

**Paramount**  
resources ltd.

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SALLE DE COURIER

2008 APR 16 P 1:55

NEB/ONE

**National Energy Board**  
5<sup>th</sup> Floor, 444 – 7 Avenue SW  
Calgary, Alberta  
T2P 0X8

April 16, 2008

**Attention: Mr. Bharat Dixit, Chief Conservation Officer**

Dear Sir,

**Re: Para et al Cameron A-03**  
**WID: 2047**  
**File: 9211-**  
**UWI: 300A036010117300**

**Final Well Report**

Paramount Resources Ltd. submits, in duplicate, the attached **Final Well Report** for the **Para et al Cameron A-03** well. A copy of the report is also included on the enclosed CD.

This record reflects the drilling of the well by Precision #220 in February 2007. Also enclosed are certified copies of the drilling tour sheets and original copies of the daily drilling reports to replace the faxed copies that were sent previously.

Please contact Dave Block at 206-3834 if you require additional information.

Yours truly,

PARAMOUNT RESOURCES LTD.

Dave Block, P. Eng.  
Engineering Consultant

**FINAL WELL REPORT**  
**PARAMOUNT RESOURCES LTD.**

**PARA ET AL CAMERON A-03**

**Grid: 60<sup>0</sup> 10', 117<sup>0</sup> 30'**

**DATE: April 16, 2008**

**COMPANY REPRESENTATIVE:**  
**Dave Block**

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## A. INTRODUCTION

Paramount Resources Ltd. (Paramount) drilled Para et al Cameron A-03 as a 1589 meter Keg River water disposal well. The well was spudded on February 10, 2007 and finished drilling on February 18, 2007. The purpose of the well was to evaluate the Keg River for water disposal potential. The primary target was the Keg River formation which was encountered at a depth of 11523 mKB.

The drilling contractor was Precision Drilling Ltd based out of Calgary, Alberta. Precision's Rig # 220 was used and is a land rig rated for 2400 m. The rig had a mud system capacity of 65 m<sup>3</sup> and was equipped with a boiler.

The well was drilled on Production License No PL-017 in which Paramount has an 88% working interest under Paramount's Operating License No 1159.

The exact co-ordinates of the well are as follows:

Latitude: 60° 02' 12.397"

Longitude: 117° 30' 00.998"

Cancor Rathole Inc. drilled a 610 mm conductor hole to 12.5 meters. From surface to 1.8 meters was permafrost clay with boulders and from 1.8 to 12.5 meters was clay with boulders. A heavy walled 406 mm conductor pipe was cemented at 12.5 meters.

Precision #220 was moved onto the location starting February 8, 2007. The rig was rigged up, a diverter was nipped up and drilling commenced February 10, 2007 at 08:00 hours. A 311 mm surface hole was drilled to 436 mKB. There were minor mud ring problems encountered in drilling the surface hole. A string of 219.1 mm, 35.7 kg/m, J-55, ST&C surface casing was run to 436 mKB. The casing was cemented with 31 t class 'G' cement plus 1.5% CaCl<sub>2</sub>. There were 8.0 m<sup>3</sup> of cement returned to surface while cementing. The plug was bumped and the float held OK. The plug was down at 02:17 hours on February 12, 2007.

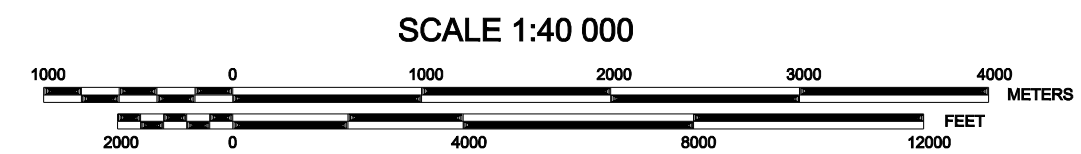
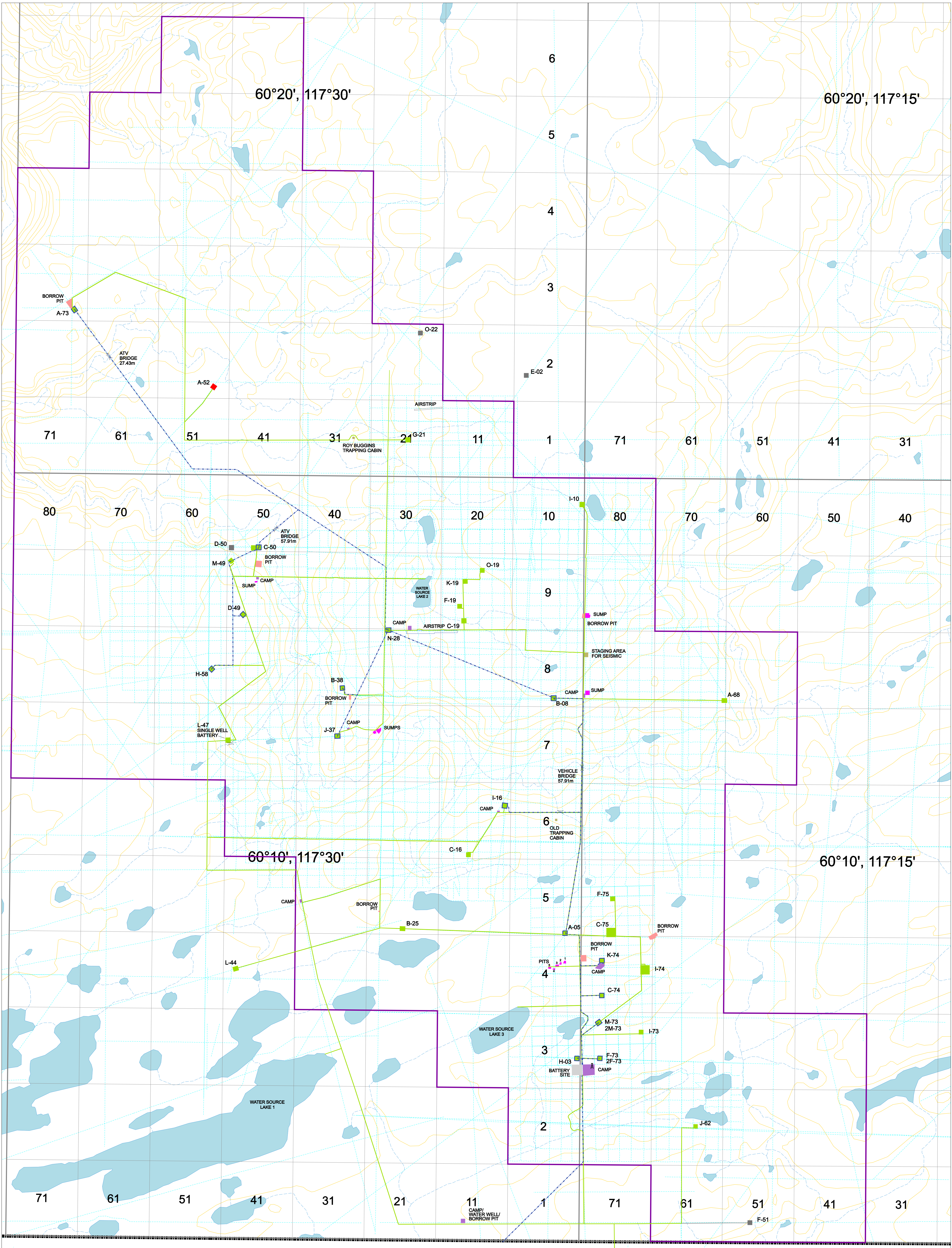
The casing and conductor were trimmed and the casing bowl was welded on. The BOP's were installed and function tested. The BOP's and manifold were pressure tested to 1500 kPa low pressure and 10,500 kPa high pressure.

The float collar and shoe were drilled out to 447 mKB on February 12, 2007. A leak off test was performed with the leak off gradient found to be 30.22 kPa/m. A 200 mm hole was drilled with a flocculated water system to approximately 1200 m. Gel was added to the drilling fluid at that point and the gel/chem mud system was then used to drill to a total depth of 1589 mKB. There were fluid losses encountered in the Wabamun starting at 553 meters. Once through the Wabamun three cement plugs were run to control the fluid losses. After the cement plugs were drilled out, drilling continued to TD with no further significant fluid losses. Precision Energy Services ran induction and sonic logs from bottom to surface casing, a density log from bottom to surface, and a micro-resistivity log from bottom to 1330 mKB.

139.7 mm, 23.07 kg/m, J-55, LT&C production casing was run and set at 1589 mKB. It was cemented with 22.0 t Thixlite + 1% SMS and 15.0 t Expando LWL + 0.1% CFL-3 + 0.2% LTR + 0.2% SPC-II. There were 2.5 m<sup>3</sup> cement returns to surface. The plug was not bumped.

Precision #220 was rigged out and released at 23:59 hours on Feb 21, 2007.





Prepared by:  
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LEGEND:

- TOWER
- SEISMIC
- AIRSTRIIP - (FOREIGN)
- ACCESS ROAD - (FOREIGN)
- AIRSTRIIP
- ACCESS ROAD
- PIPELINE RW
- BRIDGE
- SIGNIFICANT DISCOVERY LICENSE
- CONTOUR

- LEASE - (TIED-IN)
- LEASE - (NOT TIED-IN)
- LEASE - (FOREIGN)
- LEASE - RECLAIMED
- BORROW PIT
- CAMP SITE
- SUMP / PIT
- BATTERY SITE
- OTHER CLEARING



Compiled Map Showing  
**AS-BUILT JULY 2005**  
Oil & Gas Activity

**CAMERON HILLS AREA**  
Northwest Territories  
NAD83 UTM Projection

REVISED: 22-AUG-05  
MODEL: AS-BUILT JULY 2005.

Date: 13-DEC-04  
Job No.: 04-1150G  
Filename: CH.BASE.NAD83.DGN



B. GENERAL DATA

1. Well Name: Para et al Cameron a-03  
  
Authority to Drill a Well No: 2047  
  
Exploration Agreement Number: PL-017  
  
Location Unit: A  
  
Section: 03  
  
Grid Area: 60<sup>0</sup> 10' N, 117<sup>0</sup> 30' W  
  
Classification: Water Disposal
2. Coordinates:  
Surface: Latitude: 60<sup>0</sup> 02' 12.397"  
Longitude: 117<sup>0</sup> 30' 00.998"
3. Unique Well Identifier: 300A036010117300
4. Operator: Paramount Resources Ltd.
5. Contractor: Precision Drilling
6. Drilling Unit: Precision Rig # 220, Land Rig
7. Position Keeping: N/A
8. Support Craft (Helicopter): N/A
9. Drilling Unit Performance: Good
10. Difficulties and Delays: Severe lost circulation in the Wabamun.
11. Total Well Cost: \$1,163,000
12. Bottom Hole Co-ordinates: Same as surface.

## C. SUMMARY OF DRILLING OPERATIONS

1. Elevations:
  - Ground: 767.4 m above sea level
  - KB: 7772.8 m above sea level
  - KB to Casing Flange: 5.4 m
2. Total Depth:
  - FTD: 1589 mKB
  - PBTD: 1575 mKB
3. Date and Hour Spudded: February 10, 2007 at 08:00
4. Date Drilling Completed: February 18, 2007
5. Date of Rig Release: February 21, 2007
6. Well status: Cased and Suspended
7. Hole Sizes and Depths:
  - Conductor Hole: 610 mm to 12.5 m
  - Surface Hole: 311 mm to 436 mKB
  - Main Hole: 200 mm to 1589 mKB
8. Casing and Cementing Record:
  - Conductor Hole:
    - Casing Size: 406 mm
    - Wall Thickness: 9.5 mm
    - Depth Set: 12.5 m
    - Cut Height: At Surface
    - Date Set: February 6, 2007
    - Cement Volume: 0.96 tonnes
    - Cement Type: class 'G'
  - Surface Hole:
    - Casing Make: Ipsco
    - Casing Size: 219.1 mm
    - Casing Weight: 35.7 kg/m
    - Casing Grade: J-55
    - Thread: ST&C
    - Number of Joints: 33
    - Depth Set: 436 mKB
    - Cut Height: At surface
    - Date Set: February 12, 2007
    - Cement Volume: 31 Tonnes
    - Float Shoe Depth: 436 mKB
    - Float Collar Depth: 430 mKB
    - Cement Type: Class 'G'

Additives:	1.5% CaCl <sub>2</sub>
Cement Top:	Surface
Casing Bowl Size:	228 mm x 219 mm x 21 MPa
Casing Bowl Make:	ABB Vetco

Main Hole:

Casing Size:	139 mm
Casing Weight:	23.07 kg/m
Casing Grade:	J-55
Casing Make:	IPSCO
Number of Joints:	120
Thread:	LT&C
Depth Set:	1589 mKB
Cut Height:	Surface
Date Set:	February 20, 2007
Float Shoe Depth:	1589 mKB
Float Collar Depth:	1575 mKB
Cement Volume 1:	22.0 Tonnes
Cement Type 1:	Thixlite
Additives 1:	1% SMS
Cement Volume 2:	15.0 Tonnes
Cement Type 2:	Expando LWL
Additives 2:	0.1% CFL-3 & 0.2% LTR & 0.2% SPC-II
Cement Top:	Surface

9. Sidetracked Hole: N/A

10. Drilling Fluid:

Conductor Hole:	Water
Properties:	N/A

Surface Hole:	Gel - Chemical
Properties:	Viscosity: 37 - 68 sec/L
	Weight: 1150 - 1230 kg/m <sup>3</sup>
	PH: 8.5 - 11.0

Main (425 – 1200 m):	Floc water
Properties:	Viscosity: not reported
	Weight: 1000 kg/m <sup>3</sup>
	PH: not reported

Main (1200 m – TD):	Gel-chem
Properties:	Viscosity: 41 - 70 sec/L

Weight:	1060 - 1220 kg/m <sup>3</sup>
PH:	10.5 – 11.0
Water loss:	9.0 – 20.0 cc
Solids:	Not reported
Gels:	Not reported
Filtrate:	Not reported
PV / YP:	Not reported

11. Fishing Operations: **N/A**

12. Well Kicks and Well Control Operations: N/A

13. Formation Leak Off Tests:

Depth:	446 m
Fluid Density:	1000 kg/m <sup>3</sup>
Applied Pressure:	8900 kPa
Hydrostatic Pressure:	4277 kPa
Mud Weight Equivalent:	3080 kg/m <sup>3</sup>
Casing setting depth:	436 mKB

The surface casing leak-off test was taken to a gradient of 30.2 kPa/m before leak off was detected.

#### 14. Time Distribution

Date	Hours	Activity
07/02/08	20.0	Rig move and rig up.
	4.0	Wait on daylight.
07/02/09	8.0	Wait on daylight.
	15.5	Rig move and rig up.
	0.5	Nipple up diverter.
07/02/10	0.25	Safety meeting.
	0.25	BOP drill.
	0.75	Rig service.
	7.75	Nipple up diverter.
	13.0	Drill.
	2.0	Deviation survey.
07/02/11	0.25	Safety meeting.
	0.75	Rig service.
	7.0	Drill.
	1.75	Deviation survey.
	1.75	Circulate and condition mud.
	8.75	Tripping.
	3.75	Run casing.
07/02/12	0.25	Safety meeting.
	0.25	Rig service.
	0.25	BOP drill.
	1.25	Circulate and condition mud.
	1.25	Cement casing.
	4.0	Wait on cement.
	1.0	Lay out diverter.
	1.5	Cut casing and weld on bowl.
	5.0	Nipple up BOP's.
	5.0	Test BOP's.
	2.5	Tripping.
	0.5	Drill out float collar and shoe.
	0.25	Leak off test.
	1.0	Drill.
07/02/13	0.25	Safety meeting.
	0.75	Rig service.
	0.25	BOP drill.

	13.25	Drill.
	0.5	Deviation survey.
	3.5	Circulate and condition mud.
	5.5	Tripping.
07/02/14	0.5	Safety meeting.
	0.5	Rig service.
	2.5	Run cement plugs.
	9.75	Tripping.
	6.75	Circulate and condition mud.
	0.75	Slip and cut drill line.
	3.25	Drill out cement.
07/02/15	0.75	Rig service.
	0.25	Run cement plugs.
	6.5	Drill out cement.
	1.25	Circulate and condition mud.
	4.25	Trips.
	10.25	Drill.
	0.75	Deviation survey.
07/02/16	0.75	Rig service.
	13.0	Drill.
	0.75	Deviation survey.
	2.25	Circulate and condition mud.
	0.25	Reaming.
	7.0	Tripping.
07/02/17	0.75	Rig service.
	7.25	Drill.
	0.25	Deviation survey.
	13.5	Tripping.
	1.5	Circulate and condition mud.
	0.75	Slip and cut drill line.
07/02/18	0.5	BOP drill.
	0.75	Rig service.
	19.25	Drill.
	1.0	Deviation survey.
	2.25	Tripping.
	0.25	Circulate and condition mud.
07/02/19	0.25	Safety meeting.
	0.25	Rig service.



	4.0	Circulate and condition mud.
	10.25	Trips.
	9.25	Logging.
07/02/20	0.5	Safety meeting.
	7.5	Trips.
	1.5	Circulate and condition mud.
	10.0	Run casing.
	2.0	Cement casing.
	0.5	Set slips.
	2.0	Nipple down BOP's.
07/02/21	24.0	Rig out.

### Time Break Down by Activity:

	<u>Activity</u>	<u>Hours</u>
	Move on, rig up:	35.5
	Wait on daylight:	8.0
	Drilling:	84.0
	Surveying:	7.0
	Reaming:	0.25
	Tripping:	71.25
	Circulate and condition mud:	24.0
	Running casing:	13.75
	Cementing casing:	3.25
	Wait on cement	4.0
	Drill out casing shoe:	0.5
	Rig service:	6.0
	Safety meetings:	2.25
:	BOP drill:	1.25
	Nipple up diverter:	8.25
	Nipple down diverter:	1.0
	Weld casing bowl:	1.5
	Nipple up BOP's:	5.0
	Pressure test BOP's:	5.0
	Leak off tests:	0.25
	Logging:	9.25
	Slip and cut drill line:	1.5
	Nipple down BOP's:	2.0
	Set casing slips:	0.5
	Run cement plugs:	2.75
	Drill out cement plugs:	9.75
	Rig out:	24.0

15. Deviation Survey: See page 8 of the Geological Report in the Attachments Section.
16. Abandonment Plugs: N/A
17. Composite Well Record: See the copy of the strip log in the Geological Report in the Attachments Section.
18. Completion Record: Reported in a separate report.

## D: GEOLOGY

### GEOLOGICAL SUMMARY

Tops: See page 12 of the Geological Report in the Attachments Section.

Sample Descriptions: See pages 13 to 18 of the Geological Report in the Attachments Section.

Total Depth: 1589 mKB MD

### GAS DETECTION REPORT

A gas detector was utilized from the drill out of the conductor pipe to total depth. The gas detector readings are included on the composite geological log at the end of the Geological Report in the Attachments Section.

DRILL STEM TESTS: None.

### WELL EVALUATION

The following logs were run:

Array Induction Log:	436 - 1588 mKB
Photo Density Dual Spaced Neutron Log:	surface - 1581 mKB
Compensated Sonic Log:	436 - 1585 mKB
Micro Log:	1330 - 1577 mKB

GAS, OIL, & WATER ANALYSES: N/A

FORMATION STIMULATION: N/A

FORMATION AND TEST RESULTS: N/A

DETAILED TEST PRESSURE DATA READINGS: N/A

## E. ENVIRONMENTAL CONSIDERATIONS

There are no known outstanding environmental considerations on this well. The well was drilled sumpless with all drilling fluids being held in tanks on the lease. At the end of the job the water was stripped from the mud system and hauled to E-72 for re-use. The solids were hauled to a remote site at J-04 60° 10' N, 117° 30' W where they were disposed of using the mix/bury/cover technique.

# Geological Report

for

## Para et al Cameron A-03



Prepared for: Llew Williams, P. Geol  
Geological Manager, Northern Unit  
Paramount Resources Ltd.

Wellsite Geologist:



**DEESCo**  
consulting  
**Brad Powell, B.Sc.**  
*Geologist*

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## Executive Summary

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**Para et al Cameron A-03** is a vertical development well spudded by Precision Drilling Rig #220 on February 10, 2007 @ 18:30. Surface hole 311mm was drilled to 436.0m with 219.1 mm casing landed at 435.8m. The 200mm main hole terminated in the lower **Keg River** formation at 1589.4m on February 18, 2007 @ 21:15.

**A-03 was drilled primarily for water disposal purposes into the Keg River porosity.** Cutting samples were taken from 1295.0m to TD @ 1589.4m; 2 sets of vials and one set of bags for the NEB, and 1 set of vials for Paramount archiving. Triple Induction, SP, Neutron / Density, Compensated Sonic, Gamma Ray, Microlog, and XY Caliper logs were run from TD to surface casing. Microlog was run from TD to 1320m. Gas Detection was run from SC to TD.

The **Sulphur Point Dolomite** is a microcrystalline to very fine crystalline packstone to grainstone, with occasional fine to medium sucrosic euhedral crystal growth. The dolomite occurred on logs at 1409.5m MD and was 12.5m thick, conformably and sharply underlain by anhydrite of the Muskeg formation. The most promising interval occurred between 1417.0 – 1420.0m. An excellent ROP break indicates porosity. The samples appeared quite granular in texture, showing fair sucrosic intercrystalline and vug porosity. Sample cuttings showed evidence of fracturing, with micro druze and bituminous coatings. Sample porosity was estimated at 9 - 15% over this interval. Density porosity logs (dolomite scale) confirm this, and reads up to 25% from 1417.0 – 1418.0m. Cuttings were light brown to brown and saw partial dark brown oil staining. They showed bright whitish yellow dry fluorescence with an instant streaming milky yellowish white solvent cut, and a strong petroliferous odor, as well as an oily sheen in the raw sample. Deep induction log analysis shows 26ohms at 1417.5m. (Note: this log reading was read from a "Salty Model" Induction log, with mud Rm reading 0.71 ohm-m). Gas detector readings in this most porous interval peaked at 314 units over a baseline of 120 units. Gas readings were recorded while drilling with mud of density 1150 kg/m<sup>3</sup>. Microlog over almost the entire Sulphur Point Dolomite indicates good mud cake build-up, easily seen on caliper logs, suggesting modest permeability. **The Sulphur Point Dolomite appears to be a good reservoir for oil production.**

The **Slave Point** occurs on logs between 1341.6 – 1382.0m MD. It is a cream to light brown to brown mottled microcrystalline mudstone, occasionally grading to a very fine crystalline wackestone to packstone. It shows streaky dark brown oil staining. It is predominantly tight, showing increased porosity downsection. The Slave Point showed assumed poor earthy porosity and occasional poor moldic and vug porosity. Gas detector response peaks at 192 units at 1353.5m and 200 units at 1364.5m. These readings were recorded over a baseline of 70 units in 1130 kg/m<sup>3</sup> mud. This is a relatively poor show, and density porosity readings peak at 7-9% over these intervals. The lower Slave Point has a strong petroliferous odor, and shows a yellow to whitish yellow dry fluorescence. Solvent cut is milky to watery greenish yellow. **The Slave Point appears too oily and tight to have economic potential for gas production.**

## Executive Summary

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The **Keg River – Upper Porous Interval** can be described as a massive dolomite, tan to brown, with occasional dark brown oil staining. It is predominantly microcrystalline to very fine crystalline grainstone with streaks of fine to medium, euhedral crystalline growth and occasional free clear medium dolomite crystal cluster growth. Crystal growth along cutting surfaces with good relief, and free rhombs suggests growth into voids. Samples have a sandy granular appearance, with scattered fair vug porosity, and poor to fair intercrystalline porosity. Visible porosity in cuttings was estimated at 3-9%, which was confirmed on logs. Gas detector readings peaked at 130 units over a baseline of 50 units at the top of the Keg River. Deep induction varies between 200 ohm-m and 500 ohm-m in the porous Keg River interval. Caliper logs show modest filter cake buildup, indicating permeability. SP deflection also suggests perm. Samples showed dull yellow to yellow gold dry fluorescence, and a weak watery yellow cut with a petroliferous odor. **The Keg River – Upper Porous Interval appears to have sufficient porosity and permeability to provide a good water disposal zone.**

**Para et al Cameron A-03 was cased for production with 139.7mm casing for water disposal purposes into the Keg River porosity.**

## Well Data Summary

---

<b>OPERATOR</b>	Paramount Resources Ltd.
<b>WELL NAME</b>	Para et al Cameron A-03
<b>LOCATION</b>	Unit A    Section 03 Grid Area: Lat 60° 10' N Long 117° 30' W
<b>UWI</b>	300A036010117300
<b>POOL</b>	Keg River
<b>FIELD</b>	Cameron Hills
<b>PROVINCE</b>	Northwest Territories
<b>LICENCE NUMBER</b>	2047
<b>CLASSIFICATION</b>	Production
<b>A.F.E. NUMBER</b>	06N7100031
<hr/>	
<b>SURFACE COORDINATES</b>	Latitude:    60° 02' 12.3" North Longitude: 117° 30' 0.9" West
<hr/>	
<b>ELEVATIONS</b>	KB:    772.8m GL:    767.4m
<hr/>	
<b>TOTAL DEPTH</b>	Driller:    1589.4m MD (-816.6m SubSea) Logger:    1589.4m MD (-816.6m SubSea)
<hr/>	
<b>DRILLING CONTRACTOR</b>	Precision Drilling Rig #220
<b>ENGINEER</b>	Brian Neigum            403-997-5286 or 548-5013
<b>GEOLOGIST</b>	Brad Powell, B.Sc.    403-861-0838
<hr/>	
<b>SPUD DATE</b>	February 10, 2007 @ 08:30
<b>COMPLETED DRILLING</b>	February 18, 2007 @ 21:15
<b>RIG RELEASE</b>	February 21, 2007 @ 23:59
<hr/>	



## Well Data Summary

---

**HOLE SIZE** Surface hole: 311mm  
Main hole: 200mm

**CASING** Surface: 219.1mm, 35.71 kg/m set @ 435.8m  
Production: 139.7mm, 20.83 kg/m set @ 1589.4m

---

**LOGGING** STI / MRT/ SpeD / CNS / GR / XY CAL / BCS from TD to surface casing.  
Microlog from TD to top of Slave Point.

---

**DSTs** none

**CORES** none

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**SAMPLES** Operator: 1 set vials (@ 5m) over interval: 1295m - TD  
NEB: 2 sets vials (@ 5m) over interval: 1295m - TD  
1 set bags (@ 5m) over interval: 1295m - TD

**MUD RECORD** 0 – 435.8m Gelchem  
435.8 - 1190m Floc Water  
1190 - TD Gelchem

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**DIRECTIONS** From High Level, Alberta, travel north on Highway 35. 1.3km south of Indian Cabins, turn west onto main road and drive 39.0km, to Paramount plant site. The well center is just east of the main plant.

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### PROBLEMS

**On Surface Hole:** Mud rings needed to be worked and cleaned out.

**On Main Hole:** Lost circulation in the Wabamun. Three cement plugs were run to control fluid loss. After mudding up @ 1200m, we began to experience balled bit / plugged jets. Three bit trips were made to clear the problem. Minor anhydrite contamination problems in mud.

## Logging Summary

---

**Date:** February 19, 2007

**Logging Company:** Weatherford      Engineer: Matt Bonnell      Truck: 13-132

**Mud Properties:** WT: 1220 kg/m<sup>3</sup>    Visc: 70 s/L    WL: 10 cm<sup>3</sup>/30min    pH: 10.5

Rm: 1.11 ohm-m @ 25.0C      0.71 ohm-m @ 50.0C

Rmf: 1.02 ohm-m @ 25.0C

Rmc: 1.26 ohm-m @ 25.0C

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**Hole Size:** 200mm

**Surface Casing:** 219.1mm, 35.7kg/m, set @ 435.8m

**Depths:** Driller: 1589.4m      Strap: 1589.1m      Logger: 1589.4m

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**Logging Times:** First Alerted: 11:00 February 17, 2007

Time Required: 04:00 February 19, 2007 (9.0 hr final notice)

Arrived: 08:30 February 19, 2007

Rig Up: 10:00 February 19, 2007

Rig Out: 18:30 February 19, 2007 (8.5 hr rig time)

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**Hole Condition:** Good

**Circulations:** 1.0hr after TD then 2.0hrs after wiper trip

**Wiper Trips:** TD to 1200m

**LOGGING SEQUENCE**    Run #1: STI / MRT/ SpeD / CNS / Pe / GR / XY CAL / BCS

**Interval:** TD to surface casing (with MRT from TD to top of Slave Point)

**REMARKS:** Tagged bottom @ 12:50, Feb 19, 2007. Good, efficient logging job.

## Bit Record & Casing Summary

### Bit Record

Bit #	Make	Type	Size	In (m)	Out (m)	Meters (m)	Hours	ROP (m/hr)	CONDITION
1A	Varel	CHIGJM	311mm	13	270	257	14.00	18.36	5 – 5 – WT – A - PR
2A	Varel	MX 1	311mm	270	436	166	7.25	22.90	6 – 6 – WT – A - TD
1	Varel	MKS55	200mm	436	730	294	14.25	20.63	OK
1RR	Varel	MKS55	200mm	730	1380	650	30.50	21.31	4 – 4 – CT – A - PP
2	Varel	MKS55	200mm	1380	1589.4	209.4	19.25	10.88	2 – 2 – CT – A - TD

### Casing Summary

Type	Casing Size	Hole Size	Landed	Total Joints	Remarks
Surface	219.1mm	311mm	435.8m	31	31 joints of 219.1mm 35.7 kg/m, J-55, new Ipsco casing ran + collar + shoe. Cemented with Sanjel with 31.0t of 0:1:0 Class G + 1.5% CaCl <sub>2</sub> of density 1900 kg/m <sup>3</sup> . Approximately 5.0m <sup>3</sup> of good returns, float OK, plug down @ 02:17 February 12, 2007.
Production	139.7mm	200mm	1589.4m	120	120 joints (including 1 marker) of 139.7mm 23.07kg/m, J-55, 8RD ST&C new casing ran + float collar + shoe. Cemented with Sanjel. 21.0t Thixlite + 0.1% SMS lead then 15.0t Expandomix + 0.1% CFL-3 + 0.2% LTR + 0.2% SPCII. Plug down @ 22:30 on February 20, 2007. 2m <sup>3</sup> returns, float OK and holding.

# Deviation Surveys

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Depth (m)	Inclination (degrees)	Azimuth (degrees)	TVD (m)	North (m)	East (m)	Section (m)	Dog Leg deg/30m	Build Rate deg/30m	Turn Rate deg/30m
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THIS WELL IS A VERTICAL WELL

0	0.00
31	0.55
59	0.23
87	0.38
115	0.70
143	0.41
172	1.02
202	1.06
230	0.84
260	0.68
288	0.68
314	0.75
343	0.40
370	0.61
426	0.57
531	0.26
632	0.44
736	0.60
839	0.48
937	0.37
1031	0.13
1125	0.61
1225	0.45
1329	0.18
1424	0.50
1584	0.34

## Daily Drilling Summary

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- note that operations are as reported from 00:00 to 23:59 on the date shown

<u>Date</u>	<u>Depth</u>	<u>Progress</u>	<u>Operations</u>
Feb 8	0	0	Strip mud. Tear out. Wait on daylight to move.
Feb 9	0	0	Wait on daylight. Move rig, spot components. Rig up shacks, fire up boiler. Raise derrick @ 17:30. Rig up floor, tanks, Kelly, pre-fabs. Nipple up diverter, function test.
Feb 10	260	260	Rig up rig. Run flare lines. Test accumulator, diverter, HCR, and related BOP equipment. Pre-spud inspection. Spud well Feb 10, 2007 @ 18:30. Drill 311mm surface hole with Bit #1A with surveys and required rig service to 260m.
Feb 11	436	176	Drill 311mm surface hole with Bit #1A with surveys and required rig service from 260m to 270m. Circulate hole clean, work mud ring. POOH for bit trip. RIH with Bit #2A. Drill 311mm surface hole with required surveys and rig service from 270m to 430m. Circulate. Full wiper trip, wash to bottom. Work mud ring. Drill to surface casing point at 436.0m. Surface TD Feb 11, 2007 @ 16:15. Circulate hole and condition mud for running casing. POOH to run casing, lay down collars. Rig for and run 31 joints 219.1mm surface casing. Circulate casing. Wait on cementers. Rig up cementers.
Feb 12	457	21	Cement with Sanjel. Plug down Feb 12, 2007 @ 02:17. WOC. Weld on bowl, nipple up BOPs. Pressure test BOPs, manifolds, HCR, valves, rams, and other well control related equipment. Make up BHA with PDC Bit #1 and RIH. Rig service / function test. RIH. Rig service. Drill float @ 430.6m and shoe @ 436.0m. Drill out @ 22:15 on Feb 12. Drill to 447m, perform leak off test, rig service and safety meeting. Circulate hole clean. Drill ahead 200mm main hole with required surveys and rig service from 447m to 457m.

## Daily Drilling Summary

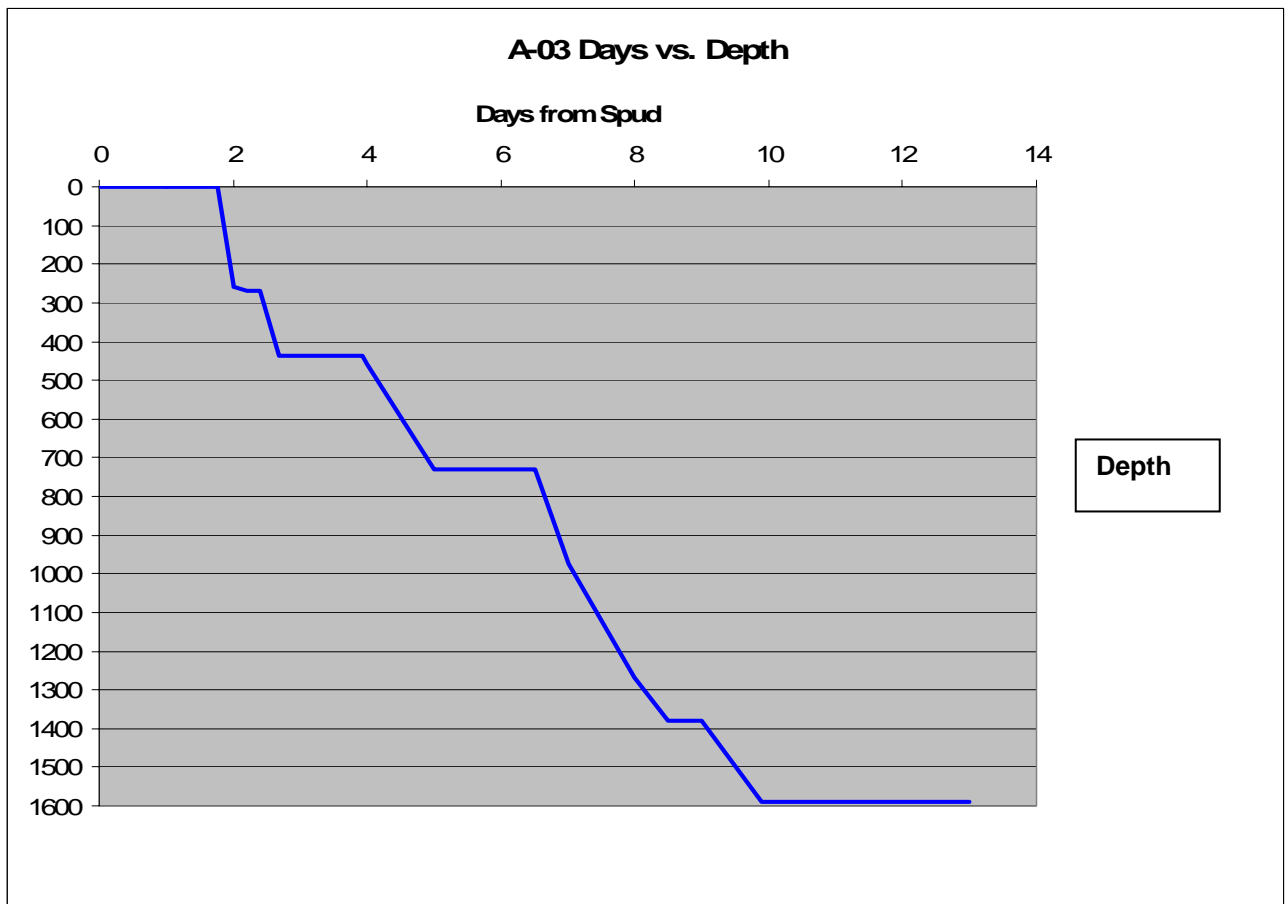
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Feb 13	730	273	Drill ahead 200mm main hole with required surveys and rig service from 457m to 730m. Losing fluid while drilling Wabamun. Haul water, build volume, drill ahead with partial losses. Drill ahead to 730m. Circulate. POOH with flow checks to run cement plugs. RIH open-ended. Circulate. Wait on cementers.
Feb 14	730	0	Rig up Sanjel. Run plug #1. WOC. Tag plug #1 @ 604m. Cement with Sanjel plug #2. WOC. Tag plug #2 @ 510m. POOH. Make up BHA with PDC Bit #1RR, RIH. Drill out cement plug 510-618m. The well began taking fluid around 600m. POOH with flow checks to run another cement plug. RIH open-ended.
Feb 15	975	245	Run cement plug #3. WOC. Tag plug #3 @ 525m. POOH. Make up BHA with PDC Bit #1RR. RIH. Drill out cement plug 525m-730m. Drill ahead 200mm main hole with required surveys and rig service from 730m to 975m.
Feb 16	1269	295	Drill ahead 200mm main hole with required surveys and rig service from 975m to 1265m. Mud up at 1200m. Trip for balled bit / plugged jets @ 1265m. RIH. Plugged jets again @ 1269m. POOH for bit trip with flow checks.
Feb 17	1380	111	POOH for bit trip with flow checks. RIH. Drill ahead 200mm main hole with required surveys and rig service from 1269m to 1380m. Pressuring up to 14000kPa+ because of plugged jets. Circulate, POOH with flow checks. Make up BHA with new PDC Bit#2. RIH.
Feb 18	1589.4	209.4	RIH. Drill ahead 200mm main hole with required surveys and rig service from 1380m to 1589.4m Total Depth. TD reached February 18, 2007 @ 21:15. Circulate up sample. POOH wiper trip to 1200m with flow checks.

## Daily Drilling Summary

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Feb 19	1589.4	0	POOH wiper trip to 1200m with flow checks. RIH. Circulate on bottom, wait on loggers. POOH to log with strap. Rig up Weatherford wireline @ 10:00. Logs on bottom with no problems @ 12:50. Log Run #1. Rig out tools. Rig out loggers @ 18:30. RIH with flow checks to condition hole for casing. Circulate mud and condition hole in preparation for running casing.
Feb 20	1589.4	0	POOH sideways. Rig for running casing. Run 120 joints 139.7mm production casing. Circulate casing. Rig for cementers. Cement hole with Sanjel. Plug down 22:30 February 20, 2007. WOC.
Feb 21	1589.4	0	Nipple down BOPs, set slips, strip mud. Tear out rig. Rig release 23:59 February 21, 2007.



## Formation Tops

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Kelly Bushing Elevation:        772.8m

Formation	Prognosis MD (m)	Sample MD (m)	Logger MD (m)	Log SubSea (m)
Wabamun	555.8	550.0	550.0	+ 222.8
Fort Simpson	721.8	717.3	716.5	+ 56.3
Slave Point	1346.8	1342.0	1341.6	- 568.8
F4 Marker	1388.1	1382.5	1382.0	- 609.2
Watt Mountain	1395.1	1390.0	1389.0	- 616.2
Sulphur Pt LS	1399.1	1394.0	1393.0	- 620.2
Sulphur Pt DOL	1417.1	1412.0	1409.7	- 636.9
Muskeg	1429.9	1424.0	1422.0	- 649.2
M1 Dolomite Marker		1493.5	1490.5	- 717.7
Keg River **	1527.9	1524.5	1523.0	- 750.2
Base of Keg porosity	1547.8	1542.0	1543.0	- 770.2
Total Depth	1587.8	1589.4	1589.4	- 816.6

*\*\* Primary Zones of Interest*

*\* Secondary Zones of Interest*



## Sample Descriptions

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1290-1305 SHALE 1) light to medium gray, green gray, in part calcareous grading to argillaceous limestone, smooth texture, micromicaceous in part, platy to blocky, in part waxy, 2) dark gray to brown gray, micromicaceous, rugose, blocky, firm, occasional off white to light gray to gray green argillaceous microcrystalline limestone mudstone stringers

1305-1323 SHALE 1) light to medium gray, green gray, in part calcareous grading to argillaceous limestone, smooth texture, micromicaceous in part, platy to blocky, in part waxy, 2) dark gray to brown gray, micromicaceous, rugose, blocky, firm, occasional off white to light gray to gray green argillaceous microcrystalline limestone mudstone stringers

### **BEAVERHILL LAKE @ 1323.0m (-550.2m SubSea)**

1323-1330 SHALE 1) light to medium gray, green gray, in part calcareous grading to argillaceous limestone, smooth texture, micromicaceous in part, platy to blocky, scattered pyrite, 2) dark gray to brown gray, occasional black, micromicaceous, rugose, blocky, firm, LIMESTONE, off white to gray, argillaceous, cryptocrystalline to microcrystalline mudstone, in part chalky, scattered disseminated to nodular pyrite, occasional resinous gray inclusions, scattered fossil debris including Crinoids, tight, no shows

1330-1342 SHALE 1) light to medium gray, green gray, in part calcareous grading to argillaceous limestone, smooth texture, micromicaceous in part, platy to blocky, scattered pyrite, 2) dark gray to brown gray, occasional black, micromicaceous, rugose, blocky, firm, LIMESTONE, off white to gray, argillaceous, cryptocrystalline to microcrystalline mudstone, in part chalky, scattered disseminated to nodular pyrite, occasional resinous inclusions, scattered fossil debris including Crinoids, tight, no shows

### **SLAVE POINT @ 1342.0m (-569.2m SubSea)**

1342-1350 LIMESTONE, off white to tan to light brown, light gray, mottled, cryptocrystalline to microcrystalline argillaceous mudstone, occasional grading to wackestone, scattered bioclastic debris, flaky to blocky, in part chalky, occasional resinous, locally pyritized, tight with assumed poor earthy porosity, spotty pale yellow dry fluorescence, questionable show, slight petroliferous odor

## Sample Descriptions

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- 1350-1355 LIMESTONE, cream to tan to light brown, light gray, mottled, occasional dark brown oil stain, predominantly cryptocrystalline to microcrystalline, occasional very fine crystalline, argillaceous mudstone occasional grading to wackestone to packstone, scattered bioclastic debris, flaky to blocky, in part chalky, occasional resinous, locally pyritized, local bituminous partings, rare calcite infill, tight with assumed poor earthy porosity, streaks of poor moldic porosity, pale yellow dry fluorescence, watery to milky yellow green cut, petroliferous odor
- 1355-1365 LIMESTONE, cream to tan to light brown, light gray, mottled, occasional dark brown oil stain, predominantly cryptocrystalline to microcrystalline, occasional very fine crystalline, argillaceous mudstone occasional grading to wackestone to packstone, scattered bioclastic debris, flaky to blocky, in part chalky, occasional resinous, locally pyritized, local bituminous partings, rare calcite infill, tight with assumed poor earthy porosity, streaks of poor moldic porosity, yellow white dry fluorescence, watery to milky yellow green cut, petroliferous odor
- 1365-1374 LIMESTONE, becoming darker, cream to tan to light brown, light gray, mottled, occasional dark brown oil stain, predominantly cryptocrystalline to microcrystalline, occasional very fine crystalline, argillaceous mudstone occasional grading to wackestone to packstone, flaky to blocky, in part chalky, occasional resinous, locally pyritized, local bituminous partings, rare calcite infill, tight with assumed poor earthy porosity, streaks of poor moldic porosity, yellow white dry fluorescence, watery to milky yellow green cut, petroliferous odor
- 1374-1382.5 LIMESTONE, tan to brown, gray, mottled, occasional dark brown oil stain, predominantly cryptocrystalline to microcrystalline, argillaceous mudstone grading to wackestone, flaky to blocky, in part chalky, occasional resinous, local bituminous partings, slightly dolomitic in part, tight with assumed poor earthy porosity, deep yellow gold dry fluorescence, watery yellow green cut, ANHYDRITE stringers, white to pearly lustre, fibrous, amorphous, cryptocrystalline, tight

### **F4 DOLOMITE @ 1382.5m (-609.7m SubSea)**

- 1382.5-1386 DOLOMITE, cream to light gray, microcrystalline, sandy appearance, calcareous in part, firm, tight, no shows

## Sample Descriptions

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1386-1390 LIMESTONE, off white to tan to light brown, occasional dark brown, mottled, predominantly cryptocrystalline to microcrystalline mudstone to wackestone, flaky to blocky, anhydritic in part, tight with occasional poor moldic porosity, assumed poor earthy porosity, spotty yellow gold dry fluorescence, weak watery green cut, ANHYDRITE, white to pearly, amorphous, cryptocrystalline, firm, tight

### **WATT MOUNTAIN @ 1390.0m (-617.2m SubSea)**

1390-1394 SHALE, pale to emerald green, waxy, blocky, calcareous, scattered cubic pyrite crystal clusters

### **SULPHUR POINT LIMESTONE @ 1394.0m (-621.2m SubSea)**

1394-1400 LIMESTONE, off white to light brown, light gray to gray, mottled, predominantly cryptocrystalline to microcrystalline wackestone to packstone occasionally grading to very fine crystalline grainstone, light brown inclusions in off white matrix, occasional resinous, blocky, in part chalky, dolomitic in part, slightly anhydritic in part, tight with streaks of poor to fair intercrystalline porosity, assumed poor earthy porosity, minor poor vug porosity, occasional sparry calcite, spotty yellow white dry fluorescence, watery green cut, strong petroliferous odor

1400-1412 LIMESTONE, off white to light brown, becoming darker brown down section, light gray to gray, mottled, predominantly cryptocrystalline to microcrystalline wackestone to packstone occasionally grading to very fine crystalline grainstone, light brown inclusions in off white matrix, occasional resinous, blocky, in part chalky, dolomitic in part, slightly anhydritic in part, tight with streaks of poor to fair intercrystalline porosity, assumed poor earthy porosity, minor poor vug porosity, occasional secondary calcite infill, scattered pyrite, spotty bright yellow white dry fluorescence, streaming yellow white watery to milky cut, strong petroliferous odor

## Sample Descriptions

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### **SULPHUR POINT DOLOMITE @ 1412.0m (-639.2m Sub Sea)**

- 1412-1417 DOLOMITE, tan to light brown, gray brown, microcrystalline to very fine crystalline packstone to grainstone, occasional grading to fine to medium crystalline sucrosic grainstone, blocky, euhedral crystalline growth, poor to fair intercrystalline porosity with streaks of good porosity with excellent crystalline relief, evidence of fracture surface with bituminous coatings, fair vug porosity with free clear fine to medium dolomite crystalline cluster growth, white yellow to dark yellow dry fluorescence, watery to milky yellow white solvent cut, petroliferous odor
- 1417-1424 DOLOMITE, becoming coarser and darker, tan to light brown to brown oil stain, microcrystalline to fine crystalline packstone to grainstone, occasional grading medium crystalline sucrosic grainstone, blocky, euhedral crystalline growth, poor to fair intercrystalline porosity with streaks of good micro sucrosic to sucrosic porosity with excellent crystalline relief, evidence of fracture surface with bituminous coatings, fair vug porosity with free clear medium to very coarse dolomite crystalline cluster and rhomb growth, scattered pyrite, minor gray SHALE partings, bright white yellow dry fluorescence, instant milky streaming thick yellow white solvent cut, strong petroliferous odor, oily sheen on sample

### **MUSKEG @ 1424.0m (-651.2m SubSea)**

- 1424-1435 ANHYDRITE, off white to tan, gray, white pearly, cryptocrystalline, amorphous to blocky, in part fibrous, slightly dolomitic in part, firm, tight, DOLOMITE, tan to light brown, occasional brown, mottled, microcrystalline to fine crystalline packstone to grainstone, anhydritic in part, blocky to occasional sucrosic, tight with streaks of poor intercrystalline porosity, bright yellow dry fluorescence, watery yellow green cut
- 1435-1455 ANHYDRITE, off white to tan, gray, white pearly, cryptocrystalline, amorphous to blocky, in part fibrous, slightly dolomitic in part, firm, tight, DOLOMITE, tan to light brown, occasional brown, mottled, microcrystalline to fine crystalline packstone to grainstone, anhydritic in part, blocky to occasional sucrosic, tight with streaks of poor intercrystalline porosity, yellow to gold dry fluorescence, questionable cut

## Sample Descriptions

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- 1455-1470 ANHYDRITE, off white to tan, gray, white pearly, cryptocrystalline, amorphous to blocky, in part fibrous, slightly dolomitic in part, firm, tight, DOLOMITE, tan to light brown, occasional brown, mottled, microcrystalline to fine crystalline packstone to grainstone, anhydritic in part, blocky to occasional sucrosic, tight with streaks of poor intercrystalline porosity, yellow to gold dry fluorescence, questionable cut
- 1470-1480 ANHYDRITE, becoming more gray, off white to tan, gray, white pearly, cryptocrystalline, amorphous to blocky, in part fibrous, slightly dolomitic in part, firm, tight, DOLOMITE, tan to light brown, occasional brown, mottled, microcrystalline to fine crystalline packstone to grainstone, anhydritic in part, blocky to occasional sucrosic, tight with streaks of poor intercrystalline porosity, yellow to gold dry fluorescence, questionable cut
- 1480-1493.5 ANHYDRITE, off white to tan, gray, white pearly, cryptocrystalline, amorphous to blocky, in part fibrous, slightly dolomitic in part, firm, tight, DOLOMITE, tan to light brown, occasional brown, mottled, microcrystalline to fine crystalline packstone to grainstone, anhydritic in part, blocky to occasional sucrosic, tight with streaks of poor intercrystalline porosity, yellow to gold dry fluorescence, questionable cut

### **M1 DOLOMITE @ 1493.5m (-720.7m SubSea)**

- 1493.5-1498 DOLOMITE, tan to dark brown oil stain, microcrystalline to very fine crystalline grainstone, sucrosic in part, blocky, in part anhydritic, scattered pyrite, poor to fair intercrystalline porosity, bright yellow to gold dry fluorescence, watery green solvent cut
- 1498-1510 ANHYDRITE, off white to tan, gray, white pearly, mottled in part, cryptocrystalline, amorphous to blocky, in part fibrous, slightly dolomitic in part, firm, tight, DOLOMITE, tan to light brown, occasional brown, mottled, cryptocrystalline to very fine crystalline packstone to grainstone, in part resinous, anhydritic in part, blocky to occasional sucrosic, tight with streaks of poor intercrystalline porosity, yellow to gold dry fluorescence, questionable cut
- 1510-1524.5 ANHYDRITE, off white to tan, gray, white pearly, in part mottled, cryptocrystalline, amorphous to blocky, in part fibrous, slightly dolomitic in part, firm, tight, DOLOMITE, tan to light brown, occasional brown, mottled, cryptocrystalline to very fine crystalline packstone to grainstone, anhydritic in part, blocky to occasional sucrosic, tight with streaks of poor intercrystalline porosity, yellow to gold dry fluorescence, questionable cut

## Sample Descriptions

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### **KEG RIVER @ 1524.5m (-751.7m SubSea)**

1524.5-1542 DOLOMITE, tan to brown, occasional dark brown oil stain, predominantly microcrystalline to very fine crystalline grainstone with streaks of fine to medium, euhedral crystalline growth, occasional free clear dolomite medium crystalline cluster growth along cutting surfaces and free rhombs suggests growth into voids, good crystalline relief, sandy granular appearance, scattered fair vug porosity, poor to fair intercrystalline porosity, dull yellow to yellow gold dry fluorescence, weak watery yellow cut, petroliferous odor

### **BASE OF KEG RIVER POROSITY @ 1542.0m (-769.2m SubSea)**

1542-1555 DOLOMITE, light to dark brown, occasional gray to gray brown, microcrystalline to very fine crystalline packstone to grainstone, granular appearance, resinous in part, blocky, firm, tight to poor intercrystalline porosity, questionable show

1555-1565 DOLOMITE, light to dark brown, occasional gray to gray brown, microcrystalline to very fine crystalline packstone to grainstone, granular appearance, resinous in part, blocky, firm, tight to poor intercrystalline porosity, questionable show

1565-1580.5 DOLOMITE, becoming darker brown than as above, microcrystalline to very fine crystalline packstone to grainstone, streaks of fine to medium crystalline sucrosic grainstone, poor to fair sucrosic intercrystalline porosity, scattered poor vug porosity, evidence of fractures with bituminous coating on cutting surfaces, occasional free clear euhedral dolomite crystalline clusters, in part resinous, bituminous, spotty pale yellow fluorescence, weak yellow watery cut

1580.5-1589.4 LIMESTONE, light gray brown to brown, cryptocrystalline to microcrystalline mudstone to wackestone, argillaceous, slightly bituminous, dolomitic in part, scattered bioclastic debris?, dense, tight, questionable show, DOLOMITE, brown to dark brown, microcrystalline to fine crystalline packstone to grainstone, tight to streaks of poor intercrystalline porosity, spotty pale yellow fluorescence, weak cut

### **TOTAL DEPTH @ 1589.4m (-816.6m SubSea)**



Scale 1:240 (5"=100') Metric  
Measured Depth Log

Well Name: Para et al Cameron A-03  
Location: Unit A Section 03 Grid Area: Lat 60° 10' N Long 117° 30' W  
Licence Number: 2047 Region: Cameron Hills, NWT  
Spud Date: Feb 10, 2007 @ 08:30 Drilling Completed: Feb 18, 2007 @ 21:15  
Surface Coordinates: Latitude: 60° 02' 12.3" North  
Longitude: 117° 30' 0.9" West  
Bottom Hole Coordinates  
Ground Elevation (m): 767.4m K.B. Elevation (m): 772.8m  
Logged Interval (m): 1295m To: 1589.4m Total Depth (m): 1589.4m  
Formation: Primary = Keg River porosity Secondary = Sulphur Pt. DOL  
Type of Drilling Fluid: Gel Chemical

Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

#### OPERATOR

Company: Paramount Resources Ltd.  
Address: 4700 Bankers Hall West  
888 3rd Street S.W.  
Calgary, Alberta T2P 5C5

#### GEOLOGIST

Name: Brad Powell, B.Sc.  
Company: DeesCo Consulting  
Address: #8, 914 - 20th Street S.E.  
Calgary, Alberta T2G 5P5  
(403) 861-0838

## Comments

This well was drilled by Precision Drilling Rig #220.  
 Paramount AFE #06N7100031  
 A Wellsite Gas Detection dual curve gas detector was run.  
 Logging data provided by Weatherford Wireline.  
 Logging Run #1: STI-SP-MRT-SPED-CNT-GR-BHS-CAL  
 Porosities displayed on a DOLOMITE scale 1412-1590m.  
 Porosities displayed on a LIMESTONE scale 1290-1412m.  
 Induction curves calculated for a "Salty Model" mud system.  
 This well was cased with 139.7mm casing.  
 This well was primarily drilled for water disposal purposes.

## ROCK TYPES

	Anhy		Clyst		Igne		Salt		Sltst
	Bent		Coal		Lime mud		Shorg		Ss
	Brec		Congl		Lmst		Shale		Till
	Chtlt&dk		Dol		Meta		Shcol		
	Cht		Gyp		Mrlst		Shgy		

## ACCESSORIES

MINERAL		FOSSIL		Ostra		STRINGER		TEXTURE	
	Anhy		Kaol		Algae		Ostra		Sltstrg
	Arg		Marl		Pelec		Pelec		Ssstrg
	Bent		Minxl		Pellet		Pellet		
	Bit		Nodule		Pisolite		Pisolite		
	Brecfrag		Phos		Plant		Plant		
	Calc		Pyr		Strom				
	Carb		Salt						
	Chtdk		Sandy						
	Chtlt		Silt						
	Dol		Sil						
	Feldspar		Sulphur						
	Ferrpel		Tuff						
	Ferr		Quartz						
	Gyp		Mmica						
	Hvymin		Micromica						
			Glau						



**POROSITY**  
[E] Earthy  
[F] Fenest  
[X] Fracture  
[I] Inter  
[M] Moldic  
[O] Organic  
[P] Pinpoint

[V] Vuggy

**SORTING**  
[W] Well  
[M] Moderate  
[P] Poor

## OTHER SYMBOLS

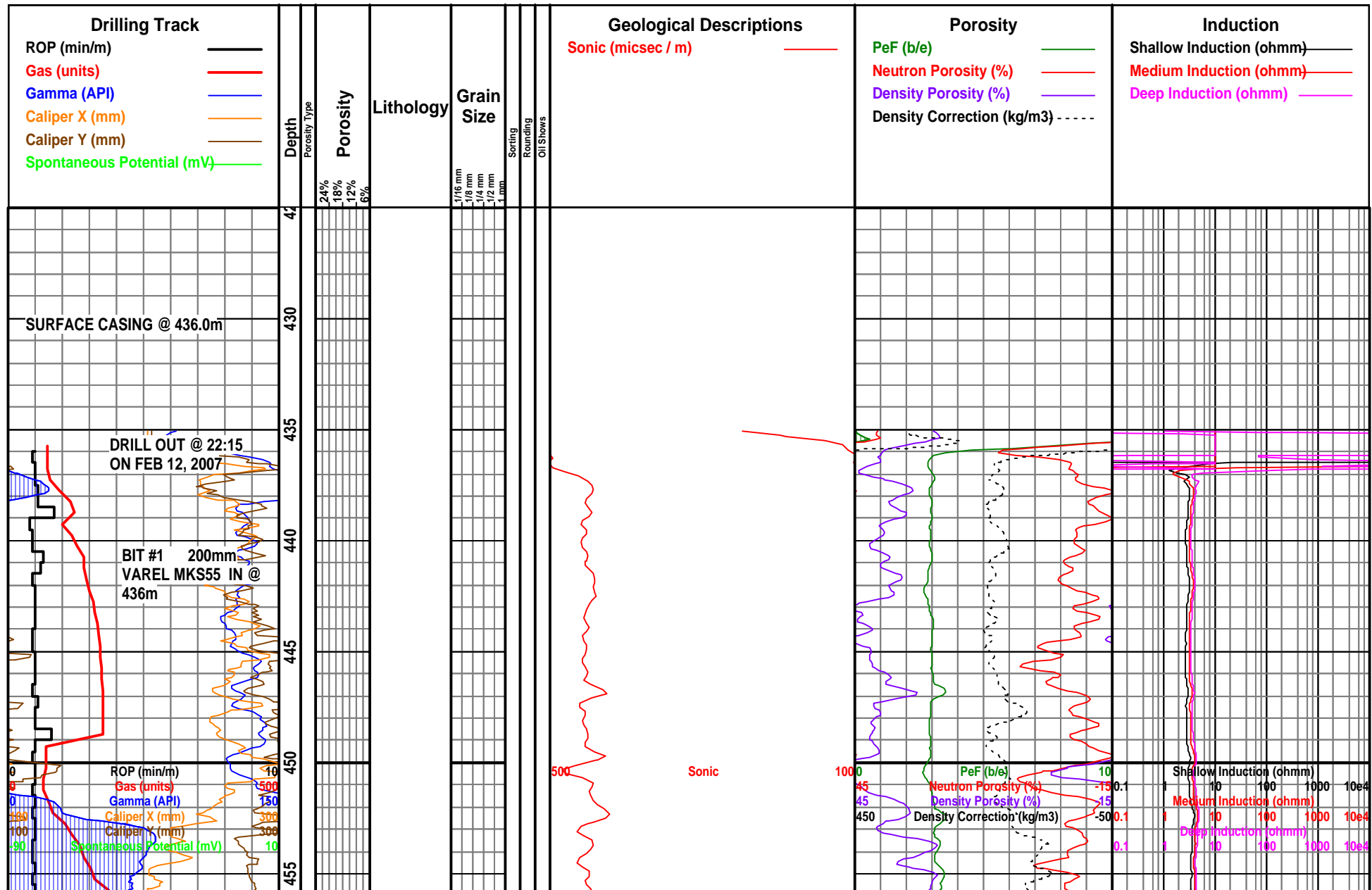
**ROUNDING**  
[R] Rounded  
[r] Subrnd  
[a] Subang  
[A] Angular

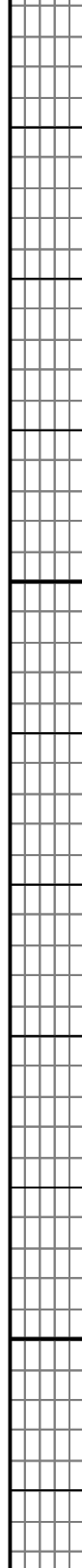
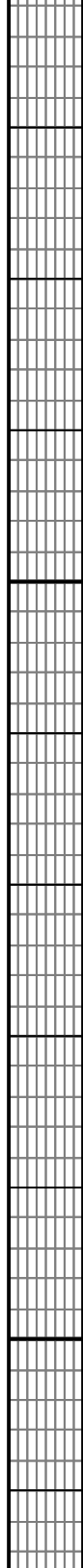
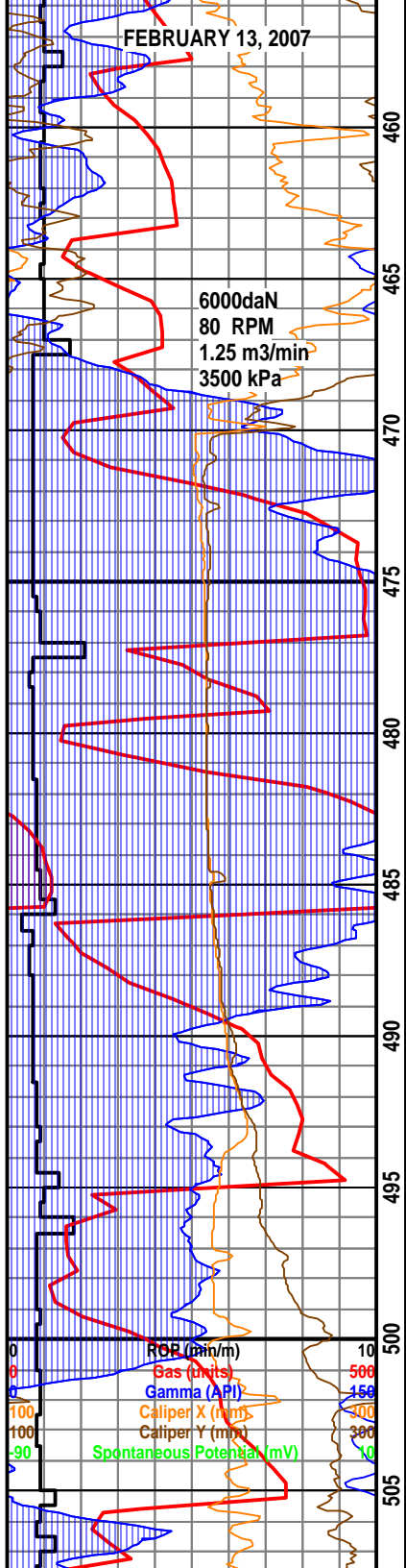
[Q] Spotted  
[Q] Ques  
[D] Dead

**EVENT**  
[R] Rft  
[S] Sidewall

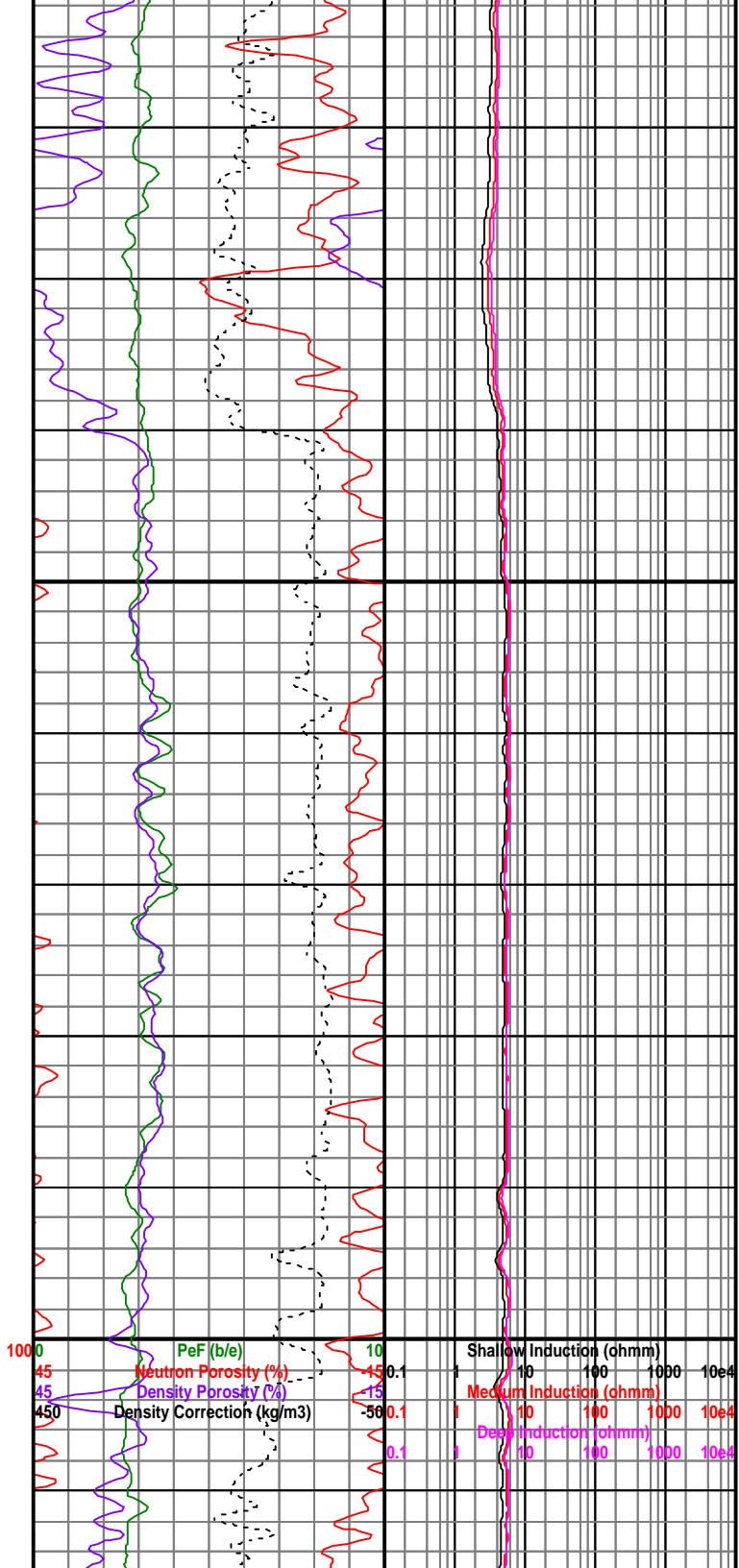
**INTERVAL**  
[C] Core  
[D] Dst

**OIL SHOW**  
[E] Even

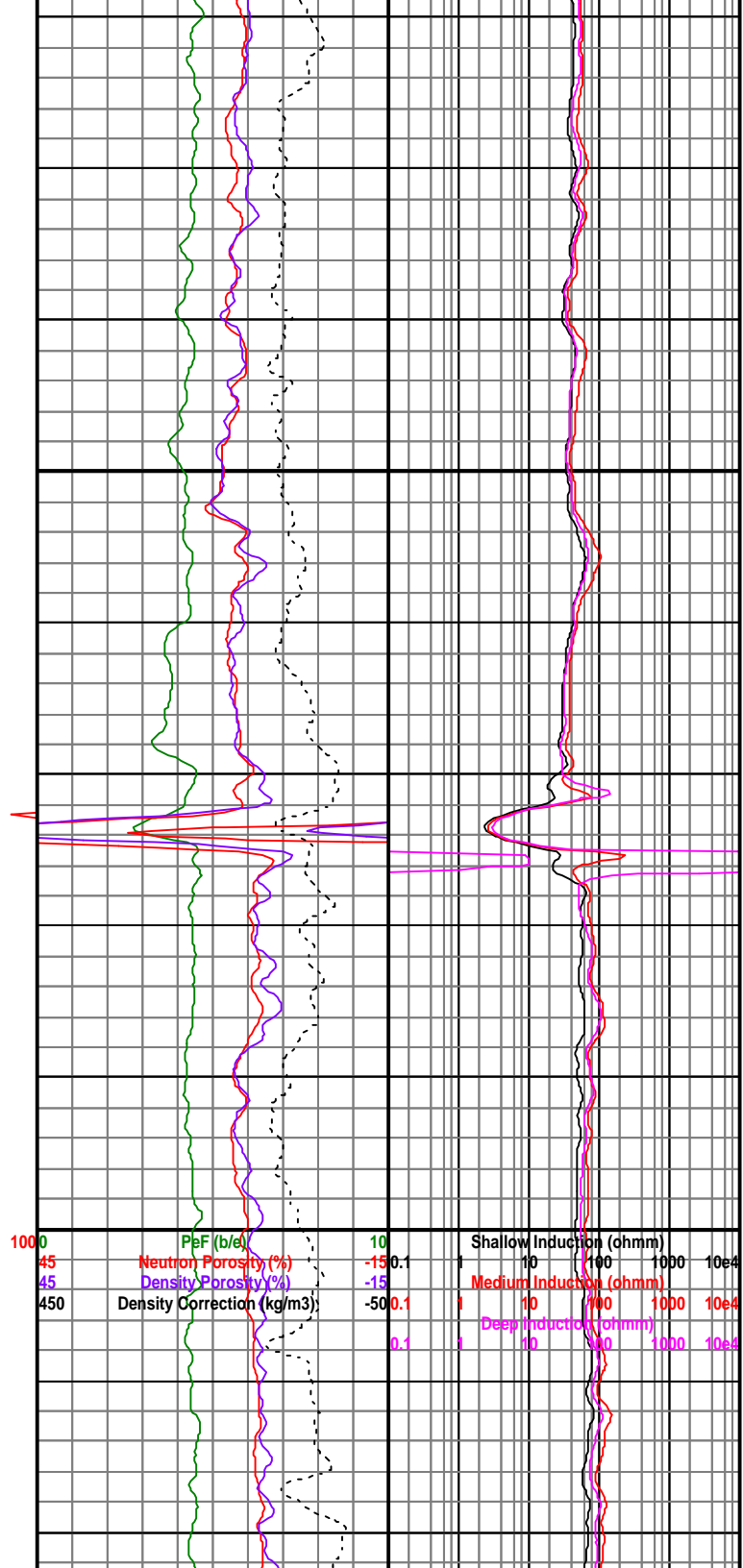
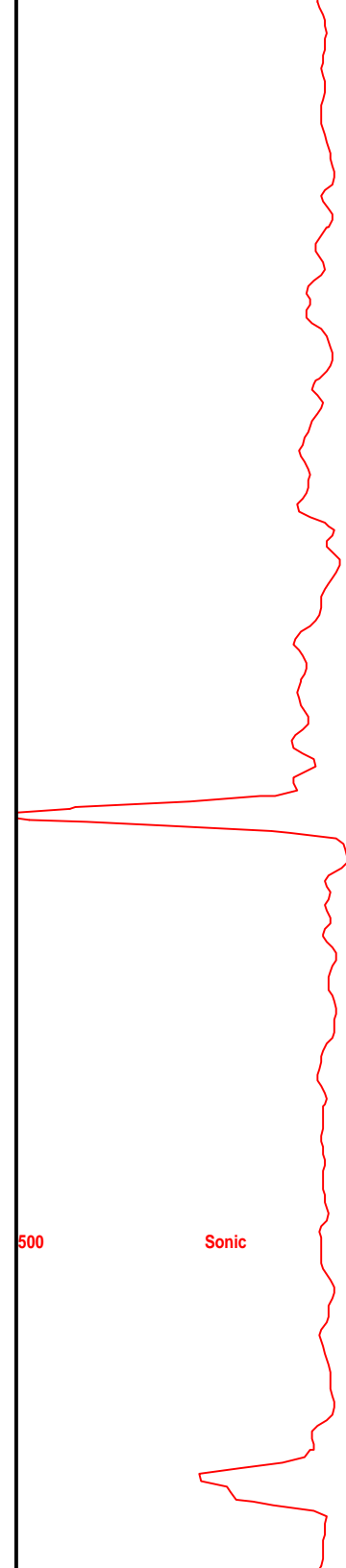
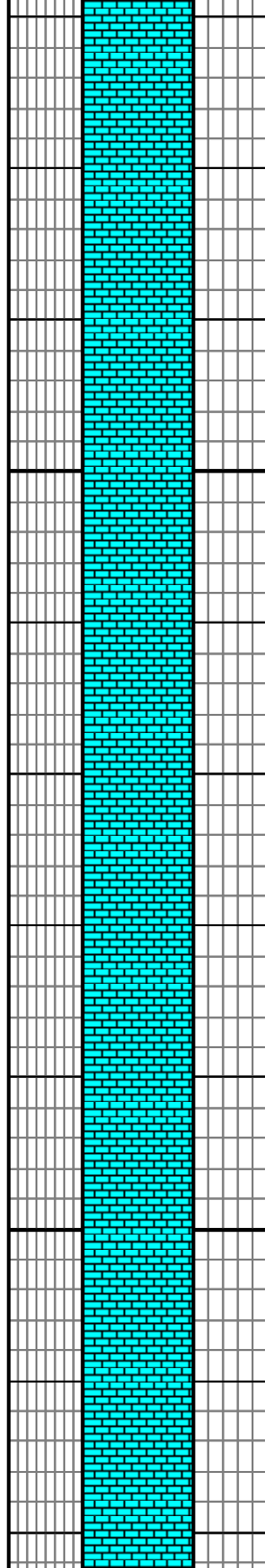
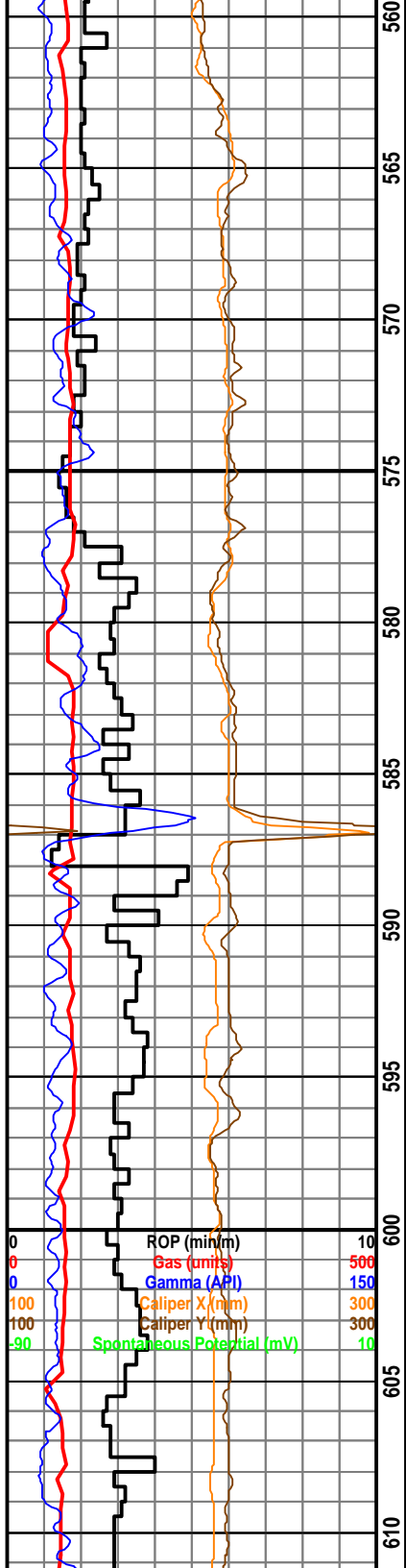


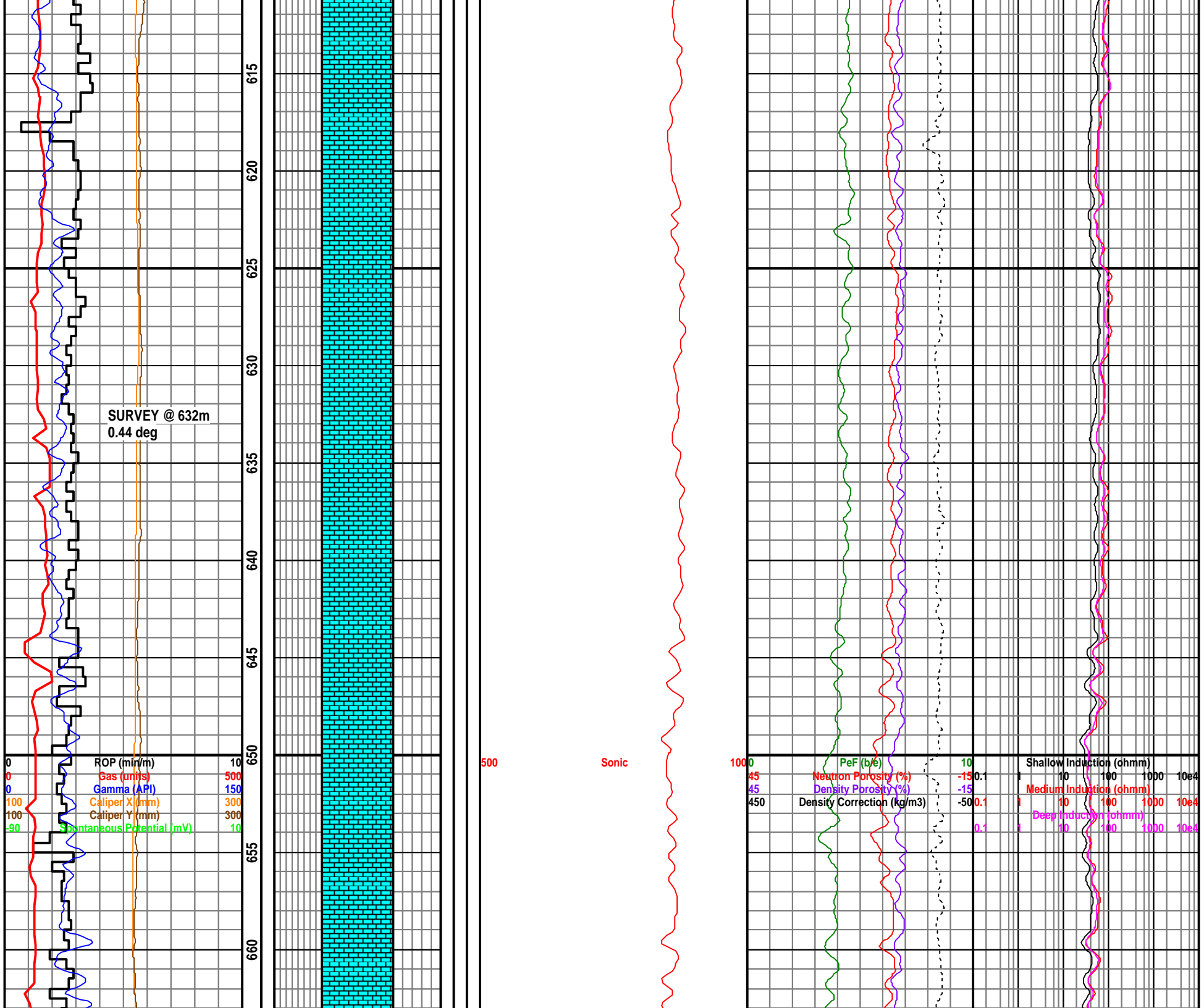


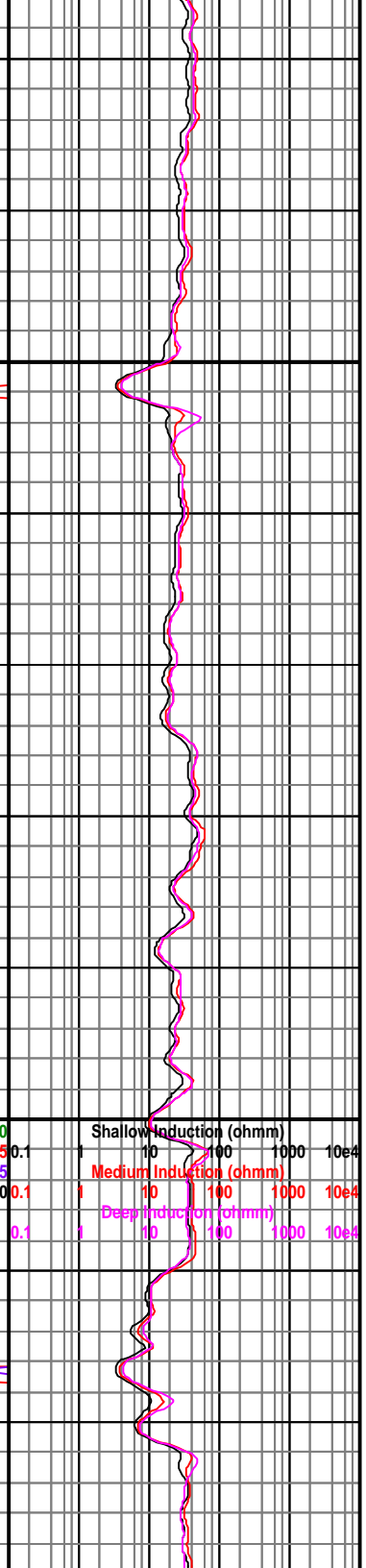
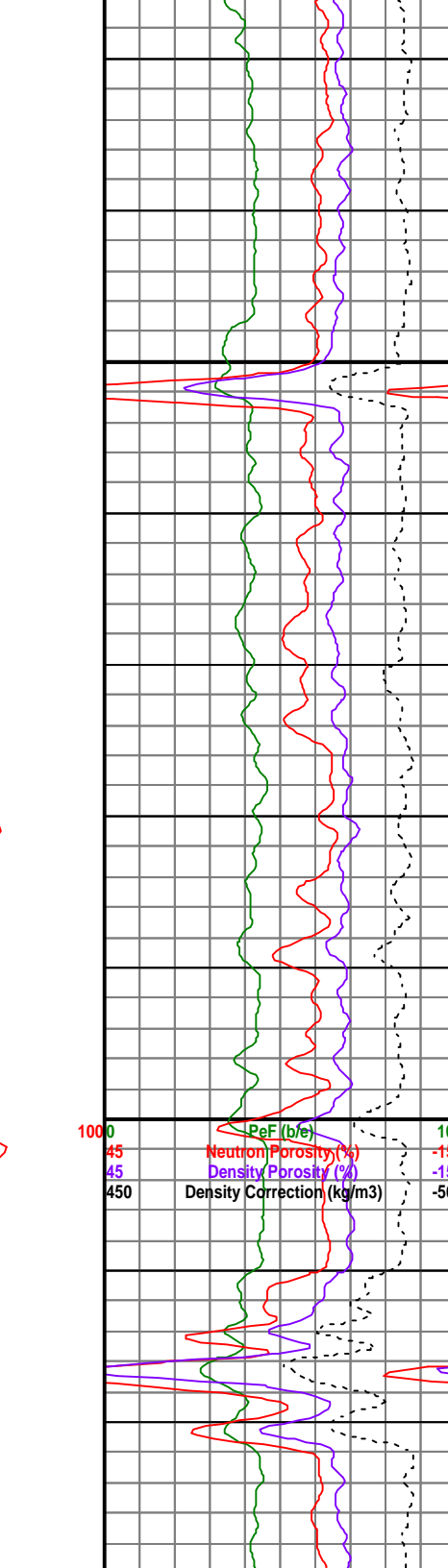
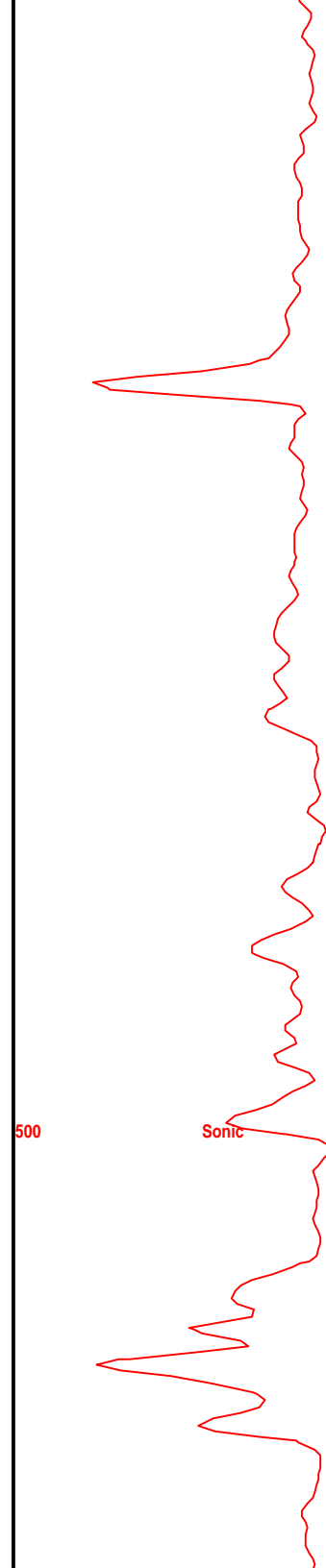
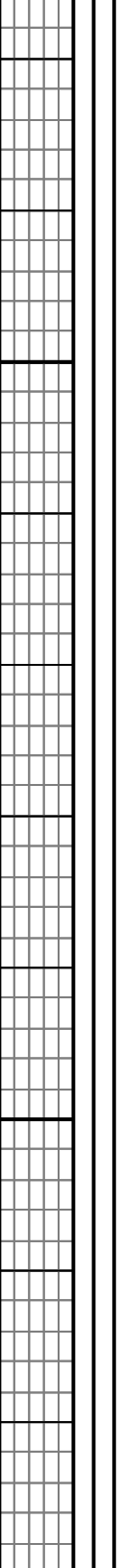
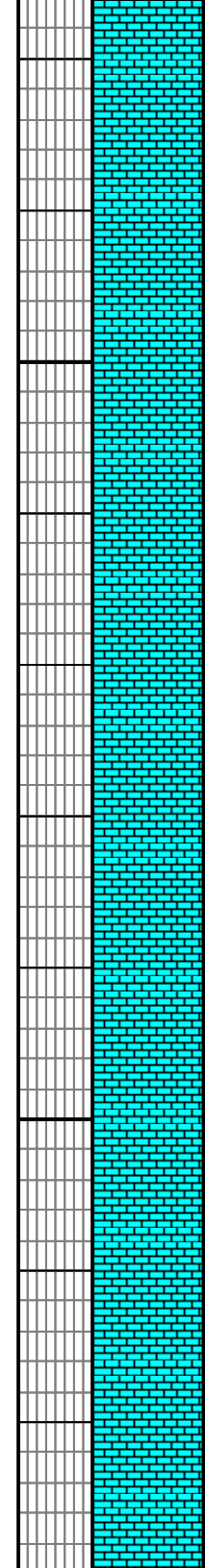
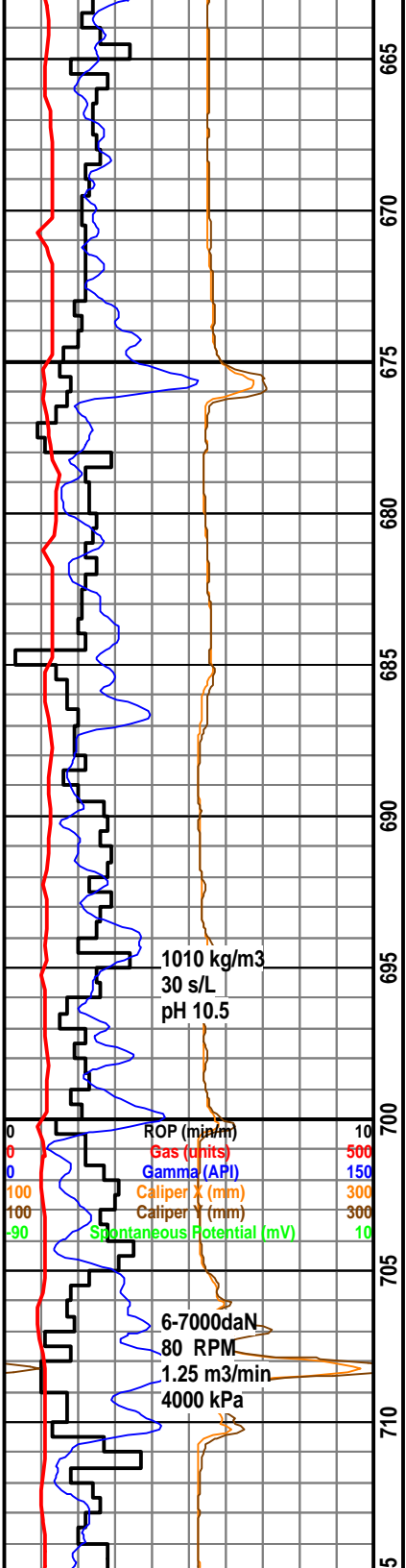
Sonic

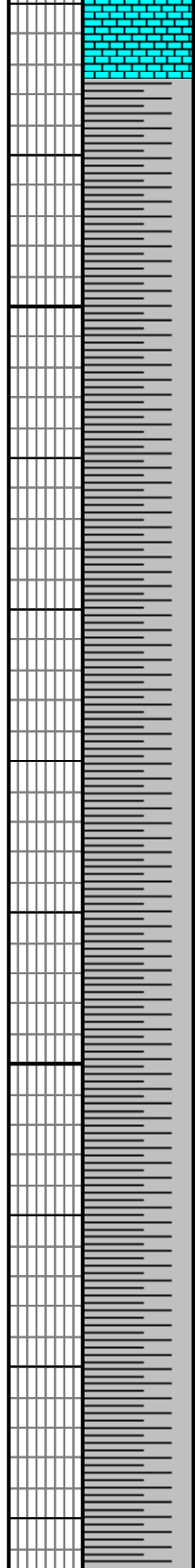
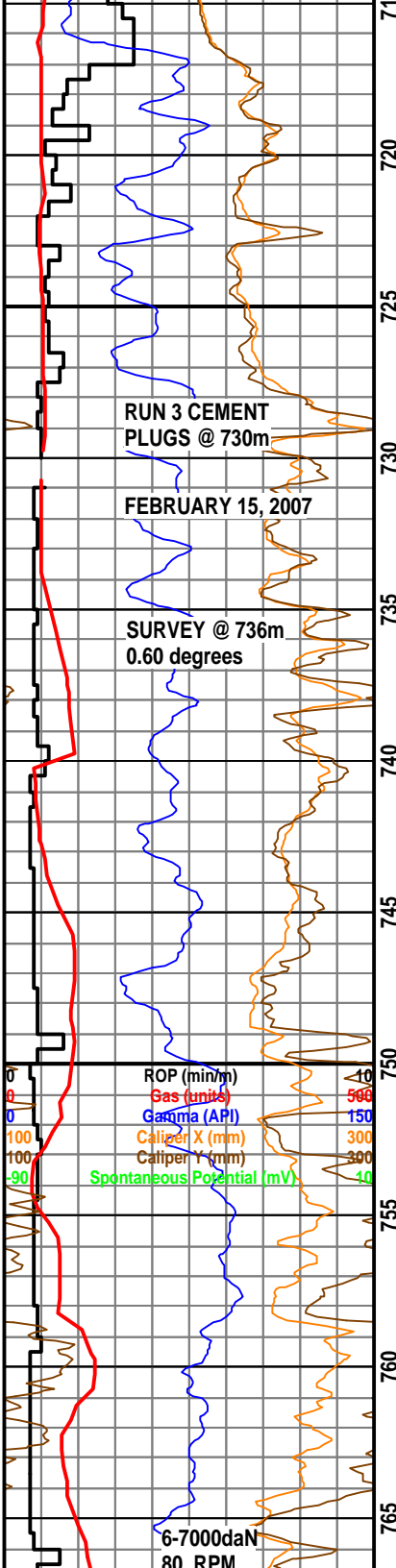






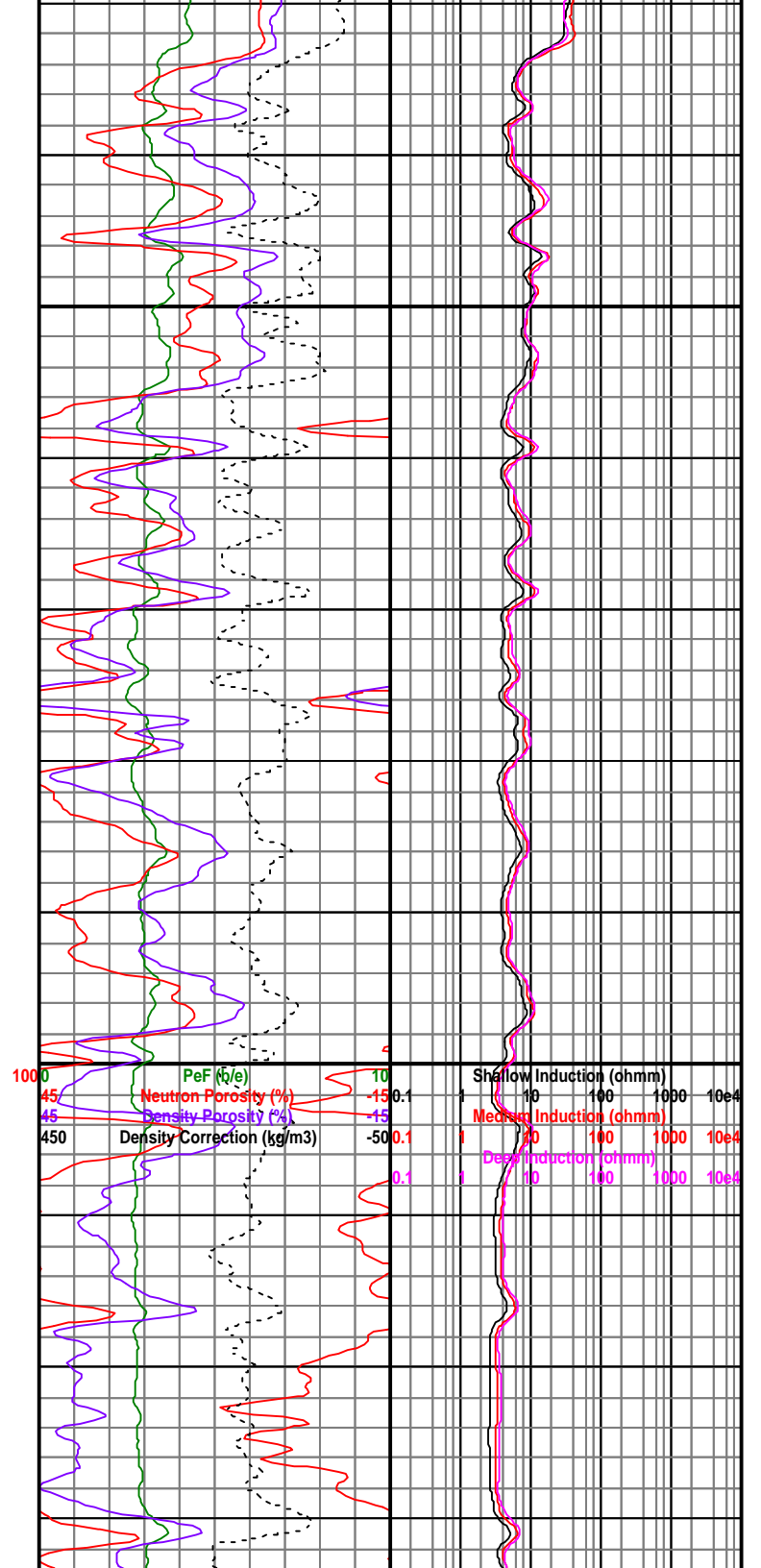


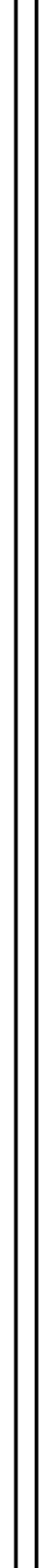
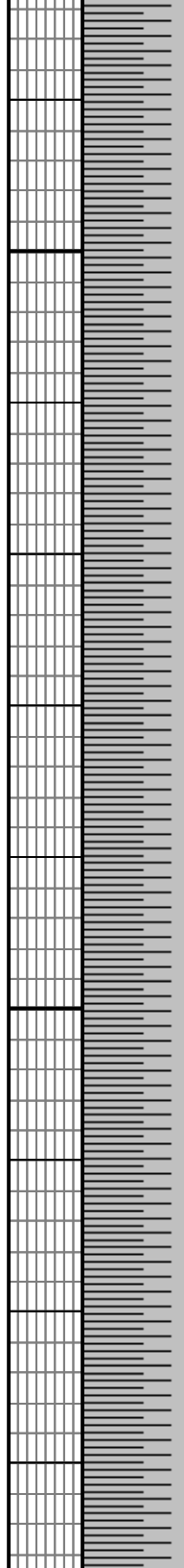
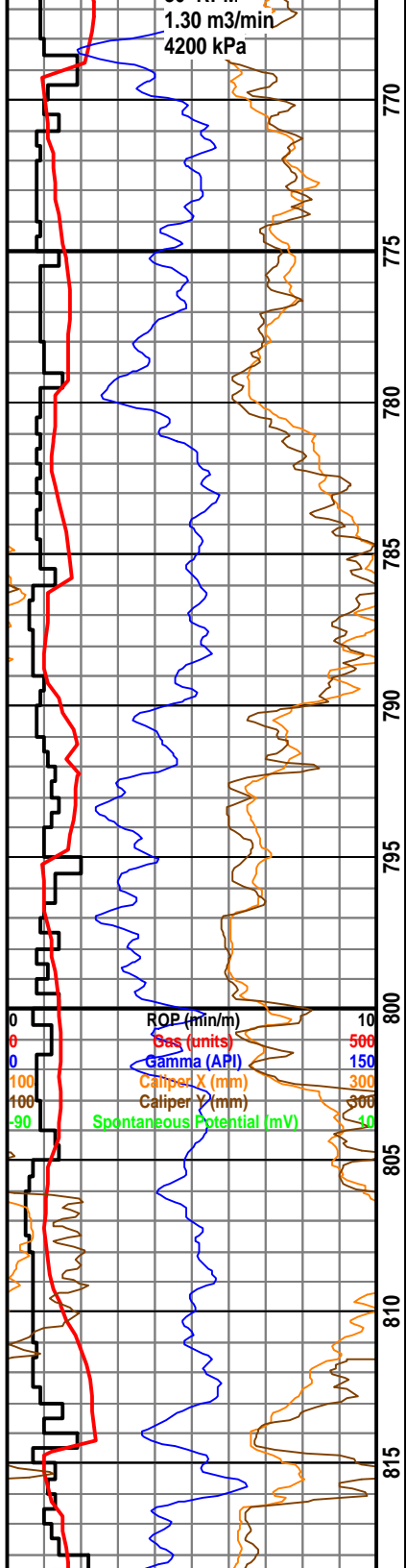




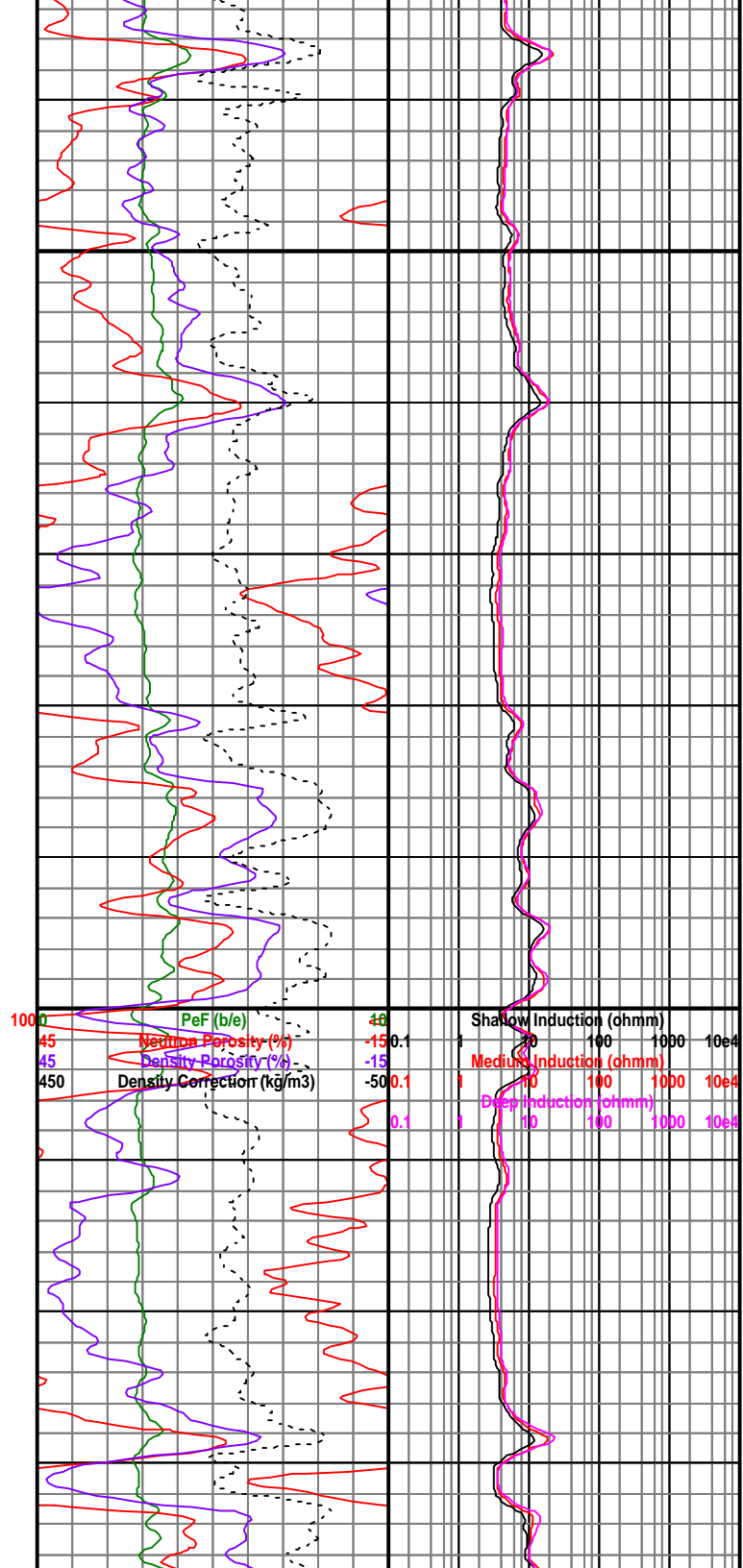
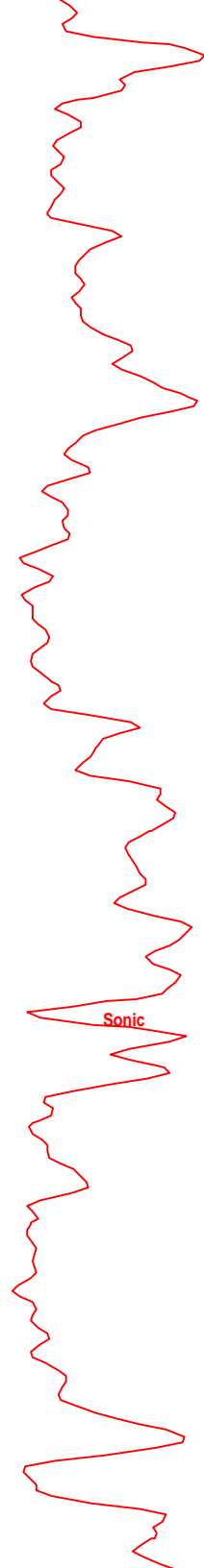
# FORT SIMPSON @ 717.3m (+55.5m SubSea)

500 Sonic

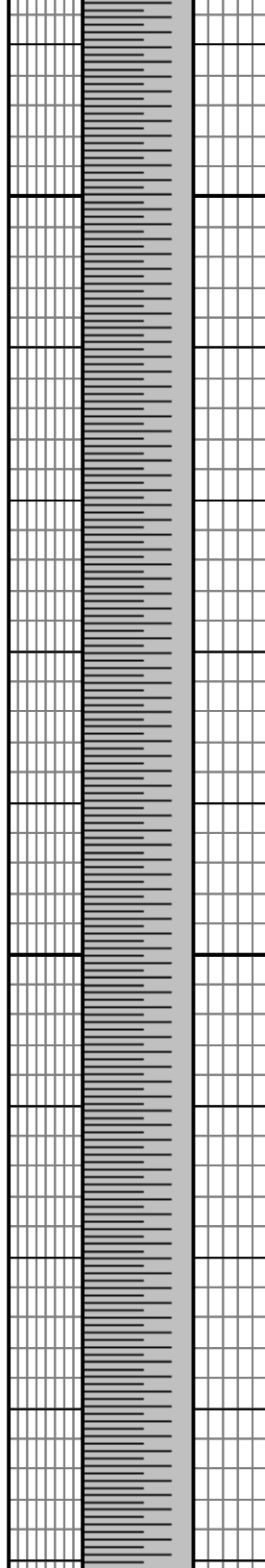
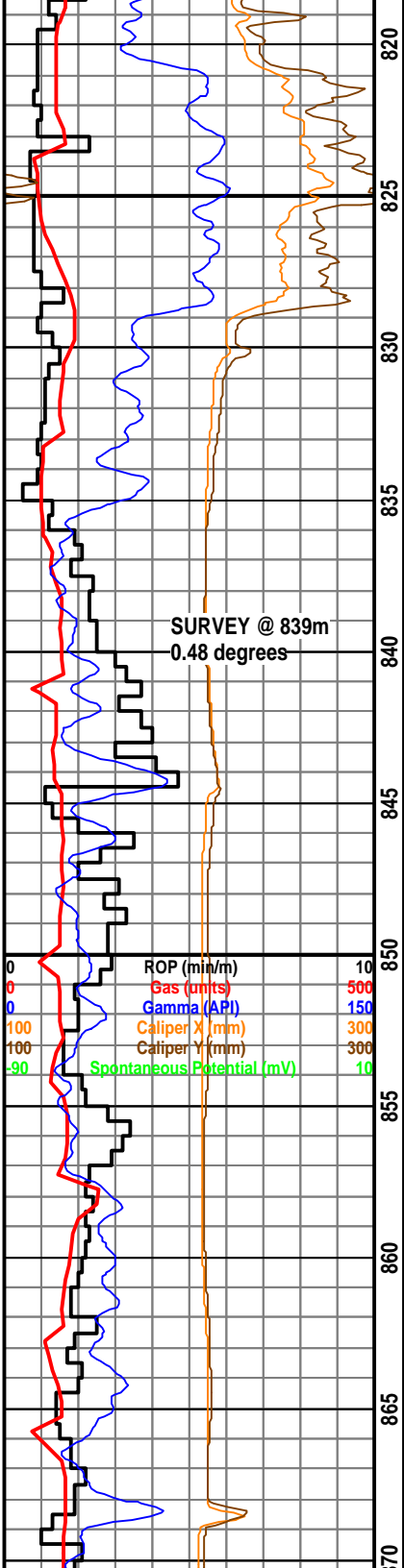




