PIONEER

Pioneer Energy Services

GUARD LOG - SP
COMPENSATED NEUTRON
GAMMA RAY CALIPER

Company NGL Water Solutions DJ, LLC
Well NGL C1C
Field Wattenberg
County Weld
State Colorado

Company	NGL Water Solutions DJ, LLC		
Well	NGL C1C		
Field	Wattenberg		
County	Weld	**State**	Colorado

Location: API # : 05-123-40377
SHL: 336' FSL & 211' FEL SESE
Sec. 8, Twp. 4N, Rge. 64W
EST. BHL: 2161' FNL & 75' FEL SENE
SEC 17 TWP 10N RGE 64W

Other Services
None

Permanent Datum	GL	Elevation	4706
Log Measured From	KB		
Drilling Measured From	KB		

Elevation
K.B. 4721.5
D.F. 4720.5
G.L. 4706

Date	November 20, 2014		
Run Number	1		
Depth Driller	10757		
Depth Logger	10757		
Bottom Logged Interval	10757		
Top Log Interval	Casing		
Casing Driller	9035		
Casing Logger	9035		
Bit Size	6.125		
Type Fluid in Hole	Mud		
Density / Viscosity	8.9 / 41		
pH / Fluid Loss	9.0 / 6.8		
Source of Sample	Mudpit		
Rm @ Meas. Temp	3.26 @ 56 F		
Rmf @ Meas. Temp	2.61 @ 56 F		
Rmc @ Meas. Temp	4.07 @ 56 F		
Source of Rmf / Rmc	Calc/Calc		
Rm @ BHT	0.66 @ 278 F		
Time Circulation Stopped	0900 11/19/2014		
Time Logger on Bottom	23:30		
Maximum Recorded Temperature	EST. 278 F		
Equipment Number	36		
Location	Ft. Morgan, CO		
Recorded By	Clint Christensen		
Witnessed By	Ruben Maykarian		

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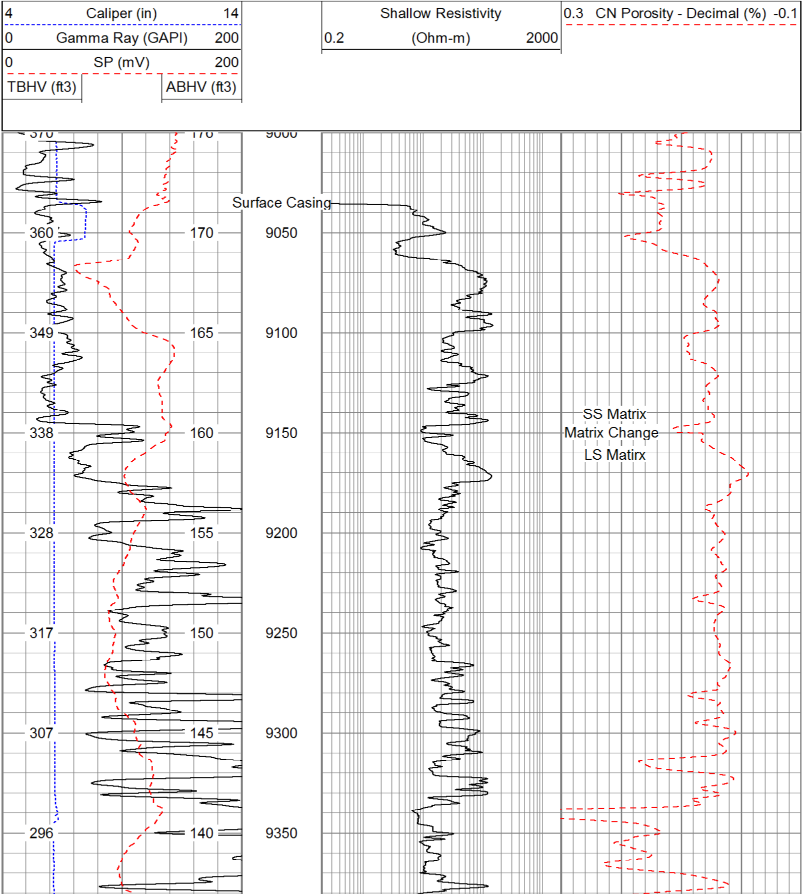
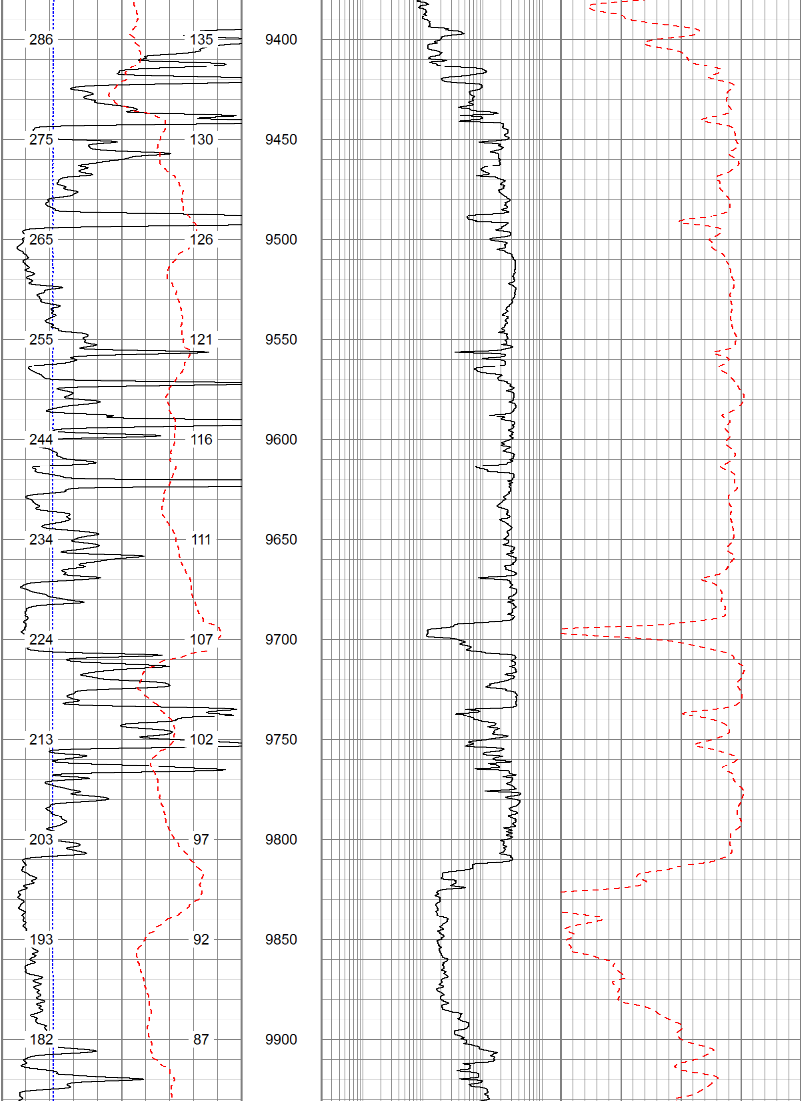
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

