NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL CEMENT BOND VDL

Company	NOBLE ENERGY INC.
Well	THISTLE DOWN STATE PC F36-67HN
Field	WATTENBERG
County	WELD
State	COLORADO

Company NOBLE ENERGY INC.
Well THISTLE DOWN STATE PC F36-67HN
Field WATTENBERG
County WELD State COLORADO

Location: API #: 0512335679
BHL: 1200' FNL & 535' FWL
SE/NE
SEC 36 TWP 5N RGE 65W

Other Services

Permanent Datum GL Elevation 4770
Log Measured From KB
Drilling Measured From KB

Elevation
K.B. 4788
D.F.
G.L. 4770

Date	MARCH 15, 2013
Run Number	ONE
Depth Driller	11330
Depth Logger	6754
Bottom Logged Interval	6754
Top Log Interval	SURFACE
Open Hole Size	8-3/4
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	210° F
Estimated Cement Top	1222
Time Well Ready	PORTABLE MAST
Time Logger on Bottom	2-3/4 PROBE 101020
Equipment Number	4838
Location	45
Recorded By	GREG NOLAN
Witnessed By	BRIAN PEARSON

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9-5/8	36# J-55	18	629
Prot. String				
Production String	7	26# P-110	18	7442
Liner	4-1/2	11.6# P-110	7294.4	11320

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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

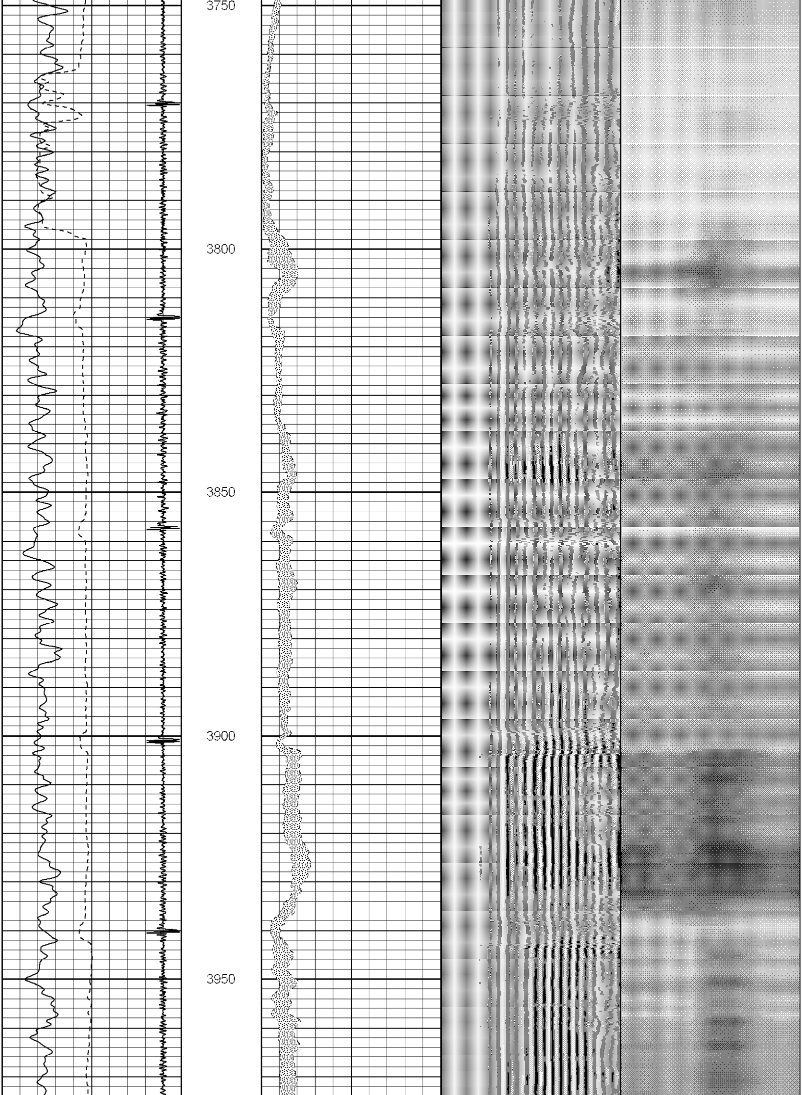
THANK YOU FOR CHOOSING NCPS!!!!
LOG NOT CORRELATED
WCR 49 & WCR 52, S.4, W200', S INTO
NORTHERNMOST WELL OF A 3 WELL PAD