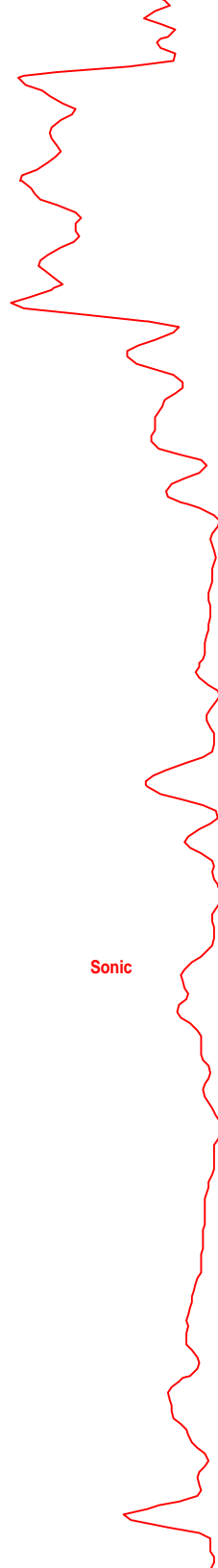
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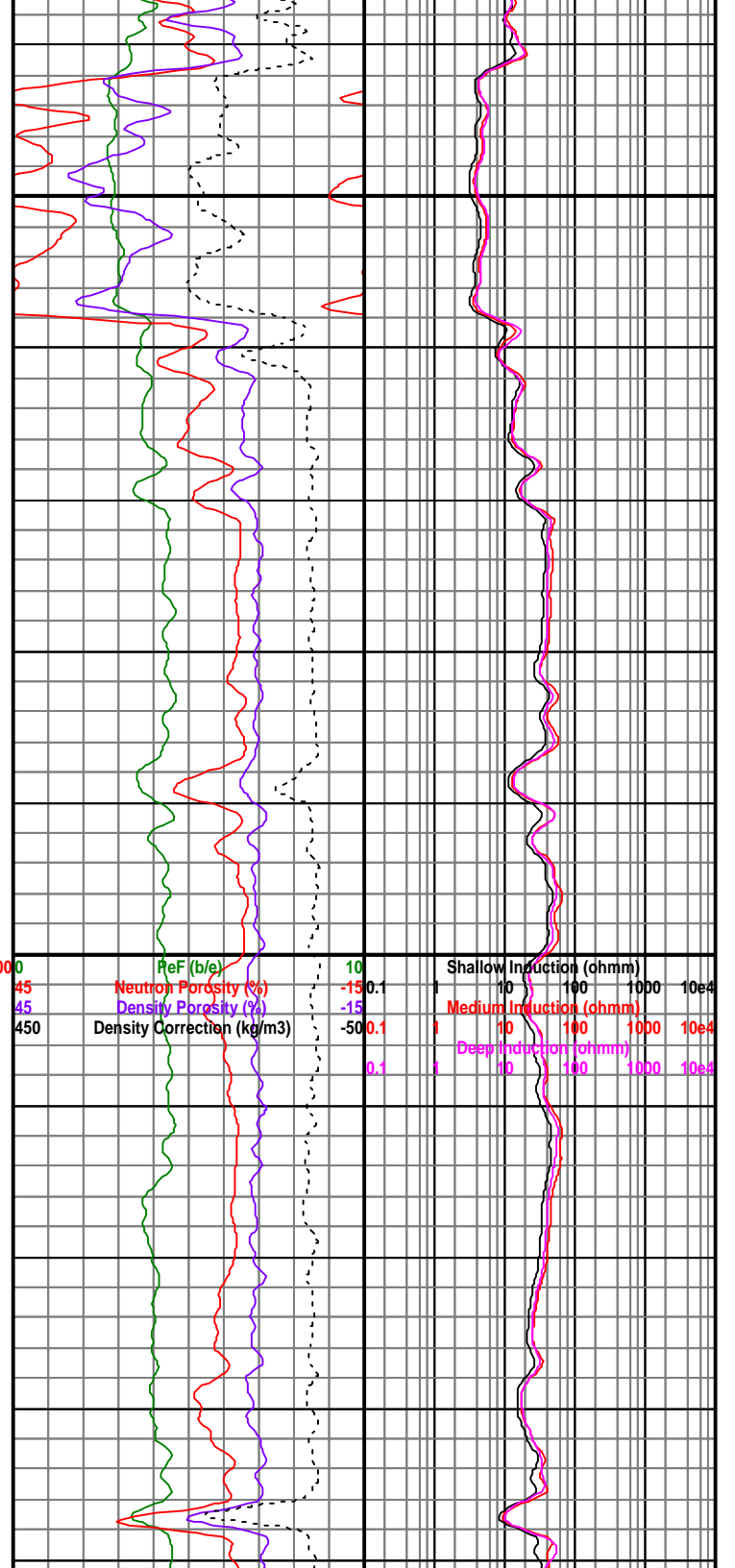


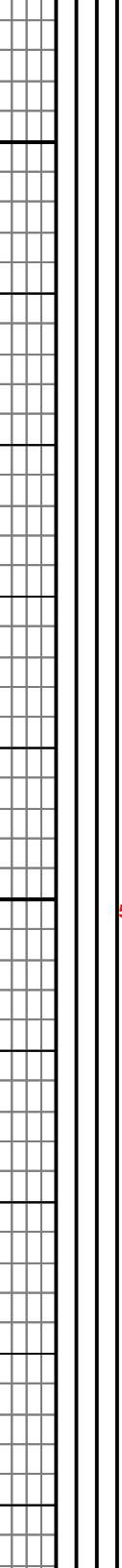
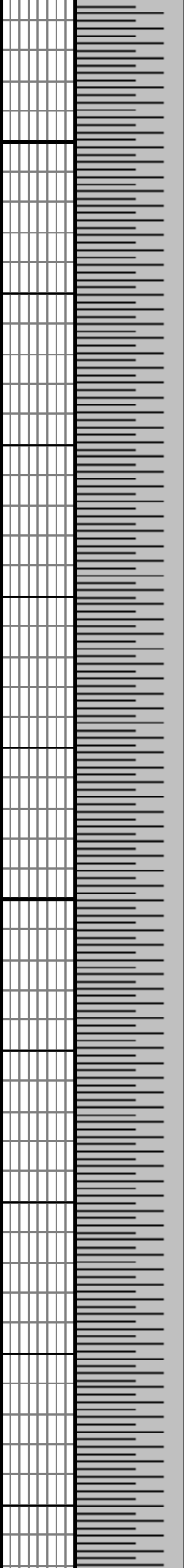
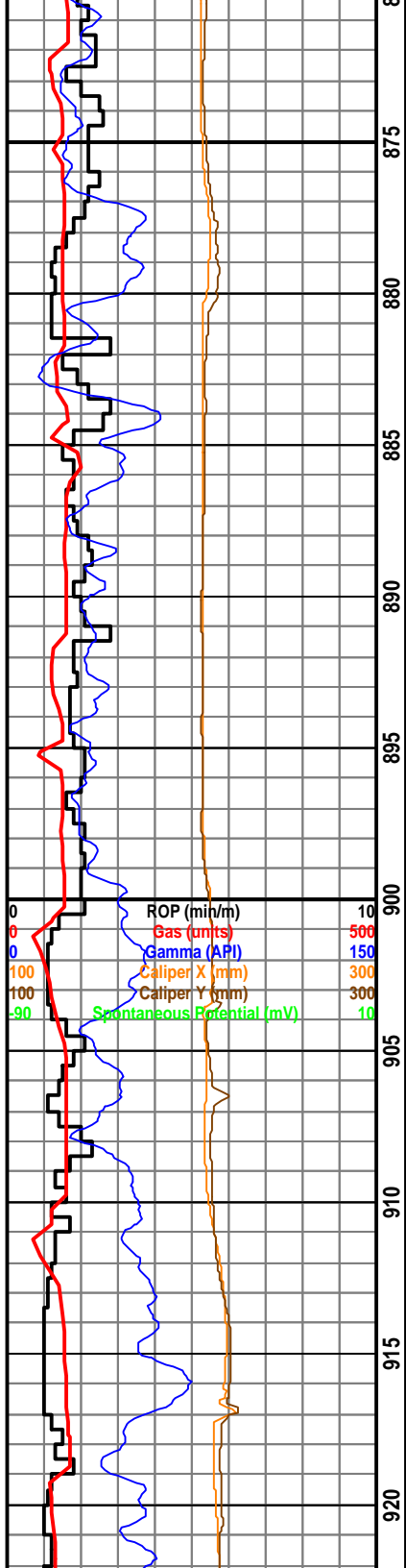


500



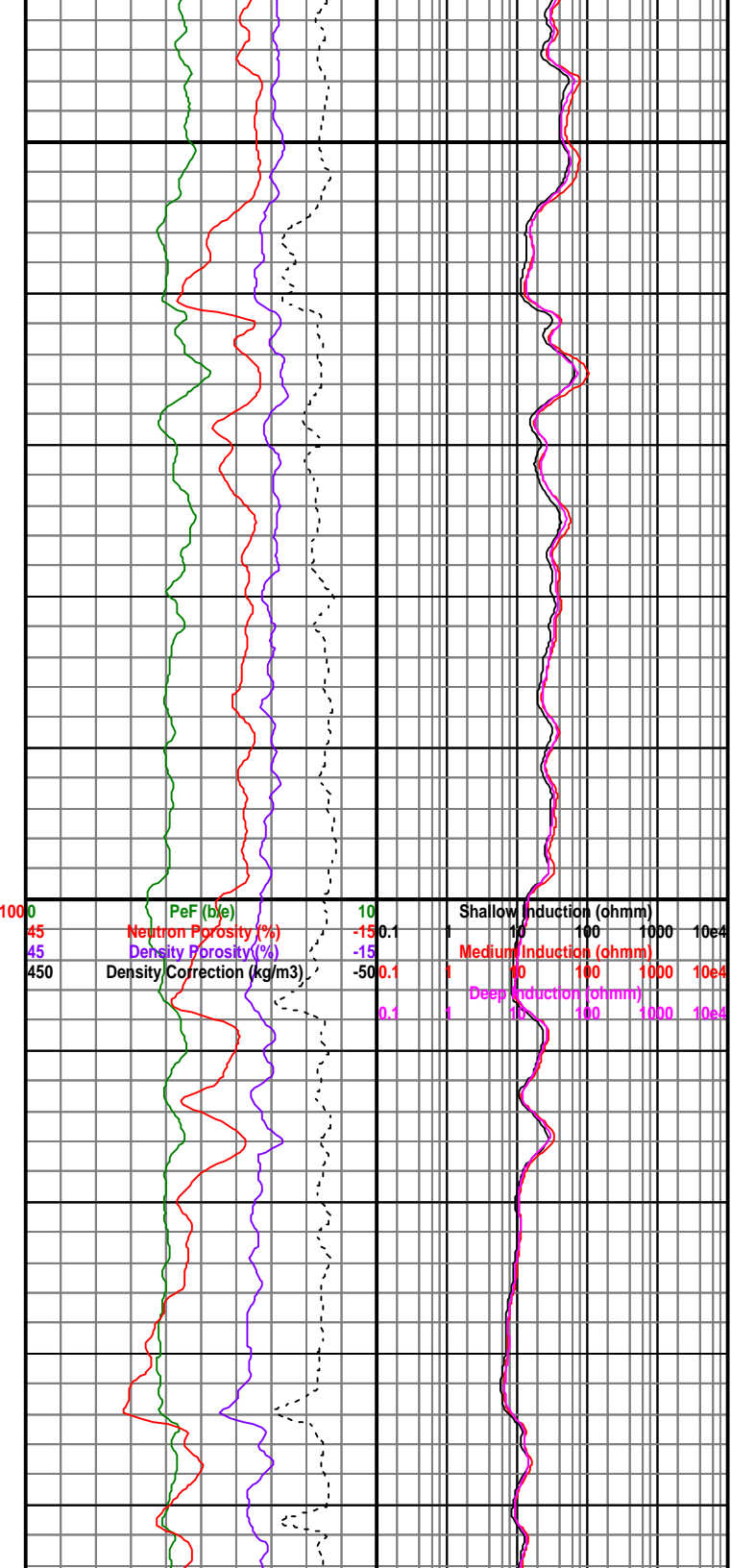
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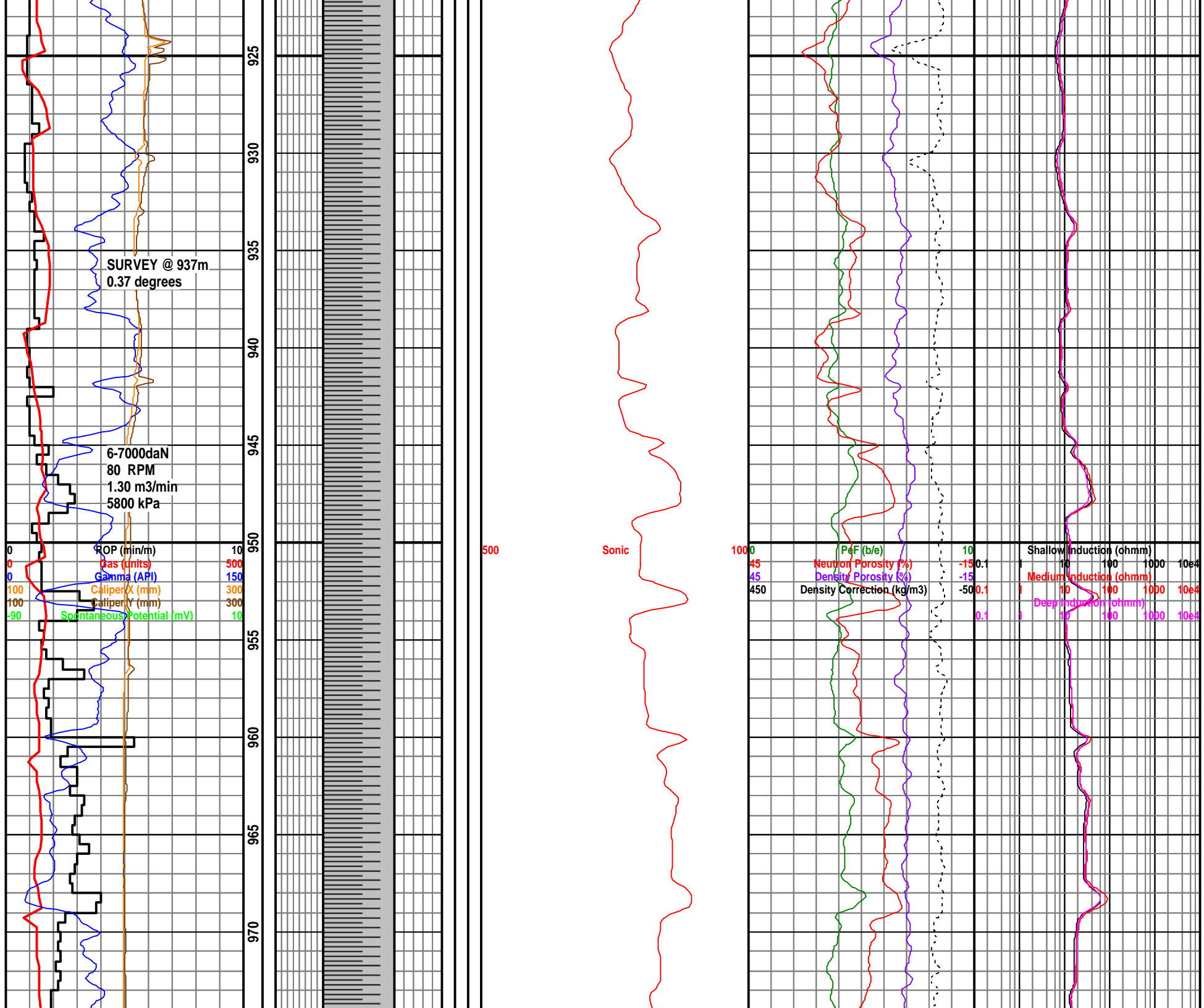




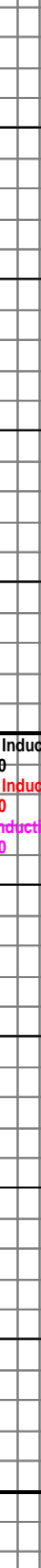
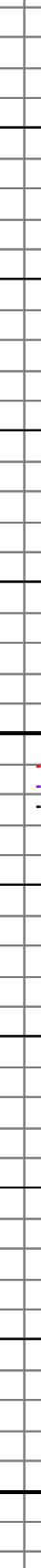
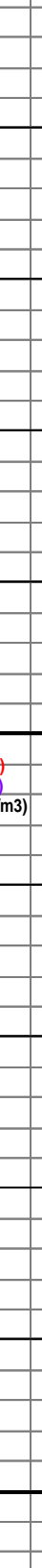
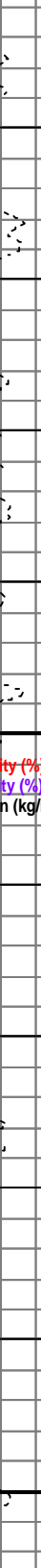
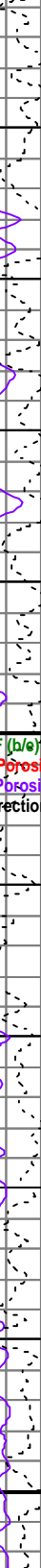
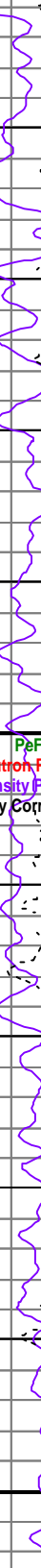
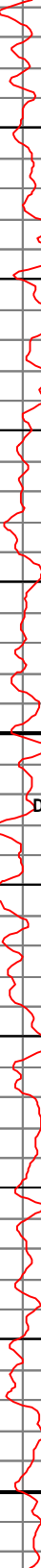
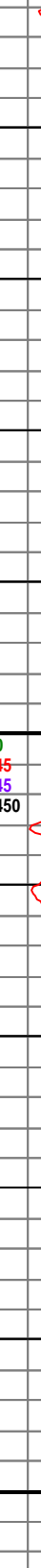
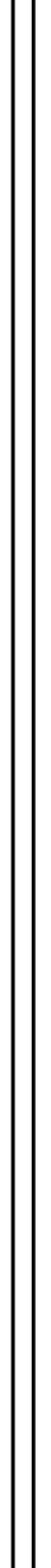
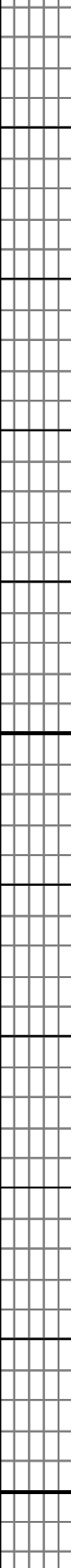
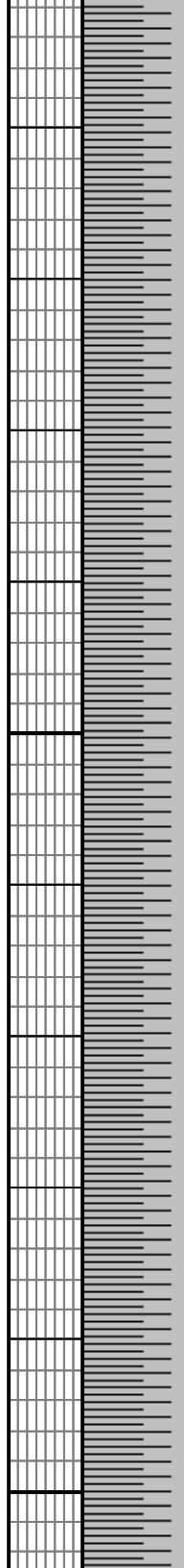
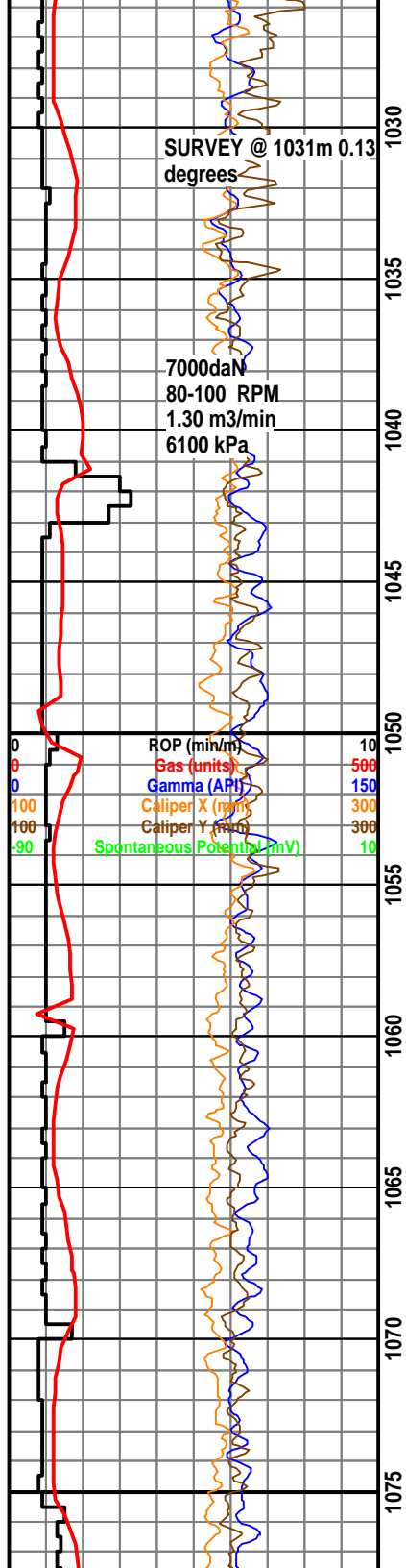
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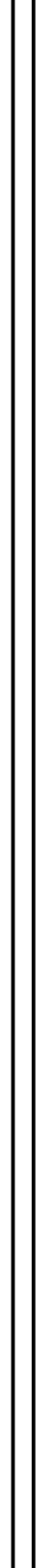
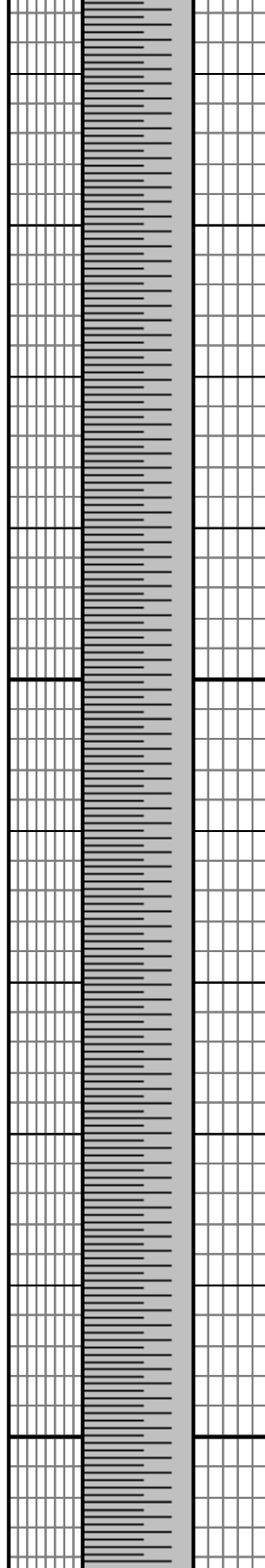
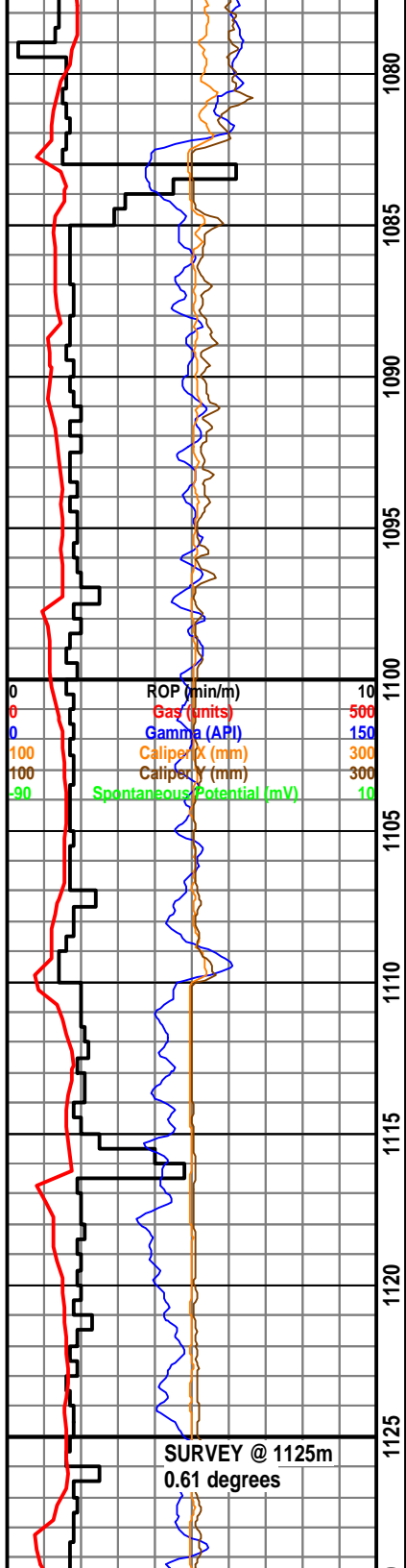
Sonic





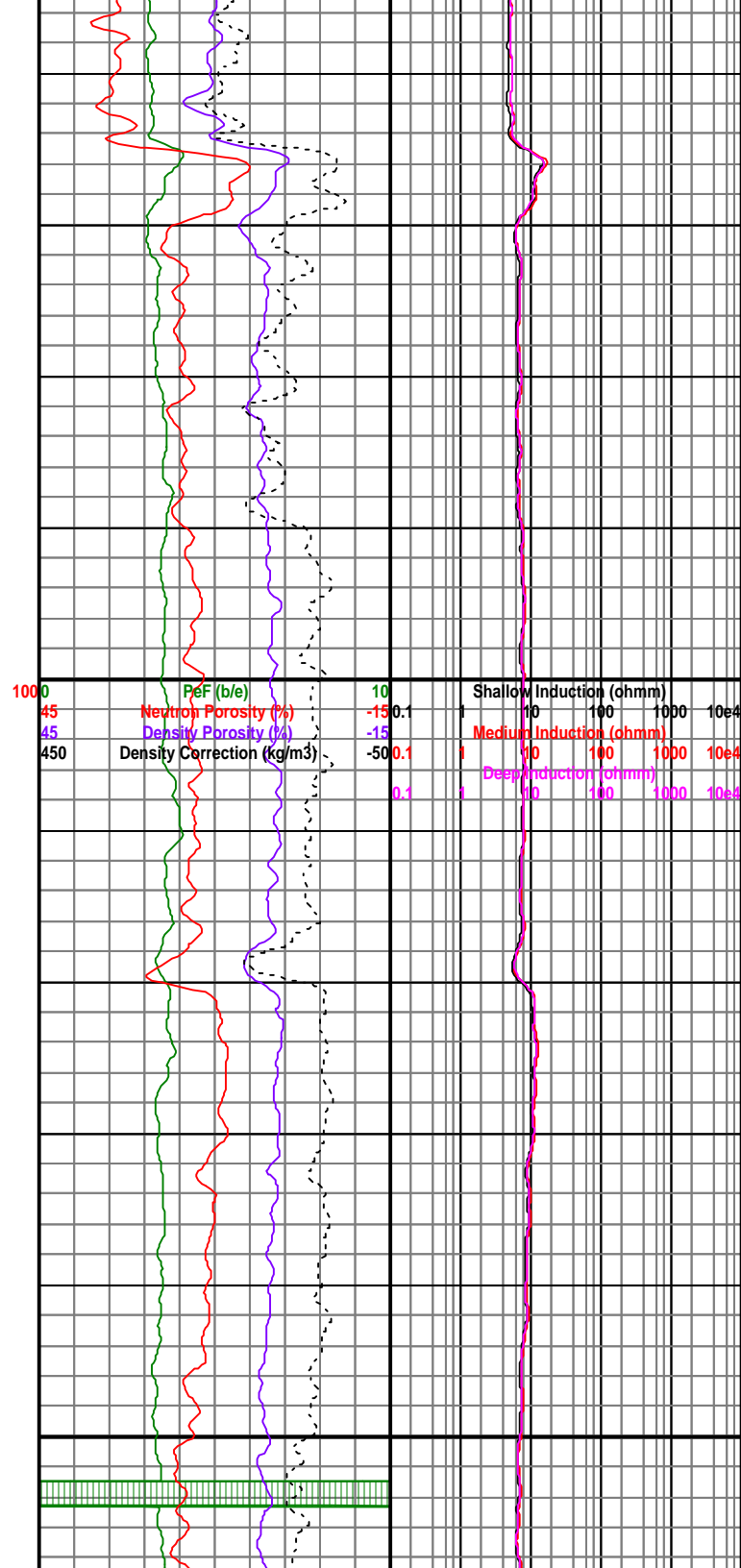


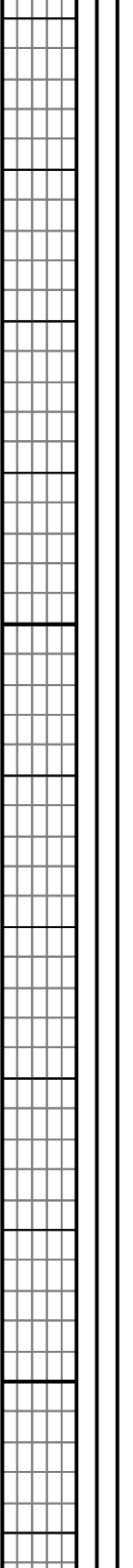
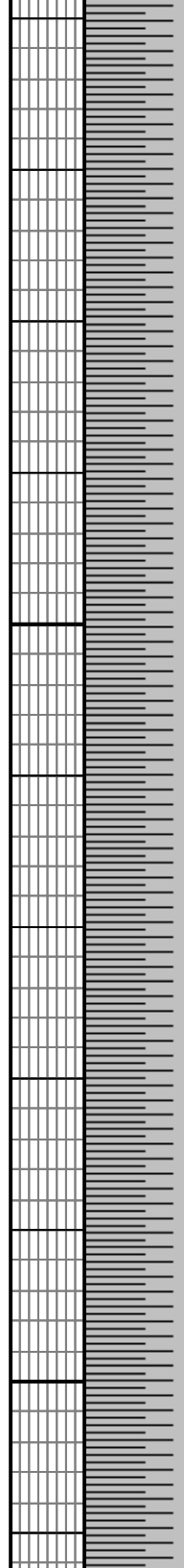
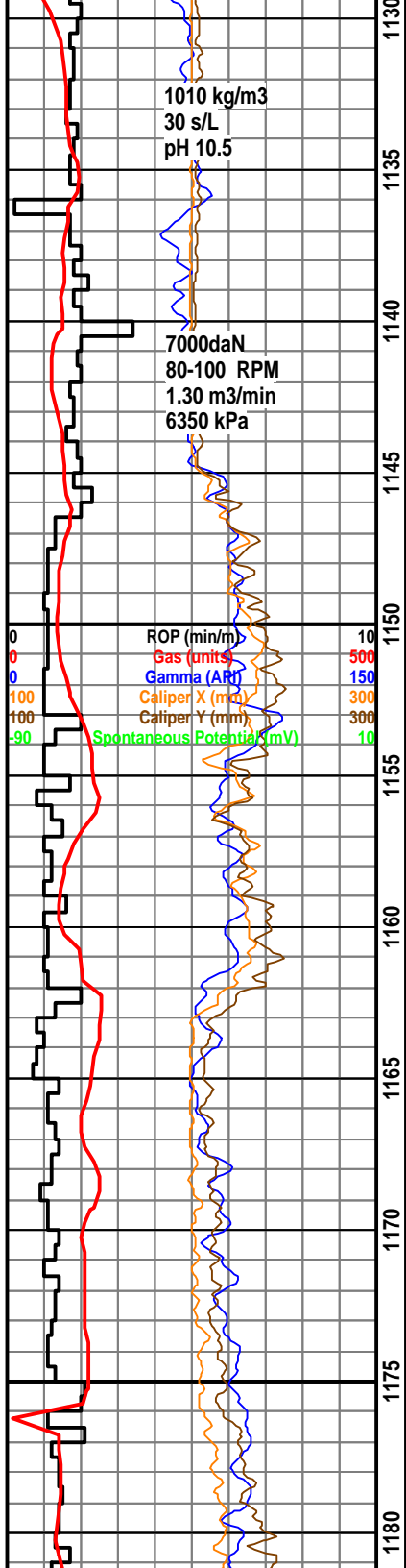




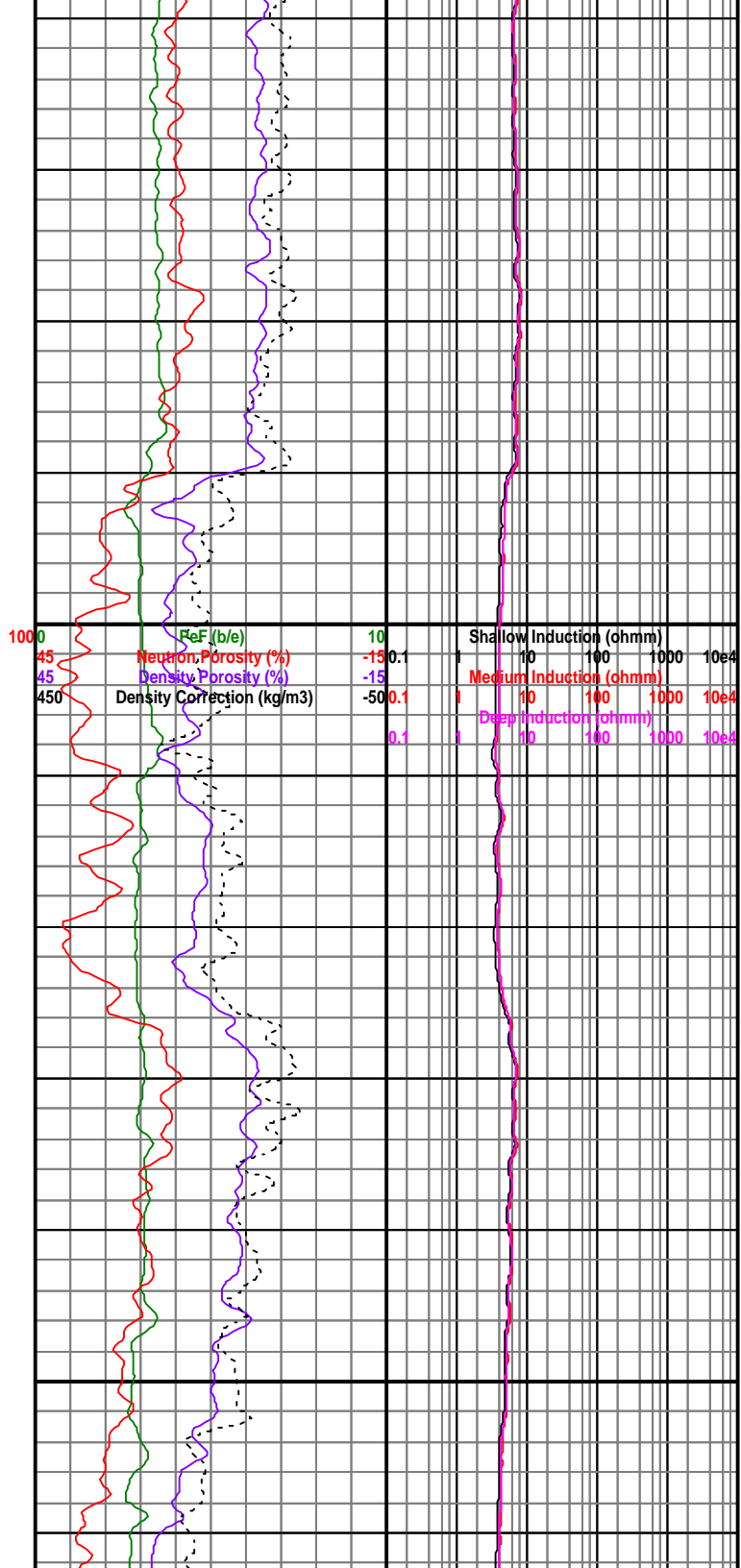
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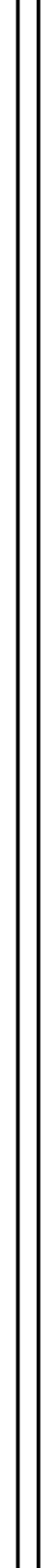
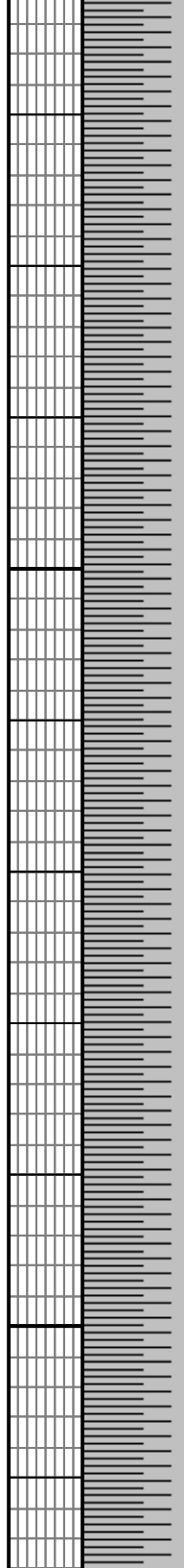
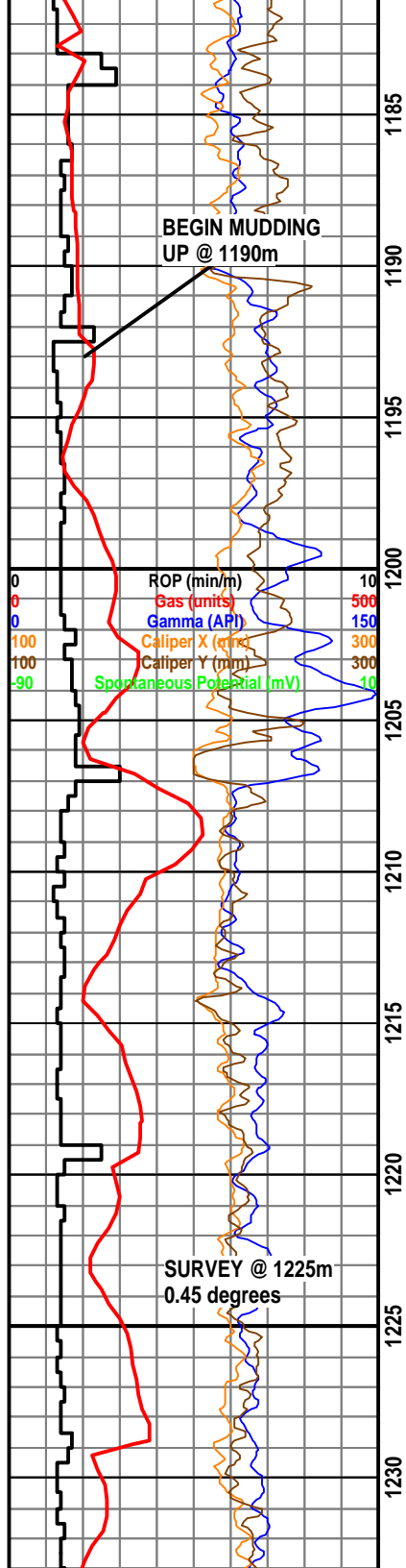
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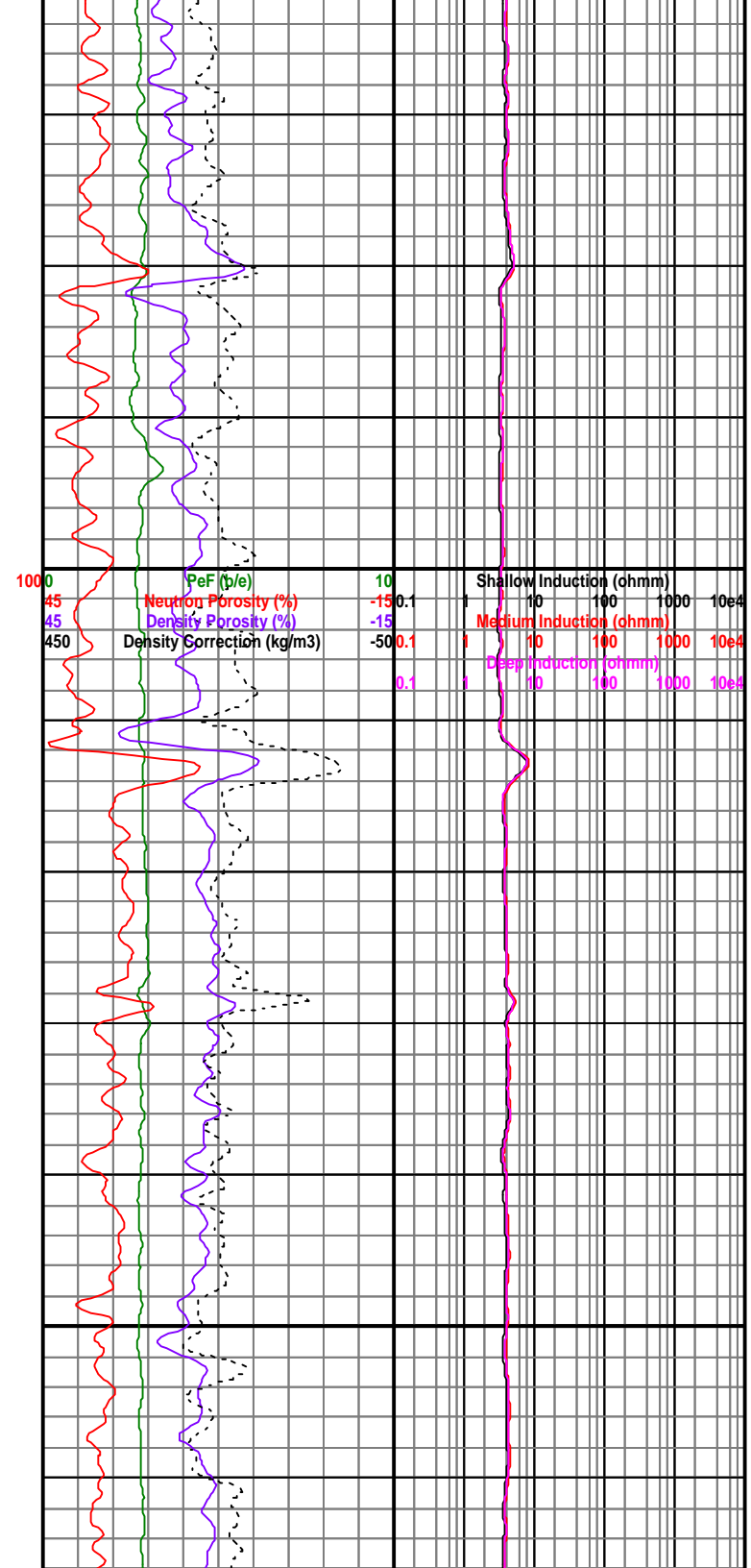


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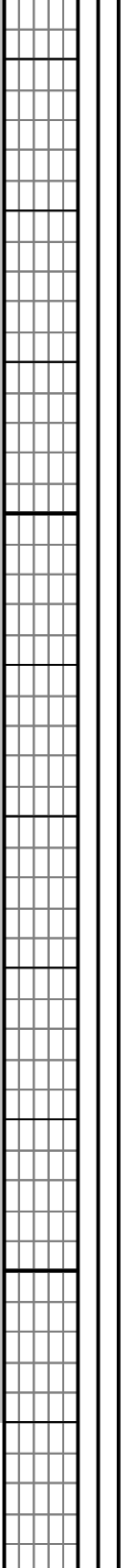
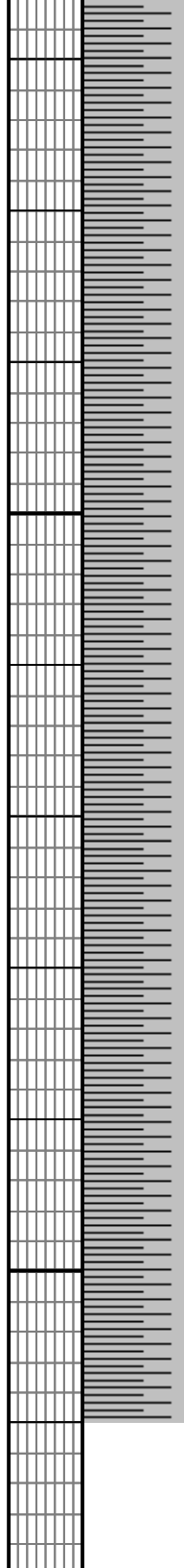
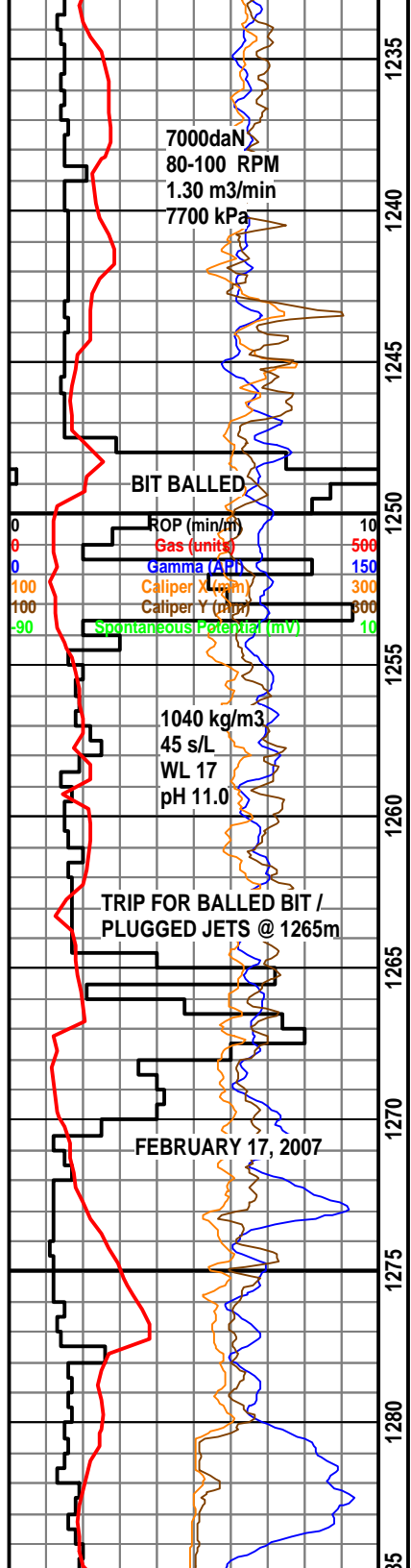




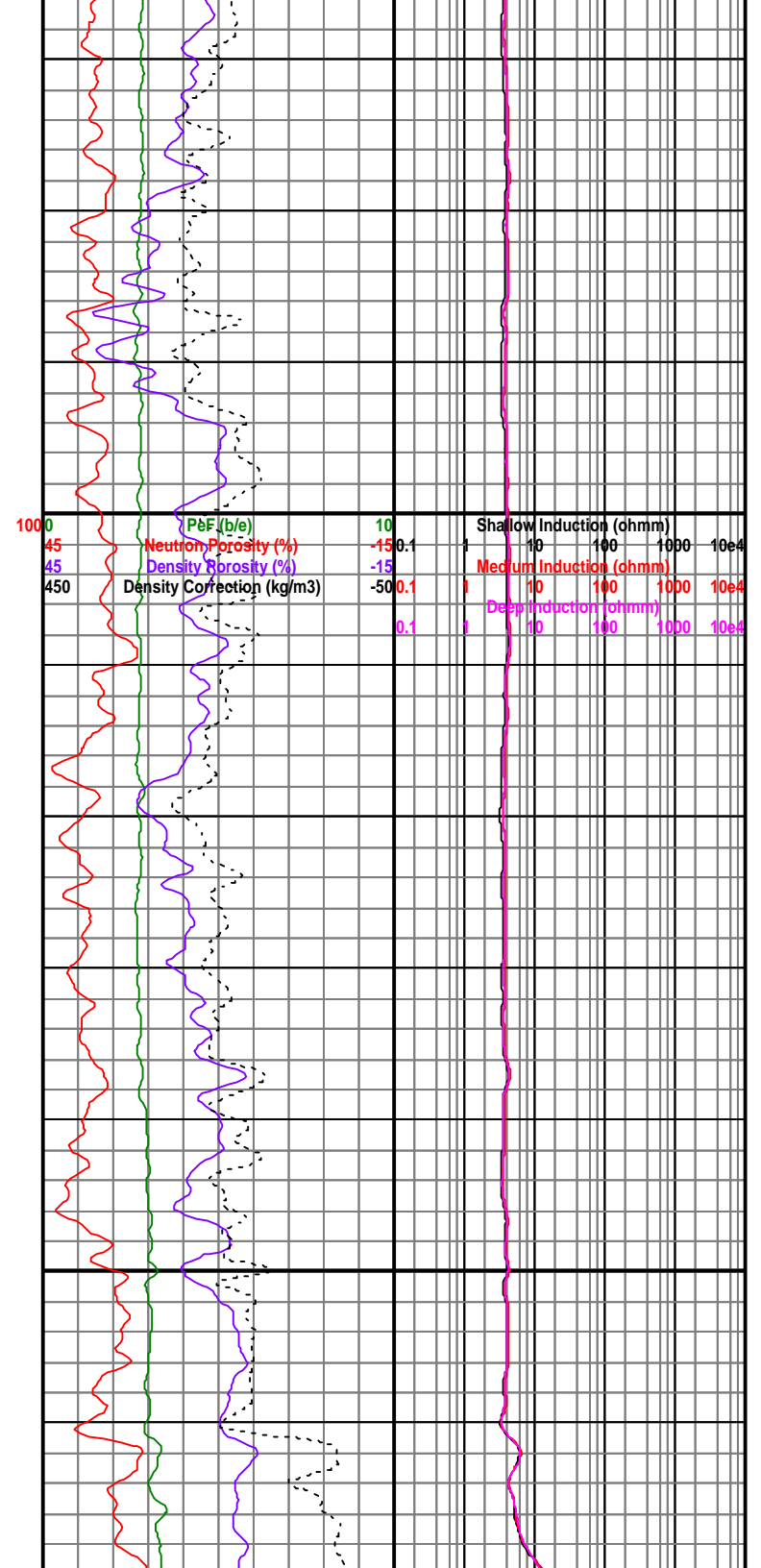
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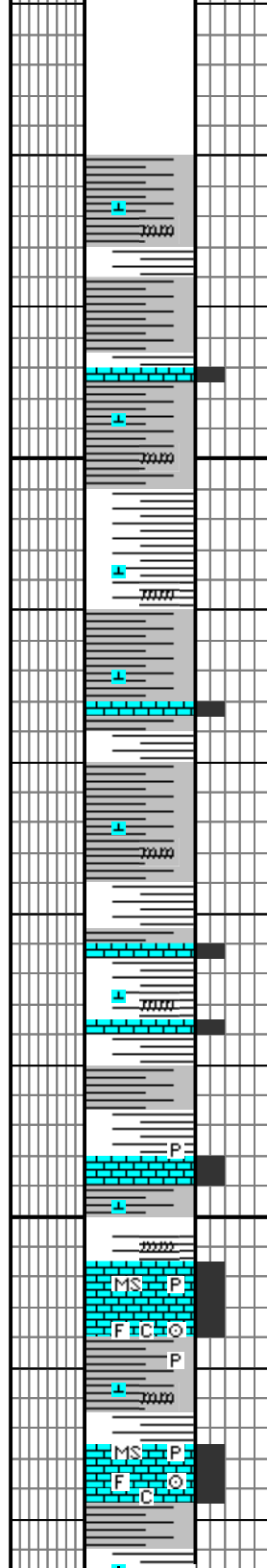
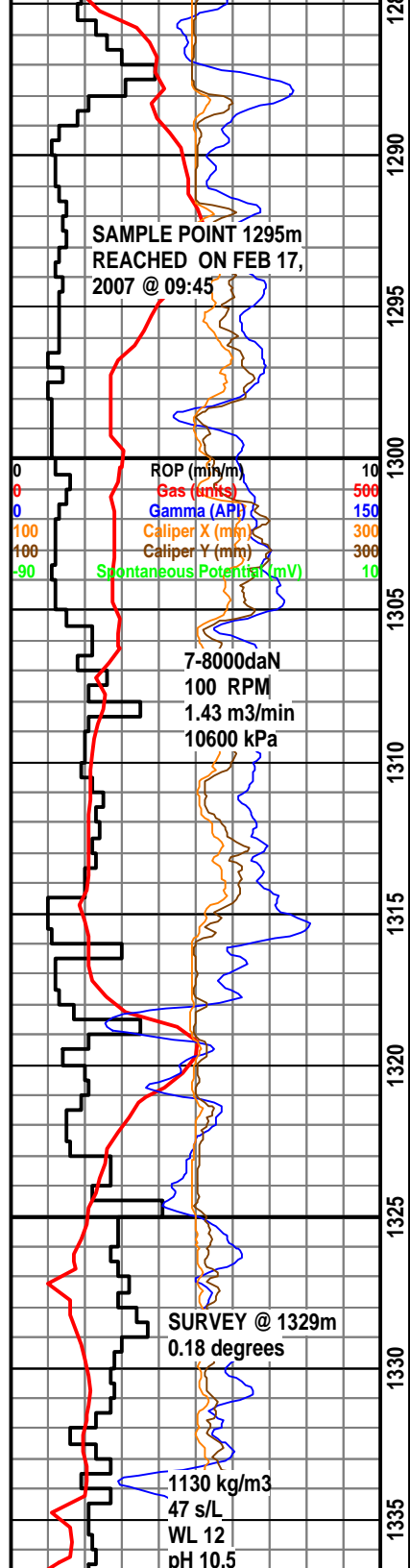






500





SH 1) lt - med gy, gn gy, ip calc grdg - arg ls, sm tex, mmica ip, plty - blk, ip waxy, 2) dk gy - brn gy, mmica, rug, blk, frm, occ off wh - lt gy - gy gn arg mcxln ls mudst strgs

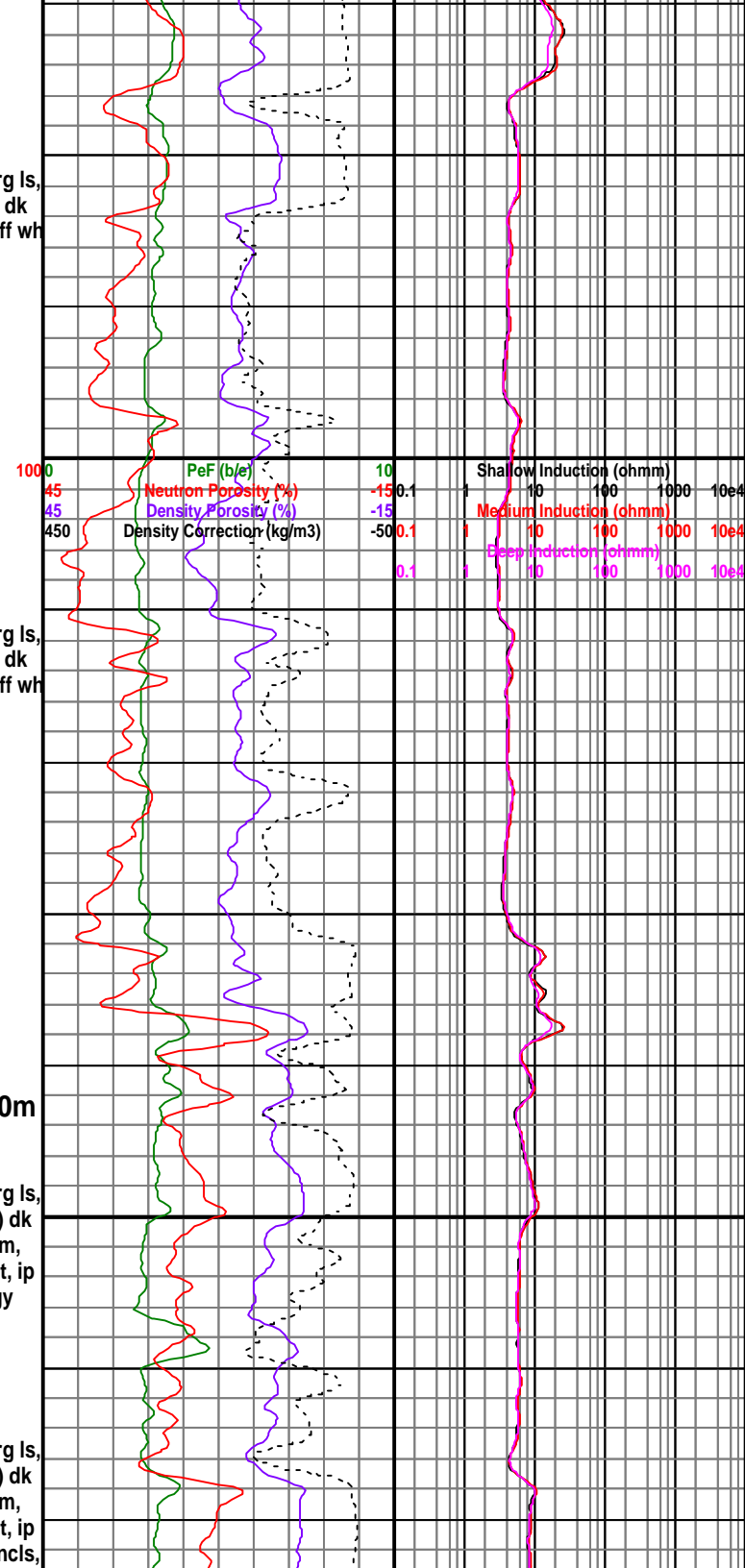
500 Sonic

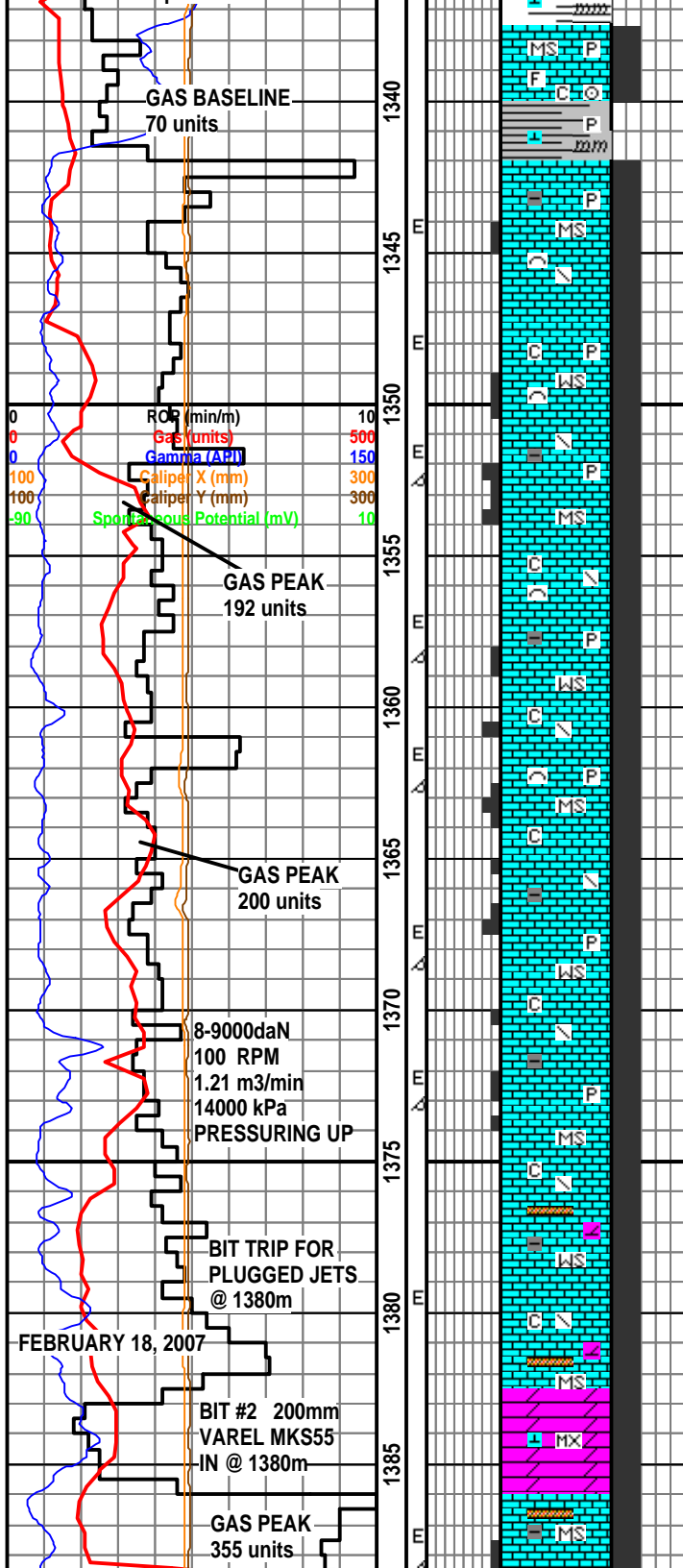
SH 1) lt - med gy, gn gy, ip calc grdg - arg ls, sm tex, mmica ip, plty - blk, ip waxy, 2) dk gy - brn gy, mmica, rug, blk, frm, occ off wh - lt gy - gy gn arg mcxln ls mudst strgs

### BEAVERHILL LAKE @ 1323.0m (-550.2m SubSea)

SH 1) lt - med gy, gn gy, ip calc grdg - arg ls, sm tex, mmica ip, plty - blk, scat pyr, 2) dk gy - brn gy, occ blk, mmica, rug, blk, frm, LS, off wh - gy, arg, crptxl - mcxln mudst, ip chalky, scat desm - nodr pyr, occ rsns gy incls, scat fos deb including Crin, tt, ns

SH 1) lt - med gy, gn gy, ip calc grdg - arg ls, sm tex, mmica ip, plty - blk, scat pyr, 2) dk gy - brn gy, occ blk, mmica, rug, blk, frm, LS, off wh - gy, arg, crptxl - mcxln mudst, ip chalky, scat desm - nodr pyr, occ rsns incls,





scat fos deb including Crin, tt, n:

## SLAVE POINT @ 1342.0m (-569.2m SubSea)

LS, off wh - tan - lt brn, lt gy, mot, crptxl -  
mcxln arg mudst, occ grdg - wkst, scat  
bioclc deb, flaky - blkly, ip chky, occ rsns,  
locally pyrz, tt wi assumed p rthy por, spty  
pale yel dry flor, q show, slight petf odor

500 Sonic 1000  
LS, crm - tan - lt brn, lt gy, mot, occ dk brn o  
stn, predy crptxl - mcxln, occ v f xln, arg  
mudst occ grdg - wkst - pkst, scat bioclc  
deb, flaky - blkly, ip chky, occ rsns, locally  
pyrz, local bitns ptgs, rr cal infill, tt wi  
assumed p rthy por, streaks of p moldic por,  
pale yel dry flor, watery - mky yel gn cut, petf  
odor

LS, crm - tan - lt brn, lt gy, mot, occ dk brn o  
stn, predy crptxl - mcxln, occ v f xln, arg  
mudst occ grdg - wkst - pkst, scat bioclc  
deb, flaky - blkly, ip chky, occ rsns, locally  
pyrz, local bitns ptgs, rr cal infill, tt wi  
assumed p rthy por, streaks of p moldic por,  
yel wh dry flor, watery - mky yel gn cut, petf  
odor

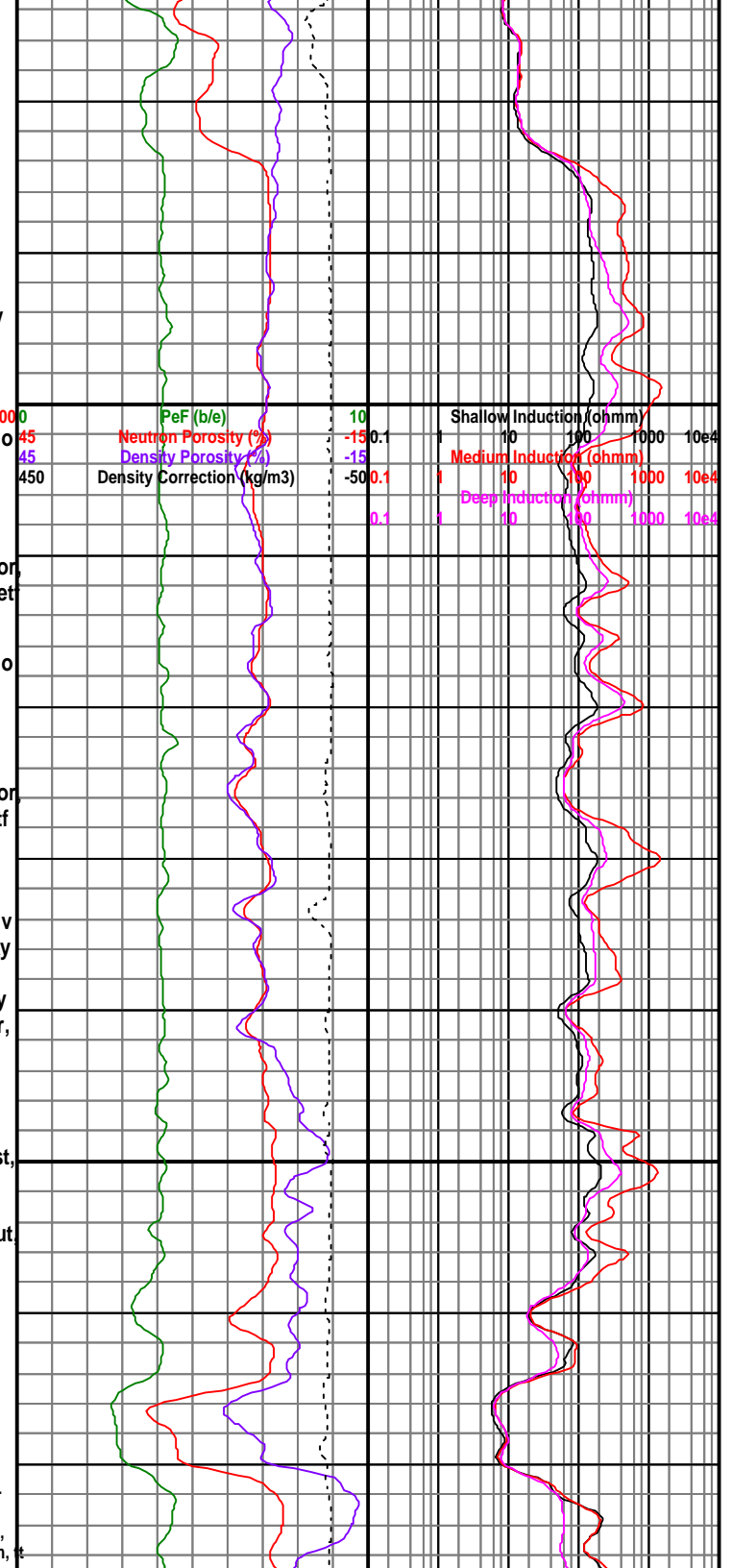
LS, bcmg dkr, crm - tan - lt brn, lt gy, mot,  
occ dk brn o stn, predy crptxl - mcxln, occ v  
f xln, arg mudst occ grdg - wkst - pkst, flaky  
- blkly, ip chky, occ rsns, locally pyrz, local  
bitns ptgs, rr cal infill, tt wi assumed p rthy  
por, streaks of p moldic por, yel wh dry flor,  
watery - mky yel gn cut, petf odor

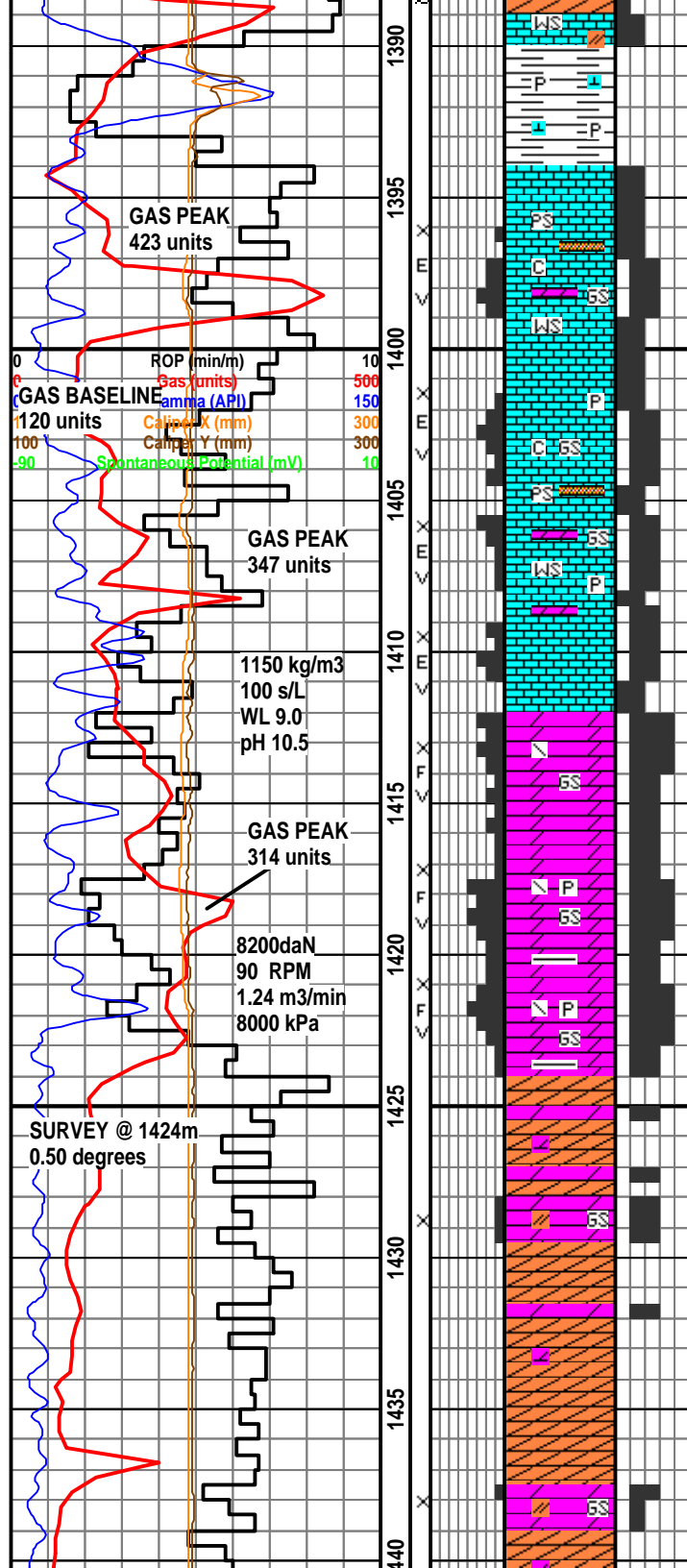
LS, tan - brn, gy, mot, occ dk brn o stn,  
predy crptxl - mcxln, arg mudst grdg - wkst,  
flaky - blkly, ip chky, occ rsns, local bitns  
ptgs, slightly dolc ip, tt wi assumed p rthy  
por, deep yel gold dry flor, watery yel gn cut  
ANHY strgs, wh - pearly luster, fib, amor,  
crptxl, tt

## F4 DOLOMITE @ 1382.5m (-609.7m SubSea)

DOL, crm - lt gy, mcxln, sandy appnc, calc  
ip, frm, tt, ns

LS, off wh - tan - lt brn, occ dk brn, mot, predy crptxl -  
mcxln mudst - wkst, flky - blkly, anhy ip, tt wi occ p  
moldic por, assumed p rthy por, spty yel gold dry flor,  
wk watery gn cut, ANHY, wh - pearly, amor, crptxl, frm, tt





## WATT MOUNTAIN @ 1390.0m (-617.2m SubSea)

SH, pale - emerald gn, waxy, blk, calc, scat pyr

## SULPHUR PT LS @ 1394.0m (-621.2m SubSea)

LS, off wh - lt brn, lt gy - gy, mot, predy crptxl - mcln wkst - pkst occly grdg - vf xln grnst, lt brn inclusions in off wh mtz, occ rsn, blk, ip chky, dolc ip, sl anhye ip, wi streaks of p - fr intxl por, assumed p rthy por, mnr p vug por, occ spy cal, spty yel wh dry flr, watery gn cut strong petf odor

LS, off wh - lt brn, bcmg dkr brn down section, lt gy - g mot, predy crptxl - mcln wkst - pkst occly grdg - vf xln grnst, lt brn inclusions in off wh mtz, occ rsn, blk, ip chky, dolc ip, sl anhye ip, tt wi streaks of p - fr intxl por, assumed p rthy por, mnr p vug por, occ sec cal infill, scat pyr, spty bri yel wh dry flr, stmg yel wh watery - mky cut, strong petf odor

## SULPHUR PT DOL @ 1412.0m (-639.2m Sub Sea)

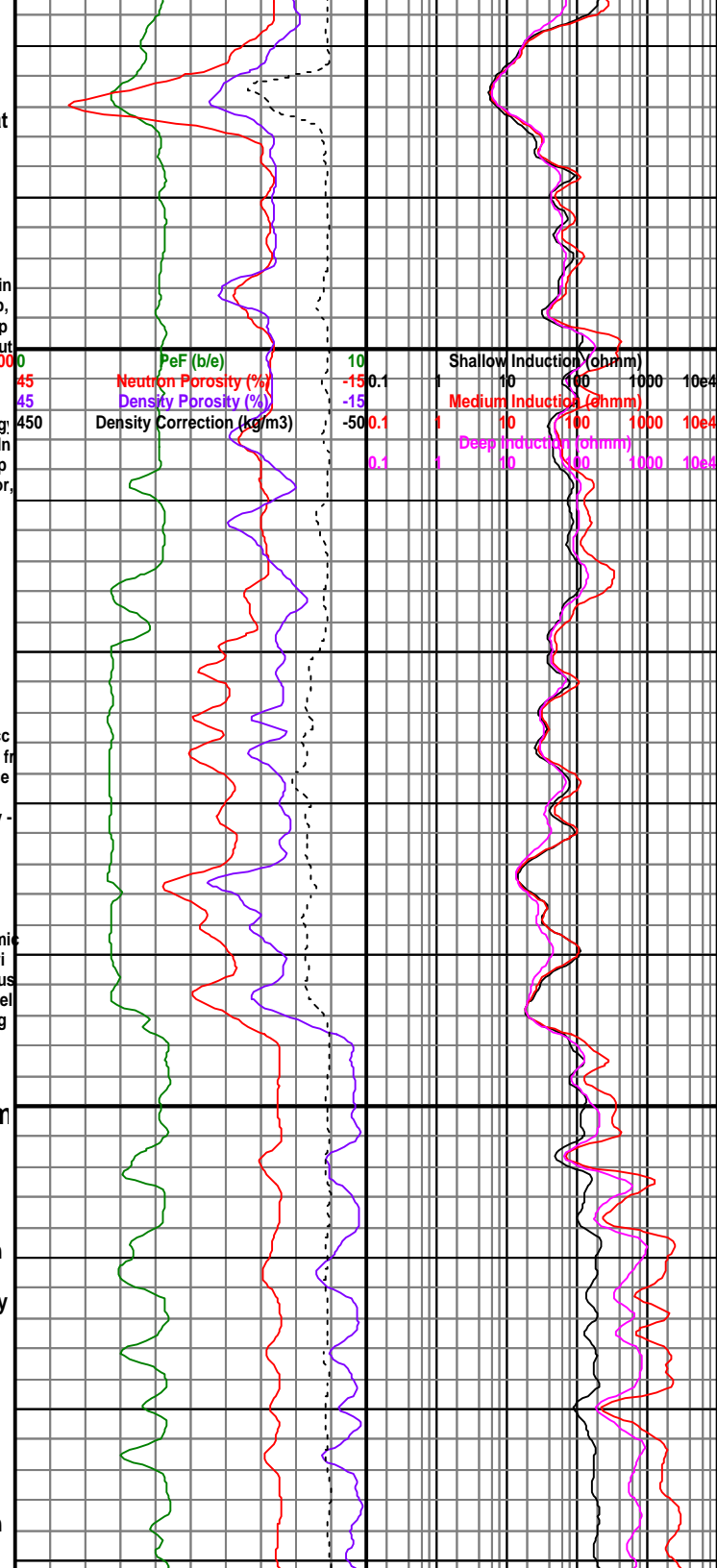
DOL, tan - lt brn, gy brn, mcln - vf xln pkst - grnst, occ grdg - f - med xln suc grnst, blk, euhed xl growth, p - fr inxln por wi streaks of g por wi excel xl relief, evidence of frac surf wi bitns coatings, fr vug por wi free clr f - med dol xl clus growth, wh yel - dk yel dry flr, watery - mky yel wh solvent cut, petf odor

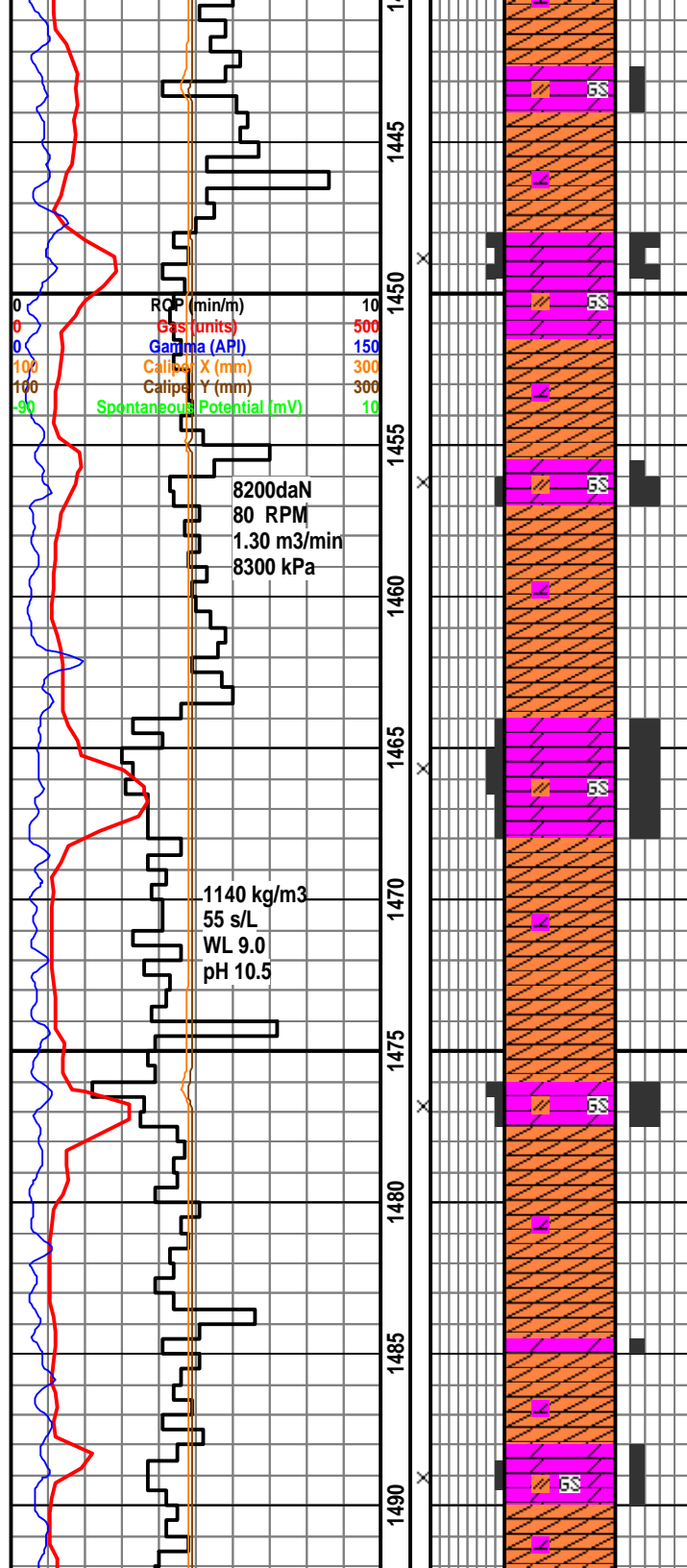
DOL, bcmg coarser and dkr, tan - lt brn - brn o stn, mcln - f xln pkst - grnst, occ grdg med xln suc grnst, blk, euhed xl growth, p - fr inxln por wi streaks of g mic suc - suc por wi excel xl relief, evidence of frac surf wi bitns coatings, fr vug por wi free clr med - vc dol xl clus and rhomb growth, scat pyr, mnr gy SH ptgs, bri wh yel dry flr, inst mky stmg thick yel wh solvent cut, strong petf odor, oily sheen on spl

## MUSKEG @ 1424.0m (-651.2m SubSea)

ANHY, off wh - tan, gy, wh pearly, crptxl, amor - blk, ip fib, slightly dolc ip, frm, tt, DOL, tan - lt brn, occ brn, mot, mcln - f xln pkst - grnst, anhye ip, blk - occ suc, tt wi streaks of p intxl por, bri yel dry flr, watery yel gn cut

ANHY, off wh - tan, gy, wh pearly, crptxl, amor - blk, ip fib, slightly dolc ip, frm, tt, DOL, tan - lt brn, occ brn, mot, mcln - f xln pkst - grnst, anhye ip, blk - occ suc, tt wi





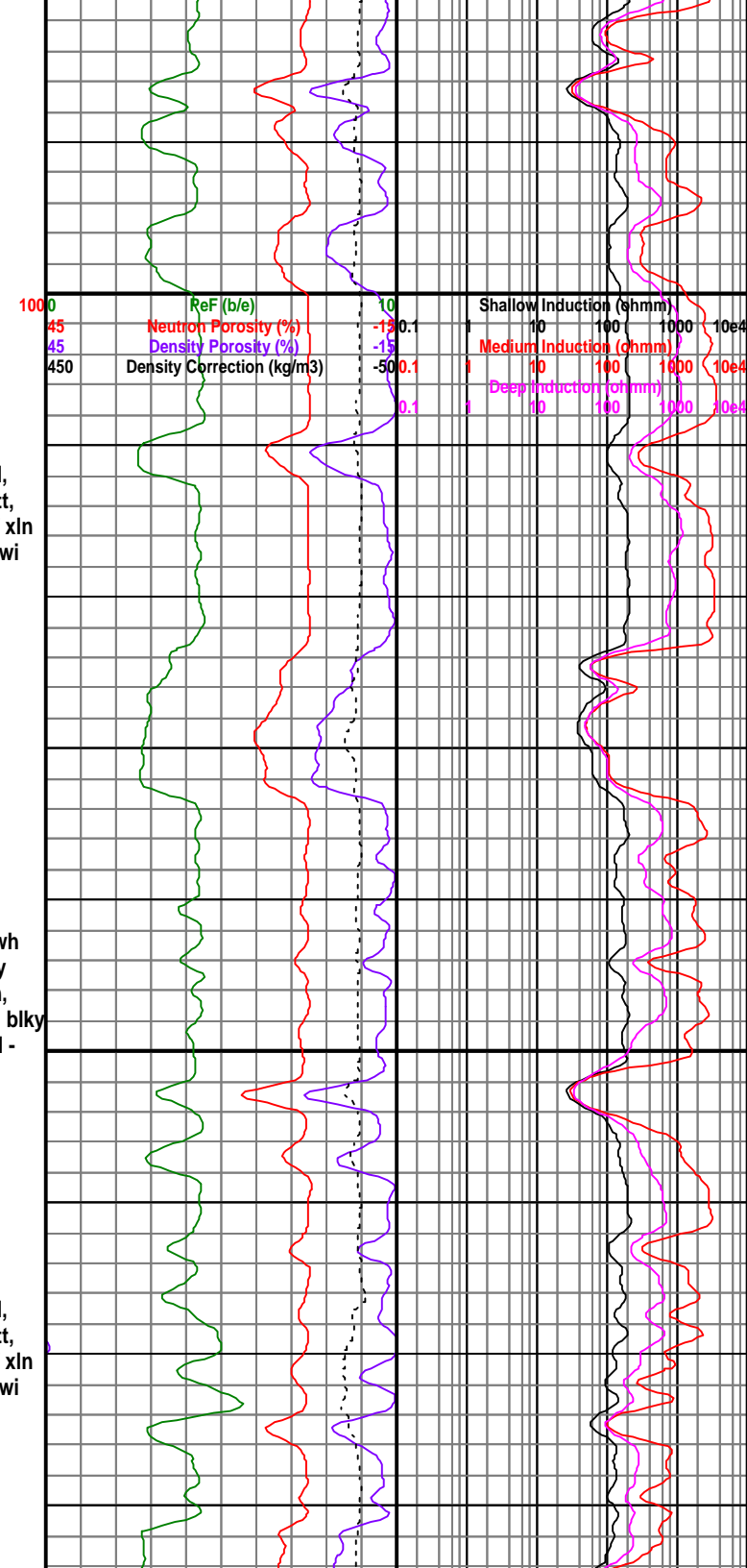
streaks of p intl por, yel - gold dry flr  
questionable cut

500 Sonic

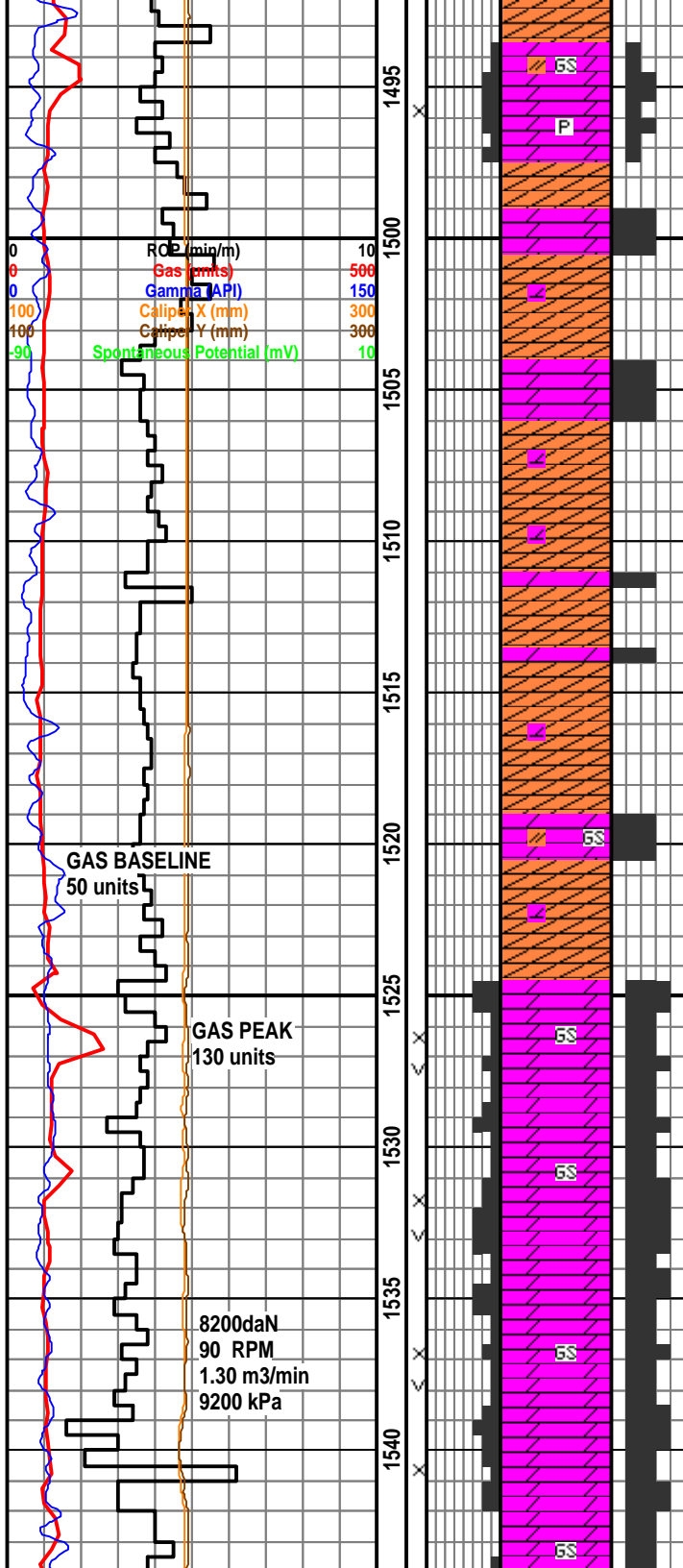
ANHY, off wh - tan, gy, wh pearly, crptxl,  
amor - blk, ip fib, slightly dolc ip, frm, tt,  
DOL, tan - lt brn, occ brn, mot, mcxln - f xln  
pkst - grnst, anhyc ip, blk - occ suc, tt wi  
streaks of p intl por, yel - gold dry flr,  
questionable cut

ANHY, bcmg more gy, off wh - tan, gy, wh  
pearly, crptxl, amor - blk, ip fib, slightly  
dolc ip, frm, tt, DOL, tan - lt brn, occ brn,  
mot, mcxln - f xln pkst - grnst, anhyc ip, blk  
- occ suc, tt wi streaks of p intl por, yel -  
gold dry flr, questionable cut

ANHY, off wh - tan, gy, wh pearly, crptxl,  
amor - blk, ip fib, slightly dolc ip, frm, tt,  
DOL, tan - lt brn, occ brn, mot, mcxln - f xln  
pkst - grnst, anhyc ip, blk - occ suc, tt wi  
streaks of p intl por, yel - gold dry flr,  
questionable cut







### M1 DOLOMITE @ 1493.5m (-720.7m SubSea)

DOL, tan - dk brn o stn, mcxln - vf xln grnst, suc ip, blk, ip anhy, scat pyr, p - fr intxl por, bri yel - gold dry flr, watery gn solvent cut

500 Sonic

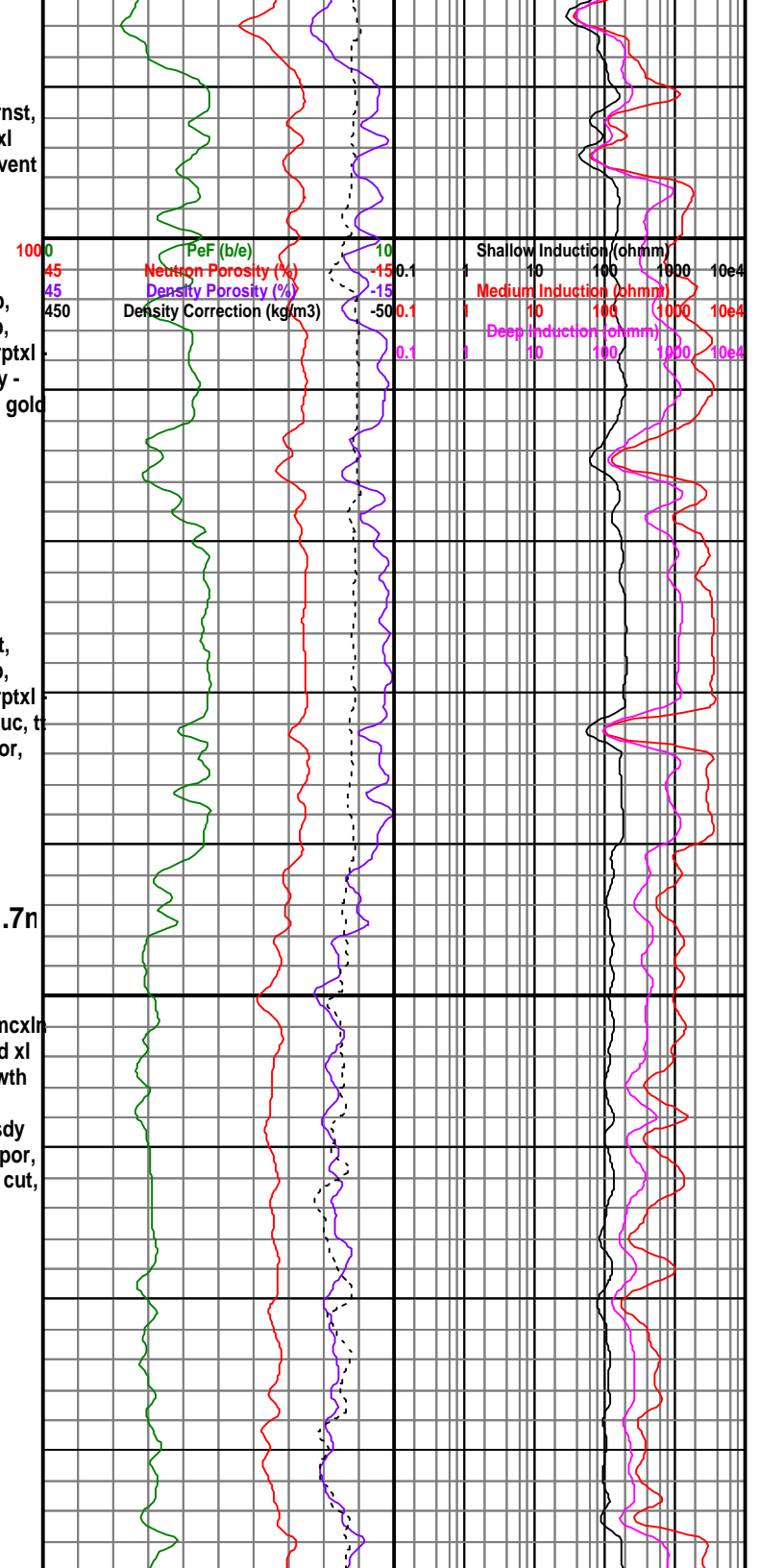
ANHY, off wh - tan, gy, wh pearly, mot ip, crptxl, amor - blk, ip fib, slightly dolo ip, frm, tt, DOL, tan - lt brn, occ brn, mot, crptxl - vf xln pkst - grnst, ip rsns, anhy ip, blk - occ suc, tt wi streaks of p intxl por, yel - gold dry flr, questionable cut

ANHY, off wh - tan, gy, wh pearly, ip mot, crptxl, amor - blk, ip fib, slightly dolo ip, frm, tt, DOL, tan - lt brn, occ brn, mot, crptxl - vf xln pkst - grnst, anhy ip, blk - occ suc, tt wi streaks of p intxl por, yel - gold dry flr, questionable cut

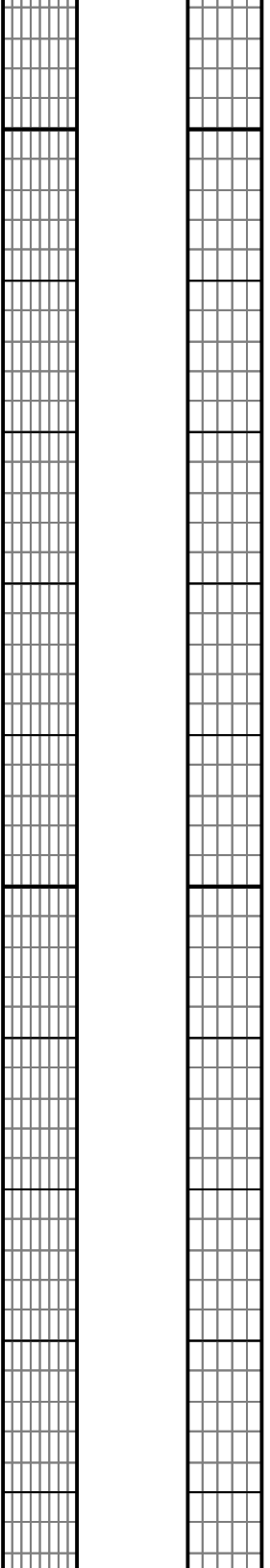
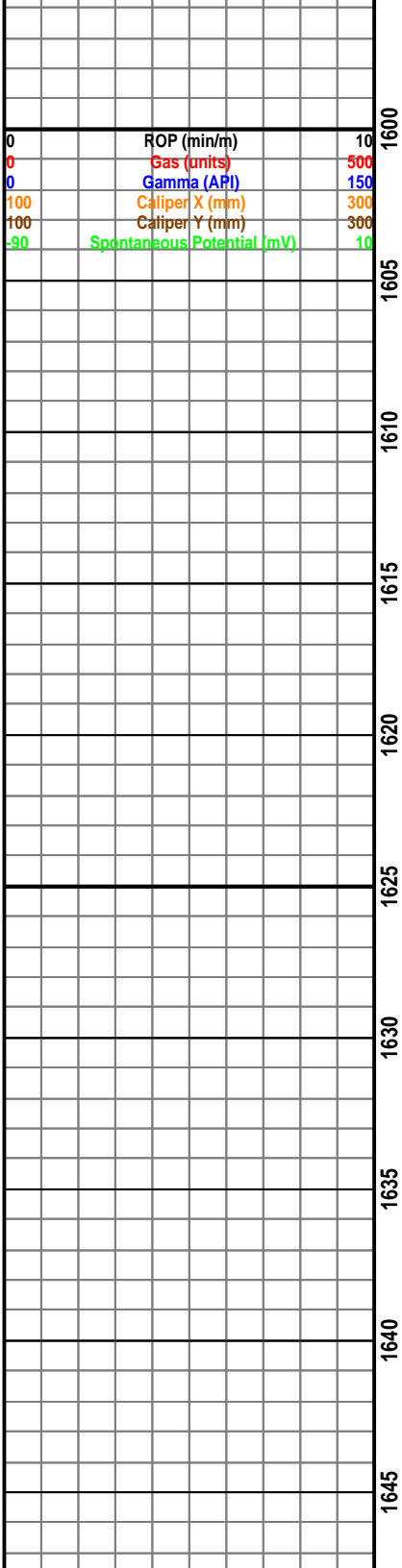
### KEG RIVER @ 1524.5m (-751.7m SubSea)

DOL, tan - brn, occ dk brn o stn, predymcxl - vf xln grnst wi streaks of f - med, euhed xl growth, occ free clr dol med xl clus growth along cutting surfaces and free rhombs suggests growth into voids, g xl releif, sdy gran appnc, scat fr vug por, p - fr intxl por, dull yel - yel gold dry flr, wk watery yel cut, petf odor

### BASE KEG POR. @ 1542.0m (-769.2m SubSea)



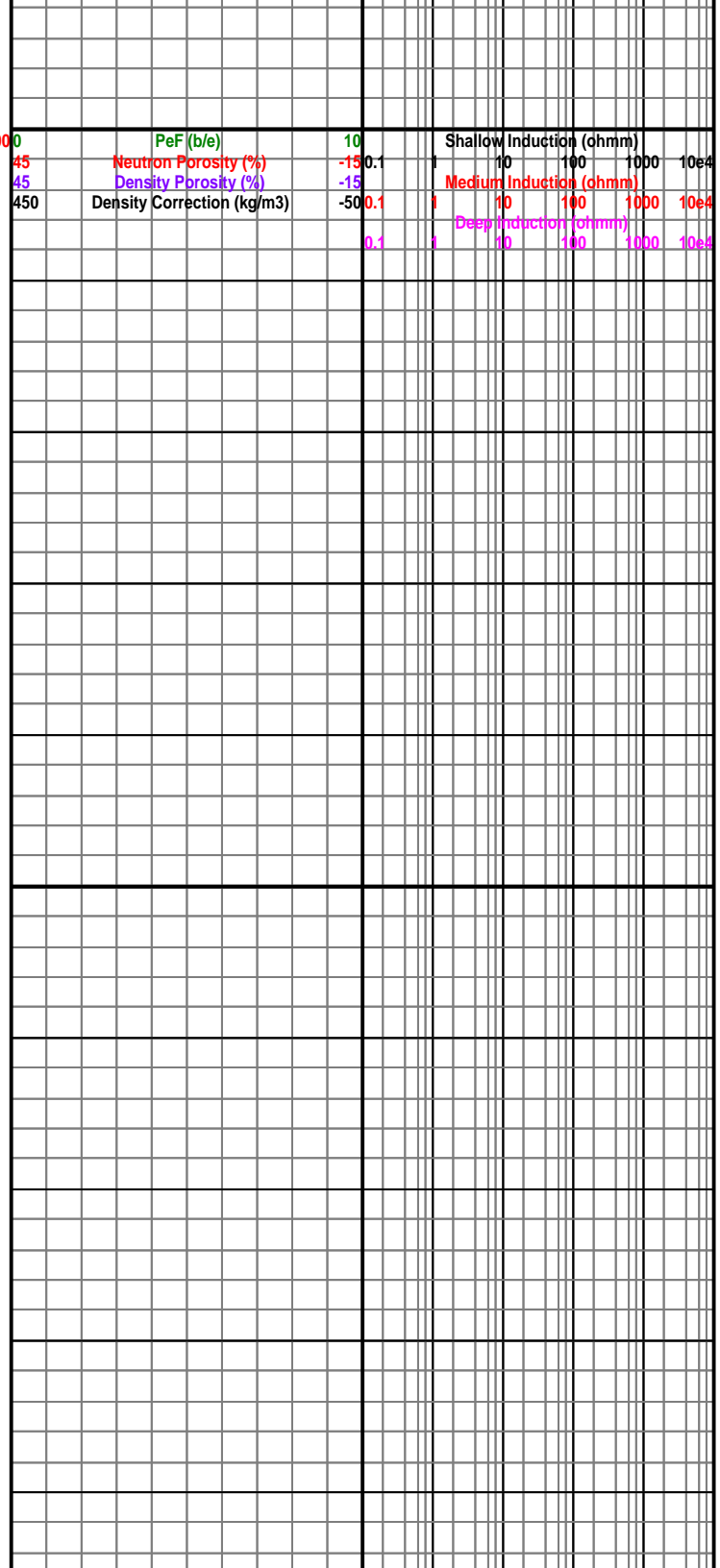




500

Sonic

1000







[illegible]



[illegible]




LICENCE NO. <b>2047</b>	WELL NAME & NO. <b>PARA ET AL CAMERON A-03</b>			<b>DAILY CHECKS</b> (1.) Daily Walk Around Inspection (2.) Detailed Inspection - Weekly ( Using Check List ) (3.) H2S Signs Posted if Required (4.) Well Licence & Stick Diagram Posted (5.) Flare Lines Staked (6.) BOP Drills Performed (7.) Visually Inspect BOPs- Flare Lines & Degasser Lines						O.P.R.M. BN DC		YEAR <b>2007</b>	MONTH <b>2</b>	DAY <b>10</b>	<b>LAST CASING TUBING OR LINER</b>	O.D. (mm)	M.I.D. (mm)	MASS (kg/m3)	MAKE	GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HEAD	SET AT (m)	SPUD DATE <b>2007/02/10</b>	TIME <b>08:00</b>
OPERATOR <b>PARAMOUNT RESOURCES LTD.</b>		CONTRACTOR NAME <b>PRECISION DRILLING, DIV OF PDC</b>								RIG NO. <b>220</b>														RIG RELEASE TIME		
SURFACE LOCATION <b>A-03-60 DEG 10-117 DEG 30</b>		UNIQUE ID <b>300A036010117300</b>								FUEL @ 08:00 HRS														WELL TYPE <b>VERT.</b>	RE-ENTRY <b>NO</b>	
SIGNATURE OF OPERATOR'S REPRESENTATIVE <b>BRIAN NEIGUM</b>		SIGNATURE OF CONTRACTOR'S RIG MANAGER <b>DAVE CROWLEY</b>								BOILER														OPERATOR'S SAFE		
										TEMPERATURE																
										WEATHER																
										CURRENT CONDITIONS																
										OVERCAST																
										WIND DIRECTION																
										S.W.																
										ROAD CONDITION																
										SLIPPERY																
										DC																
										DP																
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TIME HRS	CODE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	TOTALS	SHALE SHAKER(S)		RENTALS / SERVICES		MORN	DAY	EVE
		RIGUP & TEARDOWN	DRILL ACTUAL	REAMING	CORING	COND MUD & CIRC	TRIPS	RIG SERVICE	REPAIR RIG	CUT OFF DRILL LINE	DEV. SURVEY	WIRELINE LOGS	RUN CSG & CEMENT	WAIT ON CEMENT	NIPPLE UP B.O.P.	TEST B.O.P.	DRILLSTEM TEST	PLUG BACK	SQUEEZE CEMENT	FISHING	DIR. WORK	SAFETY MEETING							NO. 1	TYPE SWACO	TYPE	CREW VEHICLE			
																													SCREENS CHANGED	NEW/ USED					
																													38	TOP	TOP				
																														MIDDLE	MIDDLE				
MORN		7.75						0.25																				8.00							
DAY			6.5					0.25			0.75											0.25	0.25					8.00							
EVE			6.5					0.25			1.25																	8.00							
TOTAL		7.75	13.00					0.75			2.00											0.25	0.25					24.00	38	BOTTOM	BOTTOM				

NO.	DRILLING ASSEMBLY ( AT END OF TOUR )			LENGTH	BIT RECORD								MORNING TOUR				MUD RECORD				METRES DRILLED						TIME LOG										
	BIT		O.D.		BIT NO.	1							MUD TYPE				WATER BASED	<input type="checkbox"/>	OIL BASED	<input type="checkbox"/>	FROM	TO	D-R-C	RPM	WOB	FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS							
				SIZE	311							TIME													0	745	7.75	1	FINISH DIVERTER MAKE UP BHA STRAP ID OD BHA								
				IADC CODE								DENSITY (kg/m3)												745	800	0.25	7	RIG SERVICE FUNCTION HCR AND ANNULAR									
				MANUFACTURER	VAREL							FUNNEL VISCOSITY																									
				TYPE	CHIGJMS							FLUID LOSS (cm <sup>3</sup> )																									
				SERIAL NO.	237104							pH																									
				JETS	3X		15.9					MUD MATERIALS ADDED			SOLIDS CONTROL			CIRCULATION PRESSURE kPa	PUMP NO. 1		PUMP NO. 2																
											PRODUCT	AMOUNT	UNIT	CENTRIFUGE				LINER SIZE	SPM	LINER SIZE	SPM																
				DEPTH OUT (m)								SODA ASH	3	SX	HOURS RUN	INTAKE DENSITY (kg/m3)	OVER FLOW DENSITY	UNDER FLOW DENSITY	REDUCED PUMP SPEED																		
				DEPTH IN (m)	13							GEL	7	SX					@				@														
				TOTAL DRILLED (m)											HOURS RUN	INTAKE DENSITY (kg/m3)	OVER FLOW DENSITY	UNDER FLOW DENSITY	DEVIATION SURVEYS																		
				TOTAL HRS RUN															DEPTH ( m )	DEVIATION	DIRECTION																
				CUTTING STRUCTURE													BOILERS																				
				TI	To	MDC	LOC	BRG	GAGE	ODC	REASON PULLED	TOTAL RUN m/HR	1				2																				
													HRS RUN	8	HRS RUN																						
				D.P.	STANDS											BOILER pH	11	BOILER pH		DRILLER SIGNATURE				SPECIAL EVENT					SAFETY TOPIC	MEHL	MACP						
				D.P.	SINGLES											STACK TEMP	370	STACK TEMP		DAVE D CROWLEY				TIME / DEPTH													
				KELLY DOWN									HOLE DRAG																								
				TOTAL									TORQUE AT BOTTOM																								
				WT. OF D.C.									FILL ON BOTTOM (m)																								
				WT. OF STRING																																	

[illegible][illegible]

