

**Weatherford®****RESISTIVITY LOG
MCG-MDL****SCALE 2":100 LOGARITHMIC**

COMPANY

SAVIA PERU S.A

WELL

LOG-31D

FIELD

LOBITOS OFFSHORE

PROVINCE/COUNTY

PIURA

COUNTRY/STATE

PERU

LOCATION

N: 9°508,651.50 m
E: 459,047.72 mLatitude
LongitudeOther Services
MDN
MPD

Permanent Datum SEA LVL, Elevation 335 feet

Log Measured From KB

Drilling Measured From KB

Elevations:	feet
KB	50.00
DF	50.00
GL	335.00

Date

12-JUN-2013

Run Number

1

Service Order

825

Depth Driller

7668.00 feet

Depth Logger

7638.60 feet

First Reading

7611.00 feet

Last Reading

4950.00 feet

Casing Driller

2521.00 feet

Casing Logger

2521.00 feet

Bit Size

8.500 inches

Hole Fluid Type

WBAC

Density / Viscosity

11.30 lb/USg 51.00 Sec/qt

PH / Fluid Loss

9.20 5.20 ml/30Min

Sample Source

ACTIVE PIT

Rm @ Measured Temp

0.15 @ 70.0 ohm-m

Rmf @ Measured Temp

0.07 @ 70.0 ohm-m

Rmc @ Measured Temp

0.34 @ 70.0 ohm-m

Source Rmf / Rmc

PRESS

Rm @ BHT

0.10 @102.0 ohm-m

Time Since Circulation

1 HOUR

Max Recorded Temp

102.00 deg F

Equipment / Base

2 TALARA

Recorded By

J. GUERRERO

Witnessed By

A. ORTEGA

REMARKS

1. Objective: To obtain accurate open hole Gamma Ray, Neutron, Caliper, Resistivity Log (Dual Laterolog) in Compact Well Shuttle - Messenger Conveyance.
2. Maximum recorded temperature 102 degF recorded.
3. Fluid resistivity measurements during logging operation: Rmf= 0.07 @ 70deg F, Rm=0.15@ 70Deg F, Rmc=0.34@ 70degF.
4. This is a deviated well with a maximum deviation of 63.84 degrees @ 4376 ft.
5. Well sketch per driller's depth.
6. Bottom not tagged due to nature of the conveyance. Maximum depth recorded in Log header (7638.60ft) is the maximum depth reached by the induction tool in the run.
7. Main Section from 7638.60ft ft to 4950 ft, as requested.
8. No Repeat Section performed due to deployment method used in the job.
9. Resistivity curves (Dual laterolog) presented in this log are not corrected for borehole conditions.
10. Neutron log is corrected by temperature and borehole size by the density caliper.
11. Density log is corrected for mud density and borehole size by density caliper.
12. Calculated Volumes and caliper averages from 7638.60ft to 4950 ft, for a future 5.5 O.D casing:
Hole Volume= 1240 FT 3
Annular Volume = 805 FT 3
Caliper Average = 9.30 in.
Caliper Max = 12.64 in @ 7445 ft.
13. Operation started at 20:00 11-06-2013.
We reached bottom at 11:00 12-06-2013.
Deployment was done at 11:30 12-06-2013.
Log interval was finished at 15:30 12-06-2013.
Job was finished at 20:00 12-06-2013.

Crew at your service

J. Guerrero, J Jimenez, J. Escobar, E. Cruz

Bit Size
inchesDepth From
feetDepth To
feet

12.250

0.00

2521.00

8.500

2521.00

7668.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	2521.00	43.00

WELL DIAGRAM

9.63 in Casing: 0.00 ft

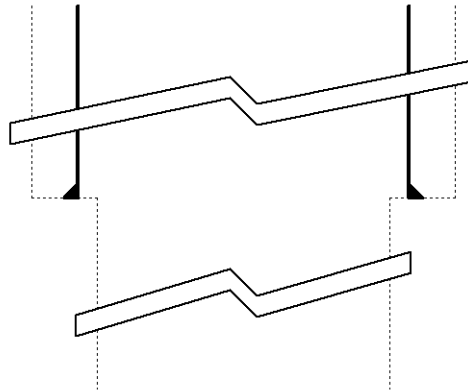
12.25 in Bit size: 0.00 - 2521.00 ft

9.63 in Casing shoe: 2521.00 ft

8.50 in Bit size: 2521.00 - 7668.00 ft

Total bit depth: 7668.00 ft

Temperature: 102.00 Degrees F



DOWNHOLE EQUIPMENT

D:\LOGS\PERU\ITALARA\LO6-CWS\LO6-31D-DSC-FINAL-HVOL-AVOL-COMPLETE.dta

Shuttle Running Tool 5" (SRT B)

SRT-A 2 LG: 6.47 ft WT: 37.5 lb OD: 2.52 in

SKJ-E.A Compact Knuckle Joint

SKJ-E.A 170 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

MBS-A.A 400v Compact Battery Sub

MBS-A.A 56 LG: 14.24 ft WT: 105.8 lb OD: 2.24 in

Compact Stiff Bridle Electrode Sub.

MBE-C.B 261 LG: 12.33 ft WT: 77.2 lb OD: 2.28 in

Compact Stiff Bridle Electrode Sub.

MBE-C.B 262 LG: 12.33 ft WT: 77.2 lb OD: 2.28 in

Compact Stiff Bridle Electrode Sub.