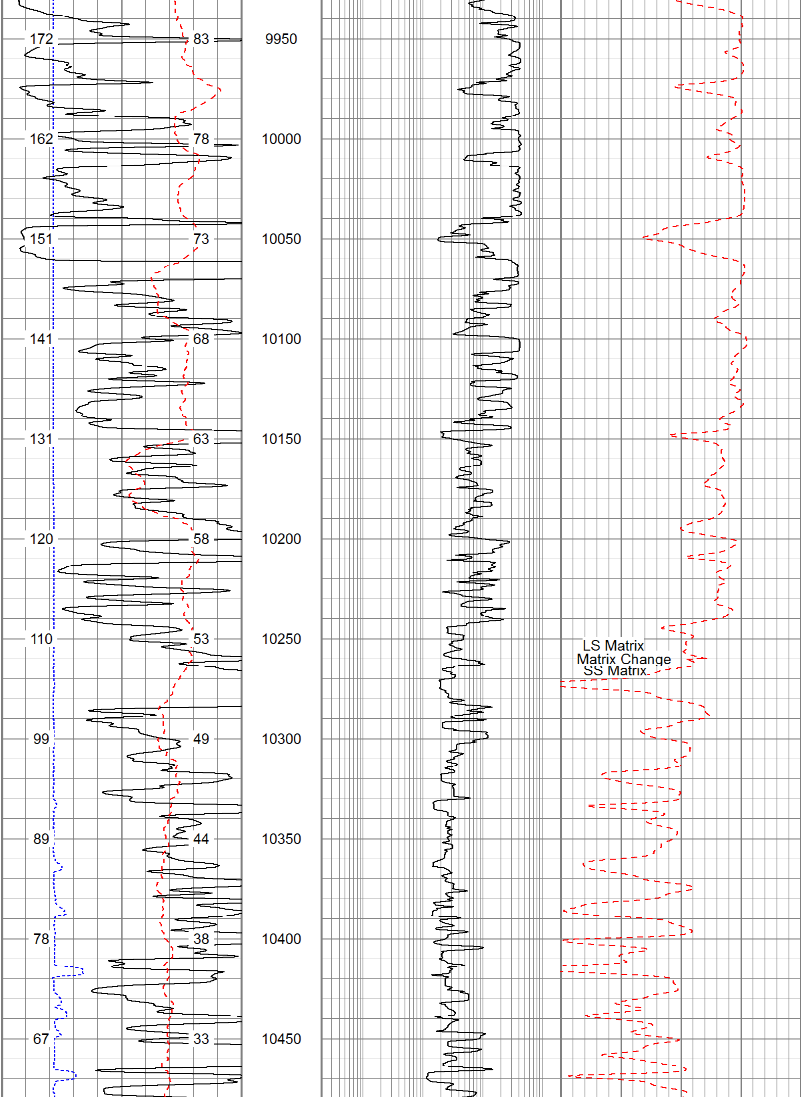
Comments

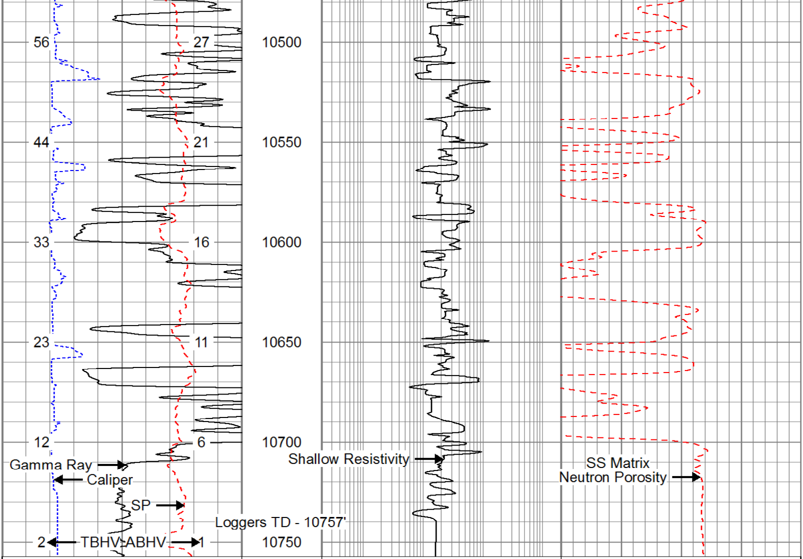
Annular volume calculated for 4.5" casing
Savanna Drilling Rig #650
SO# 2-0136732
Thank you for using Pioneer Energy Services.
Density and Induction - Failure due to TEMP!!!

Database File:	13732.db
Dataset Pathname:	Final.1
Presentation Format:	ngl_c1c
Dataset Creation:	Thu Nov 20 06:50:32 2014
Charted by:	Depth in Feet scaled 1:600









