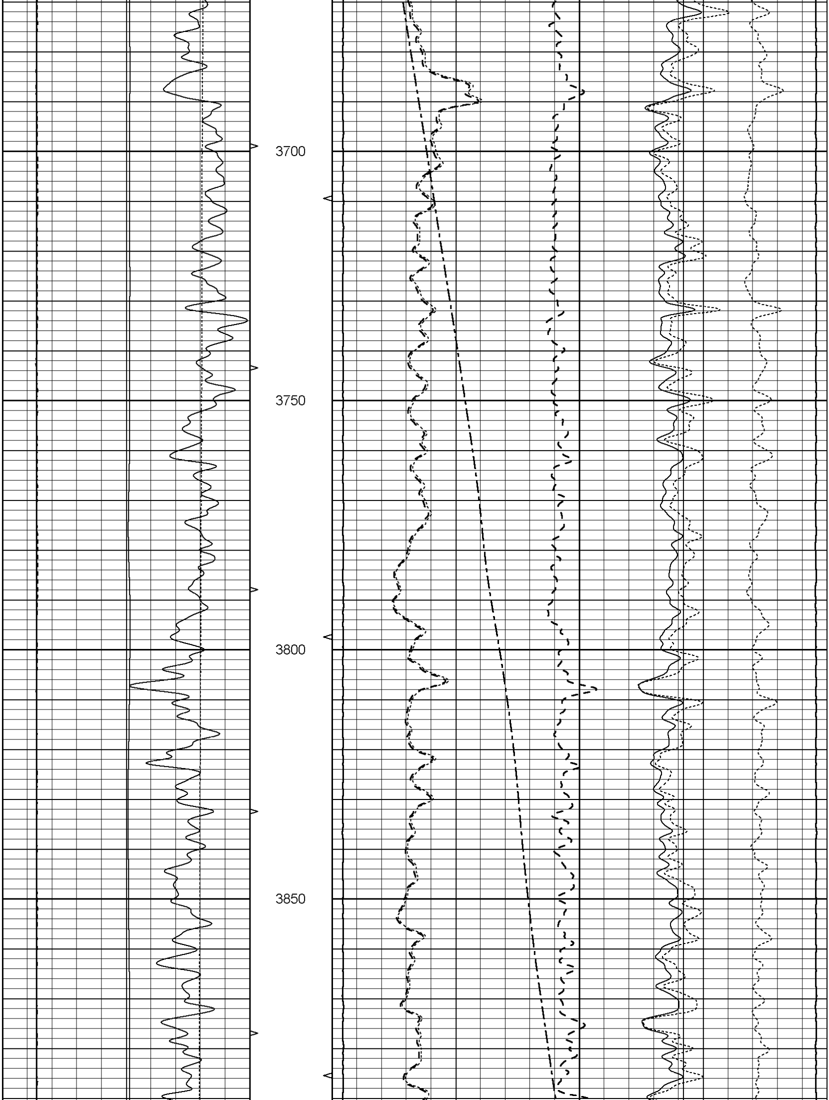


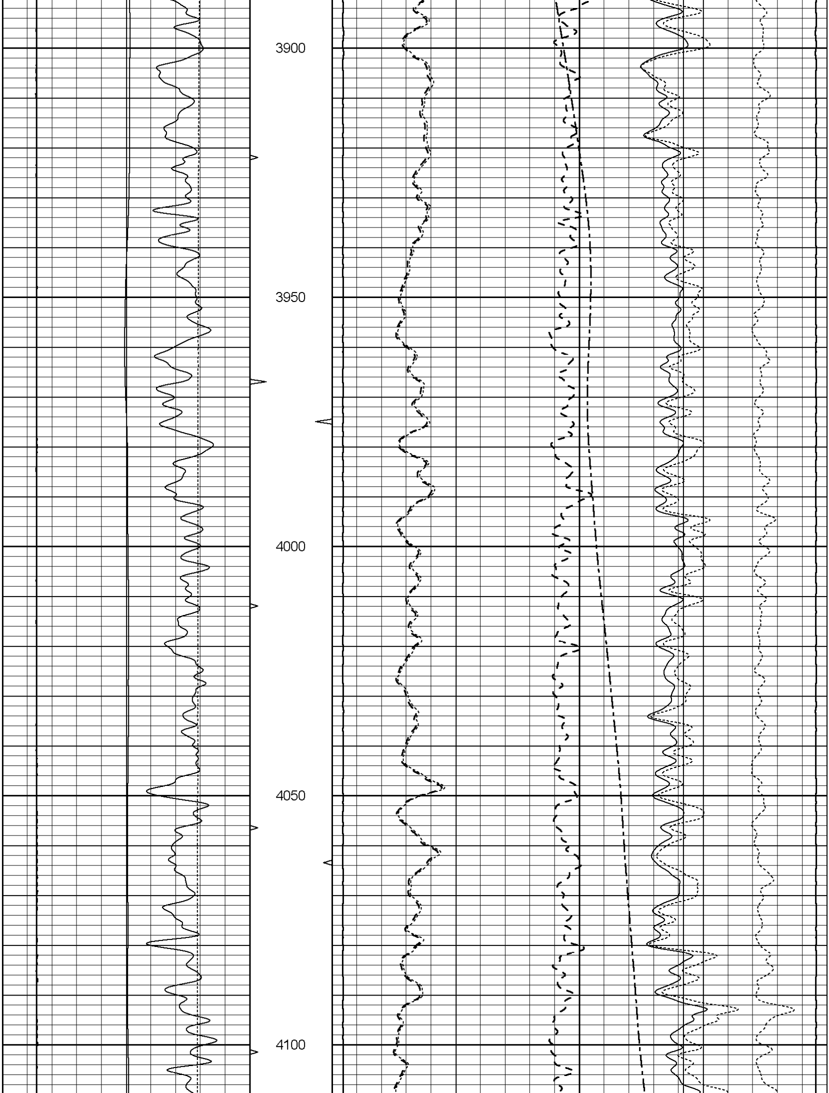


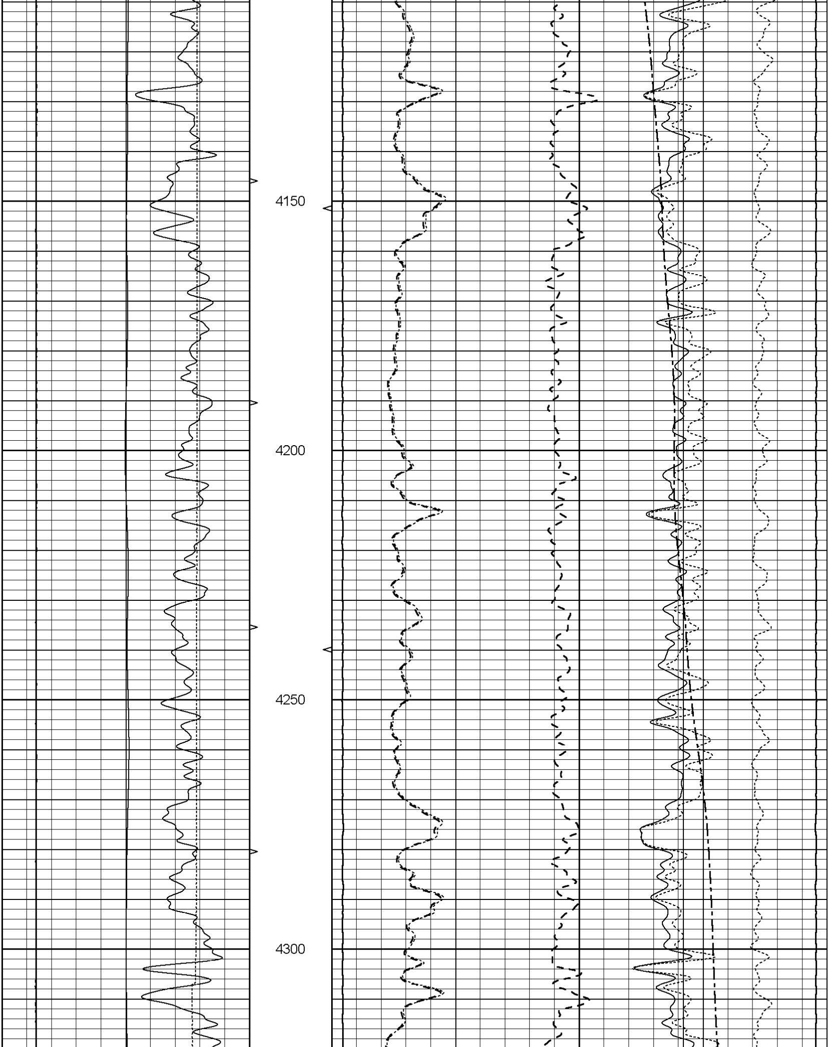