Compact Gain Drive Electrode Sub.
MBE-A.A 56 LG: 12.33 ft WT: 77.2 lb OD: 2.24 in

Compact Comms Gamma
MCG-D.A 261 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Memory Sub. A.C
MMS-A.C 1 LG: 3.12 ft WT: 22.0 lb OD: 2.24 in

SKJ-E.A Compact Knuckle Joint
SKJ-E.A 171 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

SHA-J.B Compact Swivel Head Adaptor
SHA-J.B 479 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 755 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

Compact Neutron
MDN-C.A 441 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper
MPD-C.A 197 LG: 9.59 ft WT: 90.4 lb OD: 2.24 in

MIS-D.B Compact Inline Bowspring sub
MIS-D.B 756 LG: 5.70 ft WT: 33.1 lb OD: 2.24 in

SHA-H Compact Swivel Head Adaptor
SHA-H 180 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

SKJ-E.A Compact Knuckle Joint
SKJ-E.A 180 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

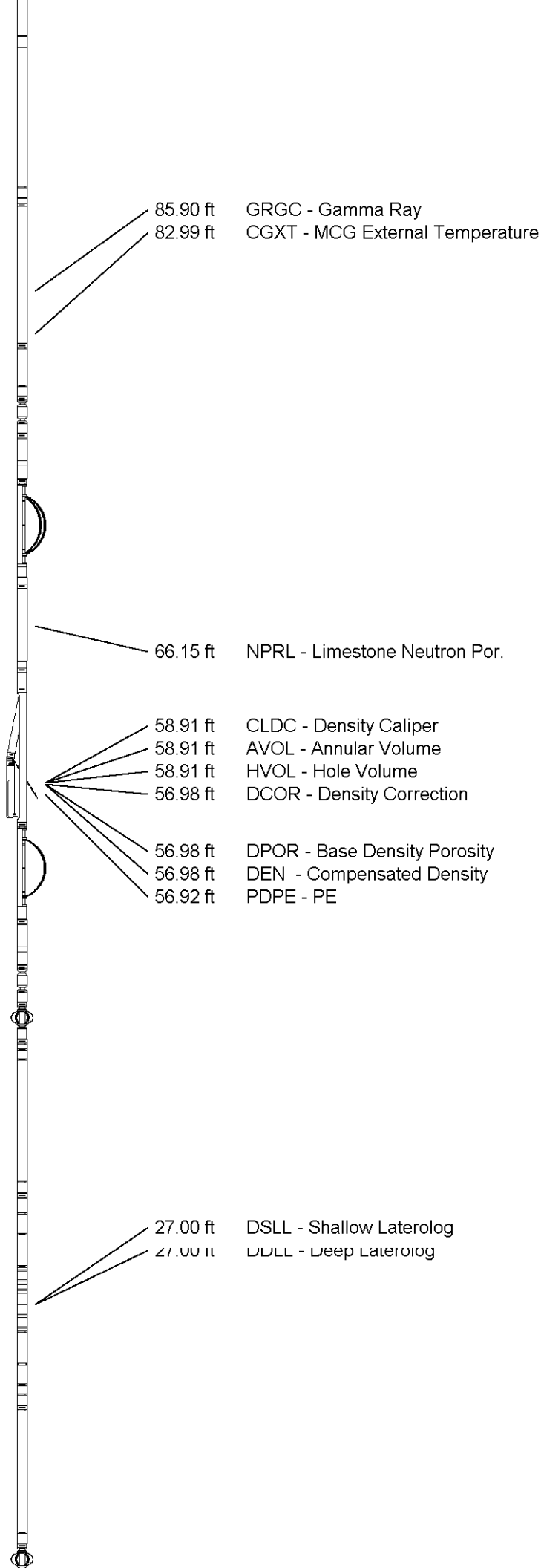
MIS-B Compact Inline Standoff sub
MIS-B 99 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Upper Guard sub
MUG-B.B 260 LG: 8.98 ft WT: 68.3 lb OD: 2.24 in

Compact Laterolog Electrode Sub.
MLE-D.A 228 LG: 12.34 ft WT: 92.6 lb OD: 2.24 in

Compact Lower Guard Sub.
MLG-B.B 257 LG: 8.00 ft WT: 55.1 lb OD: 2.24 in

MIS-B Compact Inline Standoff sub



MIS-B 98 LG: 2.14 ft WT: 15.4 lb OD: 2.24 in

Compact Induction

MAI-B.A 223 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 151.05 ft Weight: 1080.3 lb