4 Caliper (in) 14
0 Gamma Ray (GAPI) 200
0 SP (mV) 200
TBHV (ft3) ABHV (ft3)

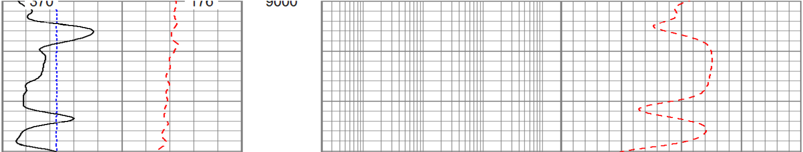
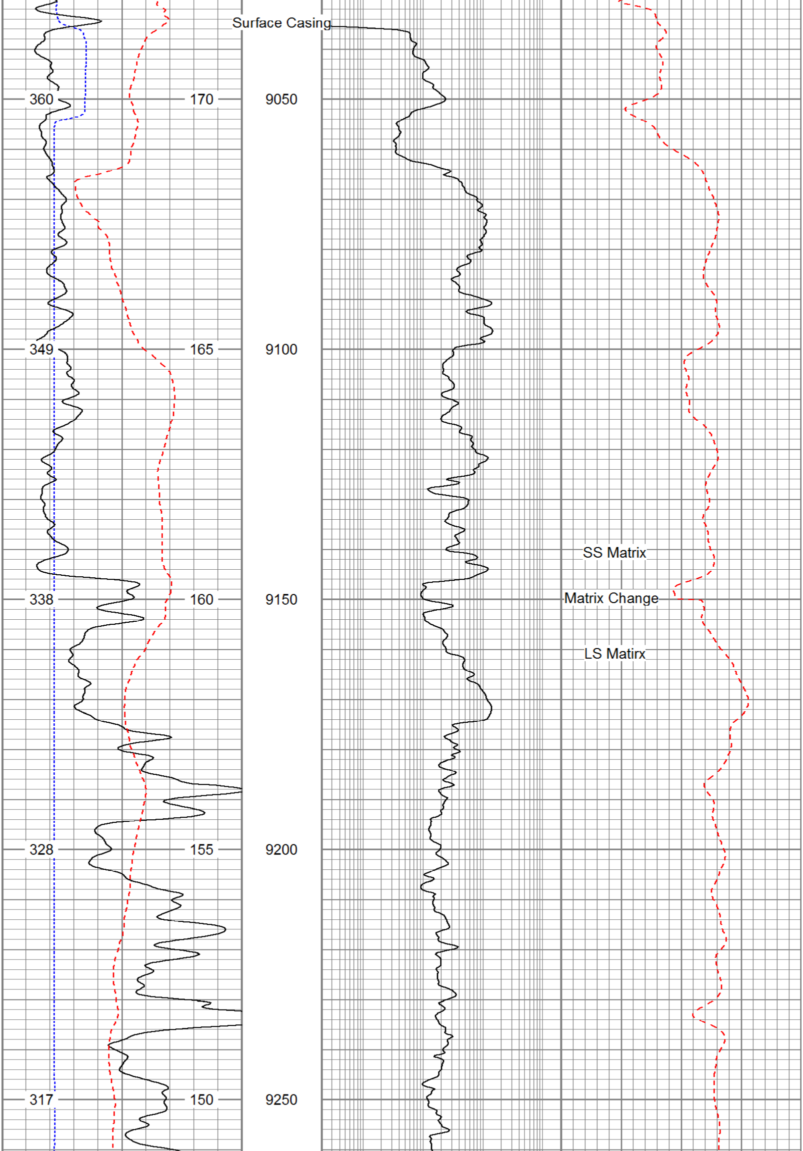