SPUD DATE	2007/02/10	TIME	08:00
RIG RELEASE		TIME	
WELL TYPE	VERT.	RE-ENTRY	NO
OPERATOR'S AFE			
KELLY BSHG		OP FUEL	
CONTRACTOR'S JOB NUM	78		
TOUR SHEET SERIAL NUM	PREC220_20070210_1C		
VENDOR SOFTWARE VERSION	EDR 3-2-4 ETS 2.2		



**PASON DATAHUB**

DRILLING CREW PAYROLL DATA					
WELL NAME & NO.			YEAR	MONTH	DAY
PARA ET AL CAMERON A-03			2007	2	10
OPERATOR		CONTRACTOR NAME			
PARAMOUNT RESOURCES LTD.		PRECISION DRILLING, DIV OF PDC			
RIG MANAGER			RIG NO.		
DAVE CROWLEY			220		
PROVINCE	CAMP			RIG SAFETY DAYS	
N.W.T.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO		1597	

[illegible]

RATE SCHEDULE	X	REGULAR		REPAIR		INVERT
CREW SAFETY DAYS		DRIVERS				

[illegible]

RATE SCHEDULE	X	REGULAR		REPAIR		INVERT
CREW SAFETY DAYS		DRIVERS				

[illegible]

RATE SCHEDULE	X	REGULAR		REPAIR		INVERT
CREW SAFETY DAYS		DRIVERS				



[illegible]



[illegible]



LICENCE NO. <b>2047</b>	WELL NAME & NO. <b>PARA ET AL CAMERON A-03</b>
OPERATOR <b>PARAMOUNT RESOURCES LTD.</b>	CONTRACTOR NAME <b>PRECISION DRILLING, DIV OF PDC</b>
SURFACE LOCATION <b>A-03-60 DEG 10-117 DEG 30</b>	UNIQUE ID <b>300A036010117300</b>
SIGNATURE OF OPERATOR'S REPRESENTATIVE <b>BRIAN NEIGUM</b>	SIGNATURE OF CONTRACTOR'S RIG MANAGER <b>DAVE CROWLEY</b>

### DAILY CHECKS

- ( 1 ) Daily Walk Around Inspection
- ( 2 ) Detailed Inspection - Weekly ( Using Check List )
- ( 3 ) HGS Signs Posted if Required
- ( 4 ) Well Licence & Stick Diagram Posted
- ( 5 ) Flare Lines Staked
- ( 6 ) BOP Drills Performed
- ( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines

- ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month )
- ( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month )
- ( 3 ) Mast Inspection before Raising or Lowering
- ( 4 ) Crown Saver Checked
- ( 5 ) Motor Kills Checked

OPR	R.M
BN	DC
BN	DC
BN	DC
BN	DC
BN	
BN	DC

YEAR	2007	MONTH	2	DAY	13
RIG NO.	220				
FUEL @ 08:00 HRS					
RIG	157		BOILER		
W E A T H E R	TEMPERATURE				
	-27				DC
	CURRENT CONDITIONS				DP
	OVERCAST				
	WIND DIRECTION				
	S.W.				DP
	ROAD CONDITION				
	SLIPPERY				DP

LAST CASING TUBING OR LINER
DC / DP SIZE
165
102
102

O.D. (mm)	MIN I.D. (mm)	MASS (kg/m3)	MAKE			GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HEAD	SET AT (m)
219.1	205.7	35.7	IPSCO			J-55	33	436.34	.5	435.84
MASS	GRADE	MINIMUM I.D.	T. JNT. O.D.	TYPE THREAD	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER			STROKE LENGTH
136	DC	57	165	41/2 XH	22	F-800	EMSCO			228.8
43.2	HWDP	72	134	4FH	8	PZ-7	GARDNER DENVER			178
23.38	SS/95	82	134	4FH	235					

SPUD DATE	2007/02/10	TIME	08:00
RIG RELEASE		TIME	
WELL TYPE	VERT.	RE-ENTRY	NO
OPERATOR'S AFE			
KELLY BSHG		OP FUEL	
CONTRACTOR'S JOB NUM	78		
TOUR SHEET SERIAL NUM	PREC220_20070213_1E		
VENDOR SOFTWARE VERSION	EDR 3-2-4 ETS 2.2		



## PASON DATAHUB

TIME PERIOD	CODE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	TOTALS	SHAPE SHAKER(S)		RENTALS / SERVICES		MORN	DAY	EVE		
		RIGUP & TEARDOWN	DRILL ACTUAL	REAMING	CORING	COND MUD & CIRC	TRIPS	RIG SERVICE	REPAIR RIG	CUT OFF DRILL LINE	DEV. SURVEY	WIRELINE LOGS	RUN CSG & CEMENT	WAIT ON CEMENT	NIPPLE UP B.O.P.	TEST B.O.P.	DRILLSTEM TEST	PLUG BACK	SQUEEZE CEMENT	FISHING	DIR. WORK	SAFETY MEETING								NO. 1	TYPE SWACO	TYPE	CREW VEHICLE				
			7.5					0.25			0.25																		8.00	SCREENS CHANGED		NEW/USED					
	MORN			5.75			0.25	1.25	0.25		0.25													0.25					8.00	38	TOP	TOP					
	DAY			5.75			0.25	1.25	0.25		0.25													0.25					8.00	38	MIDDLE	MIDDLE					
EVE						3.25	4.25	0.25														0.25						8.00	38	BOTTOM	BOTTOM						
TOTAL			13.25			3.50	5.50	0.75			0.50											0.25	0.25					24.00	38								

DRILLING CREW PAYROLL DATA						
WELL NAME & NO.				YEAR	MONTH	DAY
PARA ET AL CAMERON A-03				2007	2	13
OPERATOR		CONTRACTOR NAME				
PARAMOUNT RESOURCES LTD.		PRECISION DRILLING, DIV OF PDC				
RIG MANAGER					RIG NO.	
DAVE CROWLEY					220	
PROVINCE		CAMP			RIG SAFETY DAYS	
N.W.T.		<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO		1600	

DRILLING ASSEMBLY (AT END OF TOUR )				LENGTH		BIT RECORD				MORNING TOUR				MUD RECORD				METRES DRILLED						TIME LOG									
NO.	BIT			O.D.	.28	BIT NO.	1			MUD TYPE				WATER BASED <input type="checkbox"/> OIL BASED <input type="checkbox"/>				FROM	TO	D-R-C	RPM	WOB	FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS						
	TORQUE SUB			160	1.97	SIZE	200			TIME								457	626	D	80	6	0	245	2.75	2	DRILL F/457 TO 541						
	D.C.			161	9.38	IADC CODE				DENSITY (kg/m3)													245	300	0.25	10	DEVIATION SURVEY						
	STAB			191	1.61	MANUFACTURER	VAREL			FUNNEL VISCOSITY													300	315	0.25	7	RIG SERVICE FUNCTION TEST ANNULAR 12 SECS TO CLOSE						
	SHOCK SUB			161	2.12	TYPE	MKS55			FLUID LOSS (cm3 )													315	800	4.75	2	DRILL F/541 TO 626 WE STARTED TO LOSE CIRCULATION AT 553MKB						
11	D.C.			163	103.72	SERIAL NO.	2722			pH																		IT AVERAGED 4.2M3 PER HOUR THROUGH THE WABAMUN.					
	JAR			169	4.95	JETS	7 X 10.3			MUD MATERIALS ADDED				SOLIDS CONTROL				CIRCULATION PRESSURE kPa		PUMP NO. 1		PUMP NO. 2											
4	D.C.			163	37.53					PRODUCT		AMOUNT		UNIT		HOURS RUN		INTAKE DENSITY ( kg/m3 )		OVER FLOW DENSITY		UNDER FLOW DENSITY		3500		152		105		152			
8	X/O			159	.69	DEPTH OUT (m)																											
	H.W.D.P.			101	74.97	DEPTH IN (m)	436																										
						TOTAL DRILLED (m)	190																										
						TOTAL HRS RUN	8.5																										
						CUTTING STRUCTURE																											
						TI	To	MDC	LOC	BRG	GAGE	ODC	REASON PULLED	TOTAL RUN m/HR	BOILERS																		
															1		2																
20	D.P.			STANDS	376.42										HRS RUN	8	HRS RUN																
	D.P.			SINGLES	12.36	HOLE CONDITION												BOILER pH	11	BOILER pH													
	KELLY DOWN					HOLE DRAG												STACK TEMP	370	STACK TEMP													
	TOTAL				626.00	TORQUE AT BOTTOM												DRILLER SIGNATURE				SPECIAL EVENT								SAFETY TOPIC		MEHL	MACP
	WT. OF D.C.			22		FILL ON BOTTOM (m)												DAVE D CROWLEY				TIME / DEPTH								CONNECTIONS		37	3563
	WT. OF STRING			32																													

[illegible]

NO.	DRILLING ASSEMBLY (AT END OF TOUR)		LENGTH	BIT RECORD				DAY TOUR		MUD RECORD		METRES DRILLED					TIME LOG											
	BIT		O.D.	.28	BIT NO.	1		MUD TYPE		WATER BASED		OIL BASED		FROM	TO	D-R-C	RPM	WOB	FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS					
	TORQUE SUB		160	1.97	SIZE	200		TIME					626	730	D	85	7		800	815	0.25	22	BOP DRILL -WELL SECURE IN 95 SECS.					
	D.C.		161	9.38	IADC CODE			DENSITY (kg/m3 )											815	930	1.25	2	DRILL 626 TO 645					
	STAB		191	1.61	MANUFACTURER	VAREL		FUNNEL VISCOSITY											930	945	0.25	10	DEVIATION SURVEY AT 632					
	SHOCK SUB		161	2.12	TYPE	MKS55		FLUID LOSS (cm3 )											945	1415	4.50	2	DRILL 645 TO 730					
11	D.C.		163	103.72	SERIAL NO.	2722		pH											1415	1430	0.25	5	CIRC					
4	D.C.		163	37.53	JETS	7 X	10.3		MUD MATERIALS ADDED			SOLIDS CONTROL			CIRCULATION PRESSURE kPa	PUMP NO. 1		PUMP NO. 2		1430	1445	0.25	7	RIG SERVICE-FUNCTION PIPE RAMS-3 SECS. TO CLOSE				
8	H.W.D.P.		101	74.97					PRODUCT	AMOUNT	UNIT		CENTRIFUGE			LINER SIZE	SFM	LINER SIZE	SFM	1445	1600	1.25	6	POOH -FLOW CHECK AT 716, AT 657, AT 351				
					DEPTH OUT (m)	730							HOURS RUN	INTAKE DENSITY ( kg/m3 )	OVER FLOW DENSITY	UNDER FLOW DENSITY			4000	152	105	152						
					DEPTH IN (m)	436														REDUCED PUMP SPEED								
					TOTAL DRILLED (m)	294.00														1410	@	67	@					
					TOTAL HRS RUN	14.25														DEVIATION SURVEYS								
					CUTTING STRUCTURE																							
					TI	To	MDC	LOC	BRG	GAGE	ODC	REASON PULLED	TOTAL RUN m/HR		BOILERS													
25	D.P.		STANDS		470.71									1		2												
1	D.P.		SINGLES		9.38									HRS RUN	8	HRS RUN												
	KELLY DOWN				12.76									BOILER pH	11	BOILER pH												
	TOTAL				730.07									STACK TEMP	370	STACK TEMP												
	WT. OF D.C.		22										DRILLER SIGNATURE					SPECIAL EVENT					SAFETY TOPIC		MEHL	MACP		
	WT. OF STRING		35										JACK HUSTON					TIME / DEPTH							40	3563		

DAY TOUR		FROM	800	TO	1600	INJURIES			
CREW		SOC INS. NO.		NAME		HRS		YES	NO
DRILLER				JACK HUSTON		12.00	L3		JH
DERRICKHAND				KARL GEREIN		12.00			KG
MOTORHAND				IAN ROSS		12.00			IR
FLOORHAND				WILL WINTER		12.00			WW
FLOORHAND				ADAM KACHUROWSKI		8.00			AK
RIG MANAGER				DAVE CROWLEY					DC

[illegible]

EVENING TOUR		FROM	1600	TO	2400	INJURIES	
CREW	SOC INS. NO.	NAME			HRS	YES	NO
DRILLER		DAVE D CROWLEY			4.00		DC
DERRICKHAND		DANNY S CROWLEY			4.00		DC
MOTORHAND		COREY ANDERSON			4.00		CA
FLOORHAND		SERGE TETRAULT			4.00		ST
FLOORHAND		BRECK PICHE			4.00		BP



[illegible][illegible]

DRILLING CREW PAYROLL DATA						
WELL NAME & NO.			YEAR	MONTH	DAY	
PARA ET AL CAMERON A-03			2007	2	14	
OPERATOR		CONTRACTOR NAME				
PARAMOUNT RESOURCES LTD.		PRECISION DRILLING, DIV OF PDC				
RIG MANAGER				RIG NO.		
DAVE CROWLEY				220		
PROVINCE		CAMP			RIG SAFETY DAYS	
N.W.T.		<input checked="checked" type="checkbox"/> YES	<input type="checkbox"/> NO		1601	

[illegible]

RATE SCHEDULE	X	REGULAR		REPAIR		INVERT
CREW SAFETY DAYS			DRIVERS			
			DAVE D CROWLEY			

[illegible]

RATE SCHEDULE	X	REGULAR		REPAIR		INVERT
CREW SAFETY DAYS		DRIVERS				
		JACK HUSTON				

[illegible]

RATE SCHEDULE	X	REGULAR		REPAIR		INVERT
CREW SAFETY DAYS		DRIVERS				
		DAVE D CROWLEY				

[illegible][illegible]

NO.	DRILLING ASSEMBLY ( AT END OF TOUR )			LENGTH	BIT RECORD								EVENING TOUR						MUD RECORD						METRES DRILLED						TIME LOG																					
	BIT		O.D.		BIT NO.	1RR							MUD TYPE				WATER BASED			<input type="checkbox"/> OIL BASED <input type="checkbox"/>			FROM	TO	D-R-C	RPM	WOB	FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS																				
				SIZE	200							TIME										1600	1715	1.25	6	POOH-FLOW CHECK AT 540 AND OUT OF HOLE																										
				IADC CODE							DENSITY (kg/m3 )										1715	1930	2.25	6	RIH -OPEN ENDED-PICK UP PIPE																											
				MANUFACTURER	VAREL							FUNNEL VISCOSITY										1930	2315	3.75	5	CIRCULATE																										
				TYPE	MKS55							FLUID LOSS (cm3 )										2315	2345	0.50	21	SAFETY MEETING WITH CEMENTERS																										
				SERIAL NO.	2722							pH										2345	0000	0.25	17	PLUG BACK LCM PLUG#3 PUMP 4 TONNS OF RAS																										
				JETS	7X	10.3					MUD MATERIALS ADDED				SOLIDS CONTROL				CIRCULATION PRESSURE kPa	PUMP NO. 1		PUMP NO. 2																														
											PRODUCT	AMOUNT	UNIT	CENTRIFUGE				LINER SIZE	SPM	LINER SIZE	SPM																															
				DEPTH OUT (m)								HOURS RUN	INTAKE DENSITY ( kg/m3 )	OVER FLOW DENSITY	UNDER FLOW DENSITY	614	152	69	152	REDUCED PUMP SPEED																																
				DEPTH IN (m)	730											614	@	69	@																																	
				TOTAL DRILLED (m)								HOURS RUN	INTAKE DENSITY ( kg/m3 )	OVER FLOW DENSITY	UNDER FLOW DENSITY	DEVIATION SURVEYS																																				
				TOTAL HRS RUN								DEPTH ( m )					DIRECTION																																			
				CUTTING STRUCTURE											BOILERS																																					
				Ti	To	MDC	LOC	BRG	GAGE	ODC	REASON PULLED	TOTAL RUN m/HR	1				2																																			
				D.P.	STANDS							HOLE CONDITION				HRS RUN	8	HRS RUN																																		
				D.P.	SINGLES											BOILER pH	11	BOILER pH				DRILLER SIGNATURE						SPECIAL EVENT					SAFETY TOPIC		MEHL	MACP																
				KELLY DOWN								HOLE DRAG					STACK TEMP	365	STACK TEMP				DAVE D CROWLEY						TIME / DEPTH					CEMENTING			3563															
				TOTAL								TORQUE AT BOTTOM																																								
				WT. OF D.C.								FILL ON BOTTOM (m)																																								
				WT. OF STRING																																																



LICENCE NO. <b>2047</b>	WELL NAME & NO. <b>PARA ET AL CAMERON A-03</b>
OPERATOR <b>PARAMOUNT RESOURCES LTD.</b>	CONTRACTOR NAME <b>PRECISION DRILLING, DIV OF PDC</b>
SURFACE LOCATION <b>A-03-60 DEG 10-117 DEG 30</b>	UNIQUE ID <b>300A036010117300</b>
SIGNATURE OF OPERATOR'S REPRESENTATIVE <b>BRIAN NEIGUM</b>	SIGNATURE OF CONTRACTOR'S RIG MANAGER <b>DAVE CROWLEY</b>

### DAILY CHECKS

- ( 1 . ) Daily Walk Around Inspection
- ( 2 ) Detailed Inspection - Weekly ( Using Check List )
- ( 3 ) H2S Signs Posted if Required
- ( 4 ) Well Licence & Stick Diagram Posted
- ( 5 ) Flare Lines Staked
- ( 6 ) BOP Drills Performed
- ( 7 . ) Visually Inspect BOPs- Flare Lines & Degasser Lines
- ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month
- ( 2 ) CAODC Rig Safety Inspection Checklist ( one/rig/month
- ( 3 . ) Mast Inspection before Raising or Lowering
- ( 4 ) Crown Saver Checked
- ( 5 ) Motor Kills Checked

OPR	R.M
BN	DC
BN	DC
BN	DC
BN	DC
BN	DC

YEAR	2007	MONTH	2	DAY	15
RIG NO.	220				
FUEL @ 08:00 HRS					
RIG				BOILER	
182					
WEATHER	TEMPERATURE				
	-17				DC
	CURRENT CONDITIONS				DP
	OVERCAST				
	WIND DIRECTION				
	S.W.				DF
	ROAD CONDITION				
	SLIPPERY				DF

LAST CASING TUBING OR LINER	
DC / DP SIZE	
165	
102	
102	

O.D. (mm)	MIN I.D. (mm)	MASS (kg/m3)	MAKE			GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HEAD	SET AT (m)
219.1	205.7	35.7	IPSCO			J-55	33	436.34	.5	435.84
MASS	GRADE	MINIMUM I.D.	T. JNT. O.D.	TYPE THREAD	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER			STROKE LENGTH
136	DC	57	165	41/2 XH	22	F-800	EMSCO			228.8
43.2	HWDP	72	134	4FH	8	PZ-7	GARDNER DENVER			178
23.38	SS/95	82	134	4FH	235					

SPUD DATE	2007/02/10	TIME	08:00
RIG RELEASE		TIME	
WELL TYPE	VERT.	RE-ENTRY	NO
OPERATOR'S AFE			
KELLY BSHG		OP FUEL	
CONTRACTOR'S JOB NUM	78		
TOUR SHEET SERIAL NUM	PREC220_20070215_1E		
VENDOR SOFTWARE VERSION	EDR 3-2-4 ETS 2.2		



## PARSON DATAHUB

CODE NO.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	TOTALS	SHALE SHAKER(S)		RENTALS / SERVICES			MORN	DAY	EVE	
TIME HRS	RIGUP & TEARDOWN	DRILL ACTUAL	REAMING	CORING	COND MUD & CIRC	TRIPS	RIG SERVICE	REPAIR RIG	CUT OFF DRILL LINE	DEV. SURVEY	WIRELINE LOGS	RUN CSG & CEMENT	WAIT ON CEMENT	NIPPLE UP B.O.P.	TEST B.O.P.	DRILLSTEM TEST	PLUG BACK	SQUEEZE CEMENT	FISHING	DIR. WORK	SAFETY MEETING								NO. 1	TYPE	TYPE	CREW VEHICLE					
	MORN				1.25	4.25	0.25										0.25						2.0						8.00	SCREENS CHANGED		NEW/USED					
	DAY		3.0				0.25			0.25													4.5						8.00	38	TOP	TOP					
	EVE		7.25				0.25			0.5																			8.00		MIDDLE	MIDDLE					
	TOTAL		10.25			1.25	4.25	0.75			0.75							0.25						6.50					24.00	38	BOTTOM	BOTTOM					

DRILLING CREW PAYROLL DATA						
WELL NAME & NO.			YEAR	MONTH	DAY	
PARA ET AL CAMERON A-03			2007	2	15	
OPERATOR		CONTRACTOR NAME				
PARAMOUNT RESOURCES LTD.		PRECISION DRILLING, DIV OF PDC				
RIG MANAGER				RIG NO.		
DAVE CROWLEY				220		
PROVINCE		CAMP	<input checked="checked" type="checkbox"/> YES <input type="checkbox"/> NO		RIG SAFETY DAYS	
N.W.T.					1602	

[illegible][illegible]

NO.	DRILLING ASSEMBLY (AT END OF TOUR)		LENGTH	BIT RECORD						DAY TOUR		MUD RECORD				METRES DRILLED						TIME LOG																			
	BIT			O.D.	.28	BIT NO.	1RR						MUD TYPE				WATER BASED	<input type="checkbox"/>	OIL BASED	<input type="checkbox"/>	FROM	TO	D-R-C	RPM	WOB	FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS											
	TORQUE SUB		160	1.97	SIZE	200						TIME									730	834	D	95	6	800	1230	4.50	22	DRILL OUT CEMENT 570 TO 730 MKB											
1	D.C.		161	9.38	IADC CODE							DENSITY (kg/m3 )														1230	1300	0.50	2	DRILL 730 to 749											
	STAB		191	1.61	MANUFACTURER	VAREL						FUNNEL VISCOSITY														1300	1315	0.25	10	DEVIATION SURVEY AT 736											
	SHOCK SUB		161	2.12	TYPE	MKS55						FLUID LOSS (cm3 )														1315	1330	0.25	7	RIG SERVICE- FUNCTION ANNULAR 12 SECS. TO CLOSE											
11	D.C.		161	103.72	SERIAL NO.	2722						pH														1330	1600	2.50	2	DRILL 749 to 834											
JAR	D.C.		163	4.95	JETS	7X 10.3						MUD MATERIALS ADDED				SOLIDS CONTROL				CIRCULATION PRESSURE kPa	PUMP NO. 1		PUMP NO. 2																		
4	D.C.		159	37.53	PRODUCT	AMOUNT		UNIT		HOURS RUN	INTAKE DENSITY (kg/m3 )	OVER FLOW DENSITY	UNDER FLOW DENSITY	5100	LINER SIZE	SPM	LINER SIZE	SPM	REDUCED PUMP SPEED																						
X/O	H.W.D.P.		163	.69	GEL	35		SX		CAUSTIC	1		SX		1640	@	66	@	DEVIAION SURVEYS																						
8	H.W.D.P.		101	74.97	DEPTH OUT (m)	730						SODA ASH	2		SX		DEPTH ( m )	DEVIATION		DIRECTION																					
					TOTAL DRILLED (m)	104						ENVIROFLOC	4		SX																										
					TOTAL HRS RUN	3.0						ALKAPAM 1103D	1		SX																										
					CUTTING STRUCTURE										BOILERS																										
					TI	To	MDC	LOC	BRG	GAGE	ODC	REASON PULLED	TOTAL RUN mvHR	1				2																							
														HRS RUN				8				HRS RUN																			
31	D.P.		STANDS		584.13	HOLE CONDITION										BOILER pH				11				BOILER pH																	
	D.P.		SINGLES		12.76	HOLE DRAG										STACK TEMP				370				STACK TEMP																	
KELLY DOWN						TORQUE AT BOTTOM																																			
TOTAL			834.11		FILL ON BOTTOM (m)																																				
WT. OF D.C.		22																																							
WT. OF STRING		36																																							
																										CONNECTIONS				40		3663									

DAY TOUR		FROM 800		TO 1600		INJURIES	
CREW	SOC INS. NO.	NAME		HRS		YES	NO
DRIILLER		JACK HUSTON		12.00	L3		JH
DERRICKHAND		KARL GEREIN		12.00			KG
MOTORHAND		IAN ROSS		12.00			IR
FLOORHAND		WILL WINTER		12.00			WW
FLOORHAND		ADAM KACHUROWSKI		12.00			AK
RIG MANAGER		DAVE CROWLEY					DC
RATE SCHEDULE	X	REGULAR		REPAIR		INVERT	
<b>CREW SAFETY DAYS</b>			DRIVERS				
			JACK HUSTON				

NO.	DRILLING ASSEMBLY (AT END OF TOUR )		LENGTH	BIT RECORD					EVENING TOUR		MUD RECORD				METRES DRILLED					TIME LOG									
BIT			O.D.	28	BIT NO.		1RR		MUD TYPE		WATER BASED		OIL BASED		FROM	TO	D-R-C	RPM	WOB	FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS					
TORQUE SUB			160	1.97	SIZE		200		TIME						834	975	D	95	7	1600	1715	1.25	2	DRILL 834 TO 852					
D.C.			161	9.38	IADC CODE				DENSITY (kg/m3 )											1715	1730	0.25	10	DEVIATION SURVEY AT 839					
STAB			191	1.61	MANUFACTURER		VAREL		FUNNEL VISCOSITY											1730	2200	4.50	2	DRILL 852 TO 947					
SHOCK SUB			161	2.12	TYPE		MKS55		FLUID LOSS (cm3 )											2200	2215	0.25	10	DEVIATION SURVEY					
D.C.			161	103.72	SERIAL NO.		2722		pH											2215	2230	0.25	7	RIG SERVICE FUNCTION TEST PIPES 3 SECS TO CLOSE					
JAR			163	4.95	JETS		7X		10.3						CIRCULATION PRESSURE kPa		PUMP NO. 1		PUMP NO. 2		2230	0000	1.50	2	DRILL F/947 TO 975				
D.C.			159	37.53	DEPTH OUT (m)				PRODUCT		AMOUNT		UNIT		CENTRIFUGE		LINER SIZE		SPM		LINER SIZE		SPM						
X/O			163	.69	DEPTH IN (m)		730		HOURS RUN		INTAKE DENSITY (kg/m3)		OVER FLOW DENSITY		UNDER FLOW DENSITY		5424		152		105		152						
H.W.D.P.			101	74.97	TOTAL DRILLED (m)		245		HOURS RUN		INTAKE DENSITY (kg/m3)		OVER FLOW DENSITY		UNDER FLOW DENSITY		REDUCED PUMP SPEED		1720		@		66		@				
					TOTAL HRS RUN		10.25										DEVIATION SURVEYS		DEPTH ( m )		DEVIATION		DIRECTION						
					CUTTING STRUCTURE												839		.48										
					TI		To		MDC		LOC		BRG		GAGE		ODC		REASON PULLED		TOTAL RUN m/HR								
					HOLE CONDITION												937		.37						NOTES : FUNCTION CROWN SAVER				
D.P.			STANDS	716.05	HOLE DRAG																				VISUAL INSPECT TONGS,LINES,ANCHORS,BRAKES,PINS,LINKAGE				
D.P.			SINGLES	9.42	TORQUE AT BOTTOM																								
KELLY DOWN			12.31		FILL ON BOTTOM (m)																								
TOTAL			975.00																										
WT. OF D.C.			22																										
WT. OF STRING			38																										

[illegible]



LICENCE NO. <b>2047</b>	WELL NAME & NO. <b>PARA ET AL CAMERON A-03</b>
OPERATOR <b>PARAMOUNT RESOURCES LTD.</b>	CONTRACTOR NAME <b>PRECISION DRILLING, DIV OF PDC</b>
SURFACE LOCATION <b>A-03-60 DEG 10-117 DEG 30</b>	UNIQUE ID <b>300A036010117300</b>
SIGNATURE OF OPERATOR'S REPRESENTATIVE <b>BRIAN NEIGUM</b>	SIGNATURE OF CONTRACTOR'S RIG MANAGER <b>DAVE CROWLEY</b>

DAILY CHECKS	
( 1. )	Daily Walk Around Inspection
( 2. )	Detailed Inspection - Weekly ( Using Check List )
( 3. )	H2S Signs Posted if Required
( 4. )	Well Licence and Stick Diagram Posted
( 5. )	Flare Lines Staked
( 6. )	BOP Drills Performed
( 7. )	Visually Inspect BOPs- Flare Lines & Degasser Lines
( 1. )	Rig Site Health & Safety Meeting ( one/crew/month
( 2. )	CAODC Rig Safety Inspection Checklist ( one/rig/month
( 3. )	MASSC Inspection before Raising or Lowering
( 4. )	Crown Saver Checked
( 5. )	Motor Kills Checked

OPR	R.M
BN	DC
BN	DC
BN	DC
BN	DC
BN	
BN	DC

YEAR	2007	MONTH	2	DAY	
RIG NO.	220				
FUEL @ 08:00 HRS					
RIG	173		BOILER		
WEATHER	TEMPERATURE				
	-26				
	CURRENT CONDITIONS				
	OVERCAST				
	WIND DIRECTION				
	S.W.				
	ROAD CONDITION				
	SLIPPERY				

16	LAST CASING TUBING OR LINER	
	DC/ DP	DC / DP SIZE
	DC	165
	DP	102
	DP	102

O.D. (mm)	MIN I.D. (mm)	MASS (kg/m3)	MAKE			GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HEAD	SET AT (m)
219.1	205.7	35.7	IPSCO			J-55	33	436.34	.5	435.84
MASS	GRADE	MINIMUM I.D.	T. JNT. O.D.	TYPE THREAD	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER		STROKE LENGTH	
136	DC	57	165	41/2 XH	22	F-800	EMSCO		228.8	
43.2	HWDP	72	134	4FH	8	PZ-7	GARDNER DENVER		178	
23.38	SS/95	82	134	4FH	235					

SPUD DATE	2007/02/10	TIME	08:00
RIG RELEASE		TIME	
WELL TYPE	VERT.	RE-ENTRY	NO
OPERATOR'S AFE			
KELLY BSHG		OP FUEL	
CONTRACTOR'S JOB NUM	78		
TOUR SHEET SERIAL NUM	PREC220_20070216_1D		
VENDOR SOFTWARE VERSION	EDR 3-2-4 ETS 2.2		



# PASON DATAHUB

ITEM #	CODE NO.																										TOTALS	SHALE SHAKER(S)		RENTALS / SERVICES		MORN	DAY	EVE
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26								
	RIGUP & TEARDOWN	DRILL ACTUAL	REAMING	CORING	COND MUD & CIRC	TRIPS	RIG SERVICE	REPAIR RIG	CUT OFF DRILL LINE	DEV. SURVEY	WIRELINE LOGS	RUN CSG & CEMENT	WAIT ON CEMENT	NIPPLE UP B.O.P.	TEST B.O.P.	DRILLSTEM TEST	PLUG BACK	SQUEEZE CEMENT	FISHING	DIR. WORK	SAFETY MEETING													
MORN		7.25				0.25			0.5																		8.00	NO. 1 TYPE SWACO	TYPE CREW VEHICLE					
DAY		5.25			1.25	1.0	0.25		0.25																		8.00	SCREENS CHANGED TOP	NEW/USED TOP					
EVE		0.5	0.5		1.0	5.75	0.25																				8.00	38 MIDDLE	MIDDLE					
TOTAL		13.00	0.50		2.25	6.75	0.75		0.75																		24.00	38 BOTTOM	BOTTOM					

DRILLING CREW PAYROLL DATA						
WELL NAME & NO.			YEAR	MONTH	DAY	
PARA ET AL CAMERON A-03			2007	2	16	
OPERATOR		CONTRACTOR NAME				
PARAMOUNT RESOURCES LTD.		PRECISION DRILLING, DIV OF PDC				
RIG MANAGER			RIG NO.			
DAVE CROWLEY			220			
PROVINCE		CAMP			RIG SAFETY DAYS	
N.W.T.		<input checked="checked" type="checkbox"/> YES	<input type="checkbox"/> NO		1603	

[illegible][illegible]

NO.	DRILLING ASSEMBLY (AT END OF TOUR)		LENGTH	BIT RECORD			DAY TOUR			MUD RECORD			METRES DRILLED					TIME LOG							
	BIT	O.D.		BIT NO.	1RR	MUD TYPE	WATER BASED	OIL BASED	FROM	TO	D-R-C	RPM	WOB	FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS							
	TORQUE SUB	160	1.97	SIZE	200	TIME	1530	1163	1265	D	100	7	800	1145	3.75	2	DRILL 1163 to 1238								
1	D.C.	161	9.38	IADC CODE		DENSITY (kg/m3 )	1030						1145	1200	0.25	10	DEVIATION SURVEY AT 1225								
	STAB	191	1.61	MANUFACTURER	VAREL	FUNNEL VISCOSITY	43						1200	1300	1.00	2	DRILL 1238 TO 1250								
	SHOCK SUB	161	2.12	TYPE	MKS55	FLUID LOSS (cm3 )	20						1300	1415	1.25	5	CIRC-TRY TO UNPLUG JET								
11	D.C.	161	103.72	SERIAL NO.	2722	pH	11						1415	1445	0.50	2	DRILL 1250 TO 1265								
4	D.C.	159	37.53	JETS	7X 10.3	MUD MATERIALS ADDED		SOLIDS CONTROL		CIRCULATION PRESSURE kPa	PUMP NO. 1 LINER SIZE		SPM	PUMP NO. 2 LINER SIZE		SPM	1445	1500	0.25	7	RIG SERVICE-FUNCTION PIPE RAMS-3SECS. TO CLOSE				
	X/O	163	.69	DEPTH OUT (m)		GEL	66	SX	HOURS RUN	INTAKE DENSITY (kg/m3 )	OVER FLOW DENSITY	UNDER FLOW DENSITY	7000	152	105	152		1500	1600	1.00	6	POOH-FLOW CHECK AT 1253, AT 1175			
8	H.W.D.P.	101	74.97	DEPTH IN (m)	730	CAUSTIC	2	SX					REDUCED PUMP SPEED												
				TOTAL DRILLED (m)	535	SODA ASH	8	SX	HOURS RUN	INTAKE DENSITY (kg/m3 )	OVER FLOW DENSITY	UNDER FLOW DENSITY	DEVIATION SURVEYS												
				TOTAL HRS RUN	22.75	BARITE	20	SX					DEPTH ( m )	DEVIATION	DIRECTION										
				CUTTING STRUCTURE					BOILERS				1225	.45											
				TI	To	MDC	LOC	BRG	GAGE	ODC	REASON PULLED	TOTAL RUN m/HR	1		2										
54	D.P.	STANDS	1017.15	HOLE CONDITION					HRS RUN	8	HRS RUN							NOTES : FUNCTION CROWN SAVER							
	D.P.	SINGLES							BOILER pH	11	BOILER pH							VISUAL INSPECT TONGS,LINES,ANCHORS,BRAKES,PINS,LINKAGE							
	KELLY DOWN		10.63	HOLE DRAG					DRILLER SIGNATURE					SPECIAL EVENT				SAFETY TOPIC		MEHL	MACP				
	TOTAL		1265.00	TORQUE AT BOTTOM					STACK TEMP	370	STACK TEMP		JACK HUSTON	TIME / DEPTH				TRIPPING		50	3392				
	WT. OF D.C.		22	FILL ON BOTTOM (m)																					
	WT. OF STRING		46																						

[illegible]

NO.	DRILLING ASSEMBLY ( AT END OF TOUR )		LENGTH	BIT RECORD			EVENING TOUR			MUD RECORD			METRES DRILLED					TIME LOG							
	BIT	O.D.		BIT NO.	1RR		MUD TYPE		WATER BASED		OIL BASED		FROM	TO	D-R-C	RPM	WOB	FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS			
1	TORQUE SUB	160	1.97	SIZE	200							1265	1269	D	95	6	1600	1900	3.00	6	POOH - FLOW CHECK AT 639, AT 196, AND OUT OF HOLE-SURVEY TOOL FEATHER STUCK				
	D.C.	161	9.38	IADC CODE																	IN JET				
	STAB	191	1.61	MANUFACTURER	VAREL													1900	1915	0.25	7	RIG SERVICE FUNCTION BLIND RAMS			
11	SHOCK SUB	161	2.12	TYPE	MKS55													1915	2200	2.75	6	RIH			
	D.C.	161	103.72	SERIAL NO.	2722													2200	2230	0.50	3	WASH 2 SINGLES DOWN			
	JAR	163	4.95	JETS	7X	10.3												2230	2300	0.50	2	DRILL F/ 1265 TO 1269			
4	D.C.	159	37.53															2300	0000	1.00	5	TRY TO UNPLUG JET			
	X/O	163	.69																						
	H.W.D.P.	101	74.97																						
				DEPTH OUT (m)																					
				DEPTH IN (m)	730																				
				TOTAL DRILLED (m)	539																				
				TOTAL HRS RUN	23.25																				
				CUTTING STRUCTURE																					
				Ti	To	MDC	LOC	BRG	GAGE	ODC	REASON PULLED	TOTAL RUN m/Hr													
54	D.P.	STANDS	1017.15																			NOTES : STRAP-1265.10 /BOARD-1265/DIFF- .10			
	D.P.	SINGLES	9.4	HOLE CONDITION																		HOLE FILL-ACT. 6.62 / CAL. 6.47			
	KELLY DOWN		5.23																			FUNCTION TEST CROWN SAVER			
	TOTAL		1269.00																			VISUALLY INSPECT TONGS LINES BRAKES PINS LINKAGE AND ANCHOR			
	WT. OF D.C.	22		HOLE DRAG																					
	WT. OF STRING	46		TORQUE AT BOTTOM																					
				FILL ON BOTTOM (m)																					

[illegible]







LICENCE NO. <b>2047</b>	WELL NAME & NO. <b>PARA ET AL CAMERON A-03</b>
OPERATOR <b>PARAMOUNT RESOURCES LTD.</b>	CONTRACTOR NAME <b>PRECISION DRILLING, DIV OF PDC</b>
SURFACE LOCATION <b>A-03-60 DEG 10-117 DEG 30</b>	UNIQUE ID <b>300A036010117300</b>
SIGNATURE OF OPERATOR'S REPRESENTATIVE <b>BRIAN NEIGUM</b>	SIGNATURE OF CONTRACTOR'S RIG MANAGER <b>DAVE CROWLEY</b>

DAILY CHECKS		OP	R	M
( 1 )	Daily Walk Around Inspection	BN	DC	
( 2 )	Detailed Inspection - Weekly ( Using Check List )			
( 3 )	H2S Signs Posted if Required	BN	DC	
( 4 )	Well Licence and Safety Diagram Posted	BN	DC	
( 5 )	Flare Lines Staked	BN	DC	
( 6 )	BOP Drills Performed	BN	DC	
( 7 )	Visually Inspect BOPs- Flare Lines & Degasser Lines	BN	DC	
( 1 )	Rig Site Health & Safety Meeting ( one/twice/month )			
( 2 )	CADOC Rig Satet Inspection Checklist ( one/twice/month )			
( 3 )	Master Inspection before Raising or Lowering			
( 4 )	Crown Saver Checked		DC	
( 5 )	Rotor Mills Checked		DC	

YEAR	2007	MONTH	2	DAY	18
RIG NO.	220				
FUEL @ 08:00 HRS					
RIG	75		BOILER		
W E A T H E R	TEMPERATURE				
	-26				DC/
	CURRENT CONDITIONS				
	OVERCAST				DC
	WIND DIRECTION				
	S.W.				DP
	ROAD CONDITION				
	SLIPPERY				DP

LAST CASTING TUBING OR LINER	O.D. (mm)	MIN I.D. (mm)	MASS (kg/m3)	MAKE			GRADE	NO. OF JOINTS	TOTAL LENGTH	KB TO CSG HEAD	SET AT (m)
	219.1	205.7	35.7	IPSCO			J-55	33	436.34	.5	435.84
DC /DP SIZE	MASS	GRADE	MINIMUM I.D.	T. JNT. O.D.	TYPE THREAD	NO. OF JOINTS	PUMP TYPE	PUMP MANUFACTURER			STROKE LENGTH
165	136	DC	57	165	41/2 XH	22	F-800	EMSCO			228.8
102	43.2	HWDP	72	134	4FH	8	PZ-7	GARDNER DENVER			178
102	23.38	SS/95	82	134	4FH	235					

SPUD DATE	2007/02/10	TIME	08:00
RIG RELEASE		TIME	
WELL TYPE	VERT.	RE-ENTRY	NO
OPERATOR'S AFE			
KELLY BSHG		OP FUEL	
CONTRACTOR'S JOB NUM	78		
TOUR SHEET SERIAL NUM	PREC220_20070218_1C		
VENDOR SOFTWARE VERSION	EDR 3-2-4 ETS 2.2		



# PASON DATAHUB

[illegible]

DRILLING CREW PAYROLL DATA						
WELL NAME & NO.			YEAR	MONTH	DAY	
PARA ET AL CAMERON A-03			2007	2	18	
OPERATOR		CONTRACTOR NAME				
PARAMOUNT RESOURCES LTD.		PRECISION DRILLING, DIV OF PDC				
RIG MANAGER				RIG NO.		
DAVE CROWLEY				220		
PROVINCE		CAMP			RIG SAFETY DAYS	
N.W.T.		<input checked="checked" type="checkbox"/> YES	<input type="checkbox"/> NO		1605	

[illegible][illegible]

NO.	DRILLING ASSEMBLY ( AT END OF TOUR )		LENGTH	BIT RECORD				DAY TOUR		MUD RECORD				METRES DRILLED					TIME LOG																	
	BIT		O.D.	.28	BIT NO.	2			MUD TYPE			WATER BASED	<input type="checkbox"/>	OIL BASED	<input type="checkbox"/>	FROM	TO	D-R-C	RPM	WOB	FROM	TO	ELAPSED TIME	CODE	DETAILS OF OPERATIONS IN SEQUENCE & REMARKS											
	TORQUE SUB		160	1.97	SIZE	200			TIME	1100		1400	1630		1436	1521	D	80	7	800	815	0.25	22	BOP DRILL- WELL SECURE IN 95 SECS.												
1	D.C.		161	9.38	IADC CODE				DENSITY (kg/m3 )	1130		1130	1125							815	1545	7.50	2	DRILL 1436 TO 1521												
	STAB		191	1.61	MANUFACTURER	VAREL			FUNNEL VISCOSITY	62		45	50							1545	1600	0.25	7	RIG SERVICE-FUNCTION PIPE RAMS-3SECS. TO CLOSE-FUNCTION MOTOR KILLS												
	SHOCK SUB		161	2.12	TYPE	MKS55			FLUID LOSS (cm3 )	10		9	10																							
11	D.C.		161	103.72	SERIAL NO.	3174			pH	10.5		10.5	11																							
	JAR		163	4.95	JETS	7X 10.3			MUD MATERIALS ADDED			SOLIDS CONTROL			CIRCULATION PRESSURE kPa		PUMP NO. 1		PUMP NO. 2																	
4	D.C.		159	37.53	PRODUCT	AMOUNT		UNIT	CENTRIFUGE				LINER SIZE		SPM		LINER SIZE		SPM																	
	X/O		163	.69	DESCO	2		SX	HOURS RUN	INTAKE DENSITY ( kg/m3 )		OVER FLOW DENSITY		UNDER FLOW DENSITY		9000		152		110		152														
8	H.W.D.P.		101	74.97	DRISPAC REG	4		SX	REDUCED PUMP SPEED																											
					HUMALITE	4		SX	8	1160		1130				3610		@		60		@														
					TOTAL DRILLED (m)	141			HOURS RUN	INTAKE DENSITY ( kg/m3 )		OVER FLOW DENSITY		UNDER FLOW DENSITY		DEVIATION SURVEYS																				
					TOTAL HRS RUN	14			CAUSTIC	3		SX				DEPTH ( m )		DEVIATION		DIRECTION																
					CUTTING STRUCTURE																															
					TI	To	MDC	LOC	BRG	GAGE	ODC	REASON PULLED	TOTAL RUN m/HR	BOILERS																						
														1		2																				
67	D.P.		STANDS		1261.94	HOLE CONDITION								HRS RUN	8		HRS RUN																			
	D.P.		SINGLES		9.4	HOLE DRAG								BOILER pH	11		BOILER pH																			
1	KELLY DOWN				12.76	TORQUE AT BOTTOM								STACK TEMP	370		STACK TEMP																			
	TOTAL				1521.32	FILL ON BOTTOM (m)								DRILLER SIGNATURE				SPECIAL EVENT										SAFETY TOPIC		MEHL		MACP				
	WT. OF D.C.		22		HOLE DRAG									JACK HUSTON				TIME / DEPTH										BOP DRILL		55		3008				
	WT. OF STRING		48		HOLE DRAG																															

DAY TOUR		FROM 800		TO 1600		INJURIES			
CREW		SOC INS. NO.	NAME			HRS		YES	NO
DRILLER			JACK HUSTON			12.00	L3		JH
DERRICKHAND			KARL GEREIN			12.00			KG
MOTORHAND			IAN ROSS			12.00			IR
FLOORHAND			WILL WINTER			12.00			WW
FLOORHAND			ADAM KACHUROWSKI			12.00			AK
RIG MANAGER			DAVE CROWLEY						DC

[illegible]

EVENING TOUR		FROM	1600	TO	2400	INJURIES		
CREW	SOC INS. NO.	NAME			HRS		YES	NO
DRILLER		DAVE D CROWLEY			4.00			DC
DERRICKHAND		DANNY S CROWLEY			4.00			DC
MOTORHAND		COREY ANDERSON			4.00			CA
FLOORHAND		SERGE TETRAULT			4.00			ST
FLOORHAND		BRECK PICHE			4.00			BP
								</



[illegible]







LICENCE NO.

2047

WELL NAME & NO.

PARA ET AL CAMERON A-03

OPERATOR

PARAMOUNT RESOURCES LTD.

CONTRACTOR NAME

PRECISION DRILLING, DIV OF PDC

SURFACE LOCATION

A-03-60 DEG 10-117 DEG 30

UNIQUE ID

300A036010117300

SIGNATURE OF OPERATOR'S REPRESENTATIVE

BRIAN NEIGUM

SIGNATURE OF CONTRACTOR'S RIG MANAGER

DAVE CROWLEY

DAILY CHECKS

(1.) Daily Walk Around Inspection

(2.) Detailed Inspection - Weekly ( Using Check List )

(3.) H2S Signs Posted if Required

(4.) Well License & Stick Diagram Posted

(5.) Flare Lines Staked

(6.) BOP Drills Performed

(7.) Visually Inspect BOPs- Flare Lines & Degasser Lines

(1.) Rig Site Health & Safety Meeting ( one/crew/month )

(2.) CAODC Rig Safet Inspection Checklist ( one/rig/month )

(3.) Mast Inspection before Raising or Lowering

(4.) Crown Saver Checked

(5.) Motor Kills Checked

YEAR2007MONTH2DAY21

LAST CASING TUBING OR LINER

RIG NO.220

FUEL @ 08:00 HRS

RIG62

BOILER

TEMPERATURE

DC/DP

DC/DP SIZE

MASS

GRADE

MINIMUM I.D.

T. JNT. O.D.

TYPE THREAD

NO. of JOINTS

PUMP TYPE

PUMP MANUFACTURER

STROKE LENGTH

DC165

136

DC

57

165

41/2 XH

22

F-800

EMSCO

228.8

DP102

43.2

HWDP

72

134

4FH

8

PZ-7

GARDNER DENVER

178

DP102

23.38

SS/95

82

134

4FH

235

W E A T H E R

TEMPERATURE

OVERCAST

WIND DIRECTION

S.W.

ROAD CONDITION

SLIPPERY

O.D. (mm)	MIN I.D. (mm)	MASS (kg/m3)	MAKE	GRADE	NO. of JOINTS	TOTAL LENGTH	KB TO CSG HEAD	SET AT (m)
219.1	205.7	35.7	IPSCO	J-55	33	436.34	.5	435.84
139.7	125.7	23.07	IPSCO	J-55	121	1590.79		

CODE NO.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	TOTALS	SHALE SHAKER(S)		RENTALS / SERVICES		MORN	DAY	EVE	
TIME HRS	RIGUP & TEARDOWN	DRILL ACTUAL	REAMING	CORING	COND MUD & CIRC	TRIPS	RIG SERVICE	REPAIR RIG	CUT OFF DRILL LINE	DEV. SURVEY	WIRELINE LOGS	RUN CSG & CEMENT	WAIT ON CEMENT	NIPPLE UP B.O.P.	TEST B.O.P.	DRILLSTEM TEST	PLUG BACK	SQUEEZE CEMENT	FISHING	DIR. WORK	SAFETY MEETING									NO. 1	TYPE SWACO	TYPE NEW/USED	CREW VEHICLE			
	8.0																											8.00	SCREENS CHANGED							
	8.0																											8.00	TOP	TOP						
	8.0																											8.00	MIDDLE	MIDDLE						
	24.00																											24.00	BOTTOM	BOTTOM						

NO.

DRILLING ASSEMBLY ( AT END OF TOUR )

LENGTH

BIT

O.D.

BIT NO.

SIZE

IADC CODE

MANUFACTURER

TYPE

SERIAL NO.

JETS

DEPTH OUT (m)

DEPTH IN (m)

TOTAL DRILLED (m)

TOTAL HRS RUN

CUTTING STRUCTURE

TI

To

MDC

LOC

BRG

GAGE

ODC

REASON PULLED

TOTAL RUN m/HR

D.P.

STANDS

D.P.

SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

NO.

DRILLING ASSEMBLY ( AT END OF TOUR )

LENGTH

BIT

O.D.

BIT NO.

SIZE

IADC CODE

MANUFACTURER

TYPE

SERIAL NO.

JETS

DEPTH OUT (m)

DEPTH IN (m)

TOTAL DRILLED (m)

TOTAL HRS RUN

CUTTING STRUCTURE

TI

To

MDC

LOC

BRG

GAGE

ODC

REASON PULLED

TOTAL RUN m/HR

D.P.

STANDS

D.P.

SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

MUD TYPE

WATER BASED

OIL BASED

TIME

DENSITY (kg/m3)

FUNNEL VISCOSITY

FLUID LOSS (cm3)

pH

MUD MATERIALS ADDED

SOLIDS CONTROL

CIRCULATION PRESSURE kPa

PUMP NO. 1

PUMP NO. 2

REDUCED PUMP SPEED

DEVIATION SURVEYS

BOILERS

HRS RUN

8

HRS RUN

BOILER pH

11

BOILER pH

STACK TEMP

370

STACK TEMP

FROM

TO

D-R-C

RPM

WOB

FROM

TO

ELAPSED TIME

CODE

DETAILS OF OPERATIONS IN SEQUENCE & REMARKS

0

800

8.00

1

TEAR DOWN

NOTES :

SPECIAL EVENT

TIME / DEPTH

SAFETY TOPIC

MEHL

MACP

DAVE D CROWLEY

NO.

DRILLING ASSEMBLY ( AT END OF TOUR )

LENGTH

BIT

O.D.

BIT NO.

SIZE

IADC CODE

MANUFACTURER

TYPE

SERIAL NO.

JETS

DEPTH OUT (m)

DEPTH IN (m)

TOTAL DRILLED (m)

TOTAL HRS RUN

CUTTING STRUCTURE

TI

To

MDC

LOC

BRG

GAGE

ODC

REASON PULLED

TOTAL RUN m/HR

D.P.

STANDS

D.P.

SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

NO.

DRILLING ASSEMBLY ( AT END OF TOUR )

LENGTH

BIT

O.D.

BIT NO.

SIZE

IADC CODE

MANUFACTURER

TYPE

SERIAL NO.

JETS

DEPTH OUT (m)

DEPTH IN (m)

TOTAL DRILLED (m)

TOTAL HRS RUN

CUTTING STRUCTURE

TI

To

MDC

LOC

BRG

GAGE

ODC

REASON PULLED

TOTAL RUN m/HR

D.P.

STANDS

D.P.

SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

MUD TYPE

WATER BASED

OIL BASED

TIME

DENSITY (kg/m3)

FUNNEL VISCOSITY

FLUID LOSS (cm3)

pH

MUD MATERIALS ADDED

SOLIDS CONTROL

CIRCULATION PRESSURE kPa

PUMP NO. 1

PUMP NO. 2

REDUCED PUMP SPEED

DEVIATION SURVEYS

BOILERS

HRS RUN

8

HRS RUN

BOILER pH

11

BOILER pH

STACK TEMP

370

STACK TEMP

FROM

TO

D-R-C

RPM

WOB

FROM

TO

ELAPSED TIME

CODE

DETAILS OF OPERATIONS IN SEQUENCE & REMARKS

800

1600

8.00

1

TEAR DOWN

VISUALLY INSPECT DERICK AND LAY OVER DC.

NOTES :

SPECIAL EVENT

TIME / DEPTH

SAFETY TOPIC

MEHL

MACP

JACK HUSTON

NO.

DRILLING ASSEMBLY ( AT END OF TOUR )

LENGTH

BIT

O.D.

BIT NO.

SIZE

IADC CODE

MANUFACTURER

TYPE

SERIAL NO.

JETS

DEPTH OUT (m)

DEPTH IN (m)

TOTAL DRILLED (m)

TOTAL HRS RUN

CUTTING STRUCTURE

TI

To

MDC

LOC

BRG

GAGE

ODC

REASON PULLED

TOTAL RUN m/HR

D.P.

STANDS

D.P.

SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

NO.

DRILLING ASSEMBLY ( AT END OF TOUR )

LENGTH

BIT

O.D.

BIT NO.

SIZE

IADC CODE

MANUFACTURER

TYPE

SERIAL NO.

JETS

DEPTH OUT (m)

DEPTH IN (m)

TOTAL DRILLED (m)

TOTAL HRS RUN

CUTTING STRUCTURE

TI

To

MDC

LOC

BRG

GAGE

ODC

REASON PULLED

TOTAL RUN m/HR

D.P.

STANDS

D.P.

SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

MUD TYPE

WATER BASED

OIL BASED

TIME

DENSITY (kg/m3)

FUNNEL VISCOSITY

FLUID LOSS (cm3)

pH

MUD MATERIALS ADDED

SOLIDS CONTROL

CIRCULATION PRESSURE kPa

PUMP NO. 1

PUMP NO. 2

REDUCED PUMP SPEED

DEVIATION SURVEYS

BOILERS

HRS RUN

8

HRS RUN

BOILER pH

11

BOILER pH

STACK TBMP

370

STACK TBMP

FROM

TO

D-R-C

RPM

WOB

FROM

TO

ELAPSED TIME

CODE

DETAILS OF OPERATIONS IN SEQUENCE & REMARKS

1600

2400

8.00

1

TEAR DOWN

RIG RELEASED FEB 21 2007 24:00HRS

NOTES :

SPECIAL EVENT

TIME / DEPTH

SAFETY TOPIC

MEHL

MACP

DAVE D CROWLEY

SPUD DATE2007/02/10

TIME08:00

RIG RELEASE2007/02/21

TIME23:59

WELL TYPEVERT.

RE-ENTRYNO

OPERATOR'S AFE

KELLY BSHG

OP FUEL

CONTRACTOR'S JOB NUM78

RIG NO.220

TOUR SHEET SERIAL NUMPREC220\_20070221\_1B

VENDOR SOFTWARE VERSIONEDR\_3-2-4\_HF2 ETS 2.2



PASON DATAHUB

DRILLING CREW PAYROLL DATA									
WELL NAME & NO.					YEAR	MONTH	DAY		
PARA ET AL CAMERON A-03					2007	2	21		
OPERATOR					CONTRACTOR NAME				
PARAMOUNT RESOURCES LTD.					PRECISION DRILLING, DIV OF PDC				
RIG MANAGER					RIG NO.				
DAVE CROWLEY					220				
PROVINCE					CAMP	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		RIG SAFETY DAYS	
N.W.T.								1608	
MORNING TOUR		FROM	0	TO	800			INJURIES	
CREW	SOC INS. NO.	NAME			HRS		YES	NO	
DRILLER		DAVE D CROWLEY			8.00				DC
DERRICKHAND		DANNY S CROWLEY			8.00				DC
MOTORHAND		COREY ANDERSON			8.00				CA
FLOORHAND		MIKE BELLAMY			8.00		MB		
FLOORHAND		BRECK PICHE			8.00				BP



# TEMPERATURE LOG INJECTION PROFILE

PROVINCE NORTHWEST TERRITORIES  
FIELD CAMERON HILLS  
WELL PARA et al CAMERON A-03  
300A-036010117300  
COMPANY PARAMOUNT RESOURCES LTD.

COMPANY PARAMOUNT RESOURCES LTD.

WELL PARA et al CAMERON A-03  
300A-036010117300

FIELD CAMERON HILLS

PROVINCE NORTHWEST TERRITORIES

LSD Sec. Twp. Rge.  
Perm. Datum Ground Level Elev. 767.40  
Log measured from K.B. , 5.40 m above  
Permanent Datum.

Other Services:

UWI 300A-036010117300  
Licence 2047

ELEV. K.B. 772.80  
G.L. 767.40

Date	MARCH 08, 2007	Shot Density	No. of Shots	Perf. Interval	
Service Order	4313619			From	To
Run No.	ONE				
BHT	0°C				
Depth-Driller	1589.0				
Depth-Logger	1564.0				
Btm. Log Inter.	1560.0				
Top Log Inter.	1320.0				
Fluid in Hole	WATER	Gun Type			
Fluid Level	FULL	Gun Size			
Bit Size (mm)	N/A	Tubing/Casing Record			
Unit #	14215	Size mm	Wt. Kg/m	From	To
Location	HIGH LEVEL	219.1	35.7	SURFACE	436.0
Recorded By	D. RADKIE	139.7	23.07	SURFACE	1589.0
Witnessed By	K. McLEOD				

## Other Services

Service	Type	Size	Depth
Bridge Plug			
Produc. Packer			
Cement Retainer			
Cement			
Tubing Bottom	Junk Basket Type		
Seating Nipple	Gauge Ring Size		

All interpretations of log data are opinions based on inferences from electrical or other measurements. We do not guarantee the accuracy or correctness of any interpretation or recommendation and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by anyone resulting from any interpretation or recommendation made by any of our employees or agents.

Service Order # 4313619

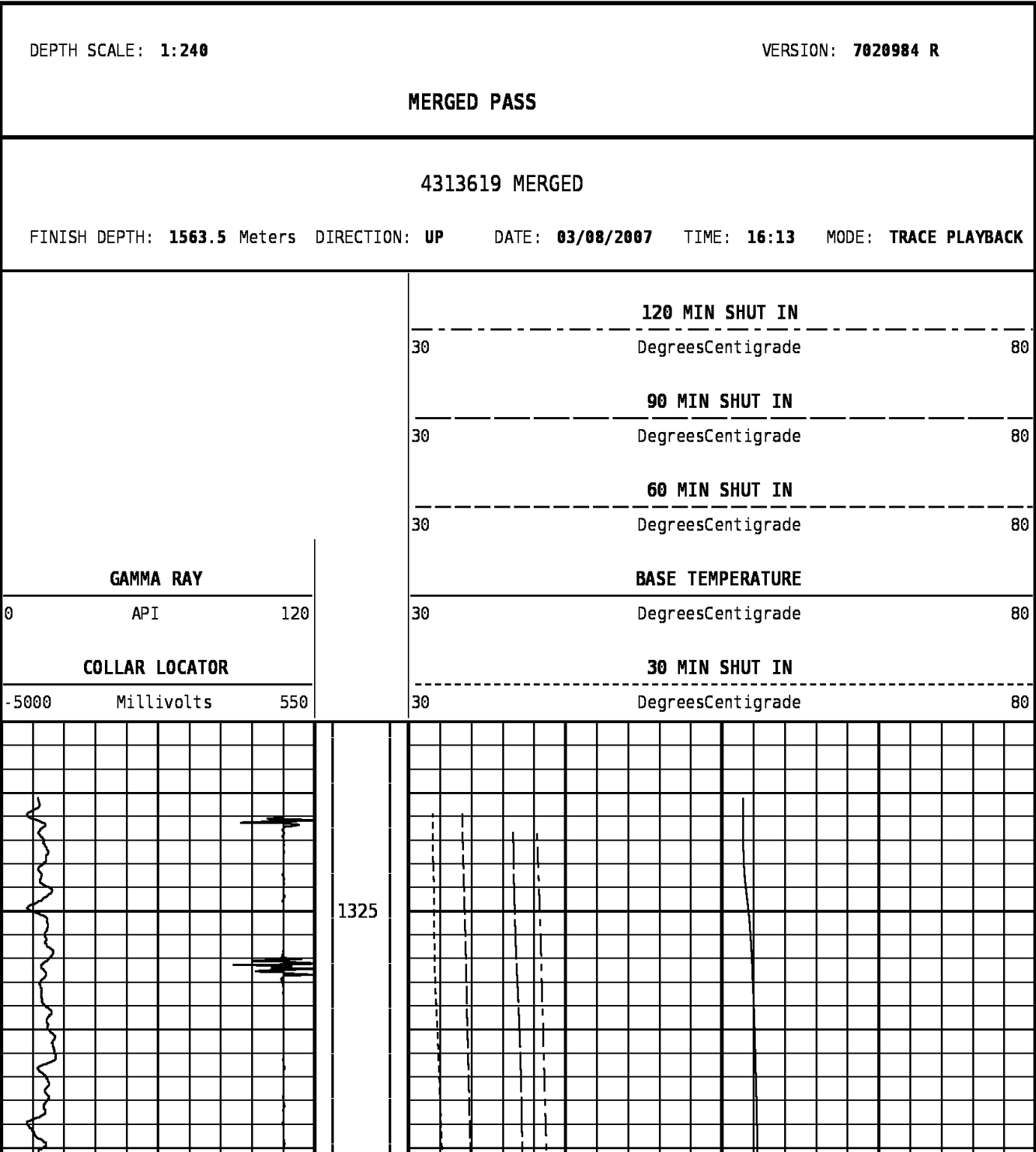
REMARKS Rig: PICKER  
LOG CORRELATED TO WEATHERFORD WIRELINE SECTOR BOND LOG  
DATED MARCH 04, 2007

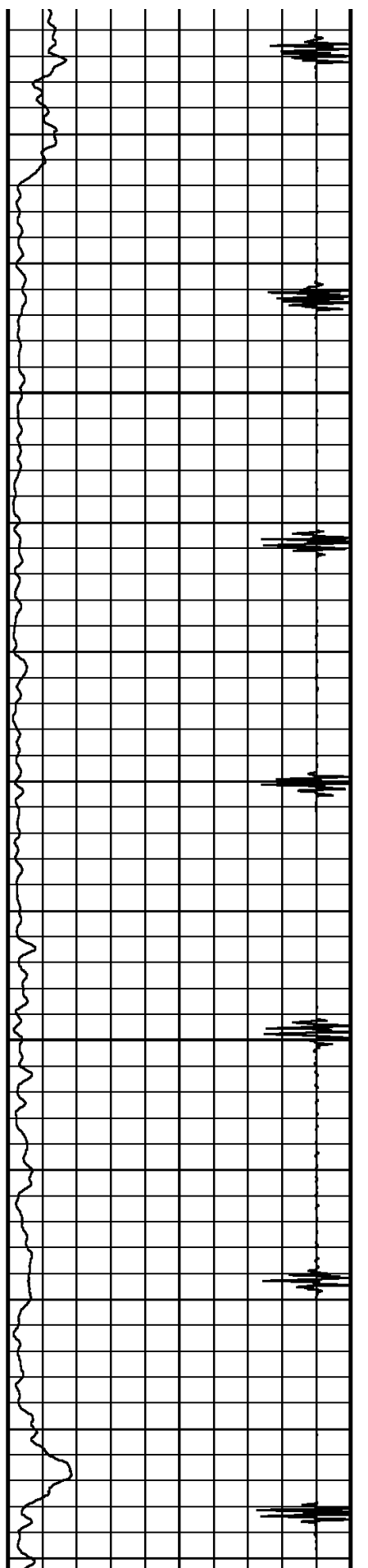
TICKET # 10155218

## EQUIPMENT DATA

Run No.	Tool Type	Tool No.	Other	
			INJECTION PROFILE	
ONE	TMP-DA	104		
	GRC-CA	116		
	CCL-CA	116		

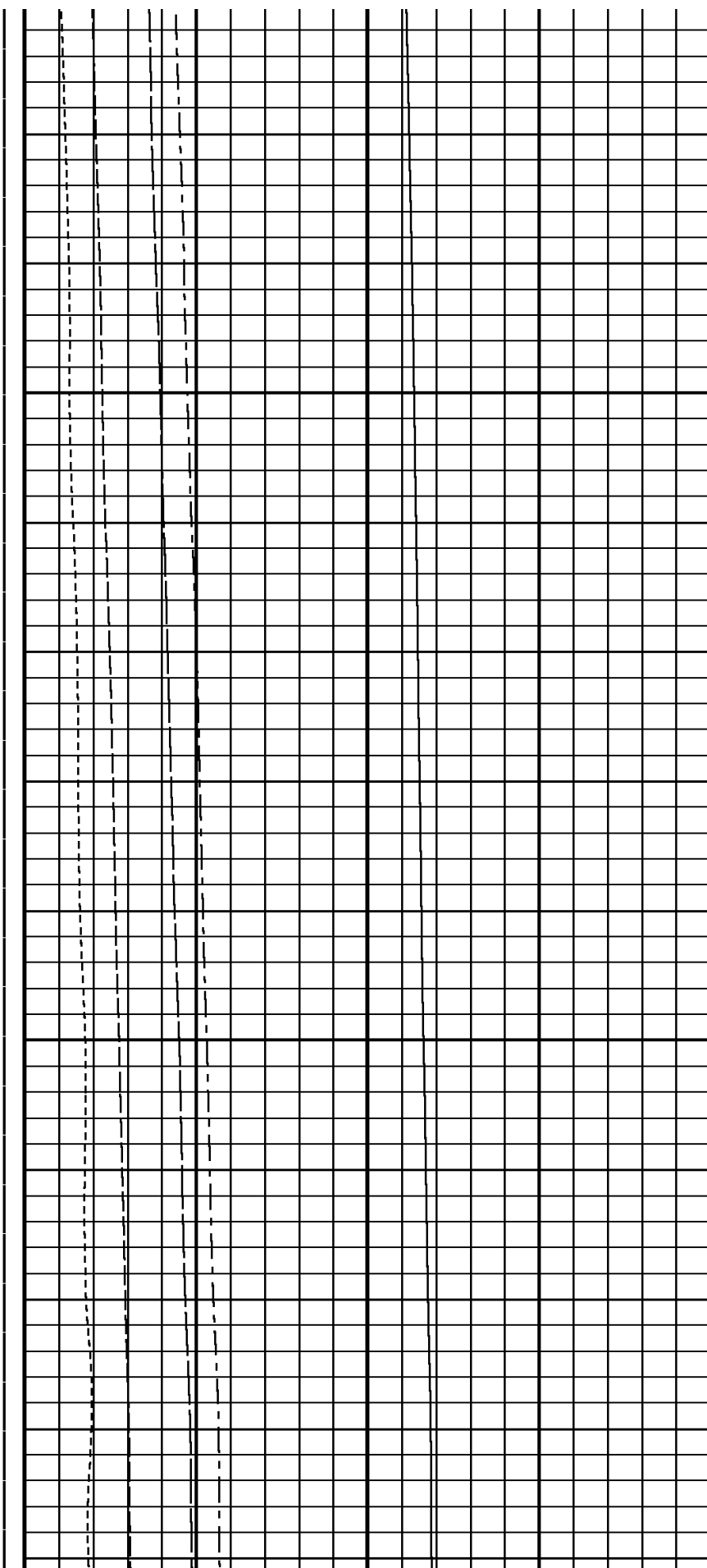


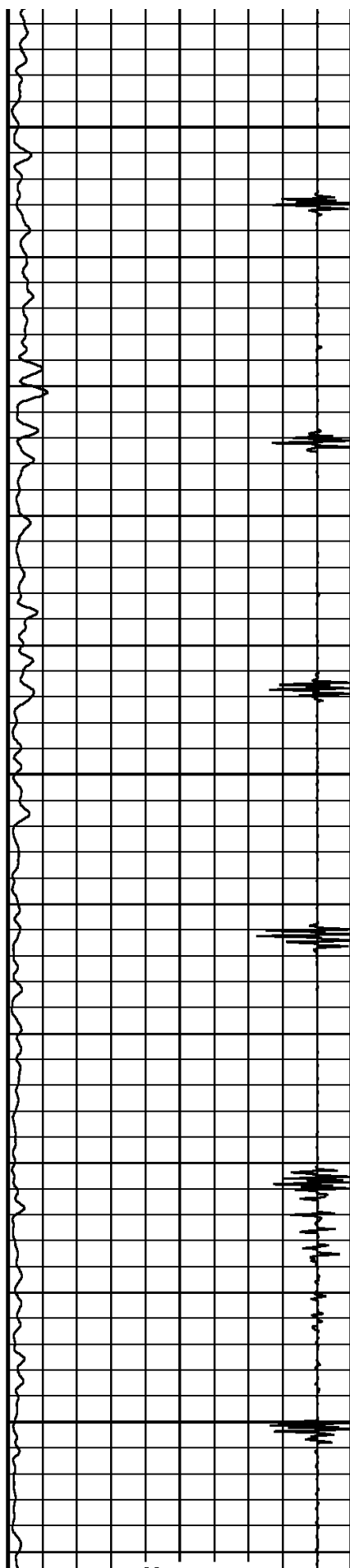





1350

1375

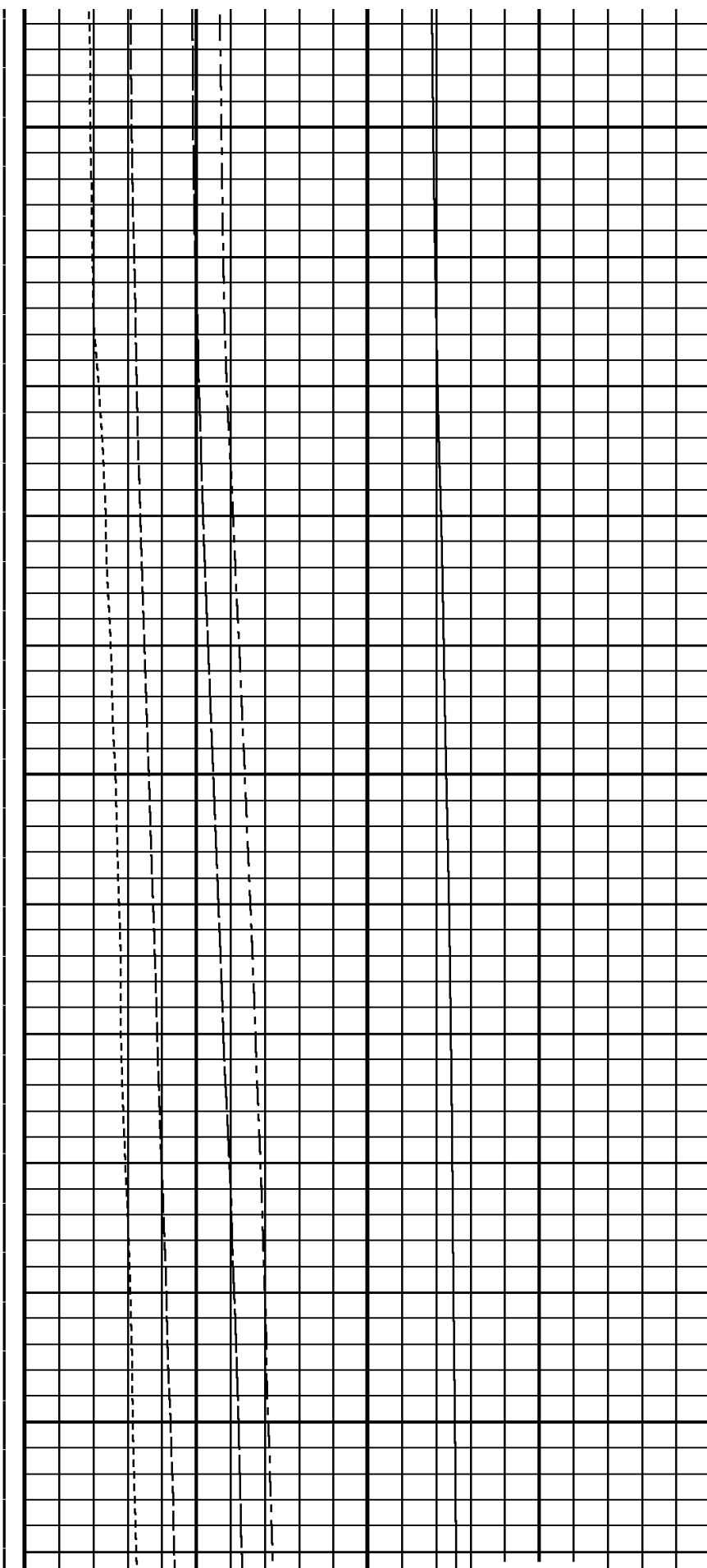


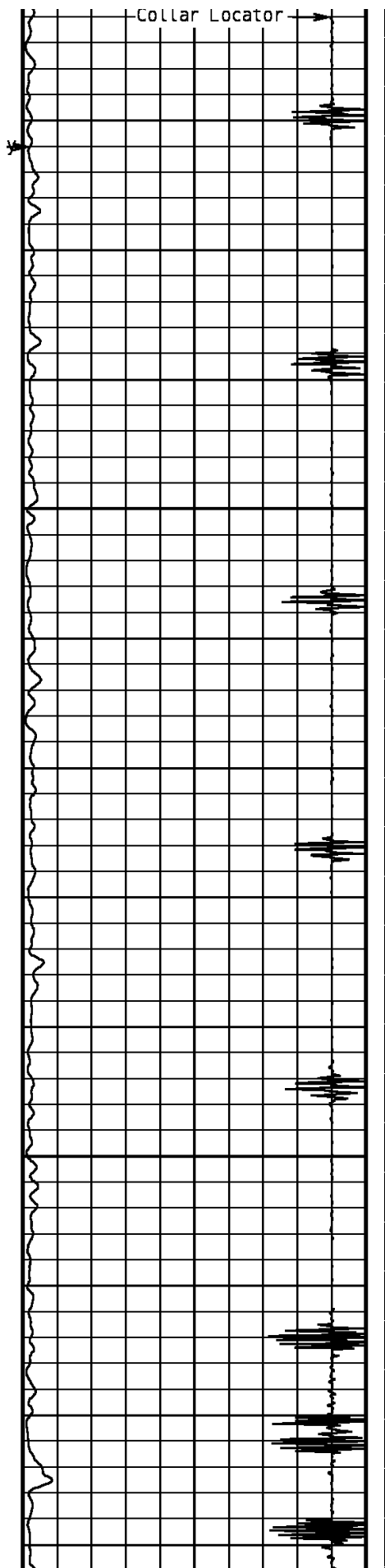


1400

1425

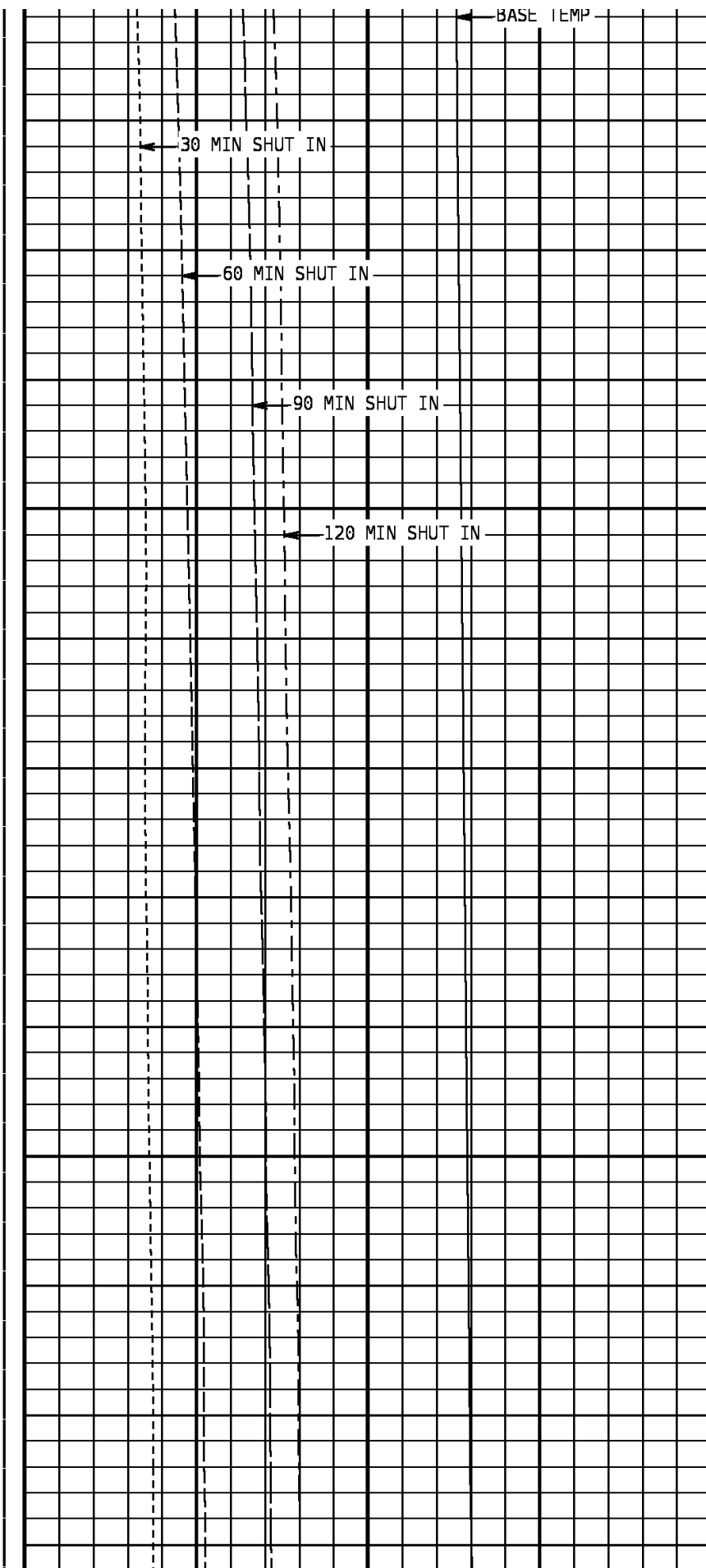
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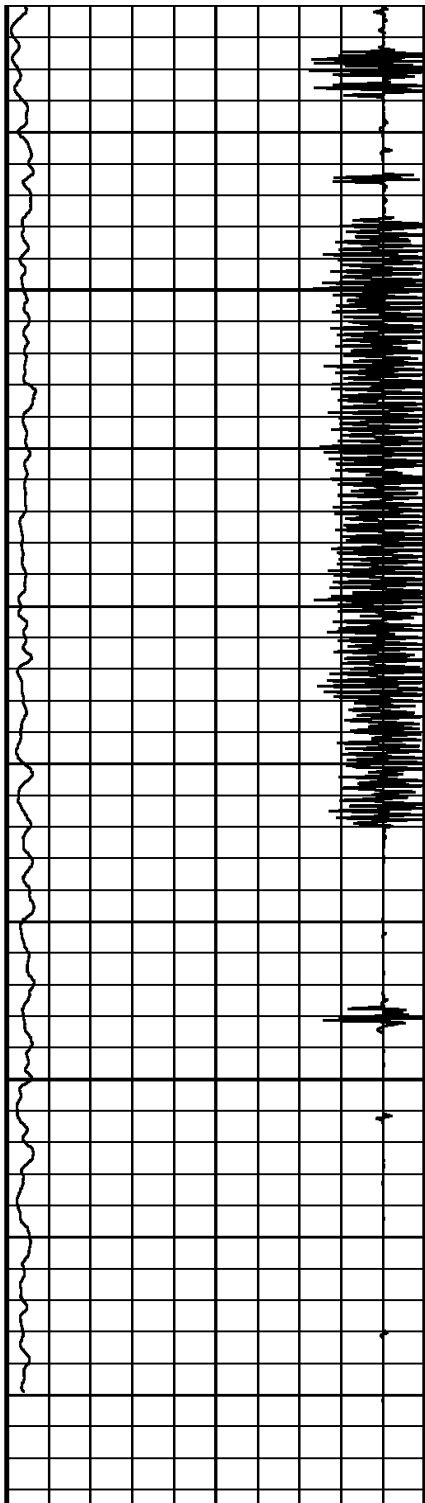




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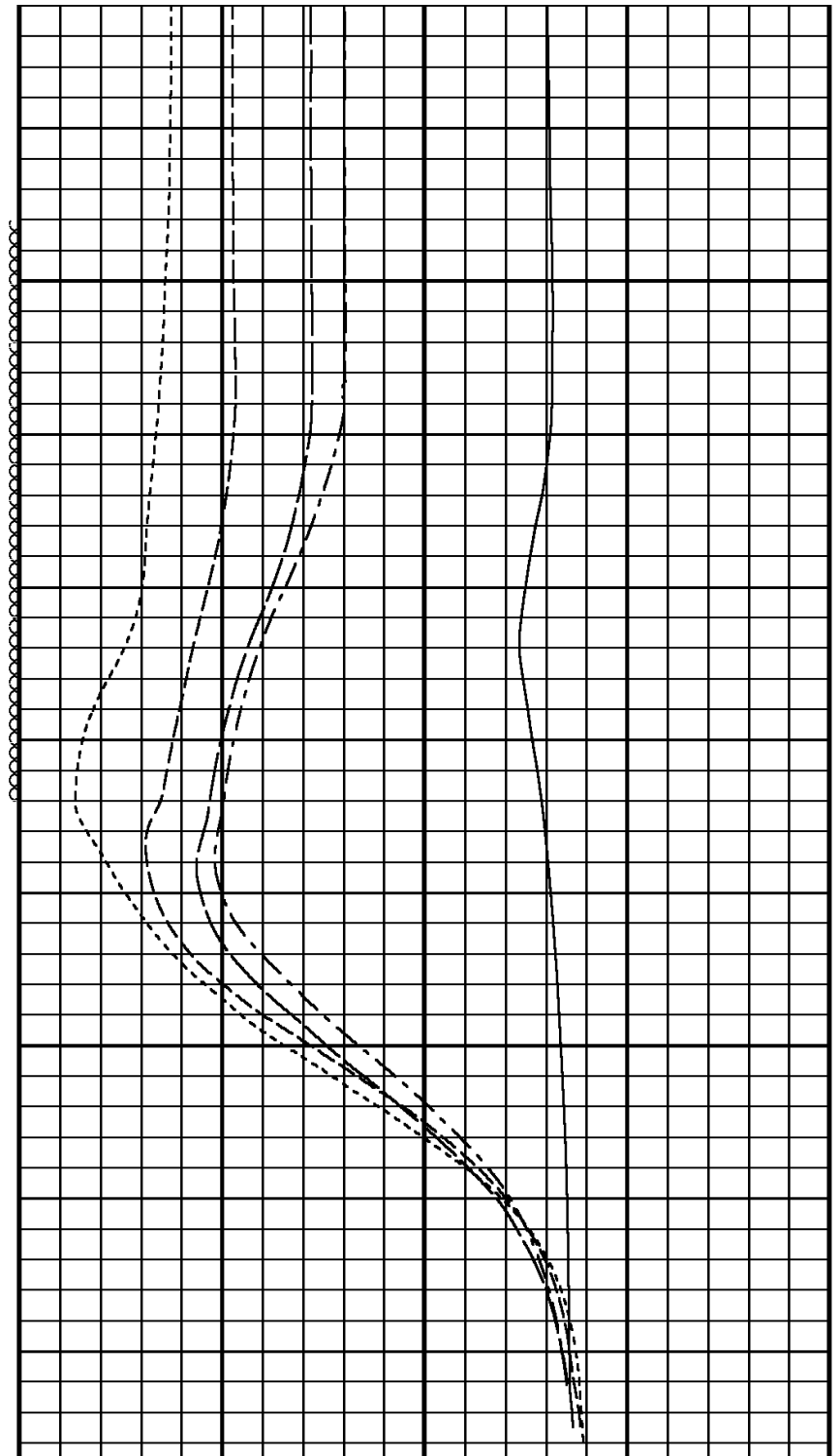
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1525

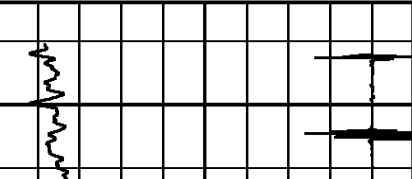

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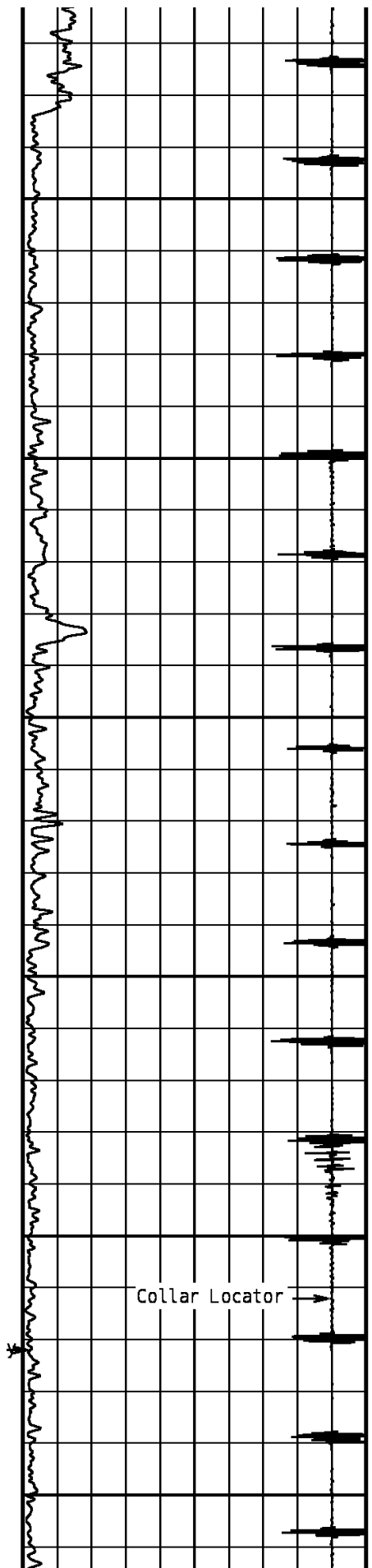


COLLAR LOCATOR		
-5000	Millivolts	550
GAMMA RAY		
0	API	120

30 MIN SHUT IN		
30	DegreesCentigrade	80
BASE TEMPERATURE		
30	DegreesCentigrade	80
60 MIN SHUT IN		
30	DegreesCentigrade	80

		90 MIN SHUT IN			
30	DegreesCentigrade			80	
		120 MIN SHUT IN			
30	DegreesCentigrade			80	
START DEPTH: 1563.5    DIRECTION: UP    DATE: 03/08/2007    TIME: 16:13    MODE: TRACE PLAYBACK					
4313619 MERGED					
MERGED PASS					
DEPTH SCALE: 1:240				VERSION: 7020984 R	

DEPTH SCALE: 1:600				VERSION: 7020984 R			
4313619							
FINISH DEPTH: 1563.5 Meters    DIRECTION: UP    DATE: 03/08/2007    TIME: 16:14    MODE: TRACE PLAYBACK							
				120 MIN SHUT IN			
				30 DegreesCentigrade 80			
				90 MIN SHUT IN			
				30 DegreesCentigrade 80			
				60 MIN SHUT IN			
30 DegreesCentigrade 80							
GAMMA RAY				BASE TEMPERATURE			
0	API		120	30	DegreesCentigrade		80
COLLAR LOCATOR				30 MIN SHUT IN			
-5000	Millivolts		550	30	DegreesCentigrade		80
							



1350

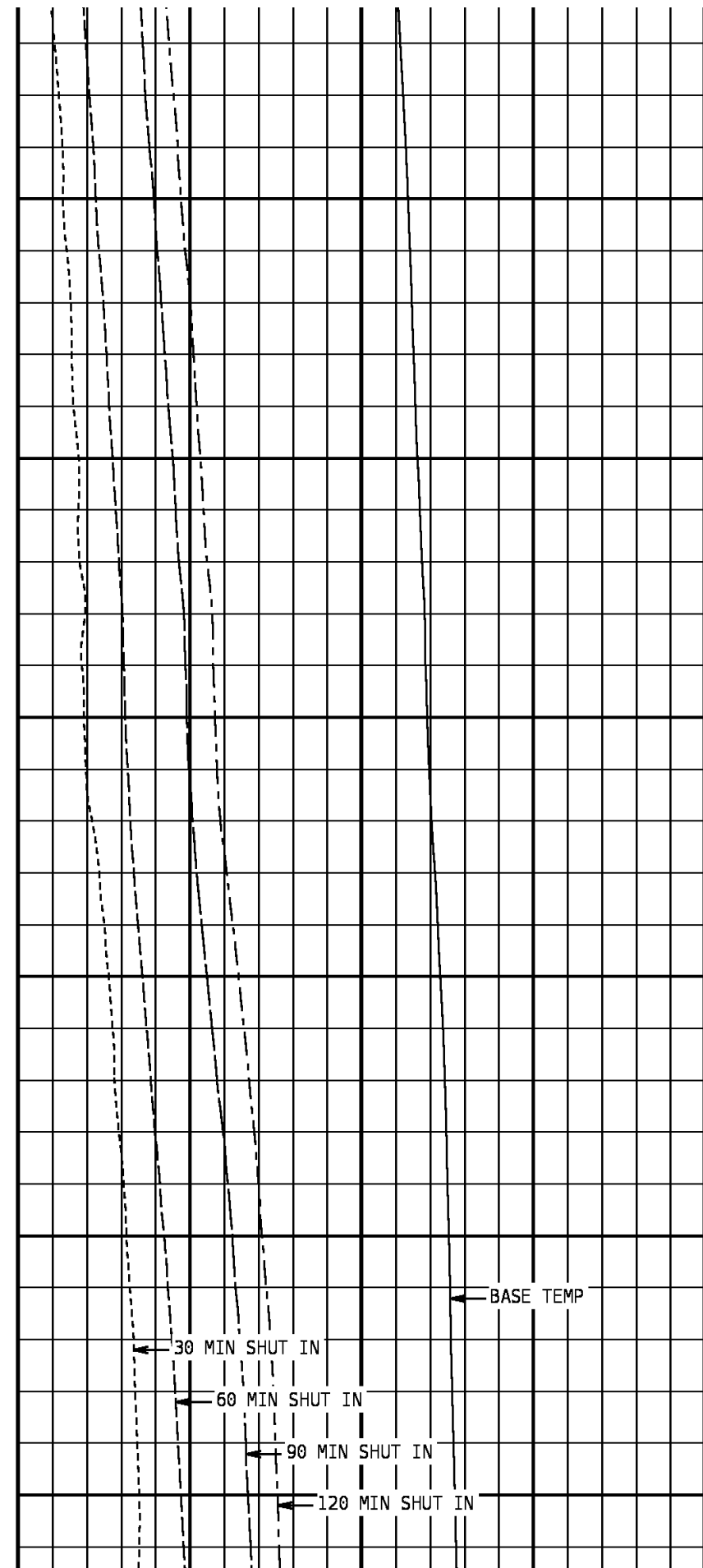
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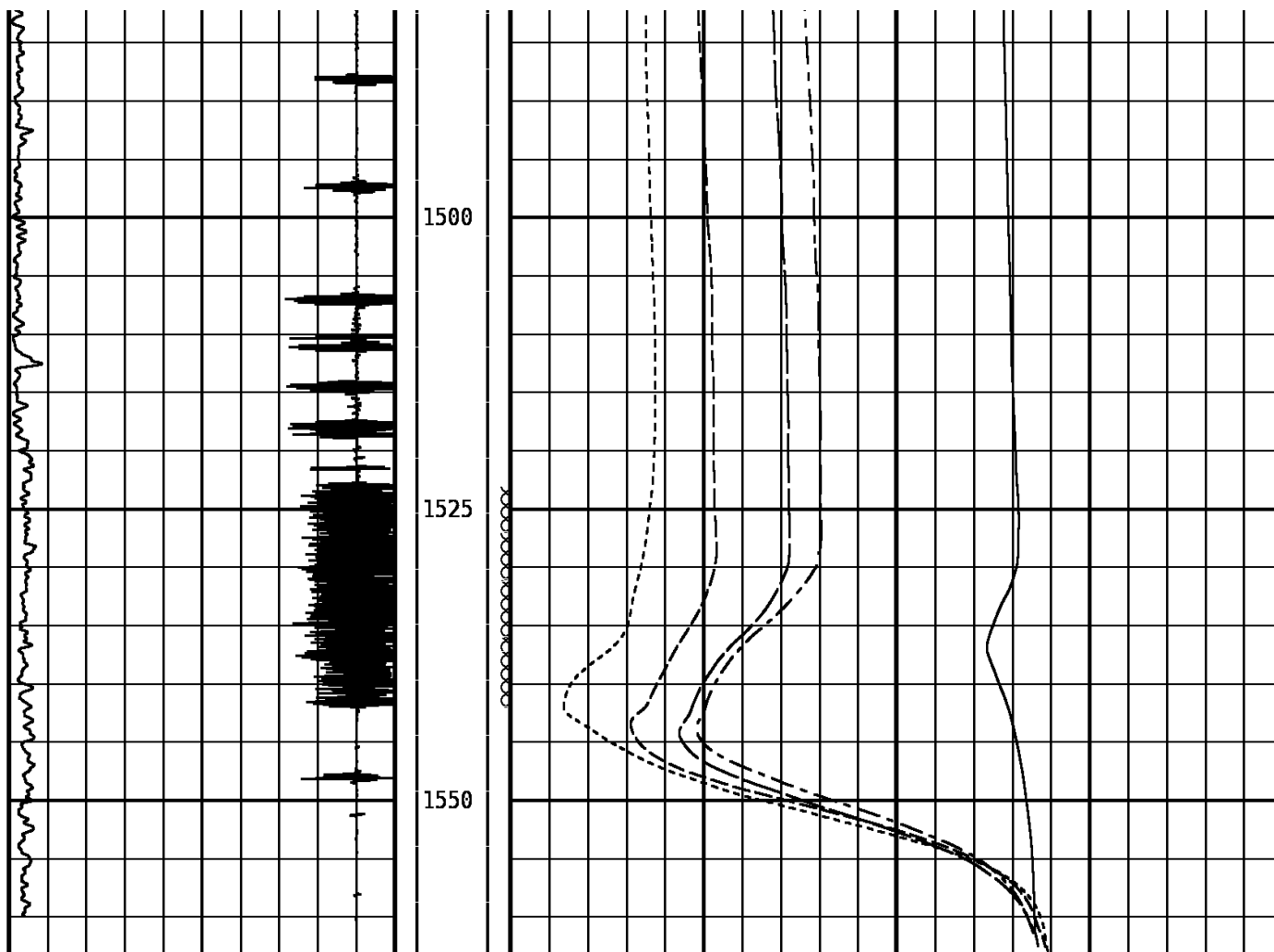
1400

1425

1450

1475





<b>COLLAR LOCATOR</b>			<b>30 MIN SHUT IN</b>		
-5000	Millivolts	550	30	DegreesCentigrade	80
<b>GAMMA RAY</b>			<b>BASE TEMPERATURE</b>		
0	API	120	30	DegreesCentigrade	80
			<b>60 MIN SHUT IN</b>		
			30	DegreesCentigrade	80
			<b>90 MIN SHUT IN</b>		
			30	DegreesCentigrade	80
			<b>120 MIN SHUT IN</b>		
			30	DegreesCentigrade	80

START DEPTH: 1563.5    DIRECTION: UP    DATE: 03/08/2007    TIME: 16:13    MODE: TRACE PLAYBACK

4313619



**1-11/16" Adaptor**

Weight 1 kg  
Length 0.31 m  
Max. Diameter 4.28 cm

Total Stack Weight 1.0 kg in air  
Total Stack Length 2.74 m

**Sinker Bar**

Weight 34 KG.  
Length 1.22 m  
Max. Diameter 42.8 mm

**Gamma Ray**

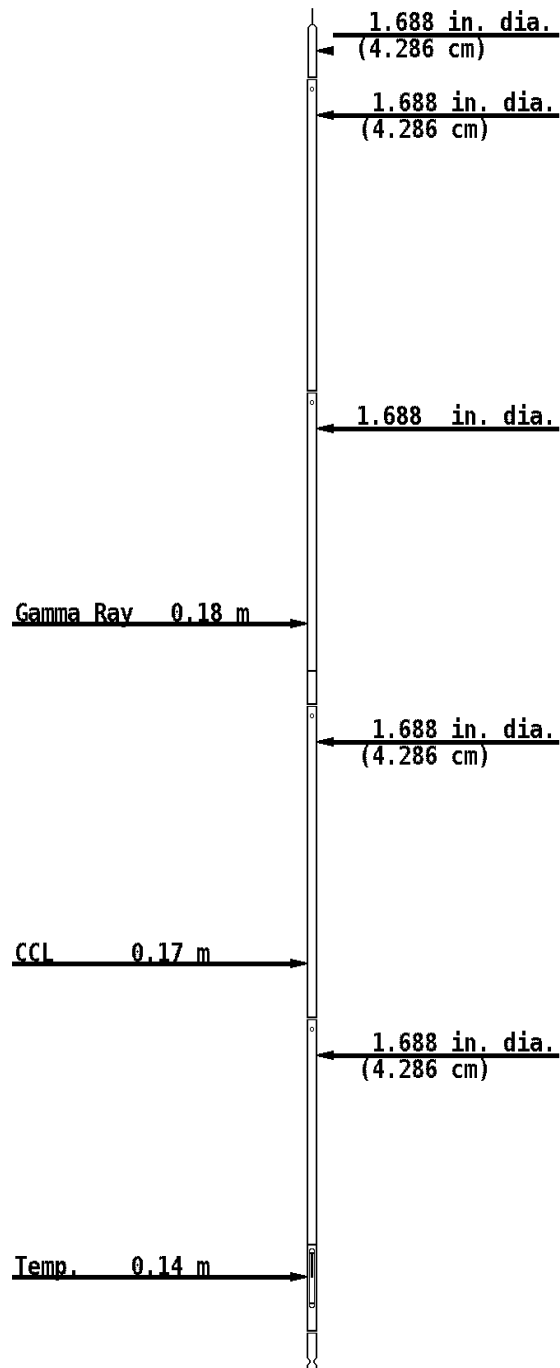
Weight 6 KG  
Length 1.19 m  
Max. Diameter 42.8 mm

**Casing Collar Locator**

Weight 5 KG  
Length 0.46 m  
Max. Diameter 42.8 mm

**Temperature**

Weight 4 kG.  
Length 0.86 m  
Max. Diameter 36.5 mm



COMPANY PARAMOUNT RESOURCES LTD.

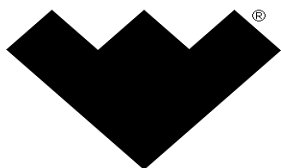
300E-076010117300

WELL PARA et al CAMERON A-03

FIELD CAMERON HILLS PROVINCE NORTHWEST TERRITORIES



**Weatherford®**



## PHOTO DENSITY DUAL SPACED NEUTRON

COMPANY		PARAMOUNT RESOURCES LTD.		
WELL		PARA ET AL CAMERON A-03		
FIELD		CAMERON HILLS		
PROVINCE/COUNTY		NORTHWEST TERRITORIES		
COUNTRY/STATE		CANADA		
LOCATION		300A036010117300		
		<b>FIELD PRINT</b>		
LSD	SEC	TWP	RGE	Other Services
				ARRAY INDUCTION
API Number				COMPENSATED SONIC
Permit Number 2047				MICROLOG
Permanent Datum GROUND LEVEL, Elevation 767.4 metres				Elevations: metres
Log Measured From 5.4 M above Permanent Datum				KB 772.80
Drilling Measured From KELLY BUSHING				DF
				GL 767.40
Date	19-FEB-2007			
Run Number	1			
Depth Driller	1589.40	metres		
Depth Logger	1589.40	metres		
First Reading	1581.30	metre		
Last Reading	5.00	metre		
Casing Driller	435.80	metres		
Casing Logger	436.00	metres		
Bit Size	200.00	mm		
Hole Fluid Type	GEL CHEM			
Density / Viscosity	1220.0 kg/M3	70.00 sec/L		
PH / Fluid Loss	10.50	10.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.11 @ 25.0	ohm-m		
Rmf @ Measured Temp	1.02 @ 25.0	ohm-m		
Rmc @ Measured Temp	1.26 @ 25.0	ohm-m		
Source Rmf / Rmc	PRESS	FILTER		
Rm @ BHT	0.71 @ 50.0	ohm-m		
Time Since Circulation	8 HRS			
Max Recorded Temp	50.00	deg C		
Equipment Name	COMPACT			
Equipment / Base	QUINT	GPR		
Recorded By	M. BONNELL			
Witnessed By	B. POWELL			
CIRC. STOP	04:30 FEB-19	Last Line		

BOREHOLE RECORD				Last Edited: 19-FEB-2007 11:16	
Bit Size millimetres	Depth From metres		Depth To metres		
311.000	0.00		435.80		
200.000	435.80		1589.40		
CASING RECORD					
Type	Size millimetres	Depth From metres	Shoe Depth metres	Weight pounds/ft	
SURFACE	219.100	0.00	435.80	24.00	

### REMARKS

- 1) SOFTWARE ISSUE: WLS 7.01.0195
- 2) CUSTOMER SCALES AND INTERVALS LOGGED.
- 3) MAI, MSS, MPD, MDN, MML, SKJ, MGS, MTC, MFE, MCG RAN IN COMBINATION.
- 4) HARDWARE: MAI: TWO 25.4 MM STANDOFFS  
MSS: THREE 25.4 MM STANDOFFS  
MDN: DUAL NEUTRON BOWSPRING  
MTC: ONE SIX-LEAF CENTRALIZER BOWSPRING

6) RIG: PD 220

7) HOLE \_CEMENT VOLUMES CALCULATED USING DENSITY CALIPER AND TWO ARM CALIPER IN COMBINATION :

HOLE VOLUME = 42.7 CU.M.

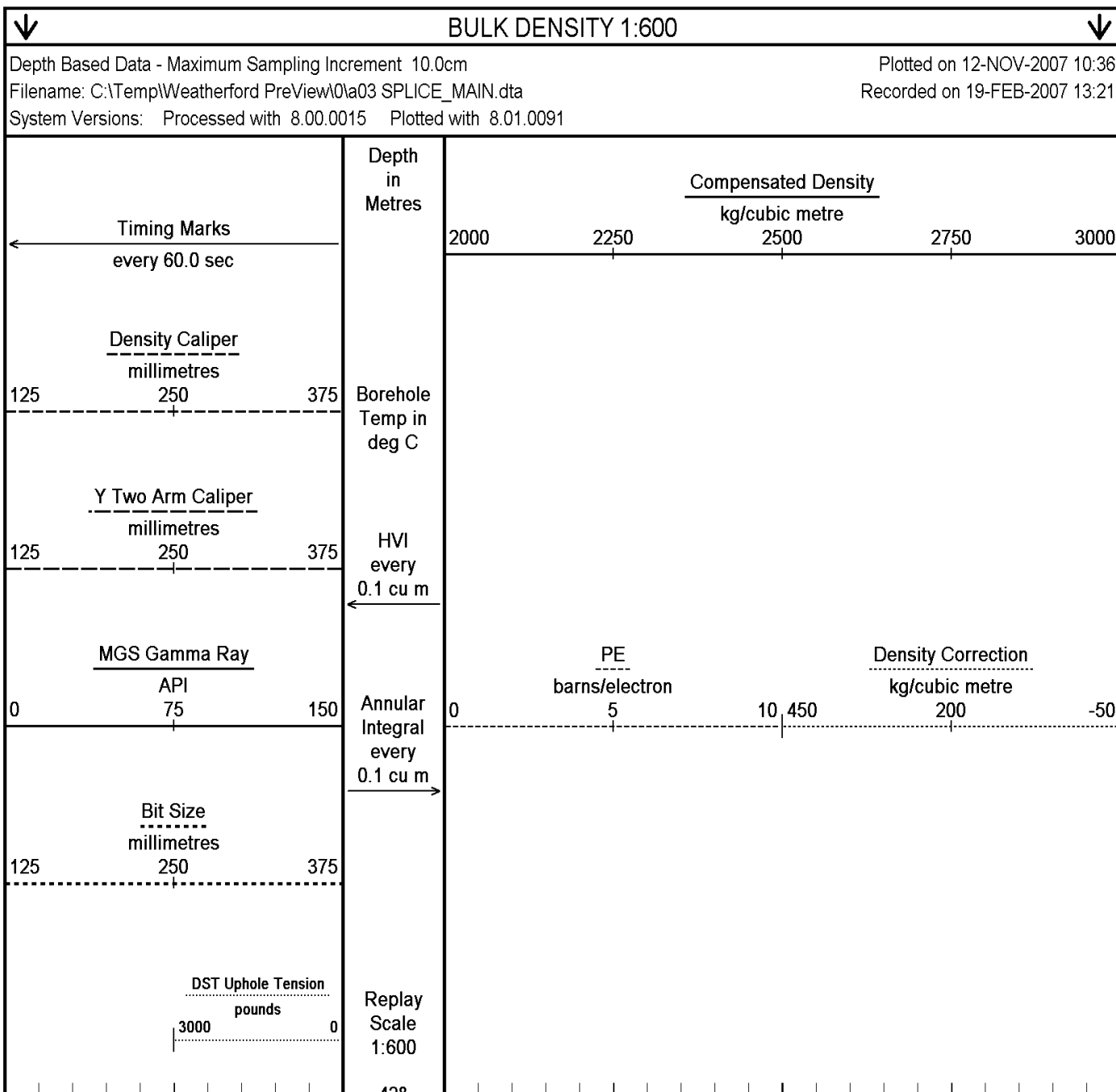
ANNULAR VOLUME USING 139.7 MM PRODUCTION CASING = 25.1 CU.M

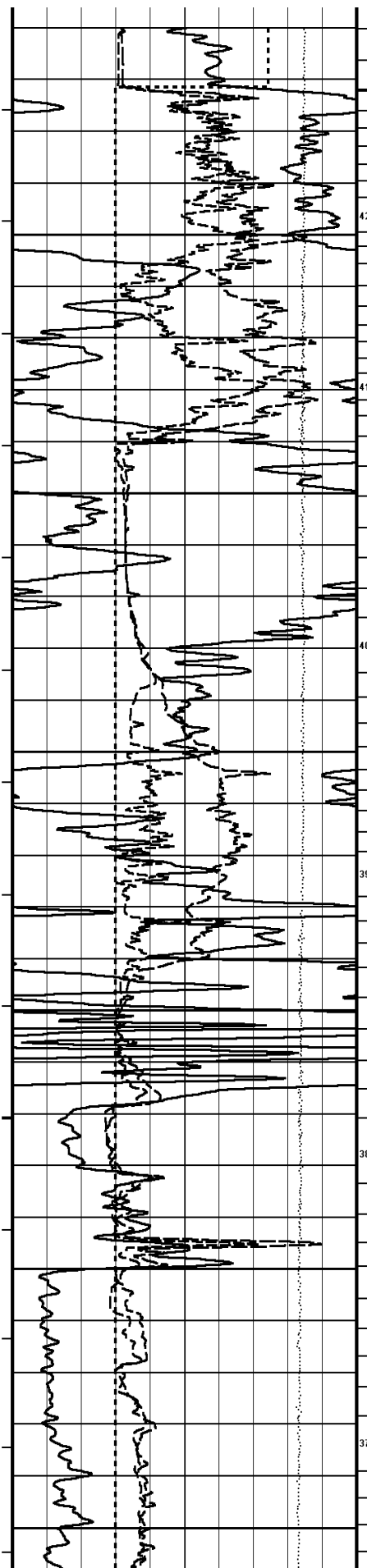
8) SONIC FREE PIPE: NOT FOUND

9) AREAS OF BOREHOLE RUGOSITY MAY CAUSE POOR DENSITY PAD CONTACT, HIGH DENSITY CORRECTION AND THUS INVALID DENSITY POROSITY DATA AT THOSE INTERVALS.