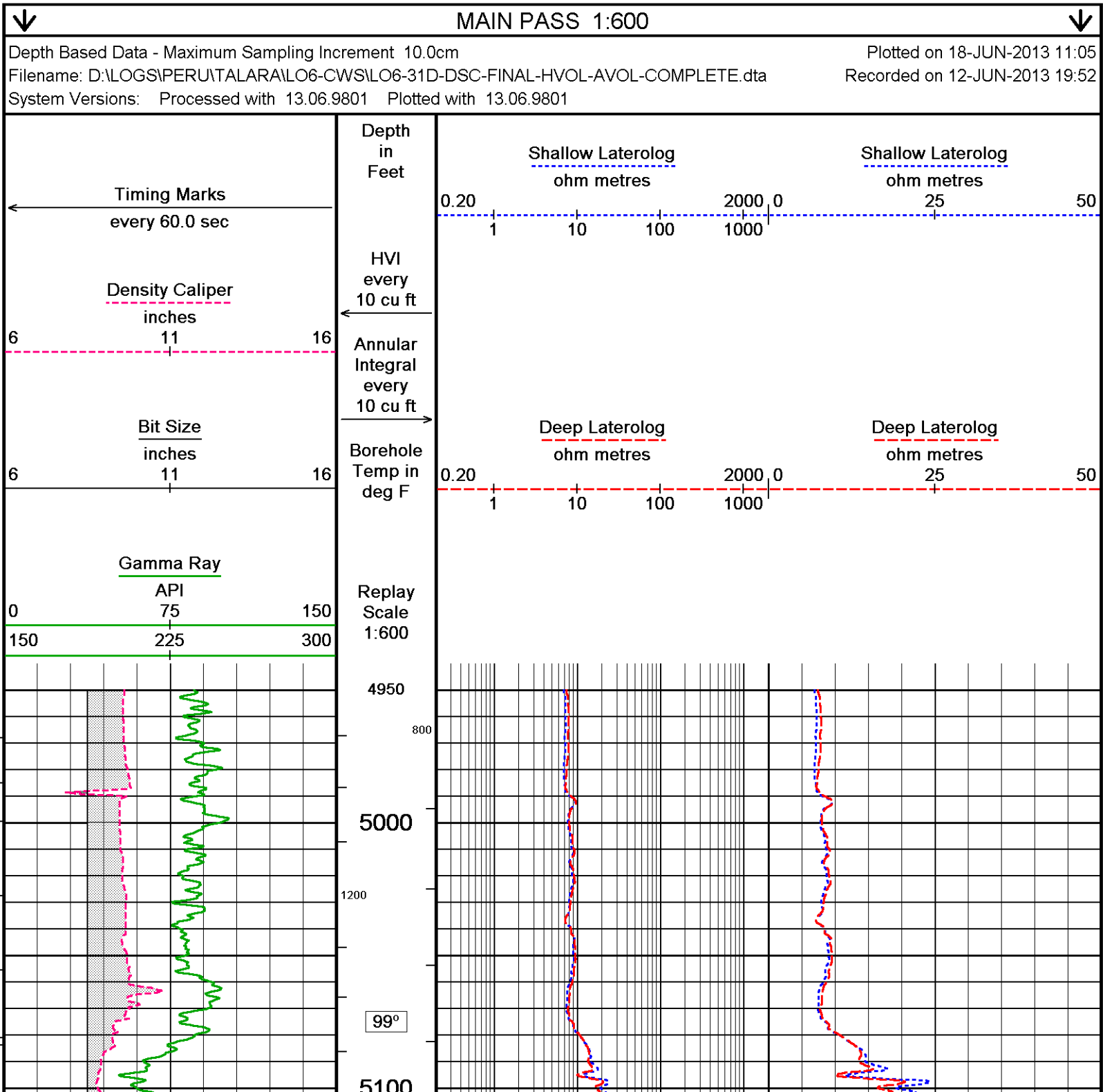


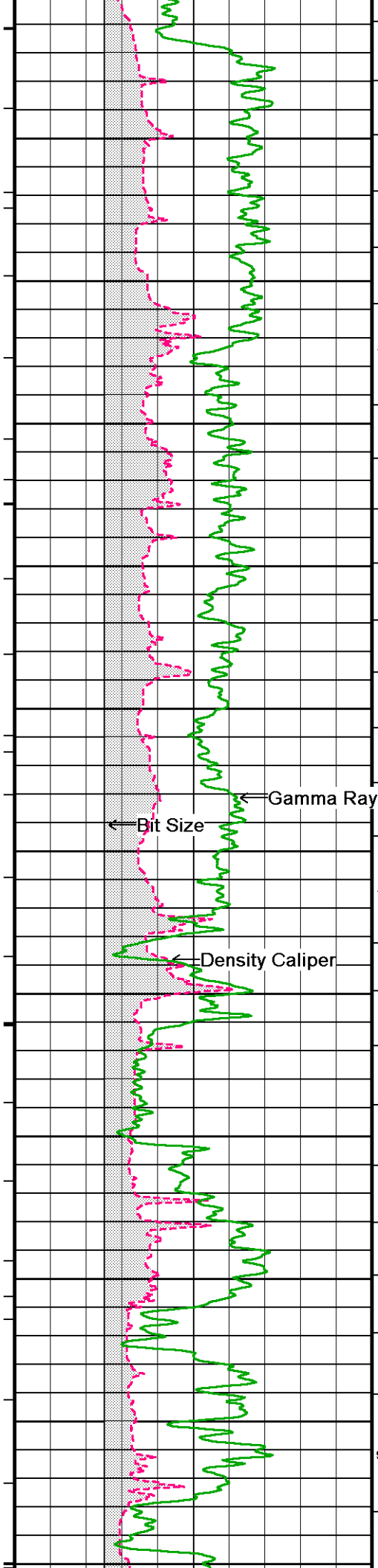
Tool Zero

(0.13ft from bottom)