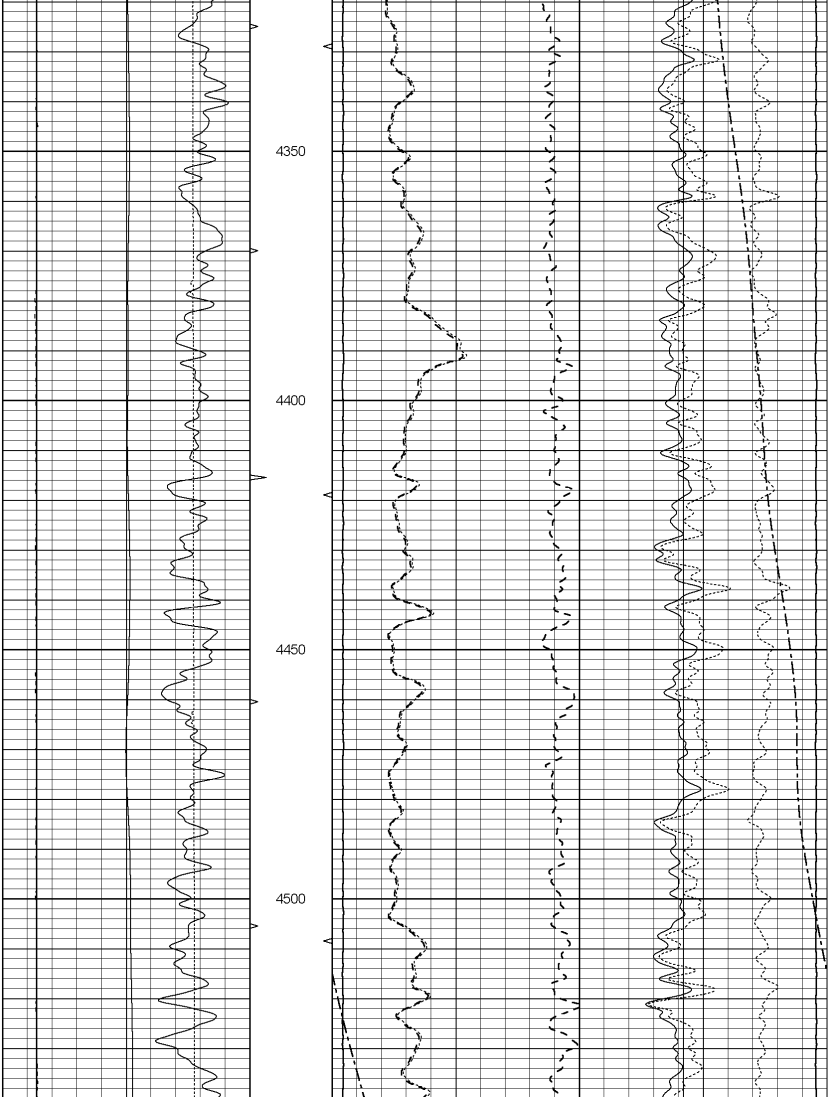


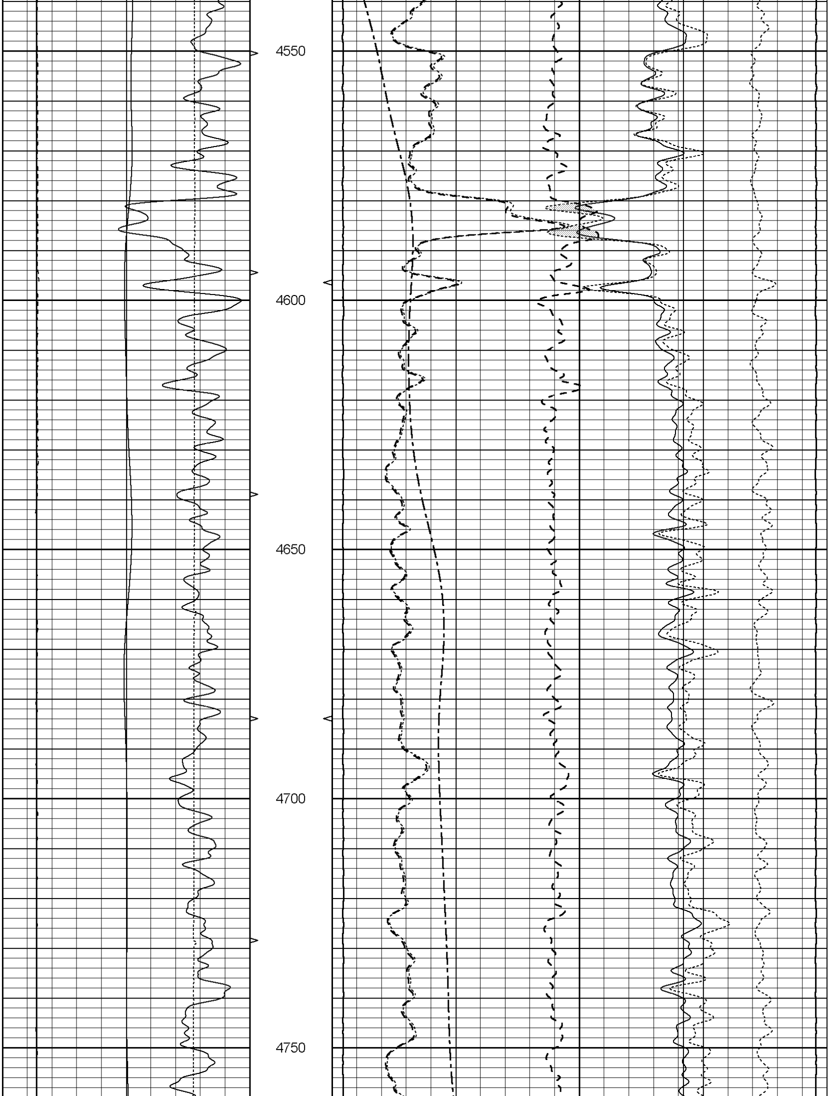