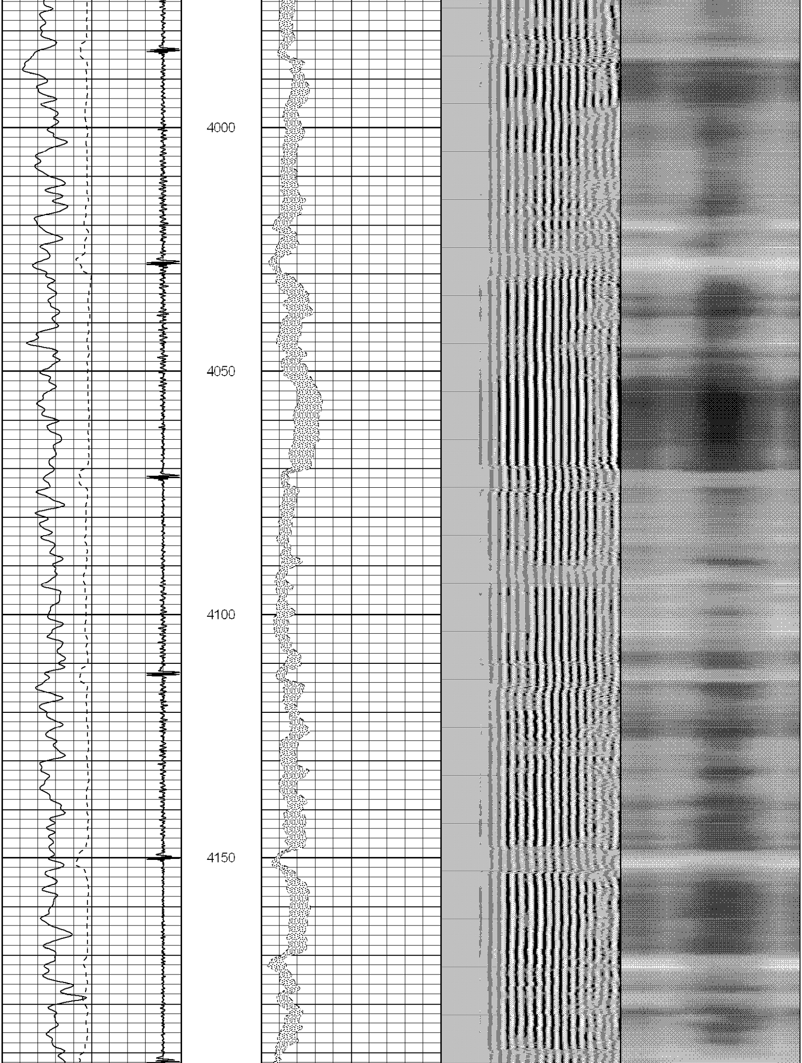
Database File:	cbl noble thistle down state pc f36-67hn.db
Dataset Pathname:	pass6
Presentation Format:	sector2
Dataset Creation:	Fri Mar 15 10:40:19 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

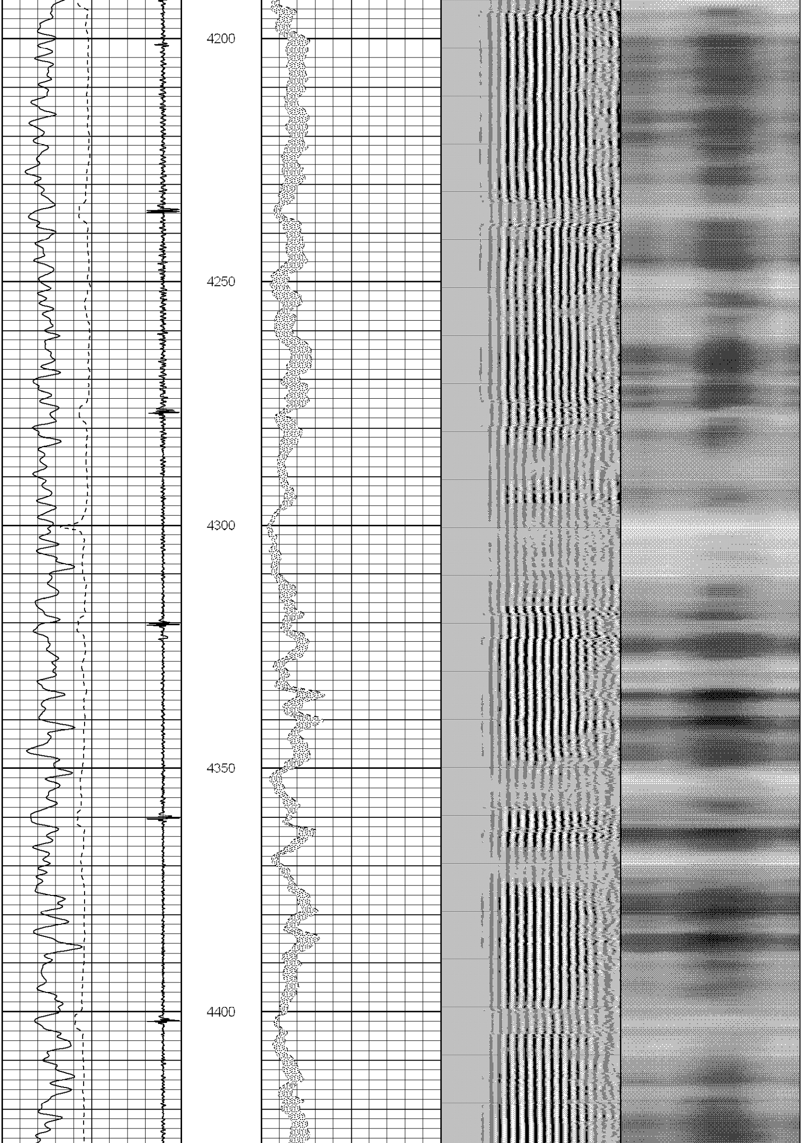
0 GR (GAPI) 200
400 TT3FT (usec) 200
50 CCL -5.5