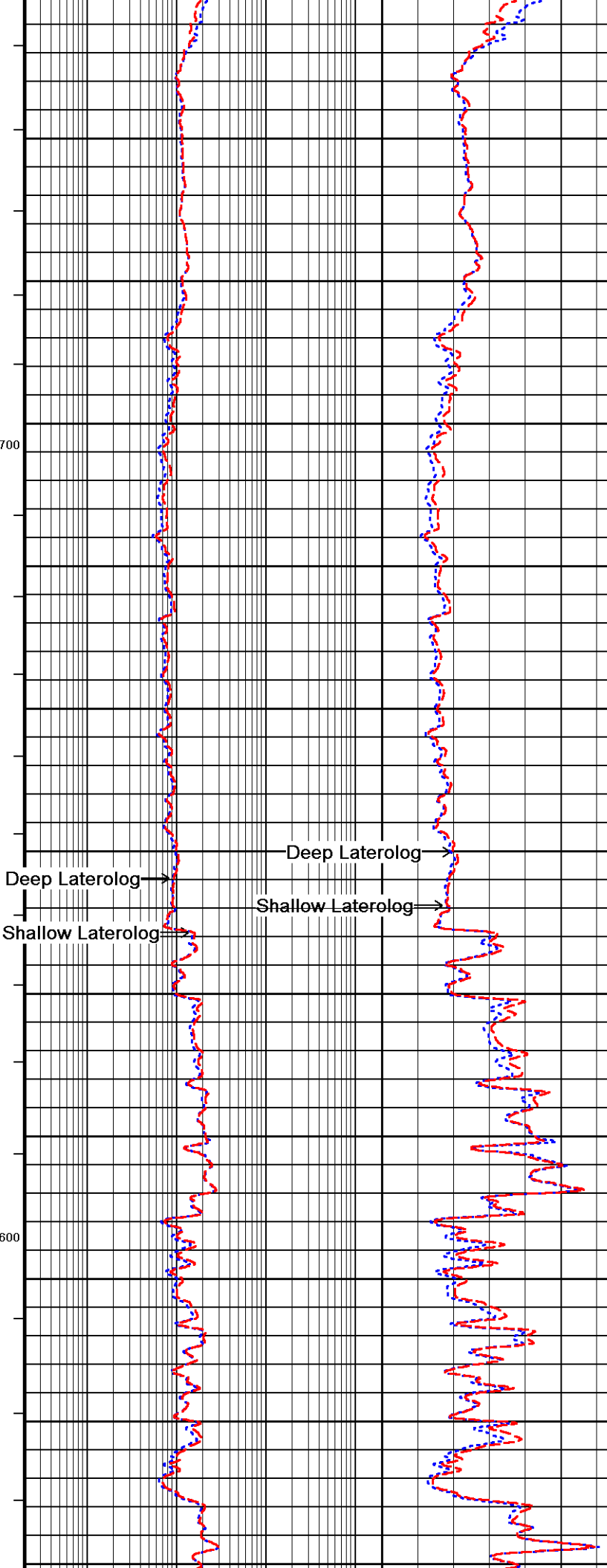
All measurements relative to tool zero.

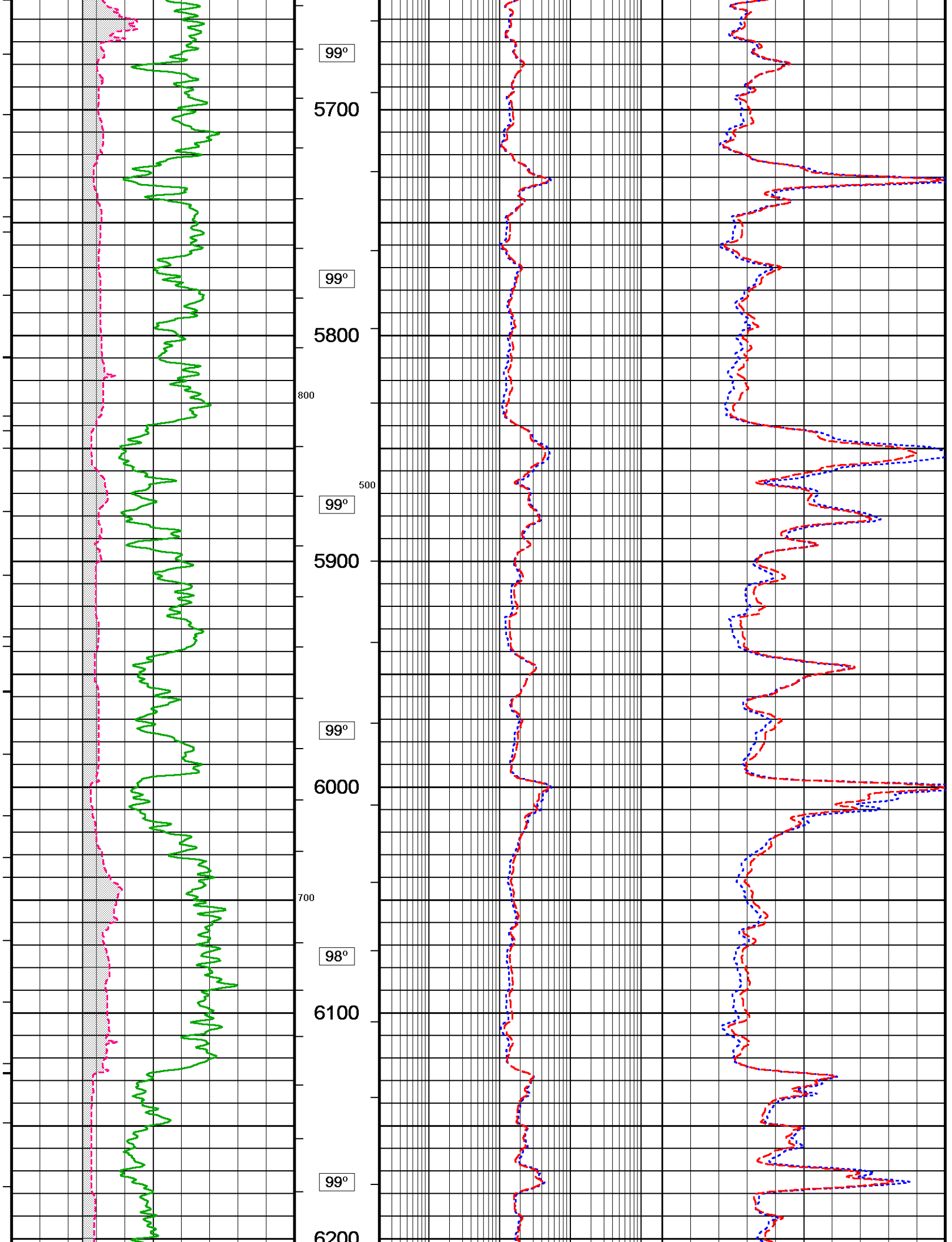
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