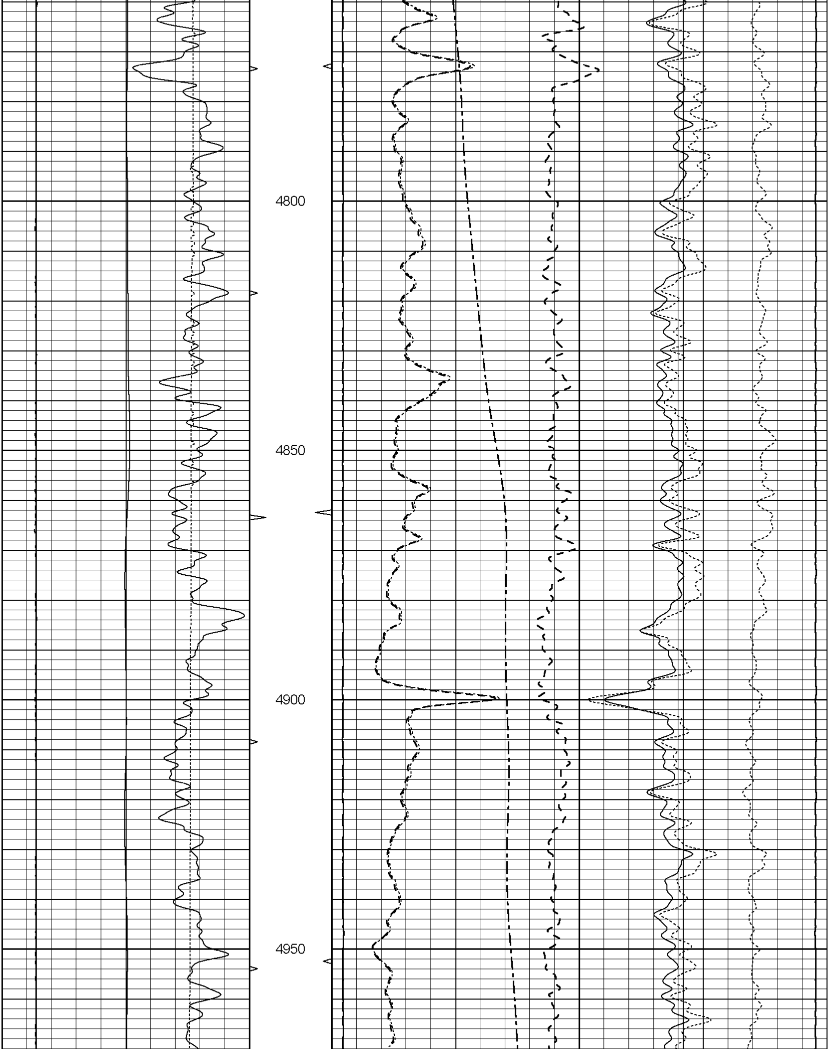


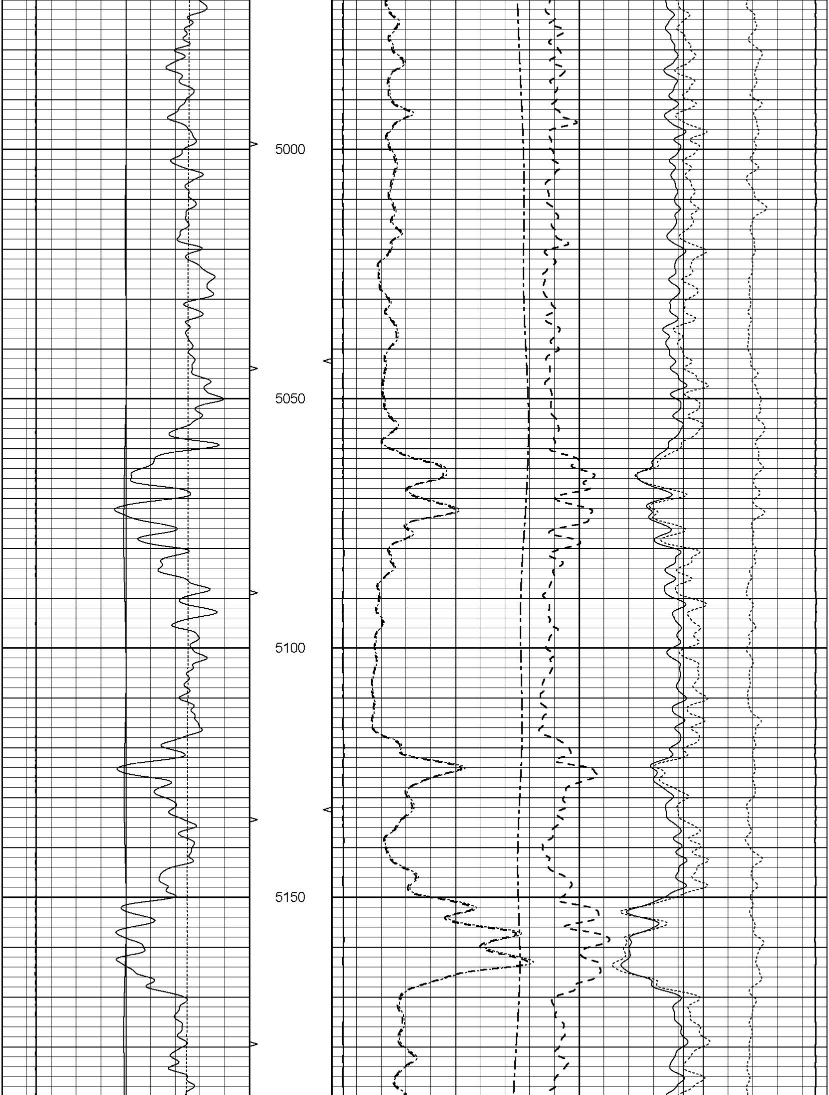


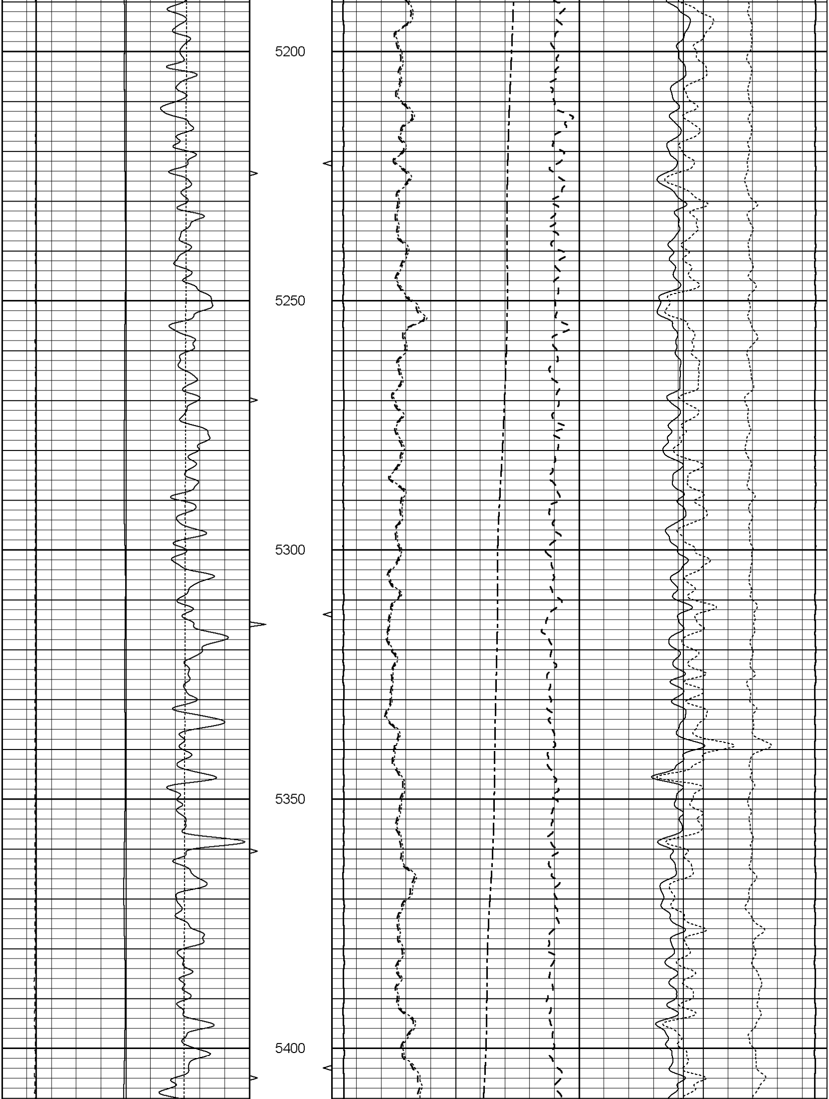