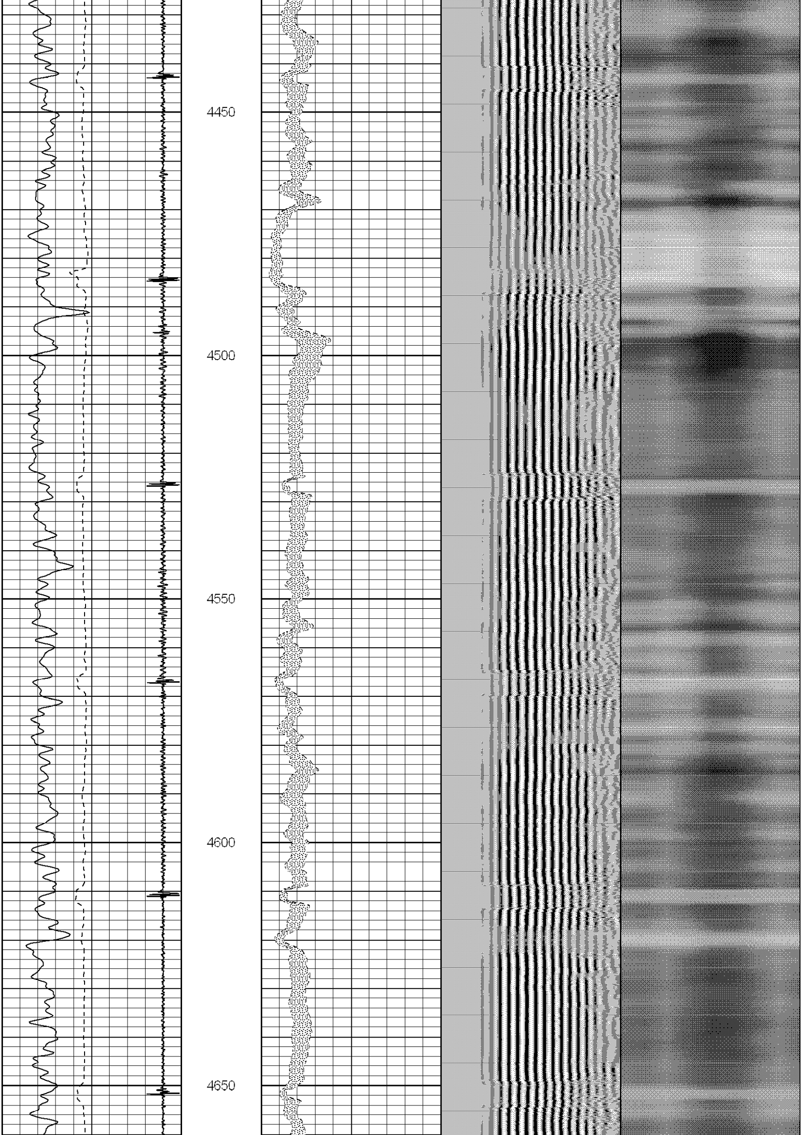
0 AMPMAX 100
0 AMPAVG 100
0 AMPMIN 100
0 AMP3FT (mV) 100