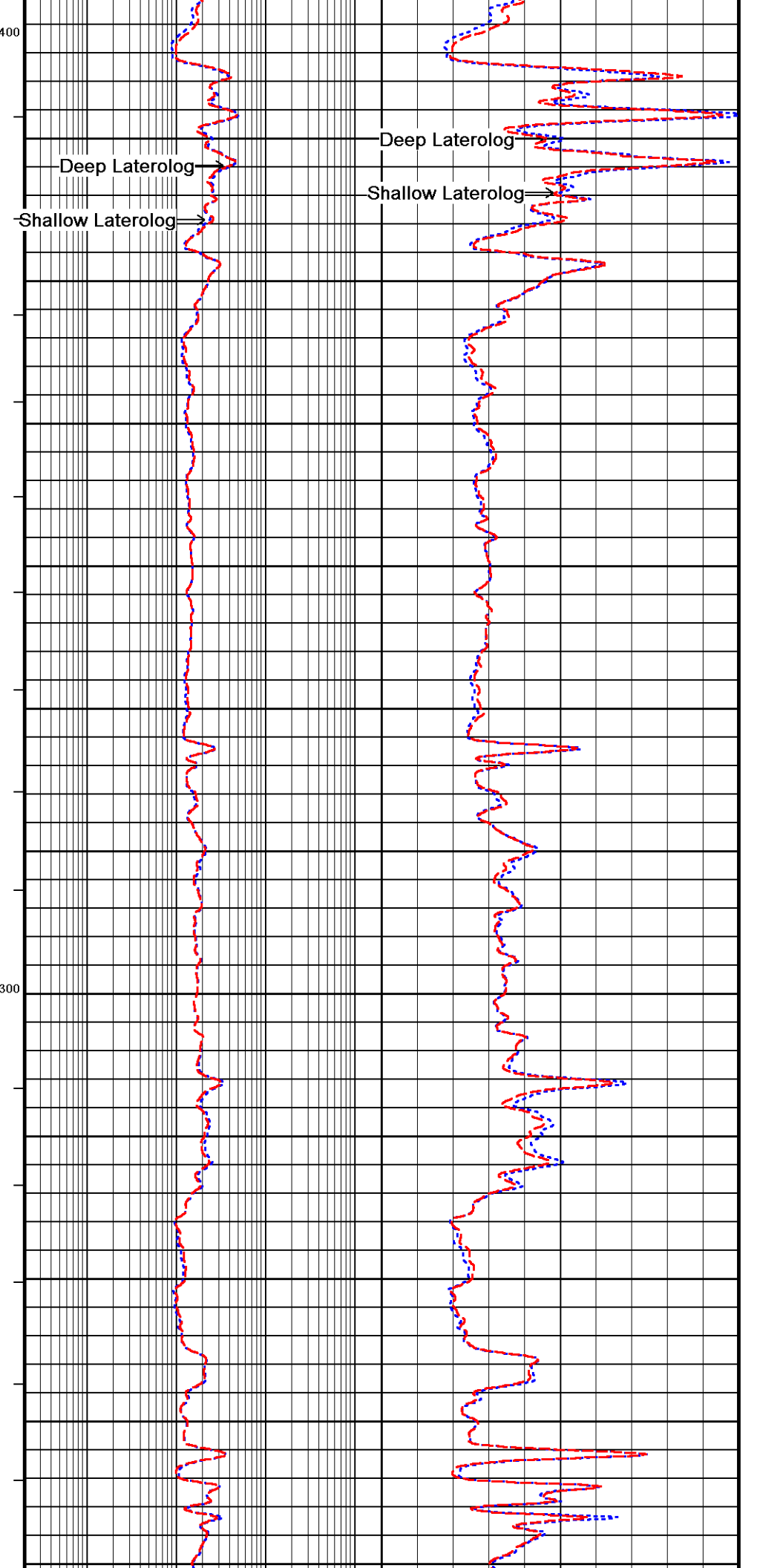
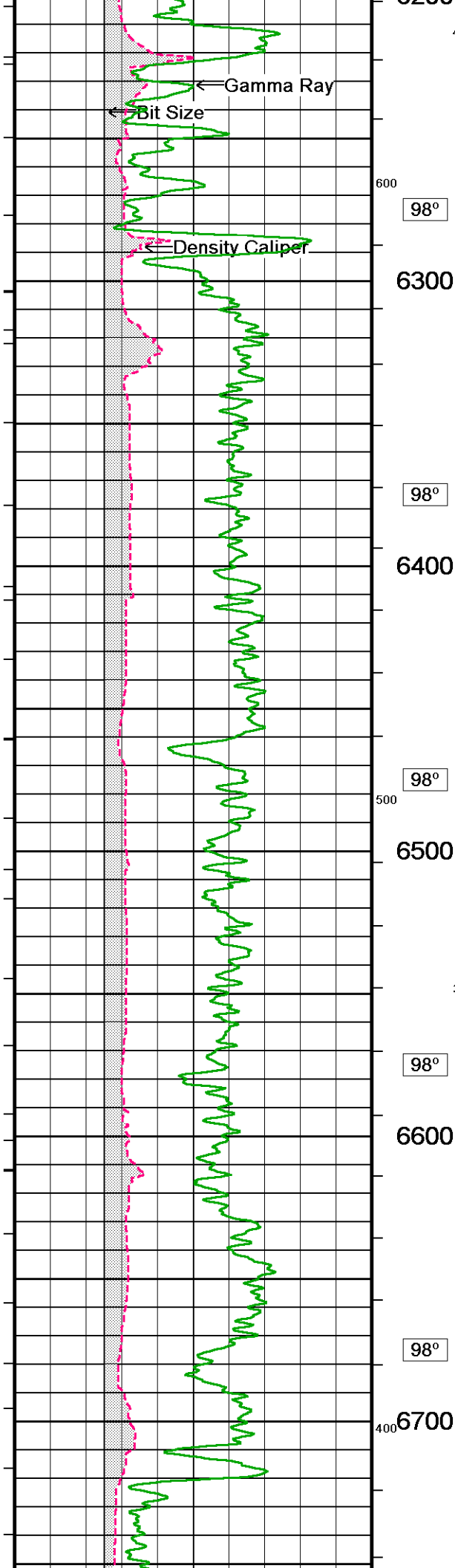


