FTS INTERNATIONAL

RADIAL CEMENT BOND LOG
GAMMA RAY
CCL

Company	NOBLE ENERGY
Well	MOSES STATE LD11-78HN
Field	DJ BASIN
County	WELD
State	CO

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Location: API # : 05-123-39828
SHL: SW/SW
BHL: 330' FSL, 675' FWL

SEC TWP RGE

Other Services

Permanent Datum	GROUND LEVEL	Elevation 4748'	Elevation
Log Measured From	KB 24'		K.B. 4772'
Drilling Measured From	KB		D.F. 4771' G.L. 4748'

Date	14 FEBRUARY 2015
Run Number	RUN ONE
Depth Driller	10870'
Depth Logger	5794'
Bottom Logged Interval	5780'
Top Log Interval	1'
Open Hole Size	8 3/4"
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	NA
Estimated Cement Top	1036'
Time Well Ready	ON ARRIVAL
Time Logger on Bottom	13:30
Equipment Number	2719
Location	BRIGHTON
Recorded By	JED MADDOCKS
Witnessed By	

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	16"	42.09#	SURFACE	124'
Prot. String	9 5/8"	36#	SURFACE	1225.9'
Production String	7"	26#	SURFACE	6069'
Liner	4 1/2"	11.6#	5856'	10866'

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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 FTS INTERNATIONAL WIRELINE
MARKER JOINT @ 4624' - 4637'
LOG UNCORRELATED, DUE TO DEVIATION, UNABLE TO REACH LINER TOP

FTS INTERNATIONAL

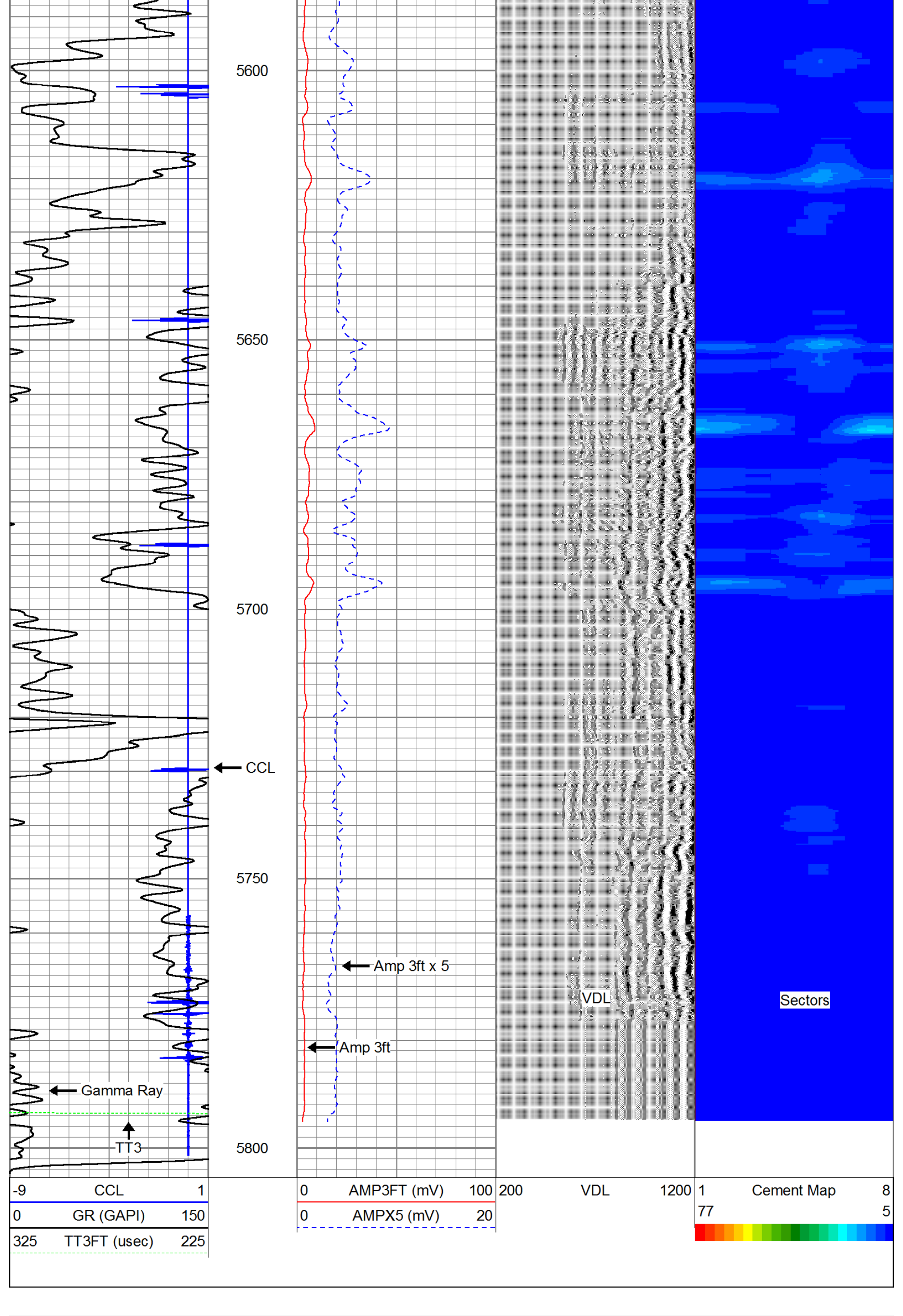
MAIN PASS (2500# PSI)