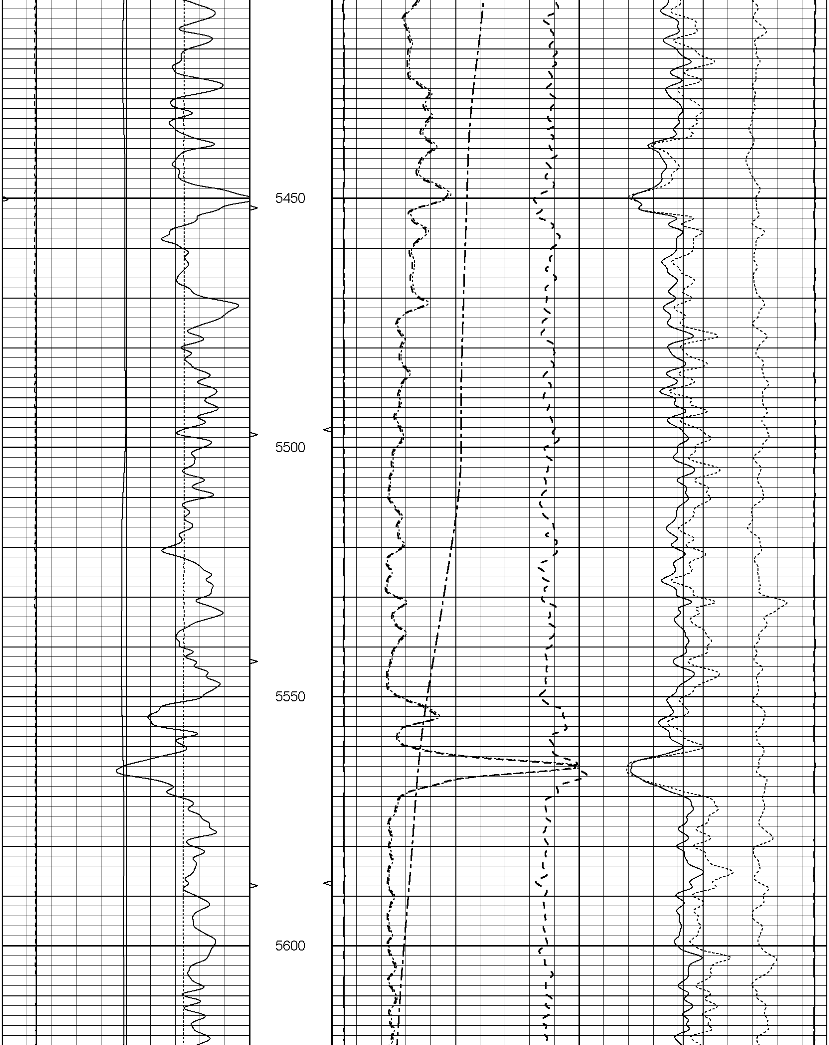


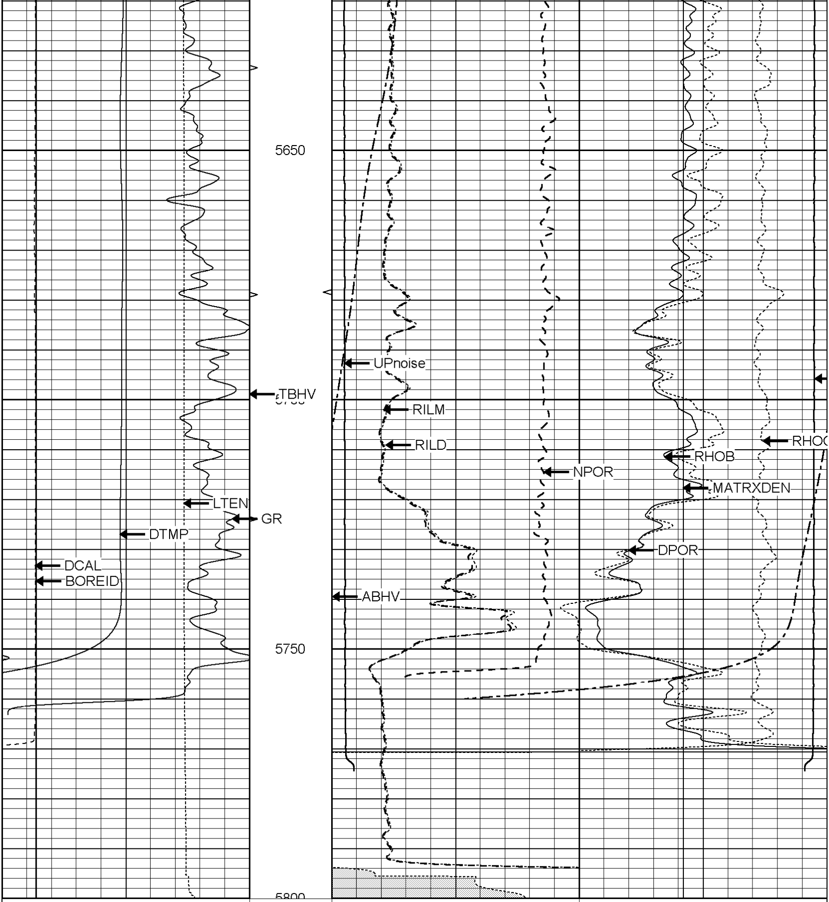












5	CALIPER (in)	15
0	GAMMA RAY (GAPI)	200
200	GR BACK UP (GAPI)	400
5	BIT SIZE (in)	15
5000	LTEN (lb)	0
-0.25	DTMP (degF)	0.25