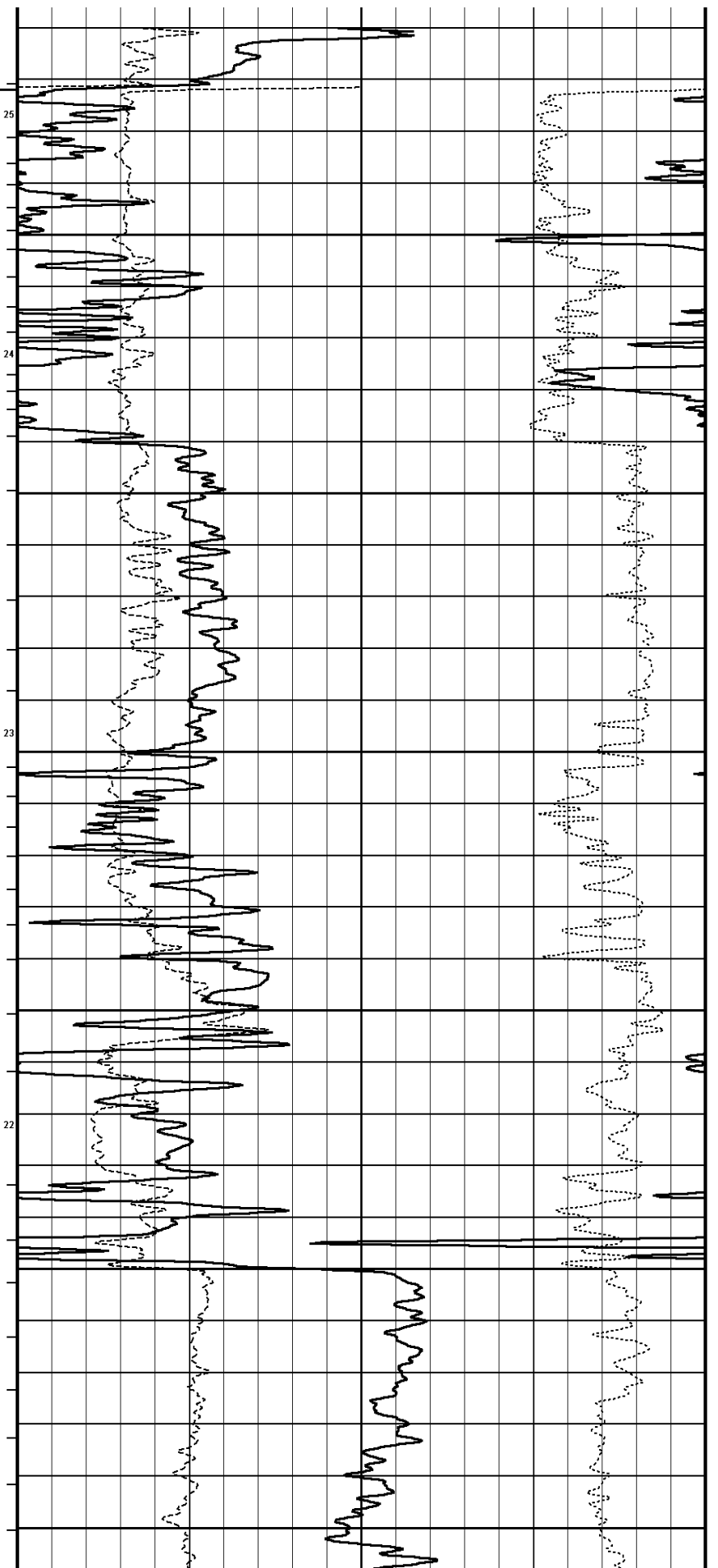
10) SALTY INDUCTION MODEL PRESENTED FROM TD-1410M.

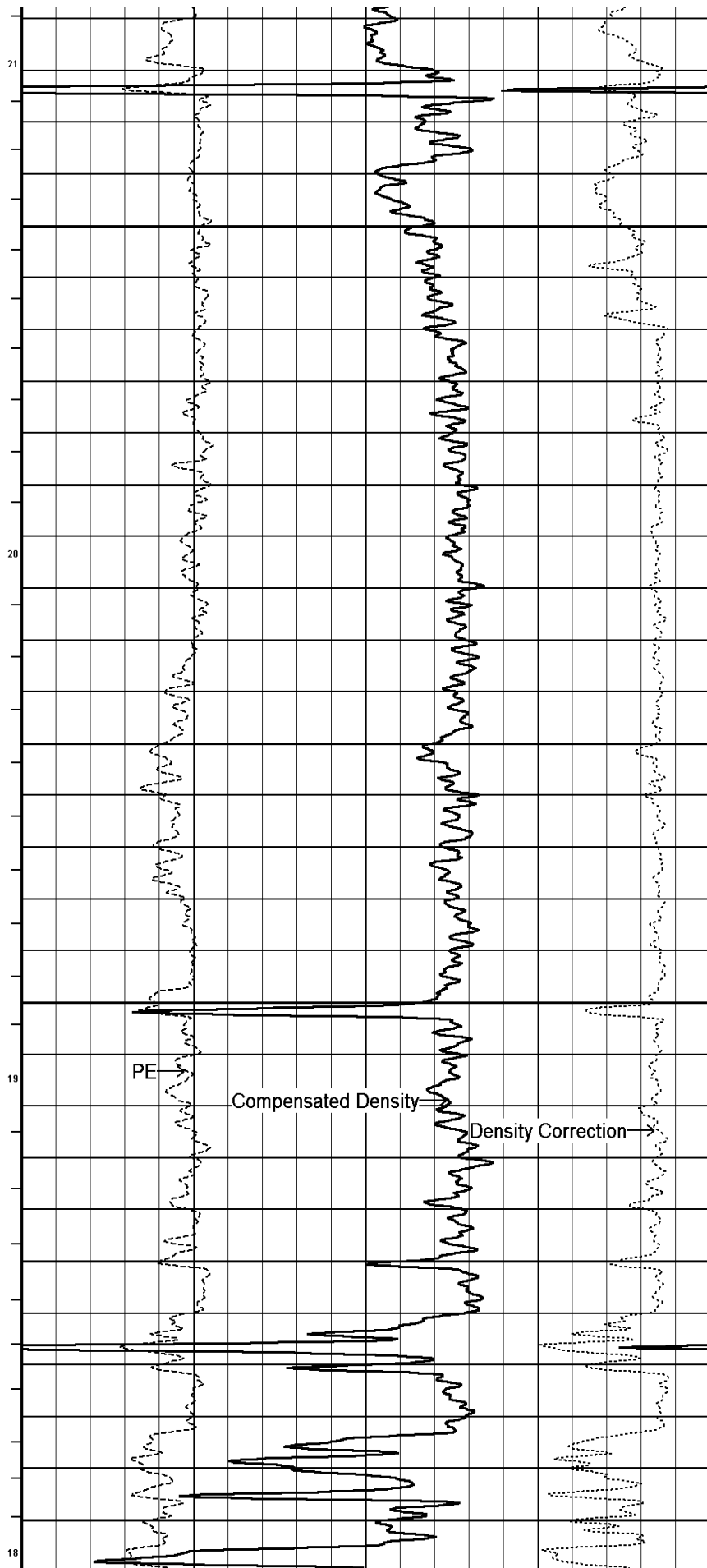
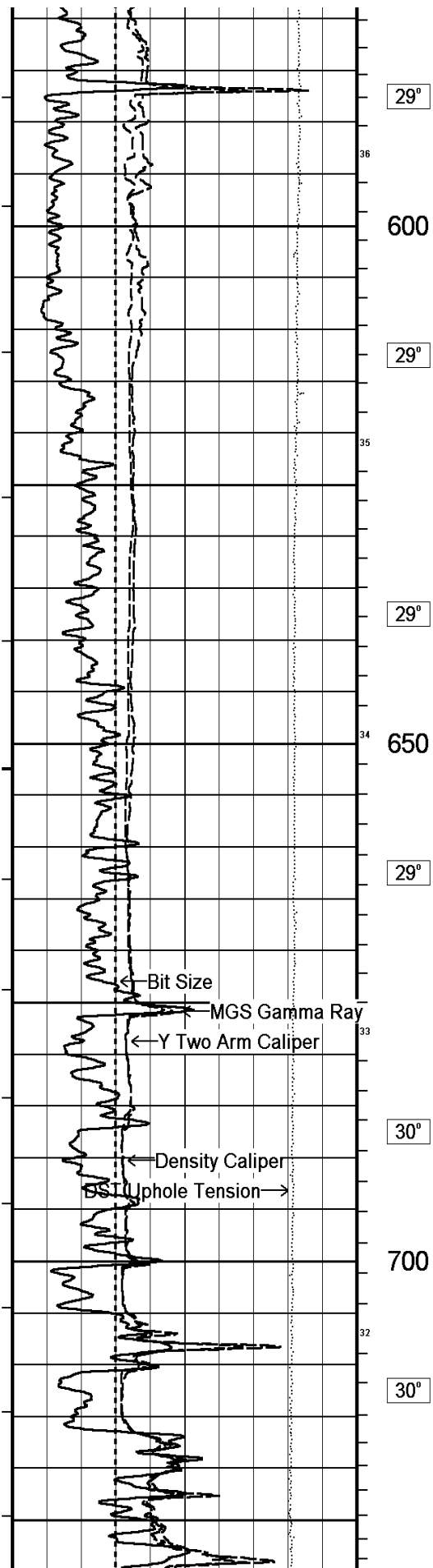
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

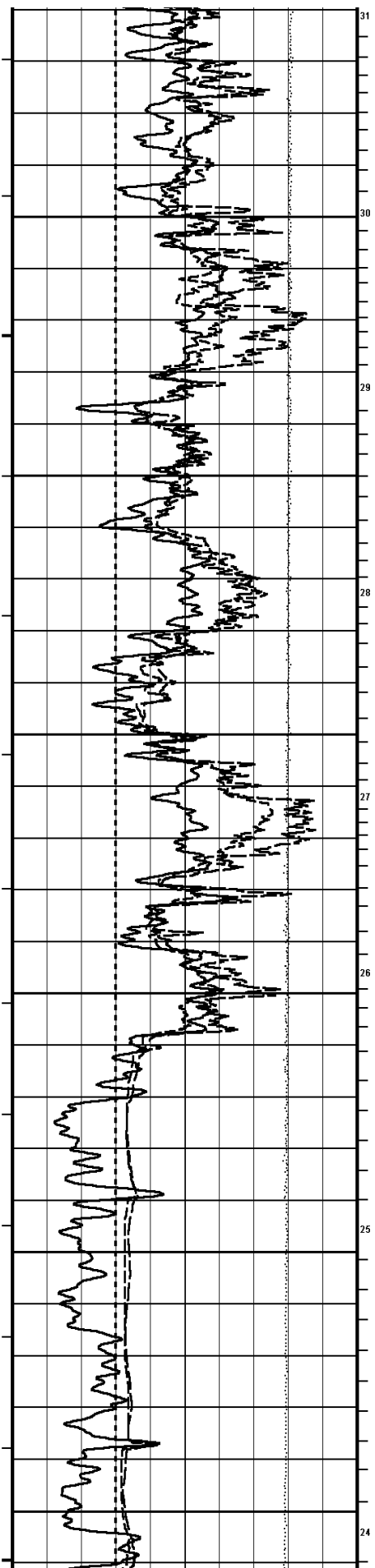




720  
Casing Shoe  
27°  
42  
450  
27°  
500  
28°  
550  
28°







31°

750

32°

32°

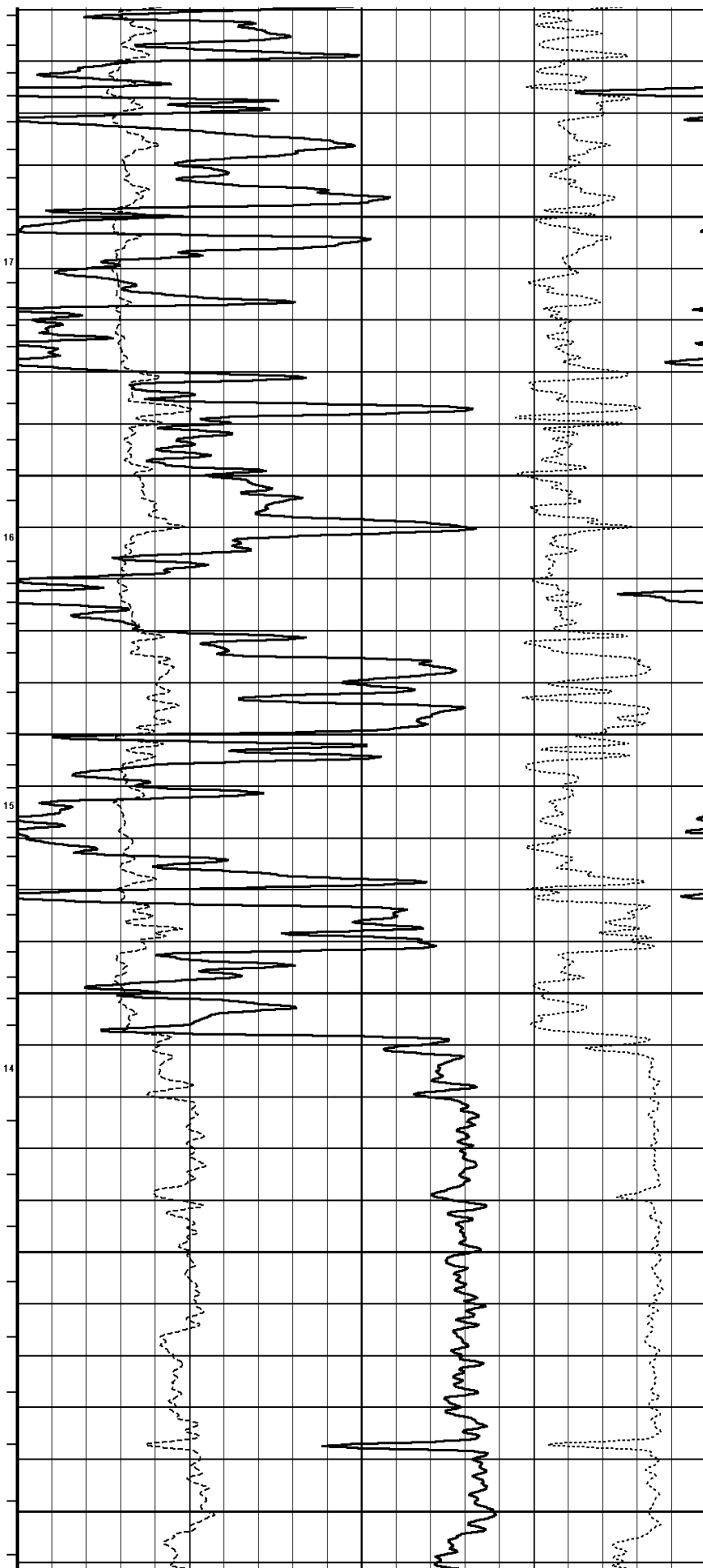
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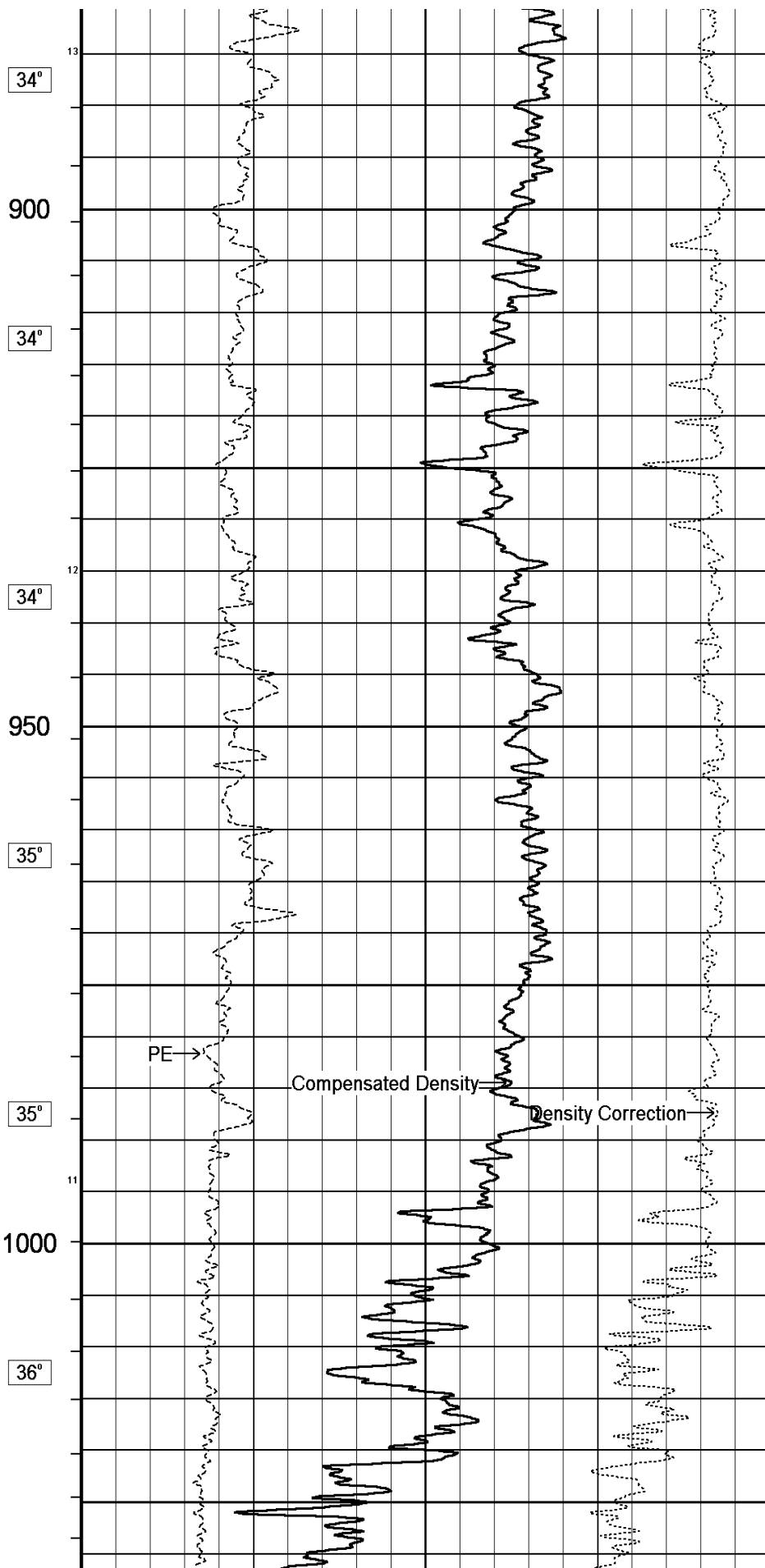
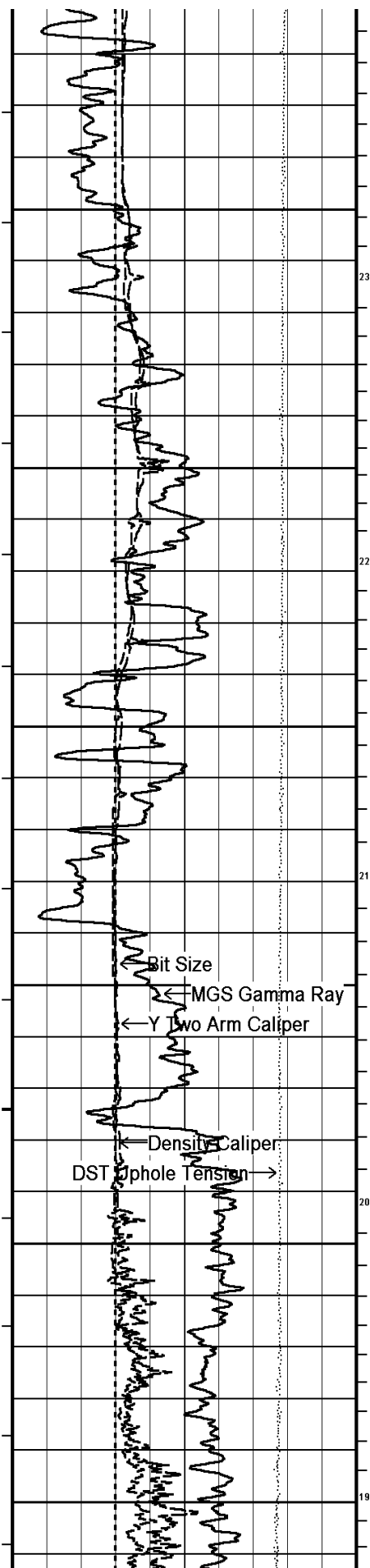
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33°

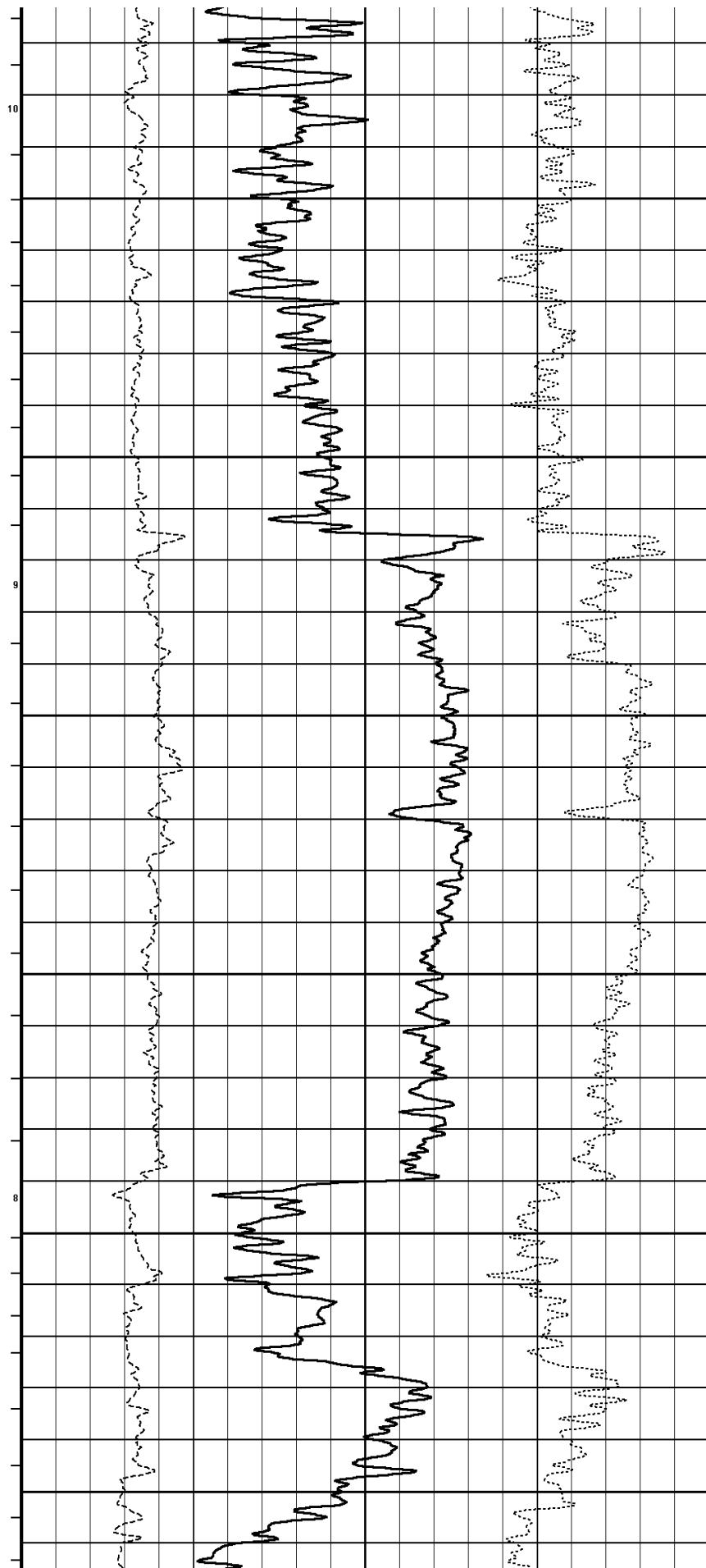
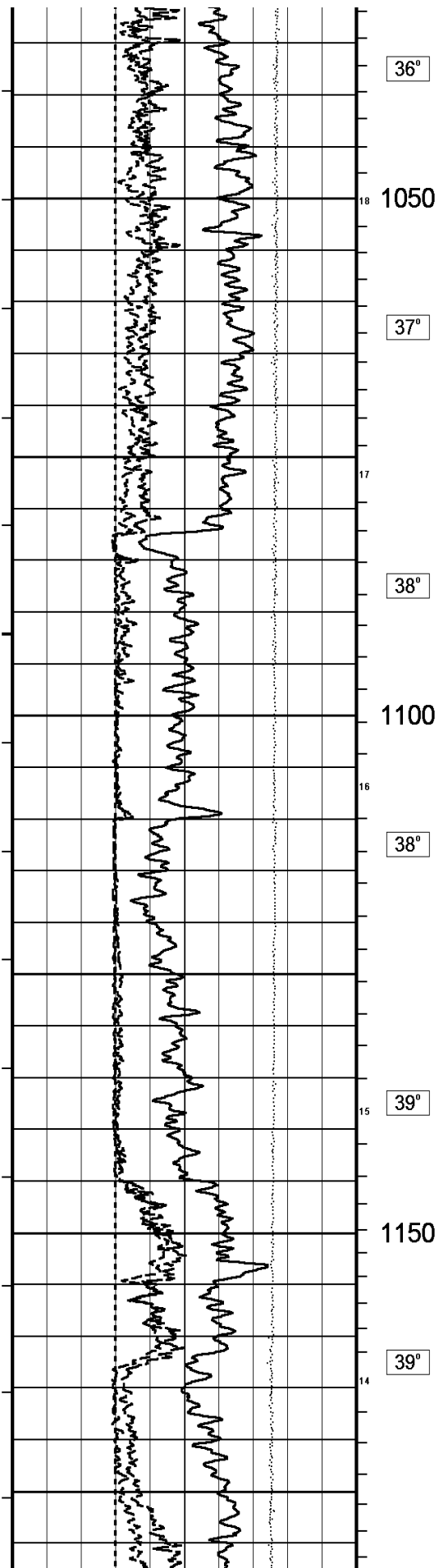
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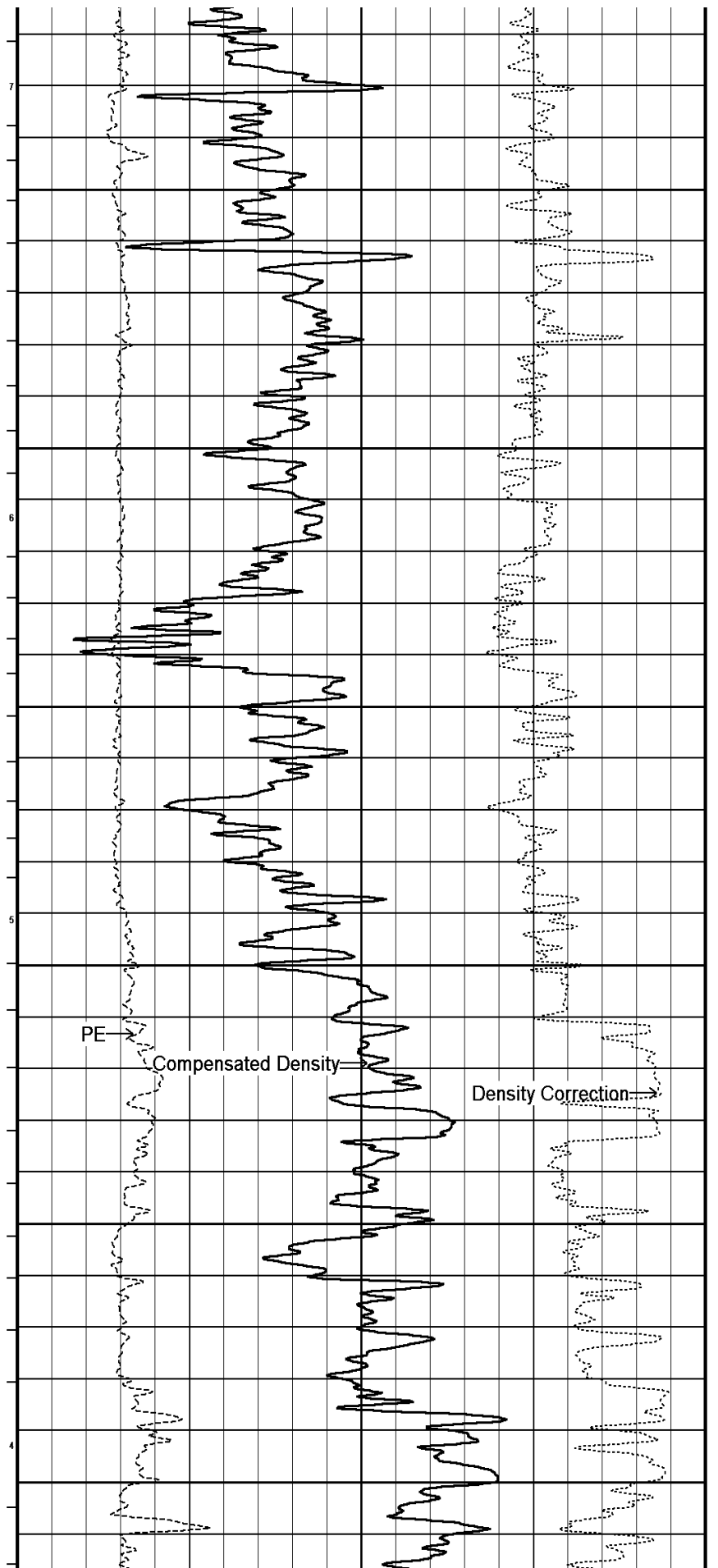
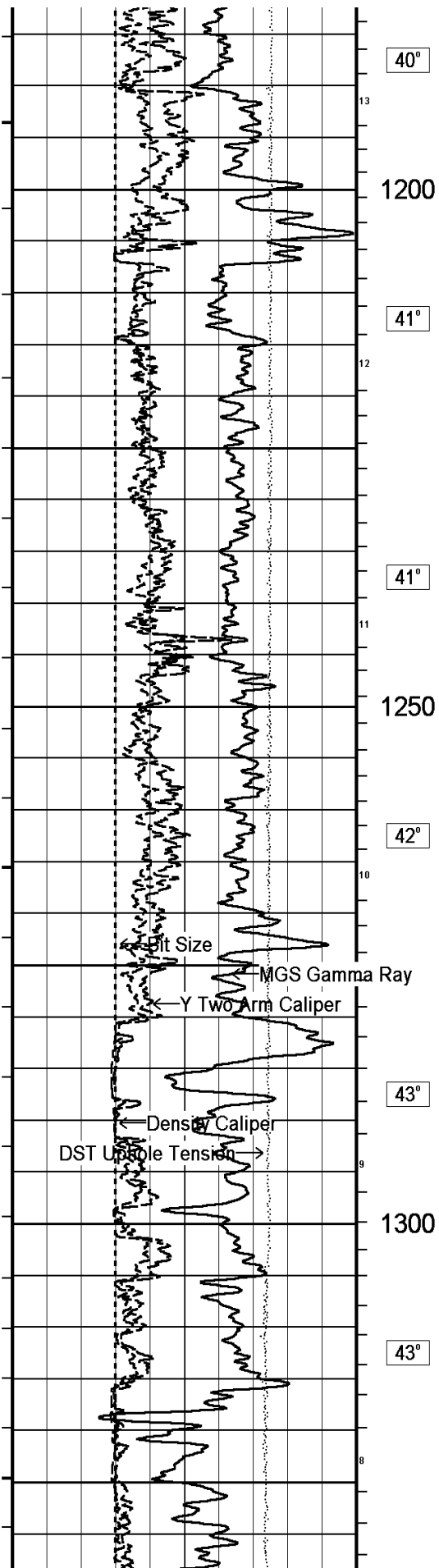
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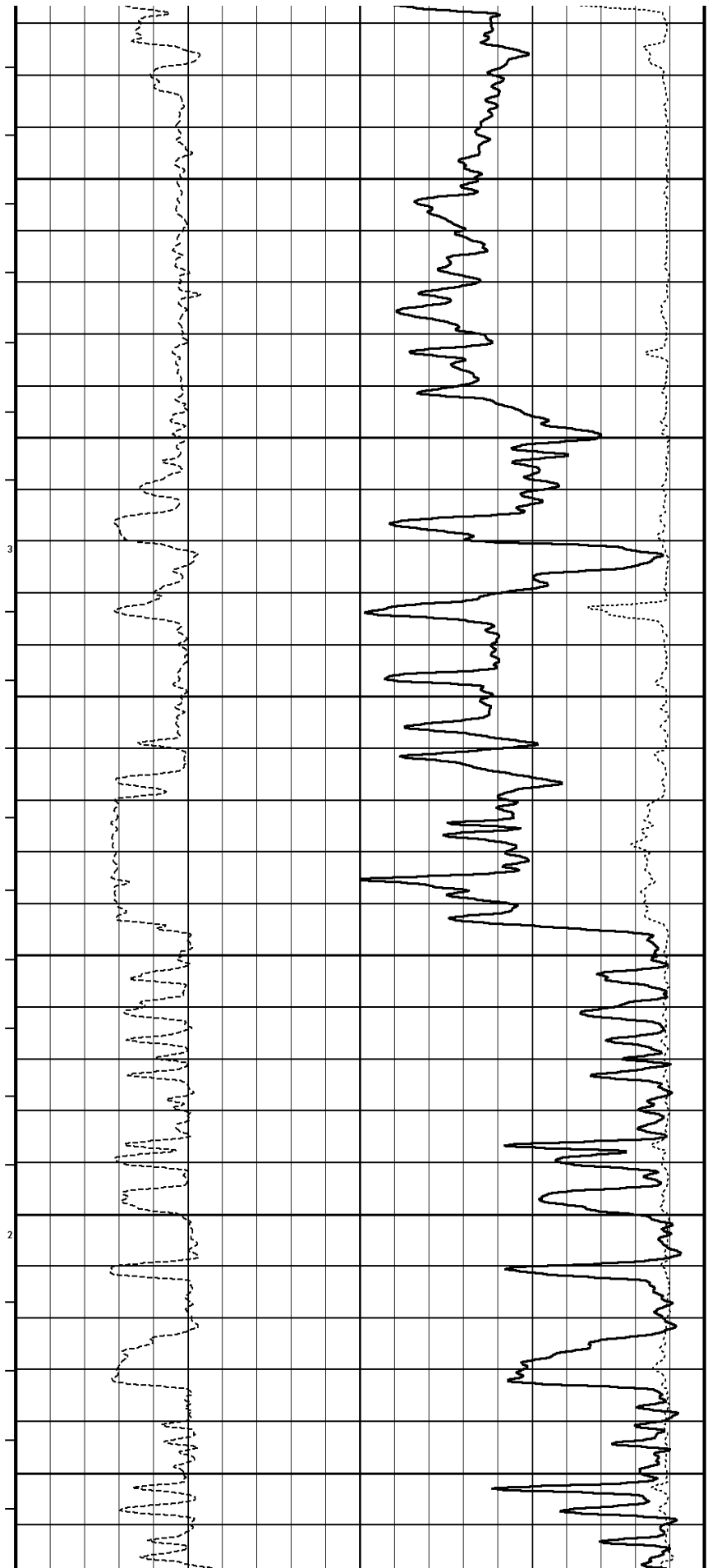
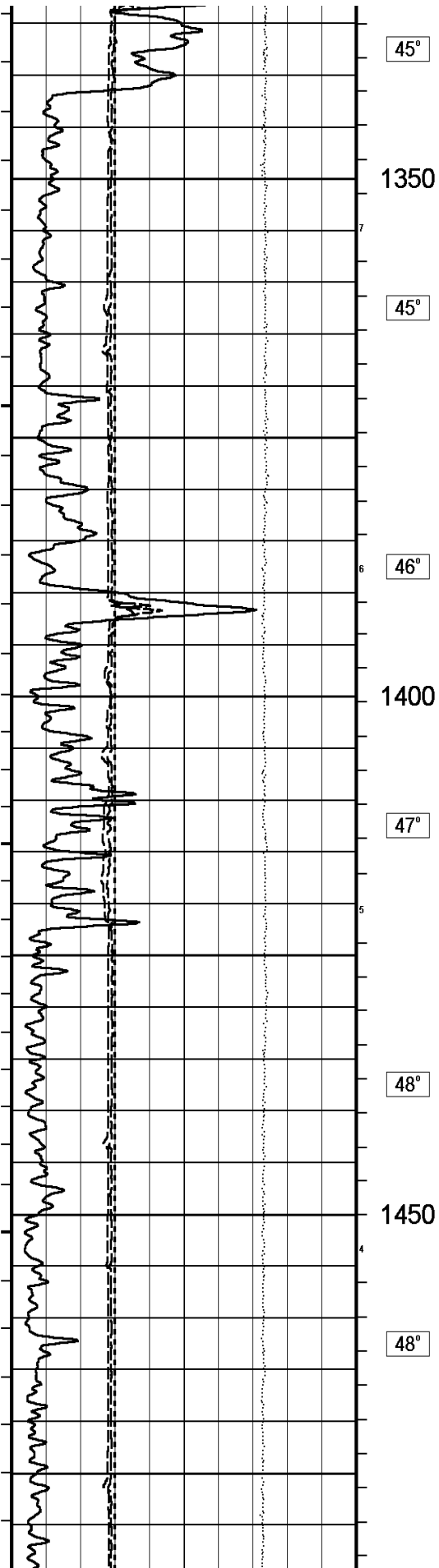


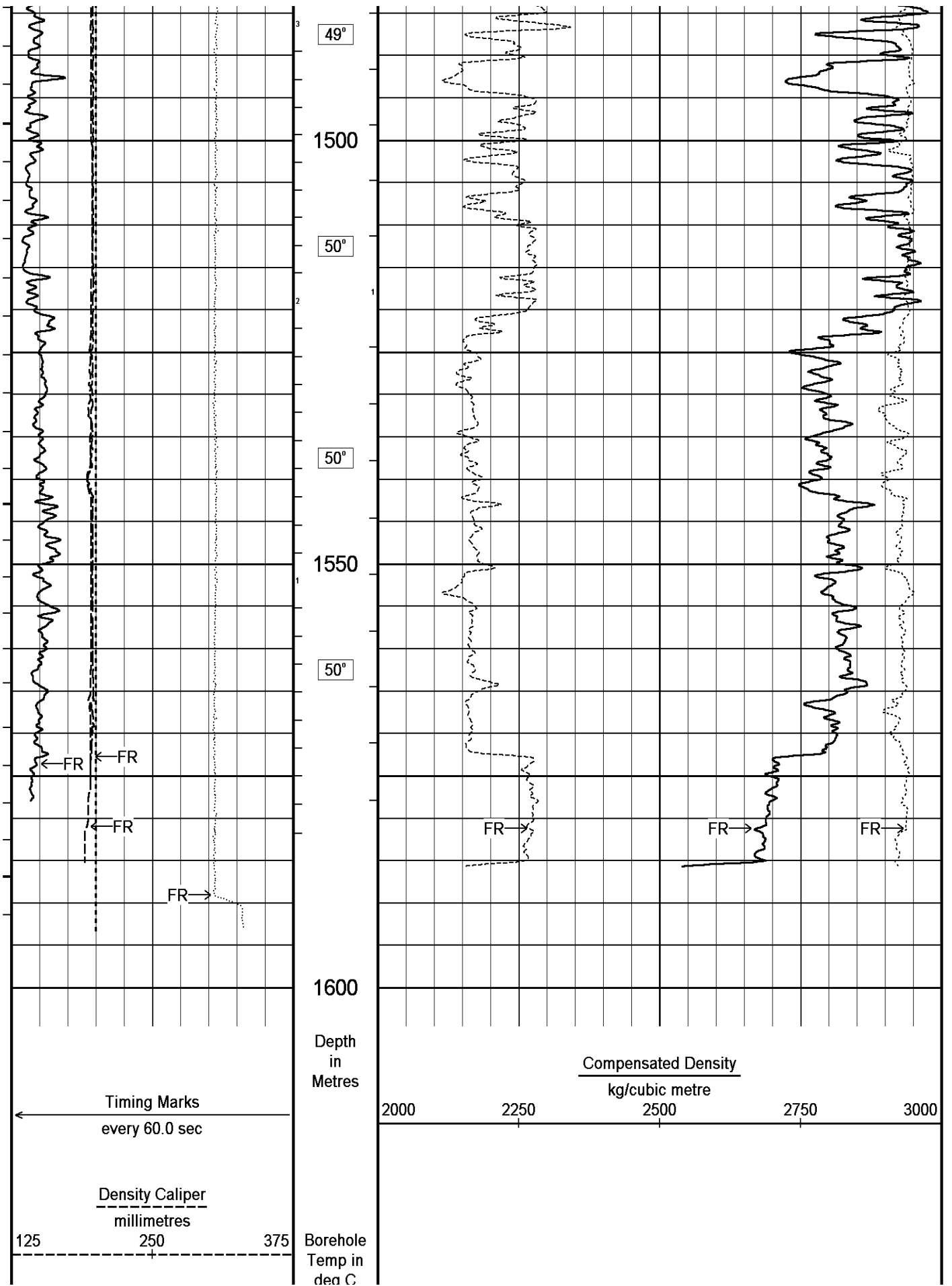


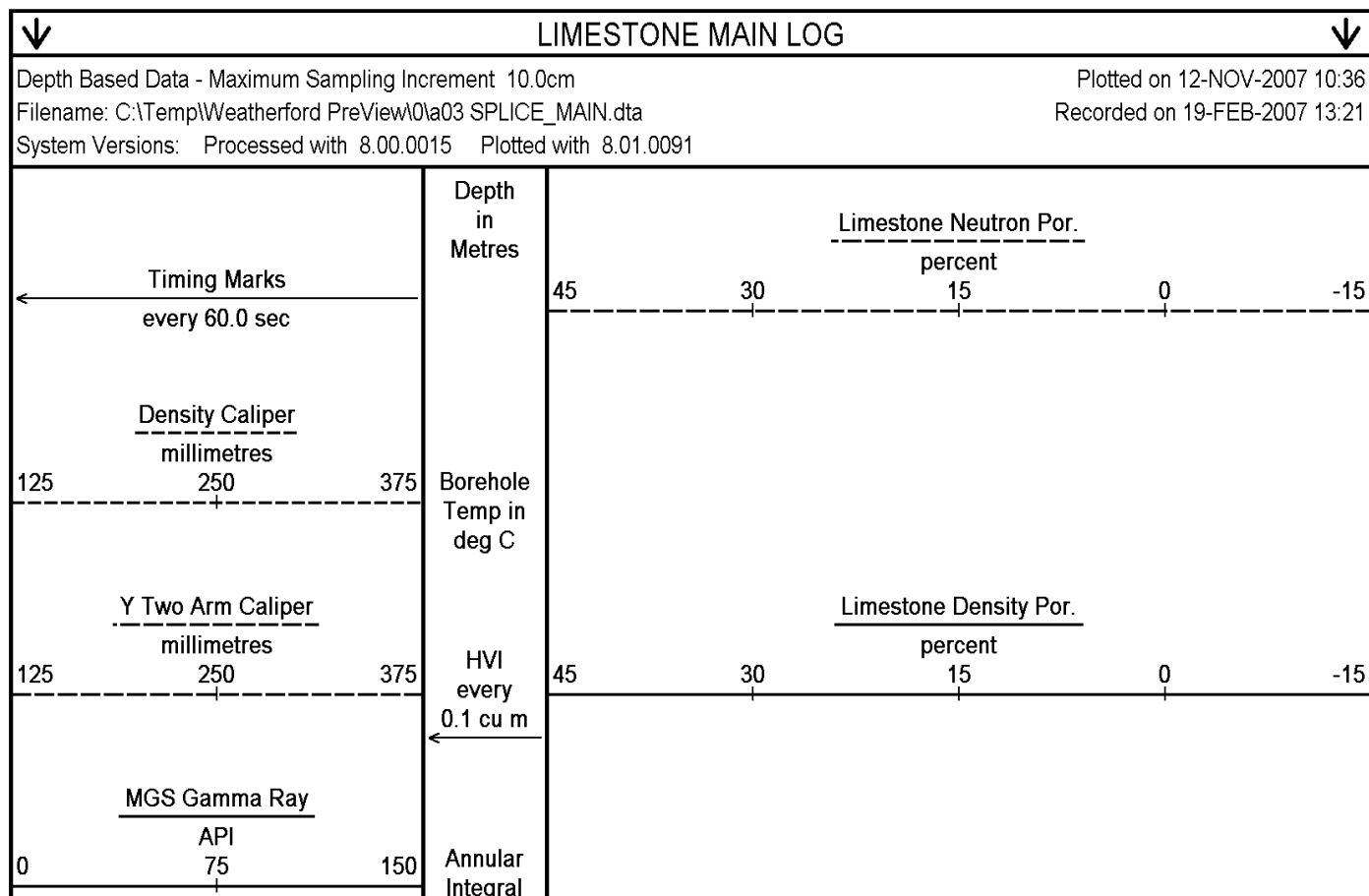
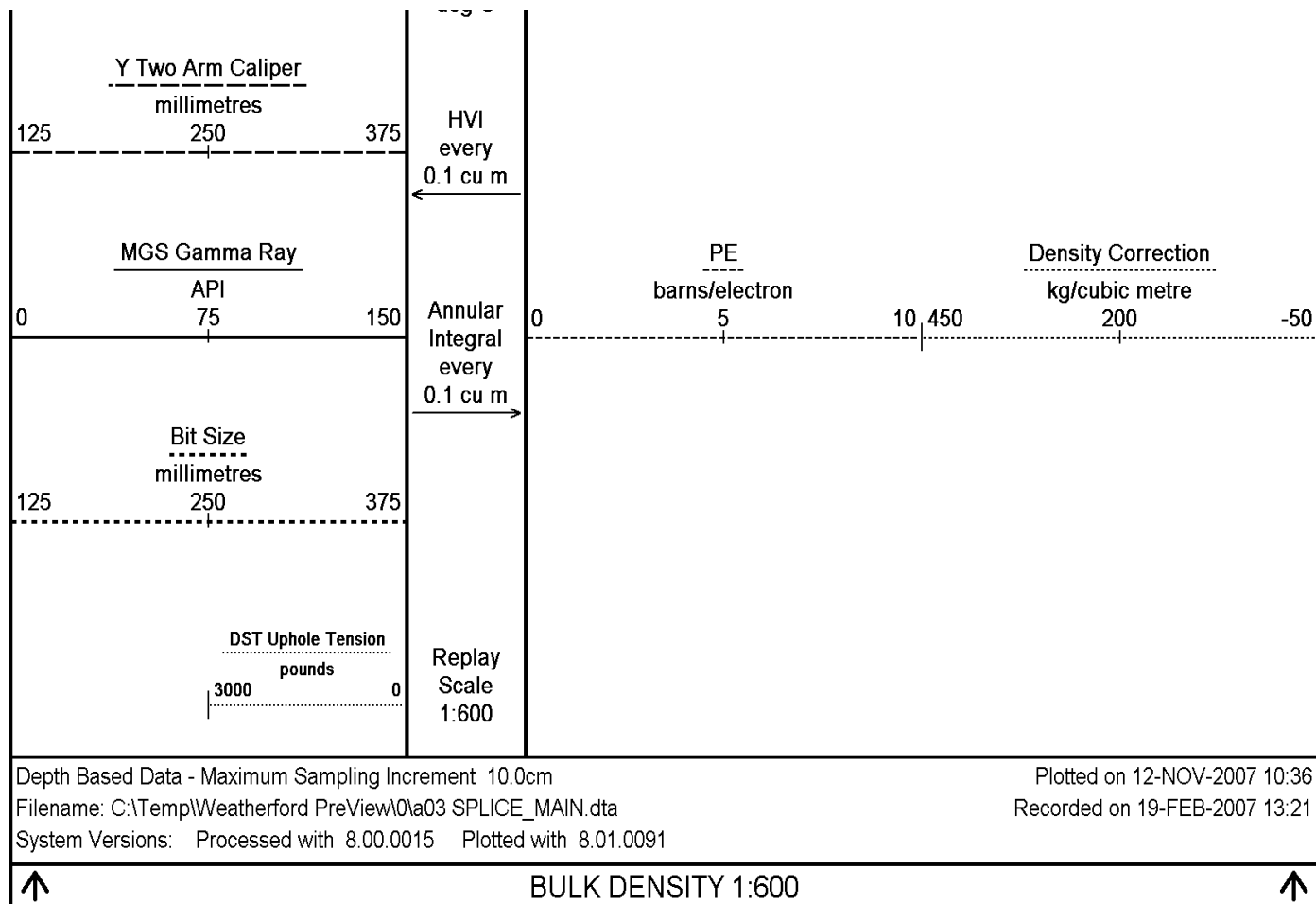


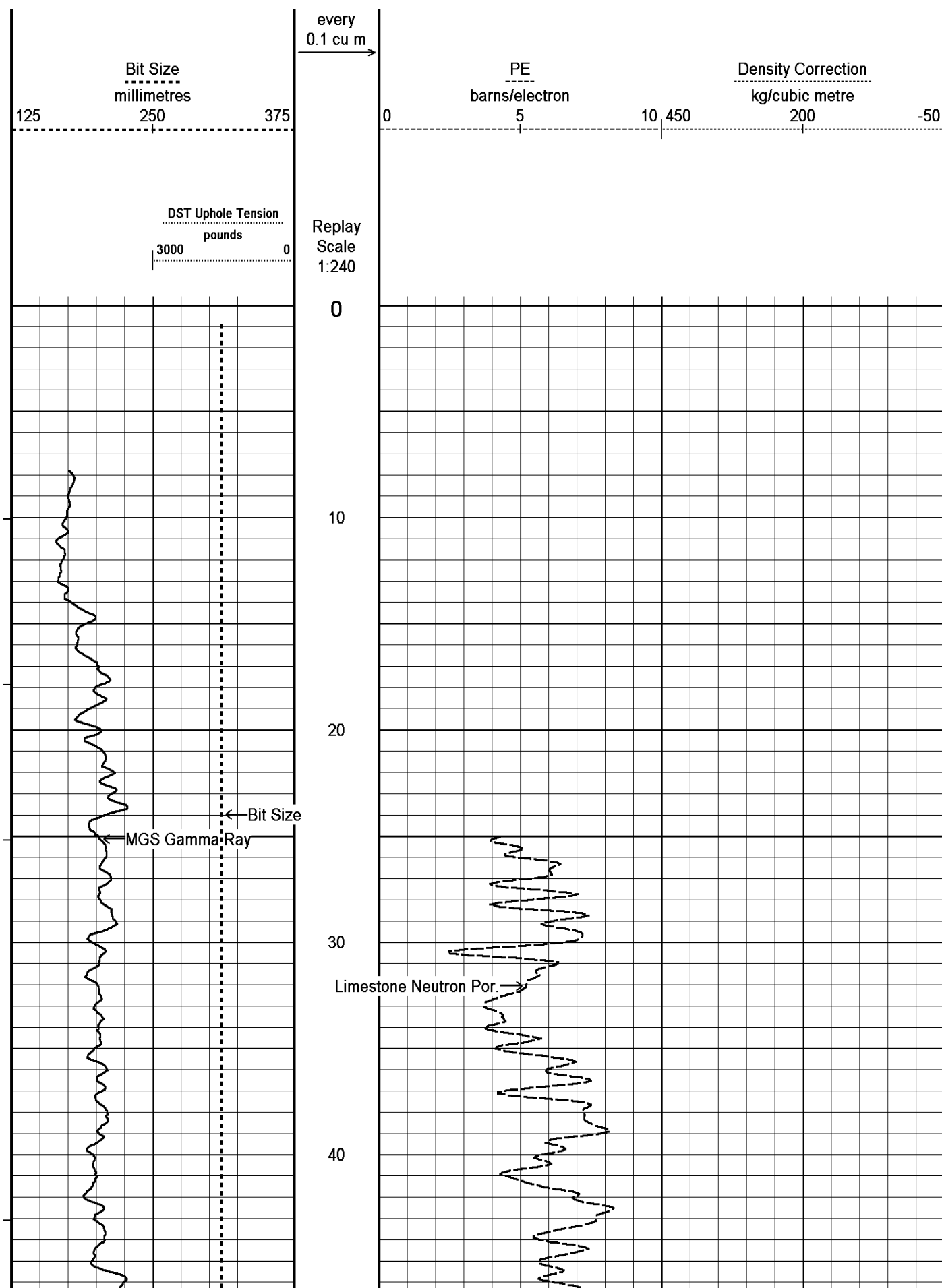


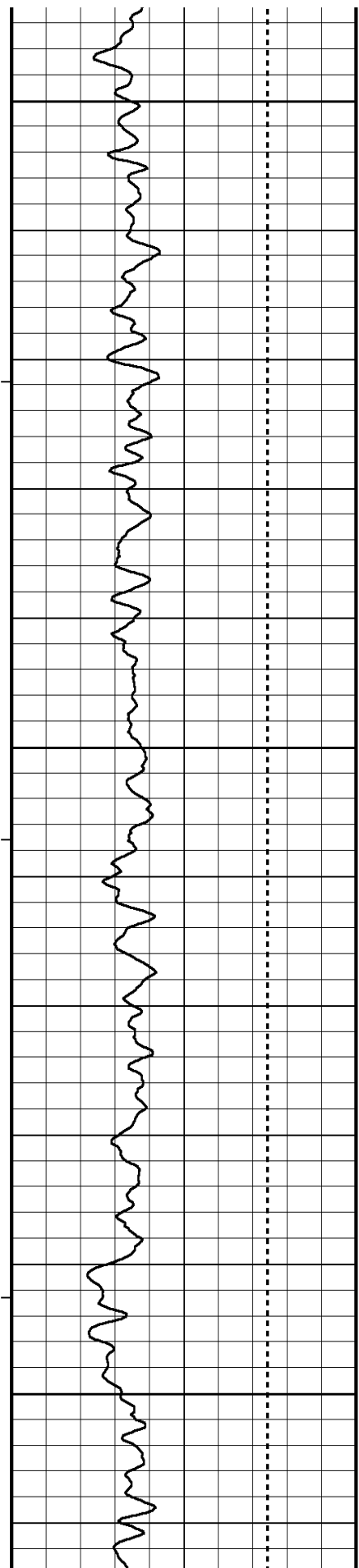












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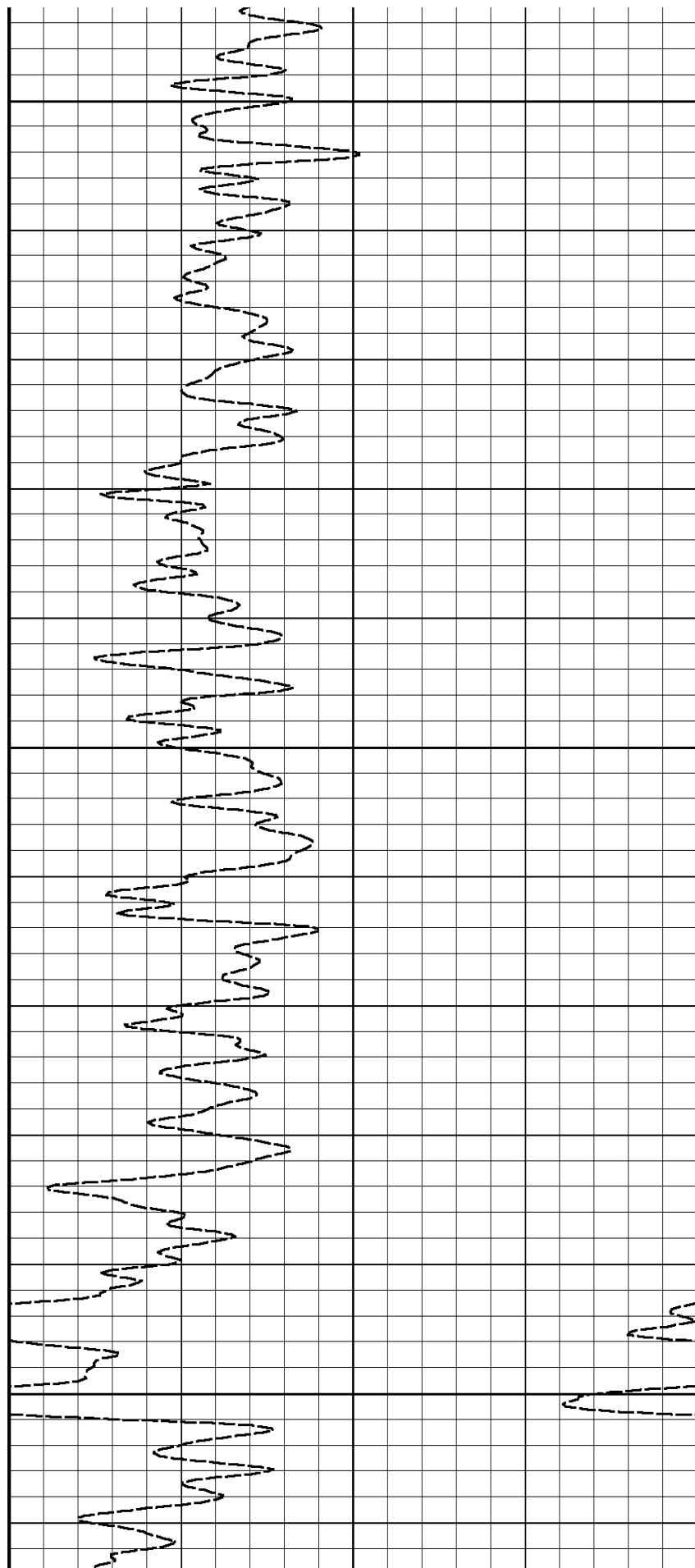
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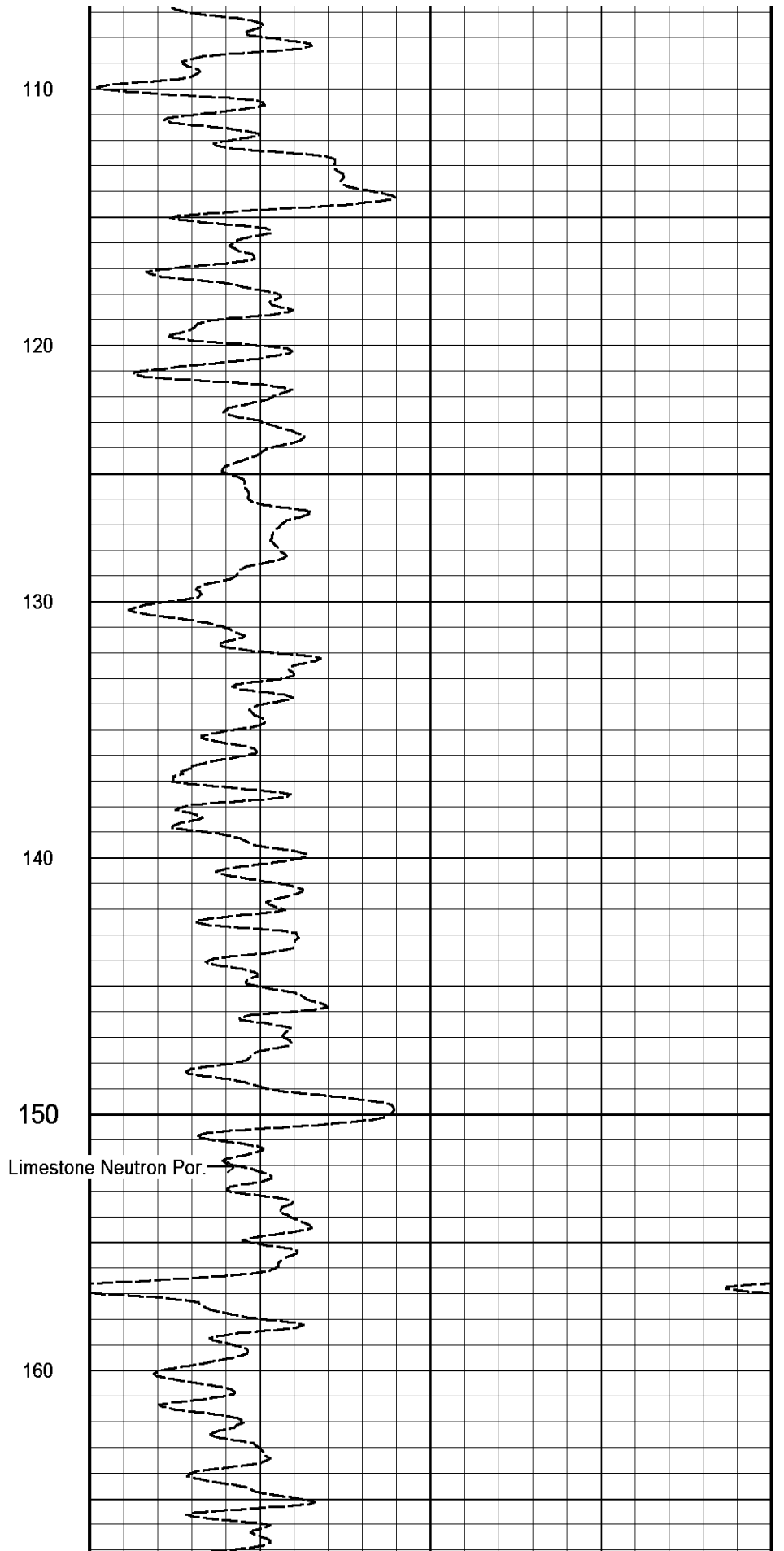
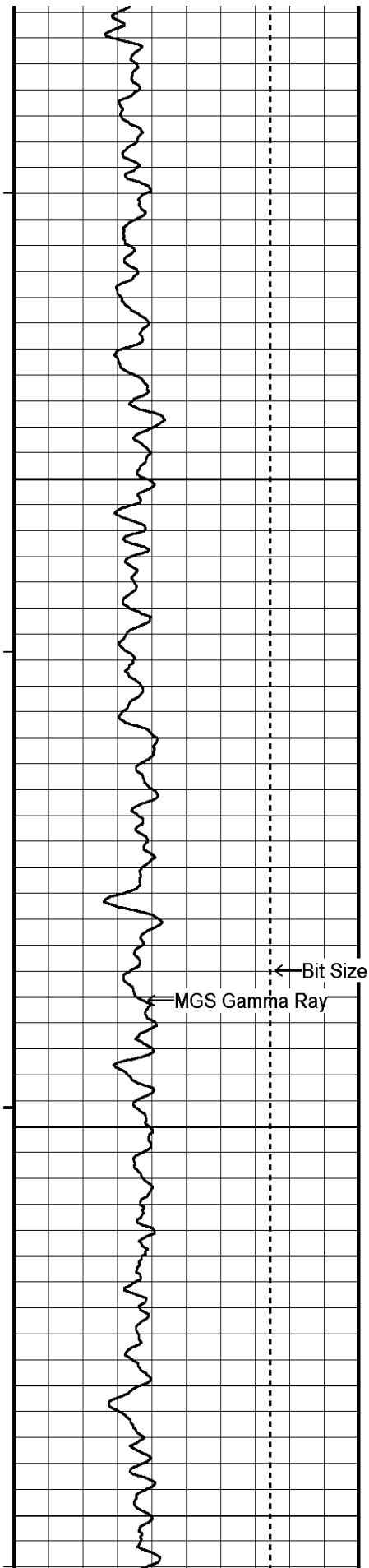
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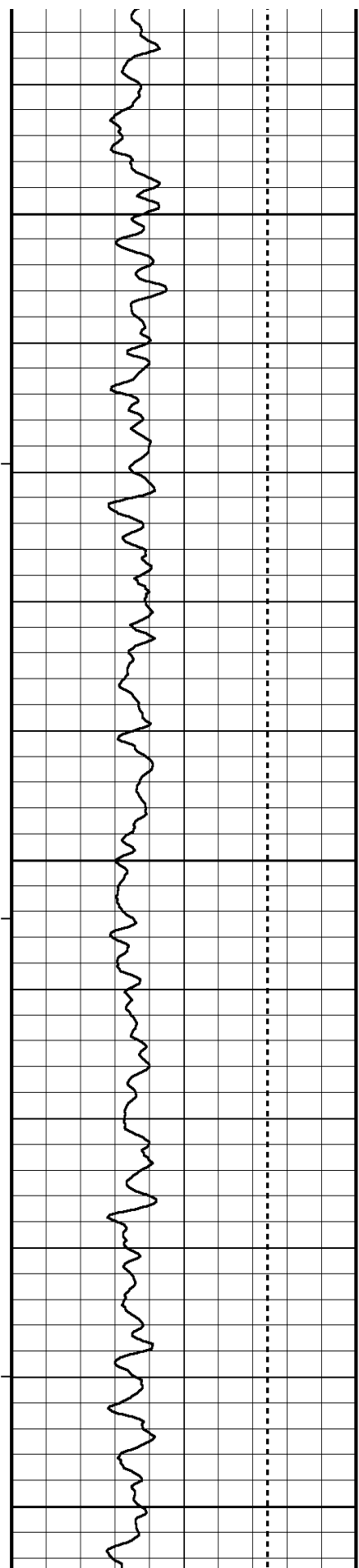
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100









170

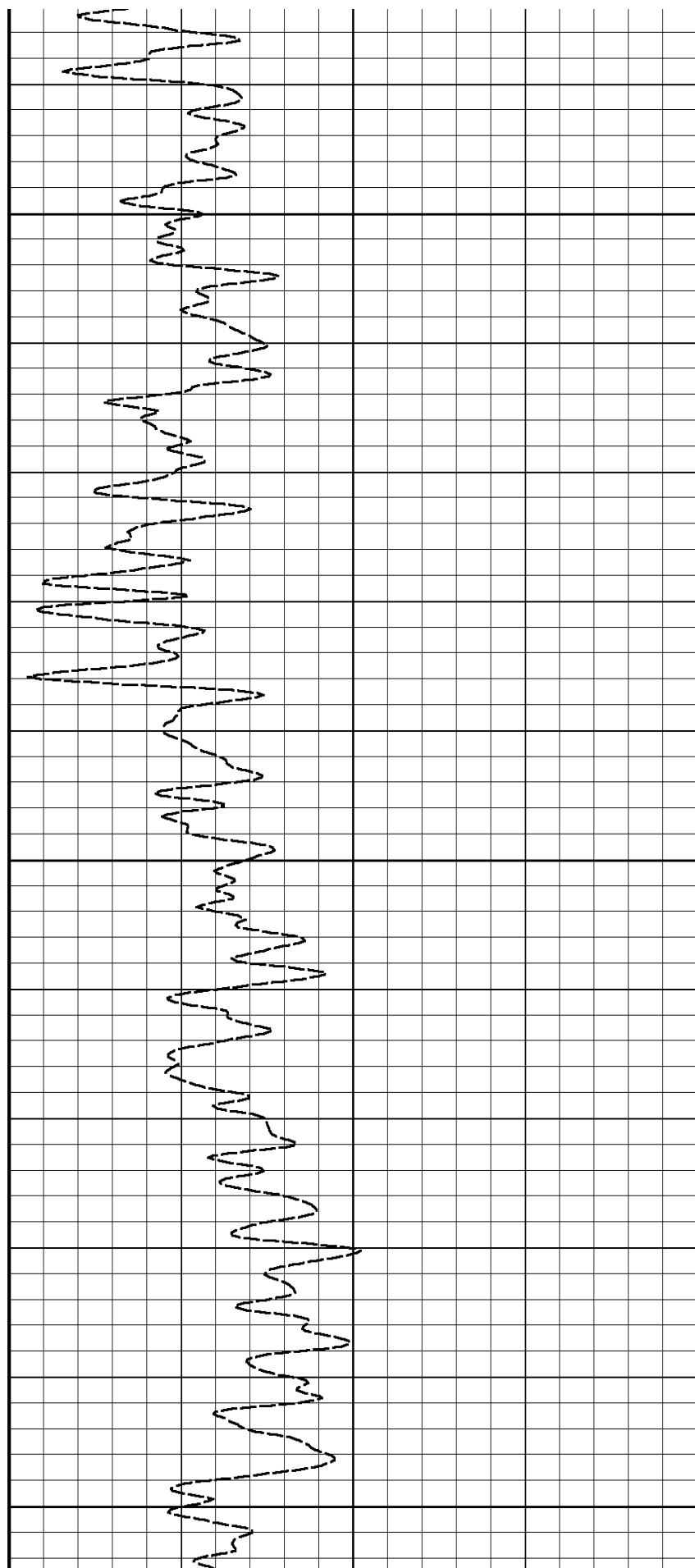
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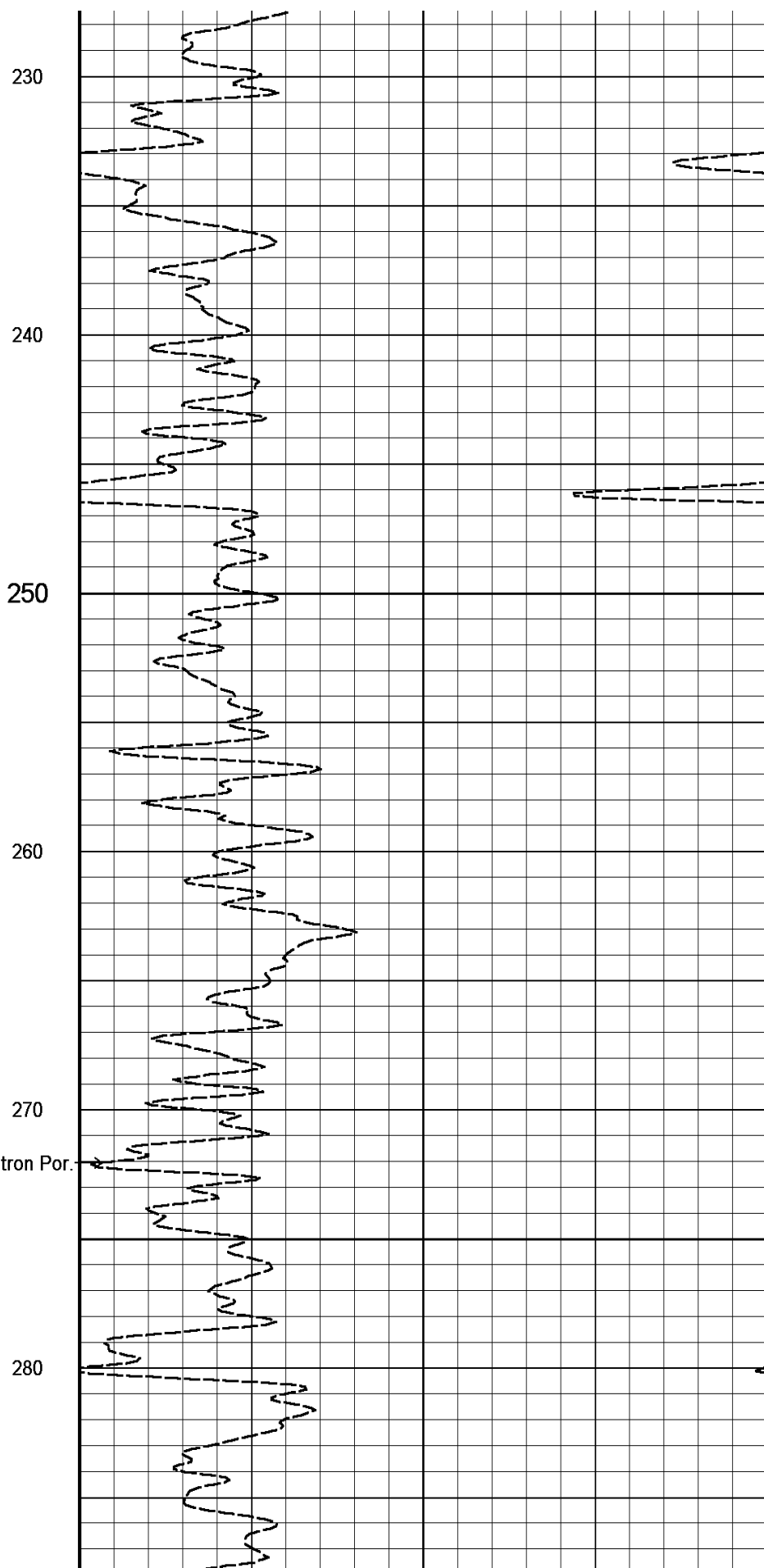
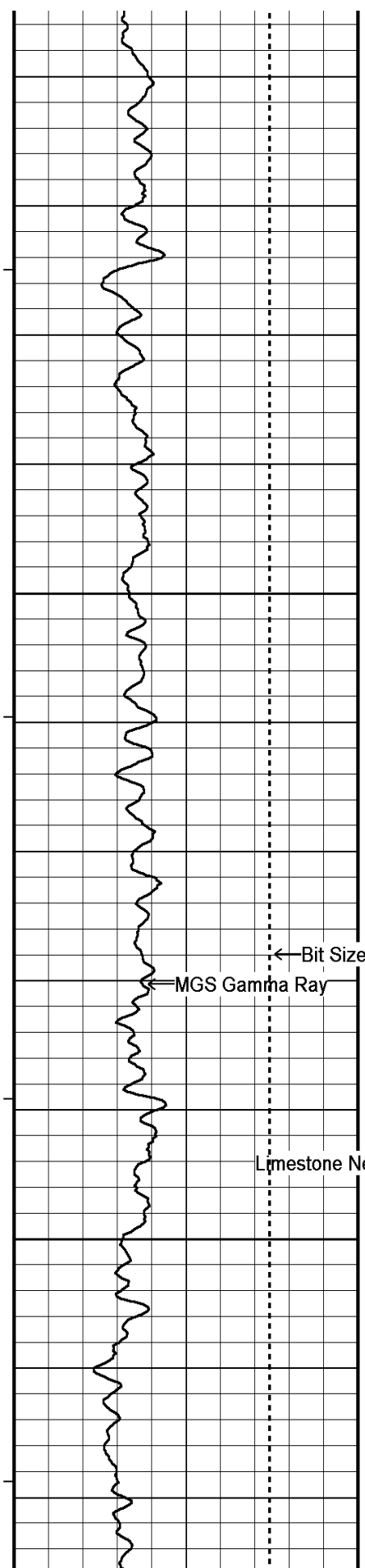
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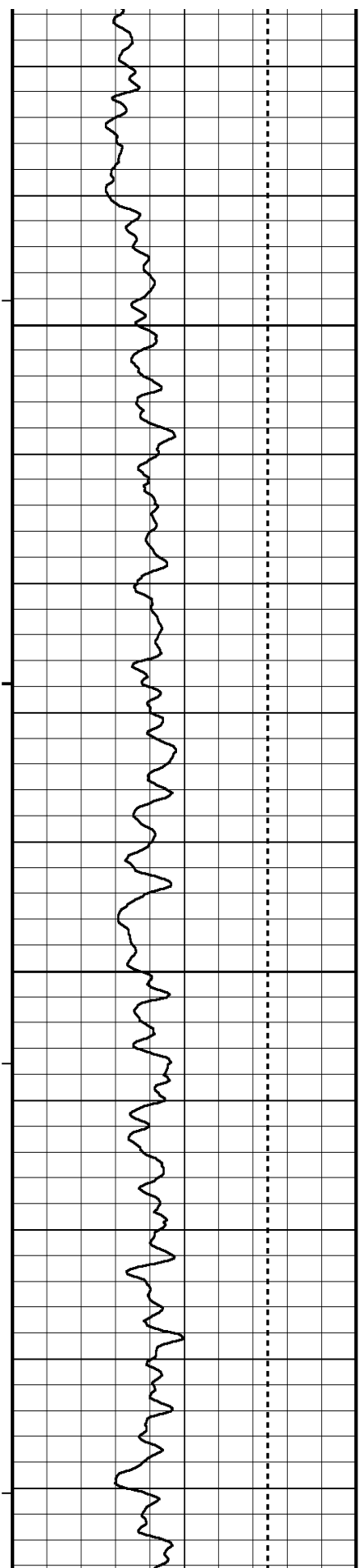
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210

220







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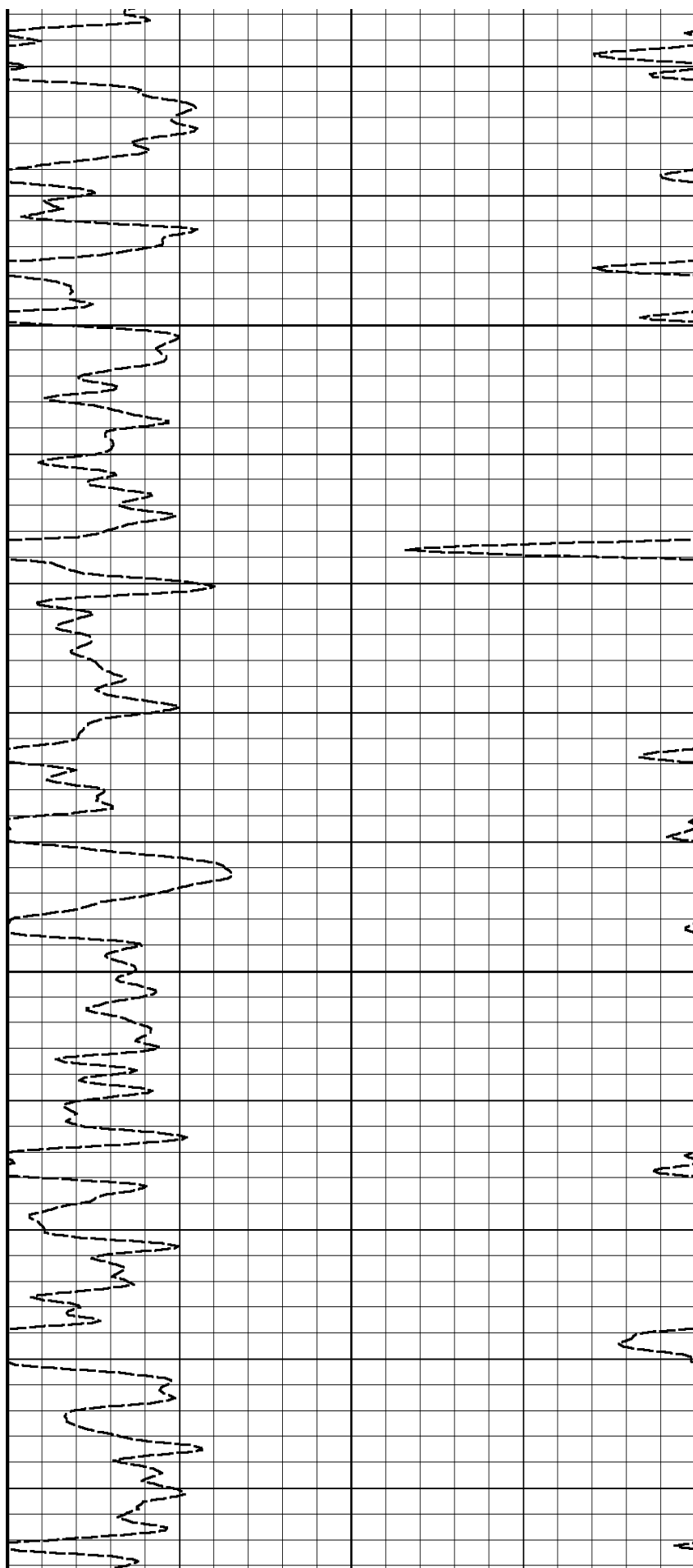
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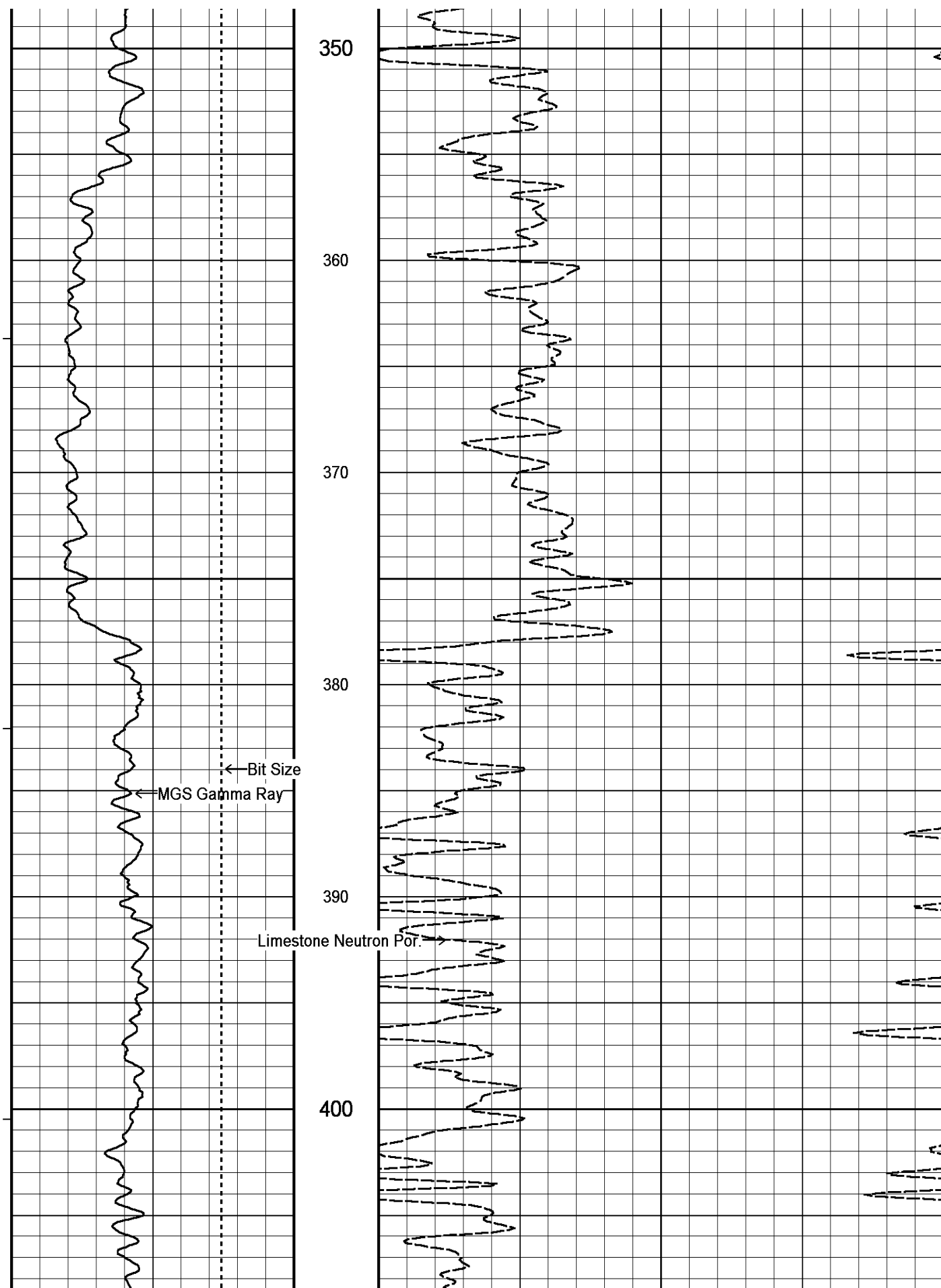
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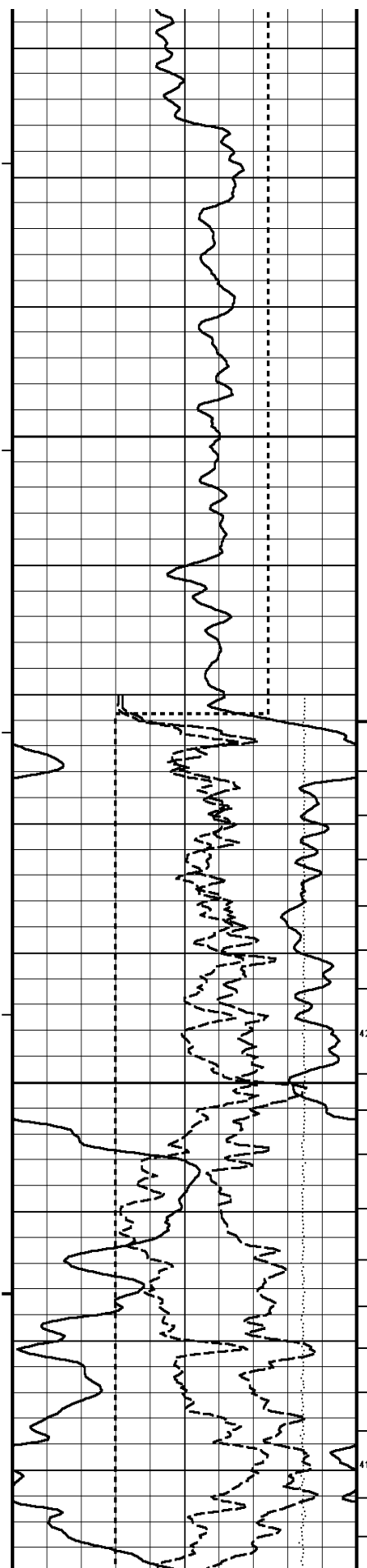
320

330

340







410

420

430

Casing  
Shoe

27°

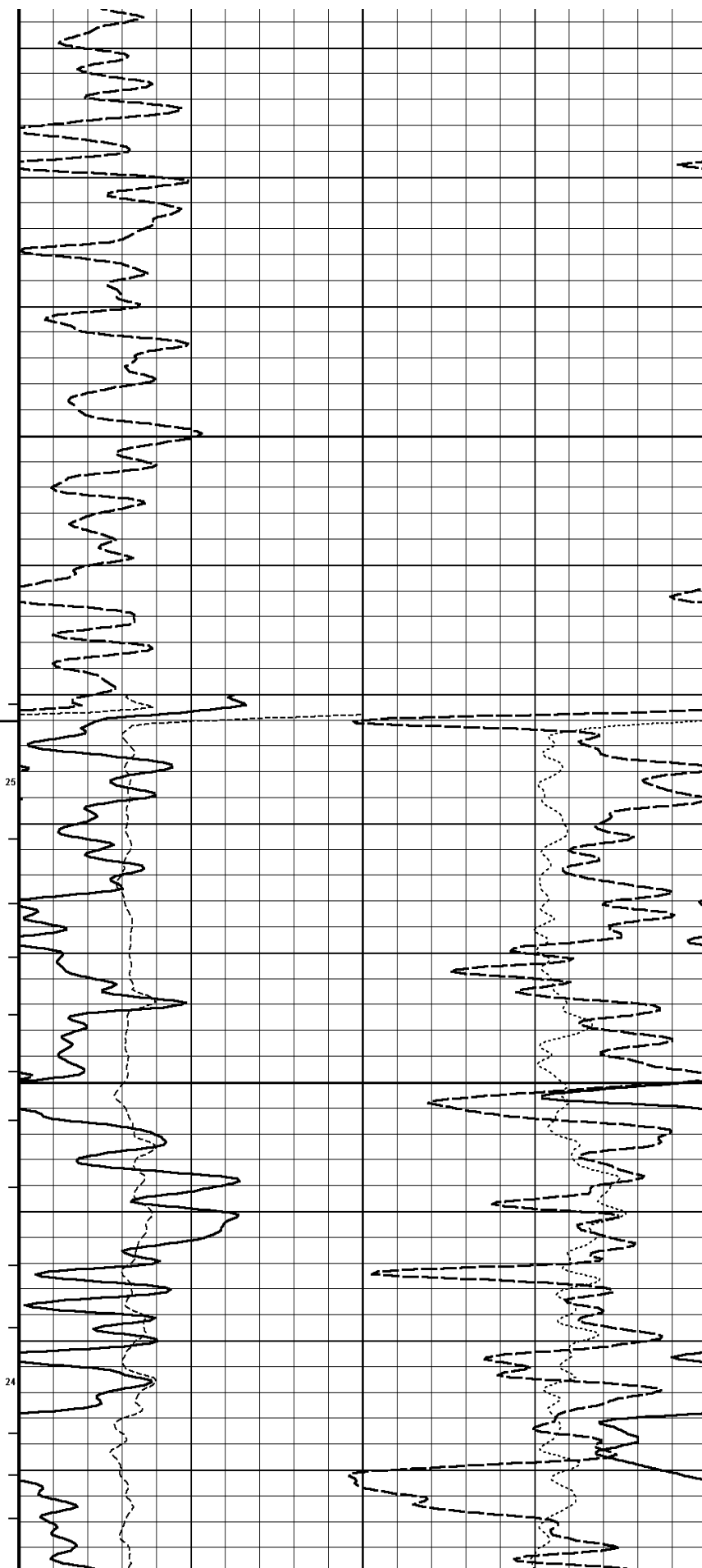
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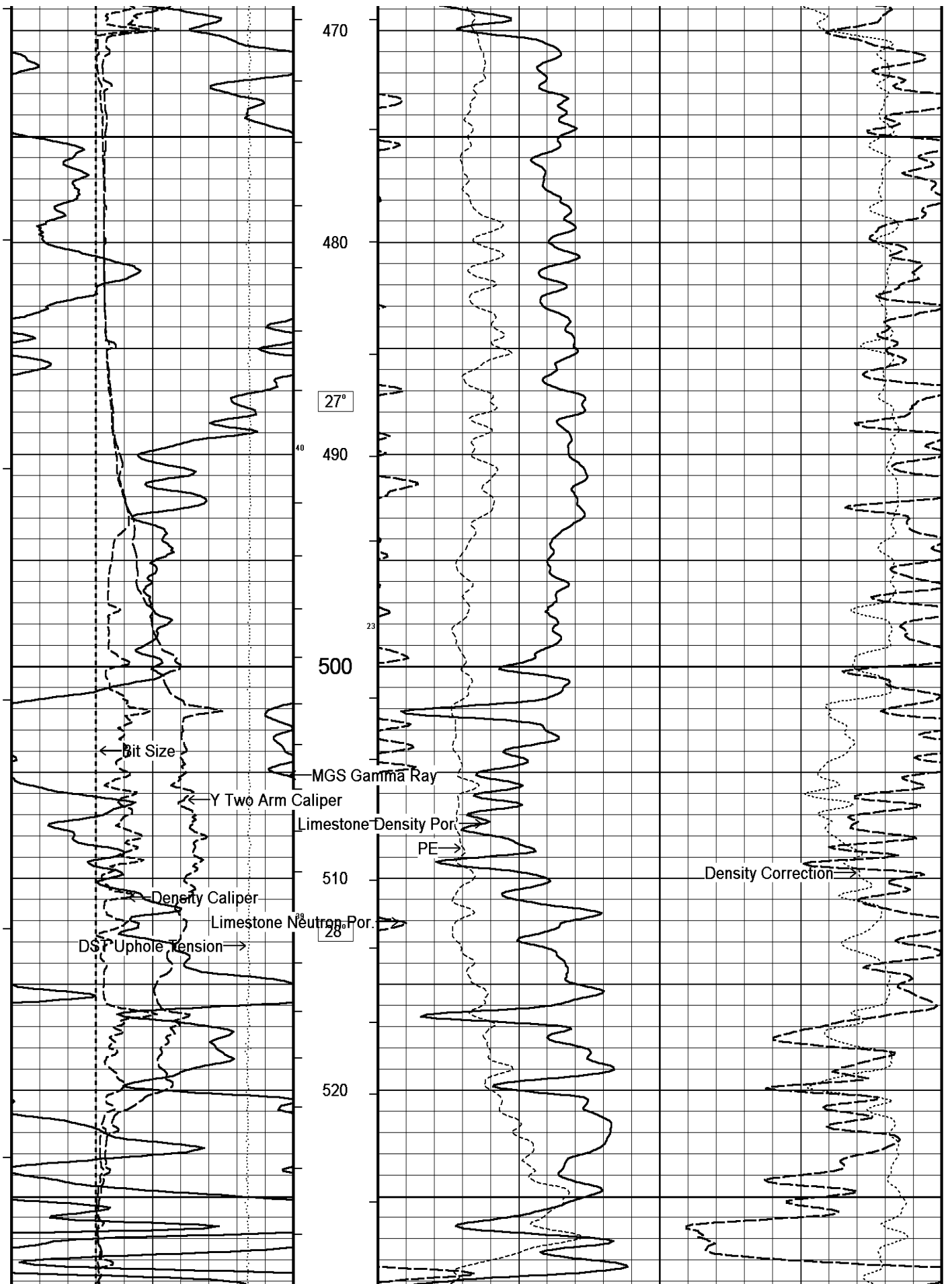
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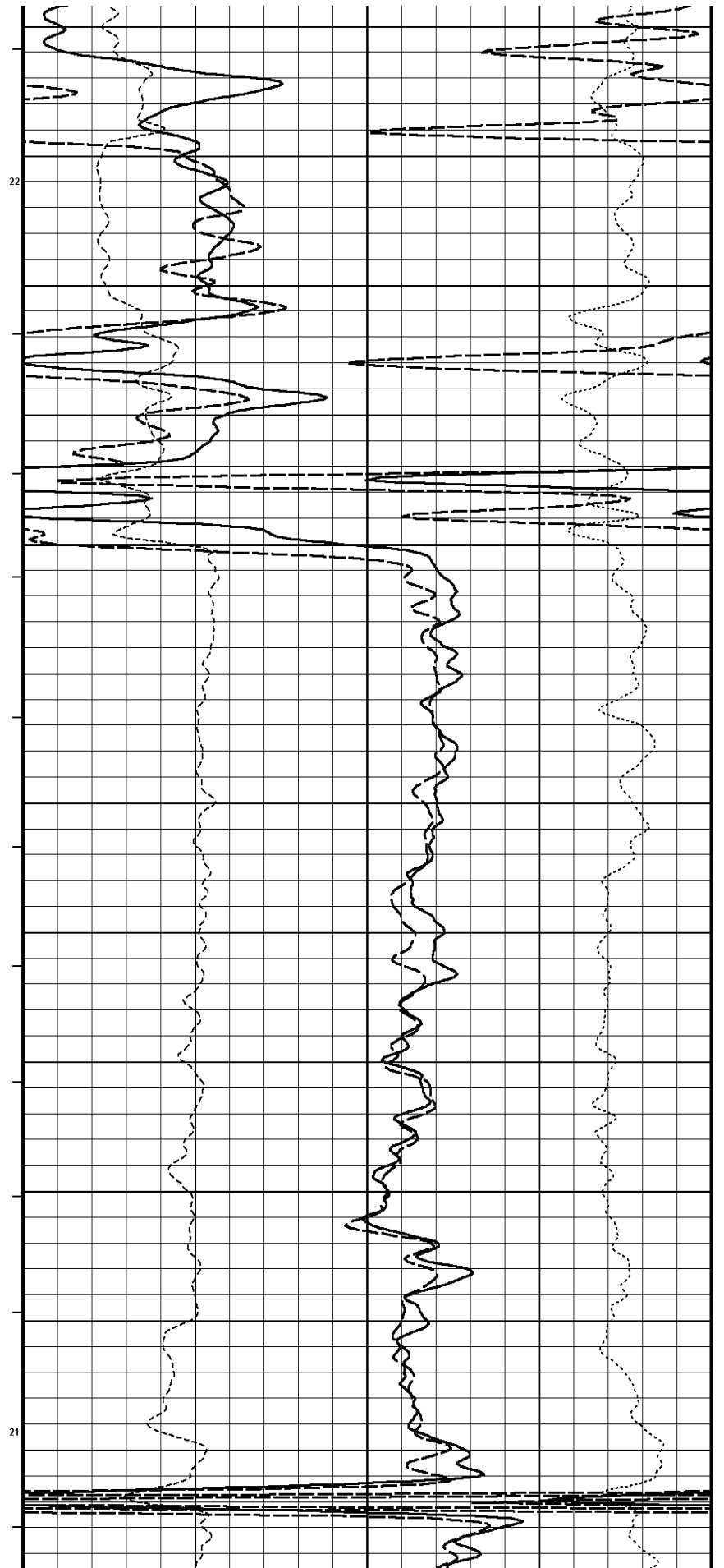
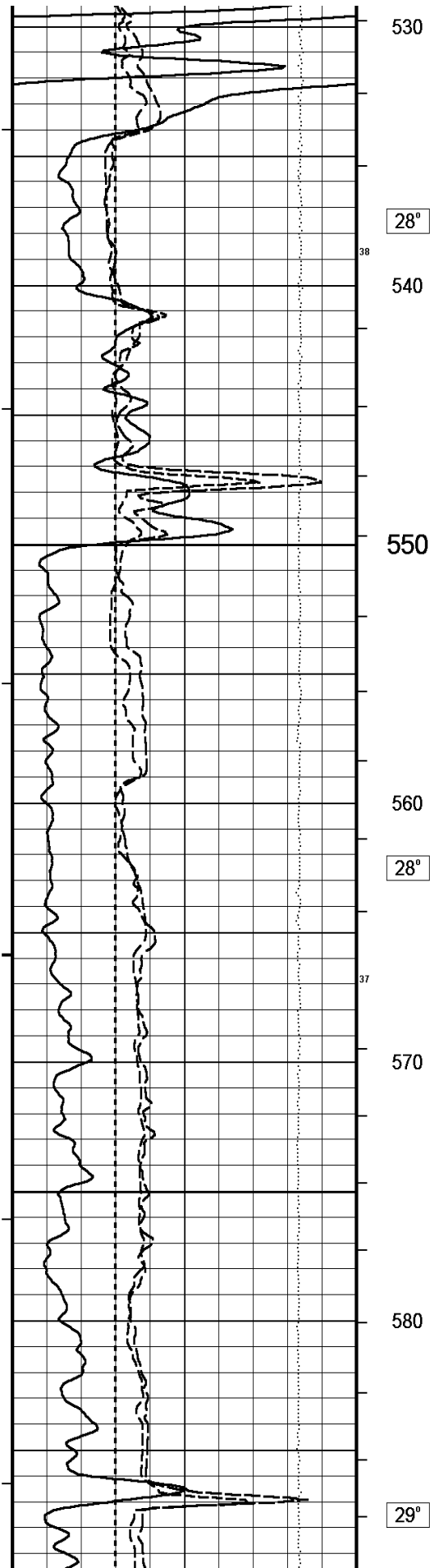
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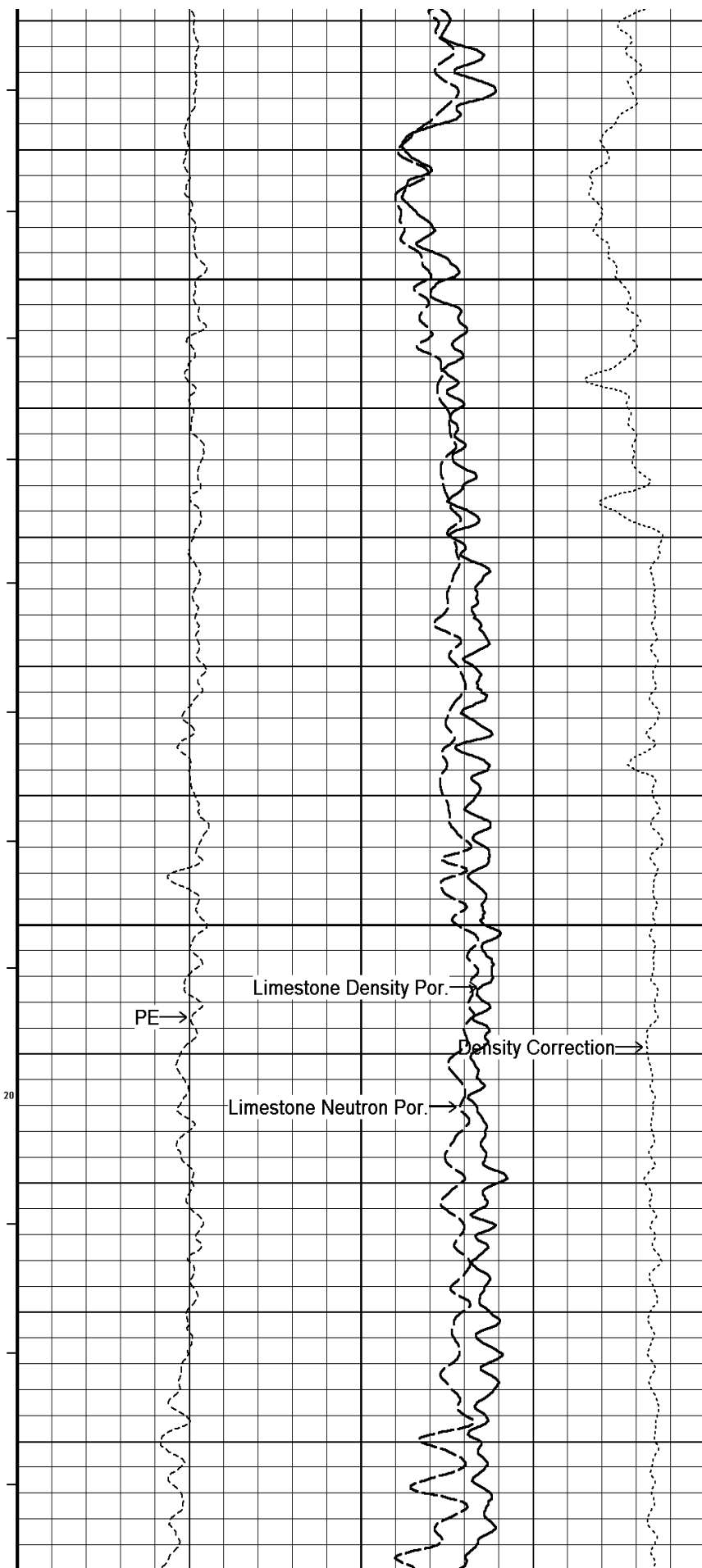
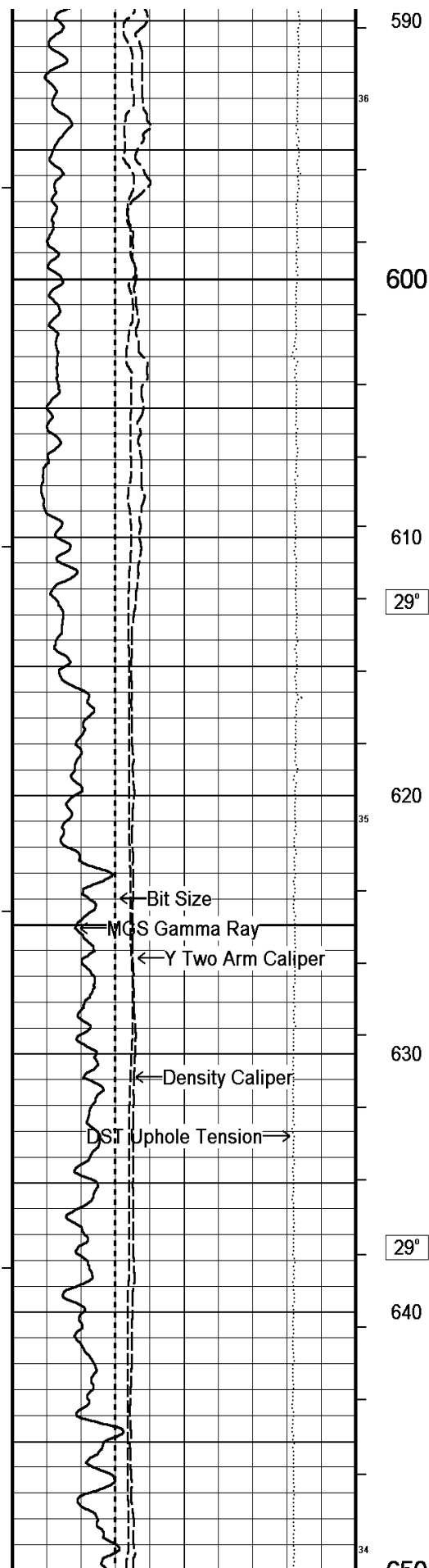
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27°