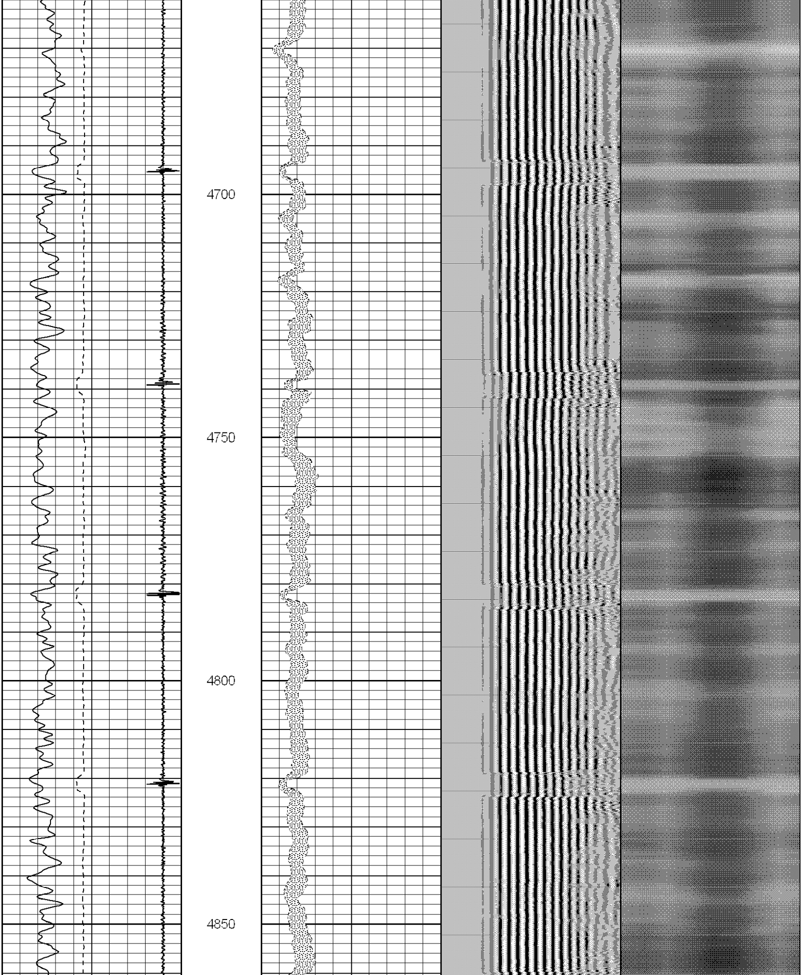
200 WVF5FT 1200
1 Sector Map 8

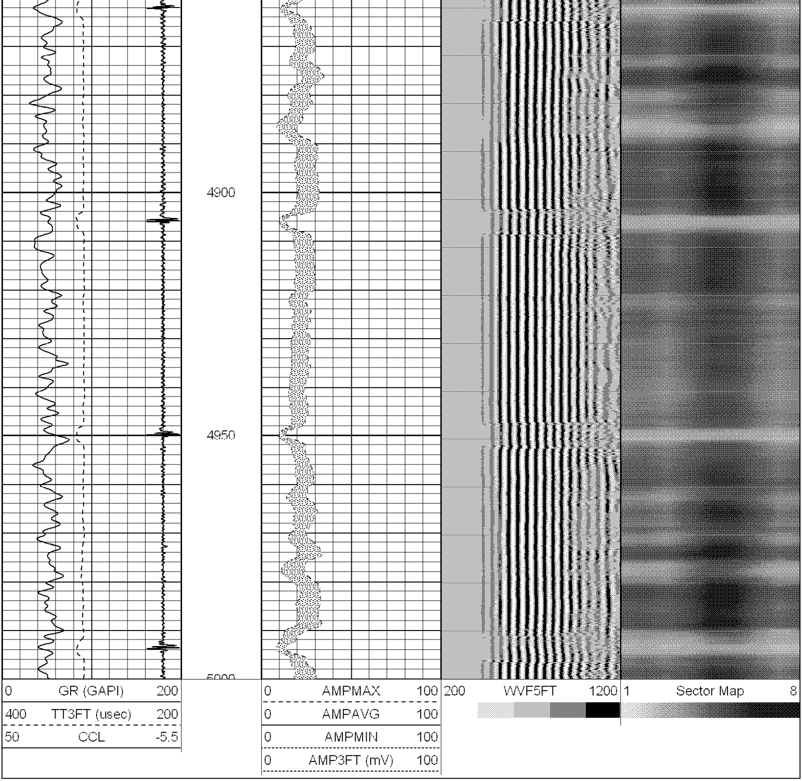






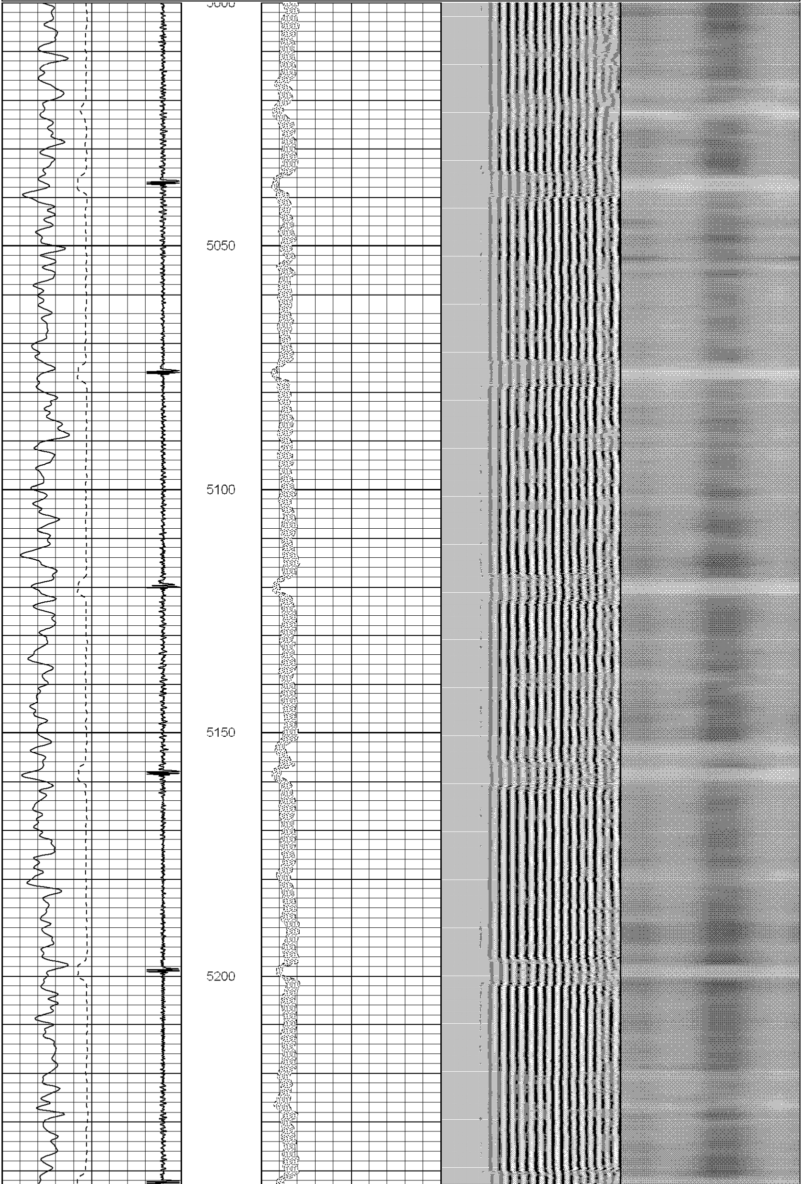


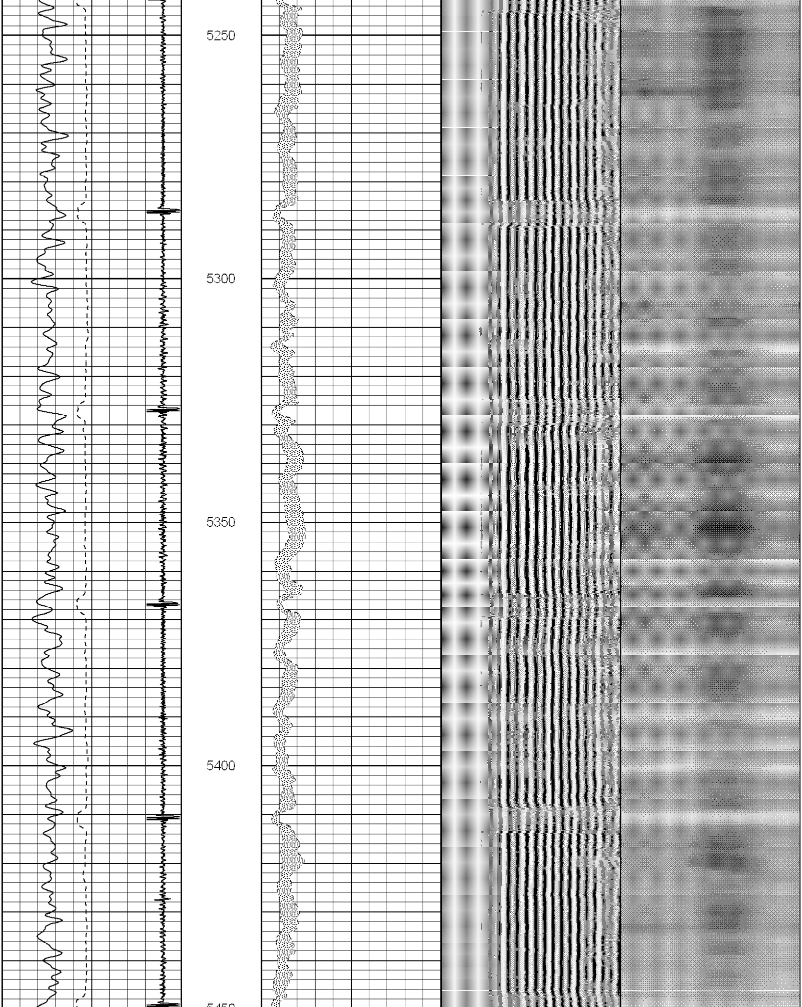