TBHV

ABHV

	MEDIUM RESISTIVITY		-0.3	CORRECTION (g/cc)	0.2
0	DEEP RESISTIVITY (Ohm-m)	100			
2	BULK DENSITY (g/cc)				3
30	DENSITY POROSITY (pu)				-10
100	RILD (Ohm-m)	1000			
2	MATRIX DENSITY (g/cc)				3
65	TEMPERATURE (degF)				70
1000	UPPER NOISE ( )				0
0	LOWER NOISE ( )				1000
30	NEUTRON POROSITY (pu)				-10

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5 INCH REPEAT SECTION

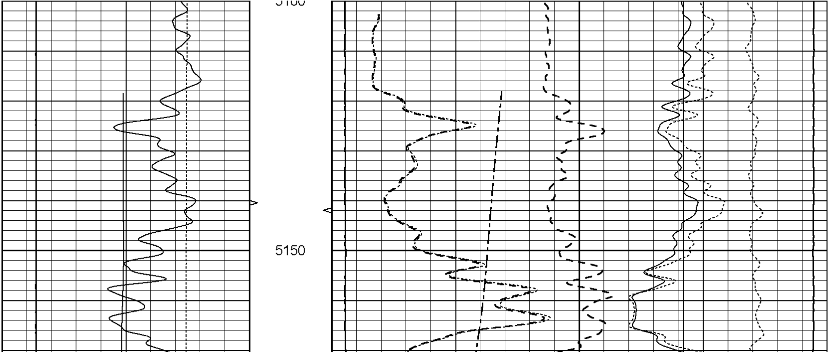
Database File:	haught energy w 1605.db
Dataset Pathname:	pass2.1A
Presentation Format:	audioup
Dataset Creation:	Tue Jan 11 00:42:03 2011
Charted by:	Depth in Feet scaled 1:240

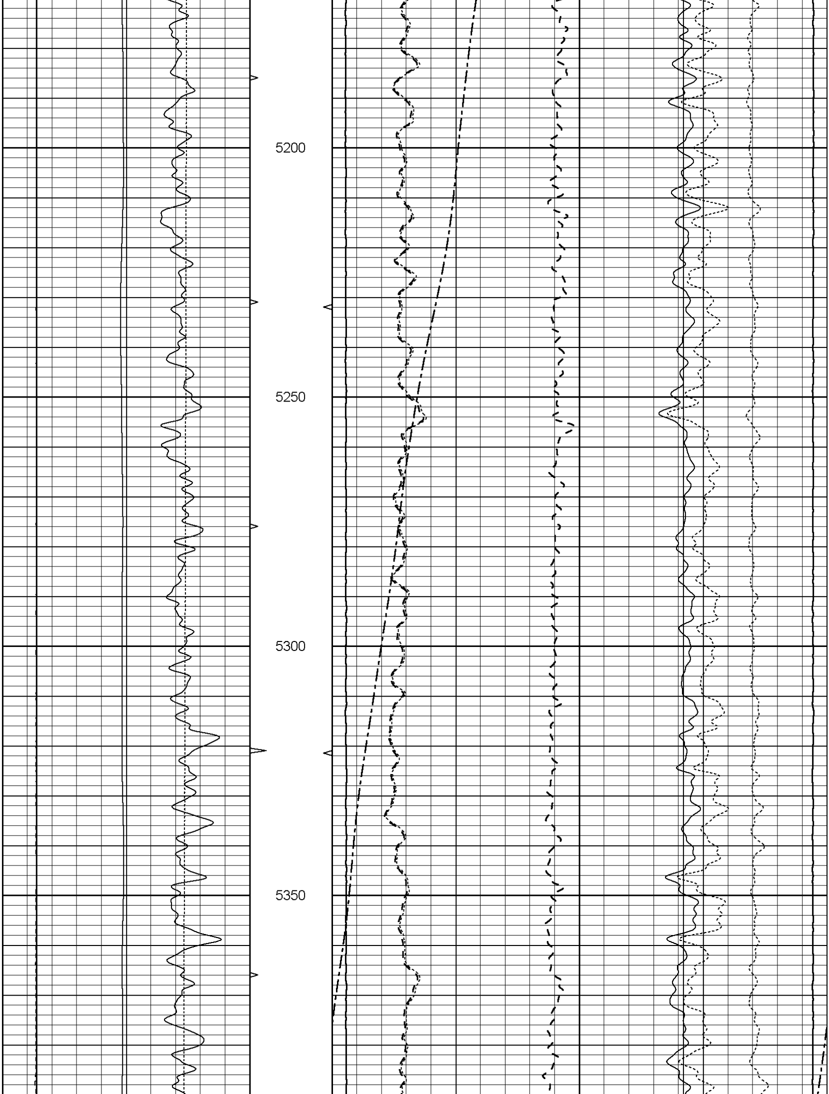
5	CALIPER (in)	15
0	GAMMA RAY (GAPI)	200
200	GR BACK UP (GAPI)	400
5	BIT SIZE (in)	15
5000	LTEN (lb)	0
-0.25	DTMP (degF)	0.25