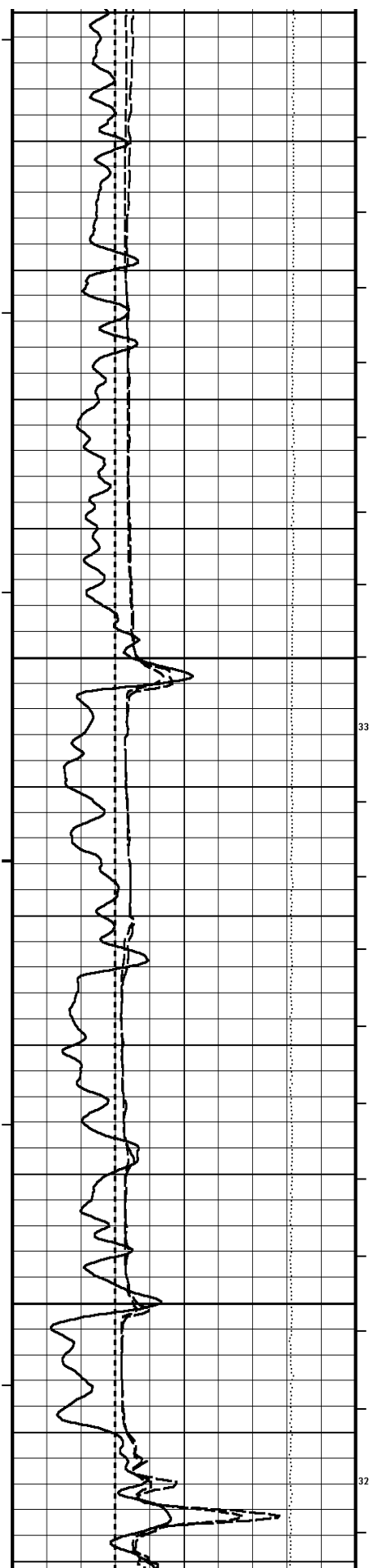












650

660

29°

670

33

680

19

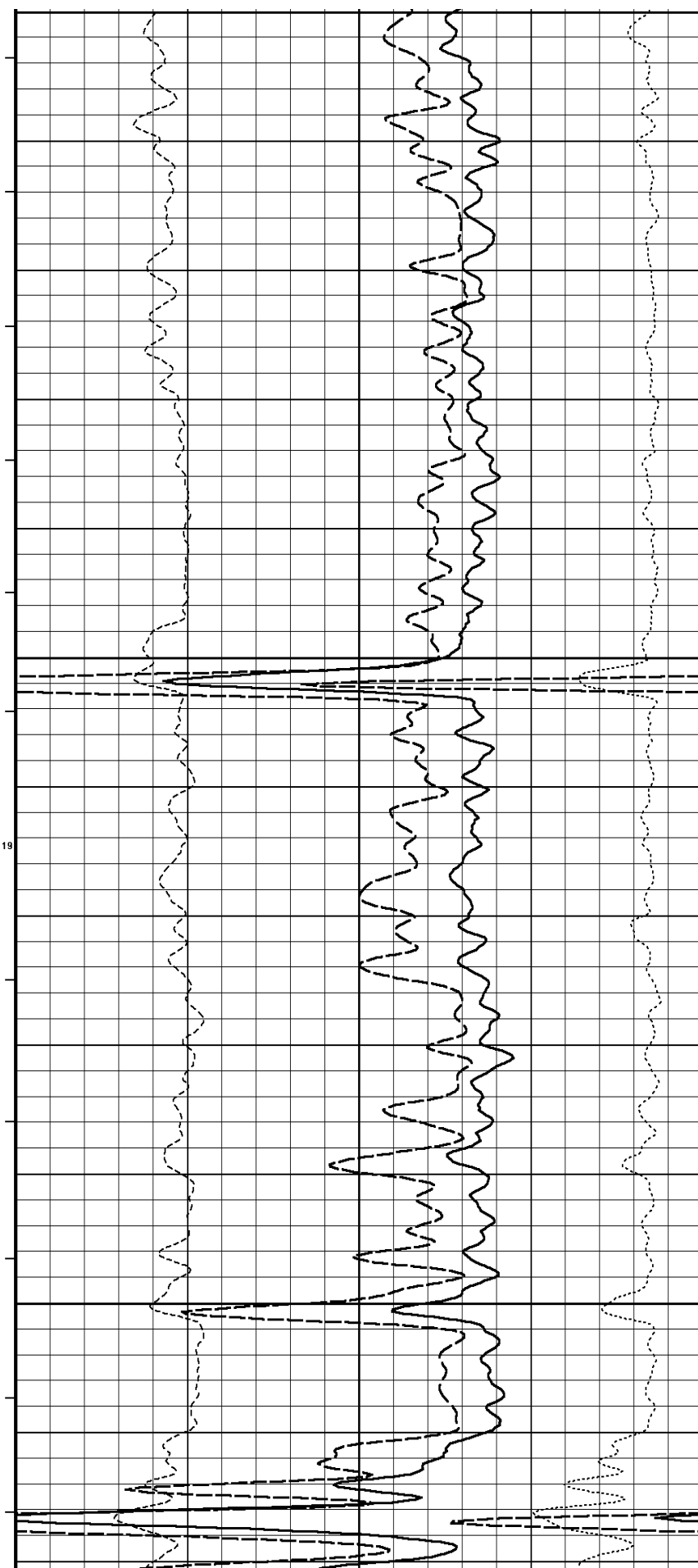
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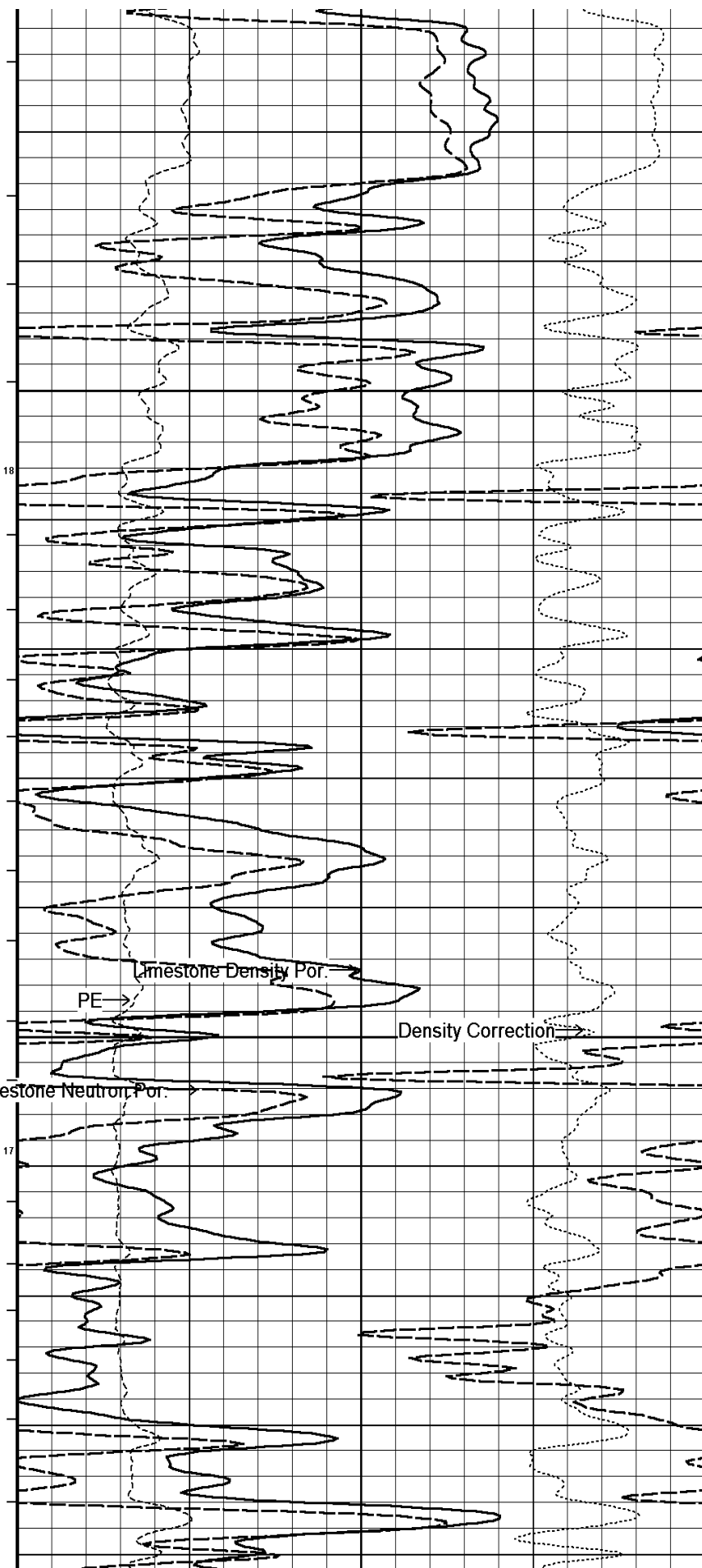
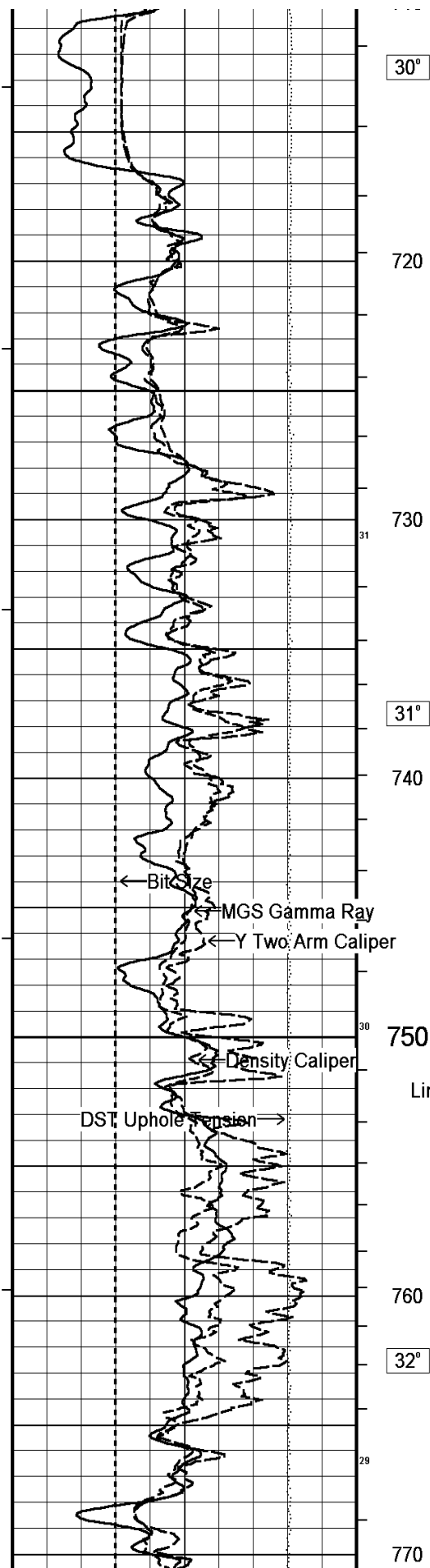
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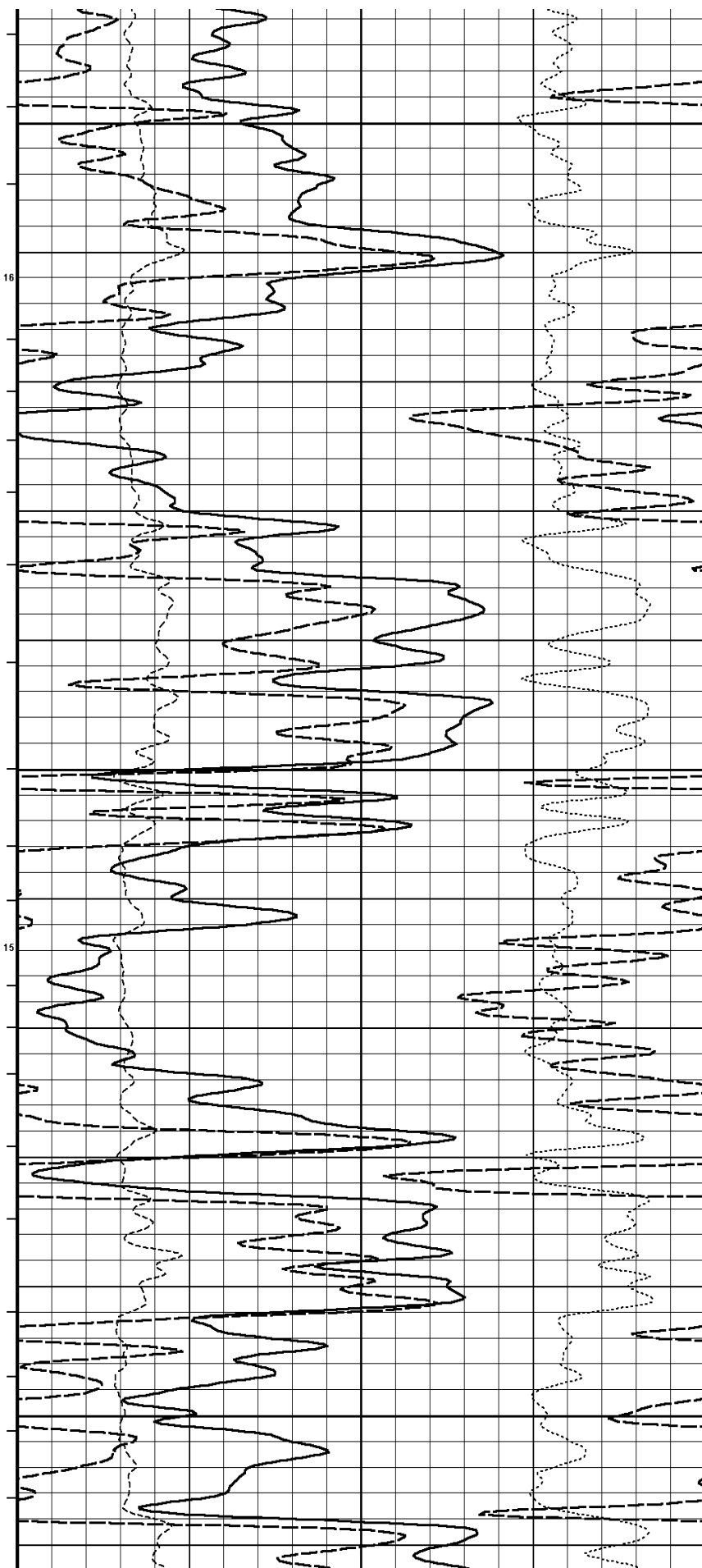
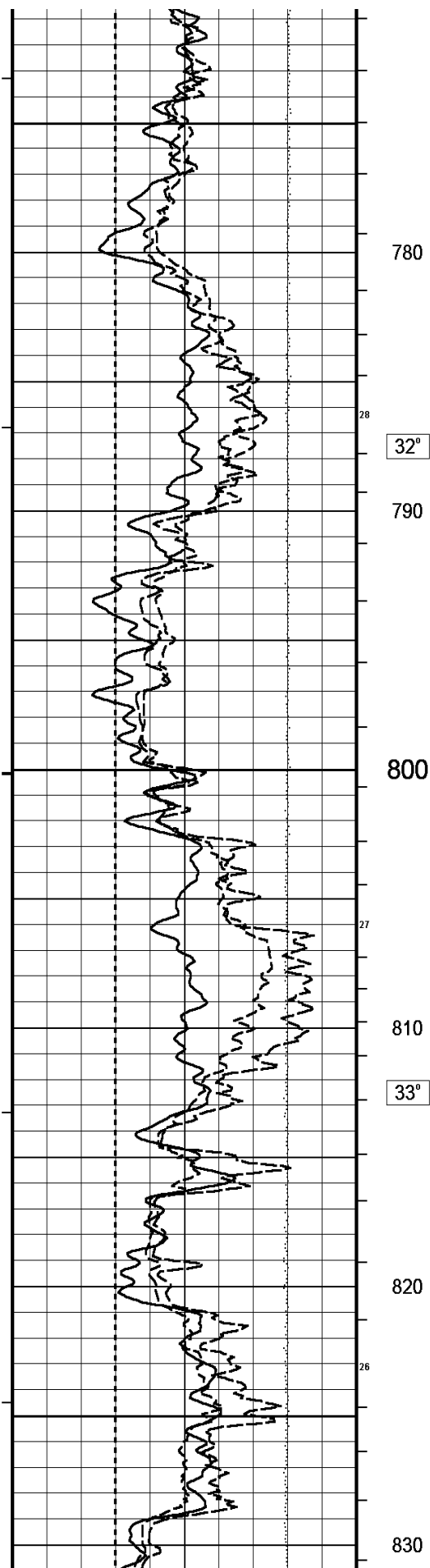
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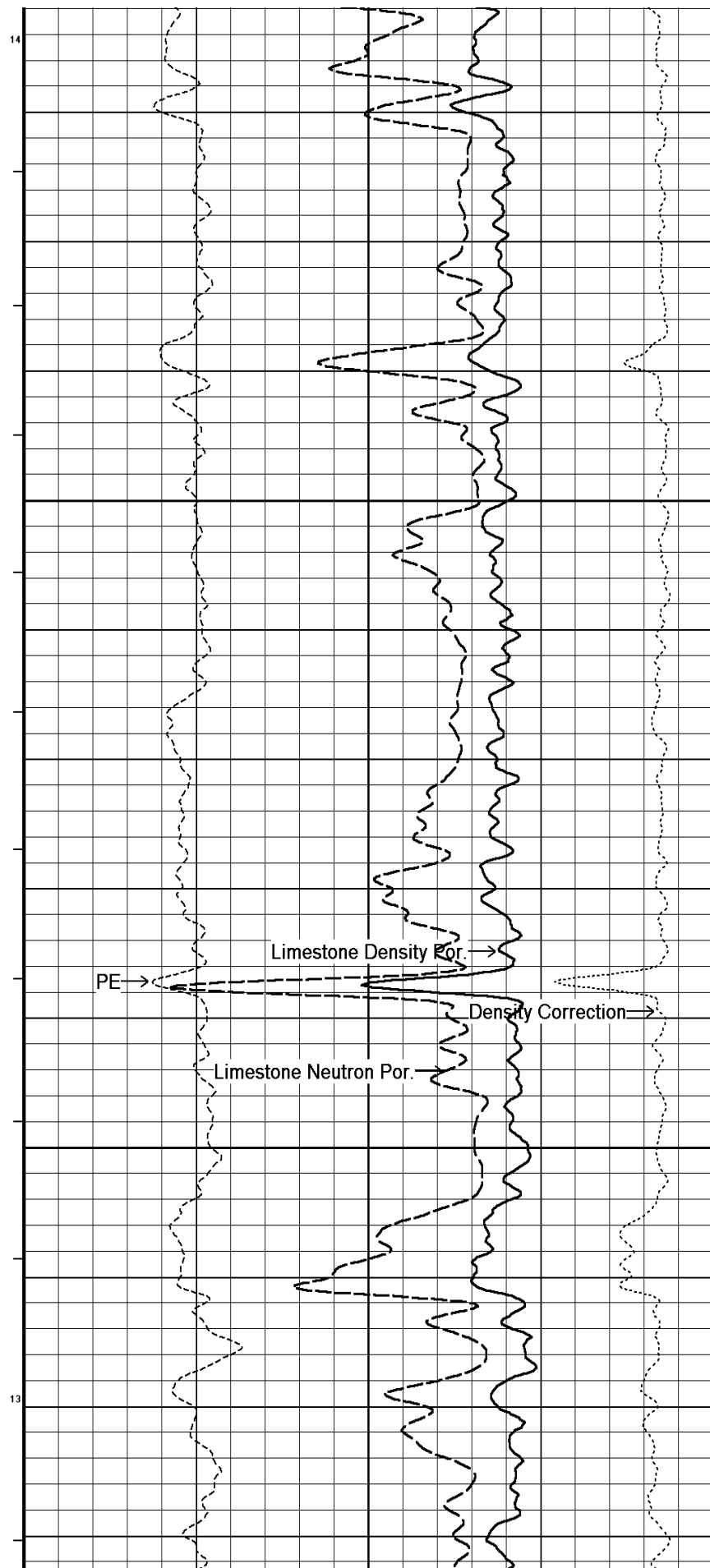
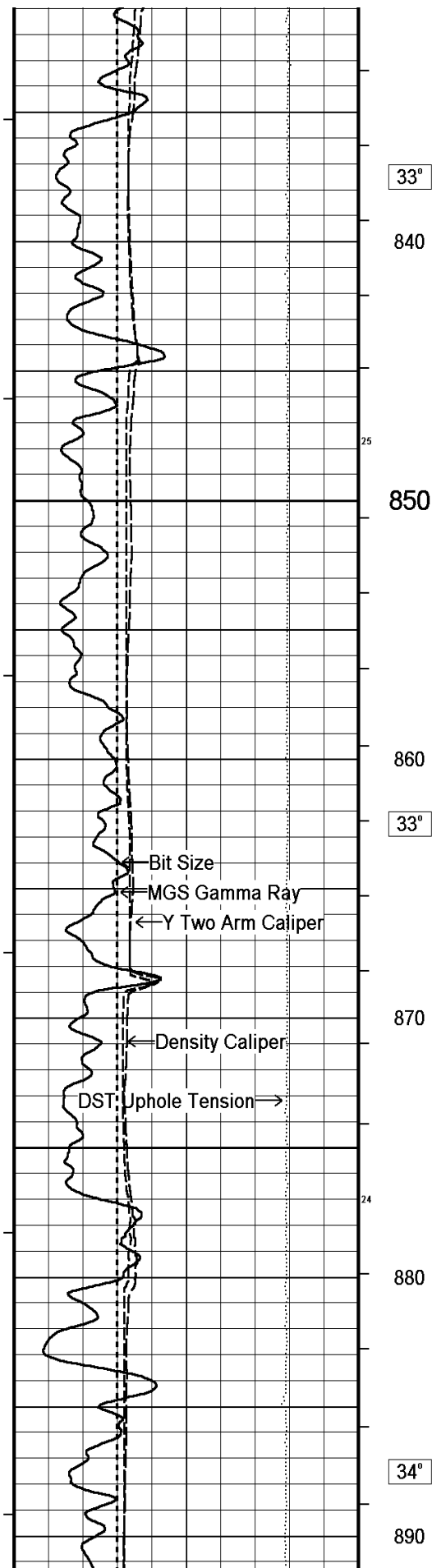
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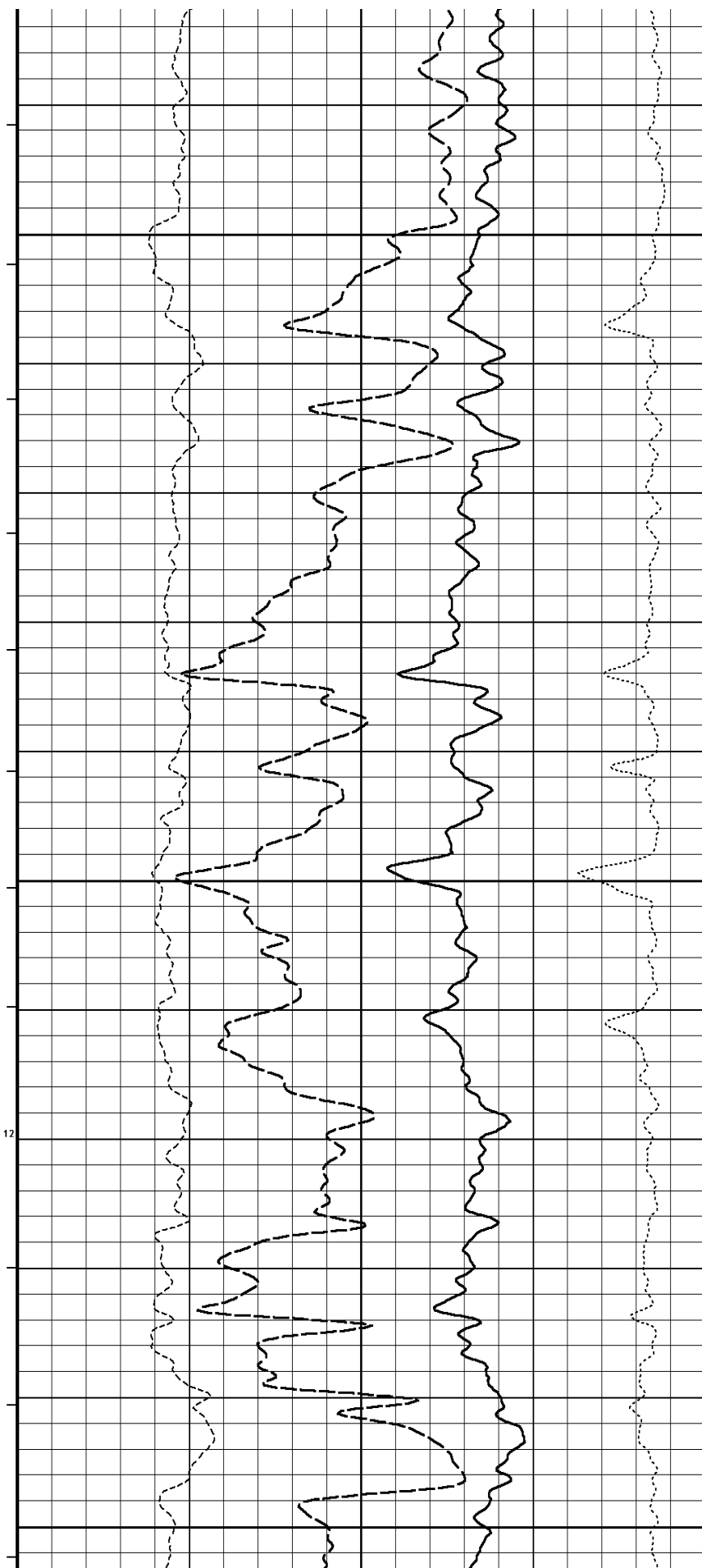
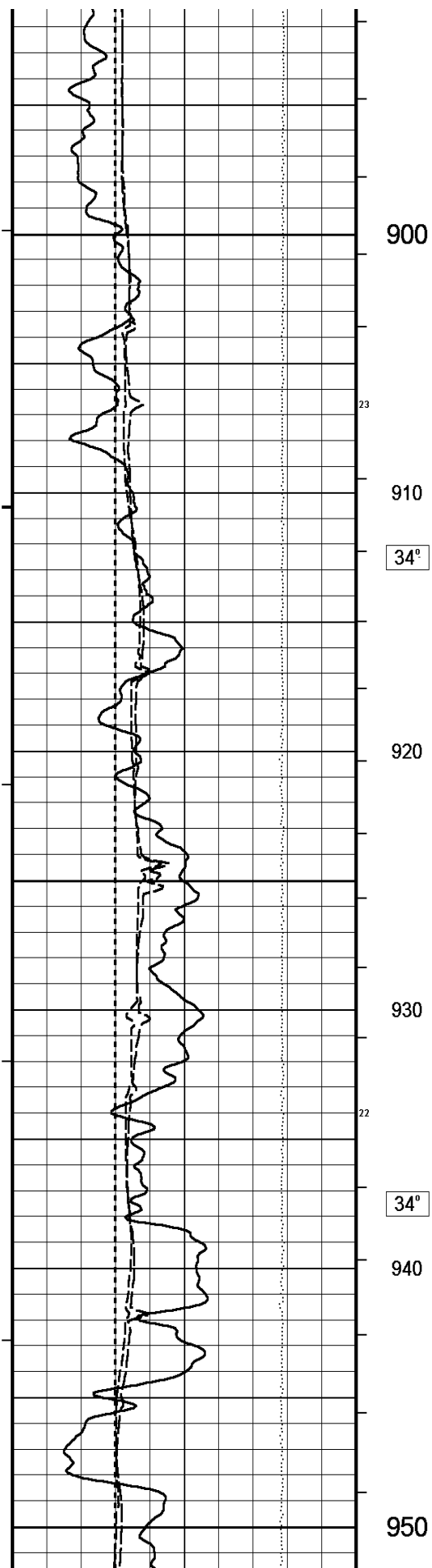
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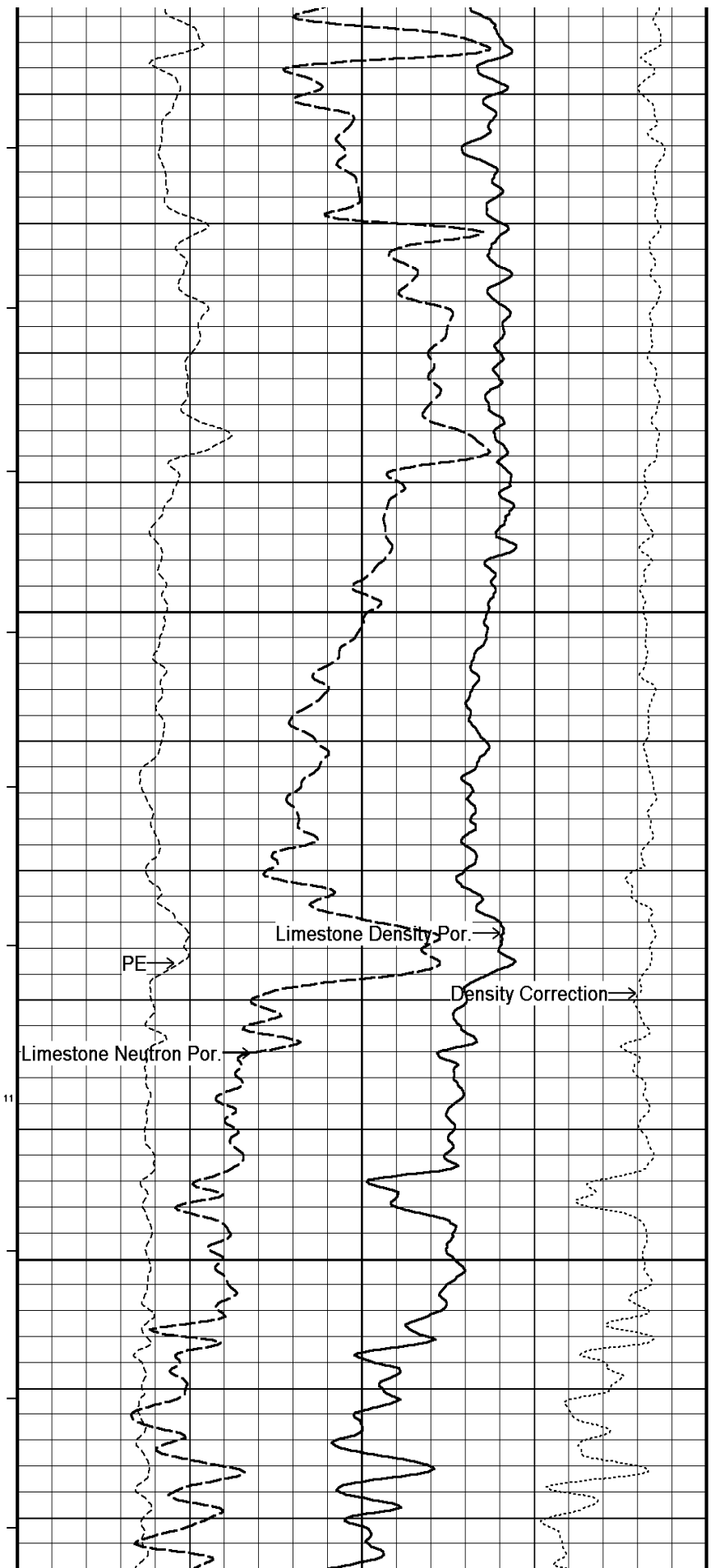
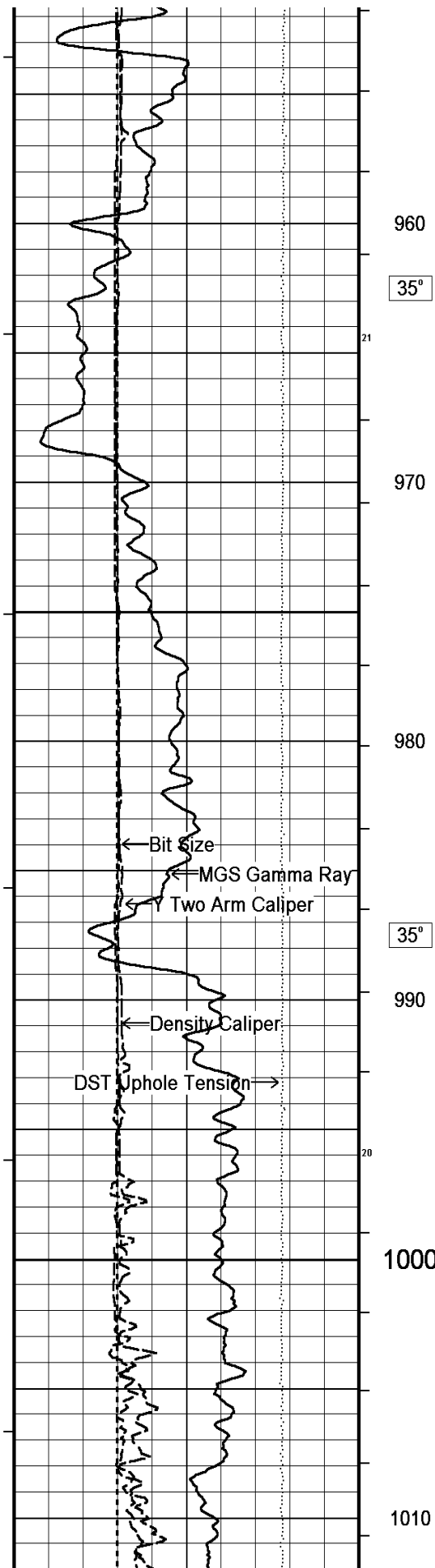


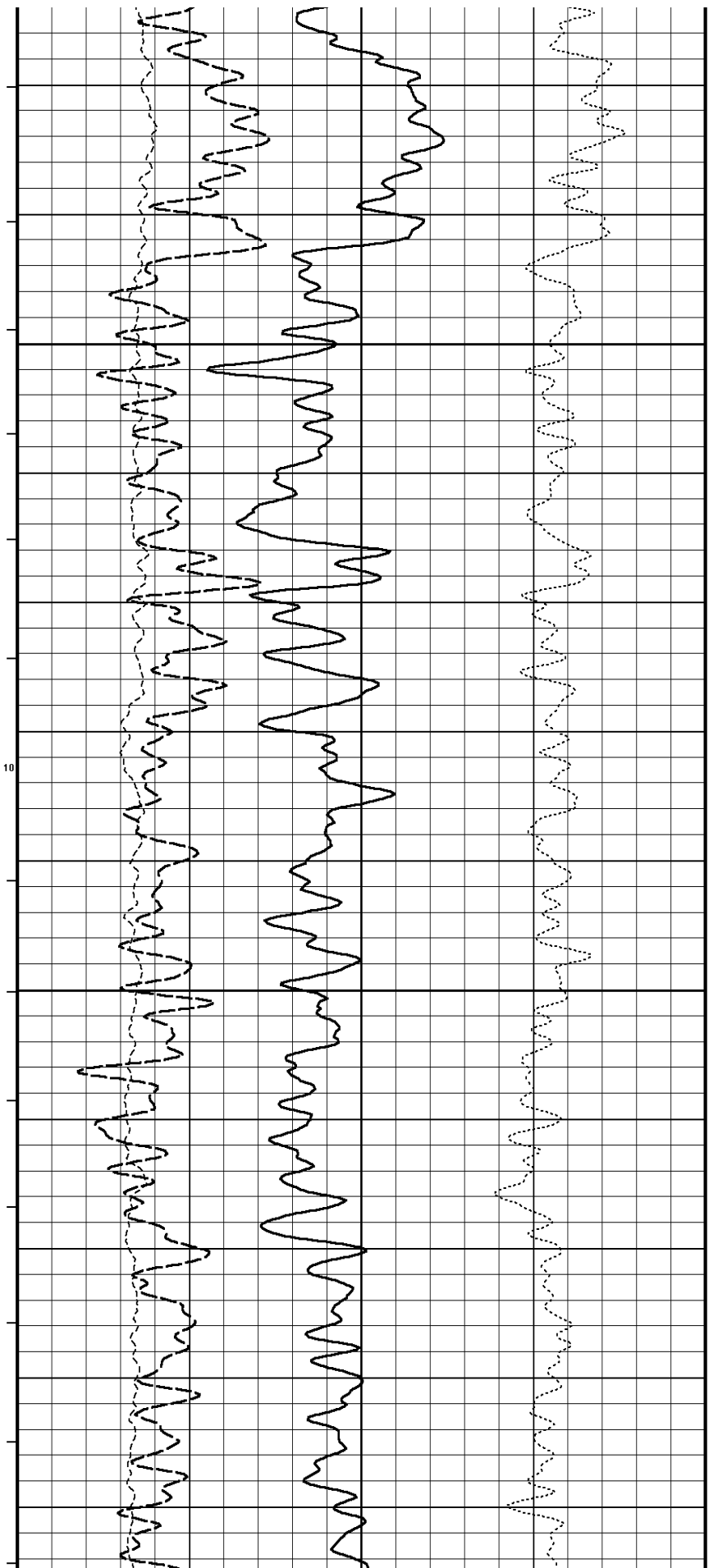
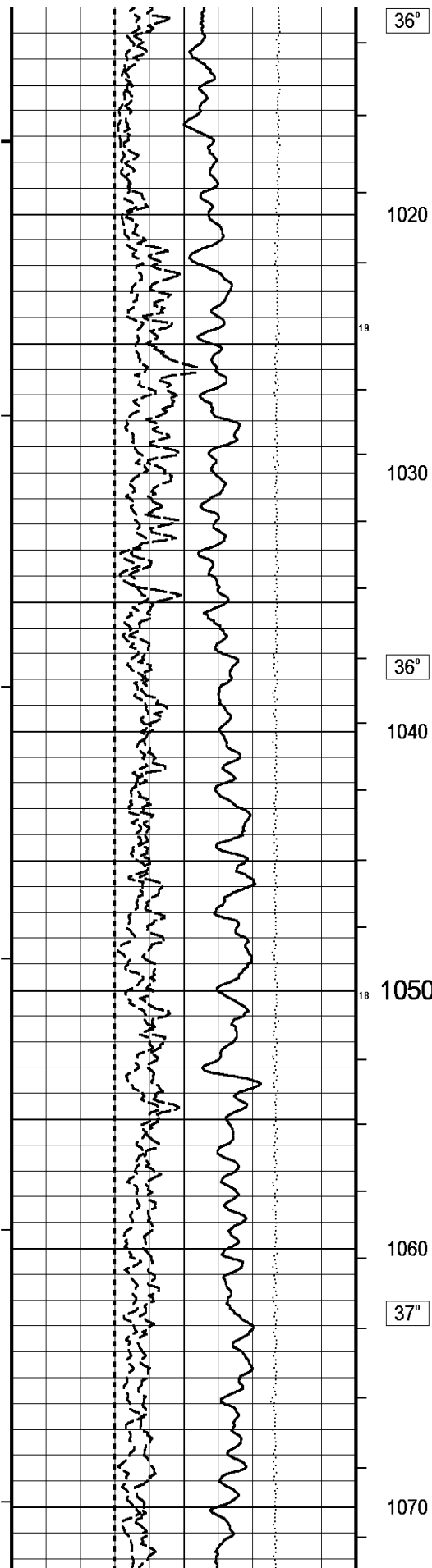


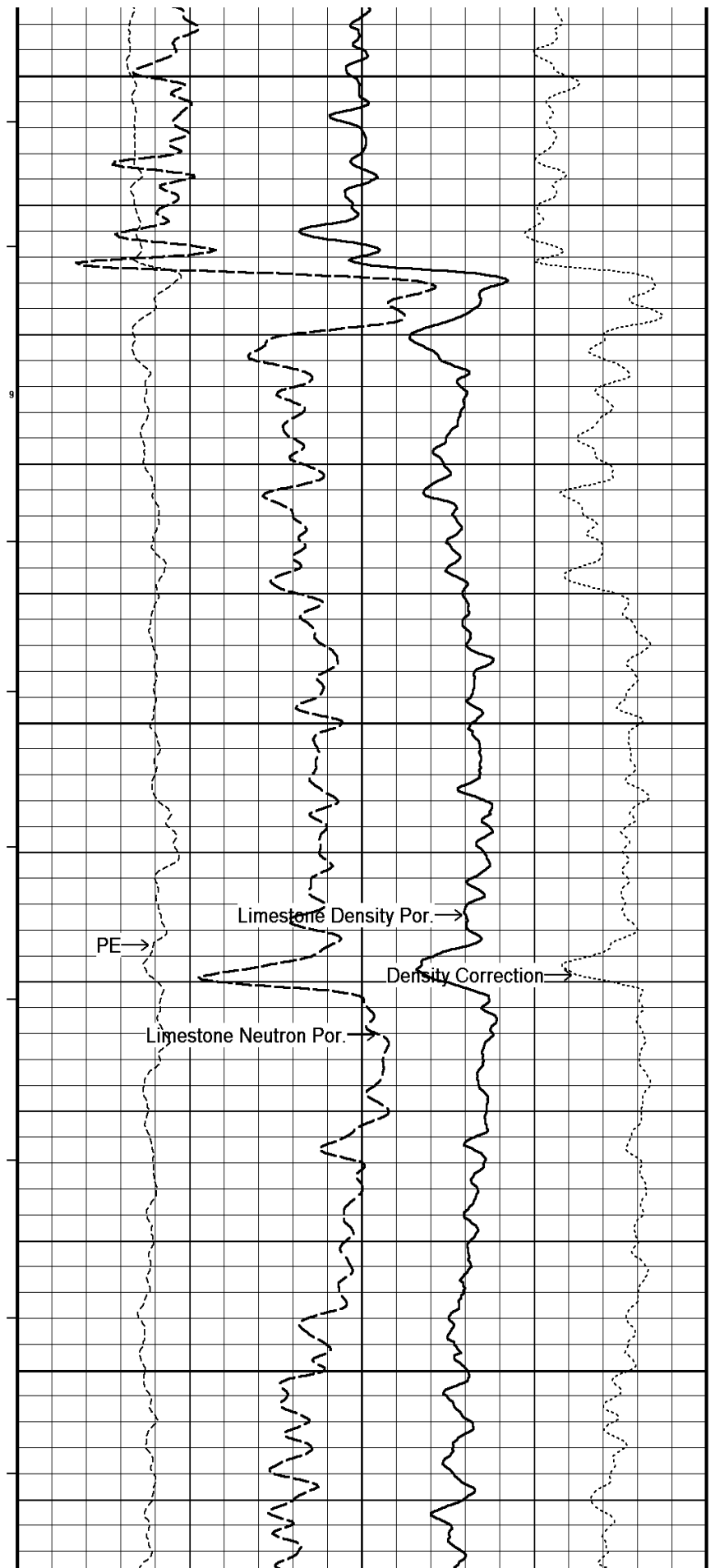
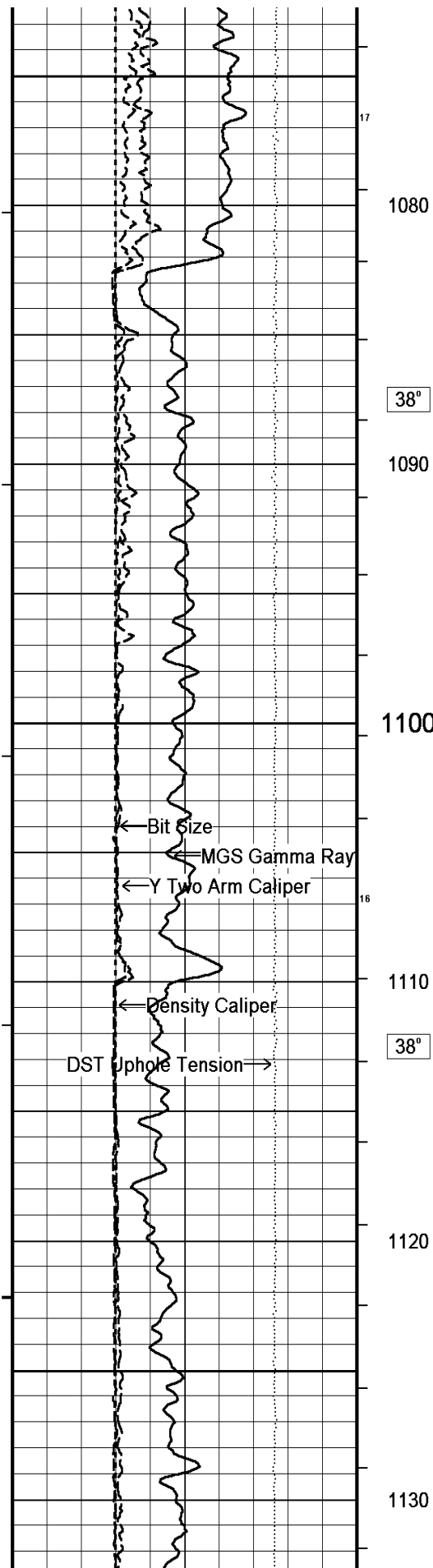




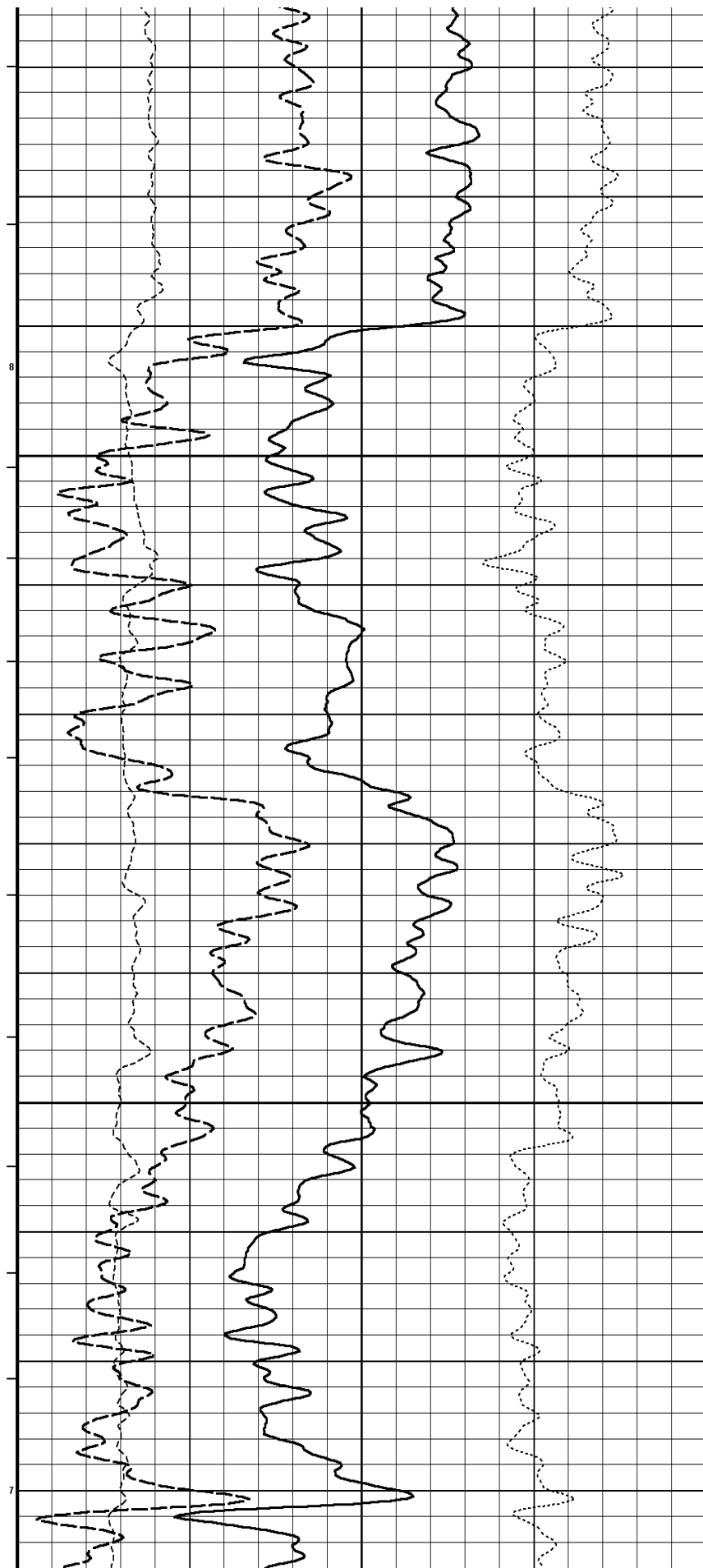
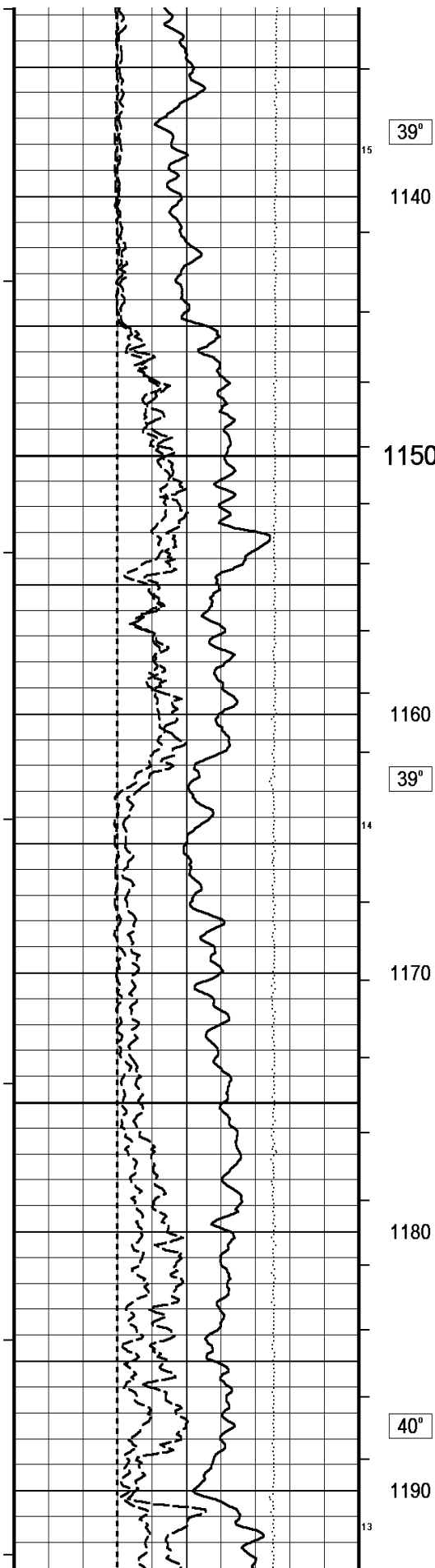


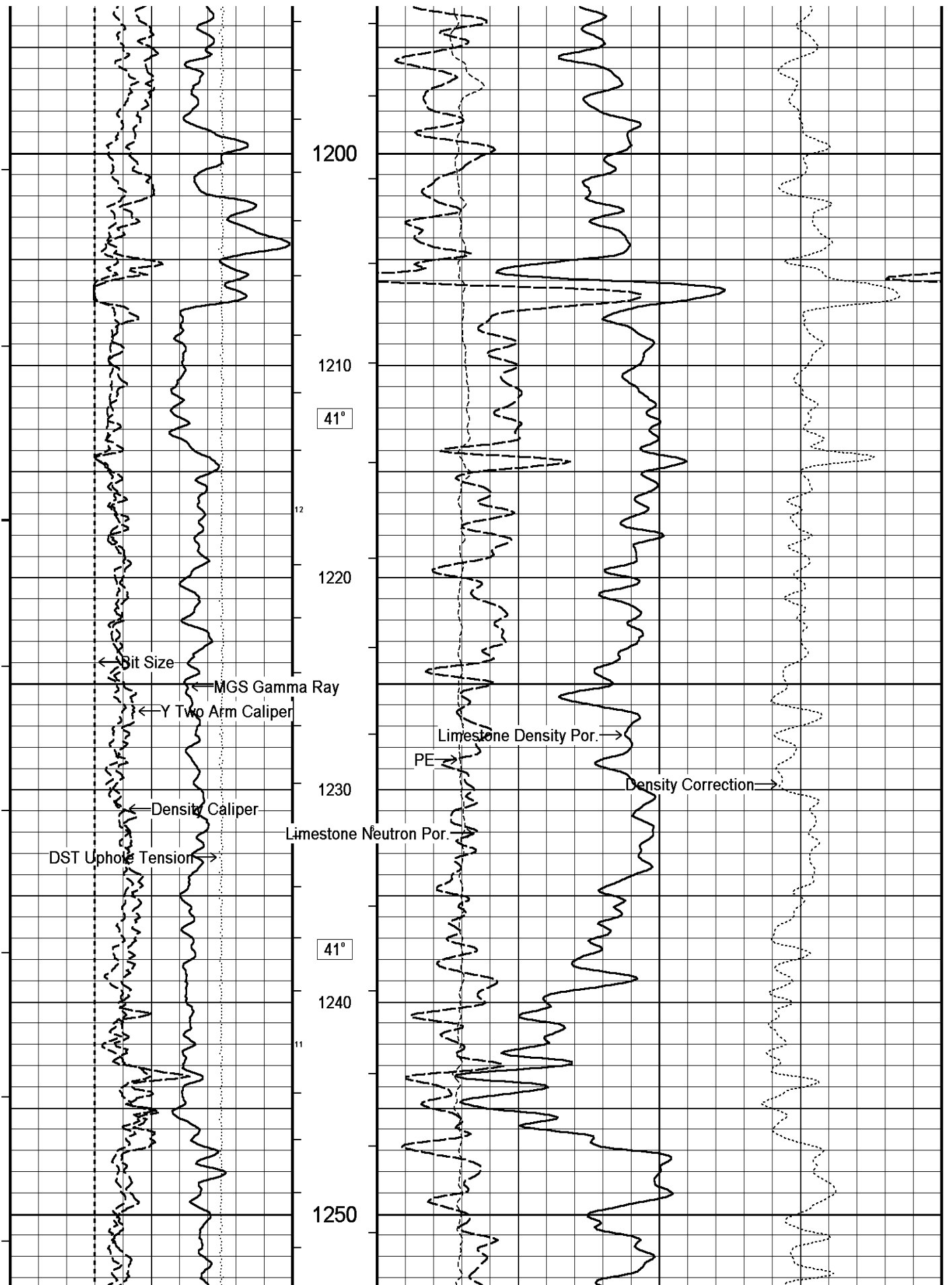


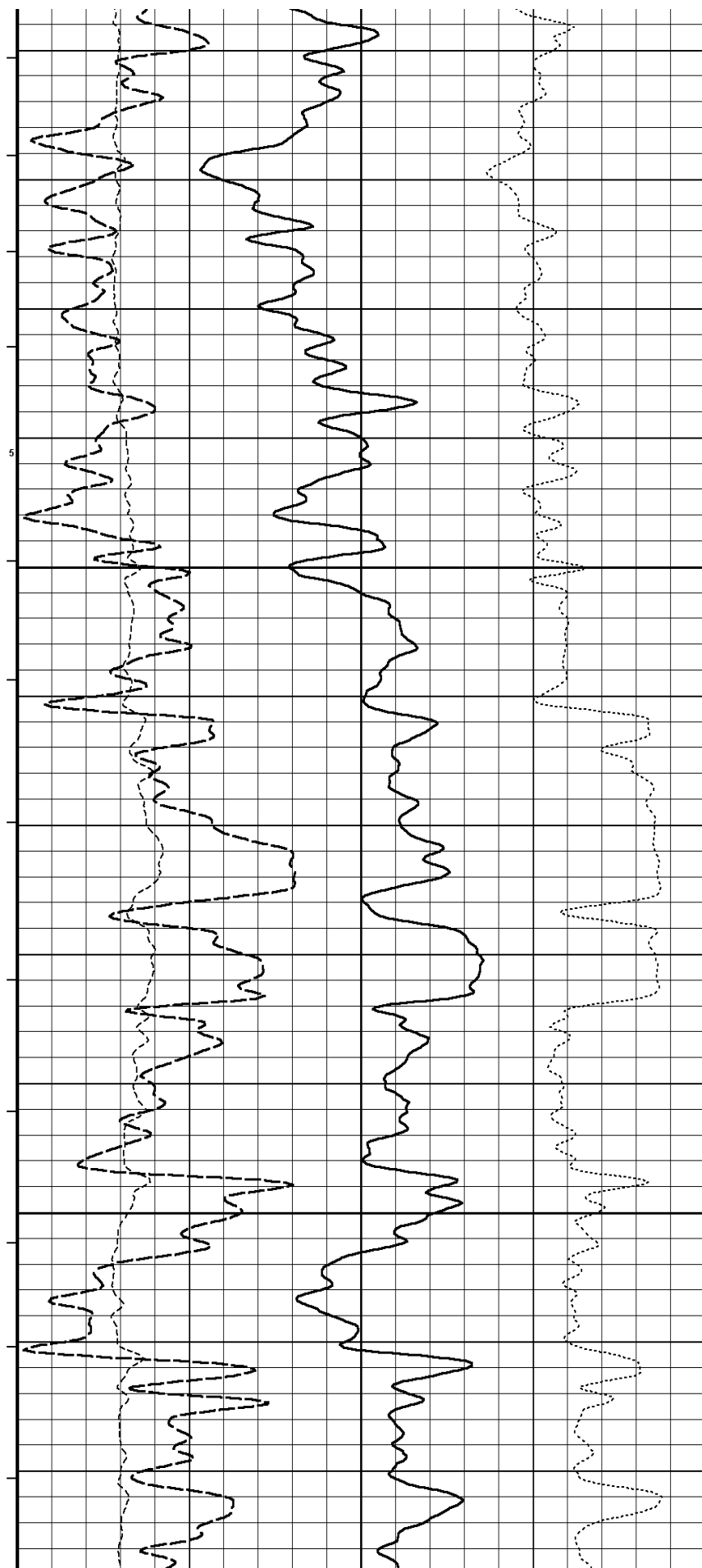
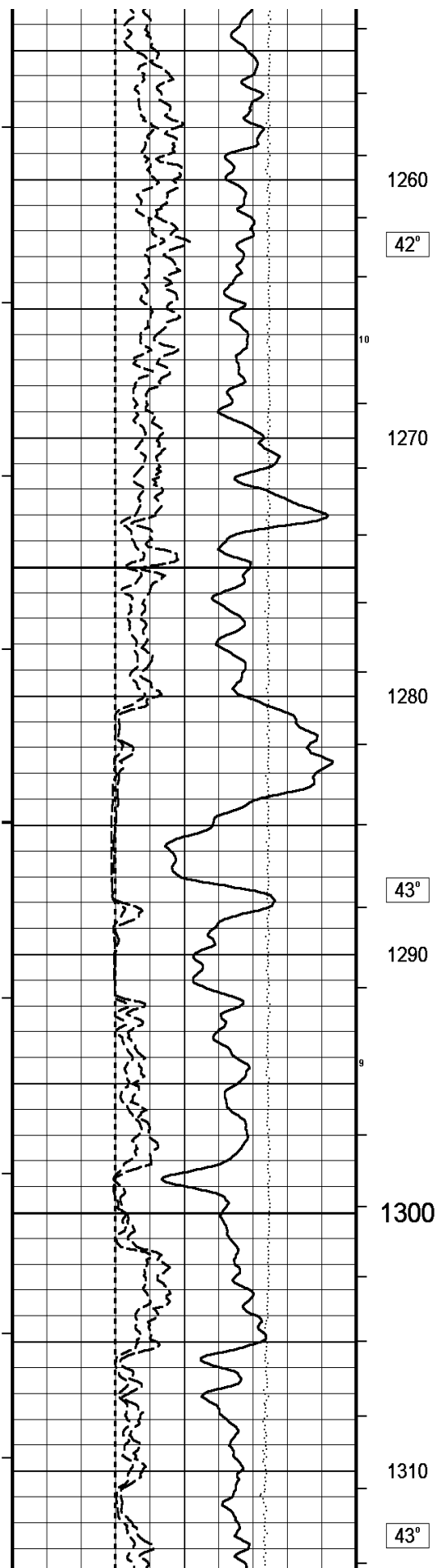


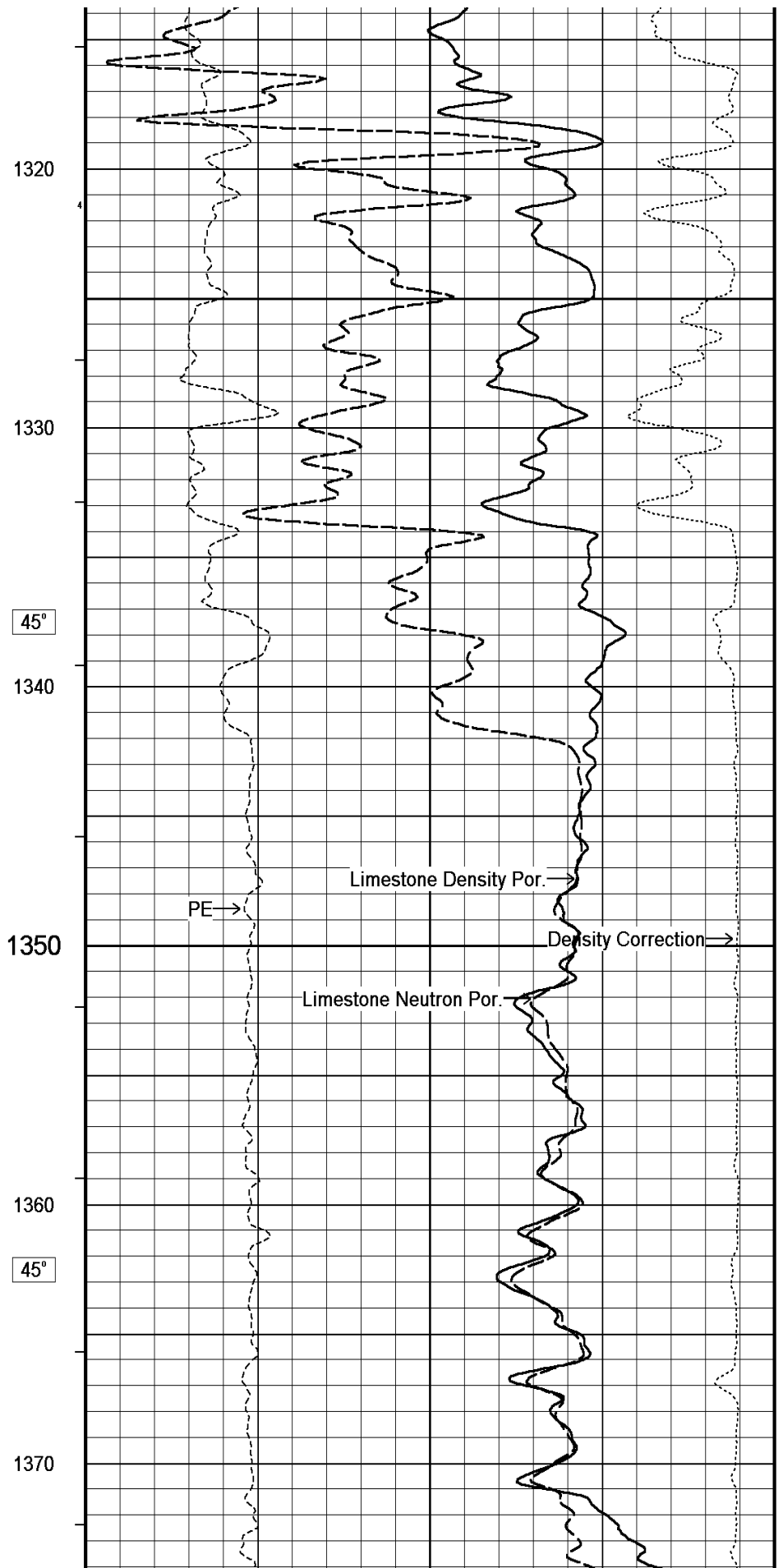
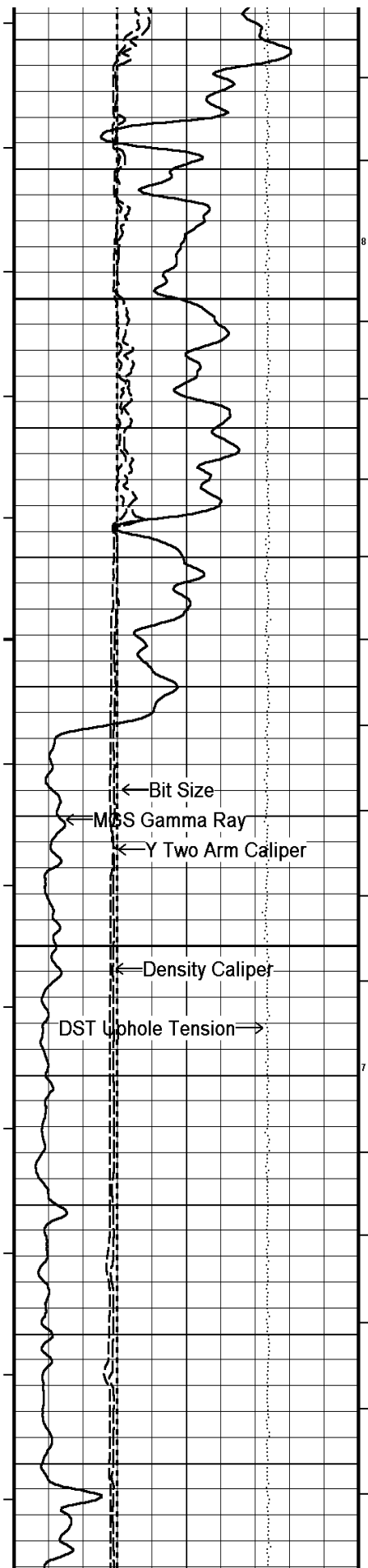


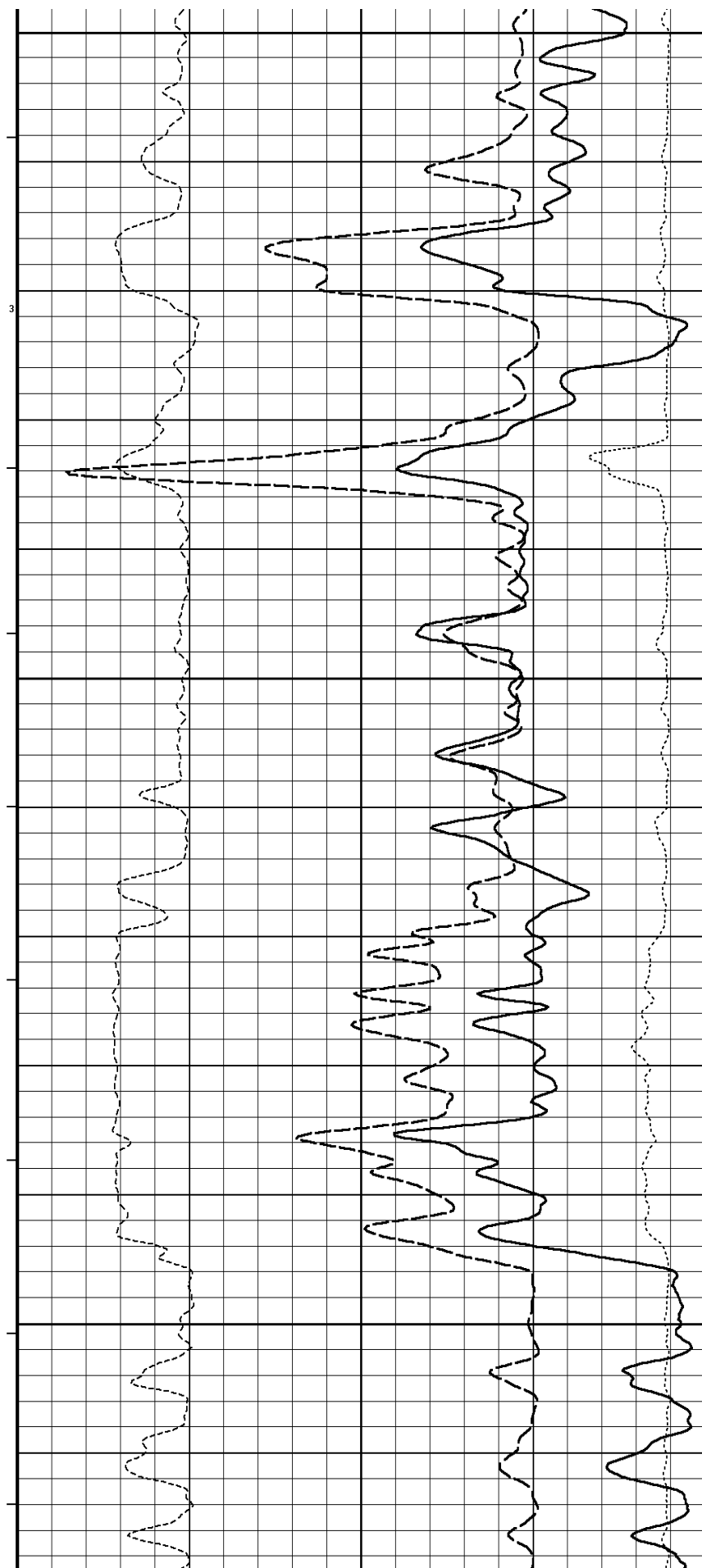
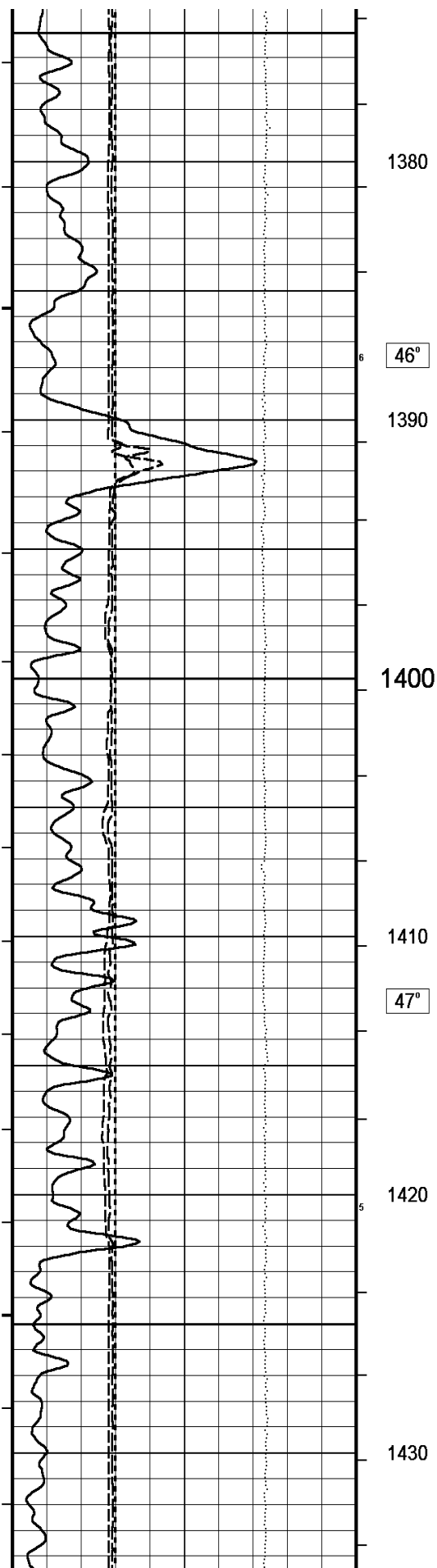


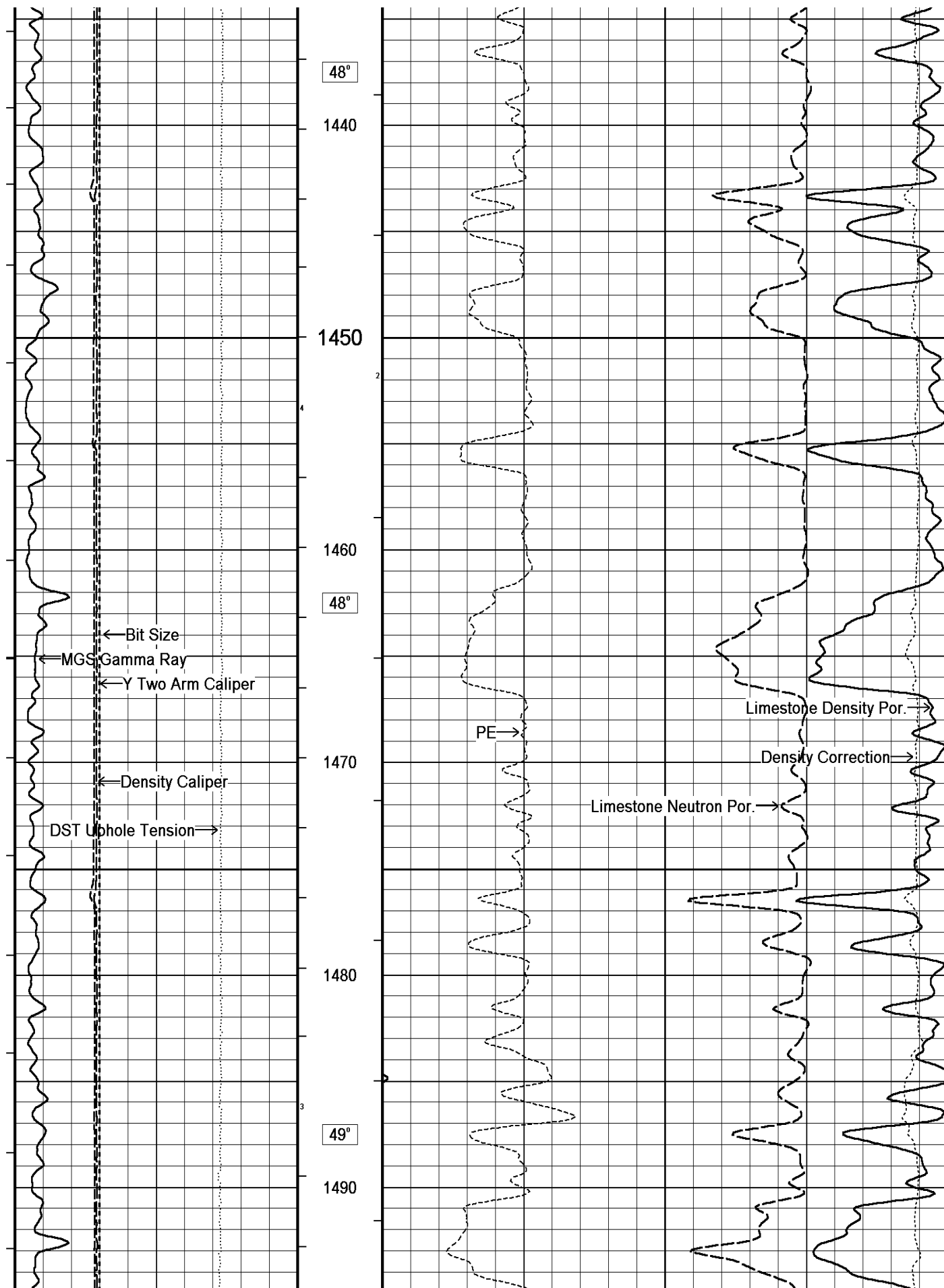


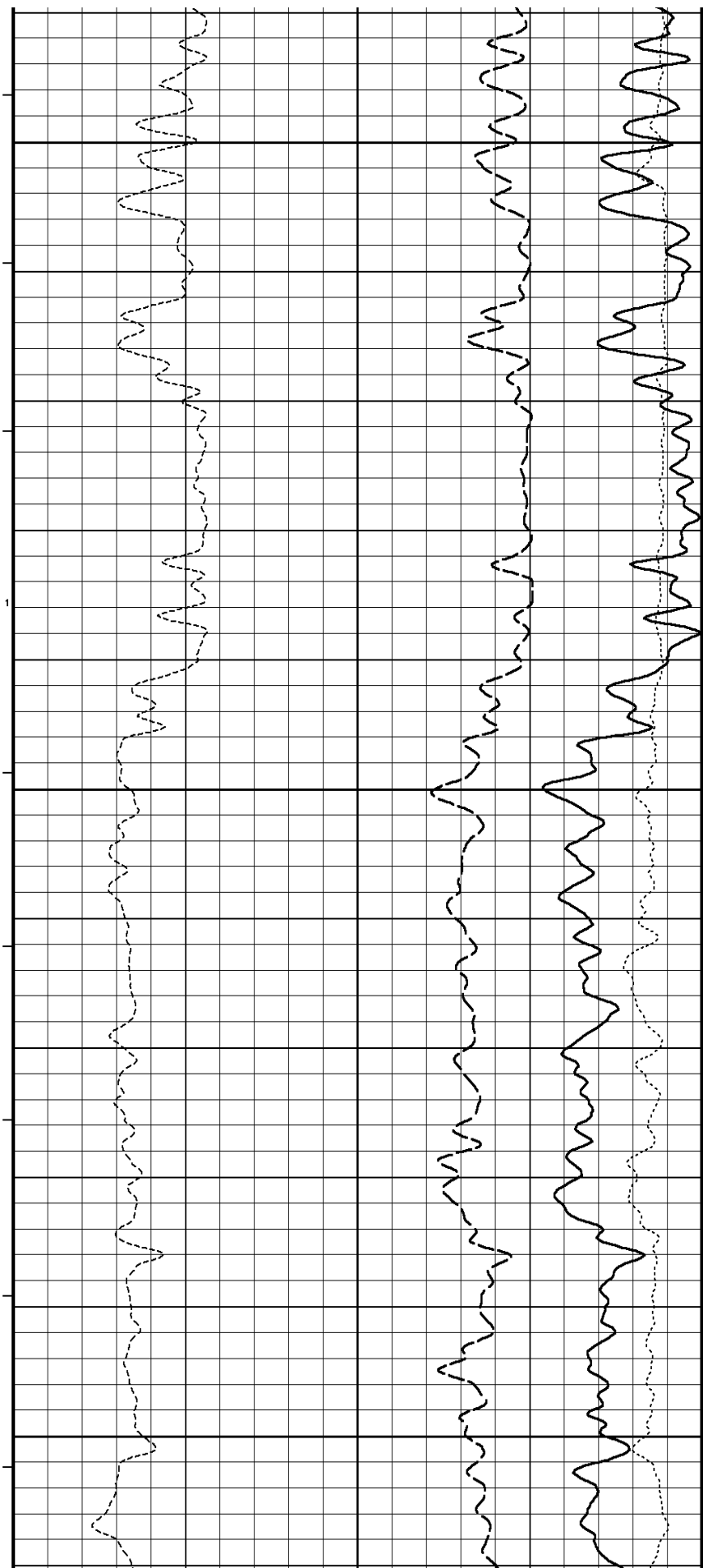
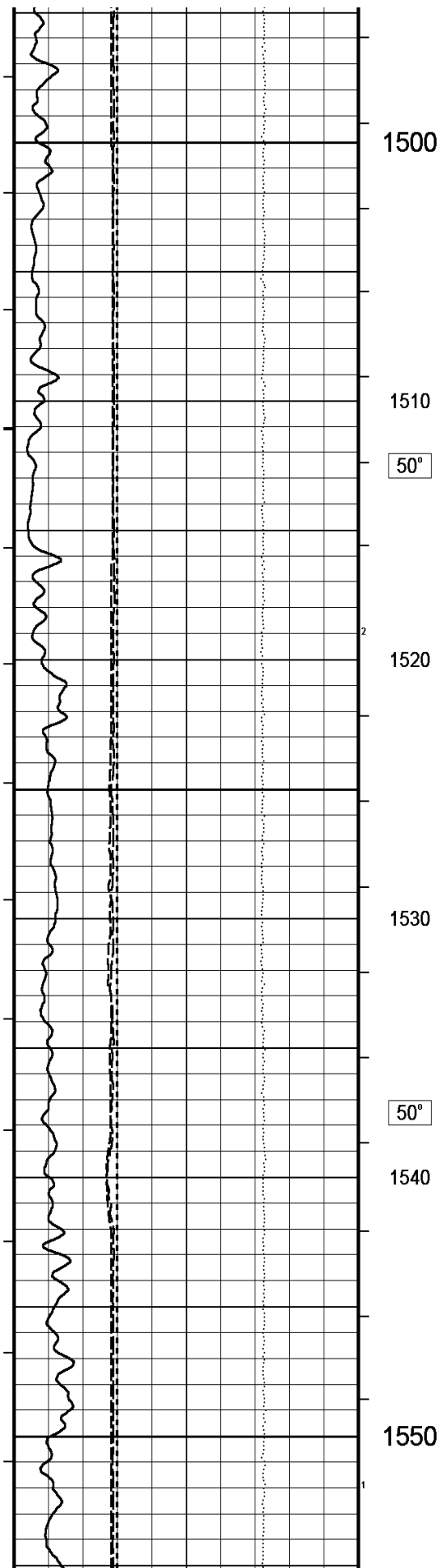


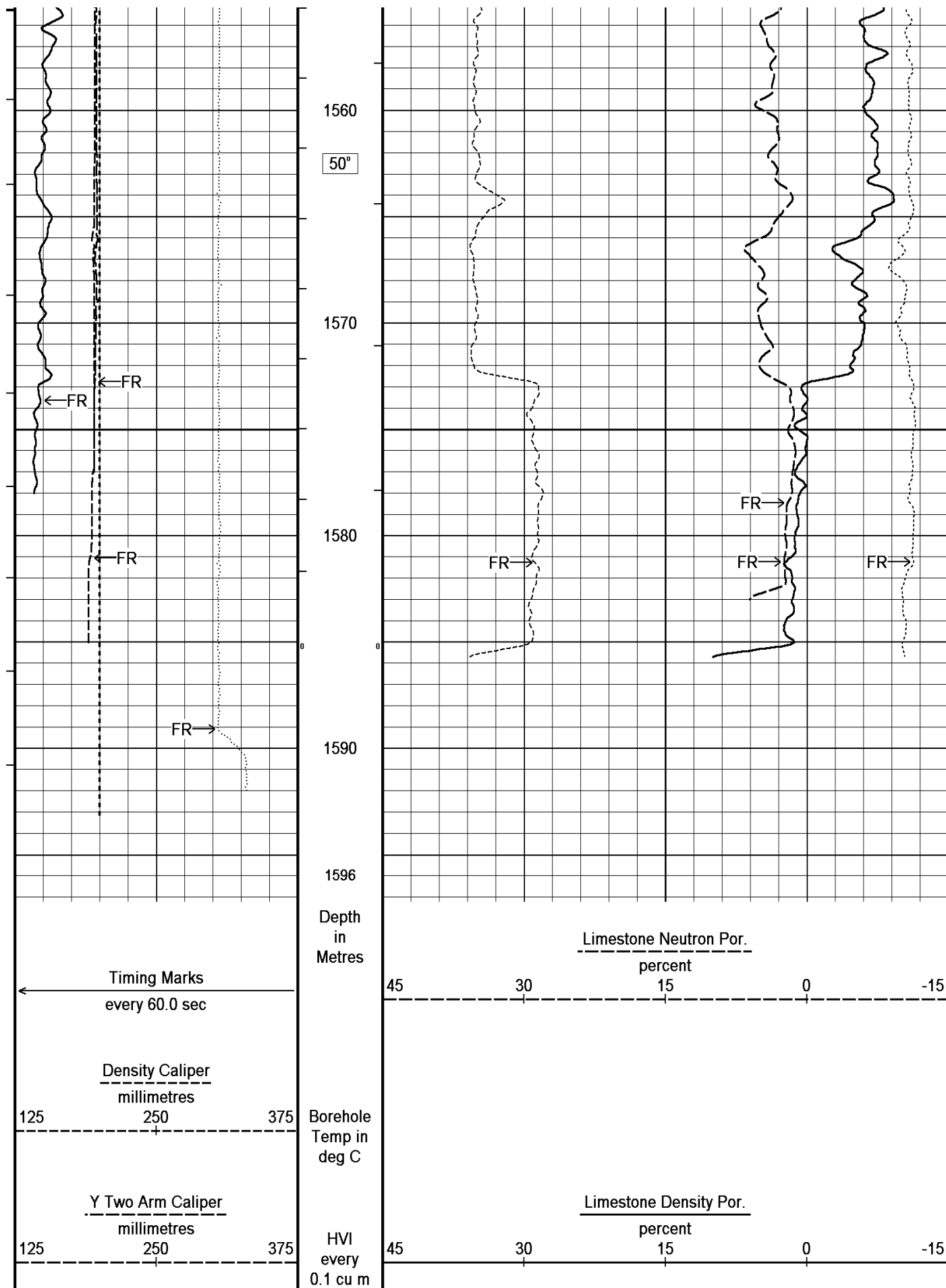




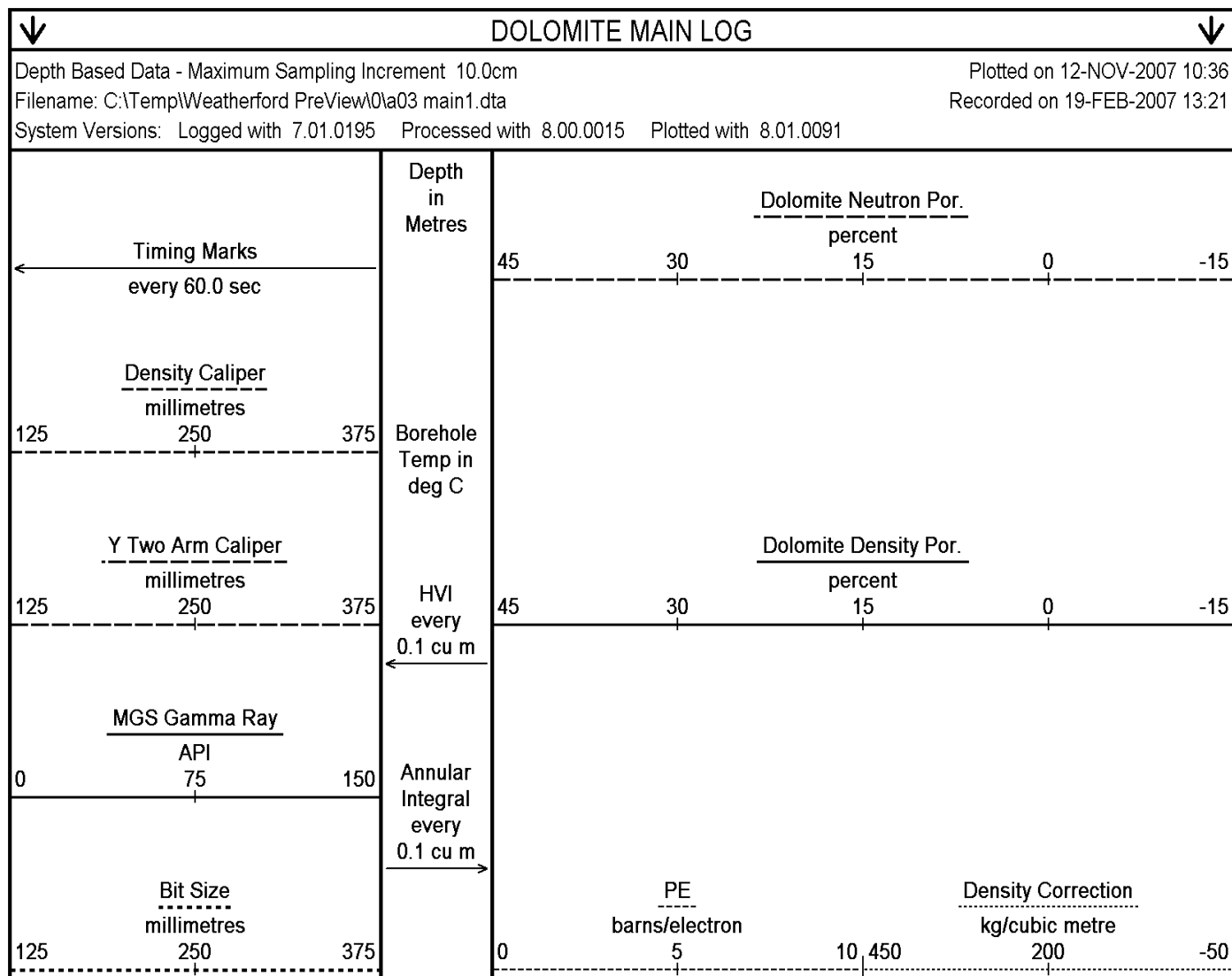
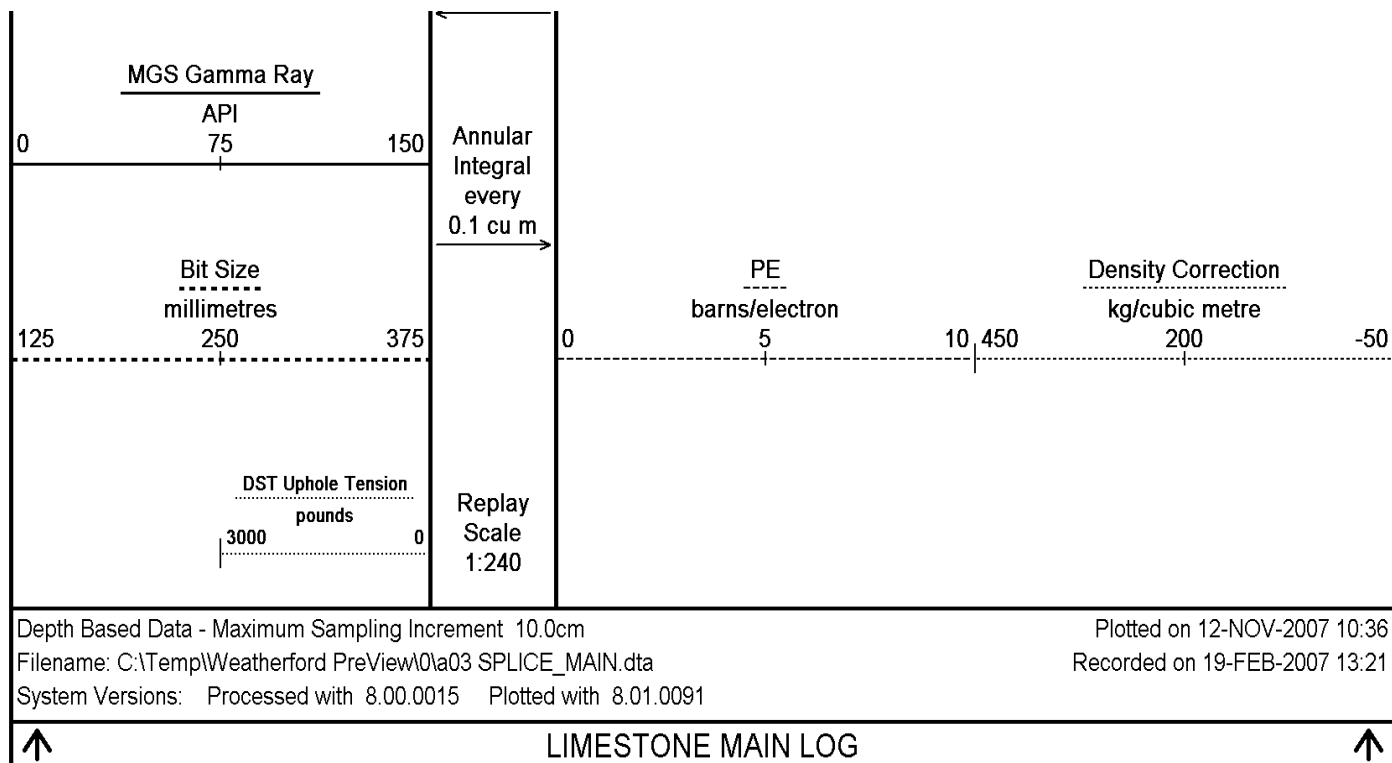


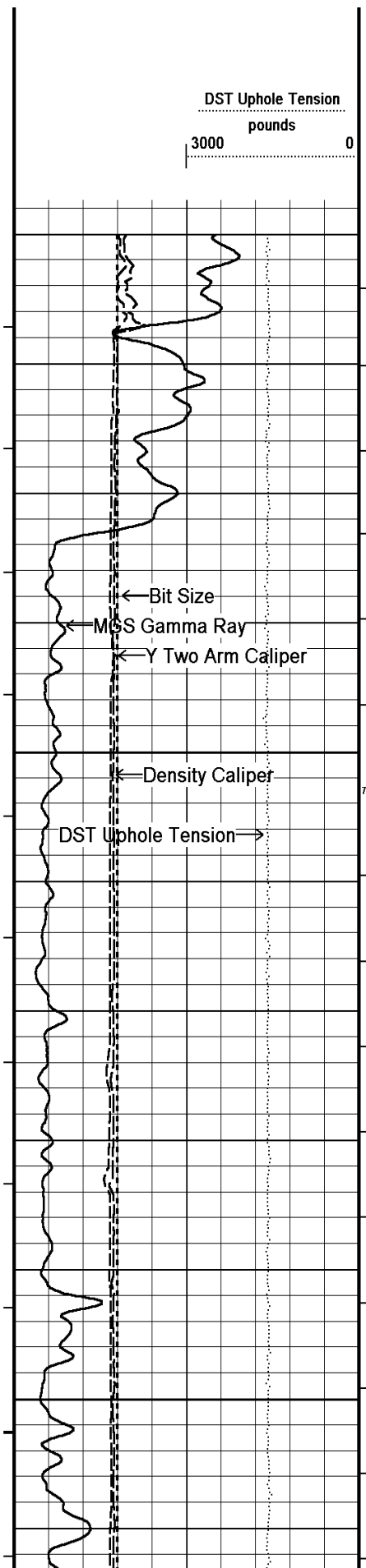












Replay  
Scale  
1:240

1330

45°

1340

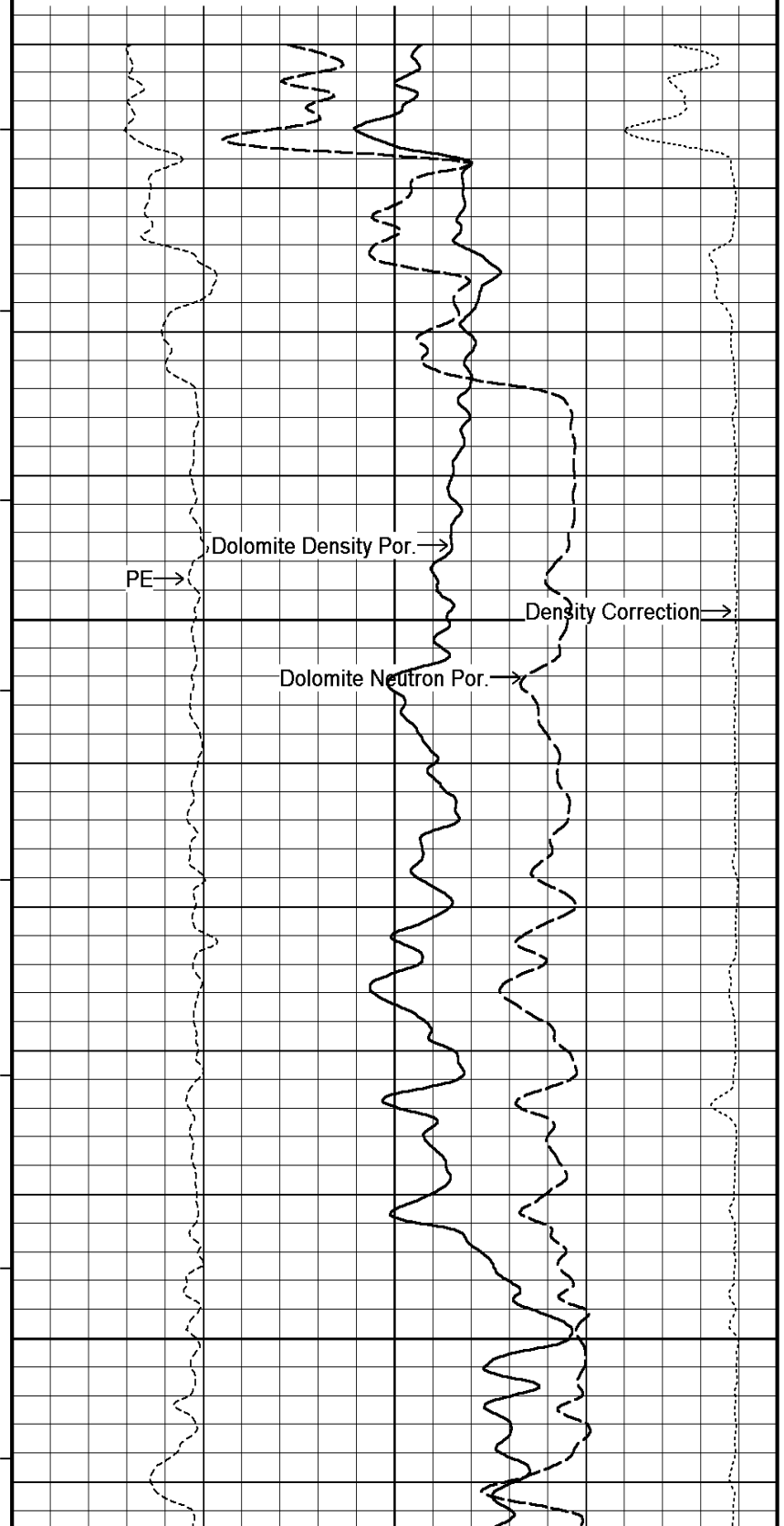
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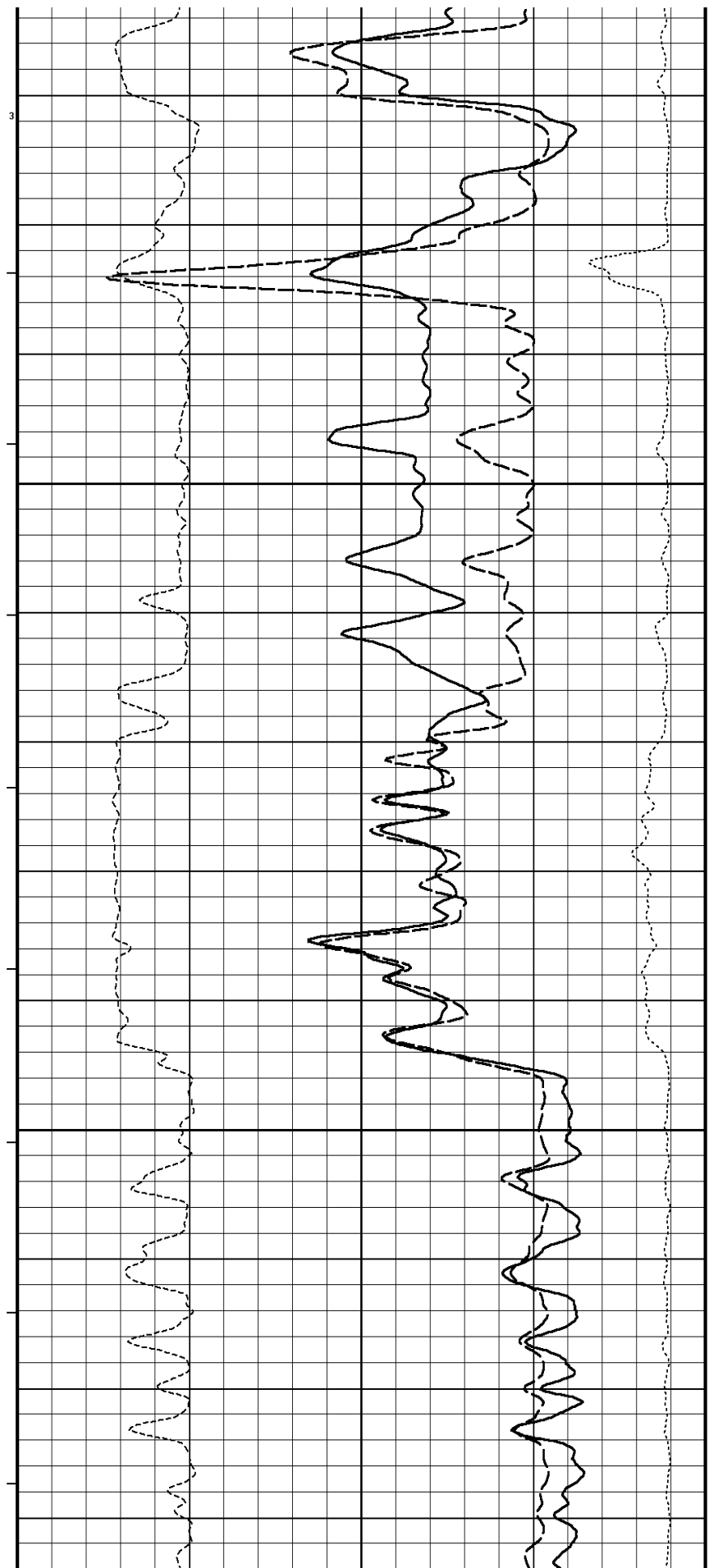
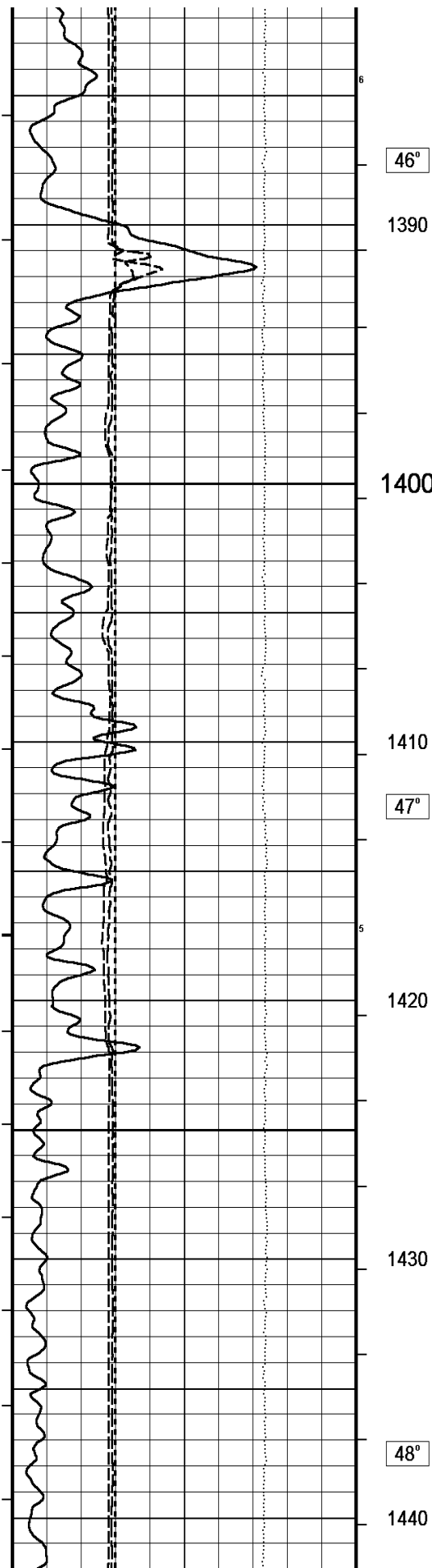
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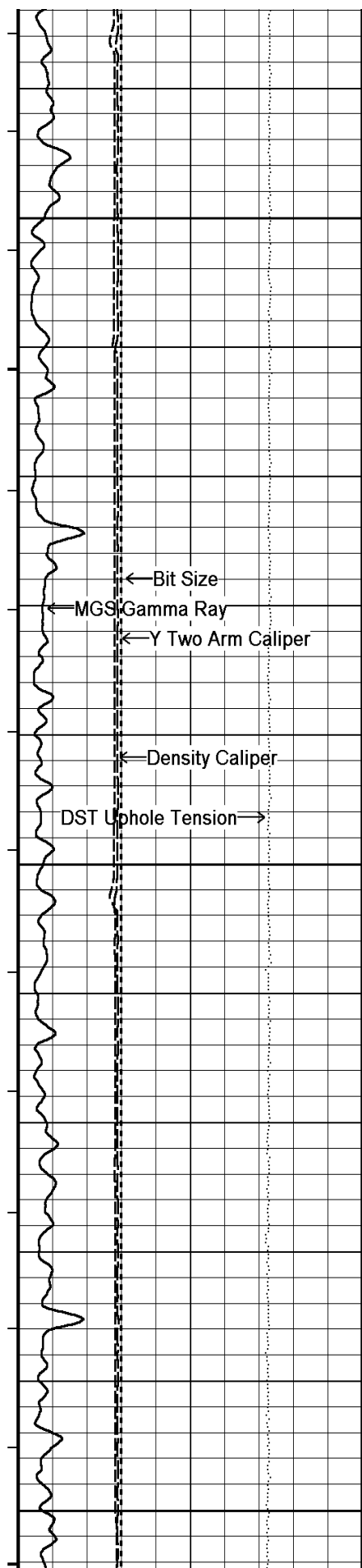
45°