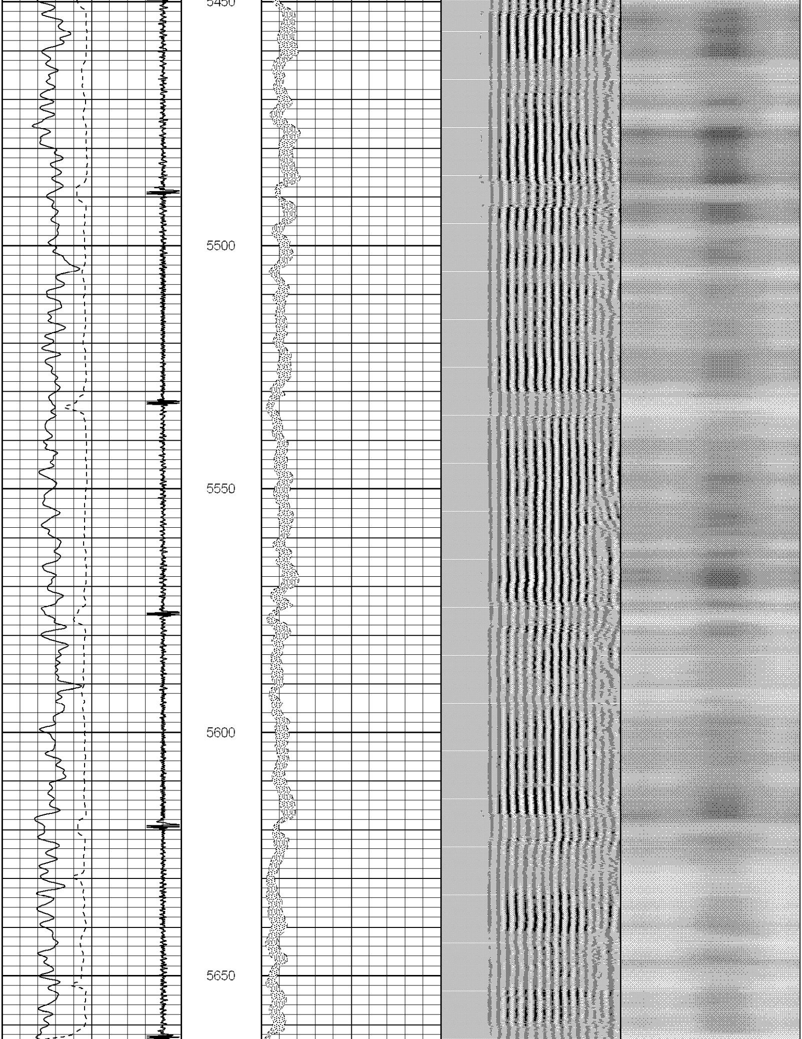


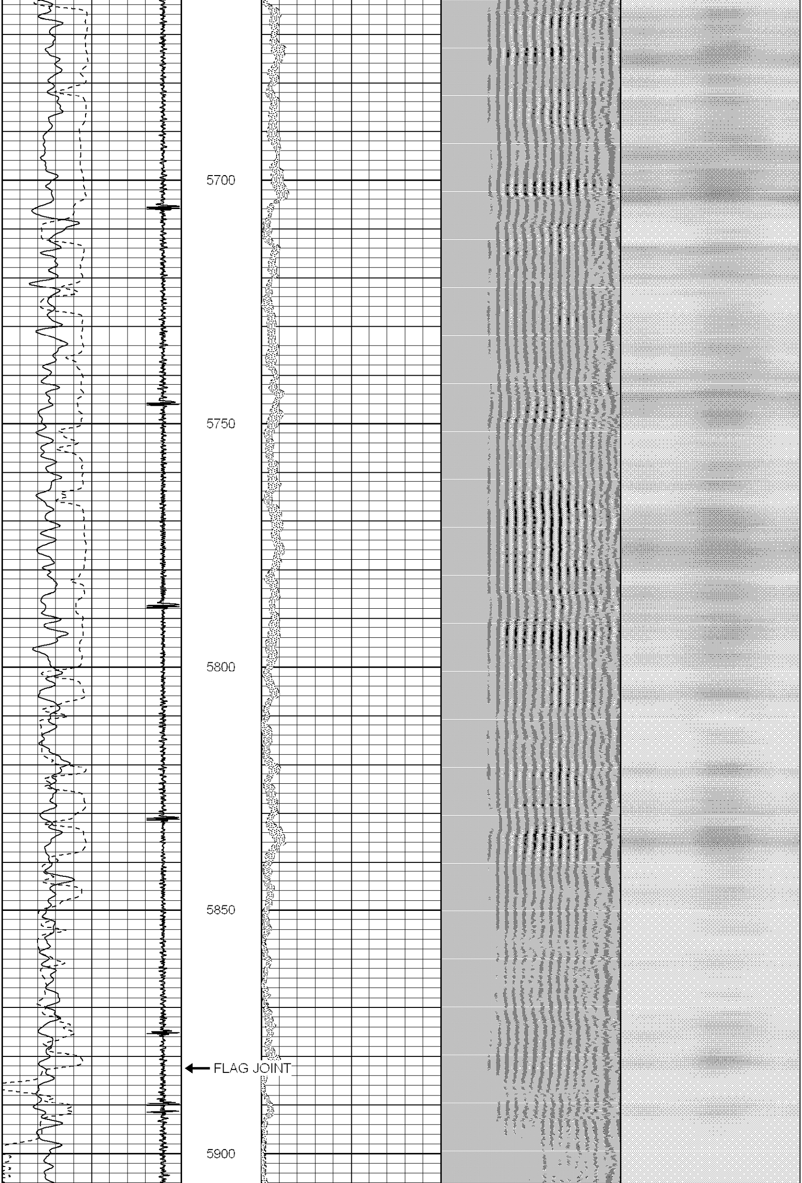
Database File:	cbl noble thistle down state pc f36-67hn.db
Dataset Pathname:	pass5
Presentation Format:	sector2
Dataset Creation:	Fri Mar 15 10:20:29 