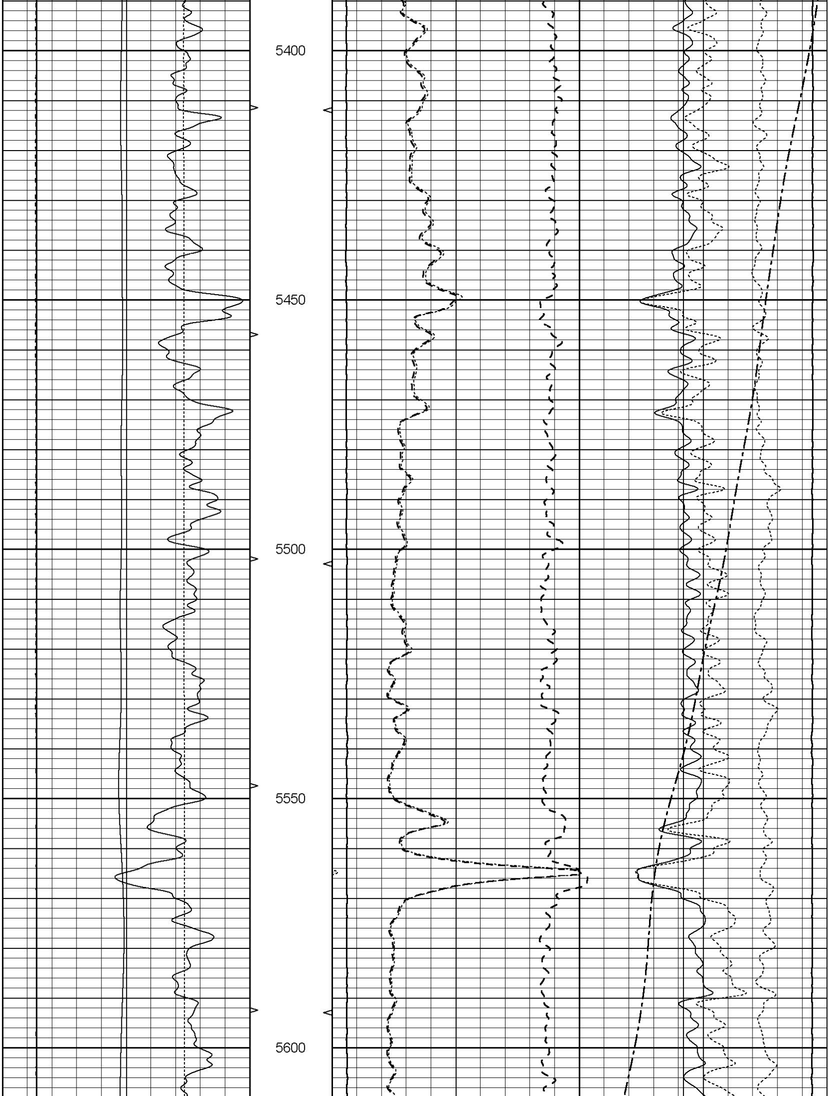
TBHV
ABHV

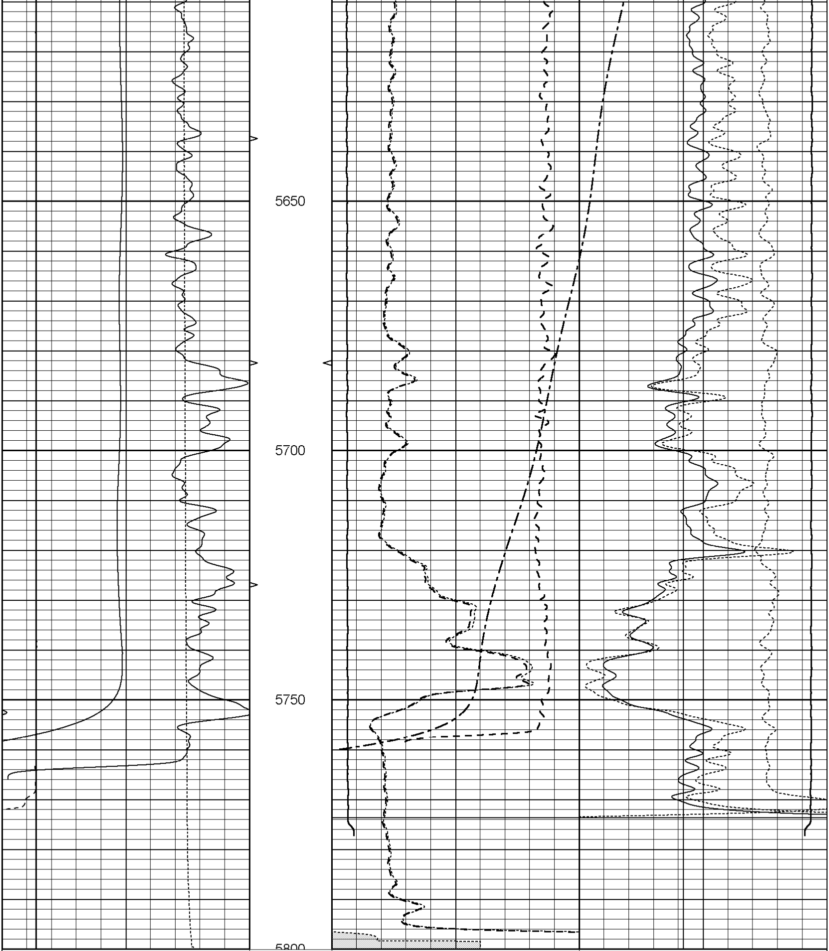
	MEDIUM RESISTIVITY	
0	DEEP RESISTIVITY (Ohm-m)	100
100	RILD (Ohm-m)	1000

-0.3	CORRECTION (g/cc)	0.2
2	BULK DENSITY (g/cc)	3
30	DENSITY POROSITY (pu)	-10
2	MATRIX DENSITY (g/cc)	3
65	TEMPERATURE (degF)	70
1000	UPPER NOISE ( )	0
0	LOWER NOISE ( )	1000
30	NEUTRON POROSITY (pu)	-10









5	CALIPER (in)	15
0	GAMMA RAY (GAPI)	200
200	GR BACK UP (GAPI)	400
5	BIT SIZE (in)	15
5000	LTEN (lb)	0
-0.25	DTMP (degF)	0.25

TBHV

ABHV

	MEDIUM RESISTIVITY	
0	DEEP RESISTIVITY (Ohm-m)	100
-0.3	CORRECTION (g/cc)	0.2
2	BULK DENSITY (g/cc)	3
30	DENSITY POROSITY (pu)	-10
100	RILD (Ohm-m)	1000
2	MATRIX DENSITY (g/cc)	3
65	TEMPERATURE (degF)	70
1000	UPPER NOISE ( )	0