1370

1380







1450

1460

48°

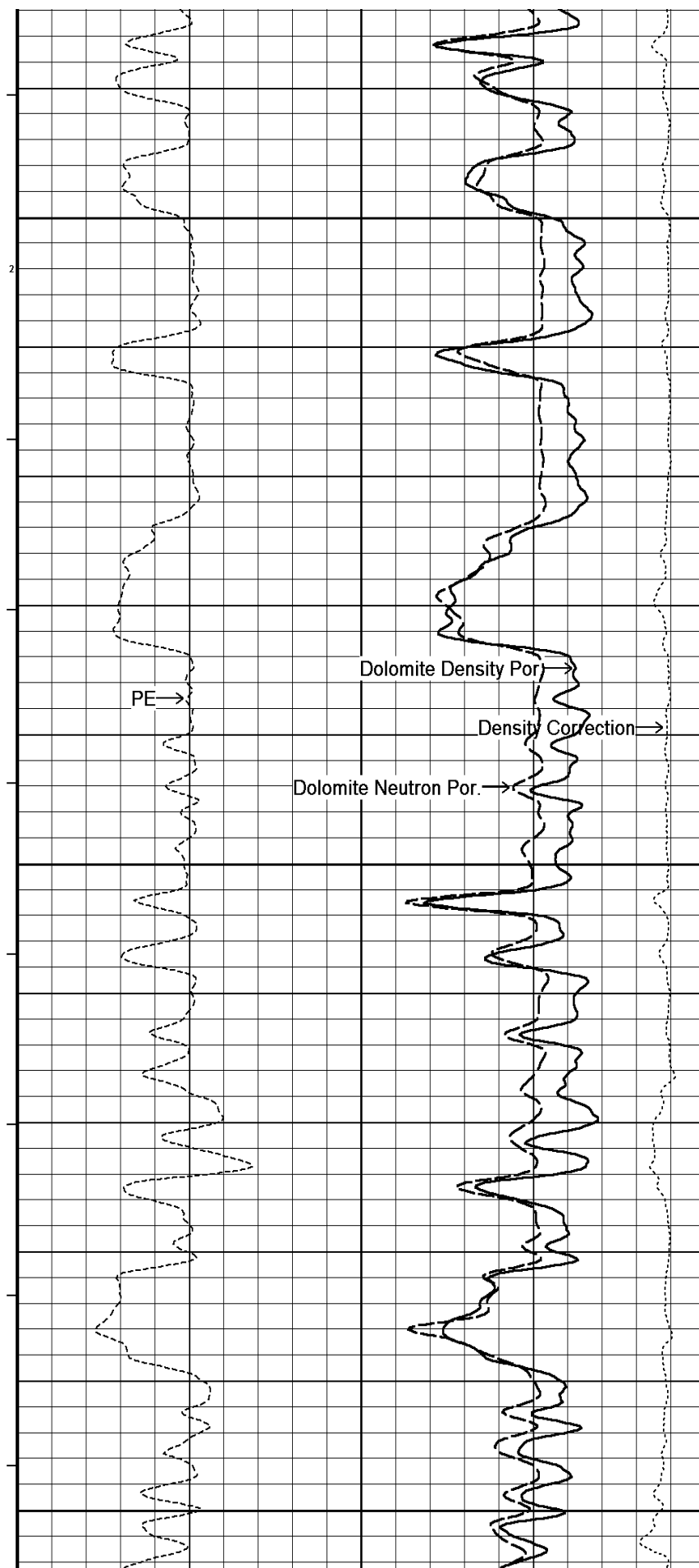
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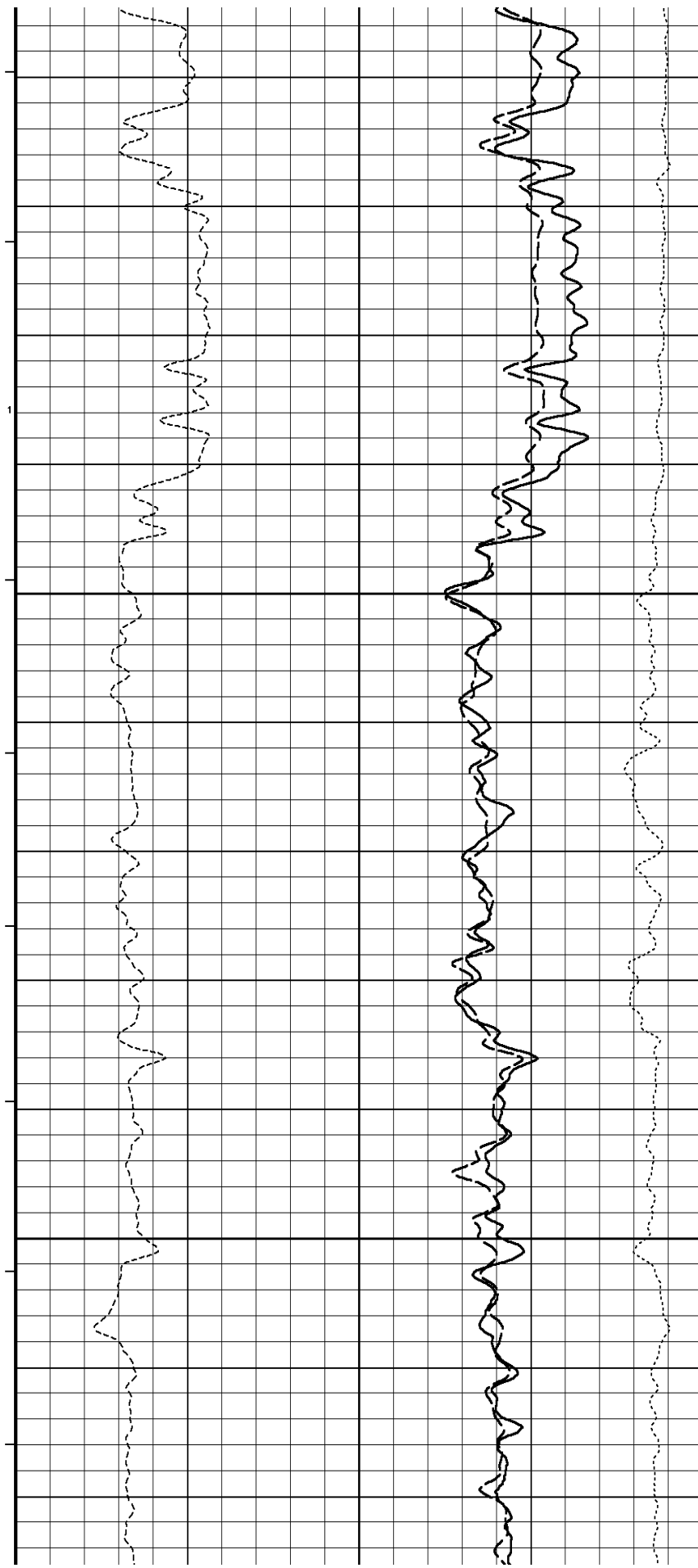
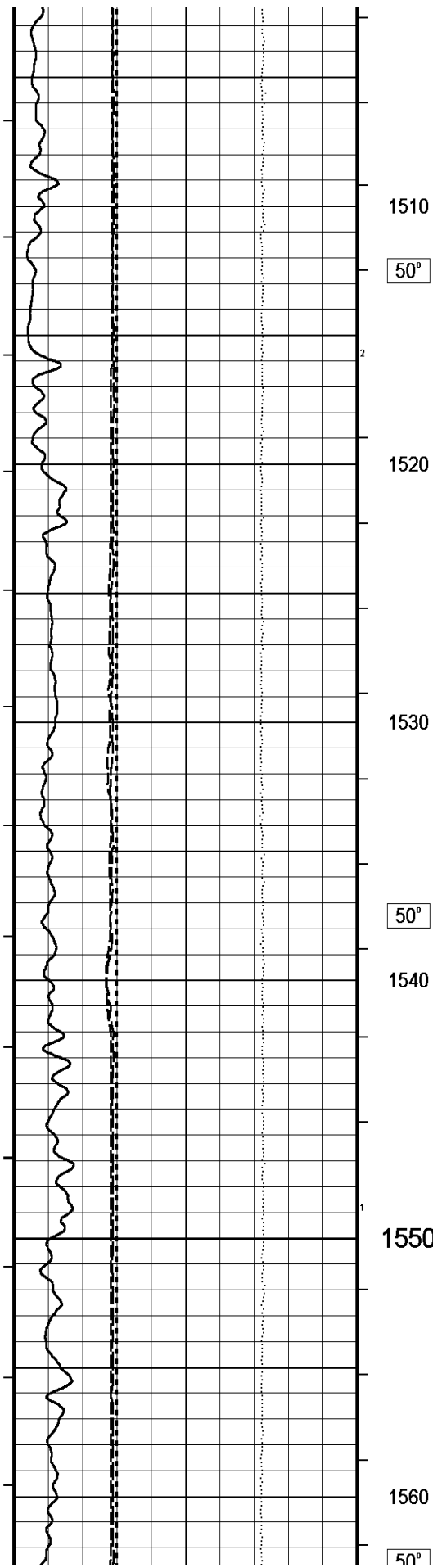
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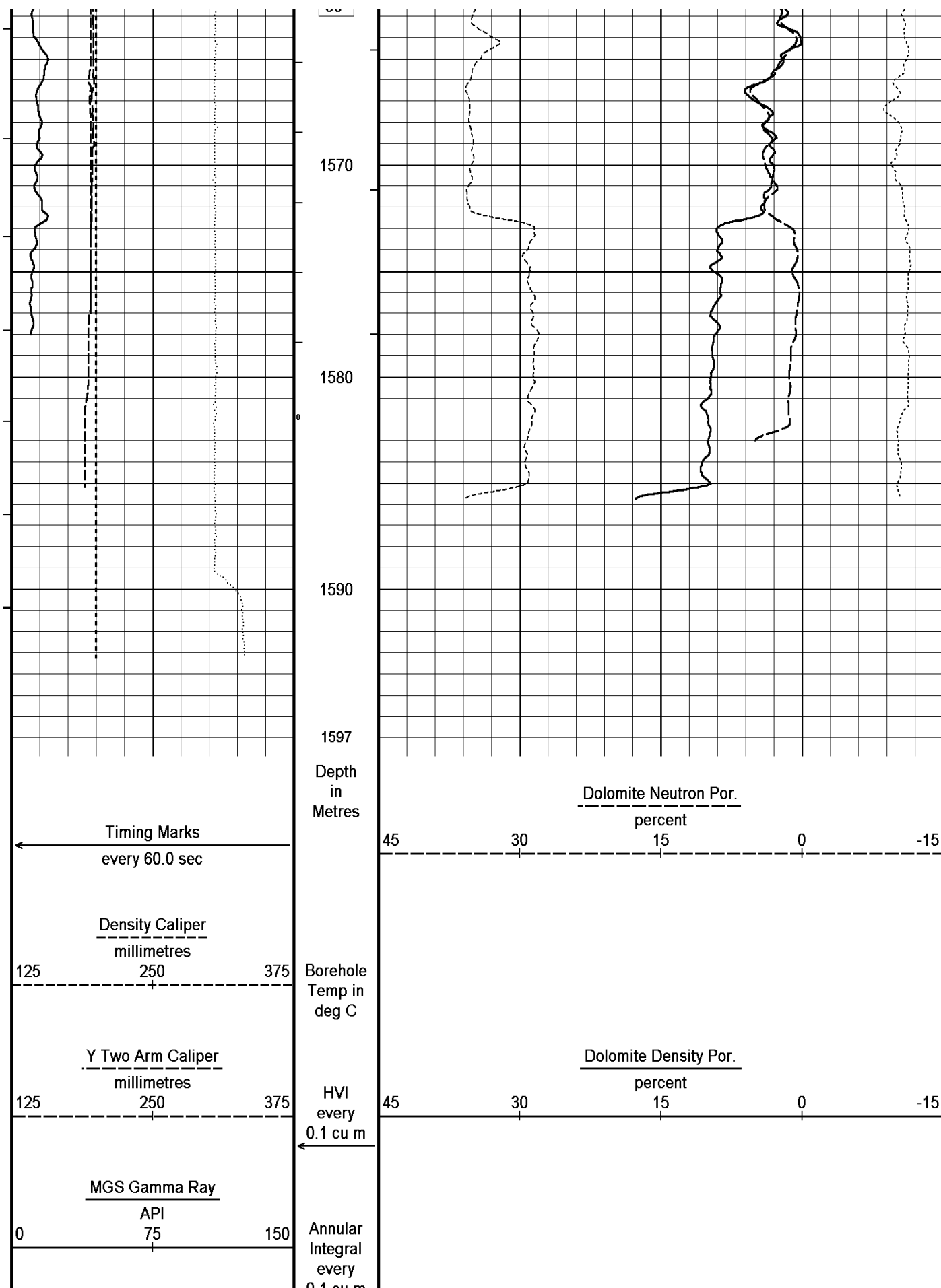
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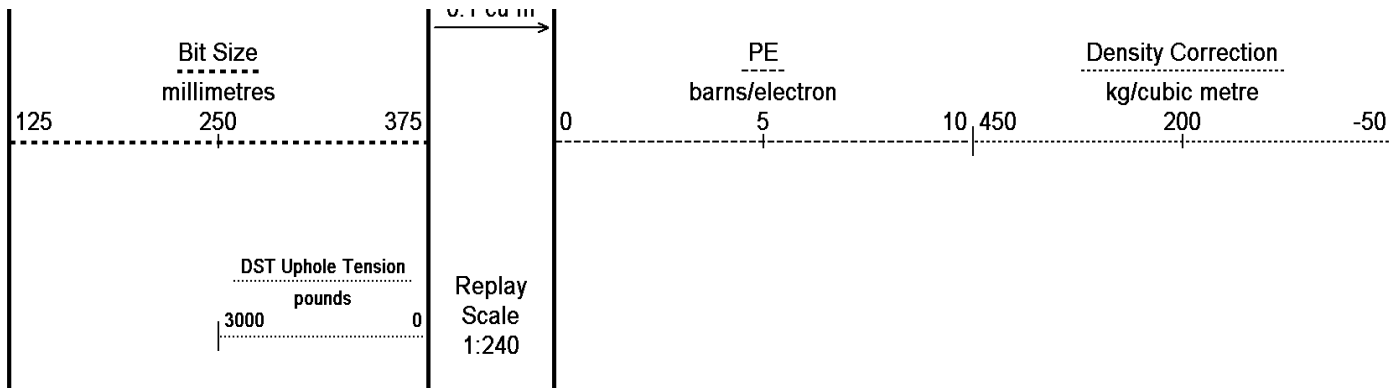
1490

1500









Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 12-NOV-2007 10:36

Filename: C:\Temp\Weatherford PreView\0\03 main1.dta

Recorded on 19-FEB-2007 13:21

System Versions: Logged with 7.01.0195 Processed with 8.00.0015 Plotted with 8.01.0091

↑ DOLOMITE MAIN LOG ↑

↓ LIMESTONE REPEAT ↓

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 12-NOV-2007 10:36

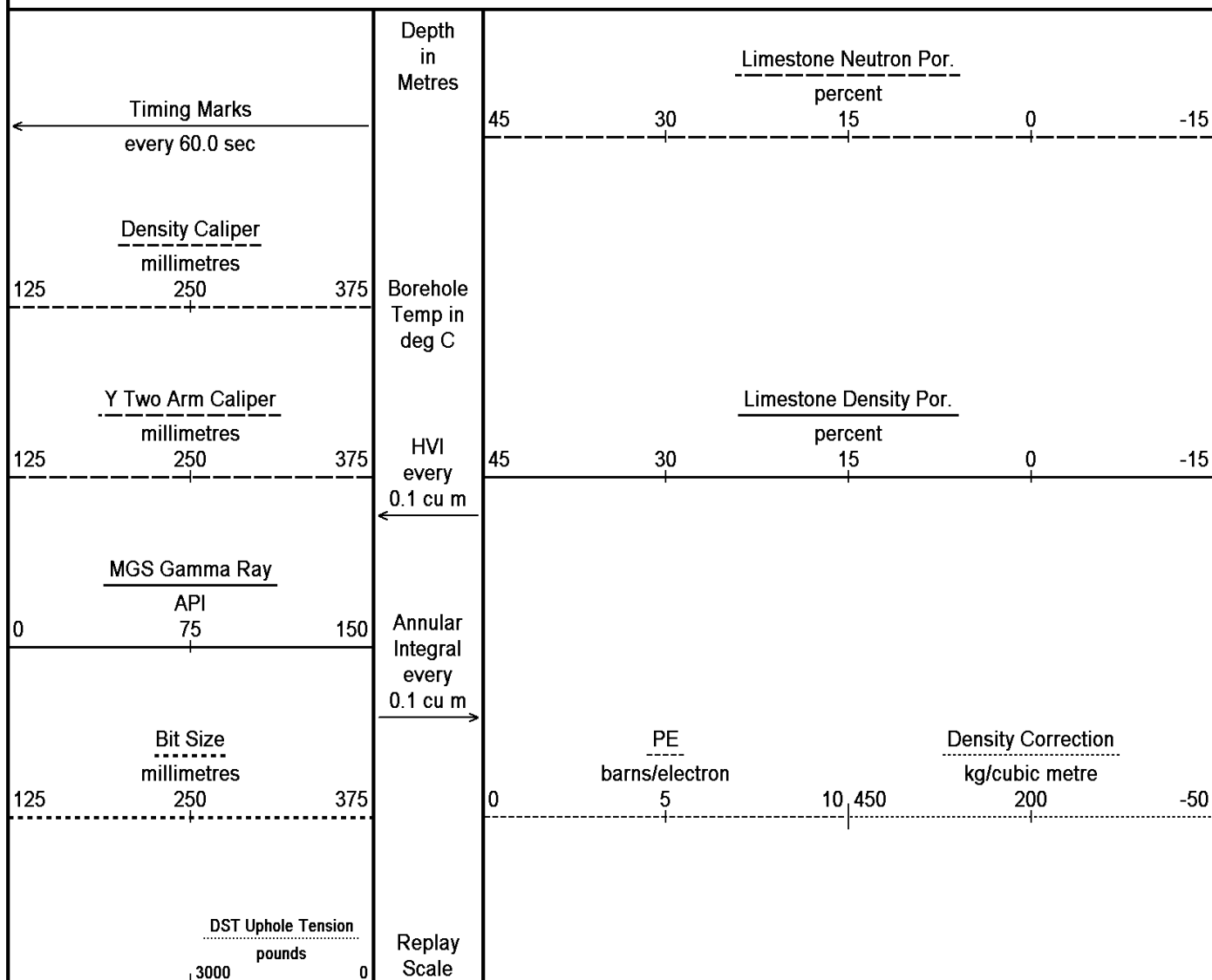
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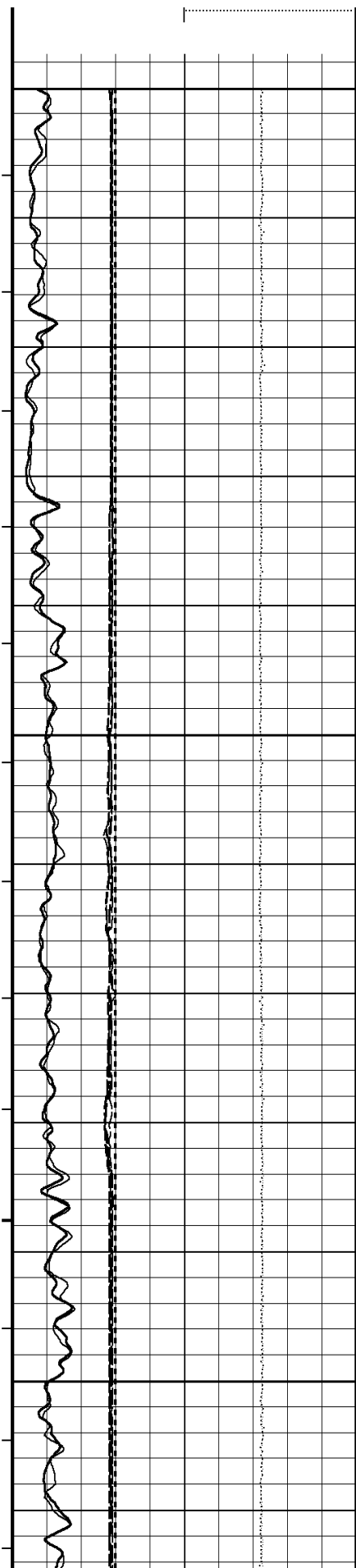
Recorded on 19-FEB-2007 13:21

Filename: C:\Temp\Weatherford PreView\0\03 rpt.dta

Recorded on 19-FEB-2007 12:51

System Versions: Logged with 7.01.0195 Processed with 8.00.0015 Plotted with 8.01.0091





1:240

1500

1510

50°

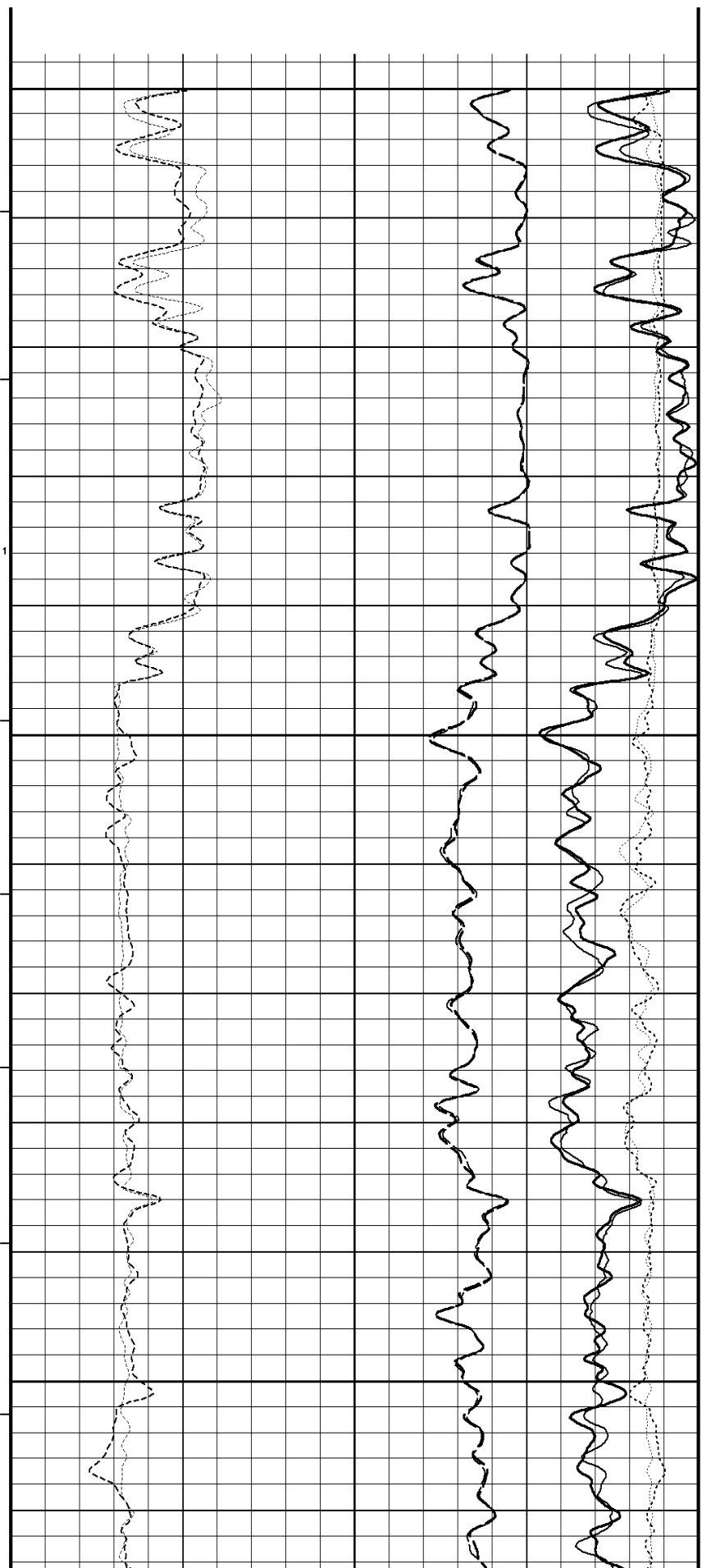
1520

1530

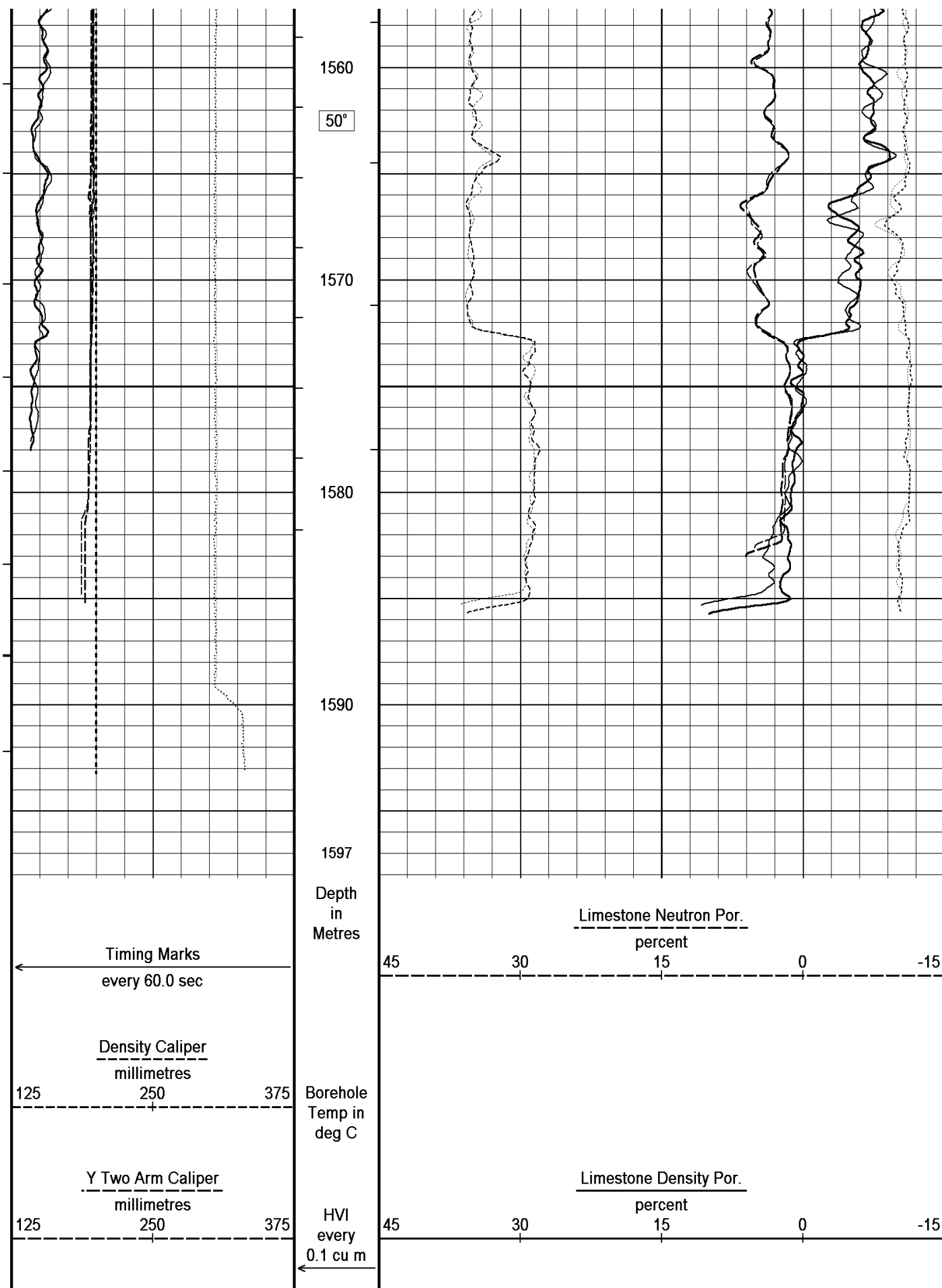
50°

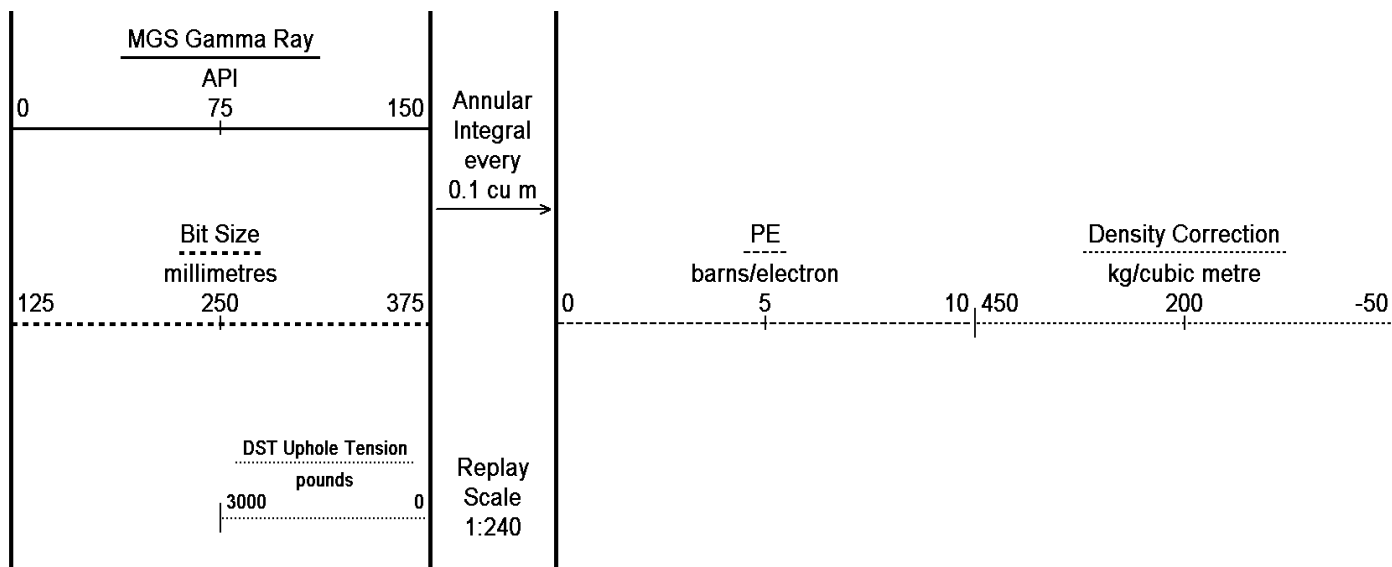
1540

1550









Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 12-NOV-2007 10:36

Filename: C:\Temp\Weatherford PreView\0\03 main1.dta

Recorded on 19-FEB-2007 13:21

Filename: C:\Temp\Weatherford PreView\0\03 rpt.dta

Recorded on 19-FEB-2007 12:51

System Versions: Logged with 7.01.0195 Processed with 8.00.0015 Plotted with 8.01.0091

↑ LIMESTONE REPEAT ↑

↓ LIMESTONE HIGH RESOLUTION 1:120 ↓

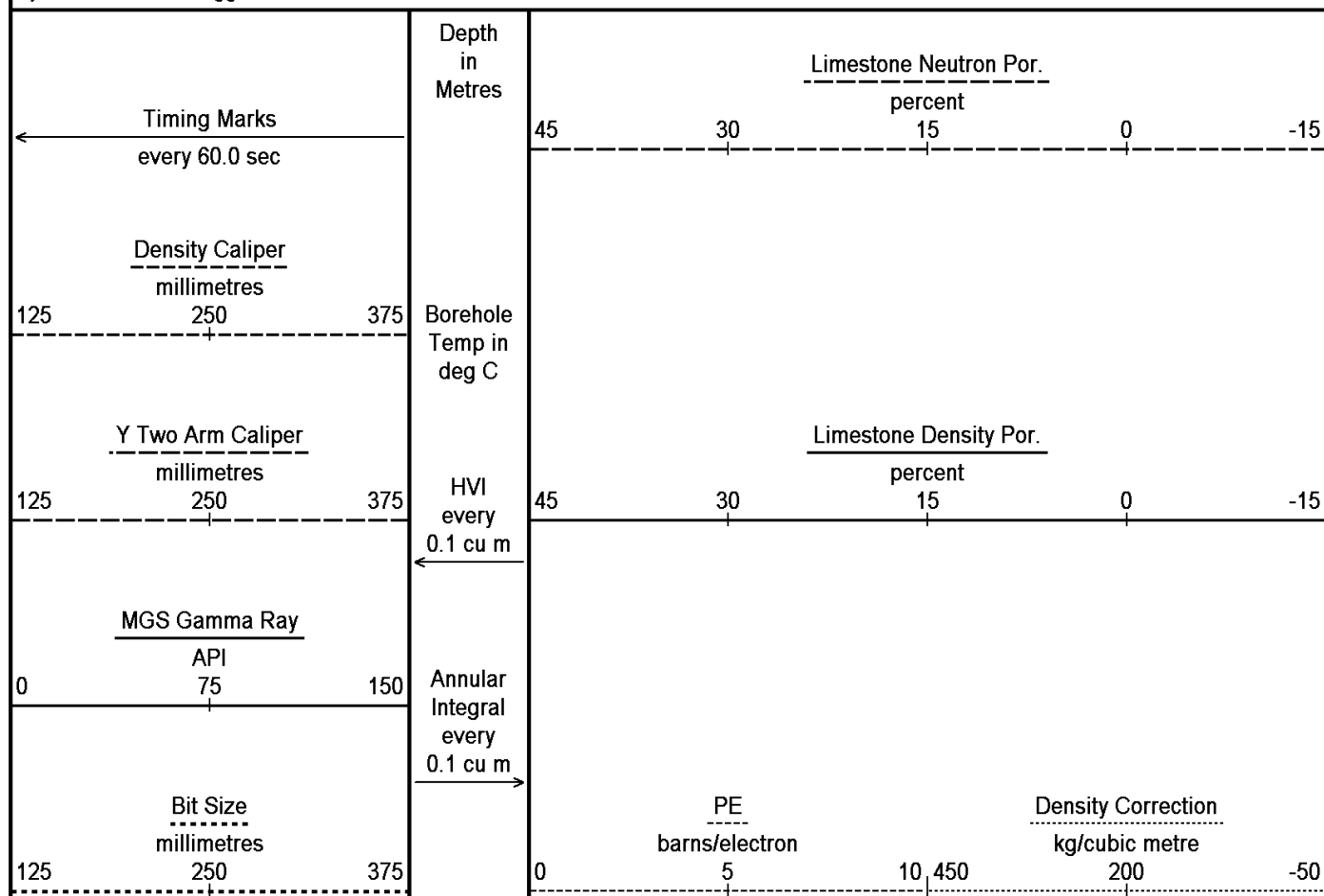
Depth Based Data - Maximum Sampling Increment 2.5cm

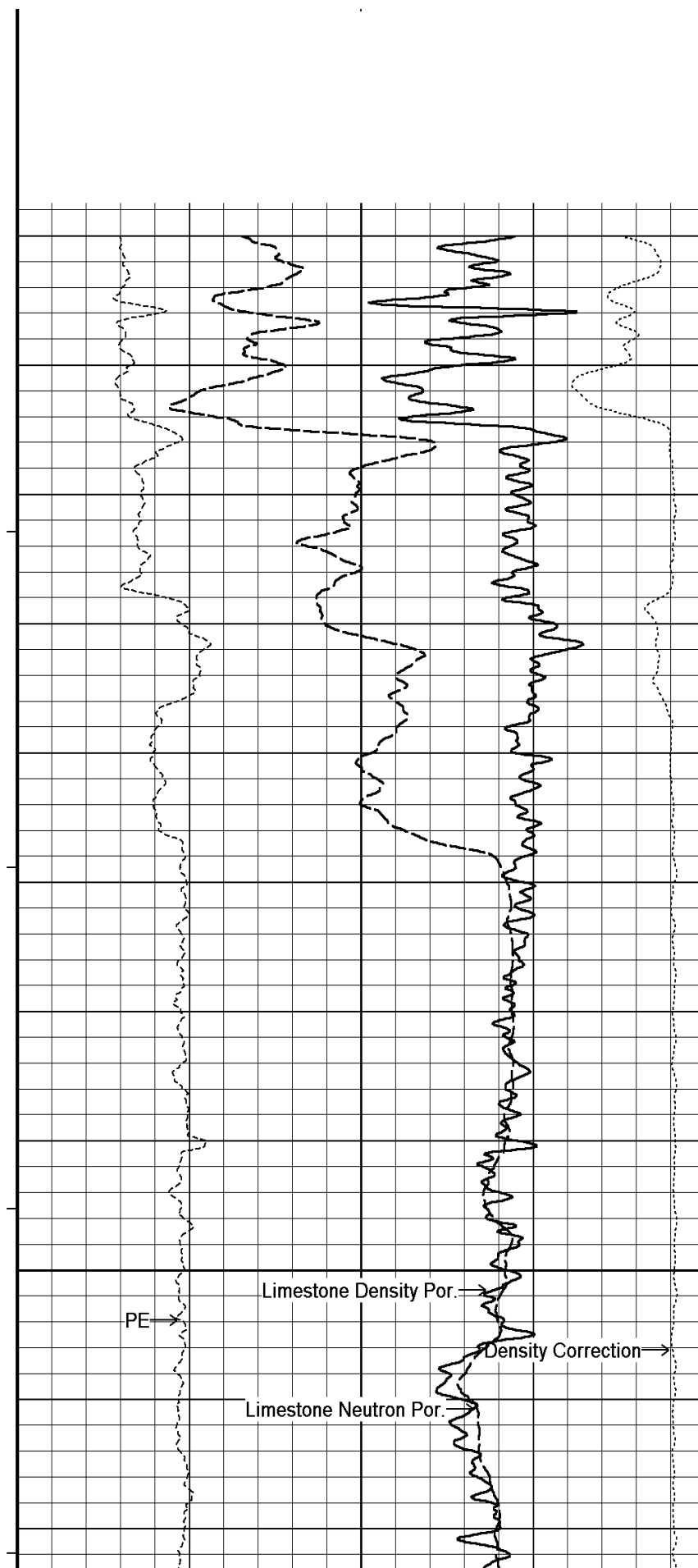
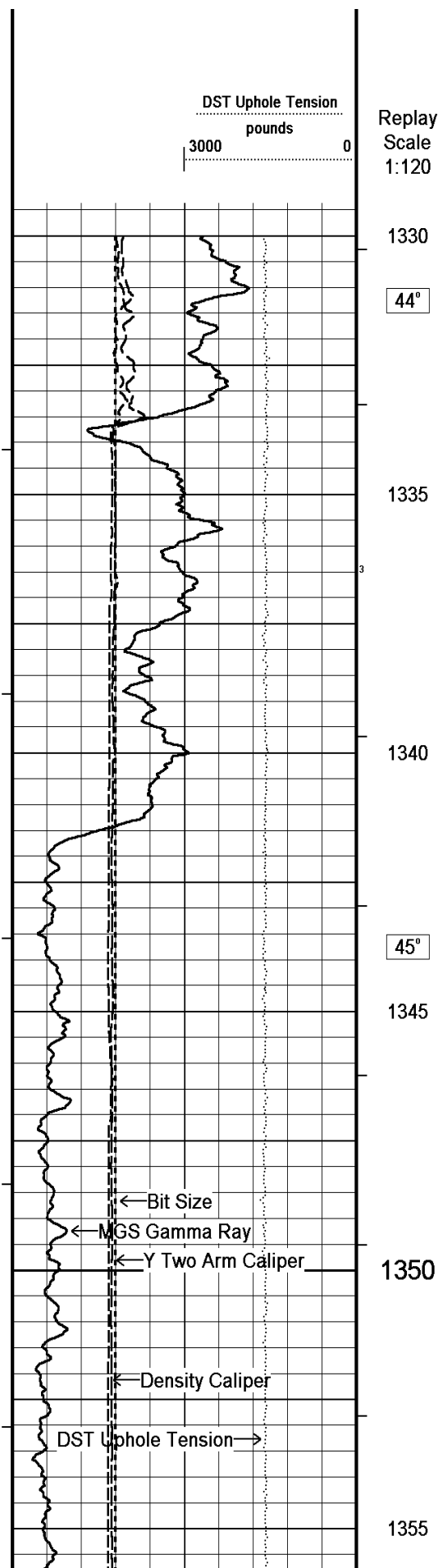
Plotted on 12-NOV-2007 10:36

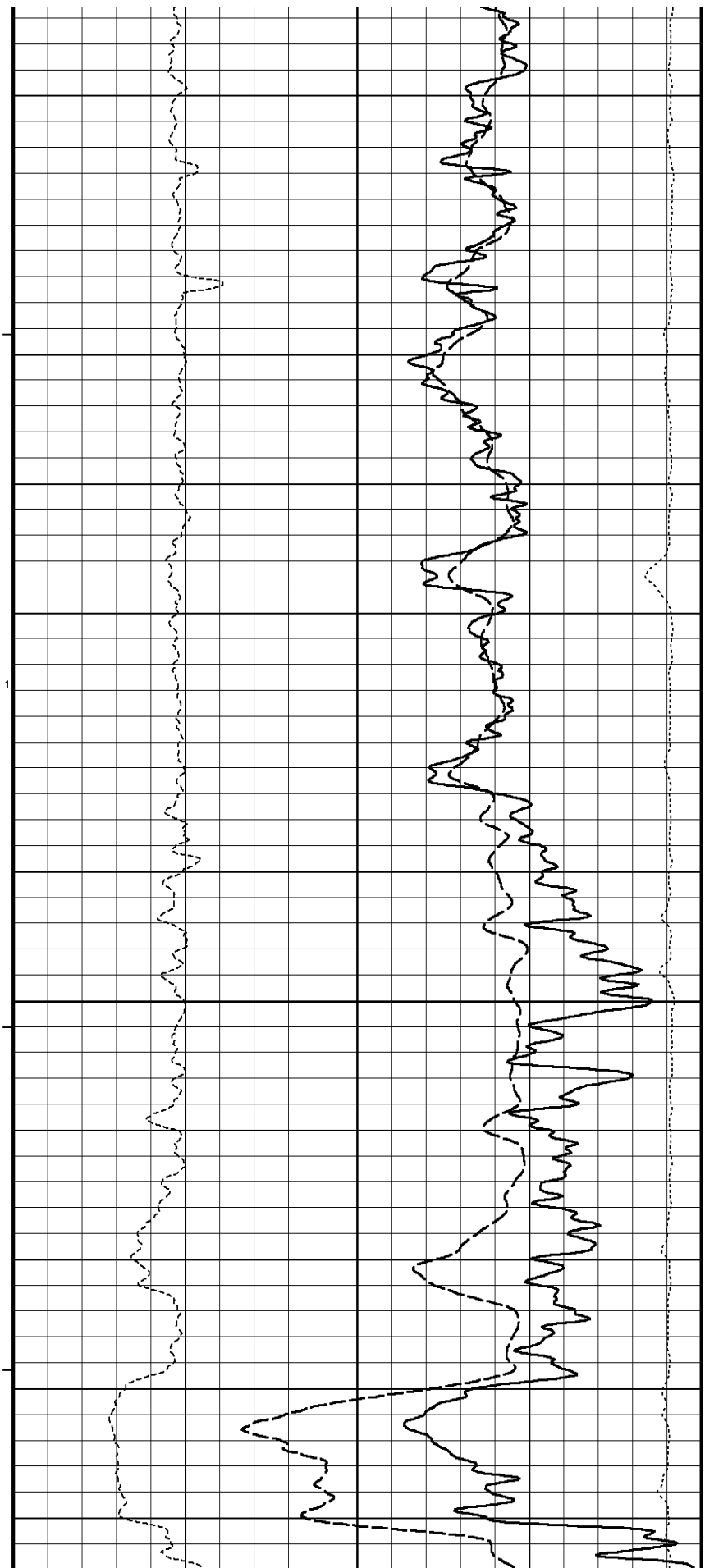
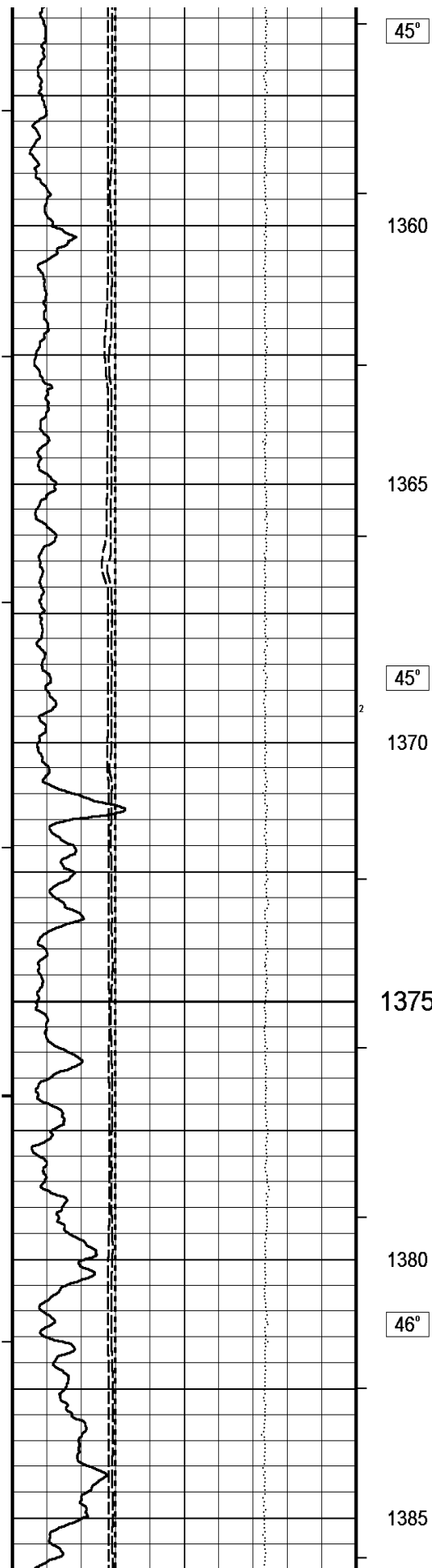
Filename: C:\Temp\Weatherford PreView\0\03 hires.dta

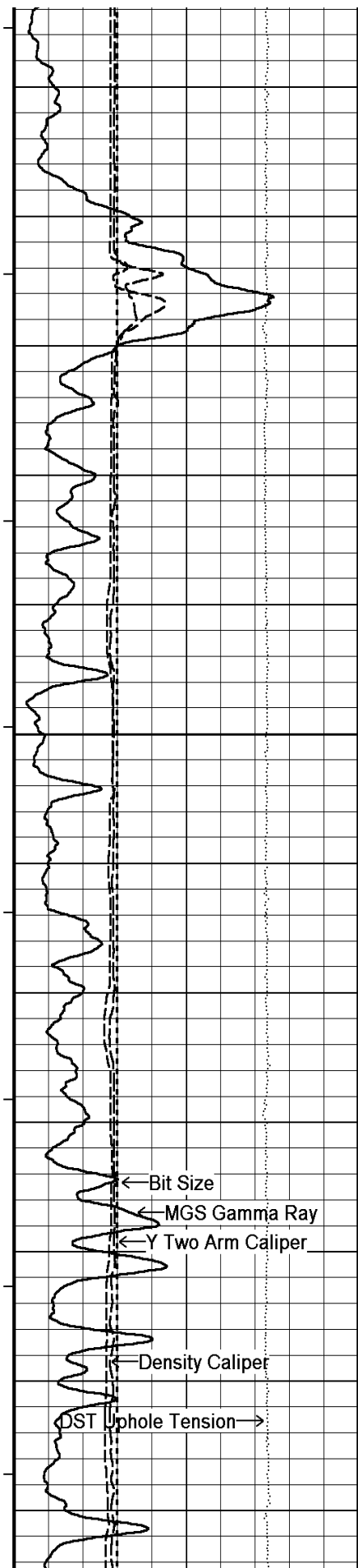
Recorded on 19-FEB-2007 13:21

System Versions: Logged with 7.01.0195 Processed with 8.00.0015 Plotted with 8.01.0091









1390

46°

1395

1400

1405

47°

1410

1415

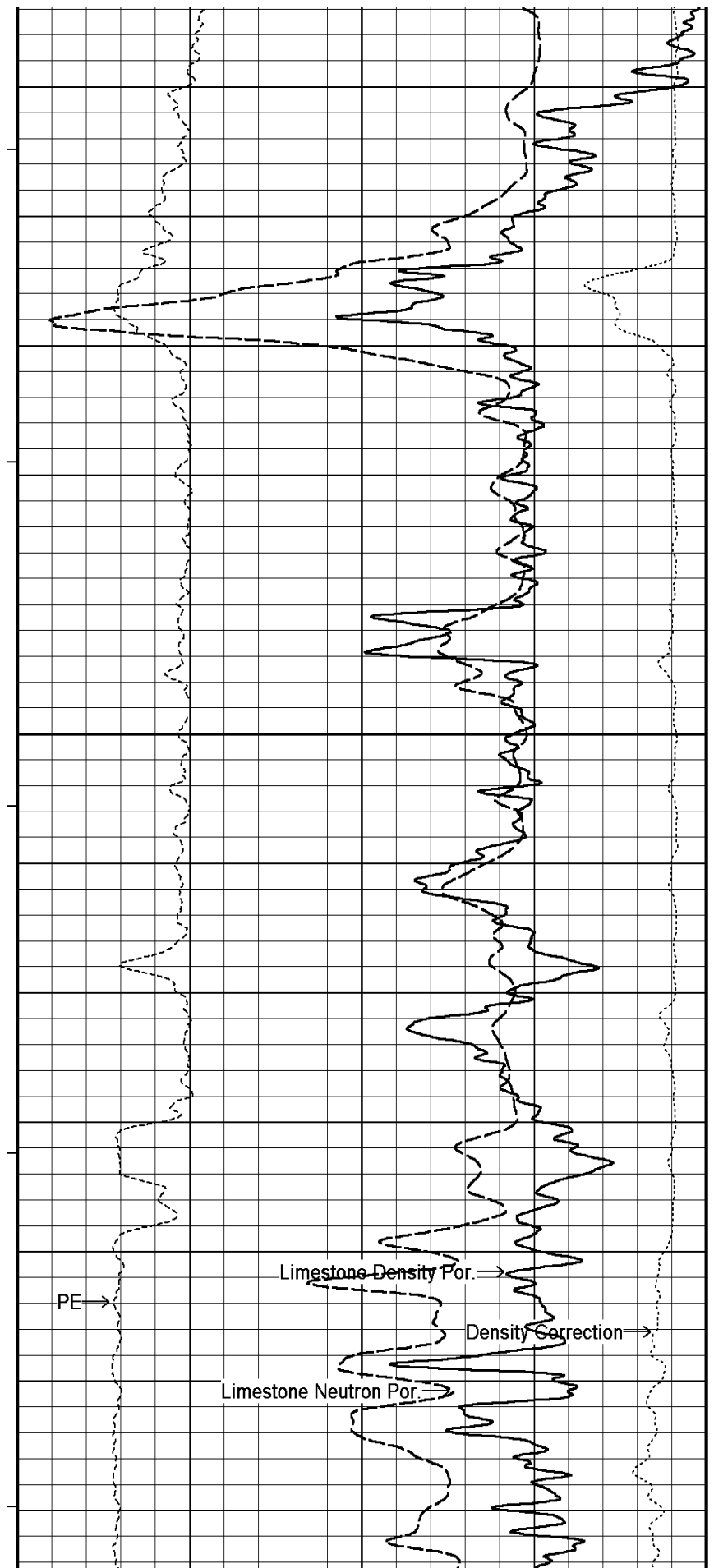
← Bit Size

← MGS Gamma Ray

← Y Two Arm Caliper

← Density Caliper

← DST Uphole Tension →

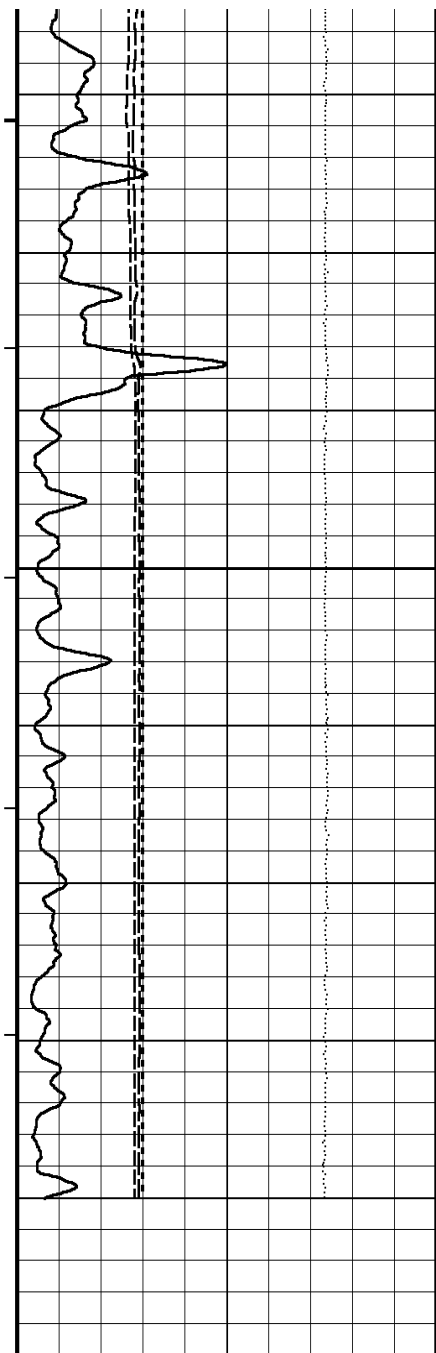


PE →

Limestone Density Por. →

Limestone Neutron Por. →

Density Correction →



47°

1420

1425

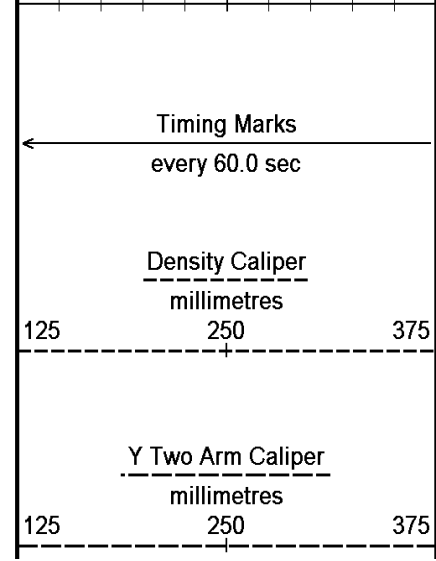
1430

48°

1435

1437

Depth  
in  
Metres



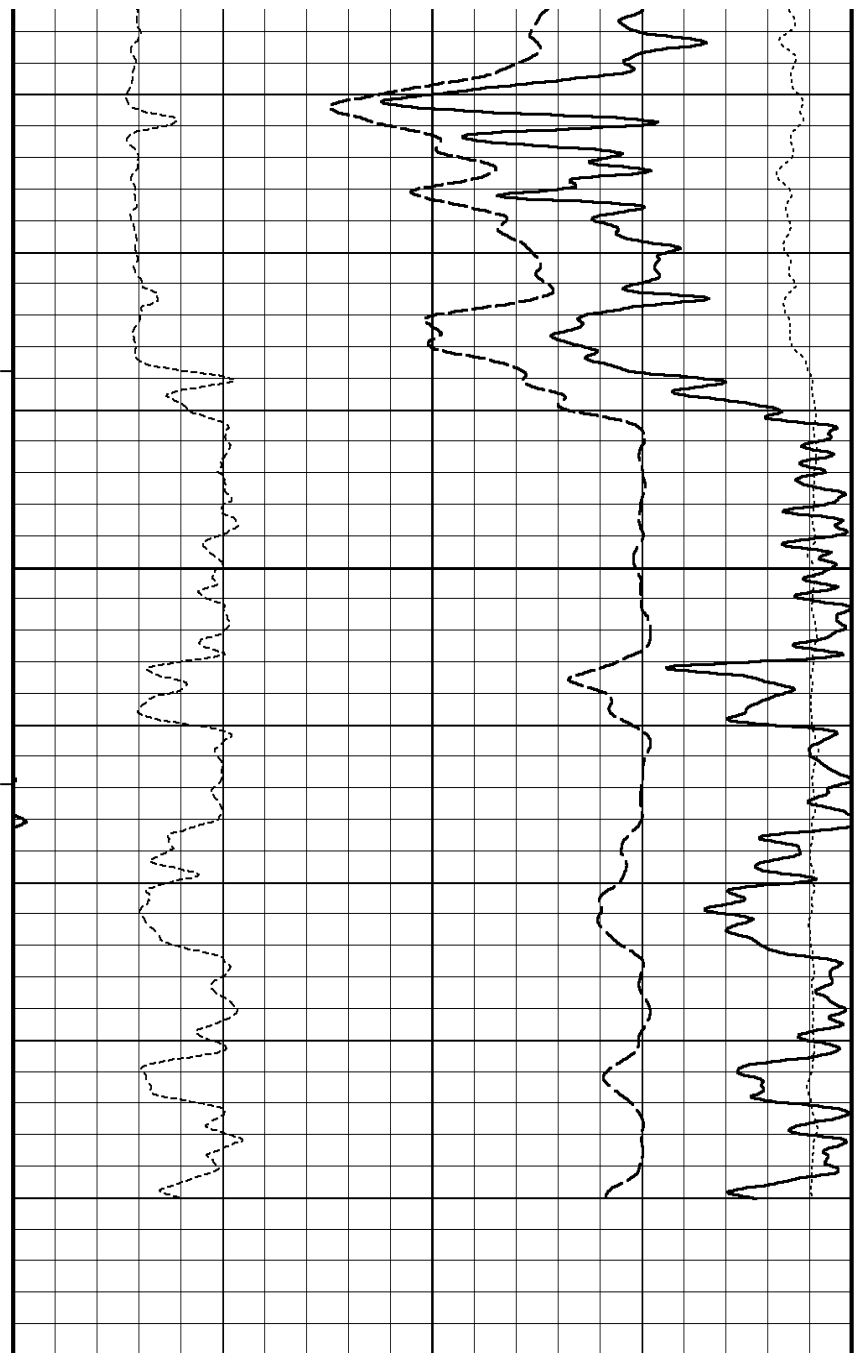
Timing Marks  
every 60.0 sec

Density Caliper  
millimetres

Y Two Arm Caliper  
millimetres

Borehole  
Temp in  
deg C

HVI  
every

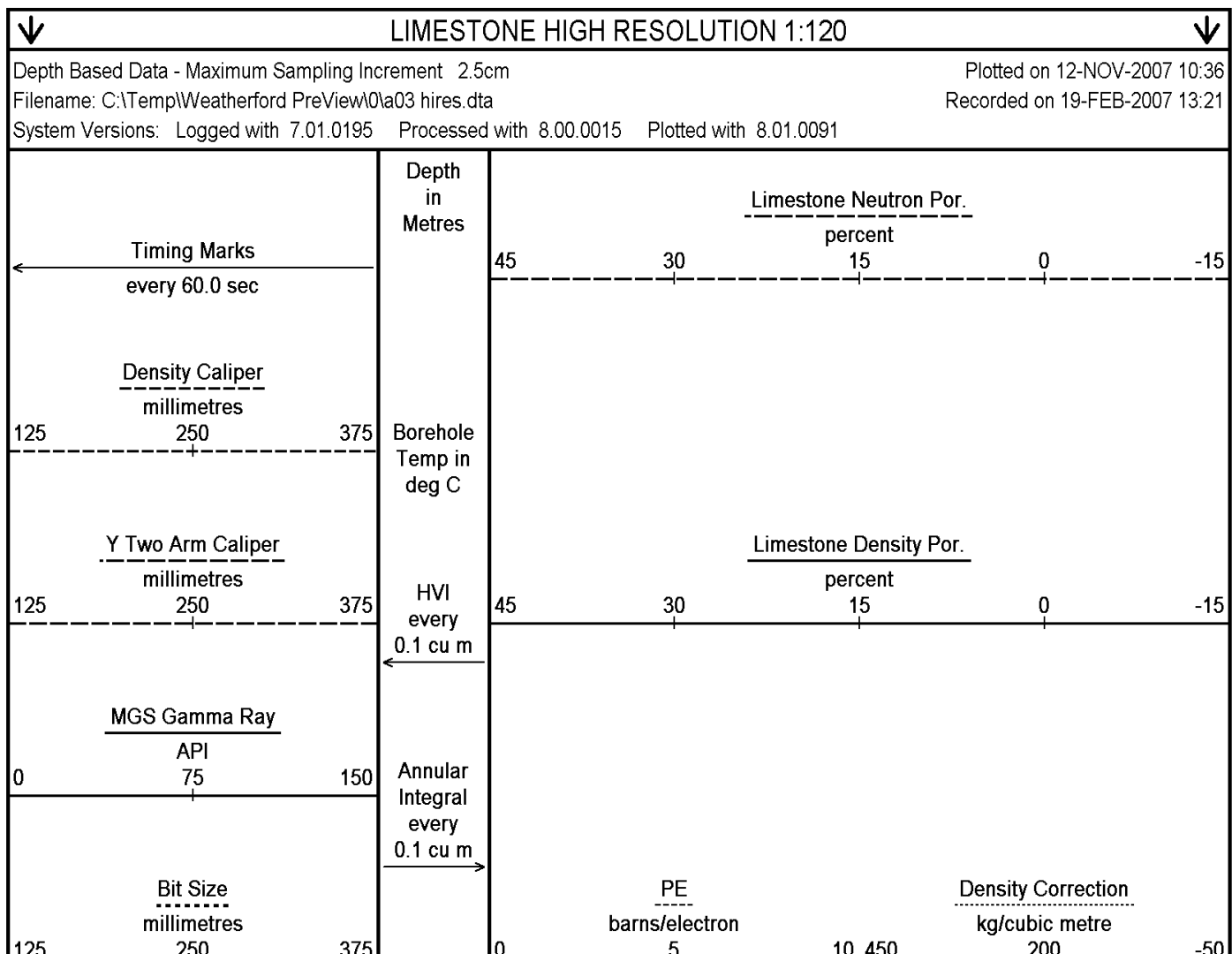
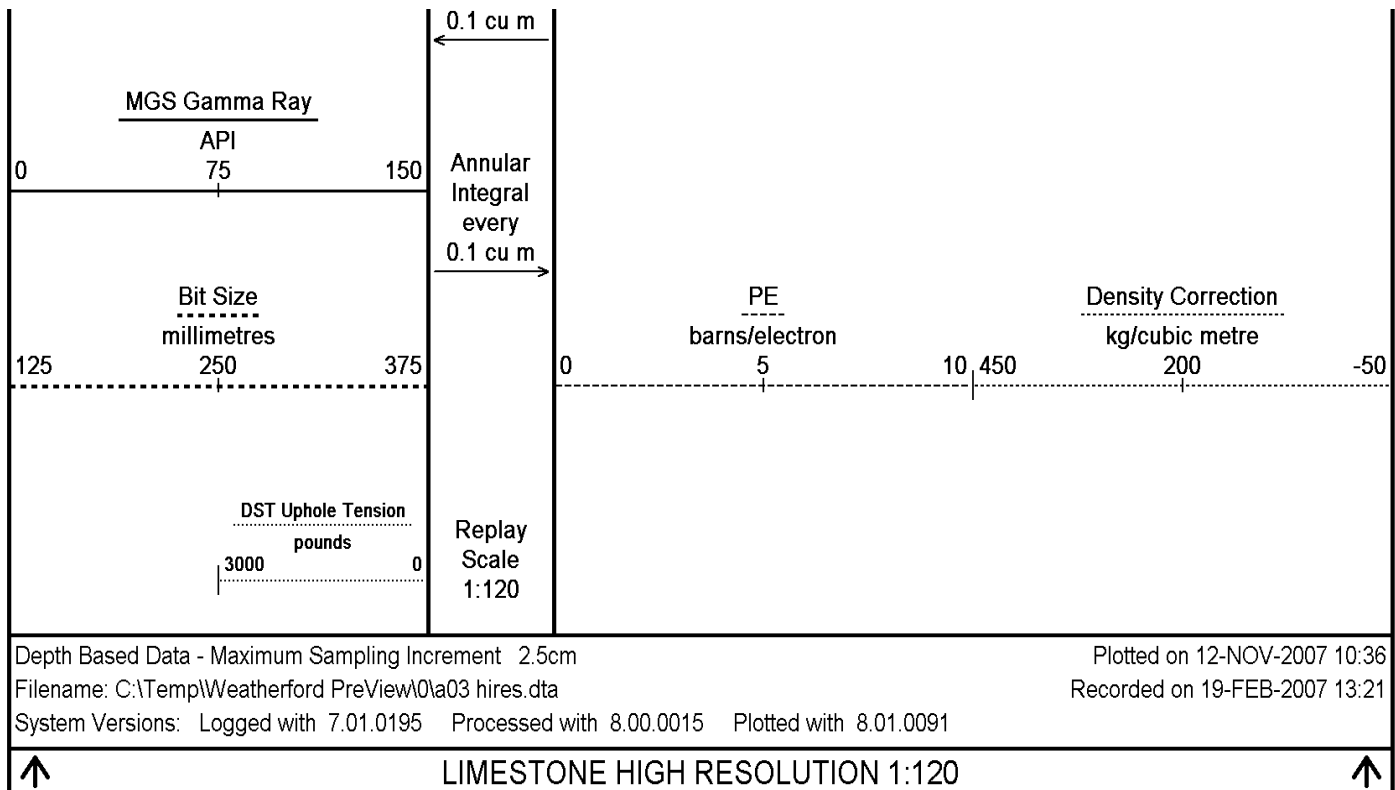


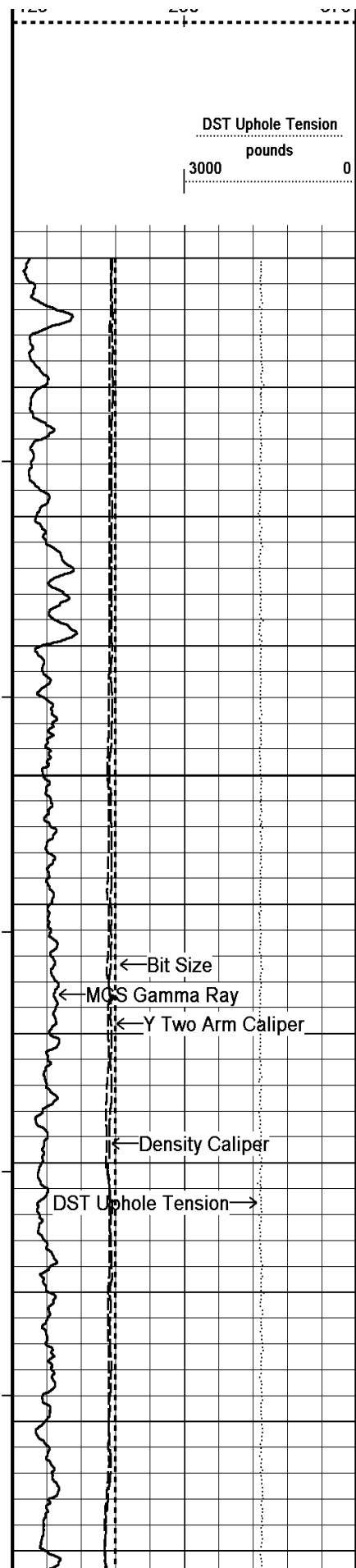
Limestone Neutron Por.  
percent

45 30 15 0 -15

Limestone Density Por.  
percent

45 30 15 0 -15





Replay  
Scale  
1:120

1515

50°

1520

1525

1530

50°

1535

1540

← Bit Size

← MCS Gamma Ray

← Y Two Arm Caliper

← Density Caliper

DST Uphole Tension →

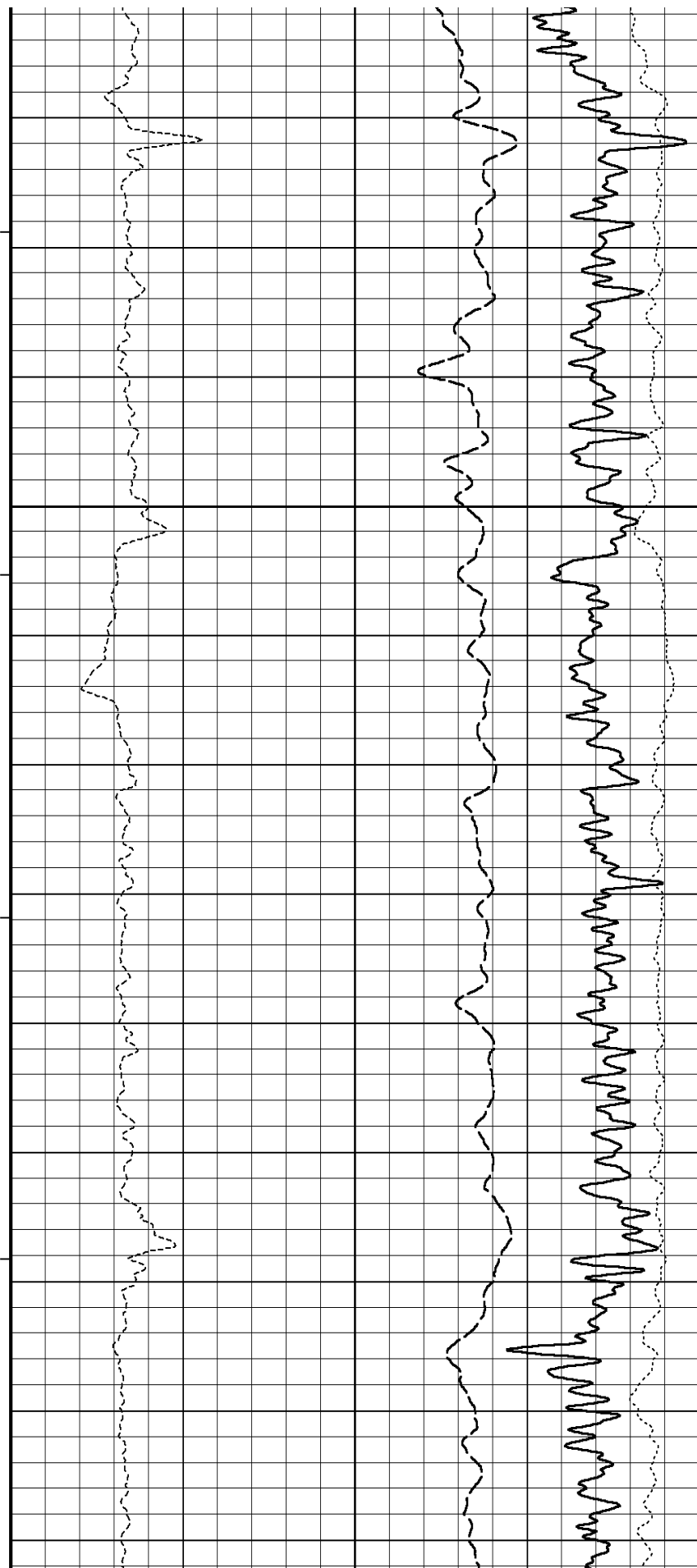
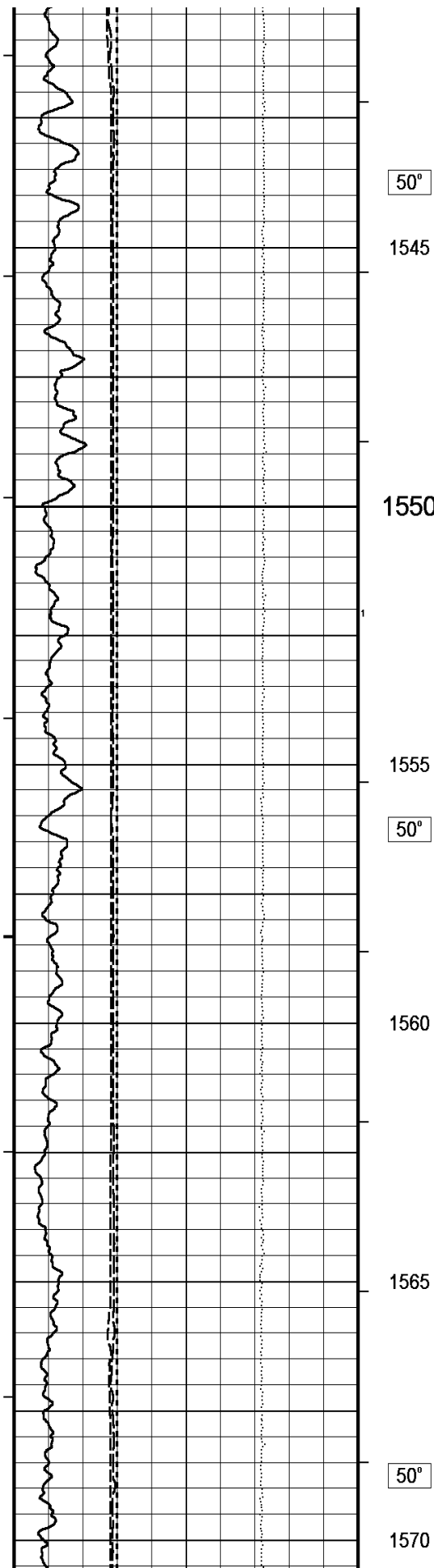
PE →

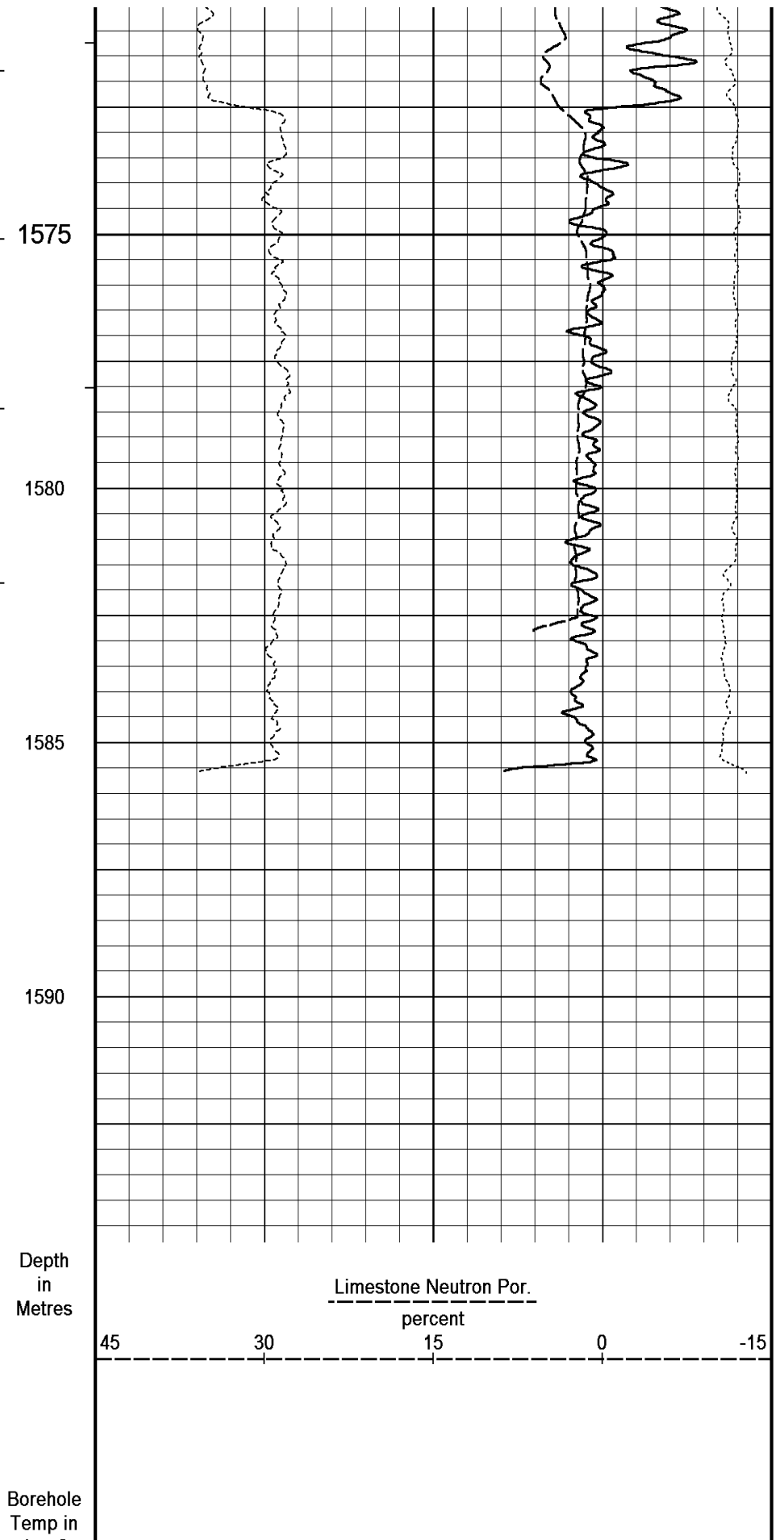
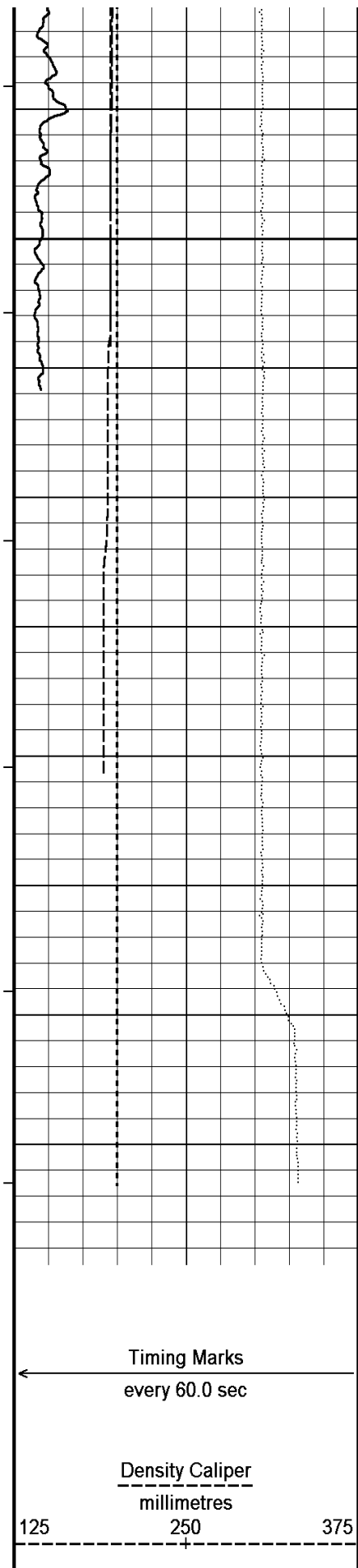
Limestone Density Por. →

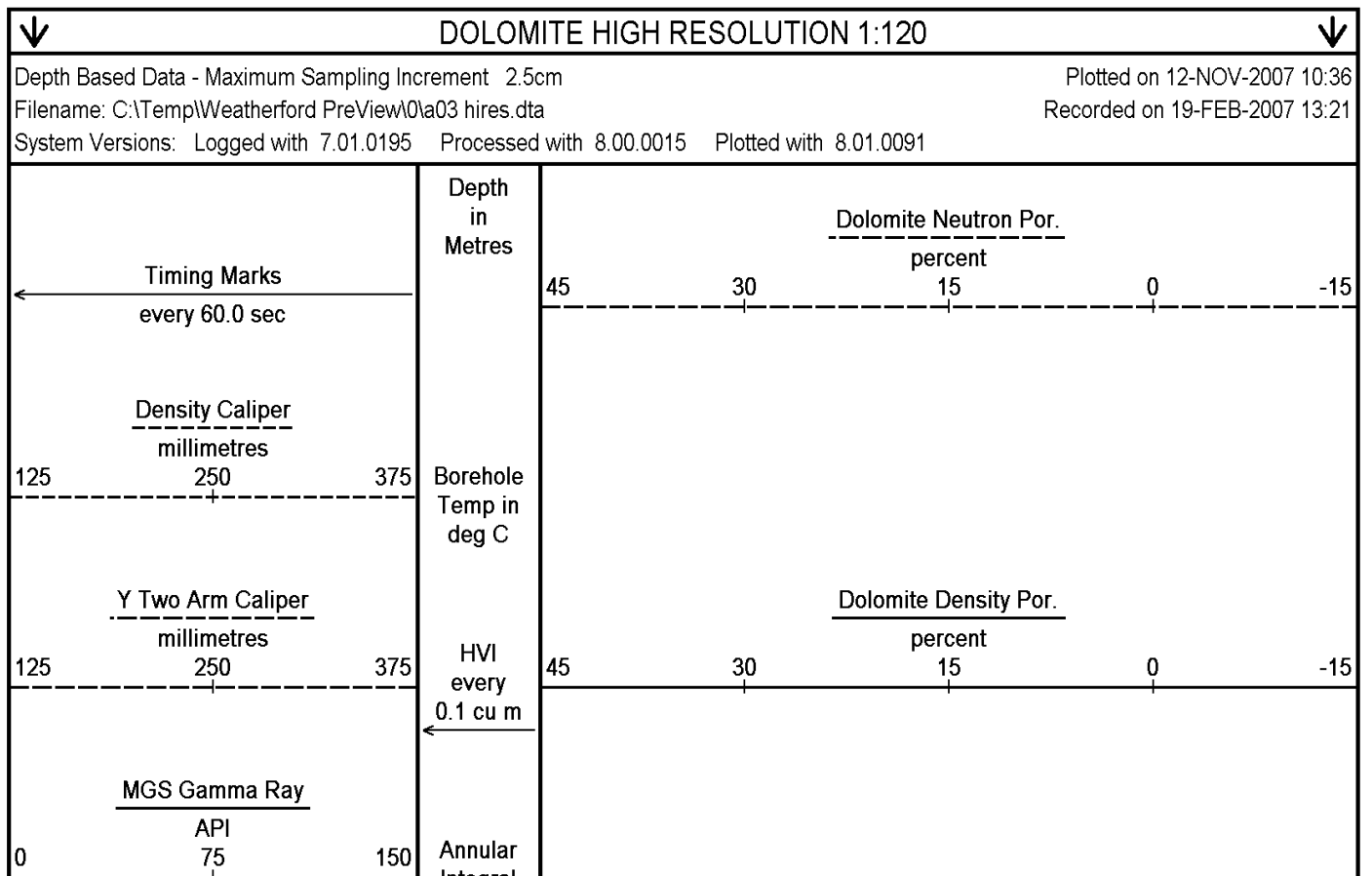
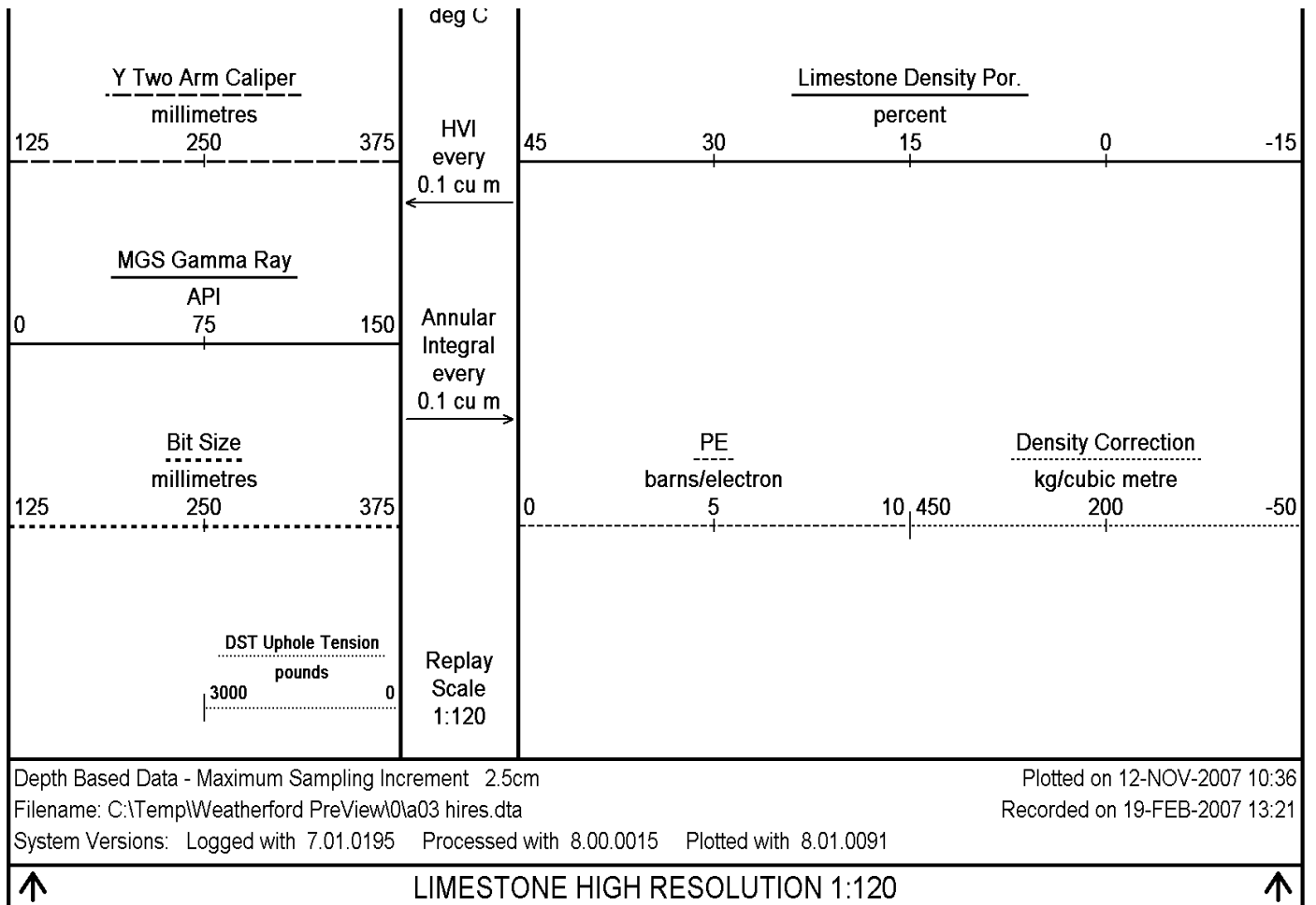
Density Correction →

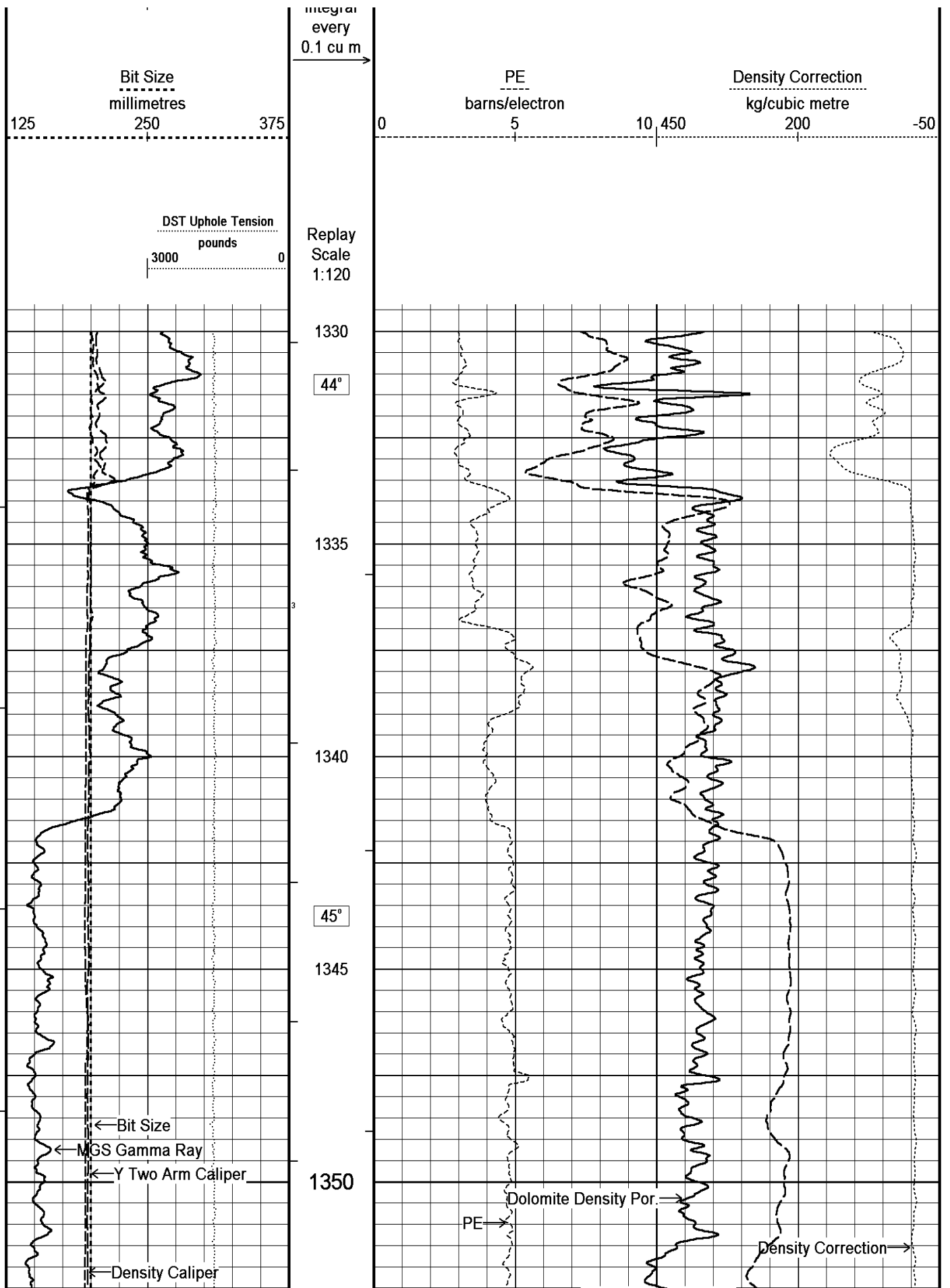
Limestone Neutron Por. →

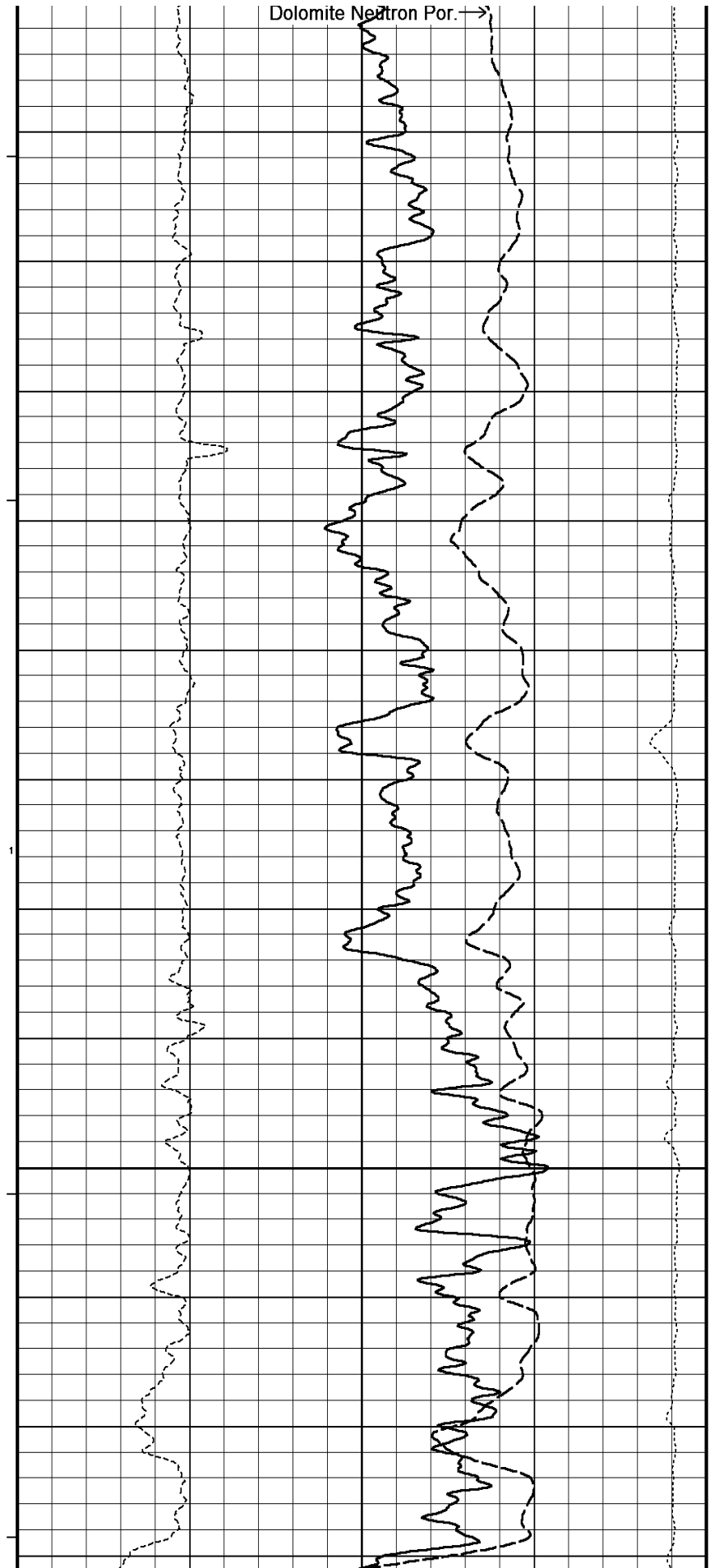
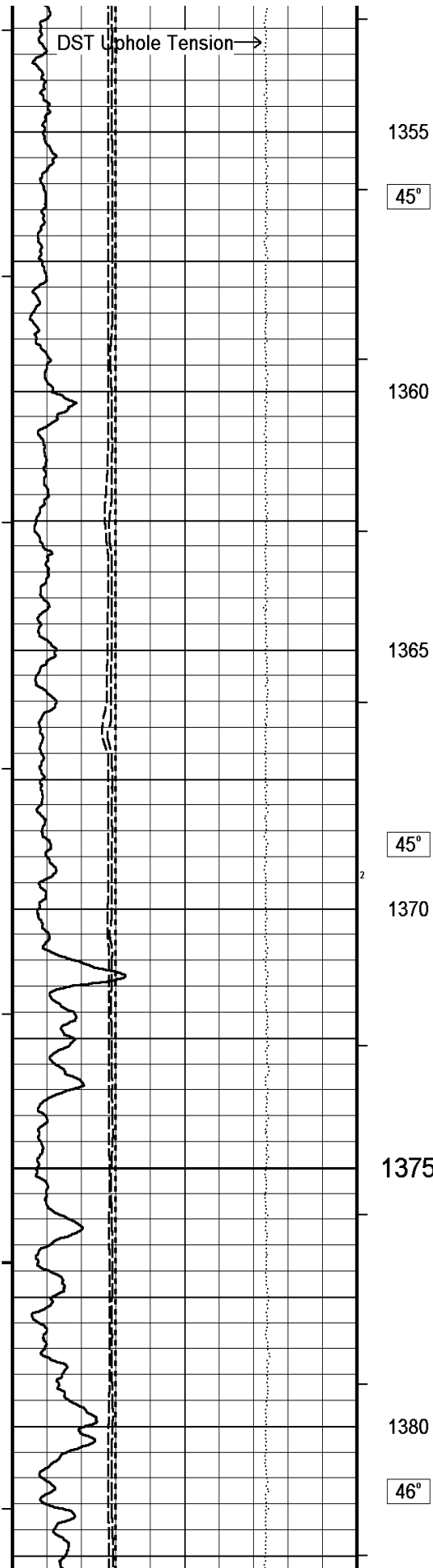


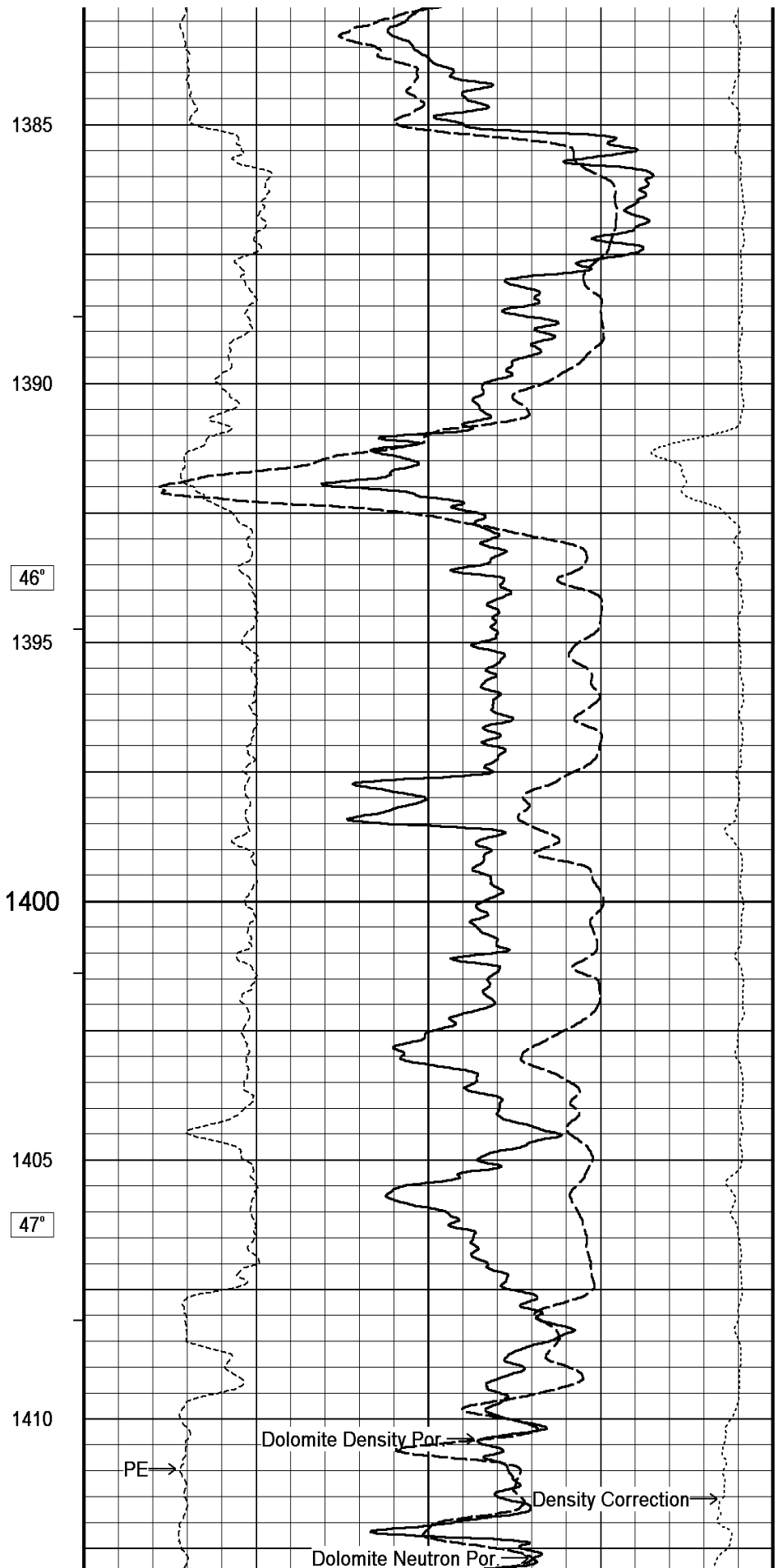
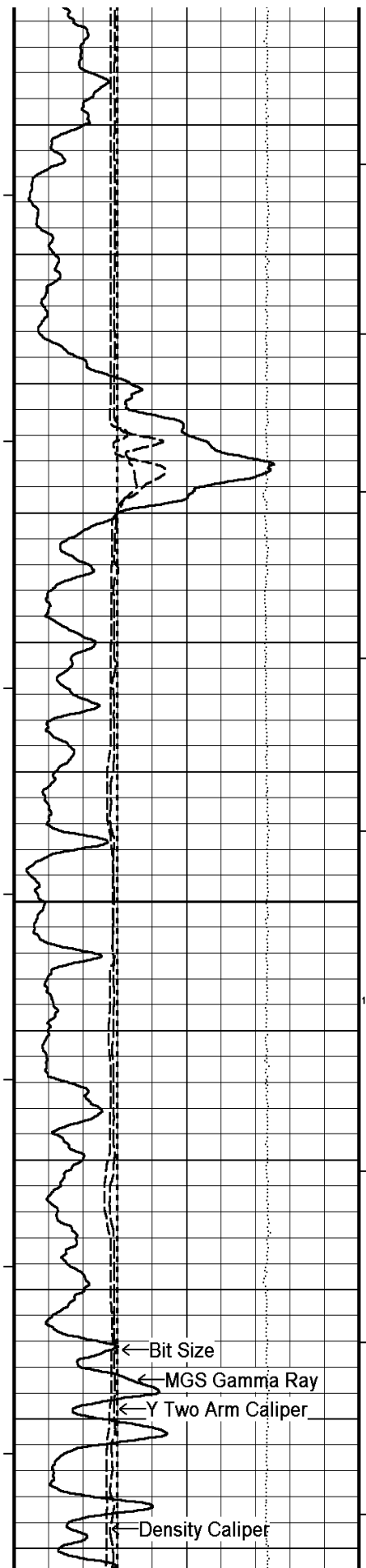


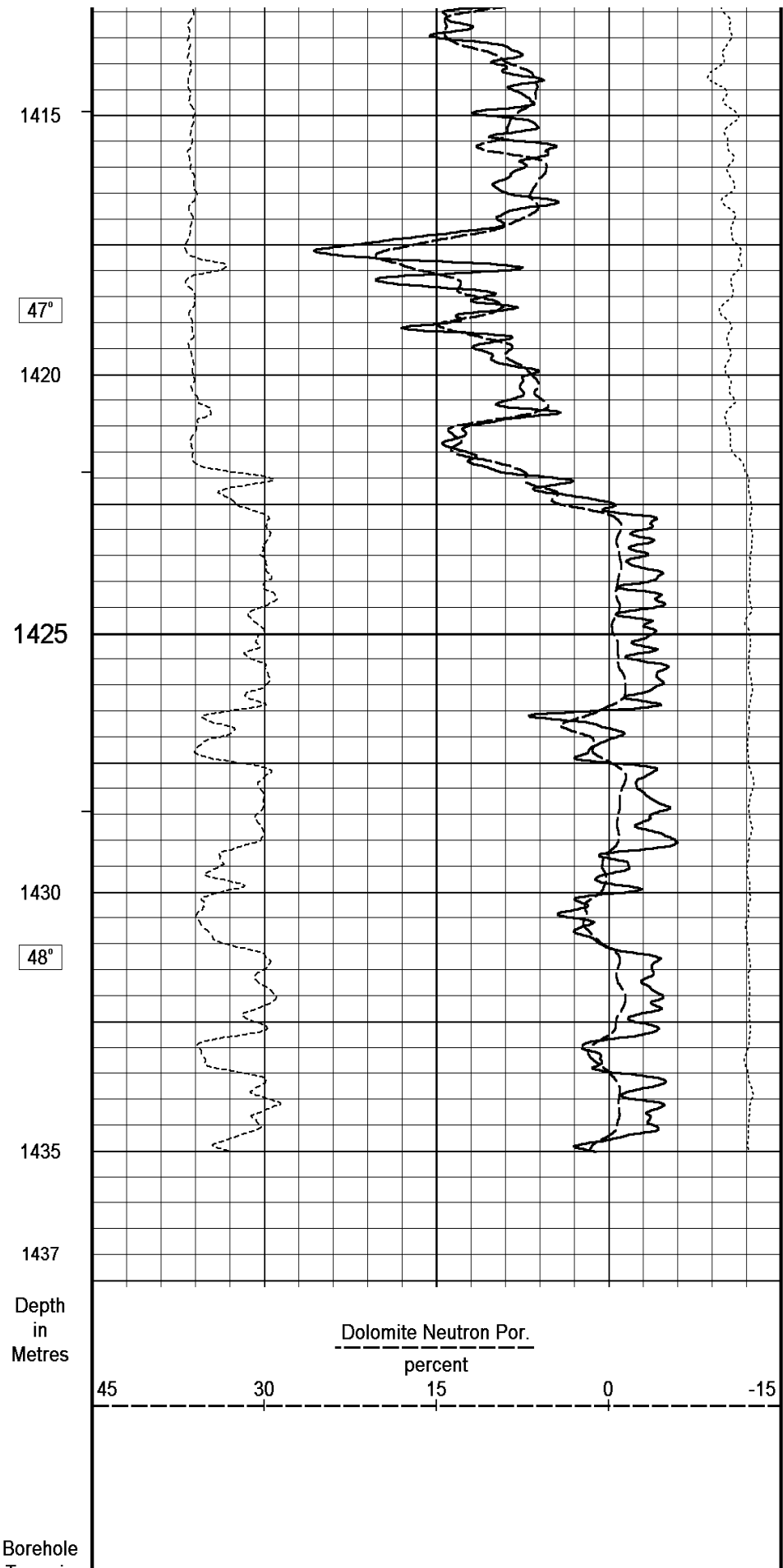
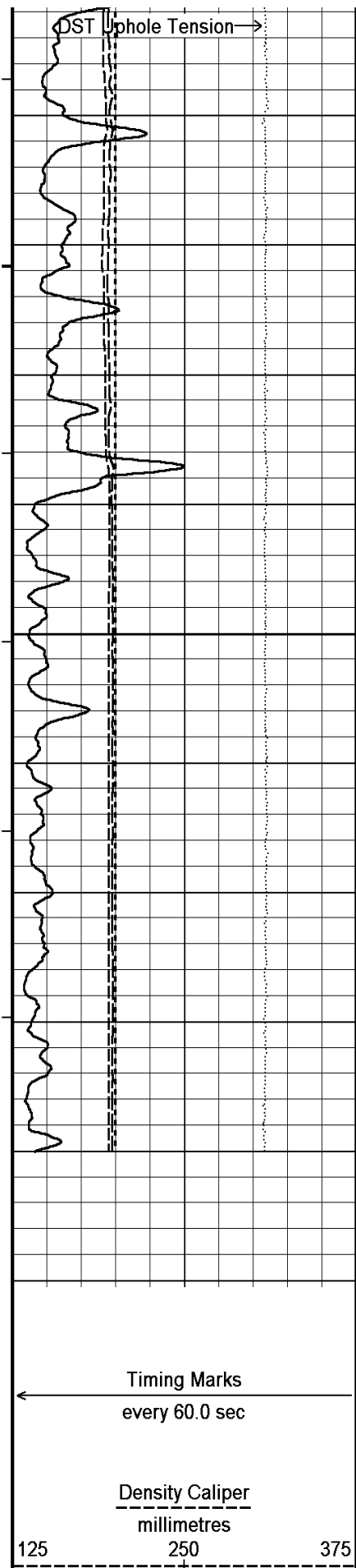


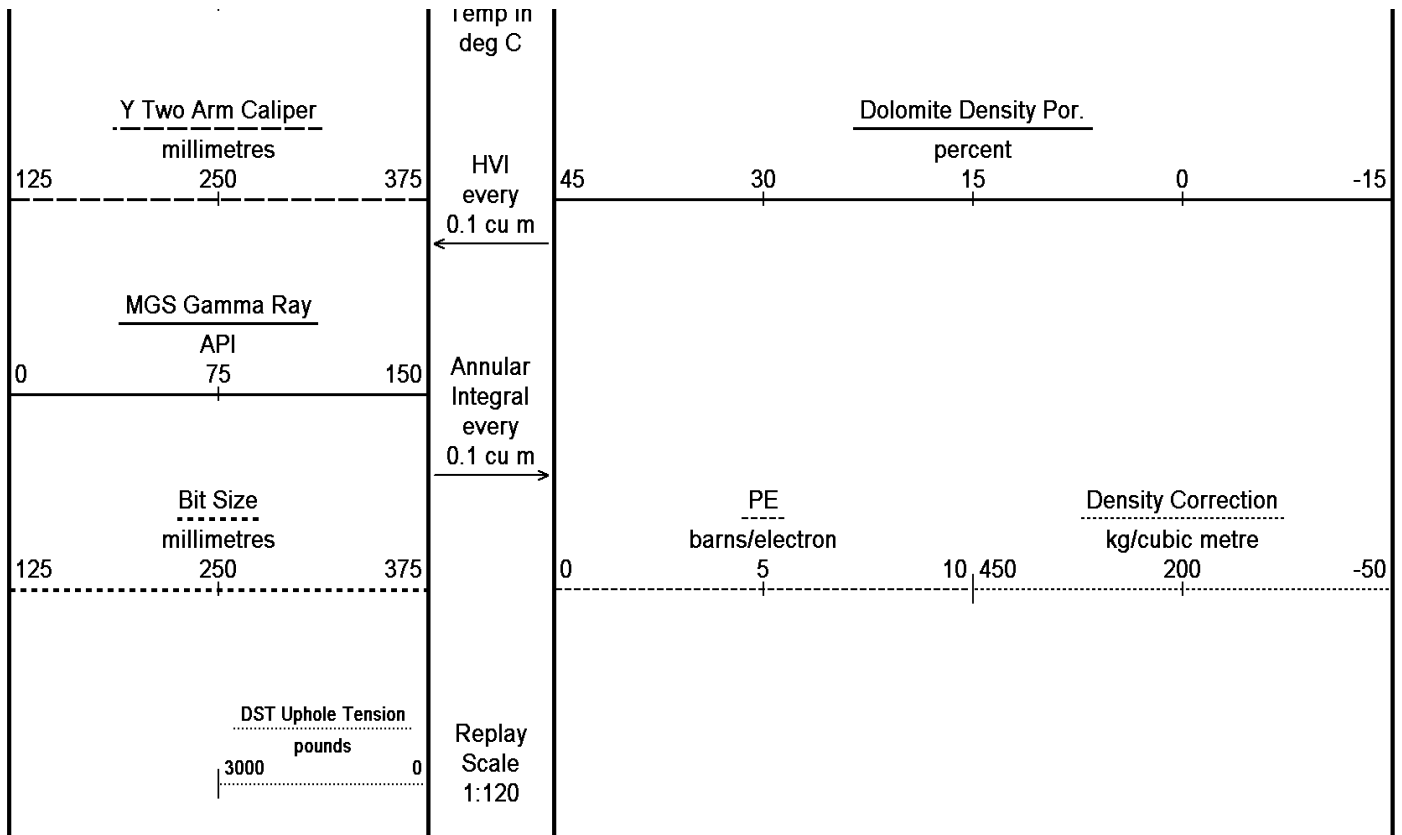












Depth Based Data - Maximum Sampling Increment 2.5cm

Plotted on 12-NOV-2007 10:36

Filename: C:\Temp\Weatherford PreView\0\03 hires.dta

Recorded on 19-FEB-2007 13:21

System Versions: Logged with 7.01.0195 Processed with 8.00.0015 Plotted with 8.01.0091

↑ DOLOMITE HIGH RESOLUTION 1:120 ↑

↓ DOLOMITE HIGH RESOLUTION 1:120 ↓

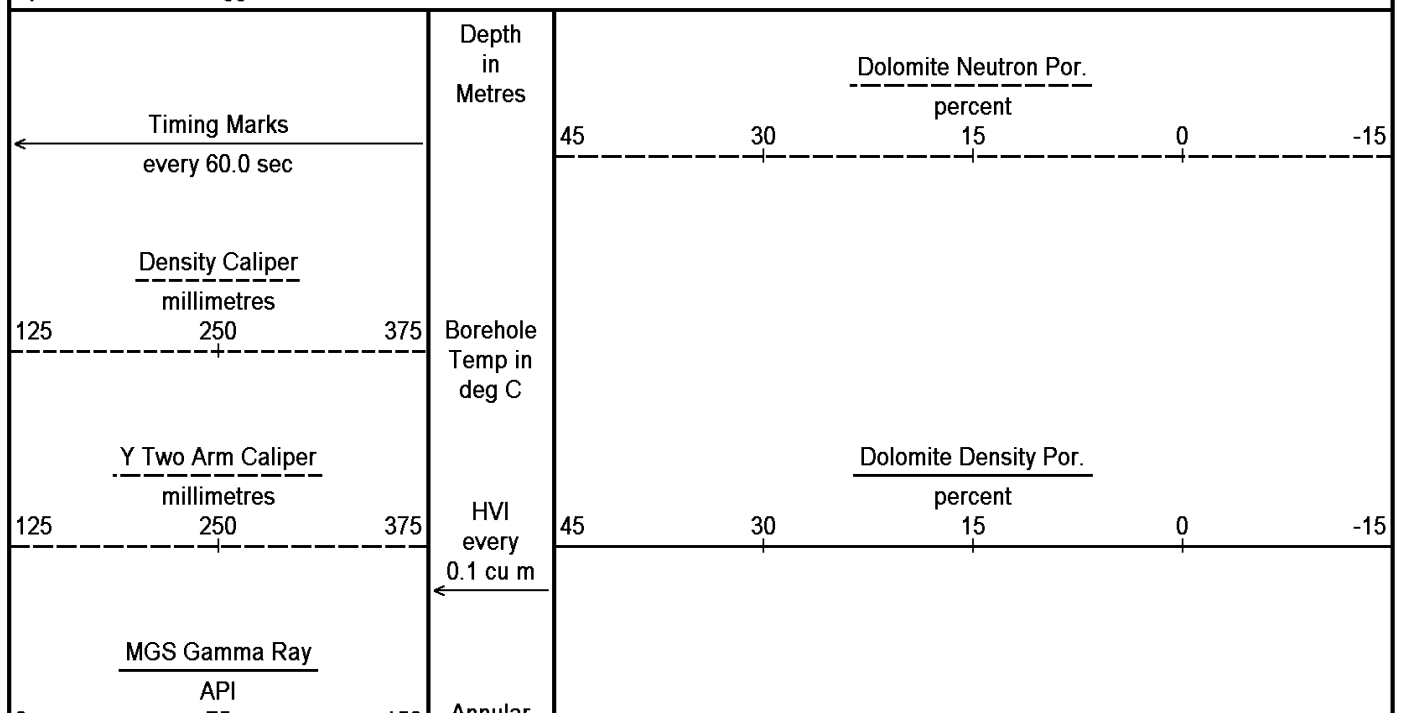
Depth Based Data - Maximum Sampling Increment 2.5cm