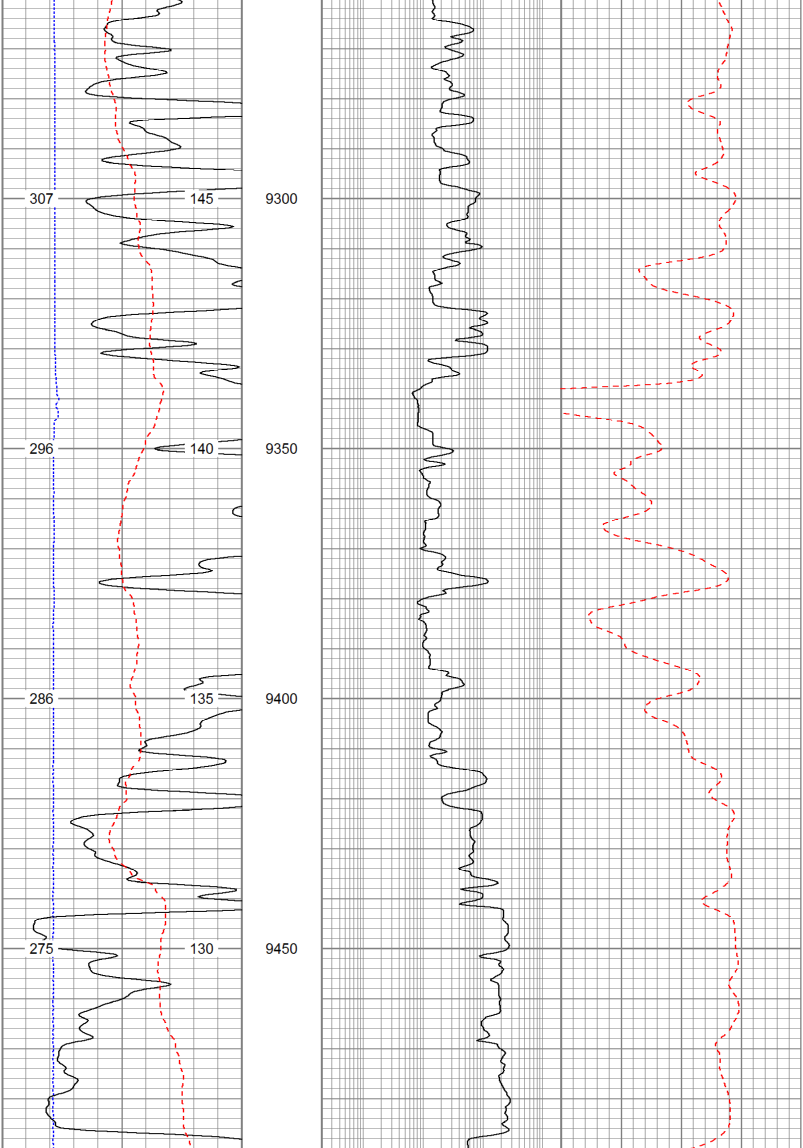
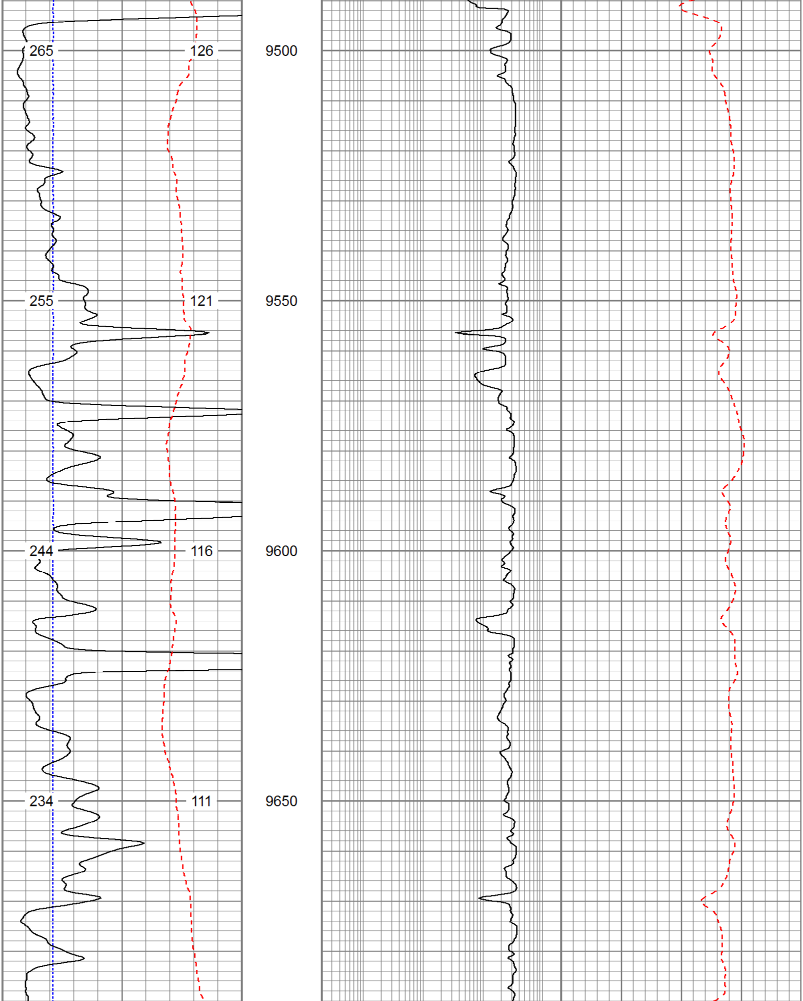
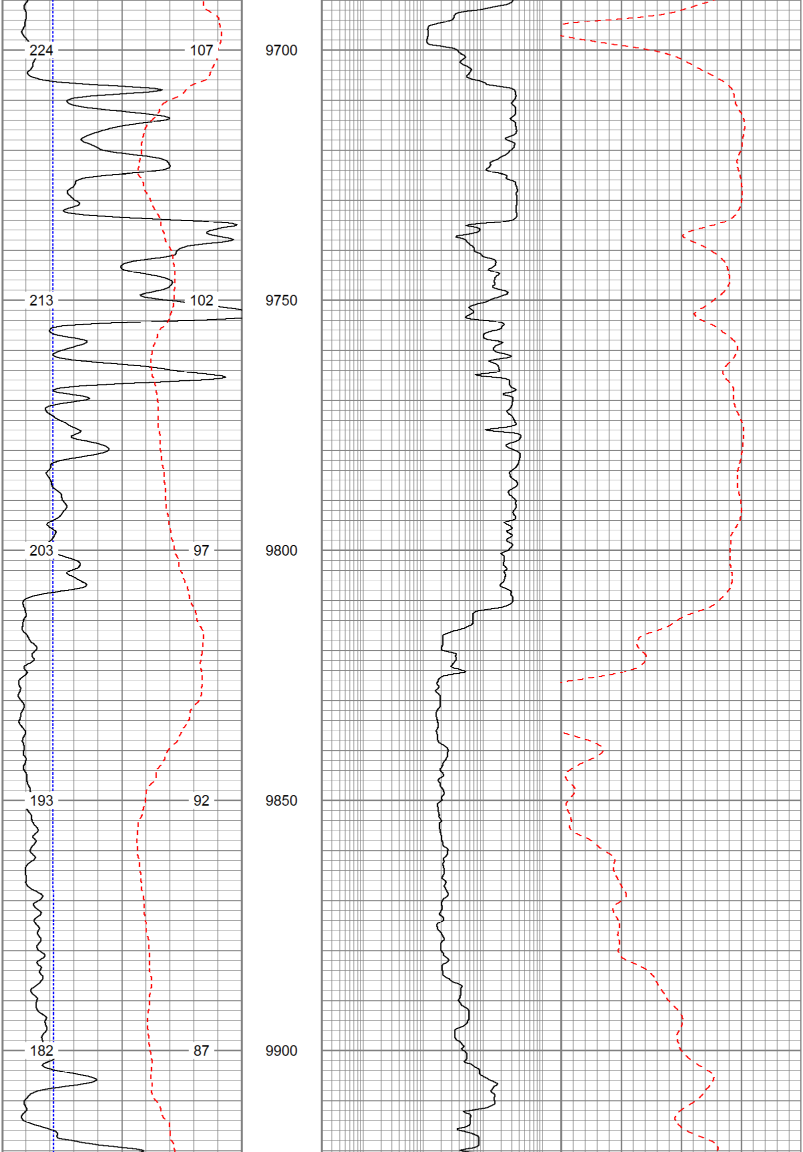
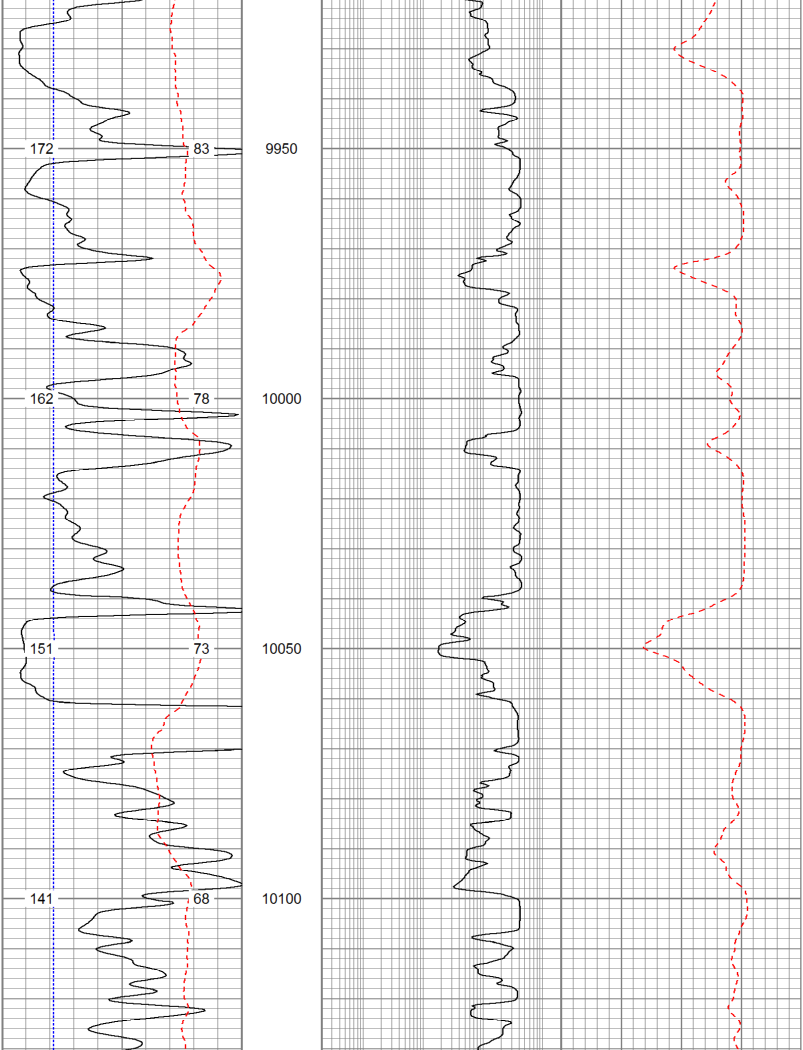