0	LOWER NOISE ( )	1000
30	NEUTRON POROSITY (pu)	-10

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5 INCH REPEAT SECTION

Calibration Report

Database File: haught energy w 1605.db
Dataset Pathname: pass3.2A
Dataset Creation: Tue Jan 11 00:43:11 2011

Dual Induction Calibration Report

Serial-Model: 304-3-GEAR
Surface Cal Performed: Fri Jan 07 15:29:27 2011
Downhole Cal Performed: Thu Jan 06 11:39:26 2011
After Survey Verification Performed: Thu Jan 06 11:39:26 2011

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.013	0.622	V	12.000	400.000	mmho-m	636.871	4.039
Medium	0.008	0.731	V	0.000	464.000	mmho-m	641.004	4.812
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-0.366	10.000	V	0.000	400.000	mmho-m	38.590	14.117
Medium	-0.077	1.055	V	0.000	464.000	mmho-m	409.724	31.697

Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	0.000	mmho-m	-228.949	6372.560	mmho-m	1.000	0.000
Medium	0.000	0.000	mmho-m	-54.402	671.516	mmho-m	1.000	0.000
Shallow	2.500	0.020	V	500.000	2.000	Ohm-m	130.806	5.106

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho-m	0.000	0.000	mmho-m	1.000	0.000
Medium	0.000	0.000	mmho-m	0.000	0.000	mmho-m	1.000	0.000
Shallow	0.000	1.000	Ohm-m	0.000	1.000	Ohm-m	1.000	0.000

Temperature Calibration Report

Serial Number: 070210
Tool Model: Probe
Performed: Mon Jan 10 22:23:12 2011

	Reference		Reading	
Low Reference:	0.00	degF	0.00	cps
High Reference:	10.00	degF	100.00	cps

Gain: 0.10
Offset: 4.00
Delta Spacing 1

Litho Density Calibration Report

Serial: 081232 Model: PRB

Master Calibration

Performed Mon Oct 18 08:00:45 2010

	Background	Magnesium	Aluminum	Aluminium + Fe	
Window 1	1332.8	68227.8	15676.9	12754.3	cps
Window 2	1224.7	58692.0	13753.2	11431.1	cps
Window 3	812.8	19320.5	4864.6	4380.2	cps
Window 4	272.6	310.1	270.9	275.1	cps
Long Space	0.0	57467.3	12528.5	10206.4	cps
Short Space	1.9	6808.3	4955.0	4099.7	cps
Rho		1.7100	2.6000	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	

Rib Angle : 48.2 Rib Slope : 1.119 Density/Spine Ratio : 0.572
Spine Angle : 78.2 Spine Slope : 4.794 Spine Intercept : -31.4

Before Survey Verification

Performed Mon Oct 18 08:14:11 2010

	Background	Magnesium	Aluminum	Aluminium + Fe	
Window 1	1655.0	67961.4	15615.2	12637.7	cps
Window 2	1511.9	58503.1	13680.8	11332.6	cps
Window 3	939.3	19312.4	4784.1	4322.9	cps
Window 4	275.9	305.6	269.7	271.2	cps
Long Space	0.0	56991.2	12169.0	9820.7	cps
Short Space	1.9	6747.0	4814.8	4054.7	cps
Measured Rho		1.7086	2.5977	2.6146	g/cc
Measured Correction		-0.0062	-0.0193	-0.1277	g/cc
Measured Pe			4258.9748	3440.2828	

After Survey Verification

Performed Mon Oct 18 08:26:36 2010

	Background	Magnesium	Aluminum	Aluminium + Fe	
Window 1	2428.2	67454.5	15880.8	12721.6	cps
Window 2	2213.3	58097.4	13910.5	11400.2	cps
Window 3	1377.9	19139.4	4866.5	4345.4	cps
Window 4	349.0	305.0	270.1	276.5	cps
Long Space	0.0	55884.1	11697.2	9186.9	cps
Short Space	5.0	6739.9	4943.4	4086.8	cps
Measured Rho		1.7227	2.6503	2.6721	g/cc
Measured Correction		-0.0036	0.0102	-0.1091	g/cc
Measured Pe			4093.8457	3218.3649	

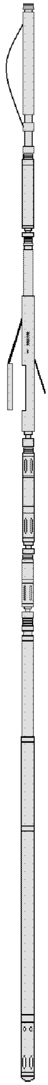
Gamma Ray Calibration Report

Serial Number:	080906	
Tool Model:	ADDON	
Performed:	Mon Jan 10 22:05:02 2011	
Calibrator Value:	130.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	500.0	cps
Sensitivity:	0.2500	GAPI/cps

Neutron Calibration Report

Serial Number: 081044
Tool Model: PROBEOP
Performed: Thu Mar 11 23:28:02 2010

Calibrator Values:	0	1	NAPI
Calibrator Readings:	0	1	cps
Sensitivity:	1	NAPI/cps	

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
NEU	45.66					
			OHNEU-PROBEOP (081044)	6.67	3.25	70.00
GR	39.30		OHGR-ADDON (080906)	3.70	3.50	30.00
			LDT-PRB (081232)	9.30	3.63	275.00
DCAL	30.49					
W1	30.34					
W2	30.34					
W3	30.34					
W4	30.34					
Q	30.34					
			NOISE-Probe (007) Digital Noise Tool	4.75	3.13	75.00
SSD	30.13					
UpNoise	27.65					
LoNoise	24.44					
			TEMP-Probe (070210) Digital Temp Tool	2.83	3.13	40.00
TEMP	21.71					
CILD	10.50		DIL-GEAR (304-3)	20.58	3.50	240.00
CILM	7.00					
RLL3	2.00					

Dataset: haught energy w 1605.db: field/well/run1/pass3.2A
Total Length: 47.83 ft
Total Weight: 730.00 lb
O.D. 3.63 in