Plotted on 12-NOV-2007 10:36

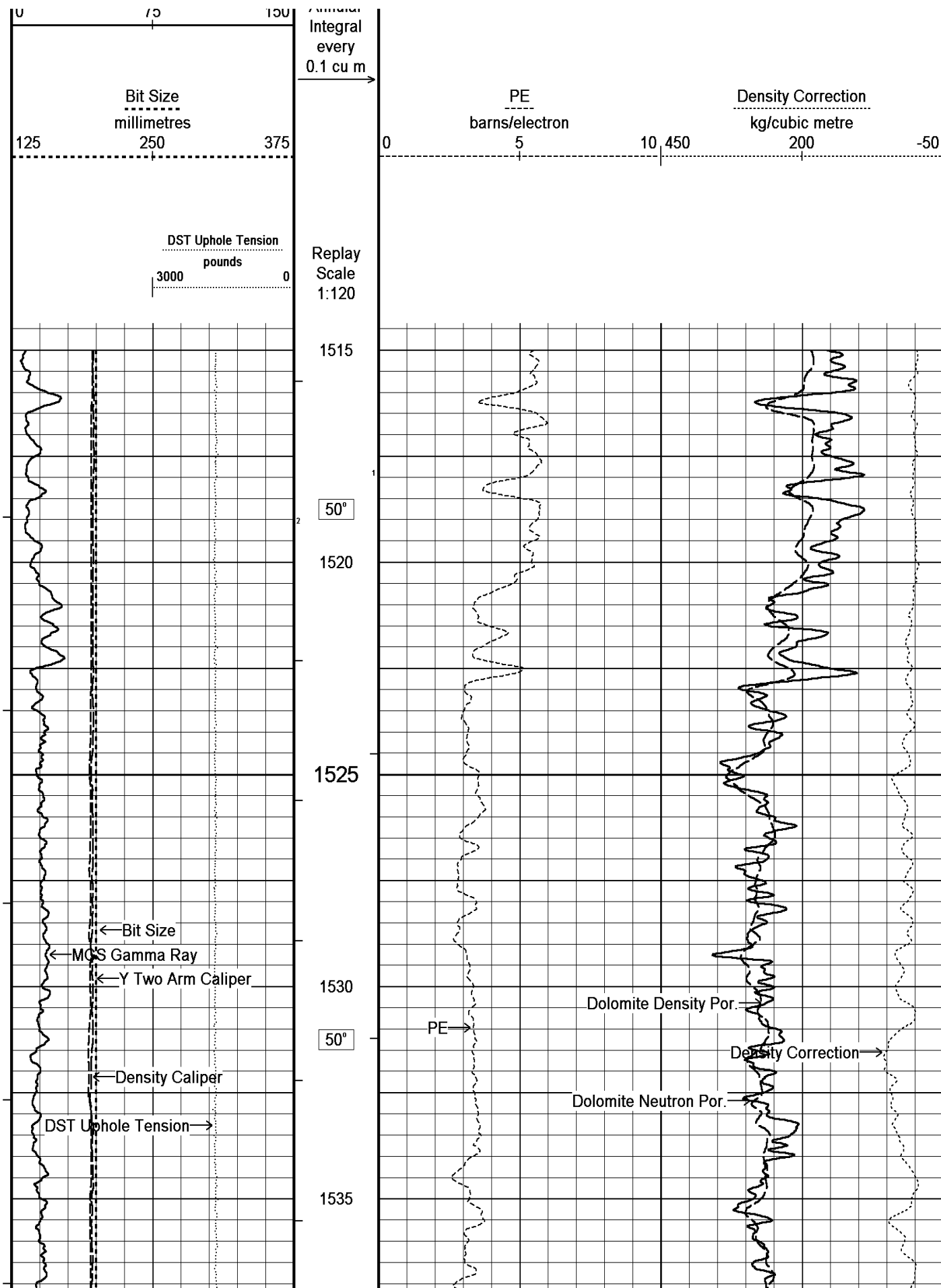
Filename: C:\Temp\Weatherford PreView\0\03 hires.dta

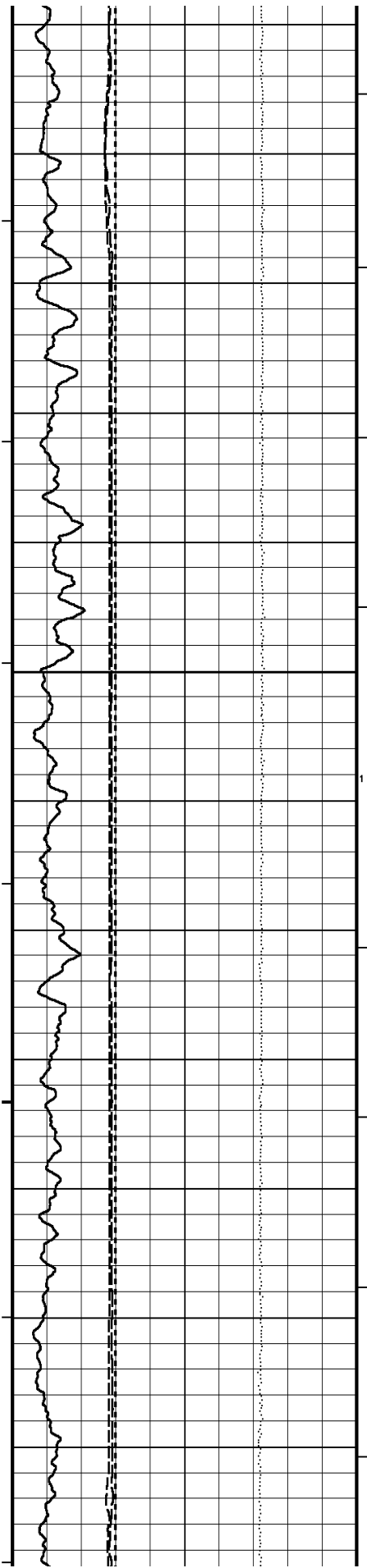
Recorded on 19-FEB-2007 13:21

System Versions: Logged with 7.01.0195 Processed with 8.00.0015 Plotted with 8.01.0091









1540

50°

1545

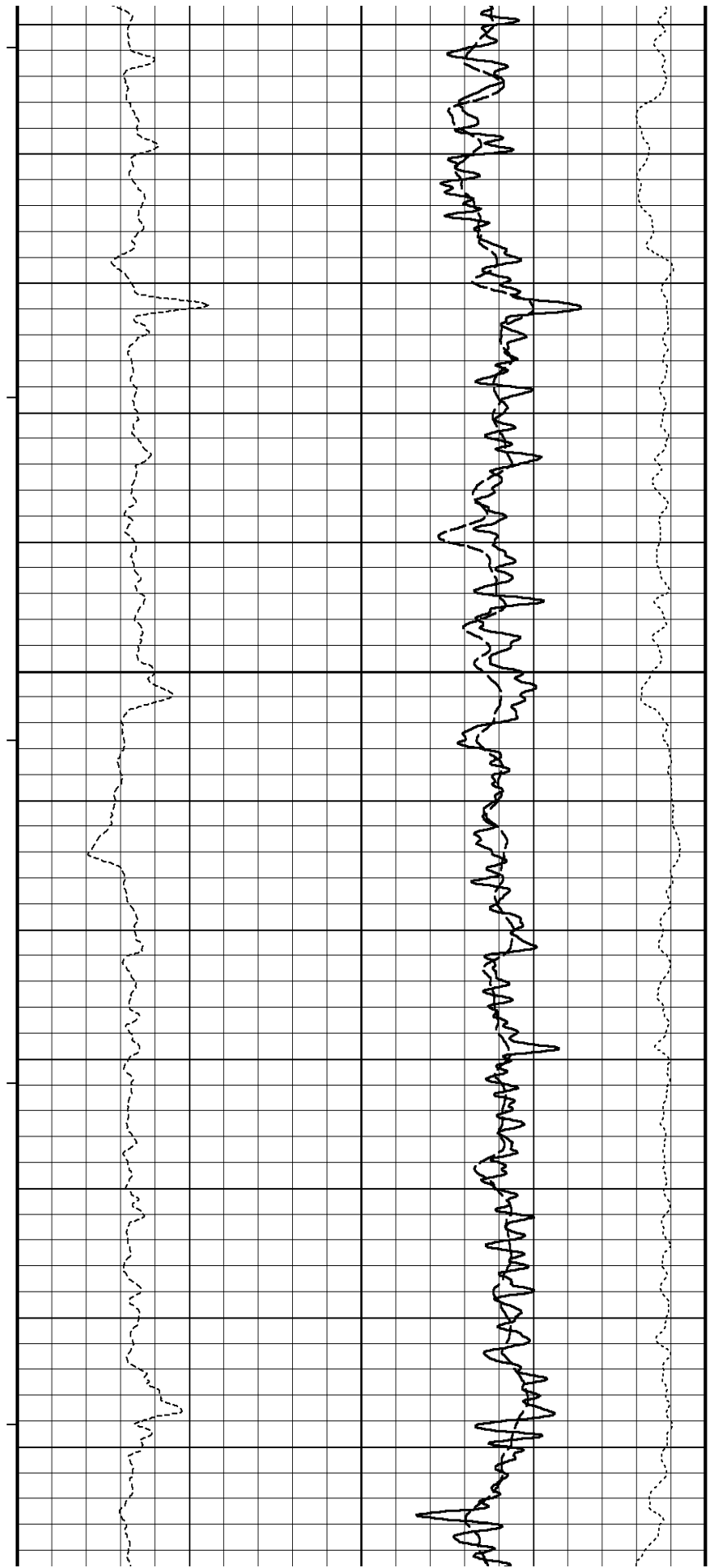
1550

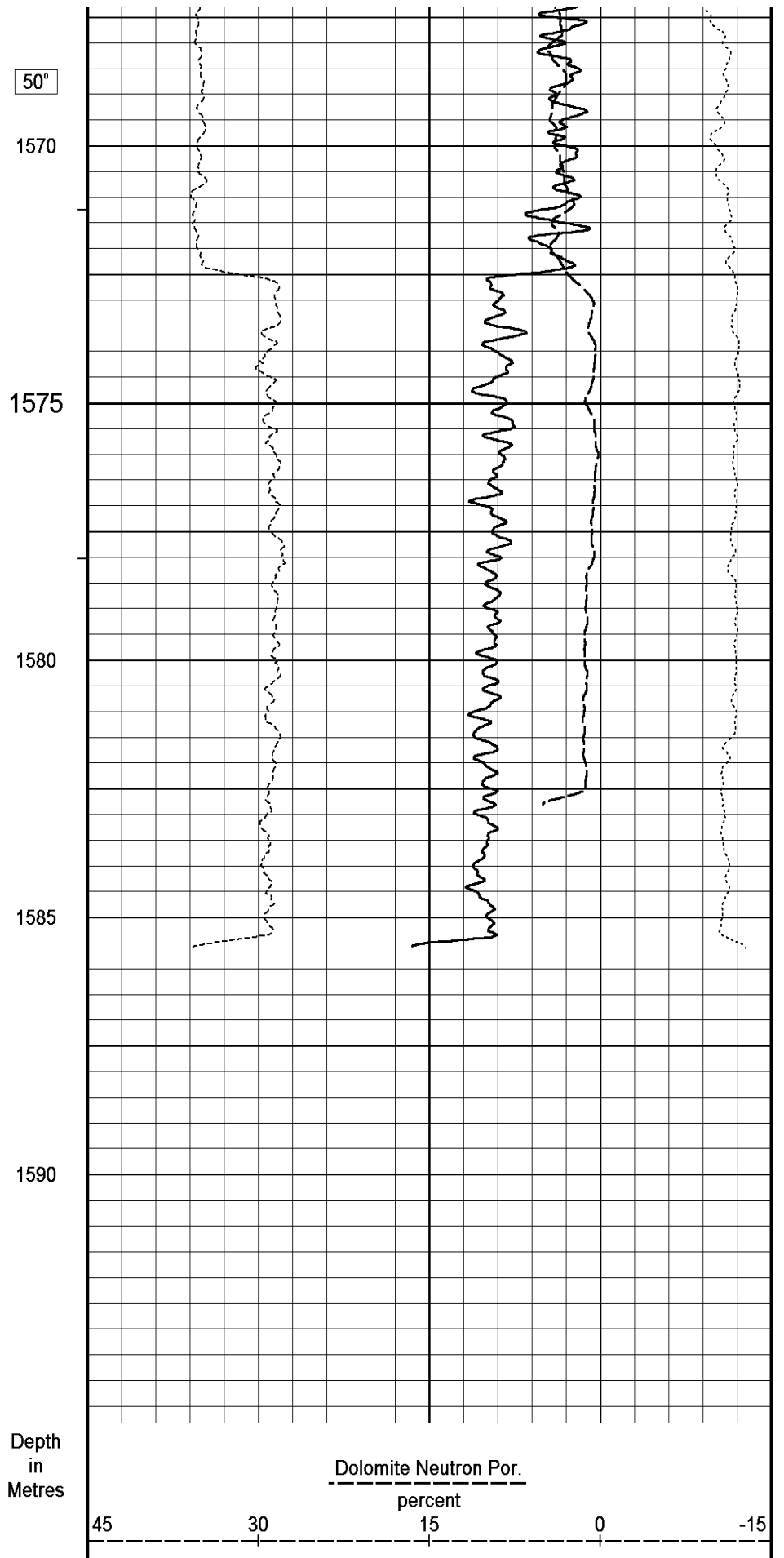
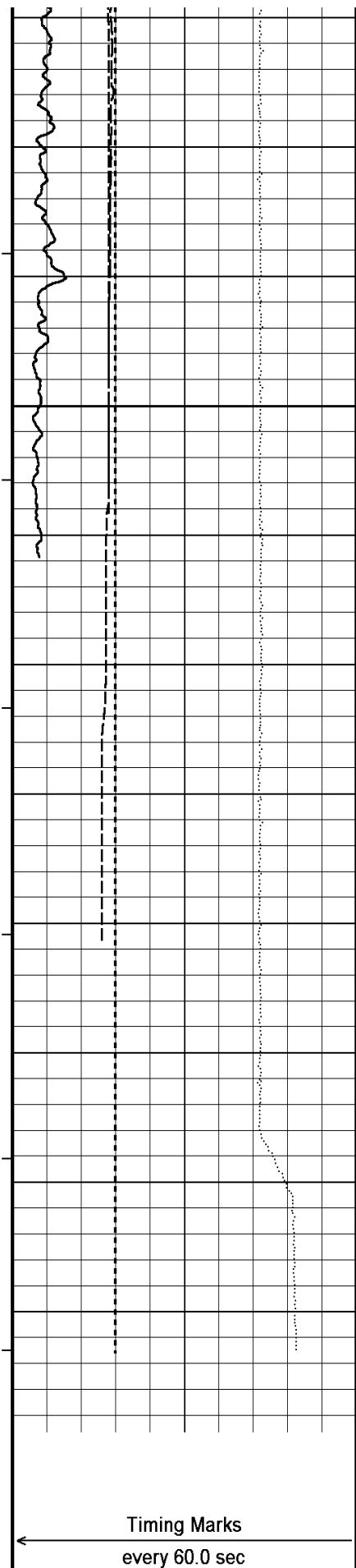
1555

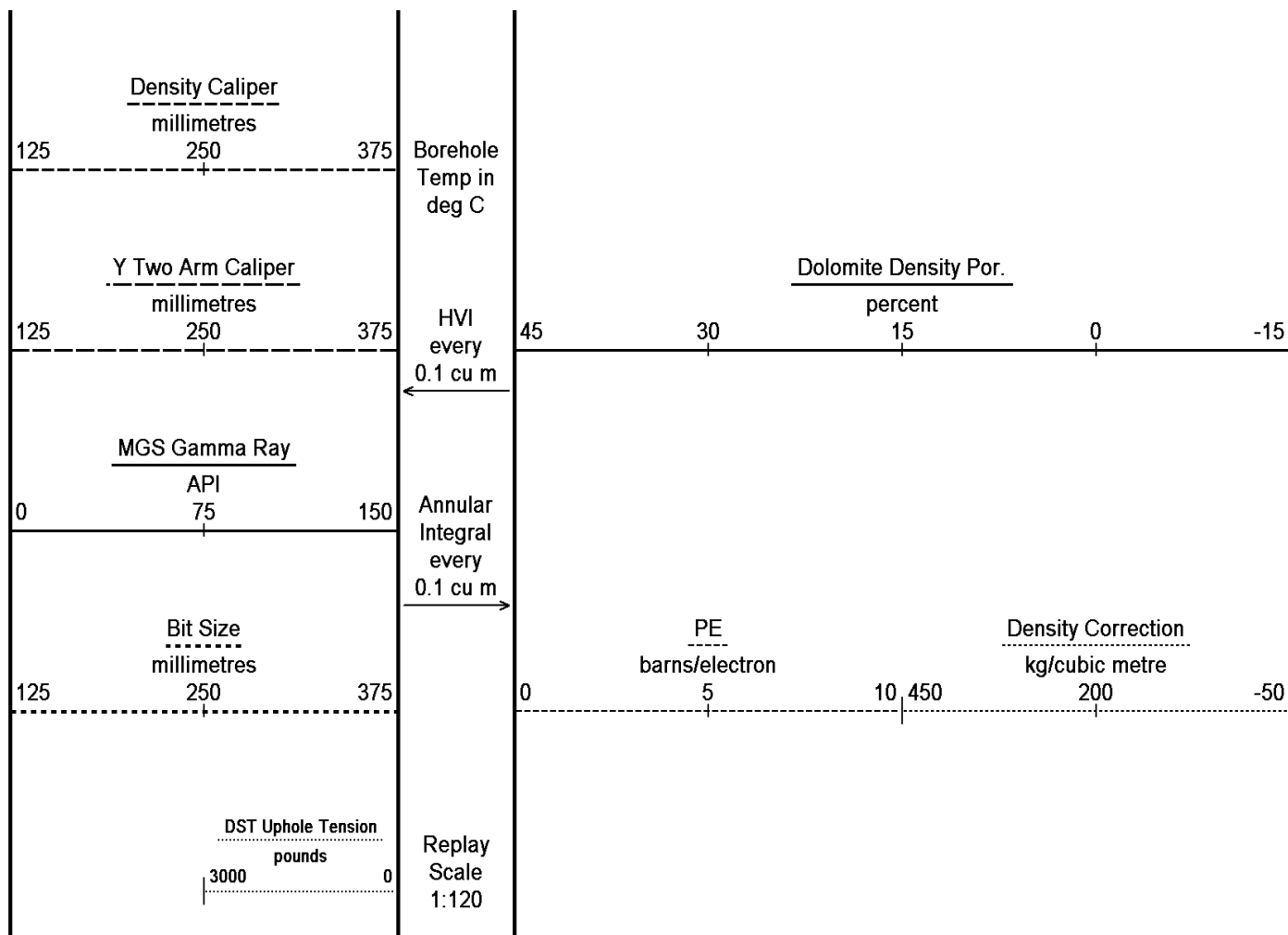
50°

1560

1565







Depth Based Data - Maximum Sampling Increment 2.5cm

Plotted on 12-NOV-2007 10:36

Filename: C:\Temp\Weatherford PreView\0\03 hires.dta

Recorded on 19-FEB-2007 13:21

System Versions: Logged with 7.01.0195 Processed with 8.00.0015 Plotted with 8.01.0091

↑ DOLOMITE HIGH RESOLUTION 1:120 ↑

## BEFORE SURVEY CALIBRATION

C:\Temp\Weatherford PreView\0\03 rpt.dta

General Constants All 000

Last Edited on 19-FEB-2007,12:14

### General Parameters

Mud Resistivity	1.110	ohm-metres
Mud Resistivity Temperature	25.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	

### Hole/Annular Volume and Differential Caliper Parameters

HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Y Two Arm Caliper	
Annular Volume Diameter	139.700	mm
Caliper for Differential Caliper	Density Caliper	

### Rwa Parameters

Porosity used	Base Density Porosity
Resistivity used	Deep Induction
RWA Constant A	0.610
RWA Constant M	2.150

Gamma Calibration MCG 131			Field Calibration on 19-FEB-2007,09:56
	Measured	Calibrated (API)	
Background	46	30	
Calibrator (Gross)	1264	824	
Calibrator (Net)	1219	794	
Gamma Constants MCG 131			Last Edited on 19-FEB-2007,11:17
Gamma Calibrator Number	GRC 095		
Mud Density	1220.00	kg/m3	
Caliper Source for Processing	Density Caliper		
Tool Position	Centred		
Concentration of KCl	0.00	kppm	
SP Calibration MCG 131			Field Calibration on 9-FEB-2007 12:52
	Measured	Calibrated (mV)	
Reference 1	100.5	100.0	
Reference 2	-100.0	-100.0	
High Resolution Temperature Calibration MCG 131			Field Calibration on 15-DEC-2006,15:05
	Measured	Calibrated(Deg C)	
Lower	1.00	1.00	
Upper	10.00	10.00	
High Resolution Temperature Constants MCG 131			
Pre-filter Length	11		
FE Calibration MFE 111			Base Calibration on 15-FEB-2007 19:40 Field Check on 19-FEB-2007 12:14
Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	0.0	0.0	
Reference 2	983.2	126.8	
Base Check		278.8	
Field Check		279.0	
FE Constants MFE 111			Last Edited on 3-FEB-2007,04:36
Caliper Source for FE correction	Density Caliper		
Rm Source for FE correction	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Stand-off	Centred	millimetres	
Caliper Calibration MTC 024			Base Calibration on 6-FEB-2007 10:21 Field Calibration on 19-FEB-2007,12:42
Base Calibration			
Reading No	Measured	Calibrator Size (mm)	
1	15472	110.00	
2	18252	162.00	
3	21045	212.00	
4	23841	262.00	
5	26691	311.00	
6	N/A	N/A	
Field Calibration			
	Measured Caliper (mm)	Actual Caliper (mm)	
	209.10	205.70	
Gamma Calibration MGS 029			Field Calibration on 19-FEB-2007 09:56

Background	Measured	Calibrated (API)		
Calibrator (Gross)	58	38		
Calibrator (Net)	1286	832		
	1228	794		
Gamma Constants MGS 029			Last Edited on 19-FEB-2007,11:17	
Gamma Calibrator Number	GRCC095			
Mud Density	1220.00	kg/m3		
Caliper Source for Processing	Density Caliper			
Tool Position	Centred			
Concentration of KCl	0.00	kppm		
SP Calibration MGS 029			Field Calibration on 7-DEC-2006,17:01	
	Measured	Calibrated (mV)		
Reference 1	100.0	100.0		
Reference 2	-100.0	-100.0		
High Resolution Temperature Calibration MGS 029			Field Calibration on 7-DEC-2006,17:01	
	Measured	Calibrated(Deg C)		
Lower	1.00	1.00		
Upper	5.00	5.00		
High Resolution Temperature Constants MGS 029				
Pre-filter Length	11			
Micro Normal and Micro Inverse Calibration MML 015			Base Calibration on 19-FEB-2007,09:53 Field Check on 19-FEB-2007,12:39	
Base Calibration				
		Measured	Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	9.9	48.5	5.1	25.6
Micro Inverse	9.9	48.7	3.4	16.9
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	79.8		79.8	
Micro Inverse	52.6		52.5	
Micro Normal and Micro Inverse Constants MML 015			Last Edited on 19-FEB-2007,09:53	
Micro Normal K Factor	0.5110			
Micro Inverse K Factor	0.3380			
Standoff Offset	N/A		millimetres	
Caliper Calibration MML 015			Base Calibration on 19-FEB-2007,09:55 Field Calibration on 19-FEB-2007,12:42	
Base Calibration				
Reading No	Measured	Calibrator Size (mm)		
1	13860	162.00		
2	17089	212.00		
3	20617	262.00		
4	24375	311.00		
5	27976	355.00		
6	N/A	N/A		
Field Calibration				
	Measured Caliper (mm)		Actual Caliper (mm)	
	210.20		205.70	
Neutron Calibration MDN 016			Base Calibration on 11-JAN-2007 20:47 Field Check on 19-FEB-2007 10:29	
Base Calibration				
	Measured		Calibrated (cps)	
	Near	Far	Near	Far

	3219	98	3714	110
Ratio	32.703		33.764	
Field Calibrator at Base	Calibrated (cps)			
	2486		3648	
Ratio	0.681			
Field Check	Calibrated (cps)			
	2589		3773	
Ratio	0.686			

Neutron Constants MDN 016	Last Edited on 17-FEB-2007,21:41			
Neutron Source Id	277			
Neutron Jig Number	N636			
Epithermal Neutron	No			
Caliper Source for Processing	Density Caliper			
Stand-off	0.00	mm		
Mud Density	1000.00	kg/m3		
Limestone Sigma	7.10	cu		
Sandstone Sigma	4.26	cu		
Dolomite Sigma	4.70	cu		
Formation Pressure Source	Constant Value			
Formation Pressure	0.00	kPa		
Temperature Source	Constant Value			
Temperature	20.00	degrees C		
Mud Salinity	0.00	kppm		
Formation Fluid Salinity Source	Constant Value			
Formation Fluid Salinity	0.00	kppm		
Barite Mud Correction	Not Applied			

Photo Density Calibration MPD 130	Base Calibration on 12-MAR-2007,15:18			
	Field Check on			
Density Calibration				
Base Calibration				
	Near	Measured	Calibrated (sdu)	
		Far	Near	Far
Reference 1	70908	37221	60352	31615
Reference 2	28626	3008	25043	2540
Field Check at Base				
	1027.6	1384.5		
Field Check				
	0.0	0.0		
PE Calibration				
Base Calibration				
	WS	Measured	Calibrated	
		WH	Ratio	Ratio
Background	184	909		
Reference 1	30385	71000	0.431	0.400
Reference 2	7753	26700	0.293	0.272
Field Check at Base				
	184.1	909.1		
Field Check				
	0.0	0.0		

Density Constants MPD 130	Last Edited on 19-FEB-2007,11:18			
Density Source Id	16151b			
Nylon Calibrator Number	608			
Aluminium/Fe Calibrator Number	608			
Density Shoe Profile	4 inch			

Caliper Source for Processing	Density Caliper		
PE Correction to Density	Not Applied		
Mud Density	1220.00	kg/m3	
Mud Density Z/A Correction	1.11		
Mud Filtrate Density	1000.00	kg/m3	
Dry Hole Mud Filtrate Density	1000.00	kg/m3	
DNCT	0.00	kg/m3	
CRCT	0.00	kg/m3	
Density Z/A Correction	Advanced		
Matrix Density (kg/m3)	Depth (m)		
2710.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
Caliper Calibration MPD 130			
			Base Calibration on 19-FEB-2007 10:46
			Field Calibration on 19-FEB-2007,12:42
Base Calibration			
Reading No	Measured	Calibrator Size (mm)	
1	18240	110.00	
2	28320	162.00	
3	38188	212.00	
4	48355	262.00	
5	58464	311.00	
6	N/A	N/A	
Field Calibration			
	Measured Caliper (mm)	Actual Caliper (mm)	
	210.10	205.70	
Sonic Constants MSS 003			
			Last Edited on 19-FEB-2007,11:18
Maximum Boundary Contrast	328.08	micro-sec/m	
Fluid Transit Time	620.08	micro-sec/m	
Limestone Transit Time	155.84	micro-sec/m	
Sandstone Transit Time	182.09	micro-sec/m	
Dolomite Transit Time	142.72	micro-sec/m	
Sonic used for Porosities	3-5' Compensated Sonic		
Correction for Sonde Skew	Applied		
Cycle Stretch Algorithm	Applied		
MN3FT	N/A	micro-sec	
MX3FT	N/A	micro-sec	
Hunt-Raymer Constant	83.13	micro-sec/ft	
Fixed Gate Parameters			
Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
Down Hole Fixed Gate Parameters			
Gate Start	N/A	micro-sec	
Gate Width	N/A	micro-sec	
Initial Discriminator Level	0.0000	mVolts	
Full Waveform Parameters			
Use 3' Waveform to derive TR	N/A		



Use 4' Waveform to derive TR	N/A	
Use 5' Waveform to derive TR	N/A	
Use 6' Waveform to derive TR	N/A	
3' Waveform Discriminator Level	N/A	mV
4' Waveform Discriminator Level	N/A	mV
5' Waveform Discriminator Level	N/A	mV
6' Waveform Discriminator Level	N/A	mV
3' Waveform Filter	N/A	
4' Waveform Filter	N/A	
5' Waveform Filter	N/A	
6' Waveform Filter	N/A	
Semblance Level	N/A	
Semblance Window Width	N/A	micro-sec
Sonic 1 Despiker	N/A	N/A
Sonic 2 Despiker	N/A	N/A

#### Induction Calibration MAI 154

Base Calibration on 14-JAN-2007 01:38

Field Check on 19-FEB-2007 12:36

##### Base Calibration

##### Test Loop Calibration

Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	16.6	470.6	9.3	966.2
2	6.3	383.0	7.6	821.4
3	4.0	264.7	5.2	566.0
4	2.3	136.2	2.6	279.2

Array Temperature 22.3 Deg C

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	13.1	3867.2	15.7	3866.2
2	29.6	3530.7	30.3	3528.1
3	26.8	3001.8	27.2	2999.2
4	18.4	2040.8	18.6	2039.1
Deep	15.3	1926.8	15.8	1925.2
Medium	39.6	3962.8	39.7	3959.0
Shallow	45.8	5270.7	46.7	5266.7

Array Temperature 12.1 31.4 Deg C

#### Induction Constants MAI 154

Last Edited on 19-FEB-2007,11:18

Induction Model	VECTAR		
Caliper for Borehole Corr.	Density Caliper		
Hole Size for Borehole Correction	N/A	millimetres	
Stand-off	25.40	millimetres	
Number of Fins on Stand-off	5.0000		
Stand-off Fin Width	25.4000	millimetres	
Borehole Corr. Rm Source	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Squasher Start	0.0020	mhos/metre	

##### Borehole Normalisation

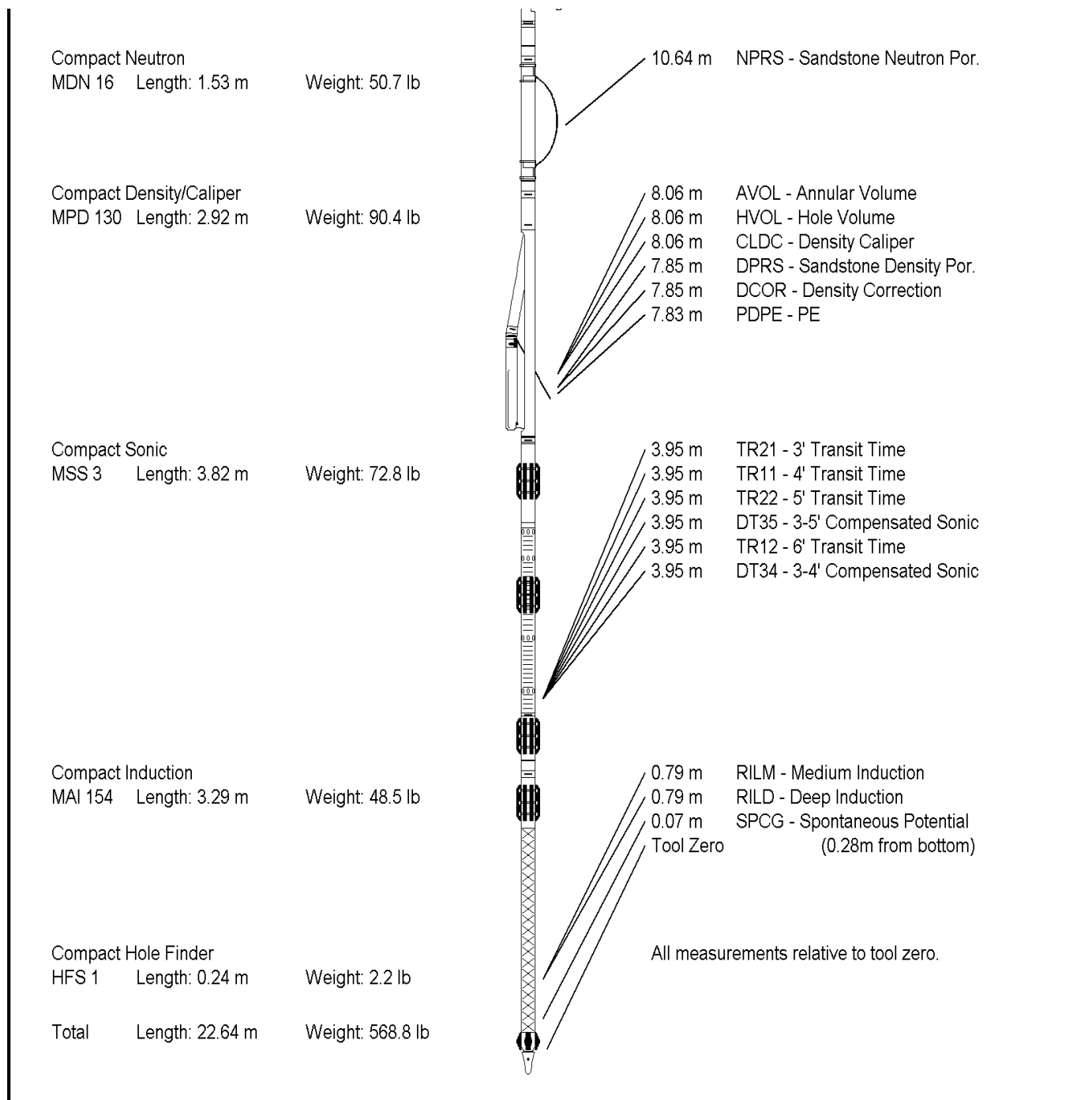
DRM1	0.0000	DRC1	0.0000
DRM2	0.0000	DRC2	0.0000
MRM1	0.0000	MRC1	0.0000
MRM2	0.0000	MRC2	0.0000
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000

##### Calibration Site Corrections

Channel 1	0.00	mmhos/metre
Channel 2	0.00	mmhos/metre
Channel 3	0.00	mmhos/metre
Channel 4	0.00	mmhos/metre

Channel 4	0.00	milliosimetre
Apparent Porosity and Water Saturation Constants		
Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	100.00	percent
Resistivity of Water for Apor and Sw	0.05	ohm-m
Resistivity of Mud Filtrate for Sw	0.00	ohm-m
High Resolution Temperature Calibration MAI 154		
	Measured	Calibrated(Deg C)
Lower	1.00	1.00
Upper	10.00	10.00
High Resolution Temperature Constants MAI 154		
Pre-filter Length	11	

DOWNHOLE EQUIPMENT			C:\Temp\Weatherford PreView\01a03 rpt.dta	
Compact Gamma MCG 131 Length: 2.65 m	Weight: 63.9 lb		20.79 m	GRGC - Gamma Ray
			19.91 m	CGXT - MCG External Temperature
Compact Focussed Electric MFE 111 Length: 1.84 m	Weight: 48.5 lb		18.79 m	FEFE - Shallow FE
Compact Two Arm Caliper MTC 24 Length: 2.17 m	Weight: 61.7 lb		16.34 m	CLYC - Y Two Arm Caliper
Compact Short Gamma MGS 29 Length: 1.04 m	Weight: 24.3 lb		15.47 m	GRGM - MGS Gamma Ray
Compact InterSonde Crank ISC 151 Length: 0.71 m	Weight: 24.3 lb			
Compact Micro-log MML 15 Length: 2.43 m	Weight: 81.6 lb		12.10 m	MINV - Micro-inverse
			12.10 m	MNRL - Micro-normal



COMPANY		PARAMOUNT RESOURCES LTD.			
WELL		PARA ET AL CAMERON A-03			
FIELD		CAMERON HILLS			
PROVINCE/COUNTY		NORTHWEST TERRITORIES			
COUNTRY/STATE		CANADA			
Elevation Kelly Bushing	772.80	metres	First Reading	1581.30	metre
Elevation Drill Floor		metres	Depth Driller	1589.40	metres
Elevation Ground Level	767.40	metres	Depth Logger	1589.40	metres



PHOTO DENSITY

**Weatherford®**

DUAL SPACED NEUTRON



# MINIPILOT

COMPANY		PARAMOUNT RESOURCES LTD.		
WELL		PARA ET AL CAMERON A-03		
FIELD		CAMERON HILLS		
PROVINCE/COUNTY		NORTHWEST TERRITORIES		
COUNTRY/STATE		CANADA		
LOCATION		300A036010117300		
LSD	SEC	TWP	RGE	Other Services
API Number		COMPENSATED SONIC		
Permit Number 2047		MICROLOG		
Permanent Datum GROUND LEVEL, Elevation 767.4 metres			Elevations: metres	
Log Measured From 5.4 M above Permanent Datum			KB 772.80	
Drilling Measured From KELLY BUSHING			DF	
			GL 767.40	
Date	19-FEB-2007			
Run Number	1			
Depth Driller	1589.40	metres		
Depth Logger	1589.40	metres		
First Reading	1588.30	metre		
Last Reading	436.00	metre		
Casing Driller	435.80	metres		
Casing Logger	436.00	metres		
Bit Size	200.00	mm		
Hole Fluid Type	GEL CHEM			
Density / Viscosity	1220.0 kg/M3	70.00 sec/L		
PH / Fluid Loss	10.50	10.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.11 @ 25.0	ohm-m		
Rmf @ Measured Temp	1.02 @ 25.0	ohm-m		
Rmc @ Measured Temp	1.26 @ 25.0	ohm-m		
Source Rmf / Rmc	PRESS	FILTER		
Rm @ BHT	0.71 @ 50.0	ohm-m		
Time Since Circulation	8 HRS			
Max Recorded Temp	50.00	deg C		
Equipment Name	COMPACT			
Equipment / Base	QUINT	GPR		
Recorded By	M. BONNELL			
Witnessed By	B. POWELL			
CIRC. STOP	04:30 FEB-19	Last Line		

BOREHOLE RECORD				Last Edited: 19-FEB-2007 11:16	
Bit Size millimetres		Depth From metres		Depth To metres	
311.000		0.00		435.80	
200.000		435.80		1589.40	
CASING RECORD					
Type	Size millimetres	Depth From metres	Shoe Depth metres	Weight pounds/ft	
SURFACE	219.100	0.00	435.80	24.00	

## REMARKS

- 1) SOFTWARE ISSUE: WLS 7.01.0195
- 2) CUSTOMER SCALES AND INTERVALS LOGGED.
- 3) MAI, MSS, MPD, MDN, MML, SKJ, MGS, MTC, MFE, MCG RAN IN COMBINATION.
- 4) HARDWARE: MAI: TWO 25.4 MM STANDOFFS  
MSS: THREE 25.4 MM STANDOFFS  
MDN: DUAL NEUTRON BOWSPRING  
MTC: ONE SIX-LEAF CENTRALIZER BOWSPRING

6) RIG: PD 220

7) HOLE \_CEMENT VOLUMES CALCULATED USING DENSITY CALIPER AND TWO ARM CALIPER IN COMBINATION :

HOLE VOLUME = 42.7 CU.M.

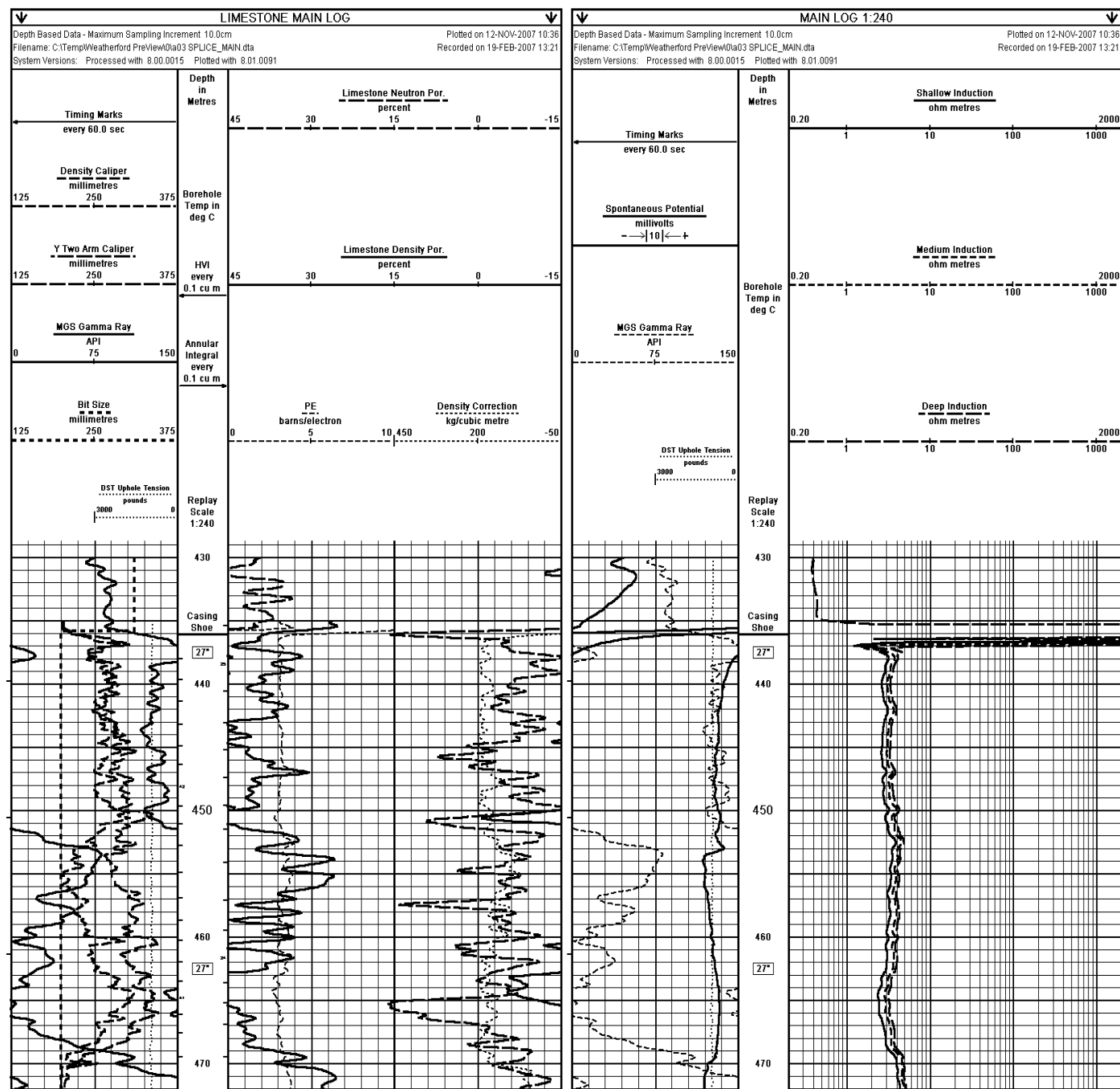
ANNULAR VOLUME USING 139.7 MM PRODUCTION CASING = 25.1 CU.M

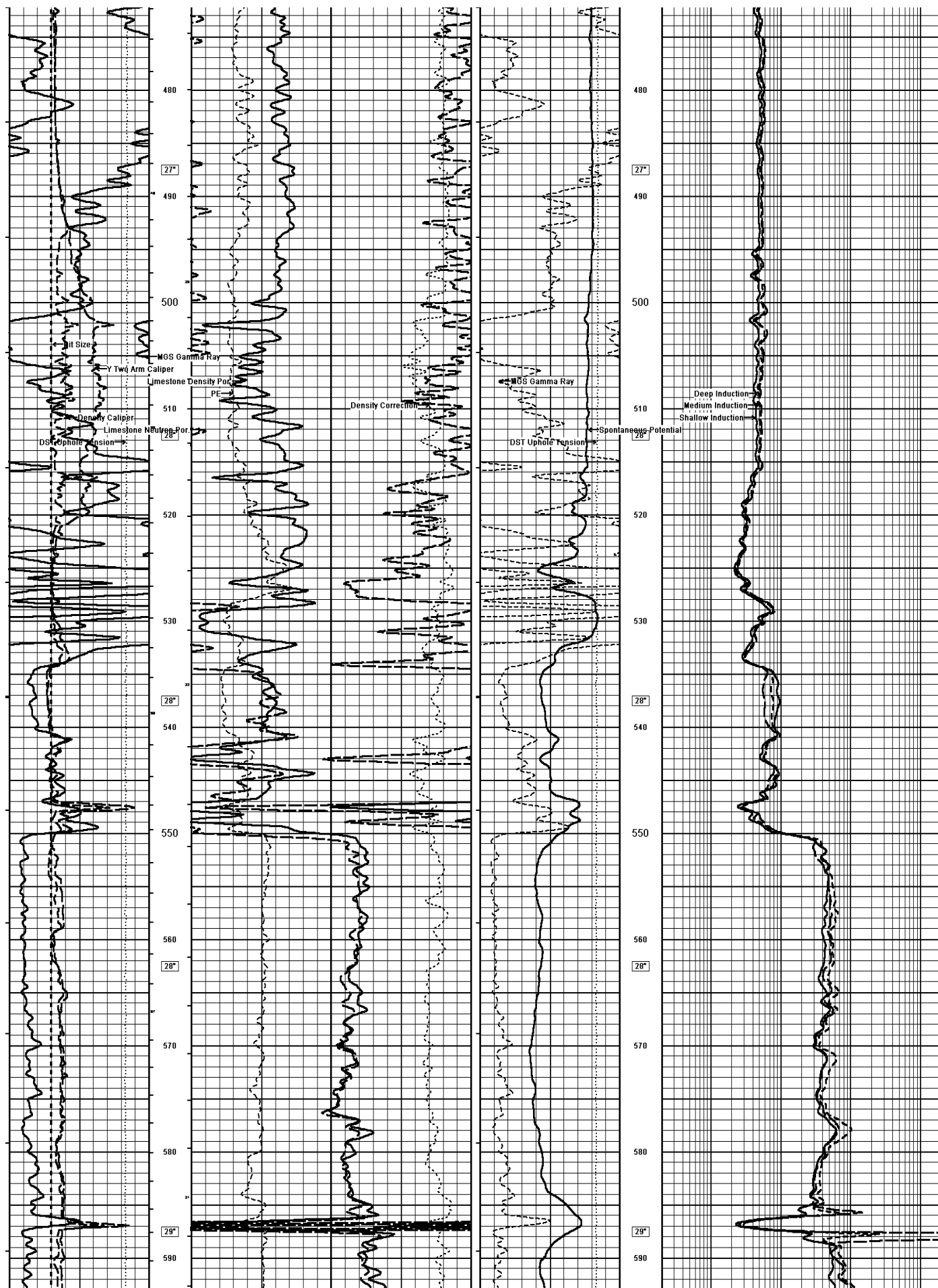
8) SONIC FREE PIPE: NOT FOUND

9) AREAS OF BOREHOLE RUGOSITY MAY CAUSE POOR DENSITY PAD CONTACT, HIGH DENSITY CORRECTION AND THUS INVALID DENSITY POROSITY DATA AT THOSE INTERVALS.

10) SALTY INDUCTION MODEL PRESENTED FROM TD-1410M.

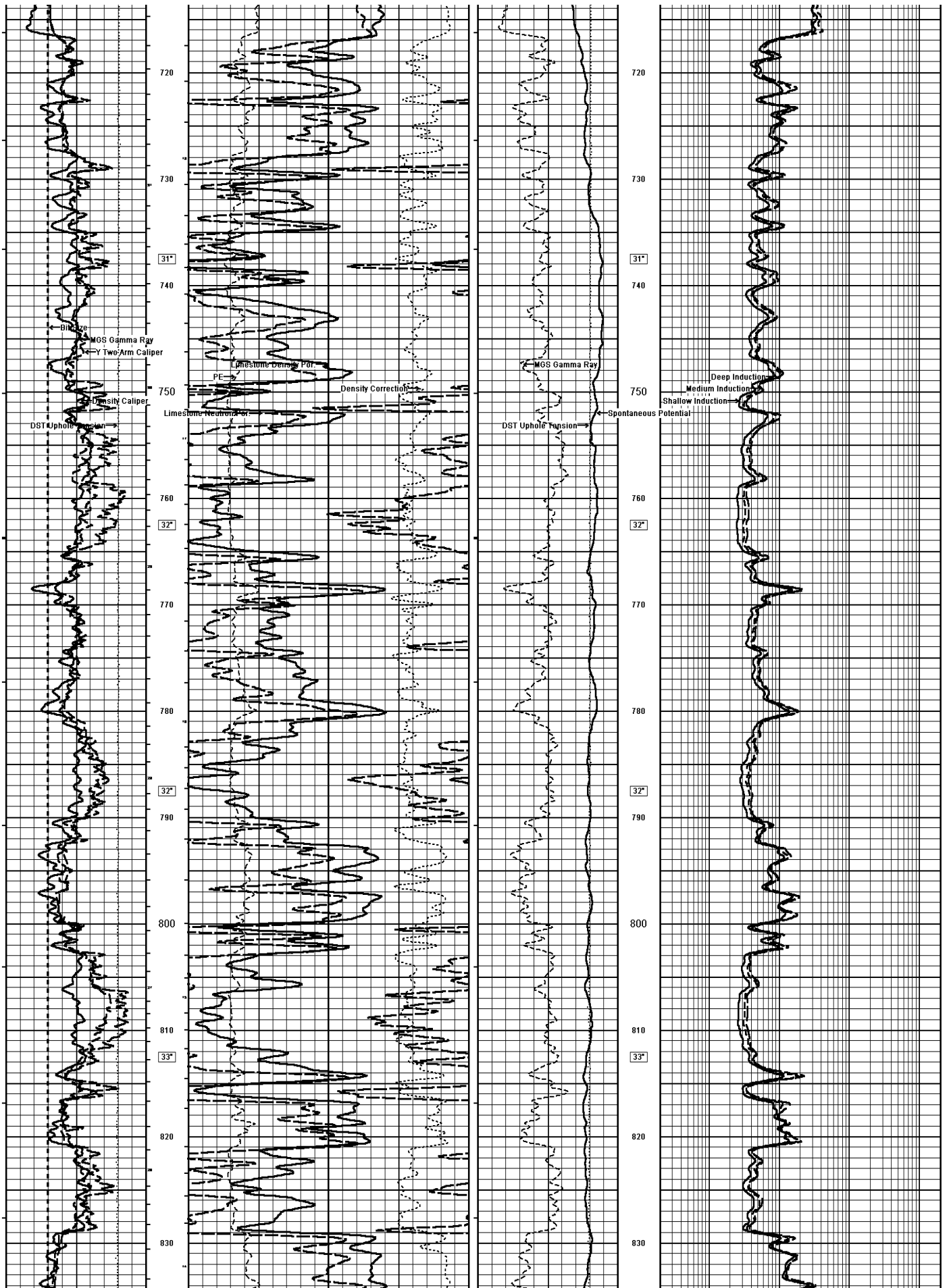
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

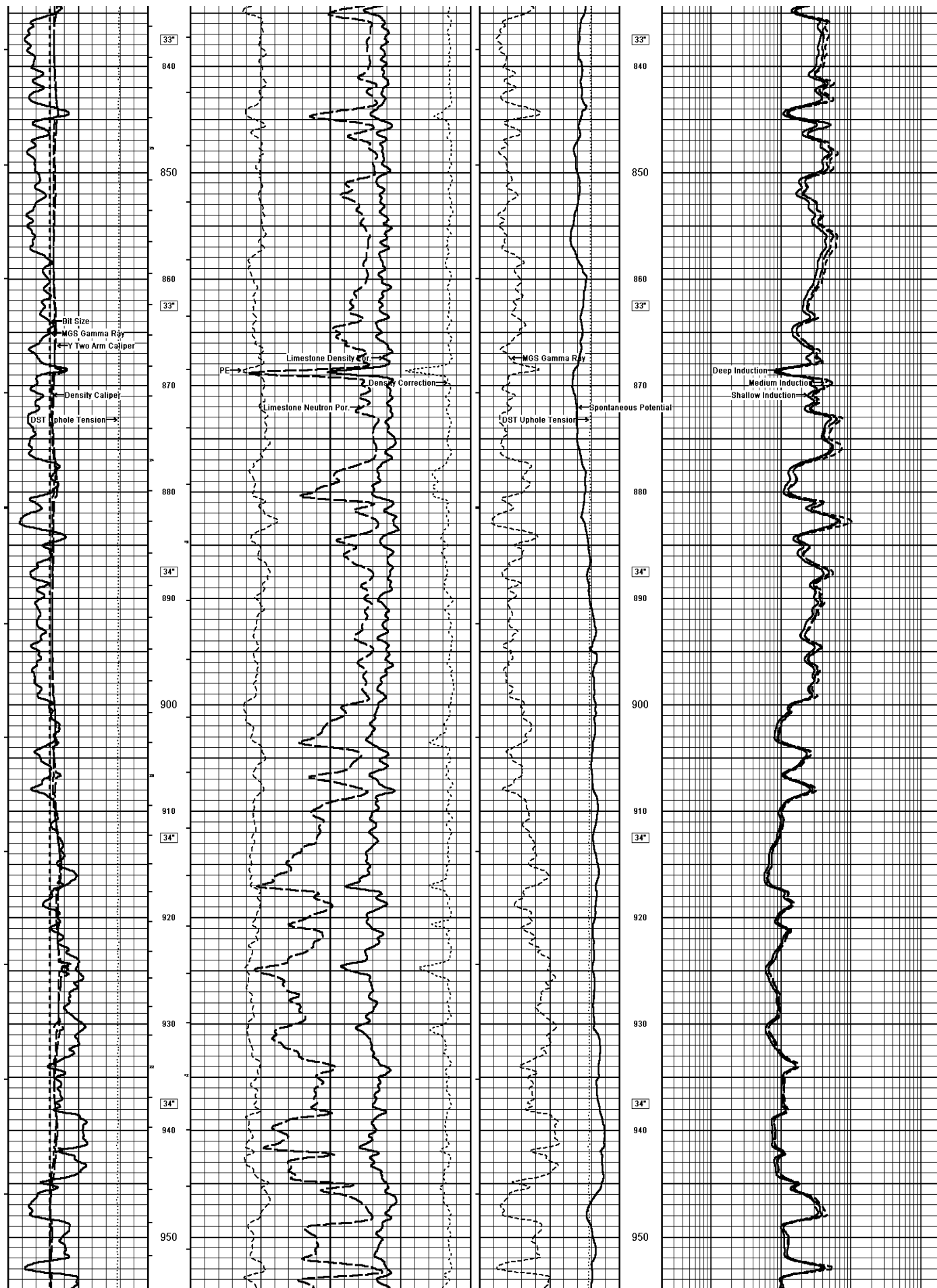


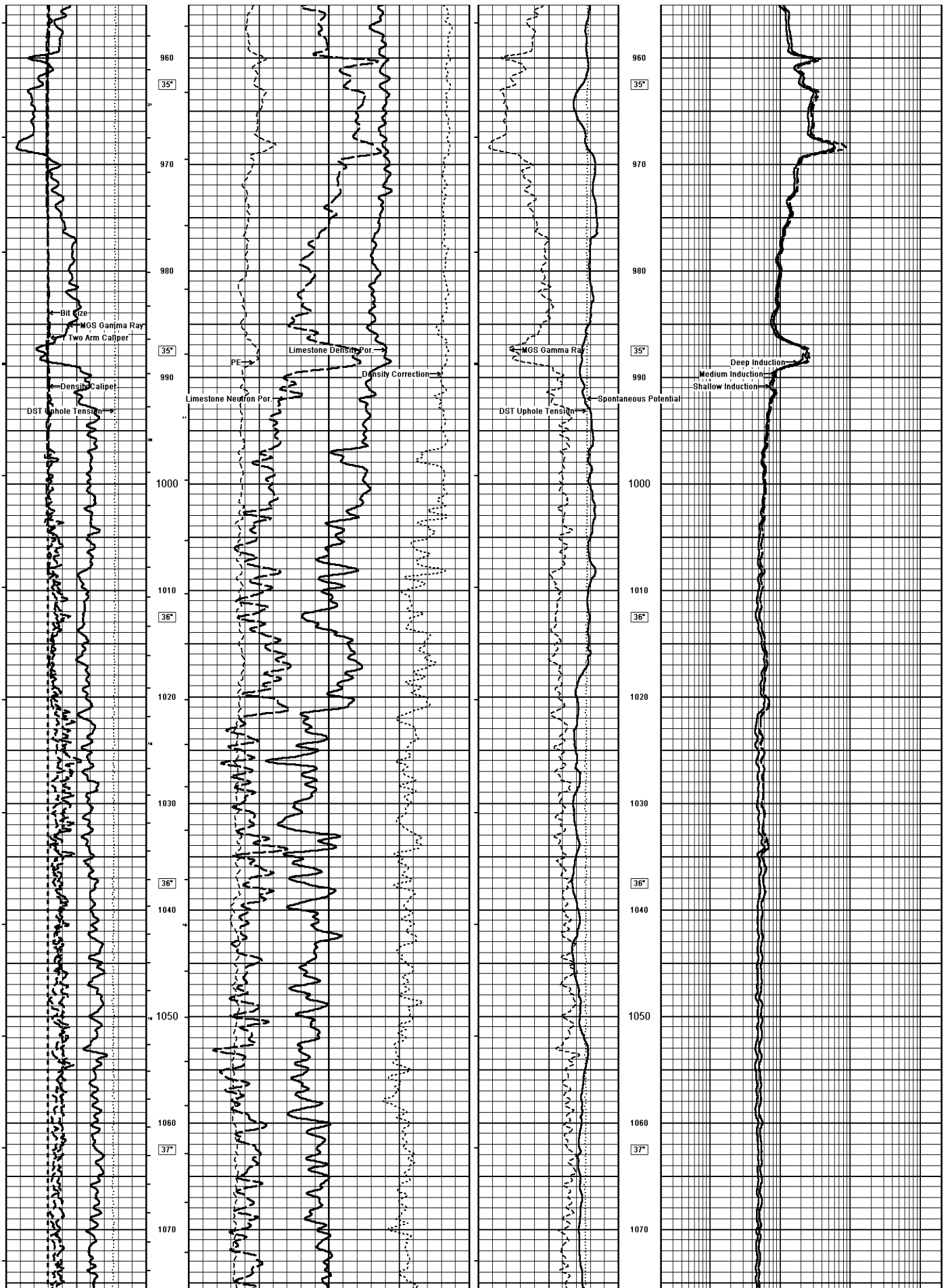




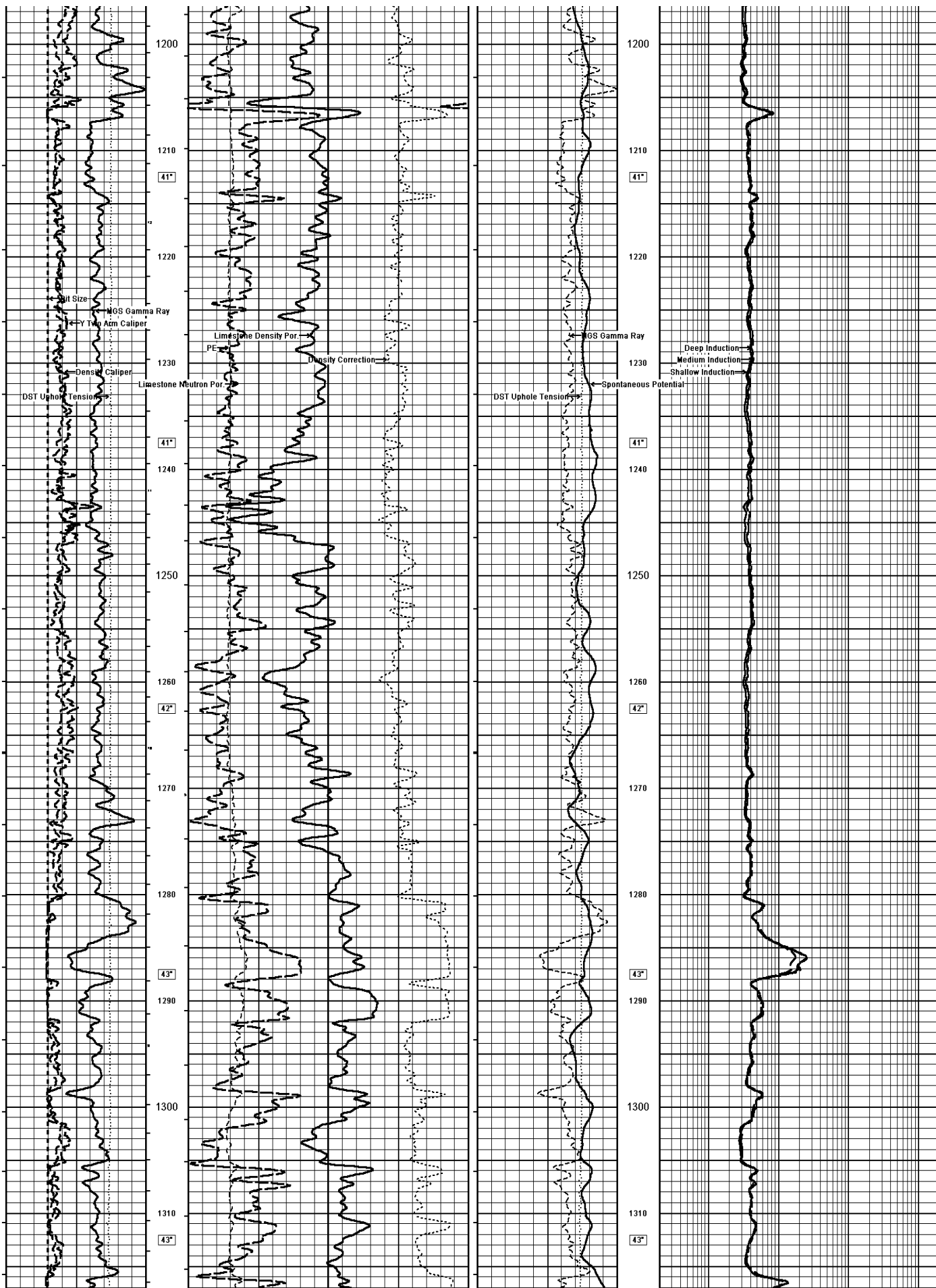


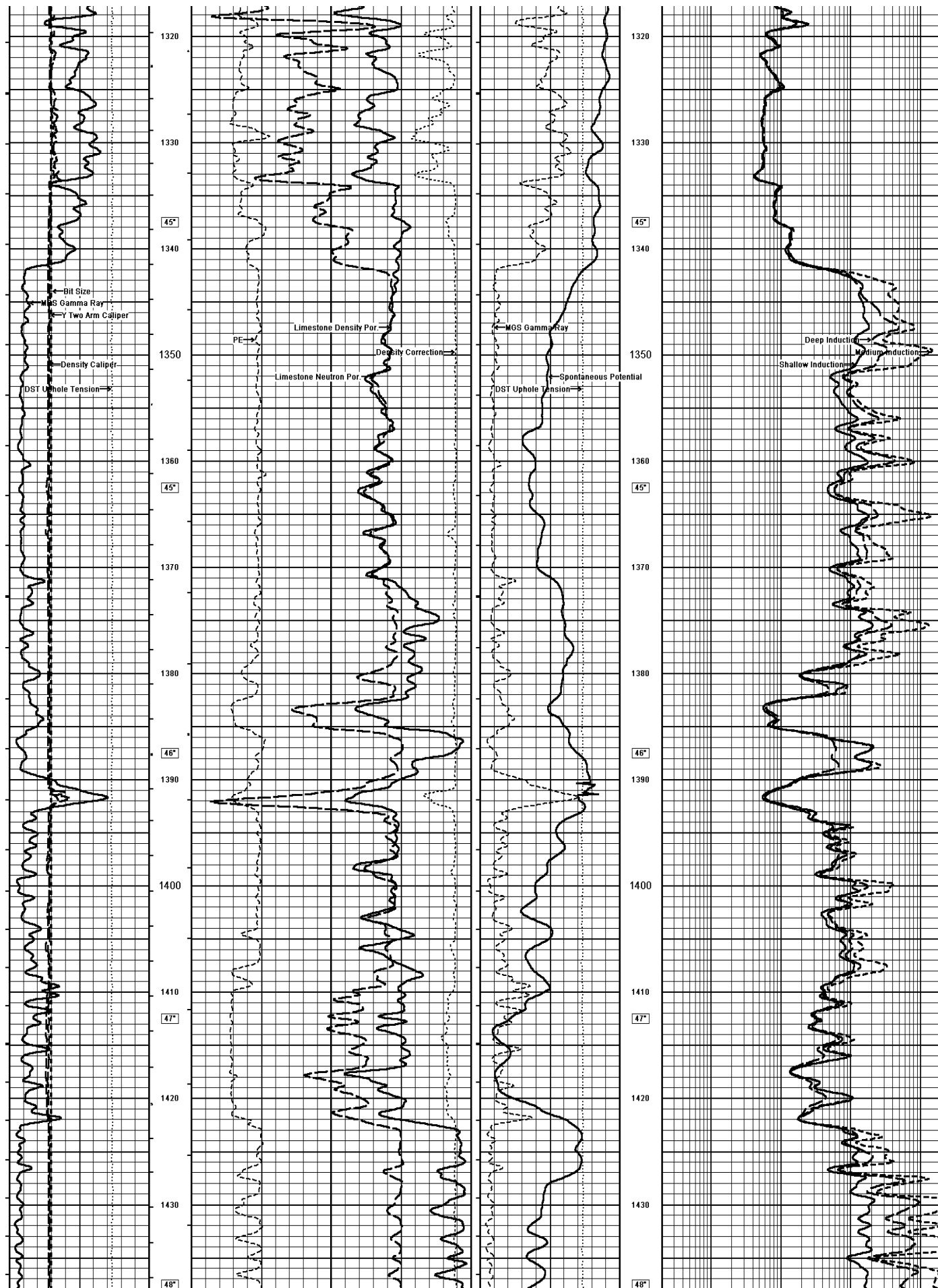




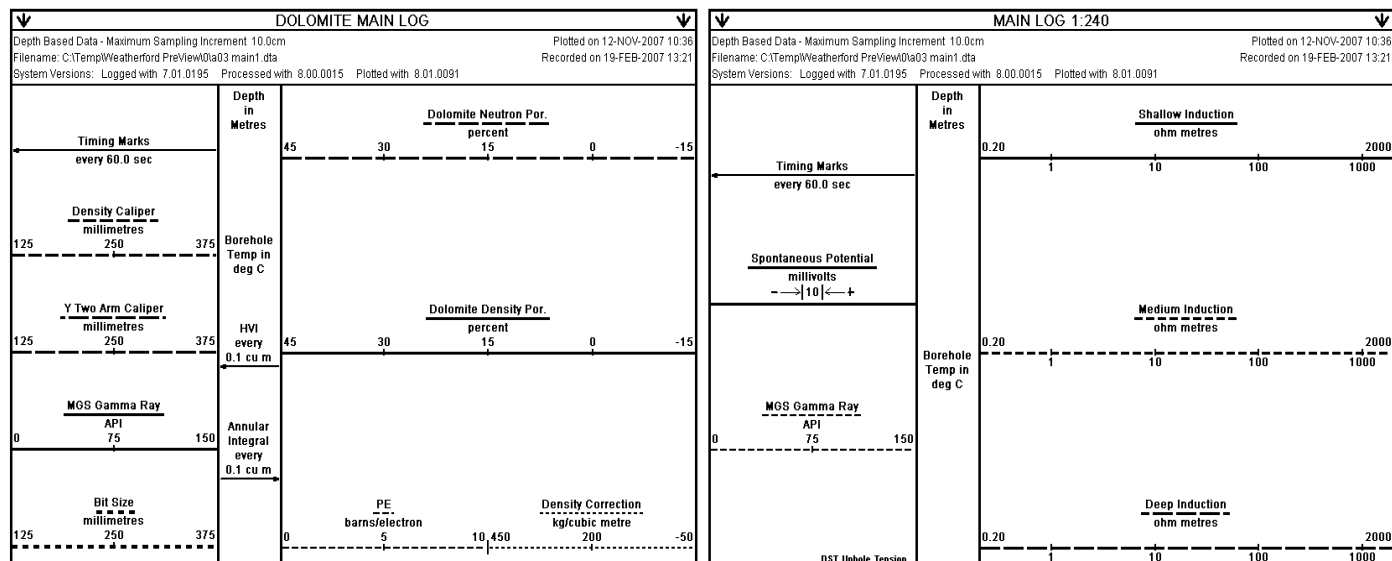
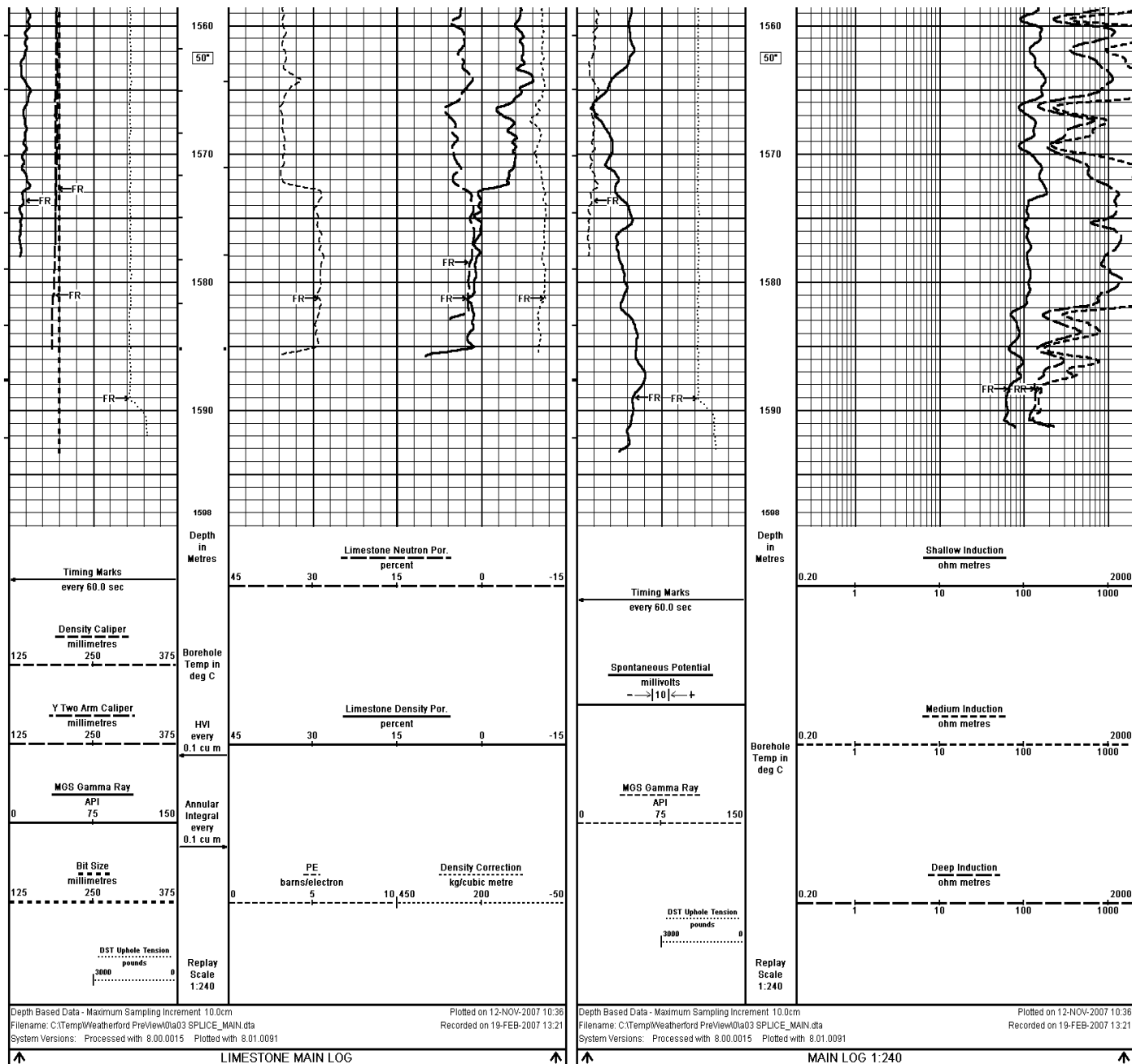




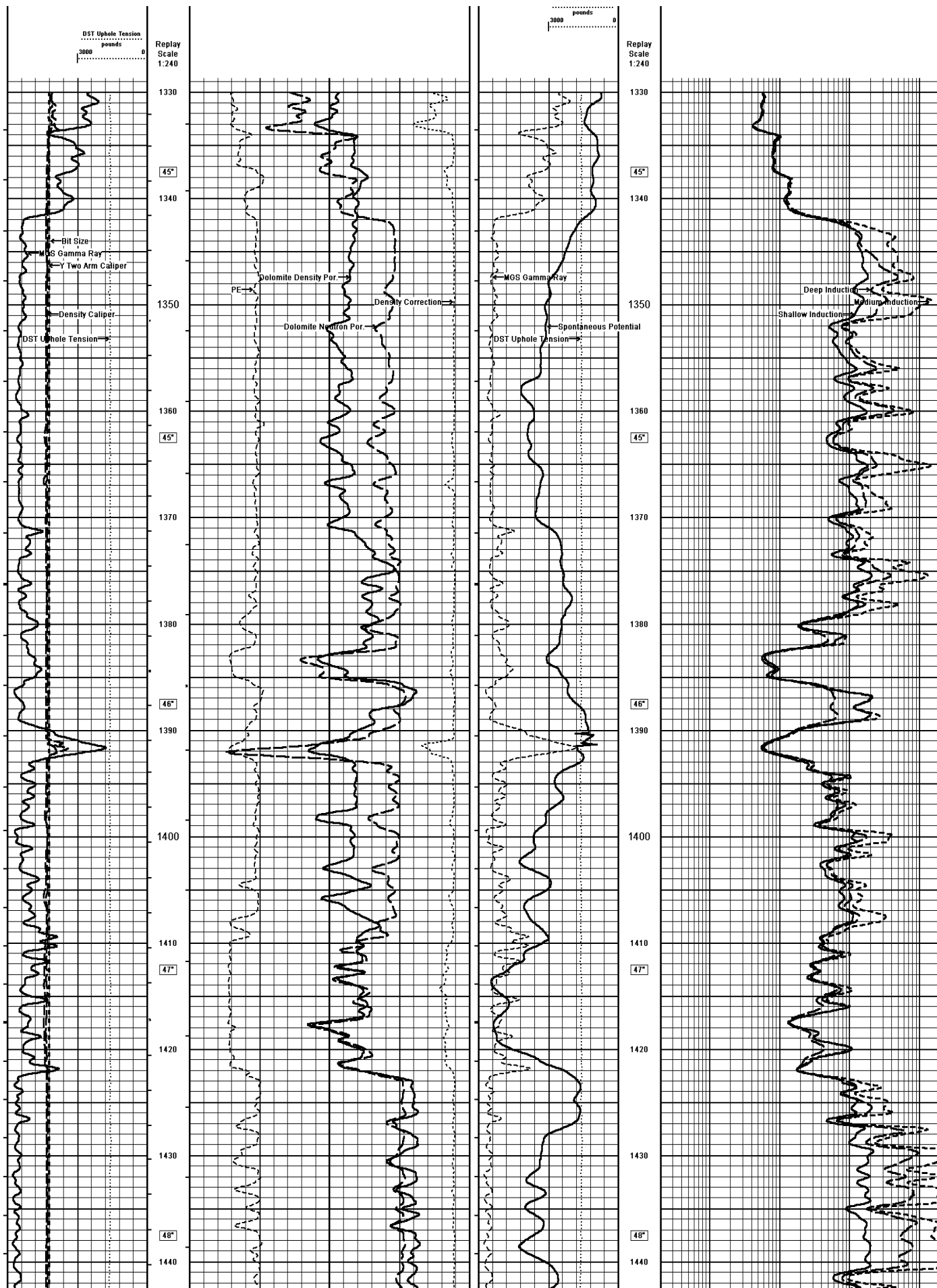


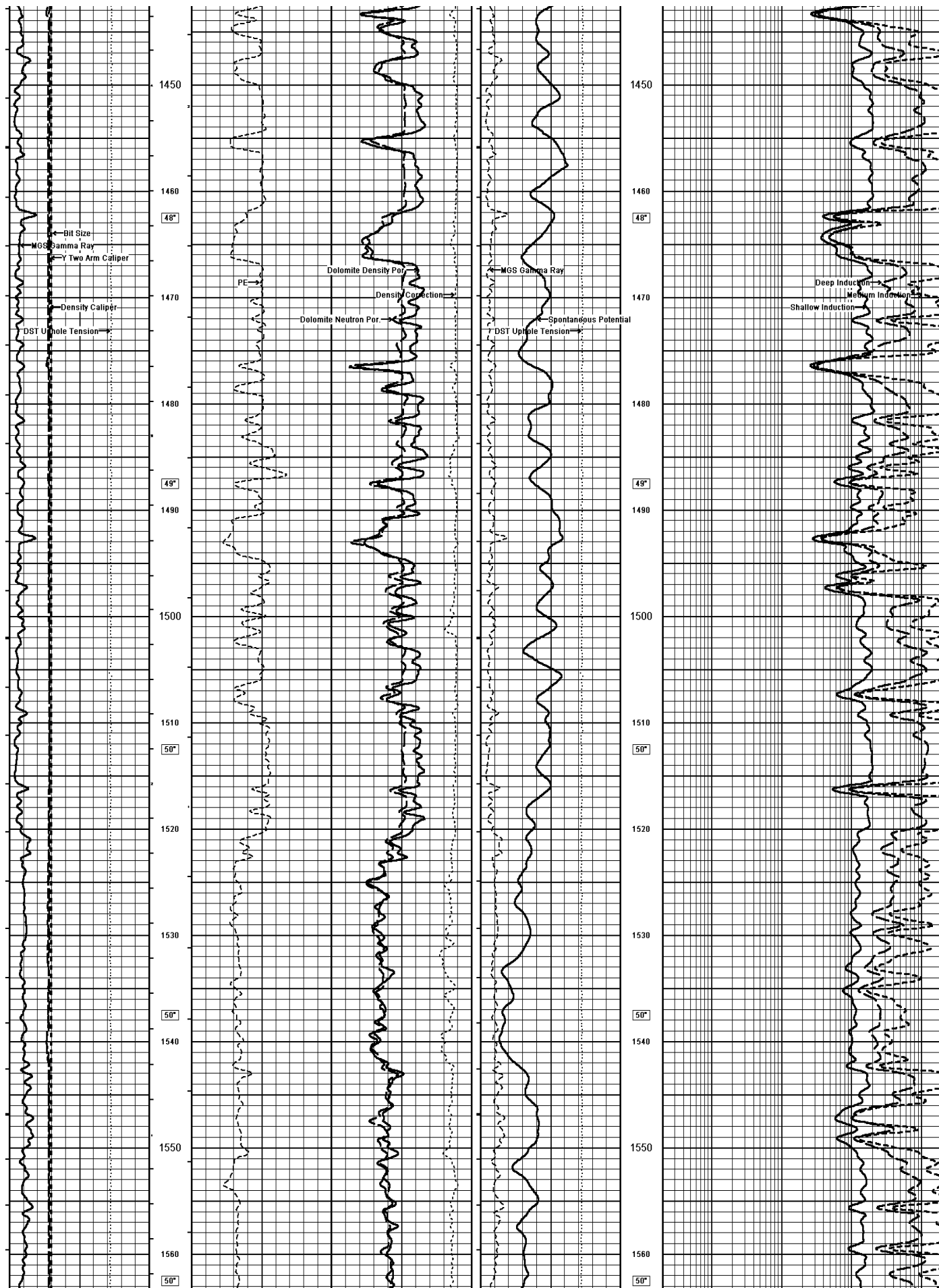


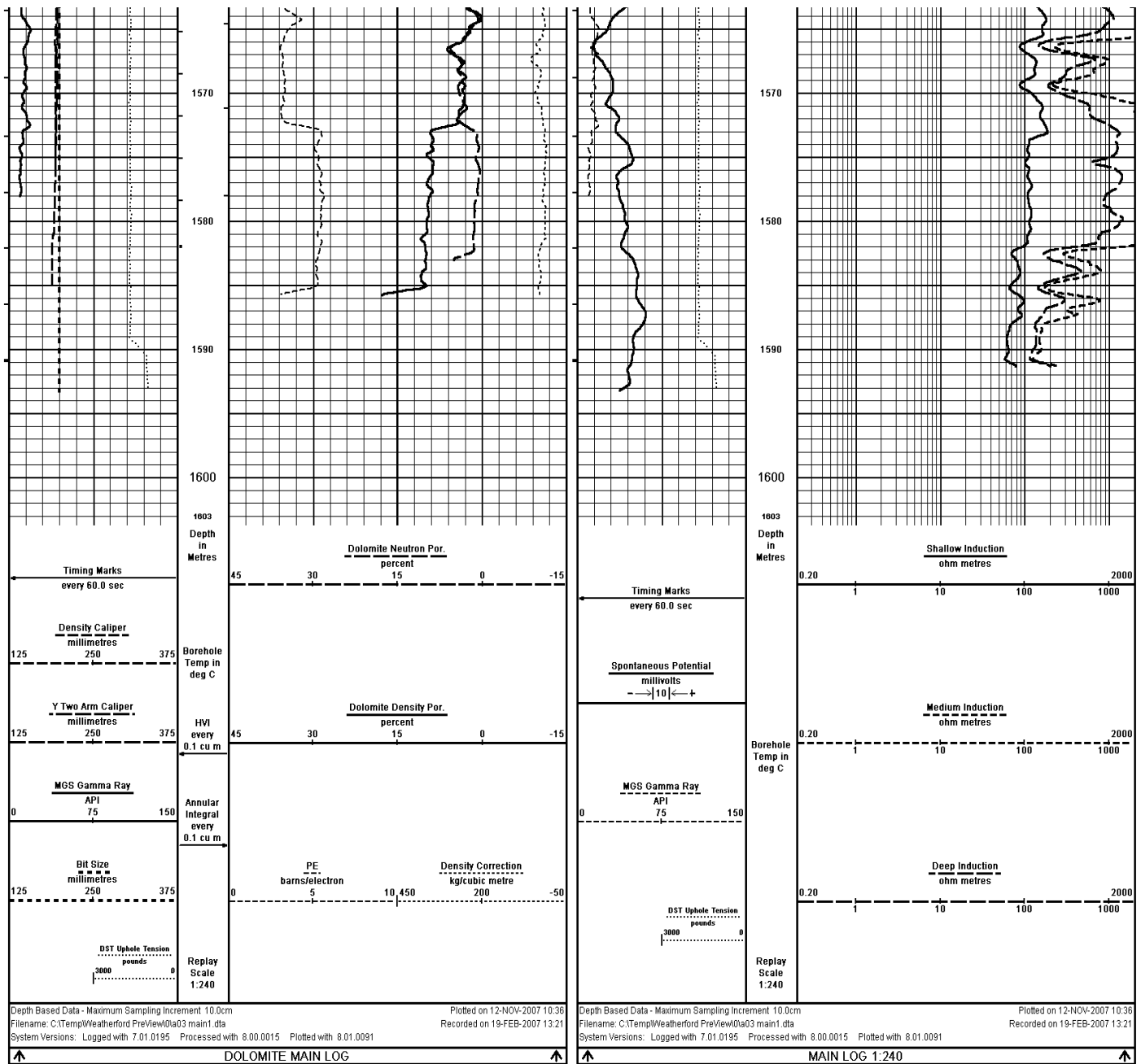












## BEFORE SURVEY CALIBRATION

C:\Temp\Weatherford PreView\01a03 rpt.dta

General Constants All 000

Last Edited on 19-FEB-2007,12:14

### General Parameters

Mud Resistivity	1.110	ohm-metres
Mud Resistivity Temperature	25.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	

### Hole/Annular Volume and Differential Caliper Parameters

HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Y Two Arm Caliper	
Annular Volume Diameter	139.700	mm
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Deep Induction	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG 131			Field Calibration on 19-FEB-2007,09:56
	Measured	Calibrated (API)	
Background	46	30	
Calibrator (Gross)	1264	824	
Calibrator (Net)	1219	794	

Gamma Constants MCG 131			Last Edited on 19-FEB-2007,11:17
Gamma Calibrator Number	GRC 095		
Mud Density	1220.00	kg/m3	
Caliper Source for Processing	Density Caliper		
Tool Position	Centred		
Concentration of KCl	0.00	kppm	

SP Calibration MCG 131			Field Calibration on 9-FEB-2007 12:52
	Measured	Calibrated (mV)	
Reference 1	100.5	100.0	
Reference 2	-100.0	-100.0	

High Resolution Temperature Calibration MCG 131			Field Calibration on 15-DEC-2006,15:05
	Measured	Calibrated(Deg C)	
Lower	1.00	1.00	
Upper	10.00	10.00	

High Resolution Temperature Constants MCG 131		
Pre-filter Length	11	

FE Calibration MFE 111			Base Calibration on 15-FEB-2007 19:40 Field Check on 19-FEB-2007 12:14
Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	0.0	0.0	
Reference 2	983.2	126.8	
Base Check		278.8	
Field Check		279.0	

FE Constants MFE 111			Last Edited on 3-FEB-2007,04:36
Caliper Source for FE correction	Density Caliper		
Rm Source for FE correction	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Stand-off	Centred	millimetres	

Caliper Calibration MTC 024			Base Calibration on 6-FEB-2007 10:21 Field Calibration on 19-FEB-2007,12:42
Base Calibration			
Reading No	Measured	Calibrator Size (mm)	
1	15472	110.00	
2	18252	162.00	
3	21045	212.00	
4	23841	262.00	
5	26691	311.00	
6	N/A	N/A	
Field Calibration			

Measured Caliper (mm)		Actual Caliper (mm)		
209.10		205.70		
Gamma Calibration MGS 029				
Field Calibration on 19-FEB-2007,09:56				
	Measured	Calibrated (API)		
Background	58	38		
Calibrator (Gross)	1286	832		
Calibrator (Net)	1228	794		
Gamma Constants MGS 029				
Last Edited on 19-FEB-2007,11:17				
Gamma Calibrator Number	GRCC095			
Mud Density	1220.00	kg/m3		
Caliper Source for Processing	Density Caliper			
Tool Position	Centred			
Concentration of KCl	0.00	kppm		
SP Calibration MGS 029				
Field Calibration on 7-DEC-2006,17:01				
	Measured	Calibrated (mV)		
Reference 1	100.0	100.0		
Reference 2	-100.0	-100.0		
High Resolution Temperature Calibration MGS 029				
Field Calibration on 7-DEC-2006,17:01				
	Measured	Calibrated(Deg C)		
Lower	1.00	1.00		
Upper	5.00	5.00		
High Resolution Temperature Constants MGS 029				
Pre-filter Length	11			
Micro Normal and Micro Inverse Calibration MML 015				
Base Calibration on 19-FEB-2007,09:53				
Field Check on 19-FEB-2007,12:39				
Base Calibration				
		Measured	Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	9.9	48.5	5.1	25.6
Micro Inverse	9.9	48.7	3.4	16.9
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	79.8		79.8	
Micro Inverse	52.6		52.5	
Micro Normal and Micro Inverse Constants MML 015				
Last Edited on 19-FEB-2007,09:53				
Micro Normal K Factor	0.5110			
Micro Inverse K Factor	0.3380			
Standoff Offset	N/A millimetres			
Caliper Calibration MML 015				
Base Calibration on 19-FEB-2007,09:55				
Field Calibration on 19-FEB-2007,12:42				
Base Calibration				
Reading No	Measured	Calibrator Size (mm)		
1	13860	162.00		
2	17089	212.00		
3	20617	262.00		
4	24375	311.00		
5	27976	355.00		
6	N/A	N/A		
Field Calibration				
	Measured Caliper (mm)	Actual Caliper (mm)		
	210.20	205.70		

## Neutron Calibration MDN 016

Base Calibration on 11-JAN-2007 20:47  
Field Check on 19-FEB-2007 10:29

## Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3219	98	3714	110
Ratio	32.703		33.764	

## Field Calibrator at Base

	Calibrated (cps)
	2486 3648
Ratio	0.681

## Field Check

	Calibrated (cps)
	2589 3773
Ratio	0.686

## Neutron Constants MDN 016

Last Edited on 17-FEB-2007,21:41

Neutron Source Id	277	
Neutron Jig Number	N636	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	mm
Mud Density	1000.00	kg/m3
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kPa
Temperature Source	Constant Value	
Temperature	20.00	degrees C
Mud Salinity	0.00	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

## Photo Density Calibration MPD 130

Base Calibration on 12-MAR-2007,15:18  
Field Check on

## Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	70908	37221	60352	31615
Reference 2	28626	3008	25043	2540

## Field Check at Base

1027.6 1384.5

## Field Check

0.0 0.0

## PE Calibration

Base Calibration	WS	Measured		Calibrated Ratio
		WH	Ratio	
Background	184	909		
Reference 1	30385	71000	0.431	0.400
Reference 2	7753	26700	0.293	0.272

## Field Check at Base

184.1 909.1

## Field Check

0.0 0.0

## Density Constants MPD 130

Last Edited on 19-FEB-2007,11:18

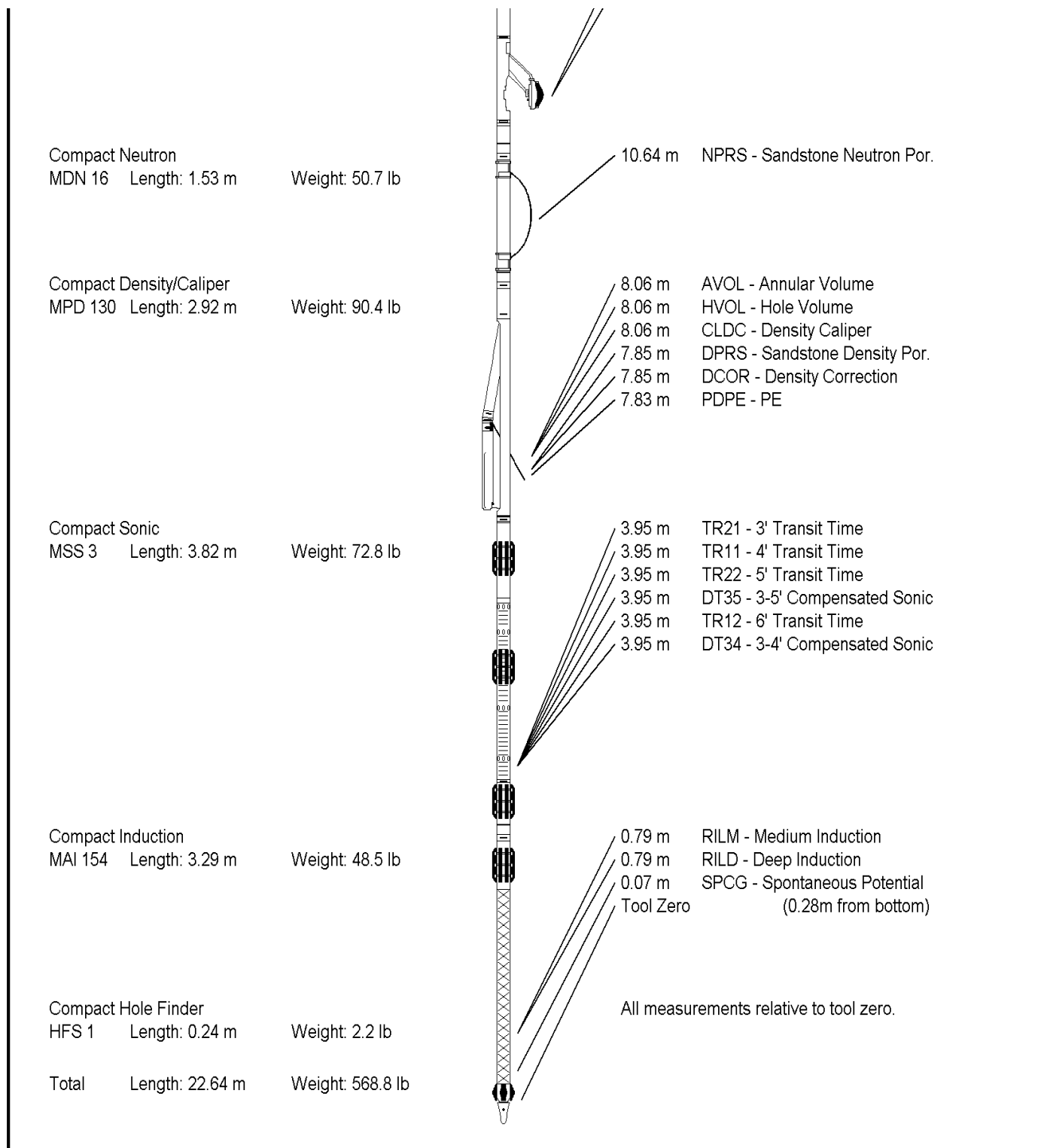
Density Source Id	16151b		
Nylon Calibrator Number	608		
Aluminium/Fe Calibrator Number	608		
Density Shoe Profile	4 inch		
Caliper Source for Processing	Density Caliper		
PE Correction to Density	Not Applied		
Mud Density	1220.00	kg/m3	
Mud Density Z/A Correction	1.11		
Mud Filtrate Density	1000.00	kg/m3	
Dry Hole Mud Filtrate Density	1000.00	kg/m3	
DNCT	0.00	kg/m3	
CRCT	0.00	kg/m3	
Density Z/A Correction	Advanced		
Matrix Density (kg/m3)	Depth (m)		
2710.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
Caliper Calibration MPD 130			
		Base Calibration on 19-FEB-2007 10:46	
		Field Calibration on 19-FEB-2007,12:42	
Base Calibration			
Reading No	Measured	Calibrator Size (mm)	
1	18240	110.00	
2	28320	162.00	
3	38188	212.00	
4	48355	262.00	
5	58464	311.00	
6	N/A	N/A	
Field Calibration			
	Measured Caliper (mm)	Actual Caliper (mm)	
	210.10	205.70	
Sonic Constants MSS 003			
		Last Edited on 19-FEB-2007,11:18	
Maximum Boundary Contrast	328.08	micro-sec/m	
Fluid Transit Time	620.08	micro-sec/m	
Limestone Transit Time	155.84	micro-sec/m	
Sandstone Transit Time	182.09	micro-sec/m	
Dolomite Transit Time	142.72	micro-sec/m	
Sonic used for Porosities	3-5' Compensated Sonic		
Correction for Sonde Skew	Applied		
Cycle Stretch Algorithm	Applied		
MN3FT	N/A	micro-sec	
MX3FT	N/A	micro-sec	
Hunt-Raymer Constant	83.13	micro-sec/ft	
Fixed Gate Parameters			
Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
Down Hole Fixed Gate Parameters			
Gate Start	N/A	micro-sec	
Gate Width	N/A	micro-sec	

Initial Discriminator Level	0.0000	mVolts
Full Waveform Parameters		
Use 3' Waveform to derive TR	N/A	
Use 4' Waveform to derive TR	N/A	
Use 5' Waveform to derive TR	N/A	
Use 6' Waveform to derive TR	N/A	
3' Waveform Discriminator Level	N/A	mV
4' Waveform Discriminator Level	N/A	mV
5' Waveform Discriminator Level	N/A	mV
6' Waveform Discriminator Level	N/A	mV
3' Waveform Filter	N/A	
4' Waveform Filter	N/A	
5' Waveform Filter	N/A	
6' Waveform Filter	N/A	
Semblance Level	N/A	
Semblance Window Width	N/A	micro-sec
Sonic 1 Despiker	N/A	N/A
Sonic 2 Despiker	N/A	N/A
Induction Calibration MAI 154		Base Calibration on 14-JAN-2007 01:38 Field Check on 19-FEB-2007 12:36
Base Calibration		
Test Loop Calibration	Measured	Calibrated (mmho/m)
Channel	Low High	Low High
1	16.6 470.6	9.3 966.2
2	6.3 383.0	7.6 821.4
3	4.0 264.7	5.2 566.0
4	2.3 136.2	2.6 279.2
Array Temperature	22.3	Deg C
Channel	Base Check (mmho/m)	Field Check (mmho/m)
	Low High	Low High
1	13.1 3867.2	15.7 3866.2
2	29.6 3530.7	30.3 3528.1
3	26.8 3001.8	27.2 2999.2
4	18.4 2040.8	18.6 2039.1
Deep	15.3 1926.8	15.8 1925.2
Medium	39.6 3962.8	39.7 3959.0
Shallow	45.8 5270.7	46.7 5266.7
Array Temperature	12.1	31.4 Deg C
Induction Constants MAI 154		Last Edited on 19-FEB-2007,11:18
Induction Model	VECTAR	
Caliper for Borehole Corr.	Density Caliper	
Hole Size for Borehole Correction	N/A	millimetres
Stand-off	25.40	millimetres
Number of Fins on Stand-off	5.0000	
Stand-off Fin Width	25.4000	millimetres
Borehole Corr. Rm Source	Temperature Corr	
Temp. for Rm Corr.	MCG External Temperature	
Squasher Start	0.0020	mhos/metre
Borehole Normalisation		
DRM1	0.0000	DRC1 0.0000
DRM2	0.0000	DRC2 0.0000
MRM1	0.0000	MRC1 0.0000
MRM2	0.0000	MRC2 0.0000
SRM1	0.0000	SRC1 0.0000
SRM2	0.0000	SRC2 0.0000



Calibration Site Corrections		
Channel 1	0.00	mmhos/metre
Channel 2	0.00	mmhos/metre
Channel 3	0.00	mmhos/metre
Channel 4	0.00	mmhos/metre
Apparent Porosity and Water Saturation Constants		
Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	100.00	percent
Resistivity of Water for Apor and Sw	0.05	ohm-m
Resistivity of Mud Filtrate for Sw	0.00	ohm-m
High Resolution Temperature Calibration MAI 154		
	Measured	Calibrated(Deg C)
Lower	1.00	1.00
Upper	10.00	10.00
High Resolution Temperature Constants MAI 154		
Pre-filter Length	11	

DOWNHOLE EQUIPMENT				C:\Temp\Weatherford PreView\01a03 rpt.dta	
Compact Gamma MCG 131 Length: 2.65 m	Weight: 63.9 lb		20.79 m	GRGC - Gamma Ray	
			19.91 m	CGXT - MCG External Temperature	
Compact Focussed Electric MFE 111 Length: 1.84 m	Weight: 48.5 lb		18.79 m	FEFE - Shallow FE	
Compact Two Arm Caliper MTC 24 Length: 2.17 m	Weight: 61.7 lb		16.34 m	CLYC - Y Two Arm Caliper	
Compact Short Gamma MGS 29 Length: 1.04 m	Weight: 24.3 lb		15.47 m	GRGM - MGS Gamma Ray	
Compact InterSonde Crank ISC 151 Length: 0.71 m	Weight: 24.3 lb				
Compact Micro-log MML 15 Length: 2.43 m	Weight: 81.6 lb		12.10 m	MINV - Micro-inverse	
			12.10 m	MNRL - Micro-normal	

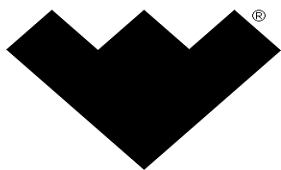


COMPANY	PARAMOUNT RESOURCES LTD.					
WELL	PARA ET AL CAMERON A-03					
FIELD	CAMERON HILLS					
PROVINCE/COUNTY	NORTHWEST TERRITORIES					
COUNTRY/STATE	CANADA					
Elevation Kelly Bushing	772.80	metres	First Reading	1588.30	metre	
Elevation Drill Floor		metres	Depth Driller	1589.40	metres	
Elevation Ground Level	767.40	metres	Depth Logger	1589.40	metres	



**Weatherford®**

MINI PLOT



# MICROLOG

COMPANY		PARAMOUNT RESOURCES LTD.			
WELL		PARA ET AL CAMERON A-03			
FIELD		CAMERON HILLS			
PROVINCE/COUNTY		NORTHWEST TERRITORIES			
COUNTRY/STATE		CANADA			
LOCATION		300A036010117300			
		<b>FIELD PRINT</b>			
LSD	SEC	TWP	RGE	Other Services	PHOTO DENSITY
				ARRAY INDUCTION	DUAL SPACED NEUTRON
API Number				COMPENSATED SONIC	
Permit Number 2047					
Permanent Datum GROUND LEVEL, Elevation 767.4 metres				Elevations:	metres
Log Measured From 5.4 M above Permanent Datum				KB	772.80
Drilling Measured From KELLY BUSHING				DF	
				GL	767.40
Date	19-FEB-2007				
Run Number	1				
Depth Driller	1589.40	metres			
Depth Logger	1589.40	metres			
First Reading	1577.00	metre			
Last Reading	1330.00	metre			
Casing Driller	435.80	metres			
Casing Logger	436.00	metres			
Bit Size	200.00	mm			
Hole Fluid Type	GEL CHEM				
Density / Viscosity	1220.0 kg/M3	70.00 sec/L			
PH / Fluid Loss	10.50	10.00 ml/30Min			
Sample Source	FLOWLINE				
Rm @ Measured Temp	1.11 @ 25.0	ohm-m			
Rmf @ Measured Temp	1.02 @ 25.0	ohm-m			
Rmc @ Measured Temp	1.26 @ 25.0	ohm-m			
Source Rmf / Rmc	PRESS	FILTER			
Rm @ BHT	0.71 @ 50.0	ohm-m			
Time Since Circulation	8 HRS				
Max Recorded Temp	50.00	deg C			
Equipment Name	COMPACT				
Equipment / Base	QUINT	GPR			
Recorded By	M. BONNELL				
Witnessed By	B. POWELL				
CIRC. STOP	04:30 FEB-19	Last Line			

Last Edited: 19-FEB-2007 11:16		
Bit Size millimetres	Depth From metres	Depth To metres
	0.00	435.80
	435.80	1589.40
CASING RECORD		
Type	Size millimetres	Shoe Depth metres
SURFACE	219.100	435.80
		Weight pounds/ft
		24.00

## REMARKS

- 1) SOFTWARE ISSUE: WLS 7.01.0195
- 2) CUSTOMER SCALES AND INTERVALS LOGGED.
- 3) MAI, MSS, MPD, MDN, MML, SKJ, MGS, MTC, MFE, MCG RAN IN COMBINATION.
- 4) HARDWARE: MAI: TWO 25.4 MM STANDOFFS  
MSS: THREE 25.4 MM STANDOFFS  
MDN: DUAL NEUTRON BOWSPRING  
MTC: ONE SIX-LEAF CENTRALIZER BOWSPRING

6) RIG: PD 220

7) HOLE \_CEMENT VOLUMES CALCULATED USING DENSITY CALIPER AND TWO ARM CALIPER IN COMBINATION :

HOLE VOLUME = 42.7 CU.M.

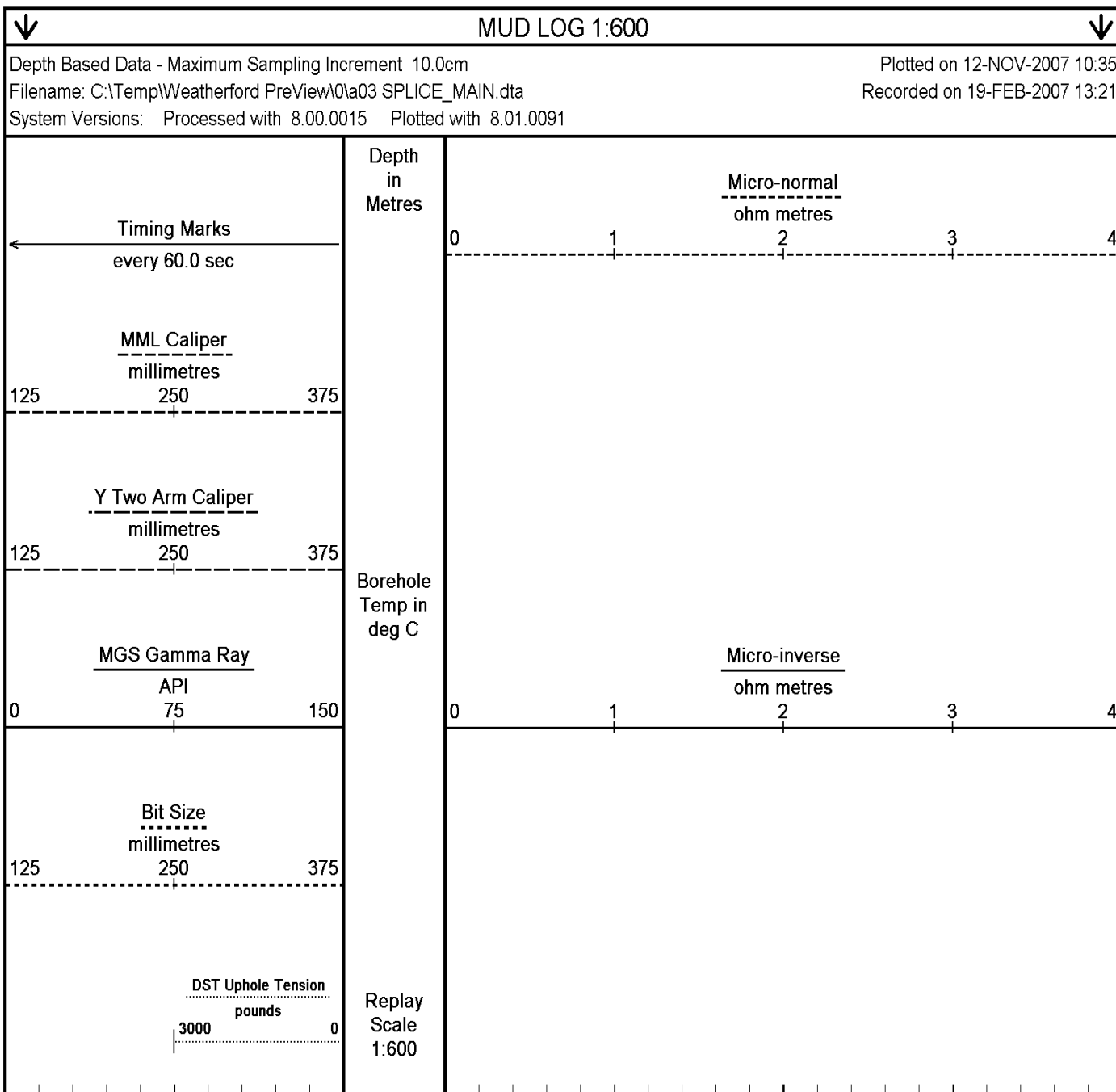
ANNULAR VOLUME USING 139.7 MM PRODUCTION CASING = 25.1 CU.M

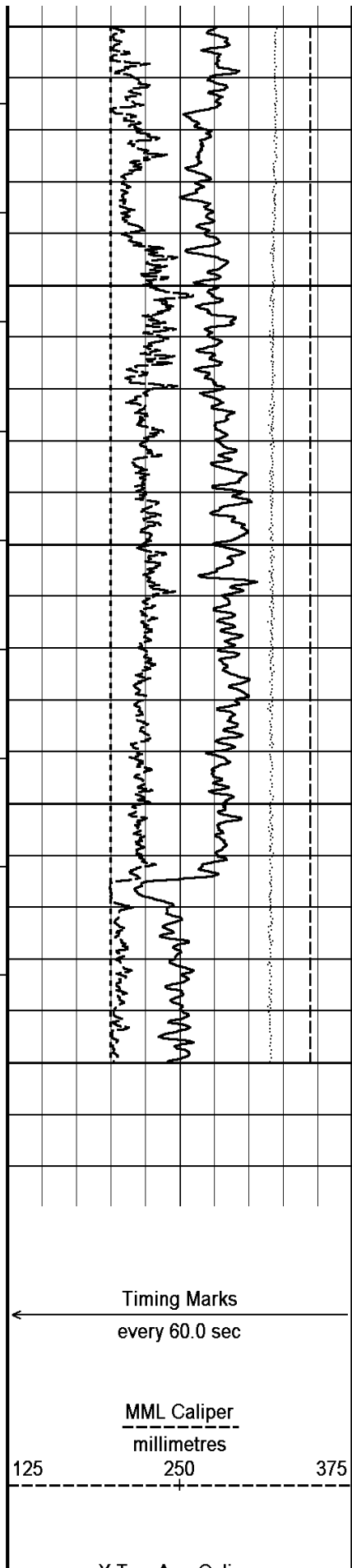
8) SONIC FREE PIPE: NOT FOUND

9) AREAS OF BOREHOLE RUGOSITY MAY CAUSE POOR DENSITY PAD CONTACT, HIGH DENSITY CORRECTION AND THUS INVALID DENSITY POROSITY DATA AT THOSE INTERVALS.