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

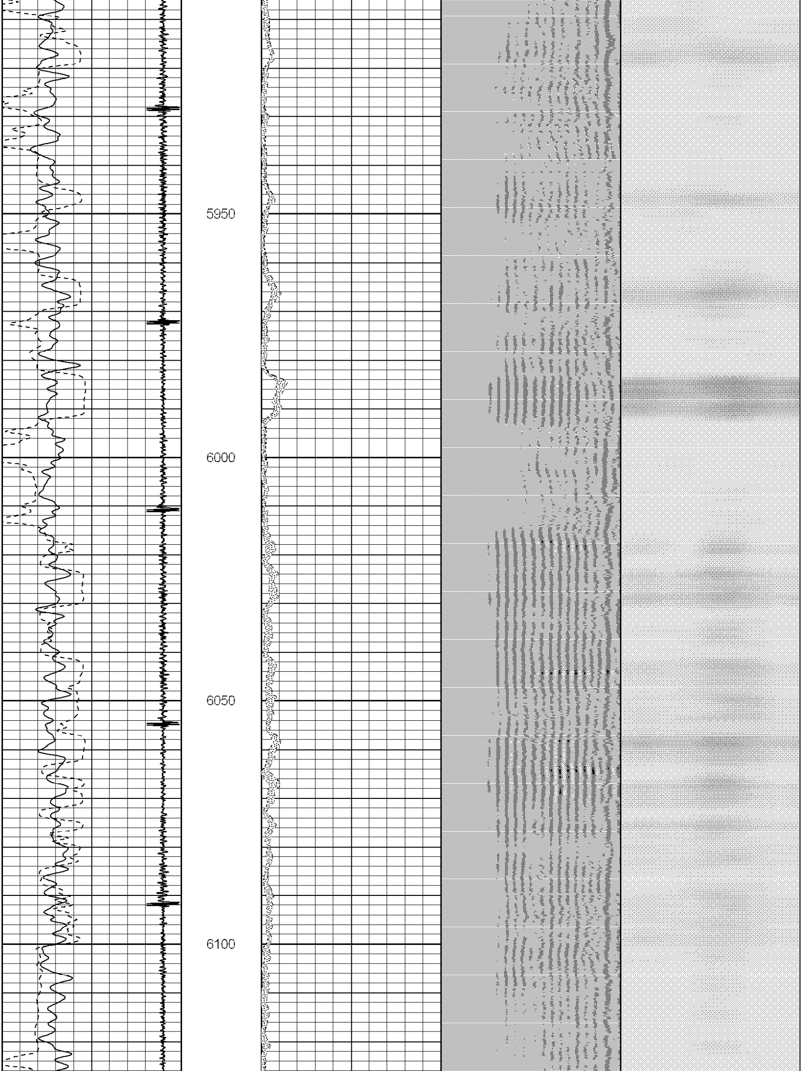
0 GR (GAPI) 200	0 AMPMAX 100	200 WVF5FT 1200	1 Sector Map 8
400 TT3FT (usec) 200	0 AMPAVG 100		
50 CCL -5.5	0 AMPMIN 100		
	0 AMP3FT (mV) 100		