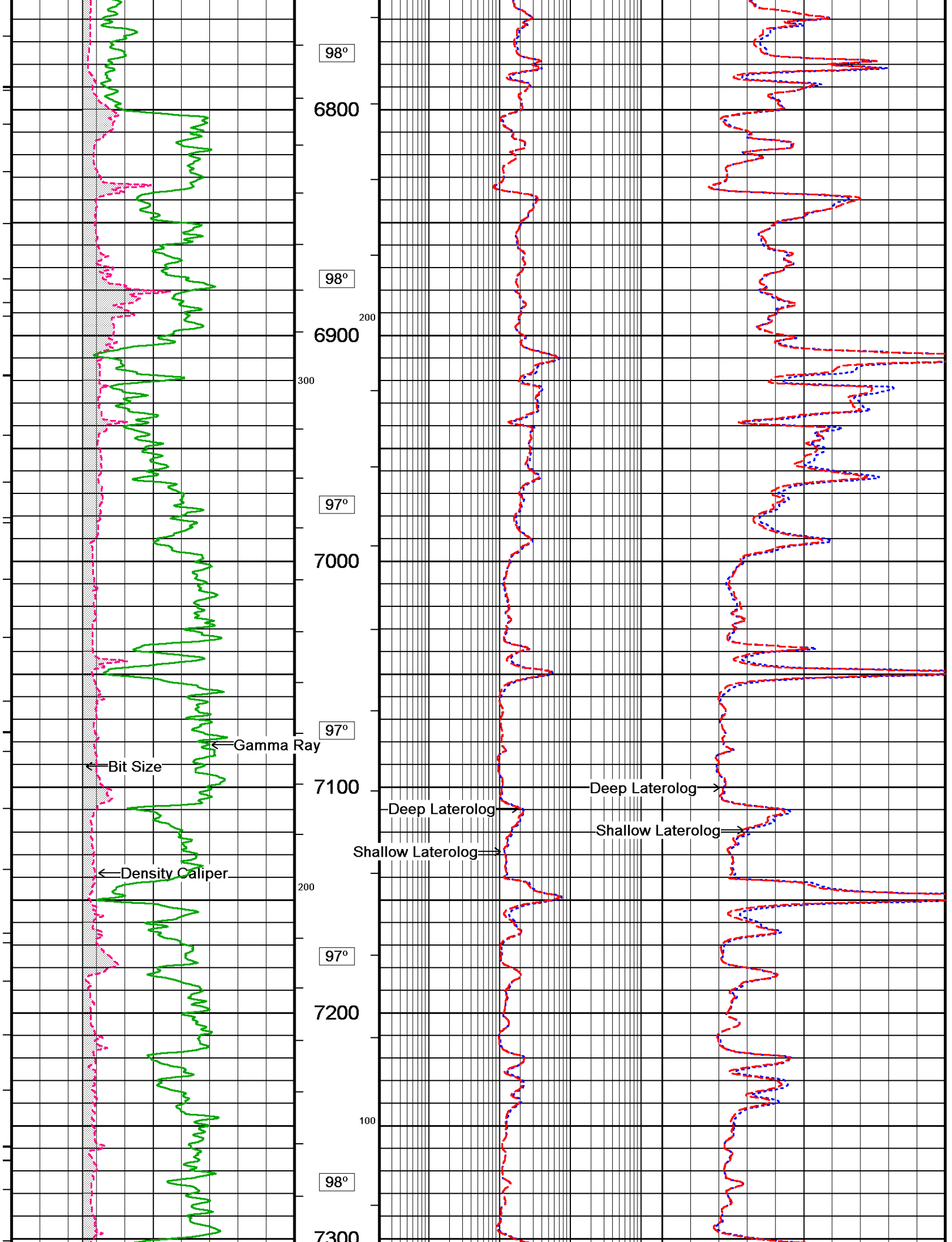


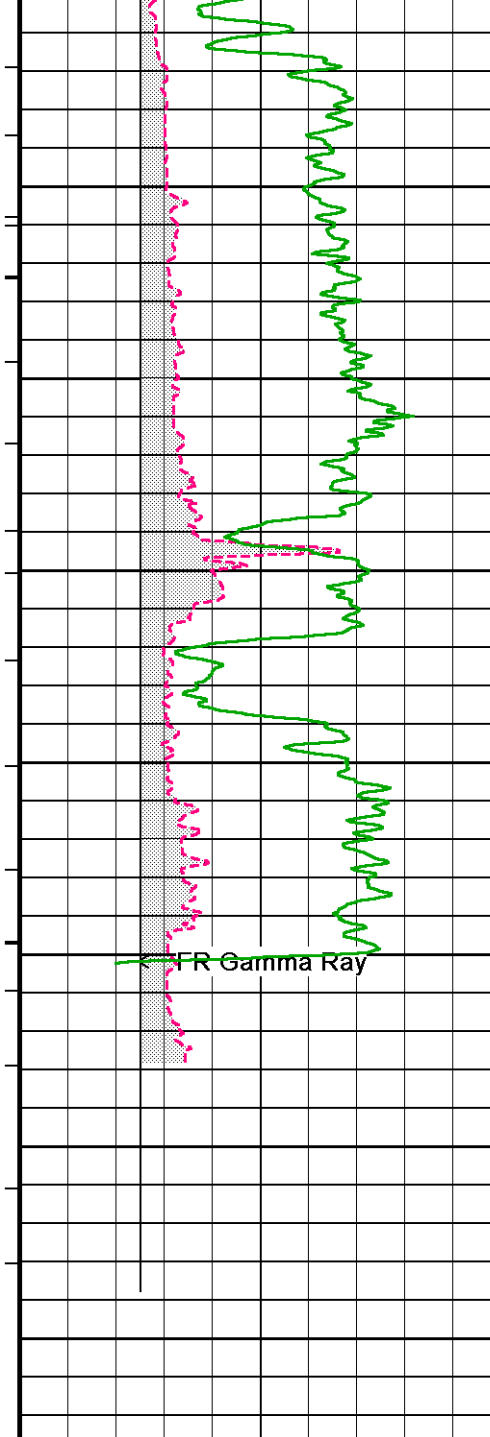
5100
98°
5200
1100
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5300
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600
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5600
900