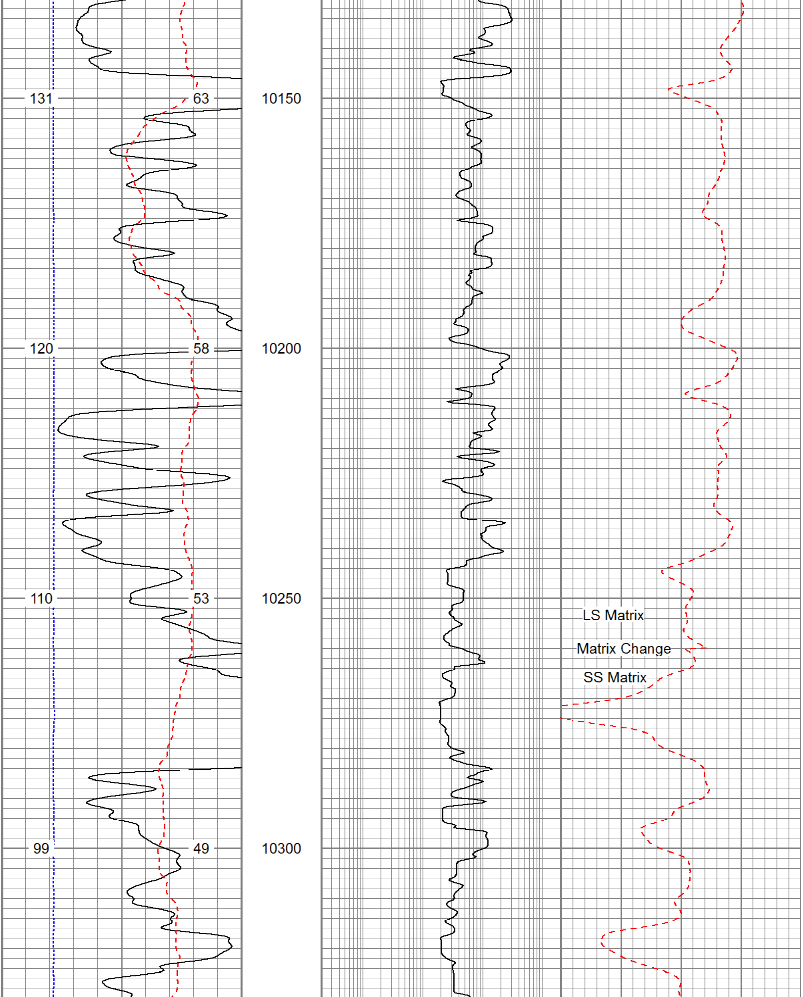
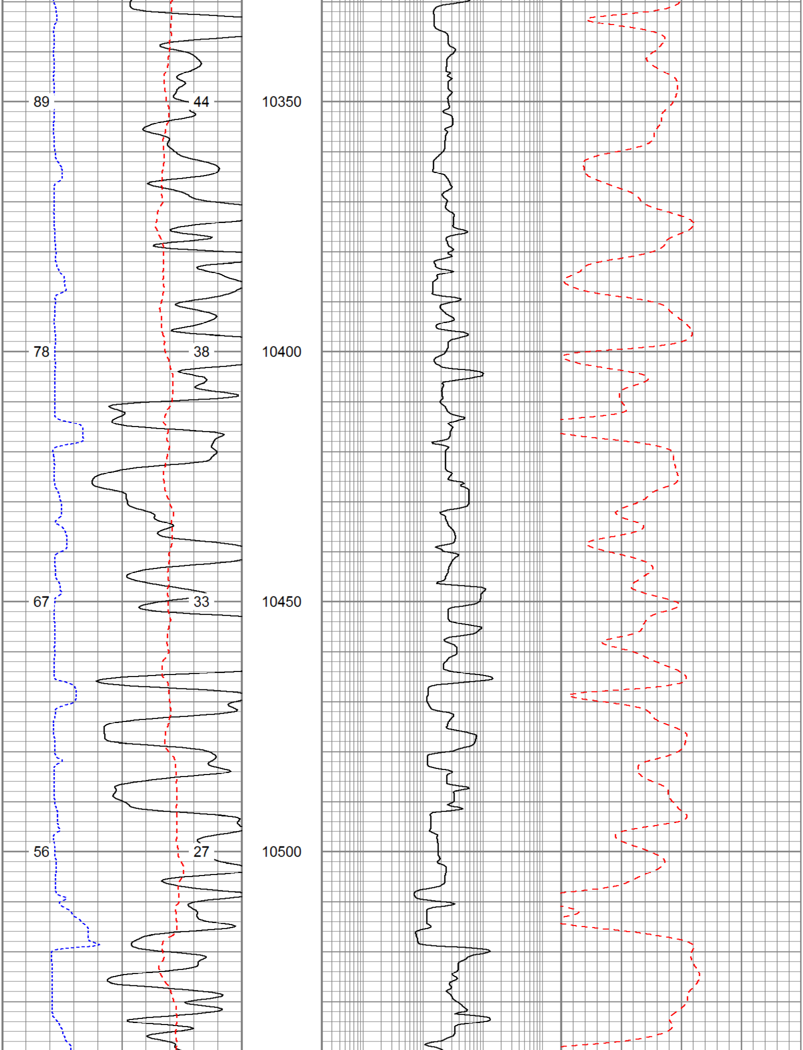
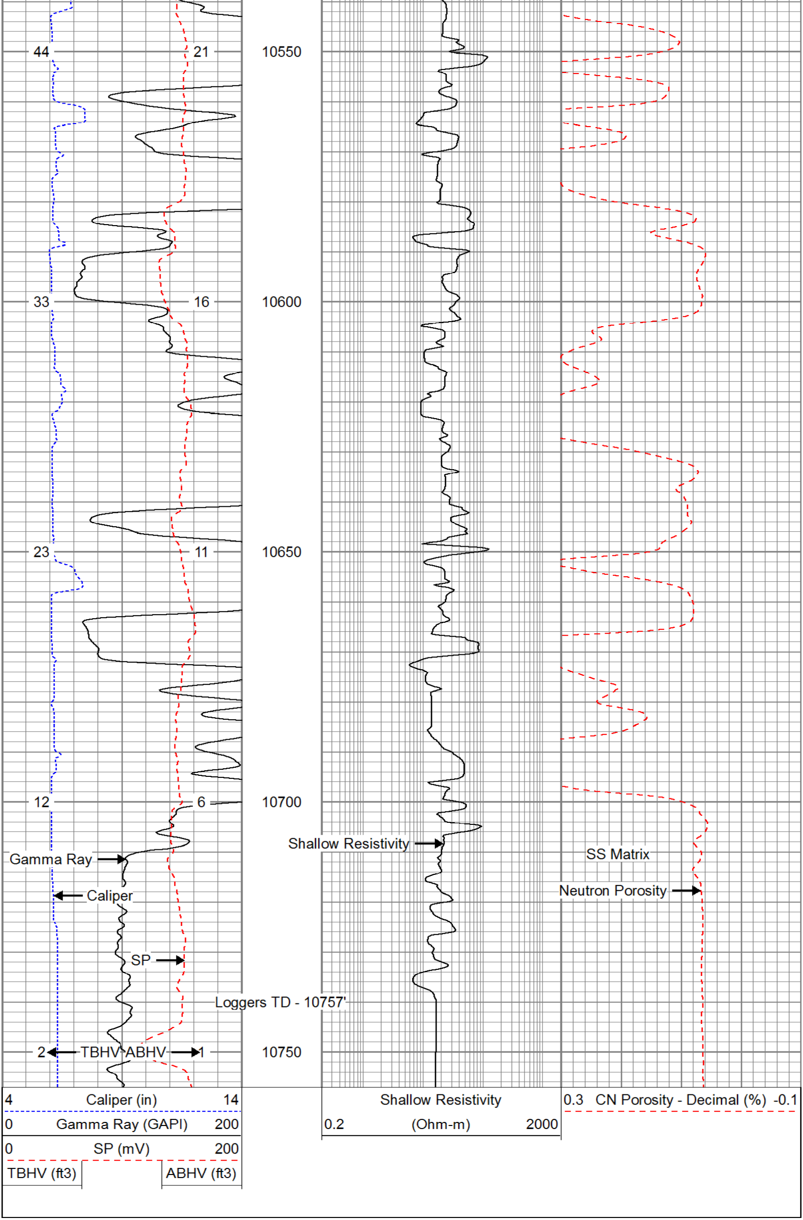
Shallow Resistivity
0.2 (Ohm-m) 2000

0.3 CN Porosity - Decimal (%) -0.1

Database File: 13732.db
Dataset Pathname: Final.1
Presentation Format: ngl_c1c
Dataset Creation: Thu Nov 20 06:50:32 2014
Charted by: Depth in Feet scaled 1:240

4 Caliper (in) 14
0 Gamma Ray (GAPI) 200
0 SP (mV) 200
TBHV (ft3) ABHV (ft3)

Shallow Resistivity
0.2 (Ohm-m) 2000

0.3 CN Porosity - Decimal (%) -0.1