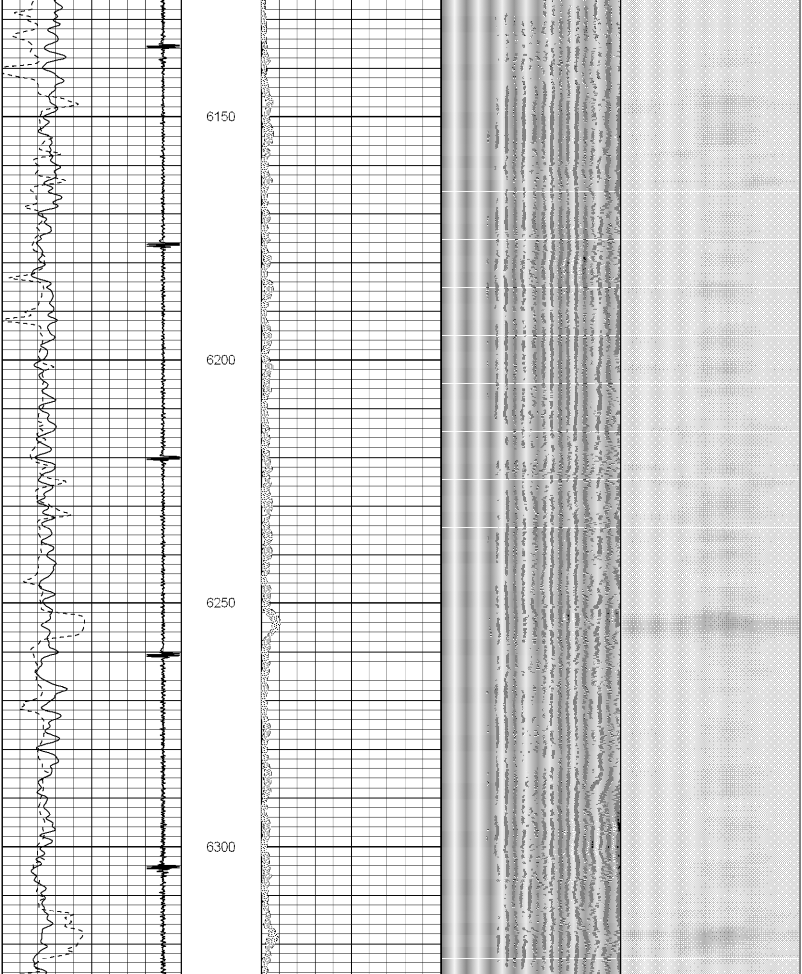


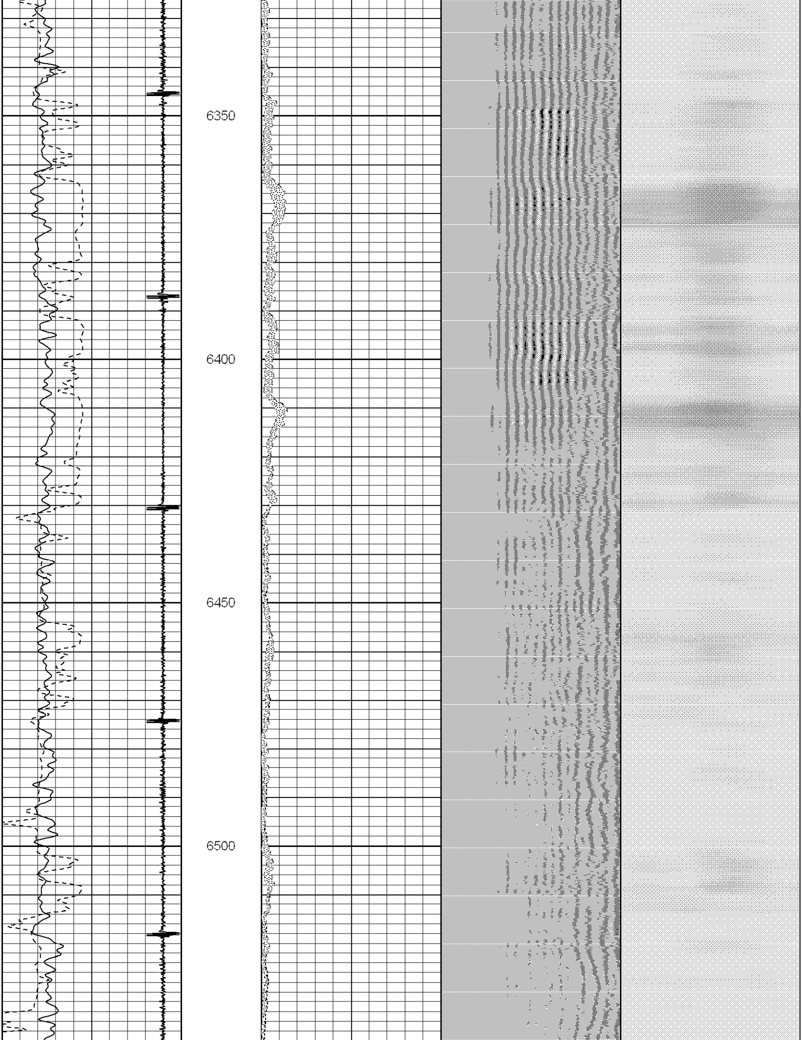


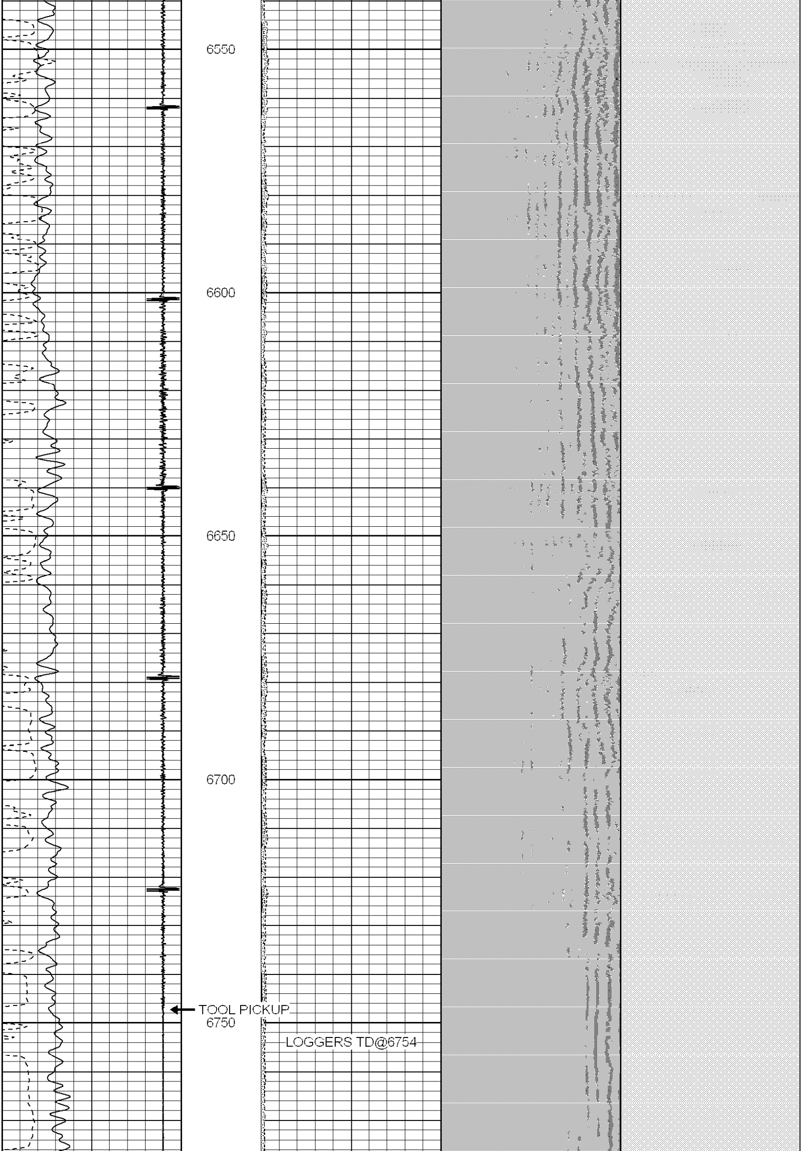


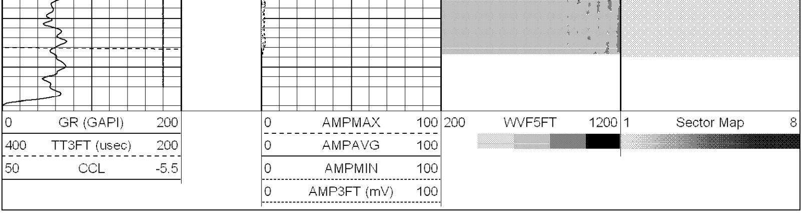












Calibration Report

Database File: cbl noble thistle down state pc f36-67hn.db
Dataset Pathname: pass5
Dataset Creation: Fri Mar 15 10:20:29 2013 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 110785

SHOP CALIBRATION

Thu Mar 07 06:39:34 2013

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.5000			GAPI/cps

PRIMARY VERIFICATION

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

BEFORE SURVEY VERIFICATION

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

AFTER SURVEY VERIFICATION

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Segmented Cement Bond Log Calibration Report

Serial Number:	101020	
Tool Model:	Probe	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	360.383	ft

Master Calibration, performed Fri Mar 15 10:03:53 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.003	1.500	62.165	60.913	1.042
CAL	0.007	1.368				
5'	0.007	1.138	1.500	62.165	53.669	1.099
SUM						
S1	0.007	1.085	0.000	62.165	57.705	-0.426
S2	0.008	1.053	0.000	62.165	59.488	-0.455
S3	0.007	1.016	0.000	62.165	61.643	-0.458
S4	0.008	0.939	0.000	62.165	66.766	-0.510
S5	0.007	0.866	0.000	62.165	72.374	-0.539
S6	0.007	0.876	0.000	62.165	71.536	-0.527
S7	0.007	0.997	0.000	62.165	62.842	-0.468
S8	0.007	1.100	0.000	62.165	56.896	-0.426

Internal Reference Calibration, performed Fri Jan 13 14:30:16 2012:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.007	1.368	1.000	0.000

Air Zero Calibration, performed Fri Mar 15 10:03:36 2013:

	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