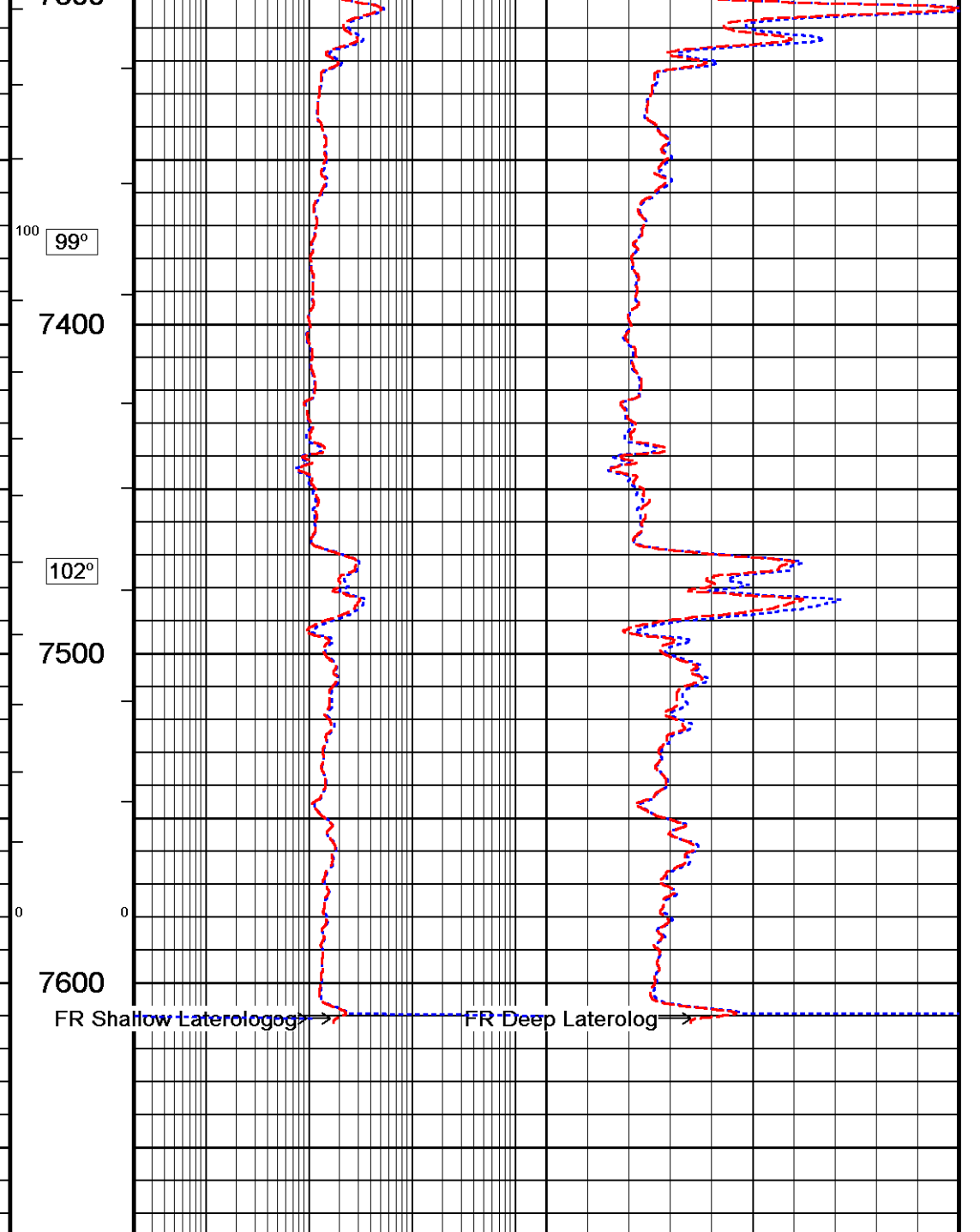






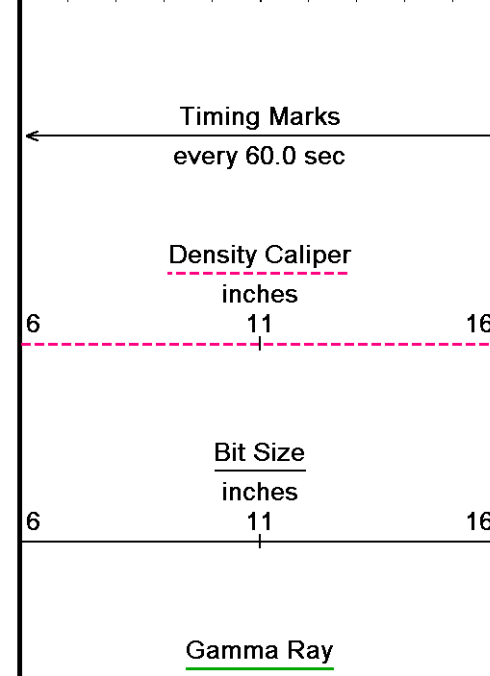


FR Gamma Ray



FR Shallow Laterolog

FR Deep Laterolog



Timing Marks
every 60.0 sec

Density Caliper
inches

Bit Size
inches

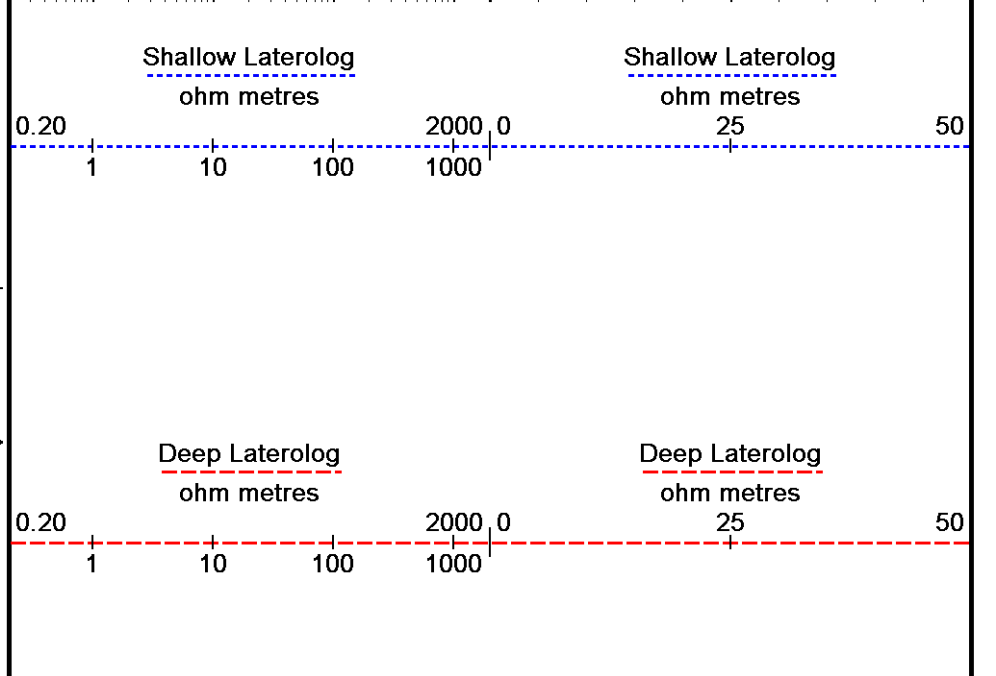
Gamma Ray

Depth
in
Feet

HVI
every
10 cu ft

Annular
Integral
every
10 cu ft

Borehole
Temp in
deg F



Shallow Laterolog
ohm metres

Shallow Laterolog
ohm metres

Deep Laterolog
ohm metres

Deep Laterolog
ohm metres

API 075150 150225300			Replay Scale 1:600		
Depth Based Data - Maximum Sampling Increment 10.0cm					
Filename: D:\LOGS\PERU\TALARA\LO6-CWS\LO6-31D-DSC-FINAL-HVOL-AVOL-COMPLETE.dta				Plotted on 18-JUN-2013 11:05	
System Versions: Processed with 13.06.9801 Plotted with 13.06.9801				Recorded on 12-JUN-2013 19:52	
↑		MAIN PASS 1:600		↑	

COMPANY		SAVIA PERU S.A			
WELL		LO6-31D			
FIELD		LOBITOS OFFSHORE			
PROVINCE/COUNTY		PIURA			
COUNTRY/STATE		PERU			
Elevation Kelly Bushing	50.00	feet	First Reading	7611.00	feet
Elevation Drill Floor	50.00	feet	Depth Driller	7668.00	feet
Elevation Ground Level	335.00	feet	Depth Logger	7638.60	feet
		RESISTIVITY LOG			
		MCG-MDL			
		SCALE 2":100 LOGARITHMIC			