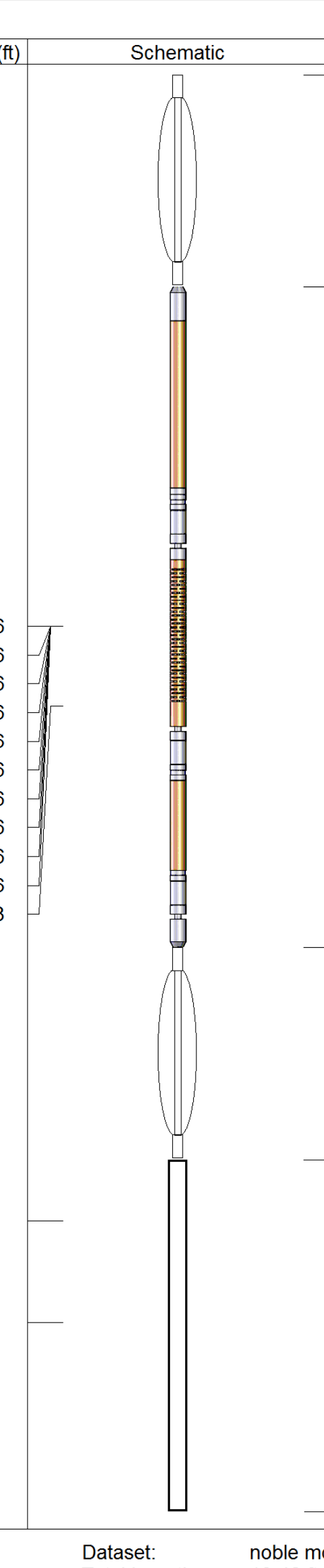
Database File:	c:\warrior\data\hn\noble moses 11-78-hn.db
Dataset Pathname:	BL-GR-CCL/pass9.9
Presentation Format:	sector-v
Dataset Creation:	Sun Feb 15 12:08:28 2015 by Calc 7.0 B1
Charted by:	Depth in Feet scaled 1:240

-9 CCL 1	0 AMP3FT (mV) 100	200 VDL 1200	1 Cement Map 8
0 GR (GAPI) 150	0 AMPX5 (mV) 20		77 5
325 TT3FT (usec) 225			

REPEAT PASS (0# PSI)

Database File: c:\warrior\data\hn\noble moses 11-78-hn.db
Dataset Pathname: BL-GR-CCL/pass7
Presentation Format: sector-v
Dataset Creation: Sat Feb 14 15:35:25 2015 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CENT-Probe (Probe1)	2.88	2.75	25.00
WVF3FT WVFCAL WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF5FT	11.96 11.96 11.96 11.96 11.96 11.96 11.96 11.96 11.96 11.96 10.88		RBT-Probe (4.5040904) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
			CENT-Probe (Probe2)	2.88	2.75	25.00
CCL GR	3.92 2.54		GR-Probe275dig (pr051112) Probe Digital Gamma CCL	4.75	2.75	57.00

Dataset: noble moses 11-78-hn.db: field/well/BL-GR-CCL/pass9
Total Length: 19.42 ft
Total Weight: 197.00 lb
O.D.: 2.75 in