10) SALTY INDUCTION MODEL PRESENTED FROM TD-1410M.

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.





1000

36°

36°

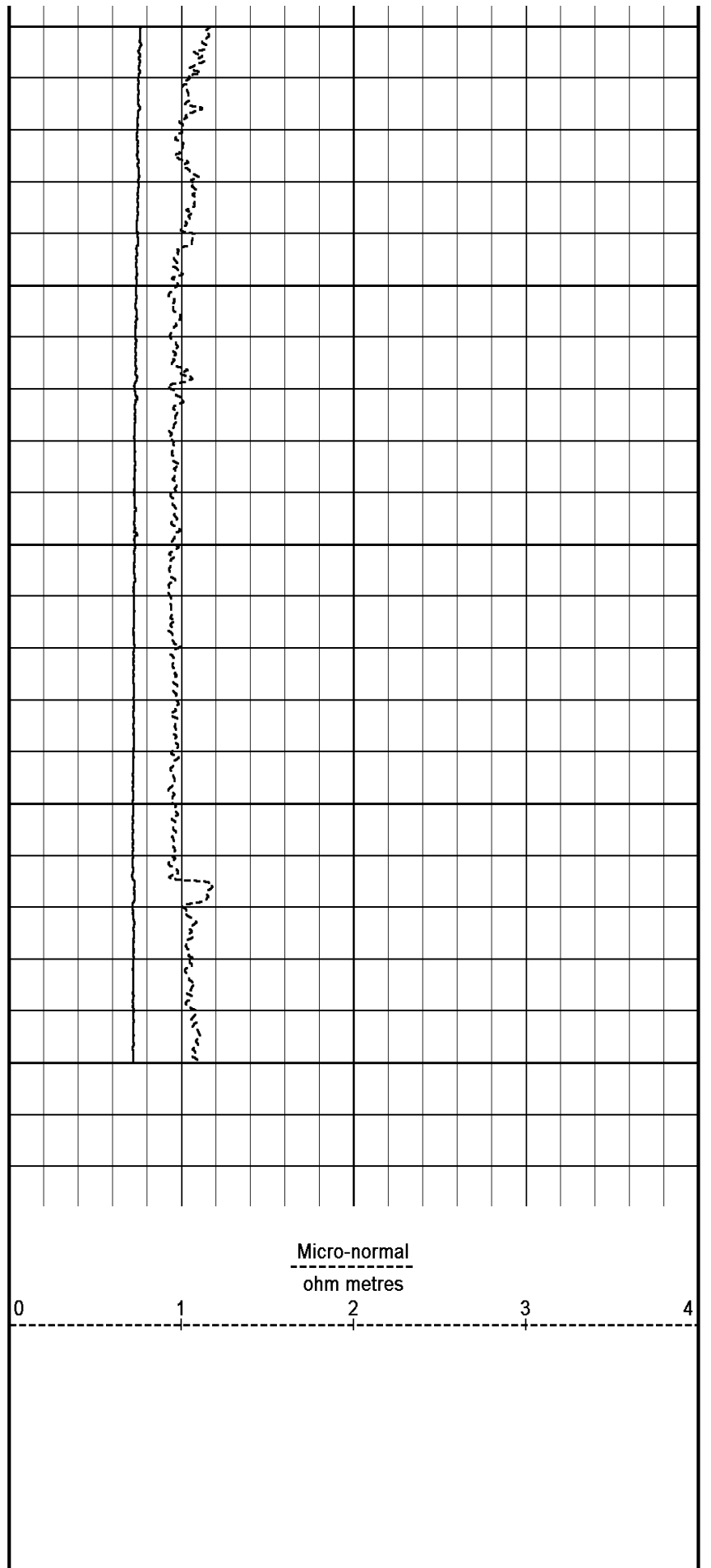
1050

37°

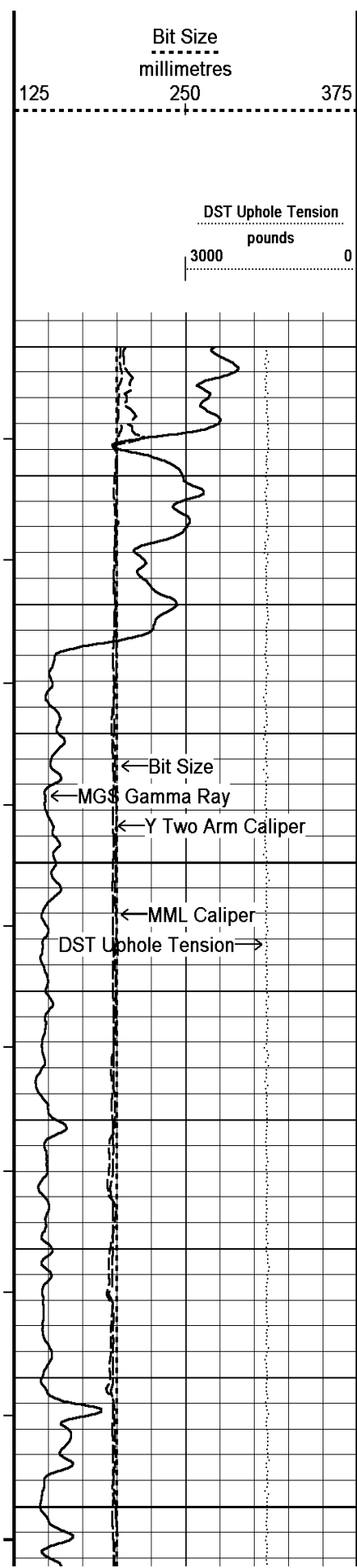
38°

1100

1112  
Depth  
in  
Metres







Replay  
Scale  
1:240

1330

45°

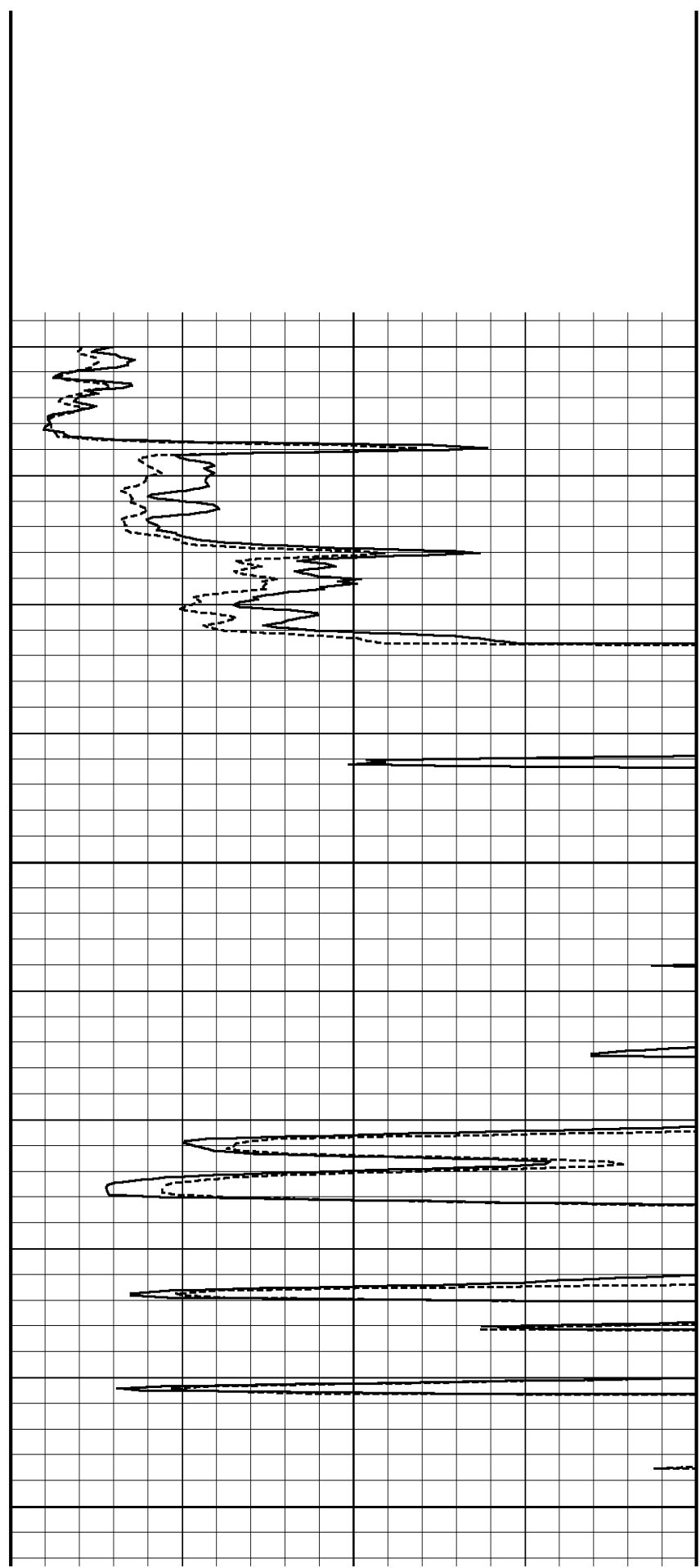
1340

1350

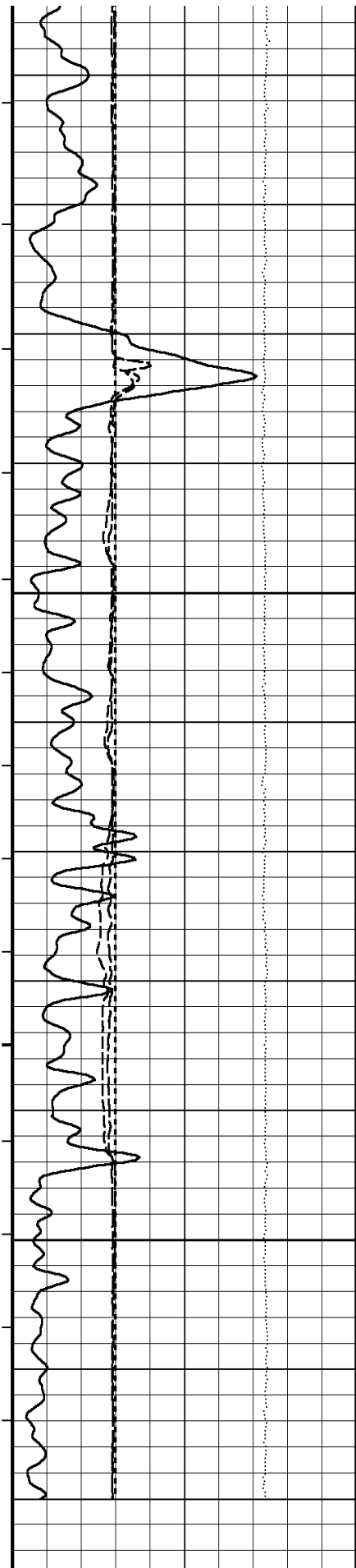
1360

45°

1370







1380

46°

1390

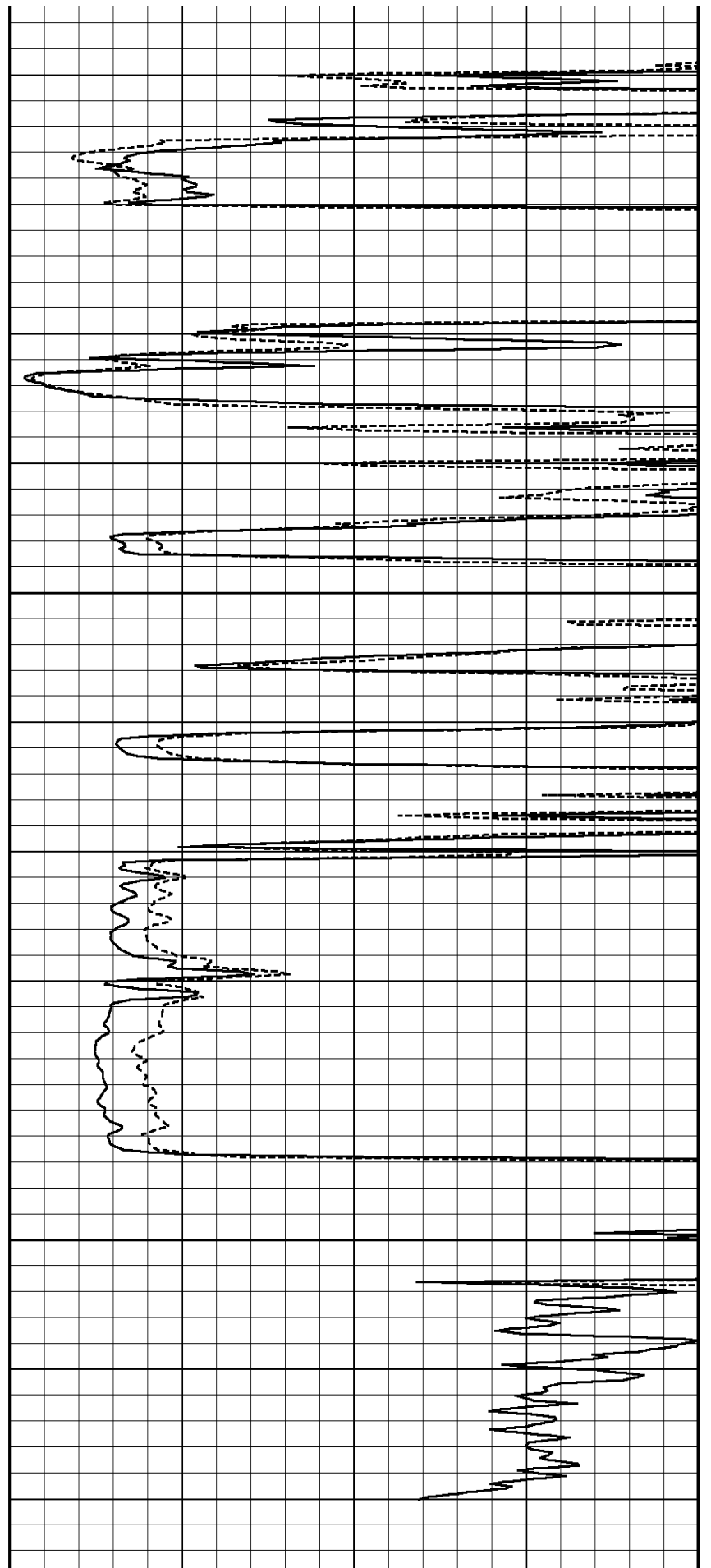
1400

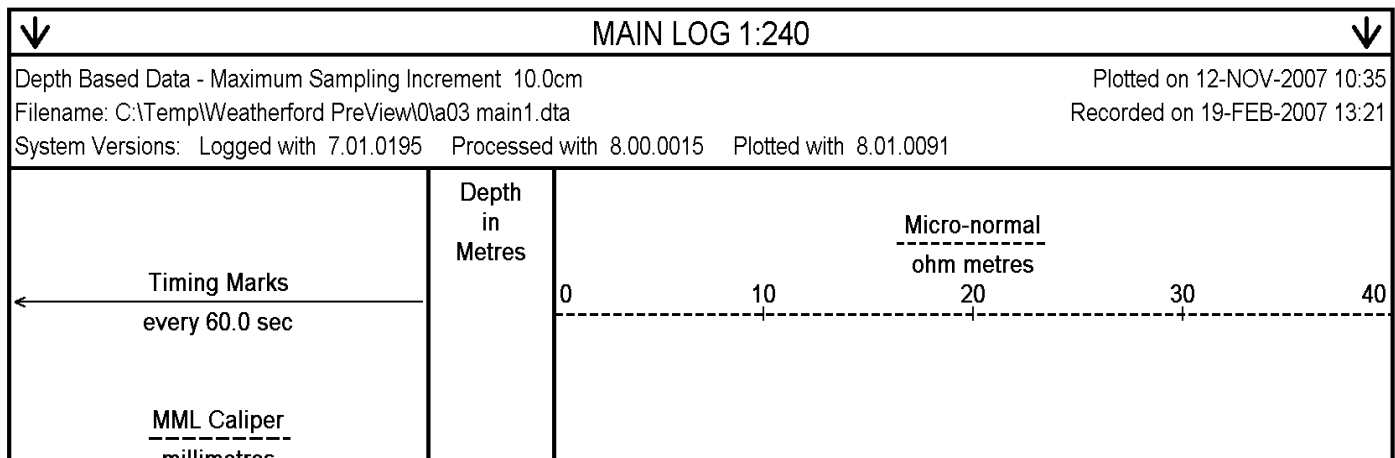
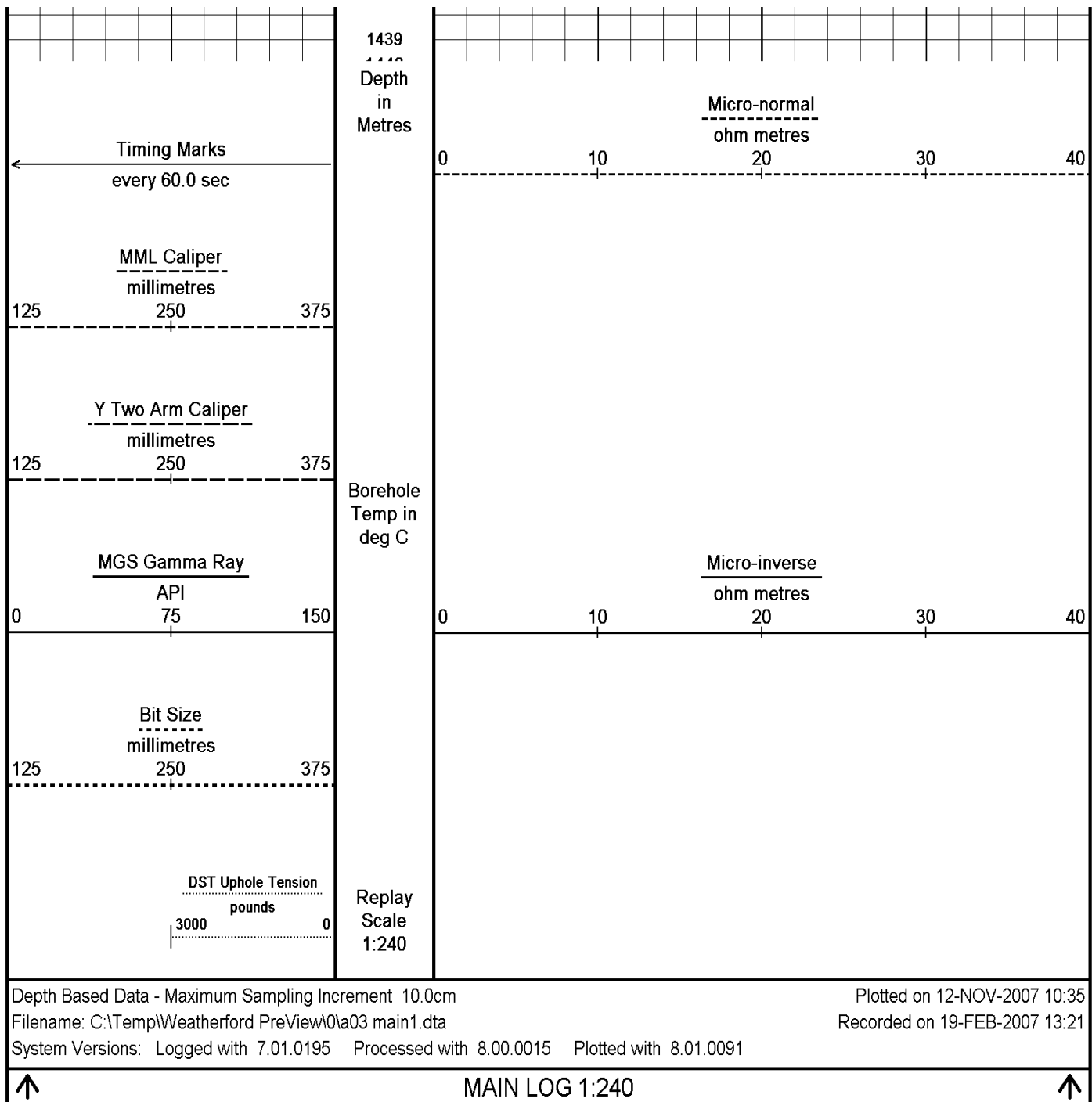
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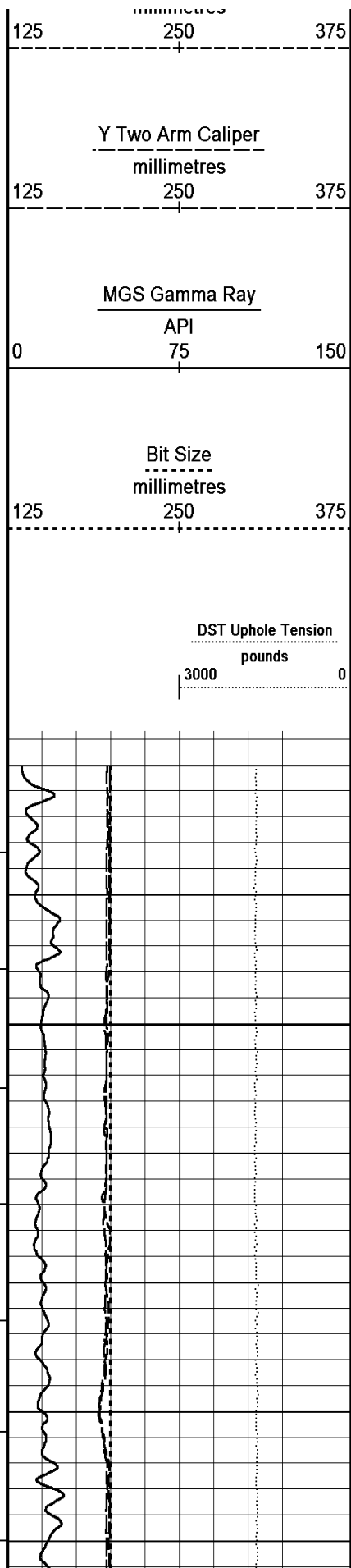
47°

1420

1430







Borehole  
Temp in  
deg C

Replay  
Scale  
1:240

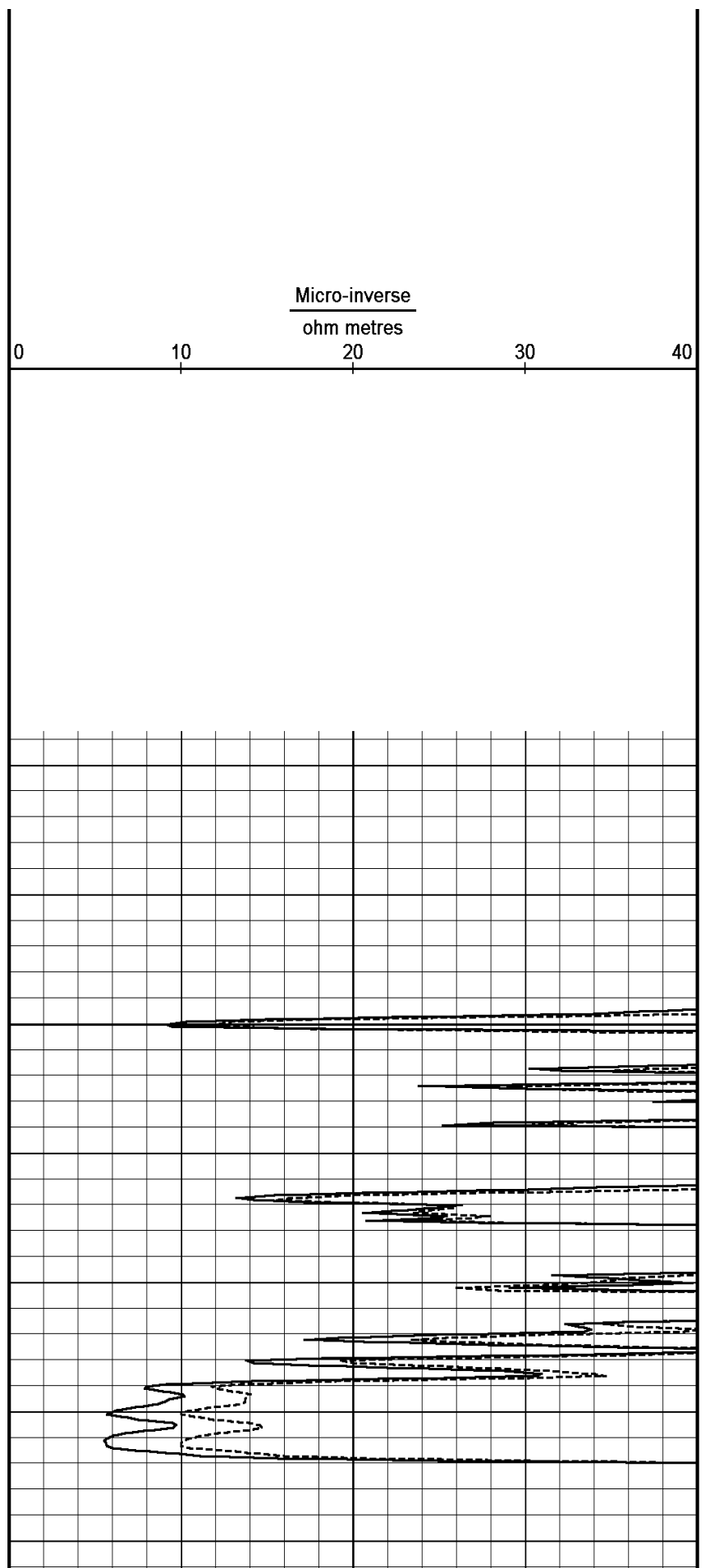
1515

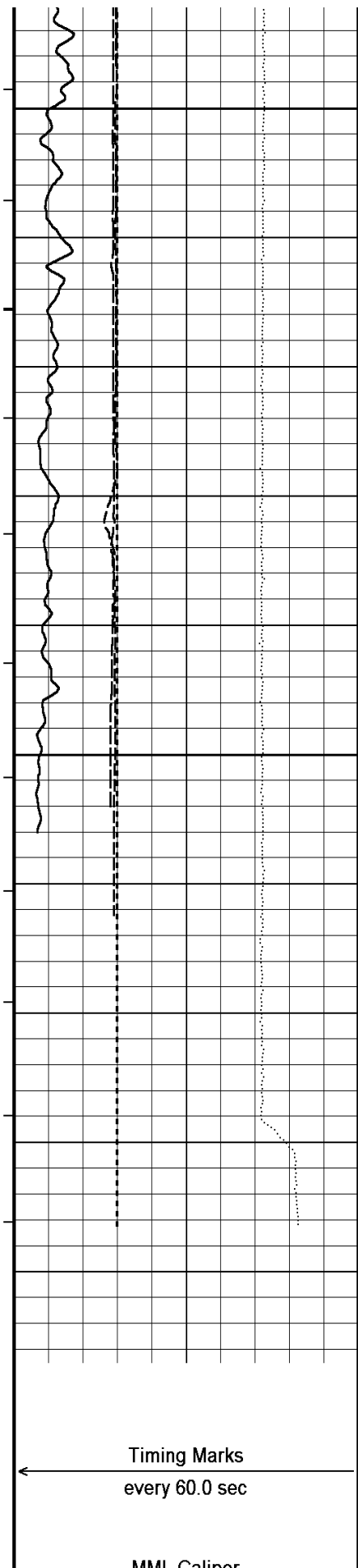
1520

1530

50°

1540





1550

1560

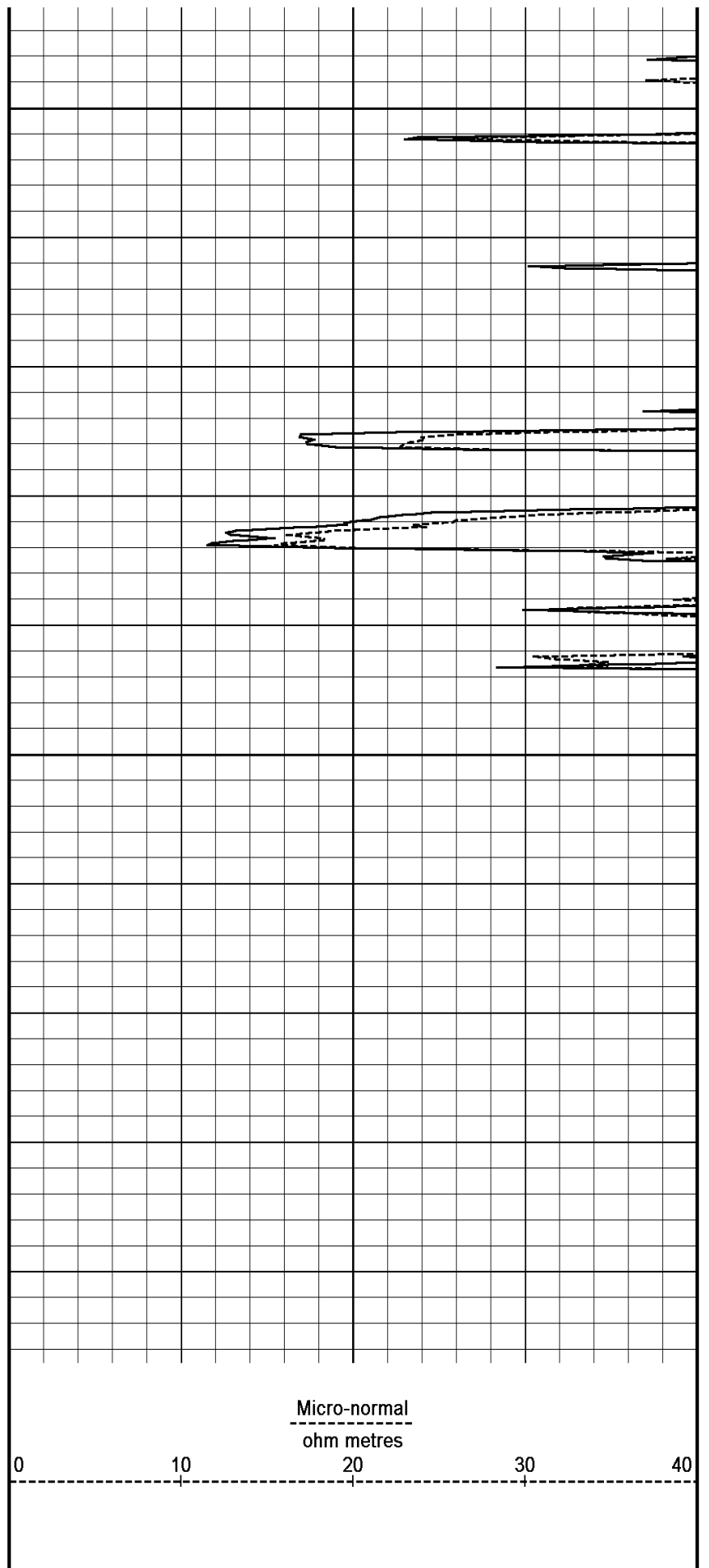
50°

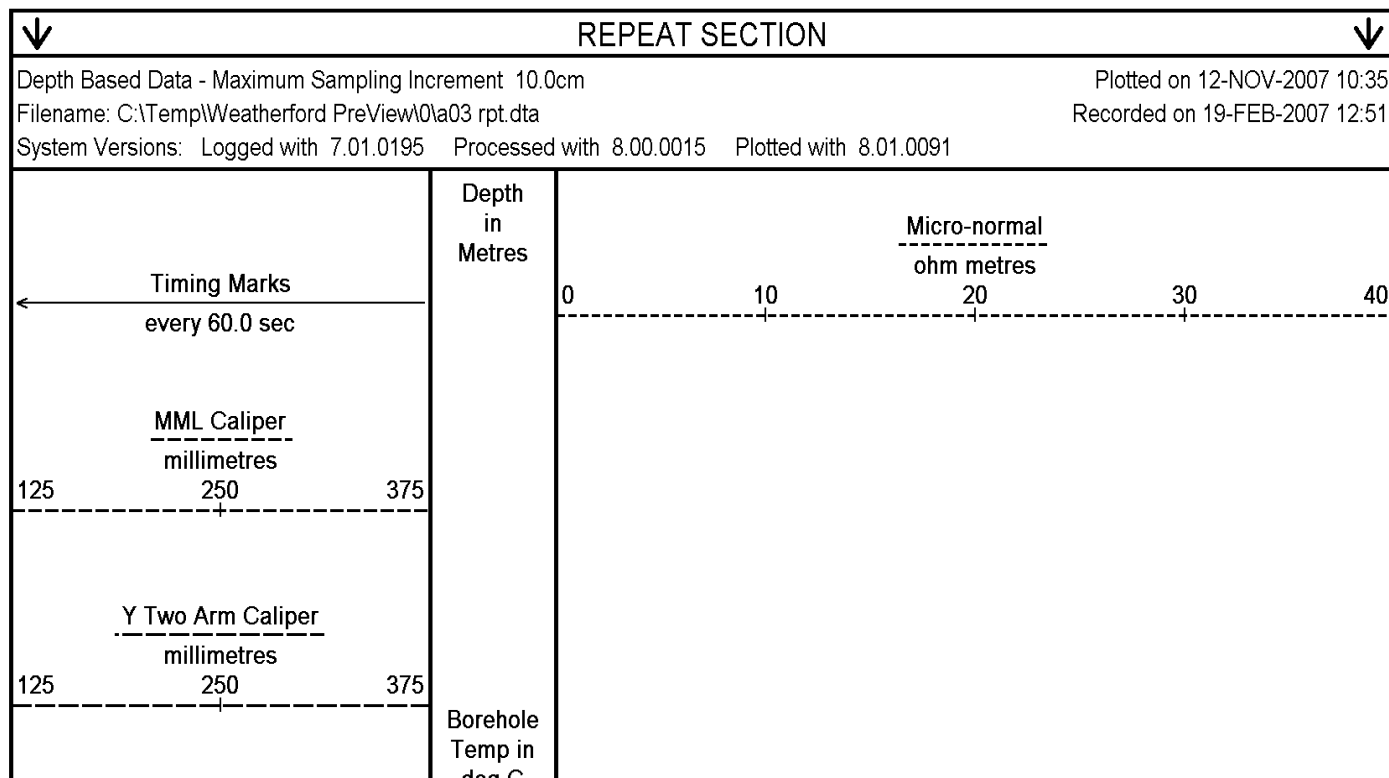
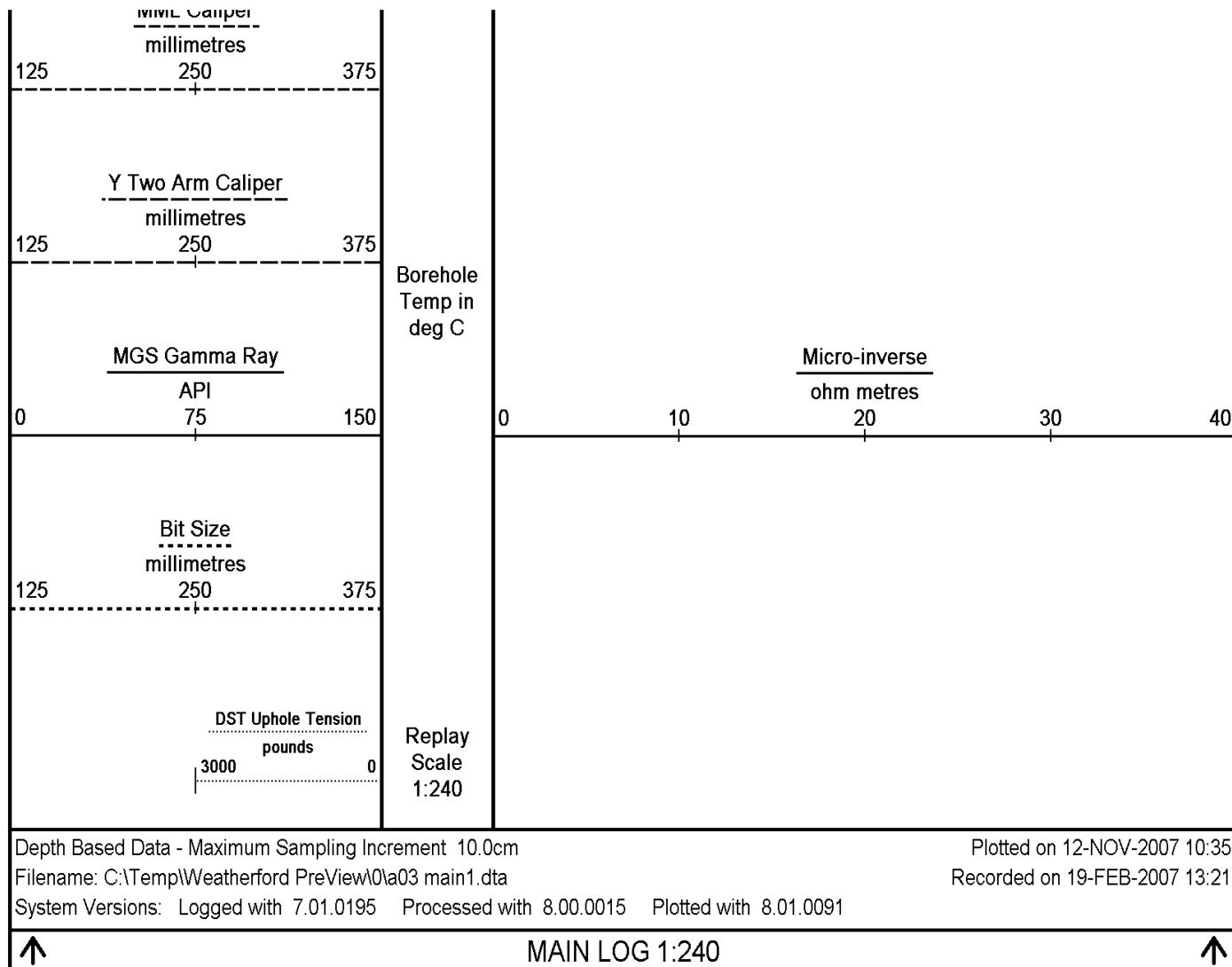
1570

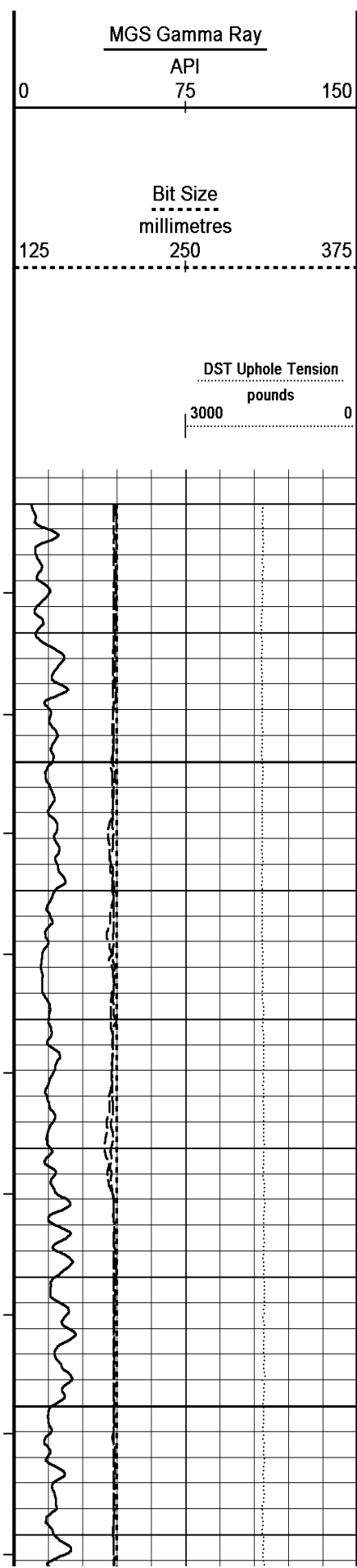
1580

1590

1598  
Depth  
in  
Metres







Replay  
Scale  
1:240

1515

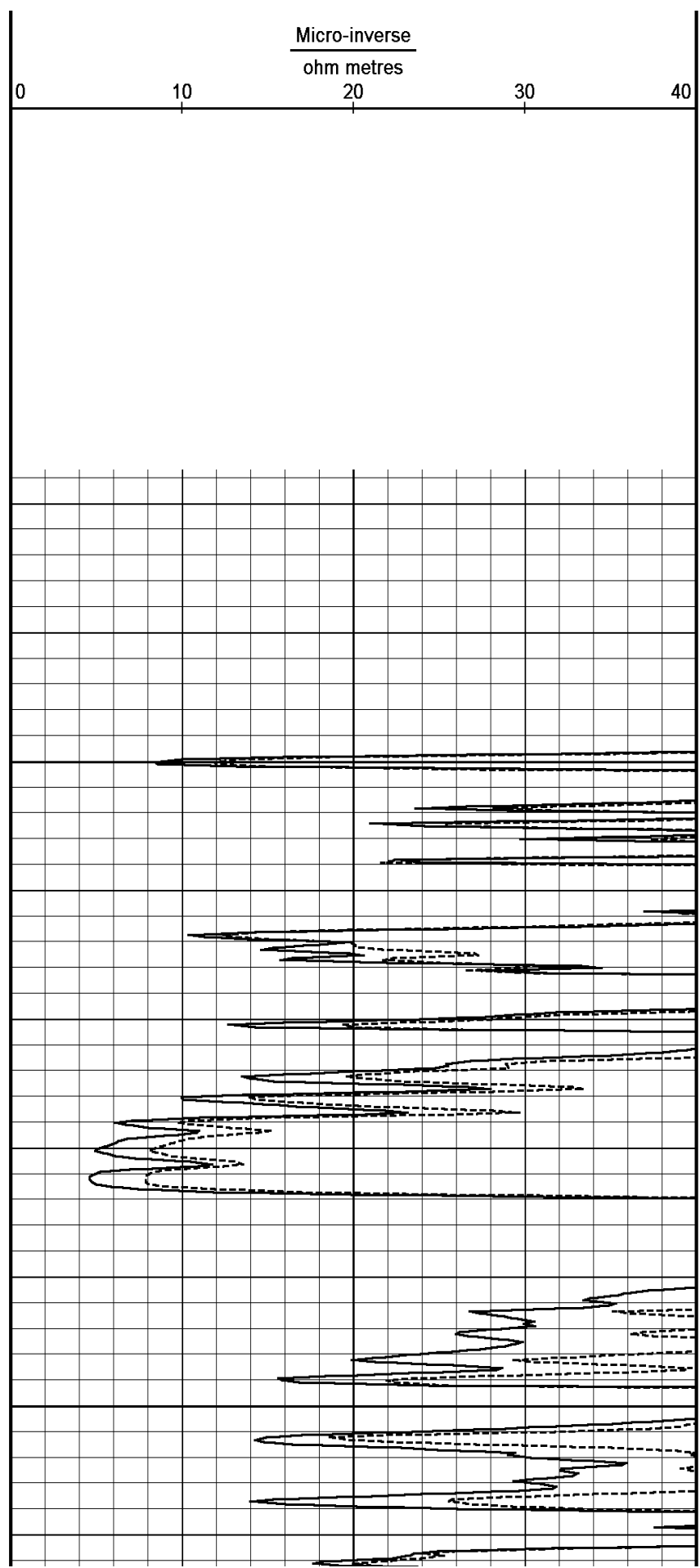
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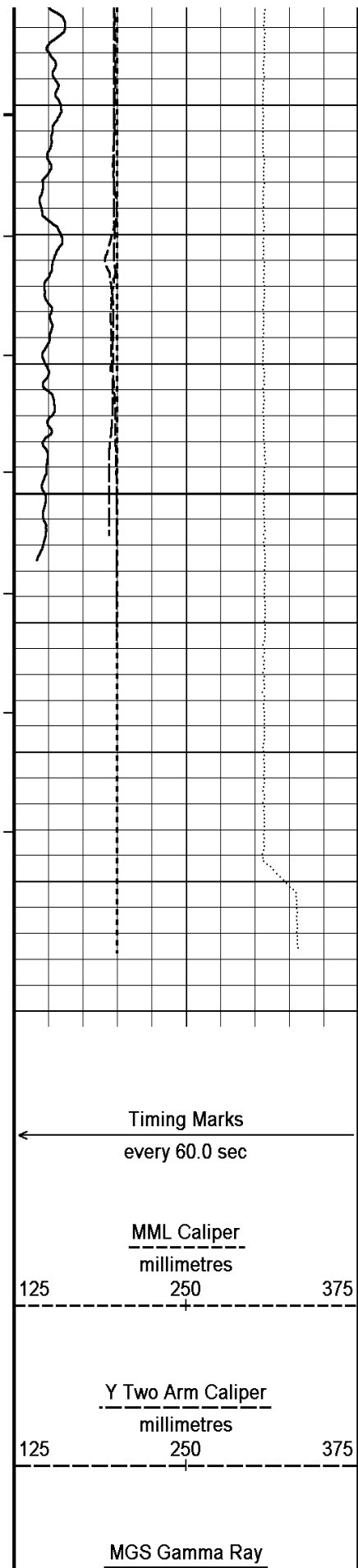
1530

49°

1540

1550





1560  
49°

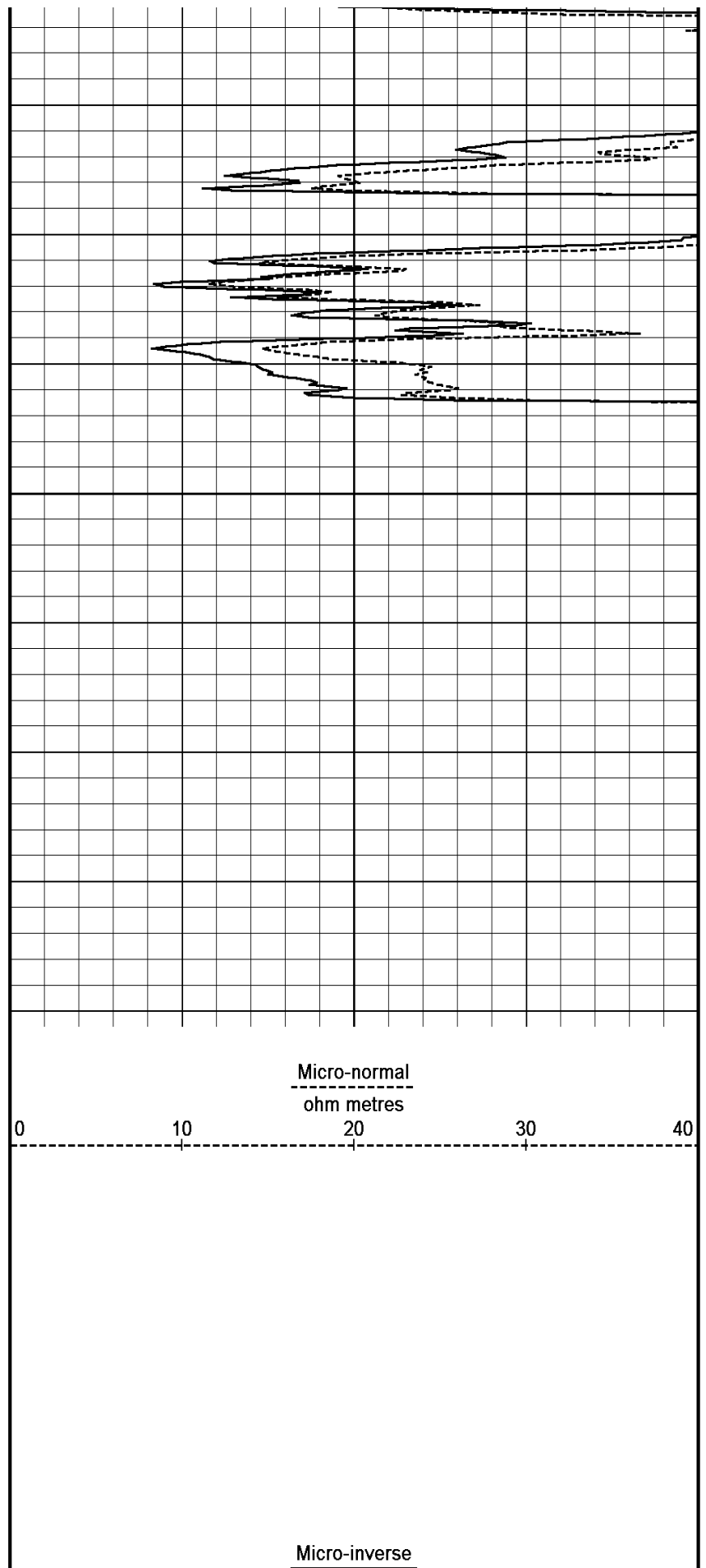
1570

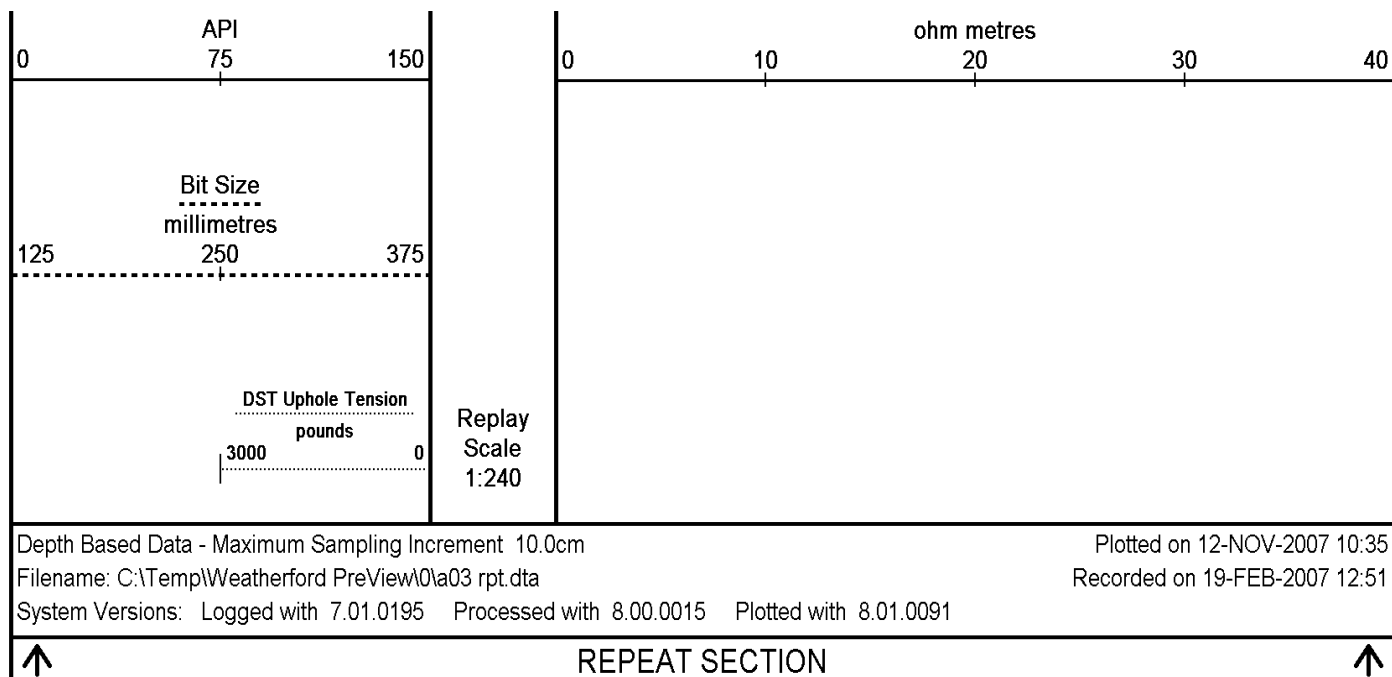
1580

1590

1595  
Depth  
in  
Metres

Borehole  
Temp in  
deg C





BEFORE SURVEY CALIBRATION			C:\Temp\Weatherford PreView\0\03 rpt.dta
General Constants All 000			Last Edited on 19-FEB-2007,12:14
General Parameters			
Mud Resistivity	1.110	ohm-metres	
Mud Resistivity Temperature	25.000	degrees C	
Water Level	0.000	metres	
Density/Neutron Processing	Wet Hole		
Hole/Annular Volume and Differential Caliper Parameters			
HVOL Caliper 1	Density Caliper		
HVOL Caliper 2	Y Two Arm Caliper		
Annular Volume Diameter	139.700	mm	
Caliper for Differential Caliper	Density Caliper		
Rwa Parameters			
Porosity used	Base Density Porosity		
Resistivity used	Deep Induction		
RWA Constant A	0.610		
RWA Constant M	2.150		
Gamma Calibration MCG 131			Field Calibration on 19-FEB-2007,09:56
	Measured	Calibrated (API)	
Background	46	30	
Calibrator (Gross)	1264	824	
Calibrator (Net)	1219	794	
Gamma Constants MCG 131			Last Edited on 19-FEB-2007,11:17
Gamma Calibrator Number	GRC 095		
Mud Density	1220.00	kg/m3	
Caliper Source for Processing	Density Caliper		
Tool Position	Centred		
Concentration of KCl	0.00	kppm	
SP Calibration MCG 131			



			Field Calibration on 9-FEB-2007 12:52
	Measured	Calibrated (mV)	
Reference 1	100.5	100.0	
Reference 2	-100.0	-100.0	
High Resolution Temperature Calibration MCG 131			Field Calibration on 15-DEC-2006,15:05
	Measured	Calibrated(Deg C)	
Lower	1.00	1.00	
Upper	10.00	10.00	
High Resolution Temperature Constants MCG 131			
Pre-filter Length	11		
FE Calibration MFE 111			Base Calibration on 15-FEB-2007 19:40 Field Check on 19-FEB-2007 12:14
Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	0.0	0.0	
Reference 2	983.2	126.8	
Base Check		278.8	
Field Check		279.0	
FE Constants MFE 111			Last Edited on 3-FEB-2007,04:36
Caliper Source for FE correction	Density Caliper		
Rm Source for FE correction	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Stand-off	Centred	millimetres	
Caliper Calibration MTC 024			Base Calibration on 6-FEB-2007 10:21 Field Calibration on 19-FEB-2007,12:42
Base Calibration			
Reading No	Measured	Calibrator Size (mm)	
1	15472	110.00	
2	18252	162.00	
3	21045	212.00	
4	23841	262.00	
5	26691	311.00	
6	N/A	N/A	
Field Calibration			
	Measured Caliper (mm)	Actual Caliper (mm)	
	209.10	205.70	
Gamma Calibration MGS 029			Field Calibration on 19-FEB-2007,09:56
	Measured	Calibrated (API)	
Background	58	38	
Calibrator (Gross)	1286	832	
Calibrator (Net)	1228	794	
Gamma Constants MGS 029			Last Edited on 19-FEB-2007,11:17
Gamma Calibrator Number	GRCC095		
Mud Density	1220.00	kg/m3	
Caliper Source for Processing	Density Caliper		
Tool Position	Centred		
Concentration of KCl	0.00	kppm	
SP Calibration MGS 029			Field Calibration on 7-DEC-2006,17:01
	Measured	Calibrated (mV)	
Reference 1	100.0	100.0	

Reference 2	-100.0	-100.0	
High Resolution Temperature Calibration MGS 029			Field Calibration on 7-DEC-2006,17:01
	Measured	Calibrated(Deg C)	
Lower	1.00	1.00	
Upper	5.00	5.00	
High Resolution Temperature Constants MGS 029			
Pre-filter Length	11		
Micro Normal and Micro Inverse Calibration MML 015			Base Calibration on 19-FEB-2007,09:53 Field Check on 19-FEB-2007,12:39
Base Calibration			
	Measured		Calibrated (ohm-m)
Channel	Resistor 1	Resistor 2	Resistor 1 Resistor 2
Micro Normal	9.9	48.5	5.1 25.6
Micro Inverse	9.9	48.7	3.4 16.9
Channel	Base Check (ohm-m)		Field Check (ohm-m)
Micro Normal	79.8		79.8
Micro Inverse	52.6		52.5
Micro Normal and Micro Inverse Constants MML 015			Last Edited on 19-FEB-2007,09:53
Micro Normal K Factor	0.5110		
Micro Inverse K Factor	0.3380		
Standoff Offset	N/A	millimetres	
Caliper Calibration MML 015			Base Calibration on 19-FEB-2007,09:55 Field Calibration on 19-FEB-2007,12:42
Base Calibration			
Reading No	Measured		Calibrator Size (mm)
1	13860		162.00
2	17089		212.00
3	20617		262.00
4	24375		311.00
5	27976		355.00
6	N/A		N/A
Field Calibration			
	Measured Caliper (mm)	Actual Caliper (mm)	
	210.20	205.70	
Neutron Calibration MDN 016			Base Calibration on 11-JAN-2007 20:47 Field Check on 19-FEB-2007 10:29
Base Calibration			
	Measured		Calibrated (cps)
	Near	Far	Near Far
	3219	98	3714 110
Ratio	32.703		33.764
Field Calibrator at Base			Calibrated (cps)
	2486		3648
Ratio	0.681		
Field Check			Calibrated (cps)
	2589		3773
Ratio	0.686		
Neutron Constants MDN 016			Last Edited on 17-FEB-2007,21:41
Neutron Source Id	277		
Neutron Jig Number	N636		
Epithermal Neutron	No		

Caliper Source for Processing	Density Caliper			
Stand-off	0.00	mm		
Mud Density	1000.00	kg/m3		
Limestone Sigma	7.10	cu		
Sandstone Sigma	4.26	cu		
Dolomite Sigma	4.70	cu		
Formation Pressure Source	Constant Value			
Formation Pressure	0.00	kPa		
Temperature Source	Constant Value			
Temperature	20.00	degrees C		
Mud Salinity	0.00	kppm		
Formation Fluid Salinity Source	Constant Value			
Formation Fluid Salinity	0.00	kppm		
Barite Mud Correction	Not Applied			

Photo Density Calibration MPD 130			Base Calibration on 12-MAR-2007,15:18	
			Field Check on	
Density Calibration				
Base Calibration		Measured	Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	70908	37221	60352	31615
Reference 2	28626	3008	25043	2540
Field Check at Base				
	1027.6	1384.5		
Field Check				
	0.0	0.0		
PE Calibration				
Base Calibration		Measured	Calibrated	
	WS	WH	Ratio	Ratio
Background	184	909		
Reference 1	30385	71000	0.431	0.400
Reference 2	7753	26700	0.293	0.272
Field Check at Base				
	184.1	909.1		
Field Check				
	0.0	0.0		

Density Constants MPD 130			Last Edited on 19-FEB-2007,11:18	
Density Source Id	16151b			
Nylon Calibrator Number	608			
Aluminium/Fe Calibrator Number	608			
Density Shoe Profile	4 inch			
Caliper Source for Processing	Density Caliper			
PE Correction to Density	Not Applied			
Mud Density	1220.00	kg/m3		
Mud Density Z/A Correction	1.11			
Mud Filtrate Density	1000.00	kg/m3		
Dry Hole Mud Filtrate Density	1000.00	kg/m3		
DNCT	0.00	kg/m3		
CRCT	0.00	kg/m3		
Density Z/A Correction	Advanced			
Matrix Density (kg/m3)	Depth (m)			
2710.00				
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
0.00	0.00			
n nn	0.00			

0.00  
0.00  
0.00

0.00  
0.00

## Caliper Calibration MPD 130

Base Calibration on 19-FEB-2007 10:46  
Field Calibration on 19-FEB-2007,12:42

### Base Calibration

Reading No	Measured	Calibrator Size (mm)
1	18240	110.00
2	28320	162.00
3	38188	212.00
4	48355	262.00
5	58464	311.00
6	N/A	N/A

### Field Calibration

Measured Caliper (mm)	Actual Caliper (mm)
210.10	205.70

## Sonic Constants MSS 003

Last Edited on 19-FEB-2007,11:18

Maximum Boundary Contrast	328.08	micro-sec/m
Fluid Transit Time	620.08	micro-sec/m
Limestone Transit Time	155.84	micro-sec/m
Sandstone Transit Time	182.09	micro-sec/m
Dolomite Transit Time	142.72	micro-sec/m
Sonic used for Porosities	3-5' Compensated Sonic	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	N/A	micro-sec
MX3FT	N/A	micro-sec
Hunt-Raymer Constant	83.13	micro-sec/ft

### Fixed Gate Parameters

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

### Down Hole Fixed Gate Parameters

Gate Start	N/A	micro-sec
Gate Width	N/A	micro-sec
Initial Discriminator Level	0.0000	mVolts

### Full Waveform Parameters

Use 3' Waveform to derive TR	N/A
Use 4' Waveform to derive TR	N/A
Use 5' Waveform to derive TR	N/A
Use 6' Waveform to derive TR	N/A
3' Waveform Discriminator Level	N/A mV
4' Waveform Discriminator Level	N/A mV
5' Waveform Discriminator Level	N/A mV
6' Waveform Discriminator Level	N/A mV
3' Waveform Filter	N/A
4' Waveform Filter	N/A
5' Waveform Filter	N/A
6' Waveform Filter	N/A
Semblance Level	N/A
Semblance Window Width	N/A micro-sec
Sonic 1 Despiker	N/A N/A
Sonic 2 Despiker	N/A N/A

## Base Calibration

## Test Loop Calibration

Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	16.6	470.6	9.3	966.2
2	6.3	383.0	7.6	821.4
3	4.0	264.7	5.2	566.0
4	2.3	136.2	2.6	279.2

Array Temperature 22.3 Deg C

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	13.1	3867.2	15.7	3866.2
2	29.6	3530.7	30.3	3528.1
3	26.8	3001.8	27.2	2999.2
4	18.4	2040.8	18.6	2039.1
Deep	15.3	1926.8	15.8	1925.2
Medium	39.6	3962.8	39.7	3959.0
Shallow	45.8	5270.7	46.7	5266.7

Array Temperature 12.1 31.4 Deg C

## Induction Constants MAI 154

Last Edited on 19-FEB-2007,11:18

Induction Model	VECTAR		
Caliper for Borehole Corr.	Density Caliper		
Hole Size for Borehole Correction	N/A		
Stand-off	25.40		
Number of Fins on Stand-off	5.0000		
Stand-off Fin Width	25.4000		
Borehole Corr. Rm Source	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Squasher Start	0.0020		
Borehole Normalisation			
DRM1	0.0000	DRC1	0.0000
DRM2	0.0000	DRC2	0.0000
MRM1	0.0000	MRC1	0.0000
MRM2	0.0000	MRC2	0.0000
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000

## Calibration Site Corrections

Channel 1	0.00	mmhos/metre
Channel 2	0.00	mmhos/metre
Channel 3	0.00	mmhos/metre
Channel 4	0.00	mmhos/metre

## Apparent Porosity and Water Saturation Constants

Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	100.00	percent
Resistivity of Water for Apor and Sw	0.05	ohm-m
Resistivity of Mud Filtrate for Sw	0.00	ohm-m

## High Resolution Temperature Calibration MAI 154

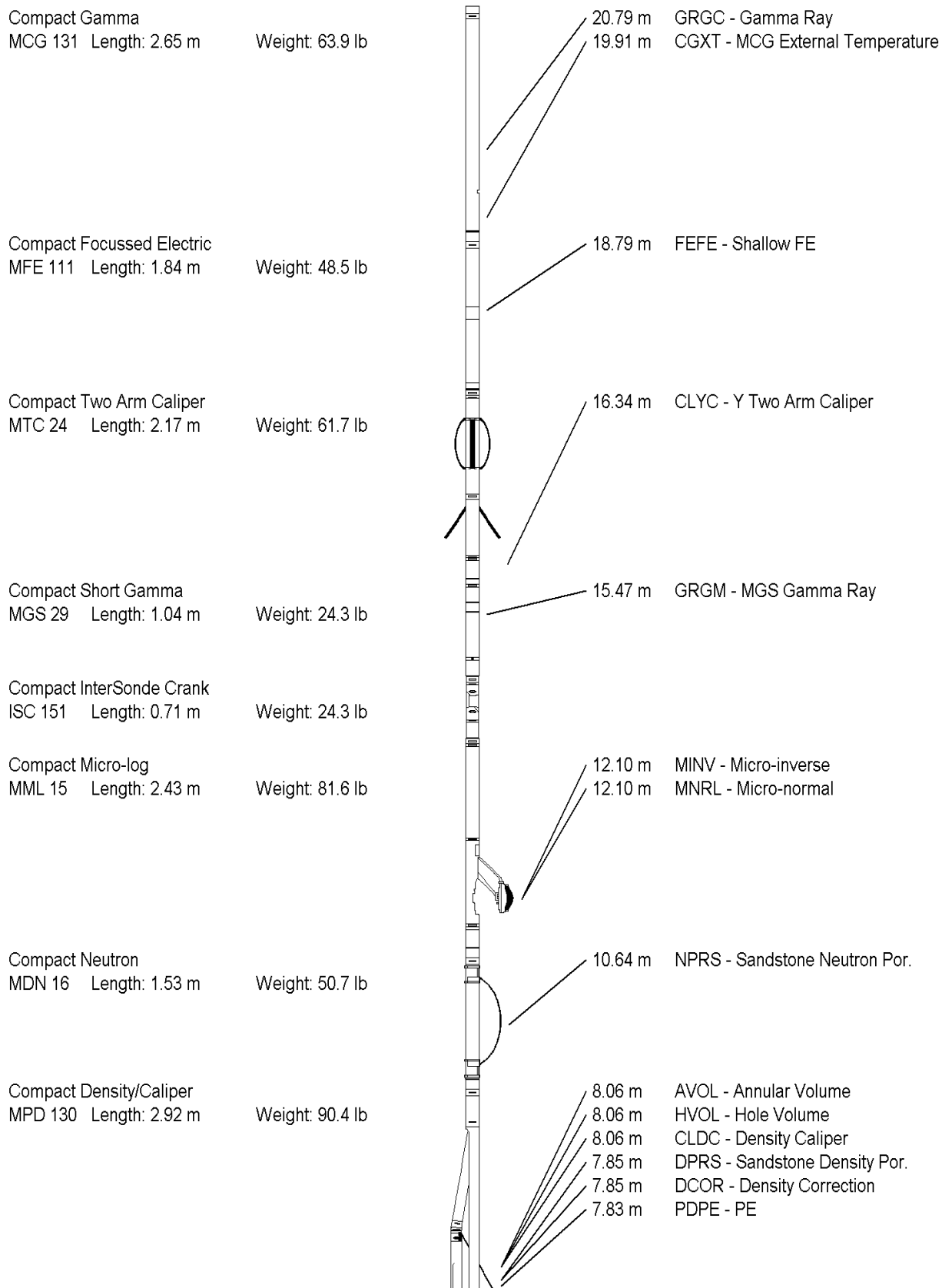
Field Calibration on 16-DEC-2006,08:07

	Measured	Calibrated(Deg C)
Lower	1.00	1.00
Upper	10.00	10.00

## High Resolution Temperature Constants MAI 154

## DOWNHOLE EQUIPMENT

C:\Temp\Weatherford PreView\0\03 rpt.dta

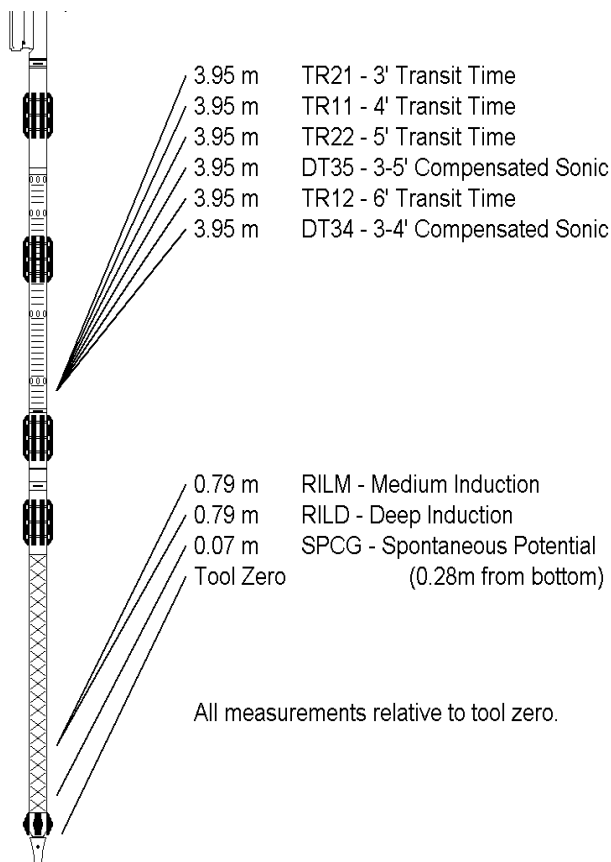


Compact Sonic  
MSS 3 Length: 3.82 m Weight: 72.8 lb

Compact Induction  
MAI 154 Length: 3.29 m Weight: 48.5 lb

Compact Hole Finder  
HFS 1 Length: 0.24 m Weight: 2.2 lb

Total Length: 22.64 m Weight: 568.8 lb



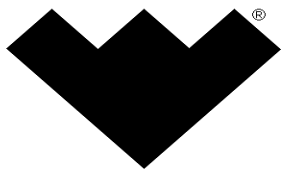
COMPANY	PARAMOUNT RESOURCES LTD.
WELL	PARA ET AL CAMERON A-03
FIELD	CAMERON HILLS
PROVINCE/COUNTY	NORTHWEST TERRITORIES
COUNTRY/STATE	CANADA

Elevation Kelly Bushing	772.80	metres	First Reading	1577.00	metre
Elevation Drill Floor		metres	Depth Driller	1589.40	metres
Elevation Ground Level	767.40	metres	Depth Logger	1589.40	metres



**Weatherford®**

MICROLOG



## COMPENSATED SONIC

COMPANY	PARAMOUNT RESOURCES LTD.				
WELL	PARA ET AL CAMERON A-03				
FIELD	CAMERON HILLS				
PROVINCE/COUNTY	NORTHWEST TERRITORIES				
COUNTRY/STATE	CANADA				
LOCATION	300A036010117300 <b>FIELD PRINT</b>				
LSD	SEC	TWP	RGE	Other Services	PHOTO DENSITY DUAL SPACED NEUTRON
				ARRAY INDUCTION	
API Number		MICROLOG			
Permit Number 2047					
Permanent Datum GROUND LEVEL, Elevation 767.4 metres					Elevations: metres
Log Measured From 5.4 M above Permanent Datum					KB 772.80
Drilling Measured From KELLY BUSHING					DF
					GL 767.40
Date	19-FEB-2007				
Run Number	1				
Depth Driller	1589.40	metres			
Depth Logger	1589.40	metres			
First Reading	1585.10	metre			
Last Reading	436.00	metre			
Casing Driller	435.80	metres			
Casing Logger	436.00	metres			
Bit Size	200.00	mm			
Hole Fluid Type	GEL CHEM				
Density / Viscosity	1220.0 kg/M3	70.00 sec/L			
PH / Fluid Loss	10.50	10.00 ml/30Min			
Sample Source	FLOWLINE				
Rm @ Measured Temp	1.11 @ 25.0	ohm-m			
Rmf @ Measured Temp	1.02 @ 25.0	ohm-m			
Rmc @ Measured Temp	1.26 @ 25.0	ohm-m			
Source Rmf / Rmc	PRESS	FILTER			
Rm @ BHT	0.71 @ 50.0	ohm-m			
Time Since Circulation	8 HRS				
Max Recorded Temp	50.00	deg C			
Equipment Name	COMPACT				
Equipment / Base	QUINT	GPR			
Recorded By	M. BONNELL				
Witnessed By	B. POWELL				
CIRC. STOP	04:30 FEB-19	Last Line			

BOREHOLE RECORD				Last Edited: 19-FEB-2007 11:16	
Bit Size millimetres	Depth From metres		Depth To metres		
311.000	0.00		435.80		
200.000	435.80		1589.40		
CASING RECORD					
Type	Size millimetres	Depth From metres	Shoe Depth metres	Weight pounds/ft	
SURFACE	219.100	0.00	435.80	24.00	

## REMARKS

- 1) SOFTWARE ISSUE: WLS 7.01.0195
- 2) CUSTOMER SCALES AND INTERVALS LOGGED.
- 3) MAI, MSS, MPD, MDN, MML, SKJ, MGS, MTC, MFE, MCG RAN IN COMBINATION.
- 4) HARDWARE: MAI: TWO 25.4 MM STANDOFFS  
MSS: THREE 25.4 MM STANDOFFS  
MDN: DUAL NEUTRON BOWSPRING  
MTC: ONE SIX-LEAF CENTRALIZER BOWSPRING



6) RIG: PD 220

7) HOLE \_CEMENT VOLUMES CALCULATED USING DENSITY CALIPER AND TWO ARM CALIPER IN COMBINATION :

HOLE VOLUME = 42.7 CU.M.

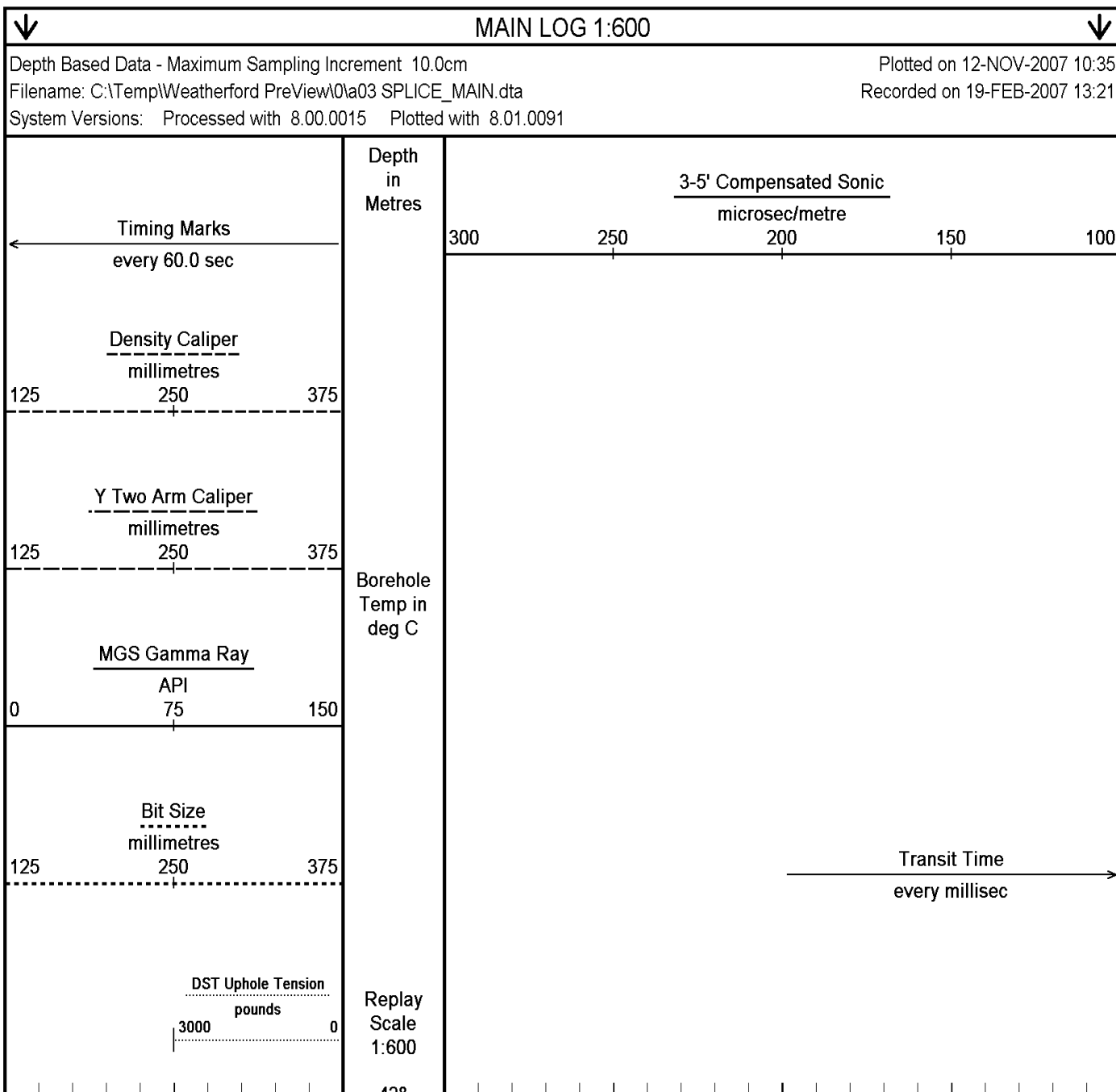
ANNULAR VOLUME USING 139.7 MM PRODUCTION CASING = 25.1 CU.M

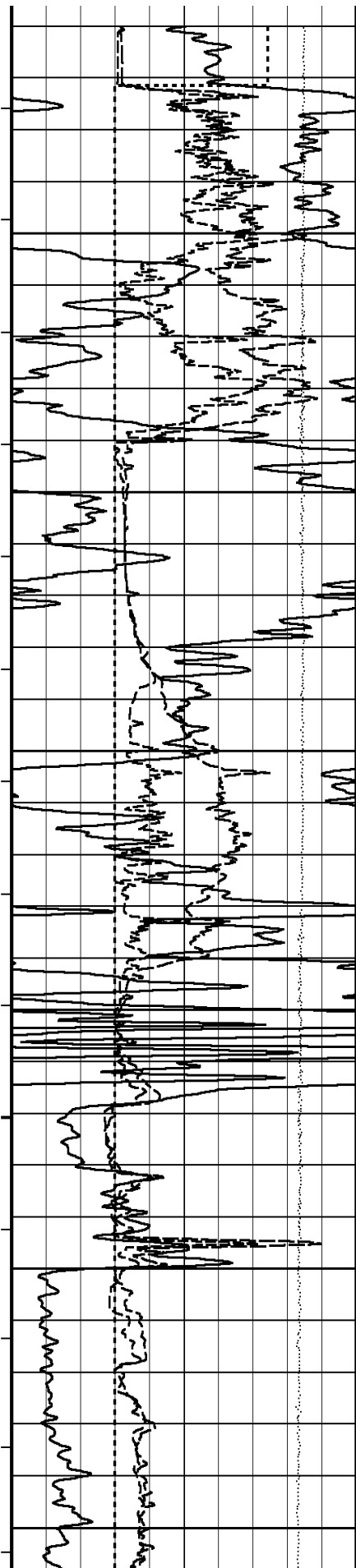
8) SONIC FREE PIPE: NOT FOUND

9) AREAS OF BOREHOLE RUGOSITY MAY CAUSE POOR DENSITY PAD CONTACT, HIGH DENSITY CORRECTION AND THUS INVALID DENSITY POROSITY DATA AT THOSE INTERVALS.

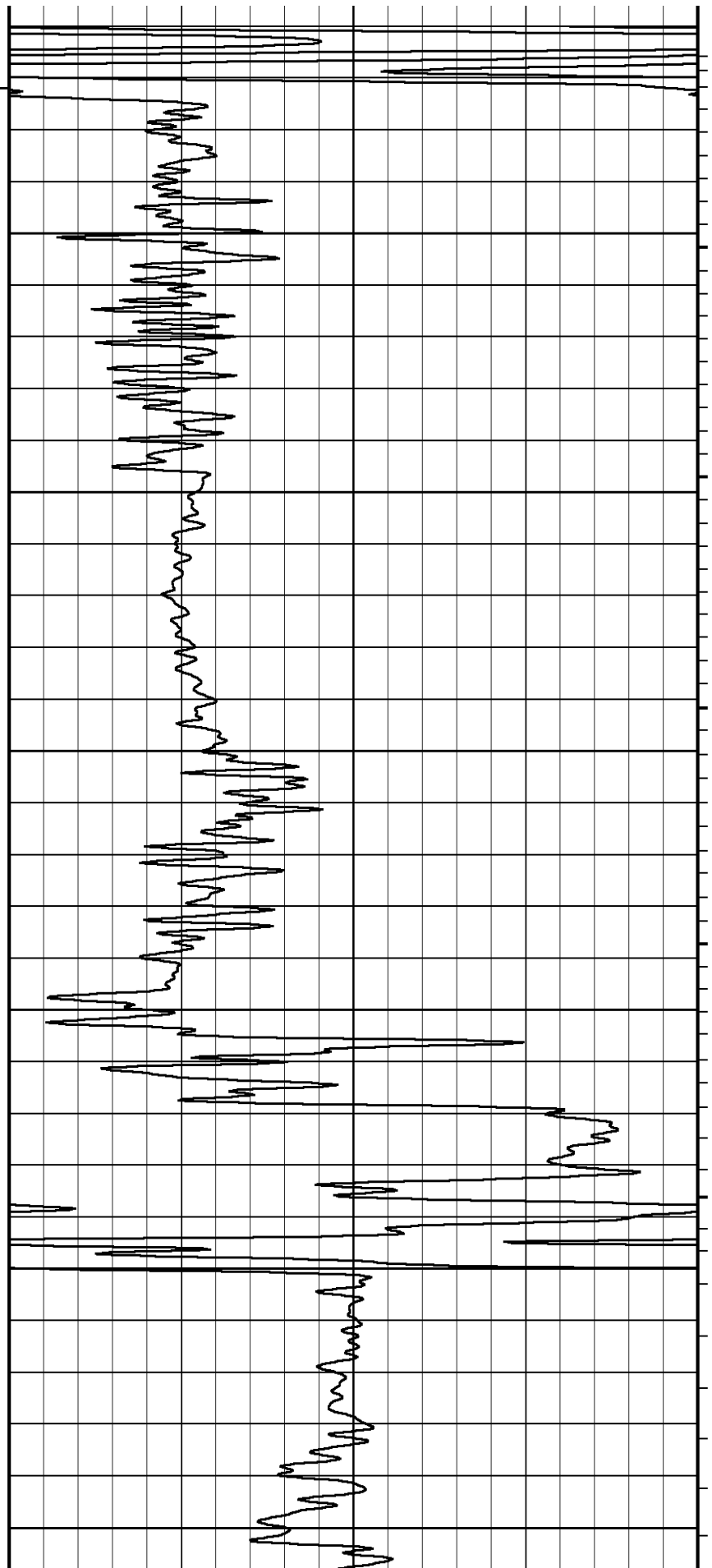
10) SALTY INDUCTION MODEL PRESENTED FROM TD-1410M.

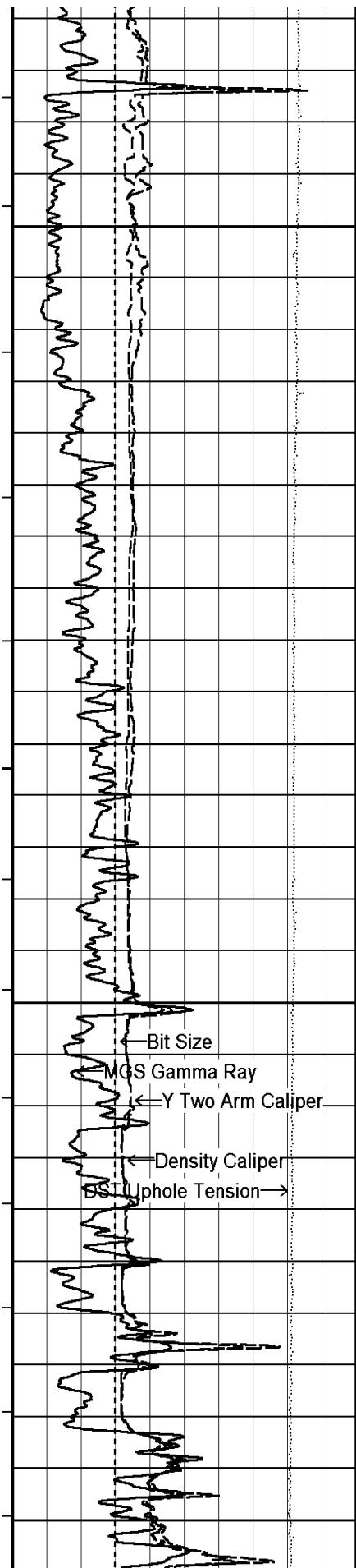
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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





720  
Casing Shoe  
27°  
450  
27°  
500  
28°  
550  
28°





29°

600

29°

29°

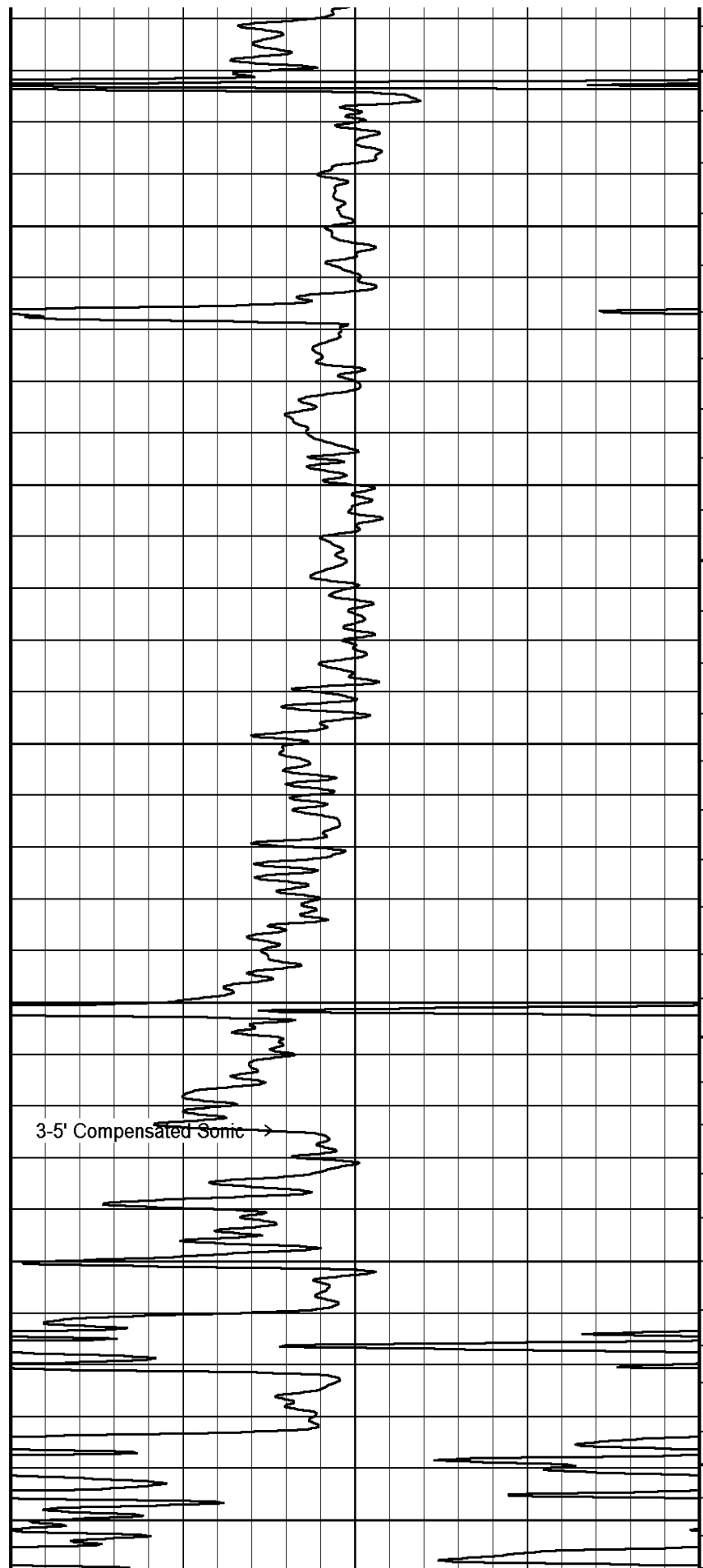
650

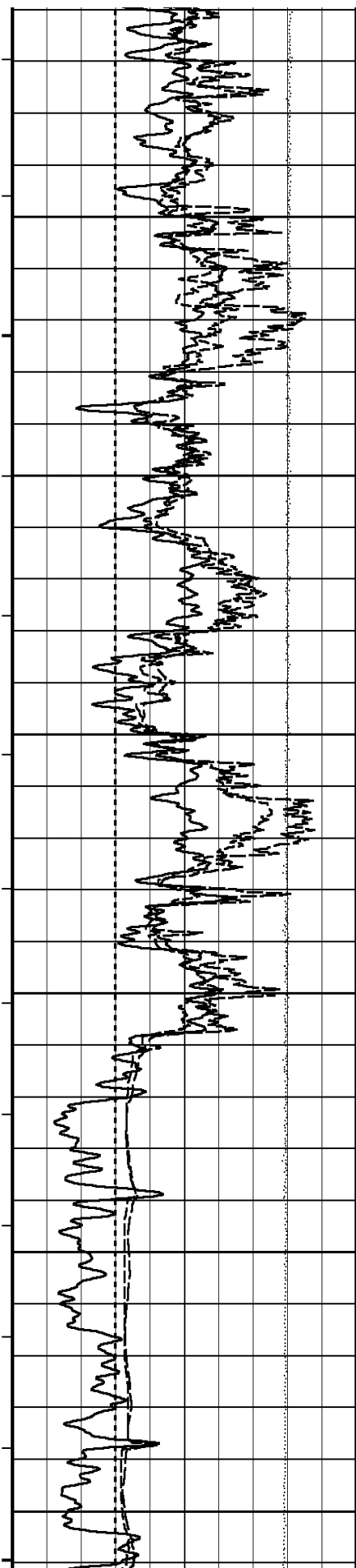
29°

30°

700

30°





31°

750

32°

32°

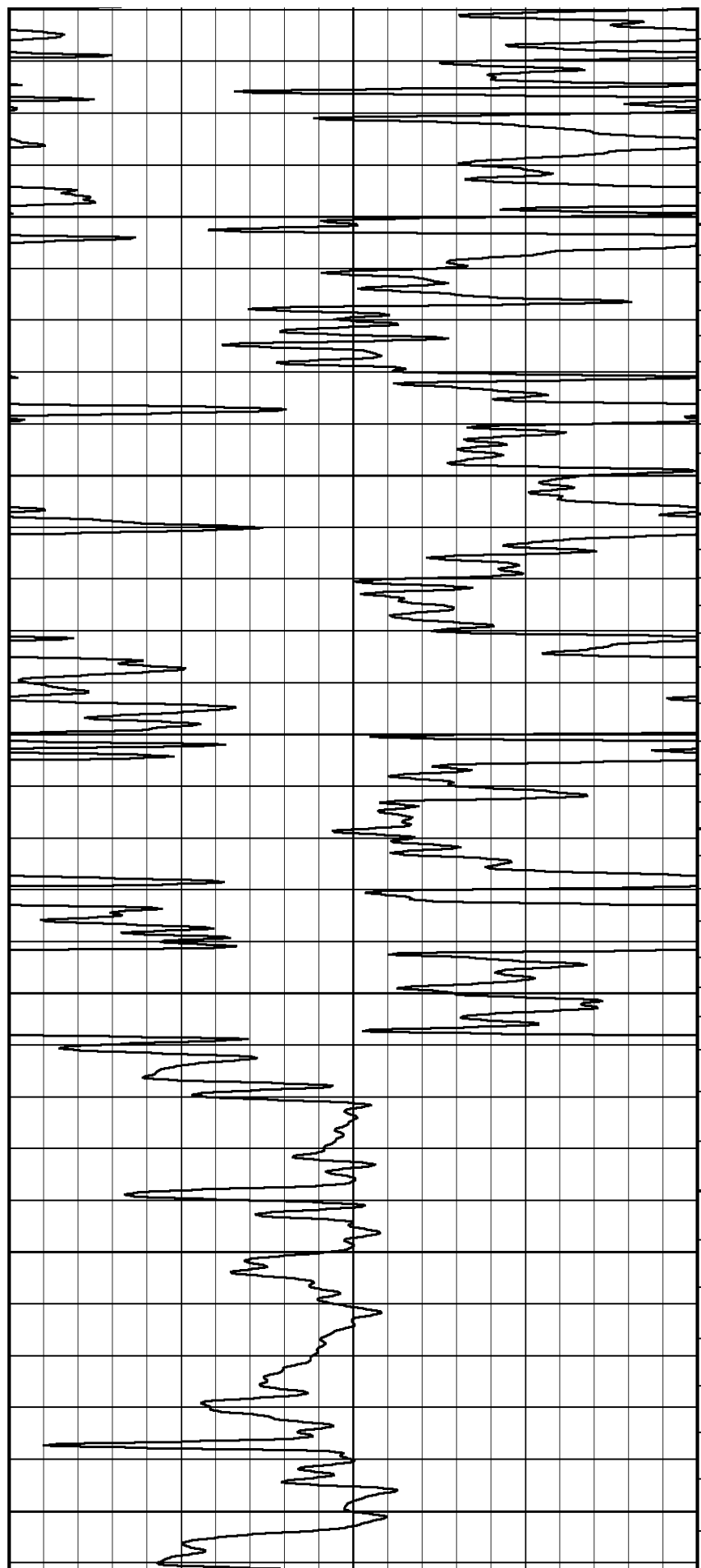
800

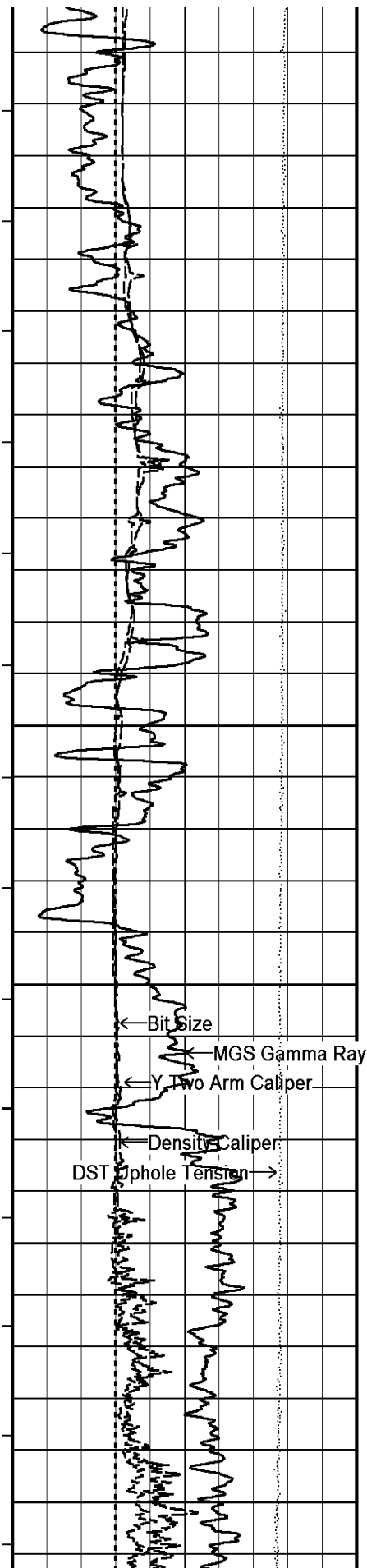
33°

33°

850

33°





34°

900

34°

34°

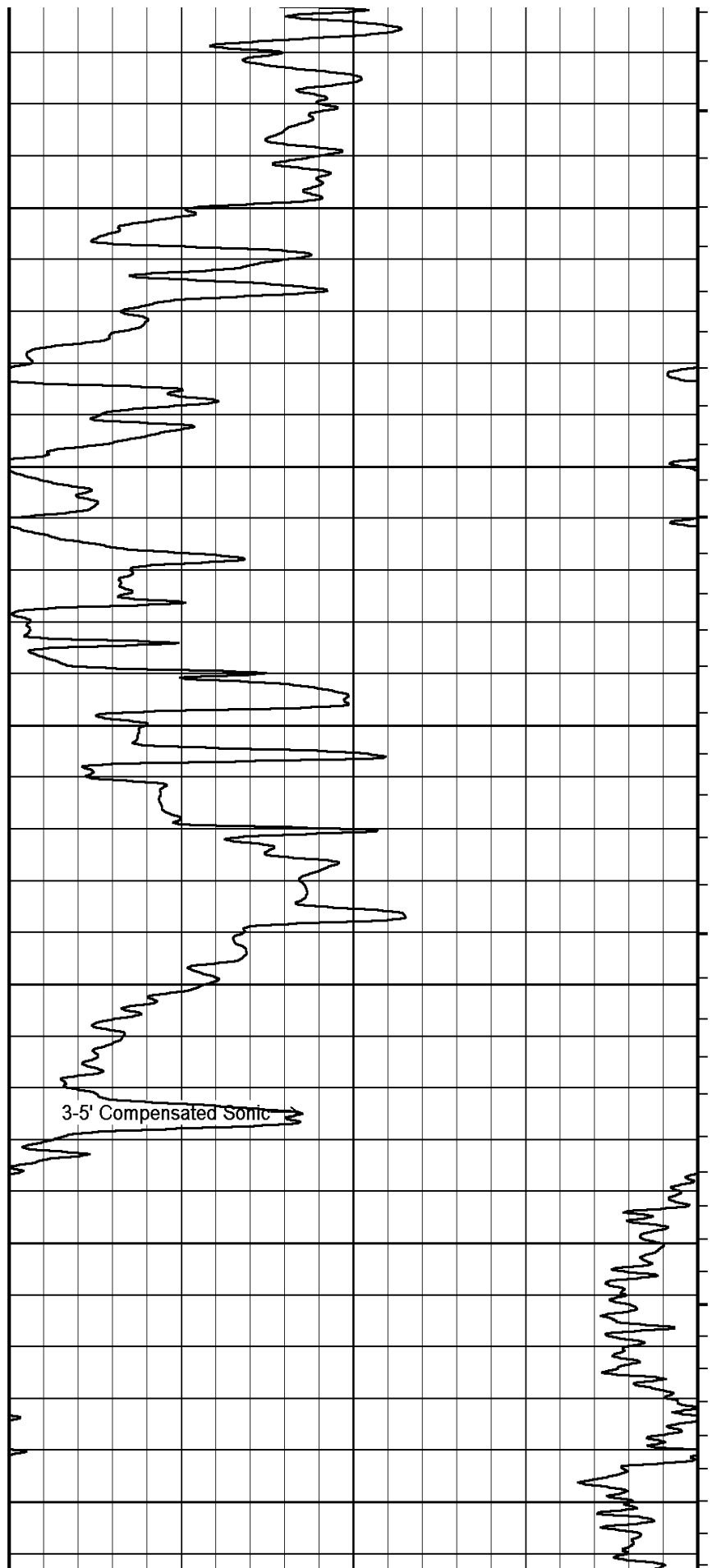
950

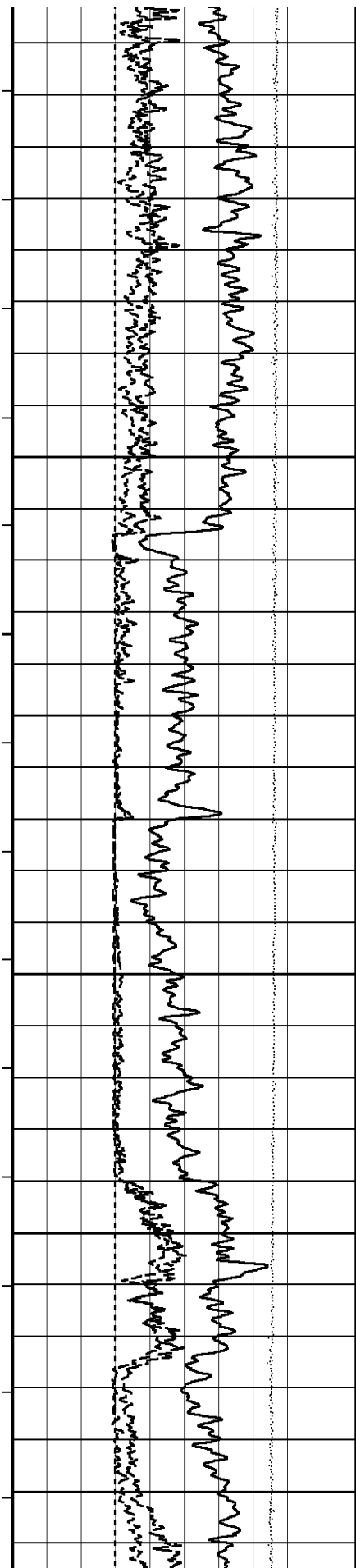
35°

35°

1000

36°





36°

1050

37°

38°

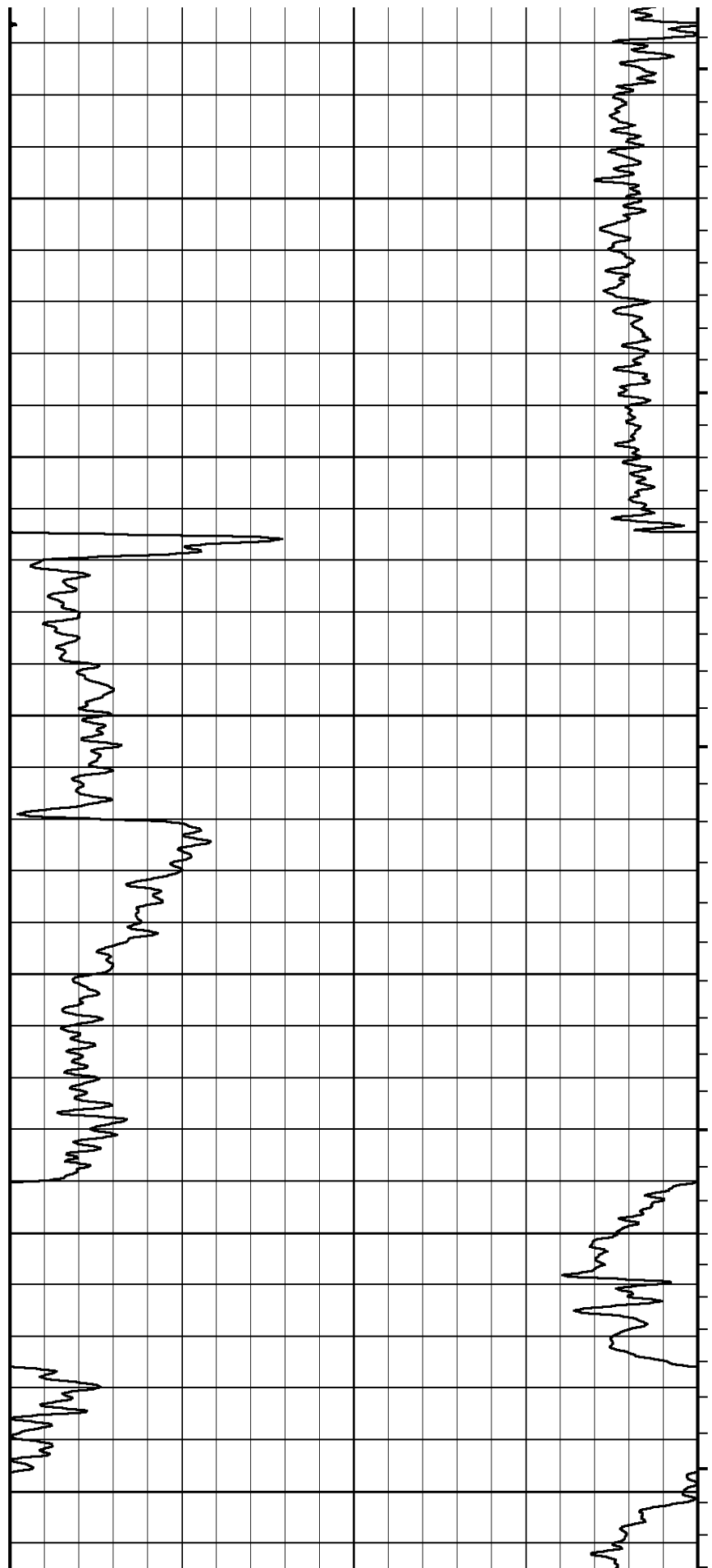
1100

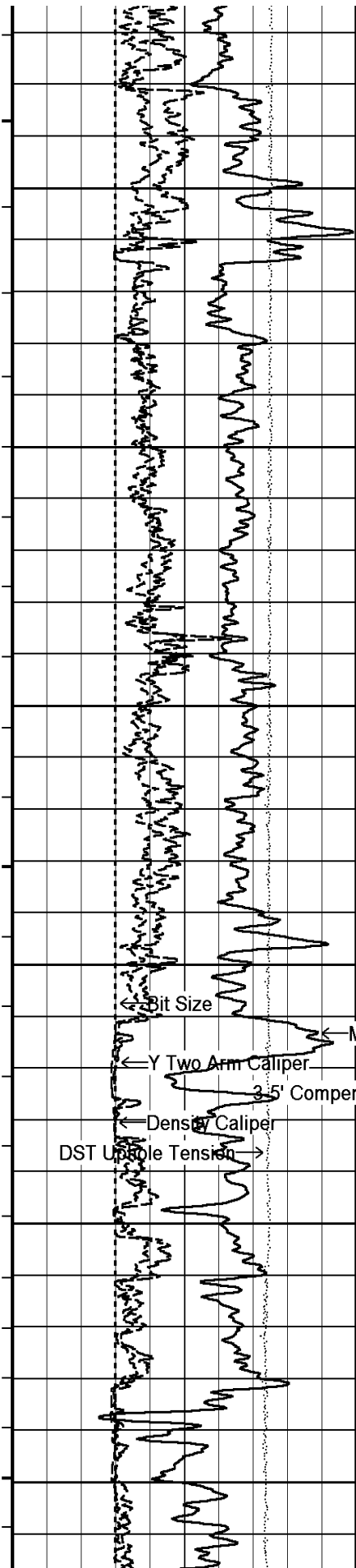
38°

39°

1150

39°





40°

1200

41°

41°

1250

42°

MGS Gamma Ray

Bit Size

Y Two Arm Caliper

35' Compensated Sonic

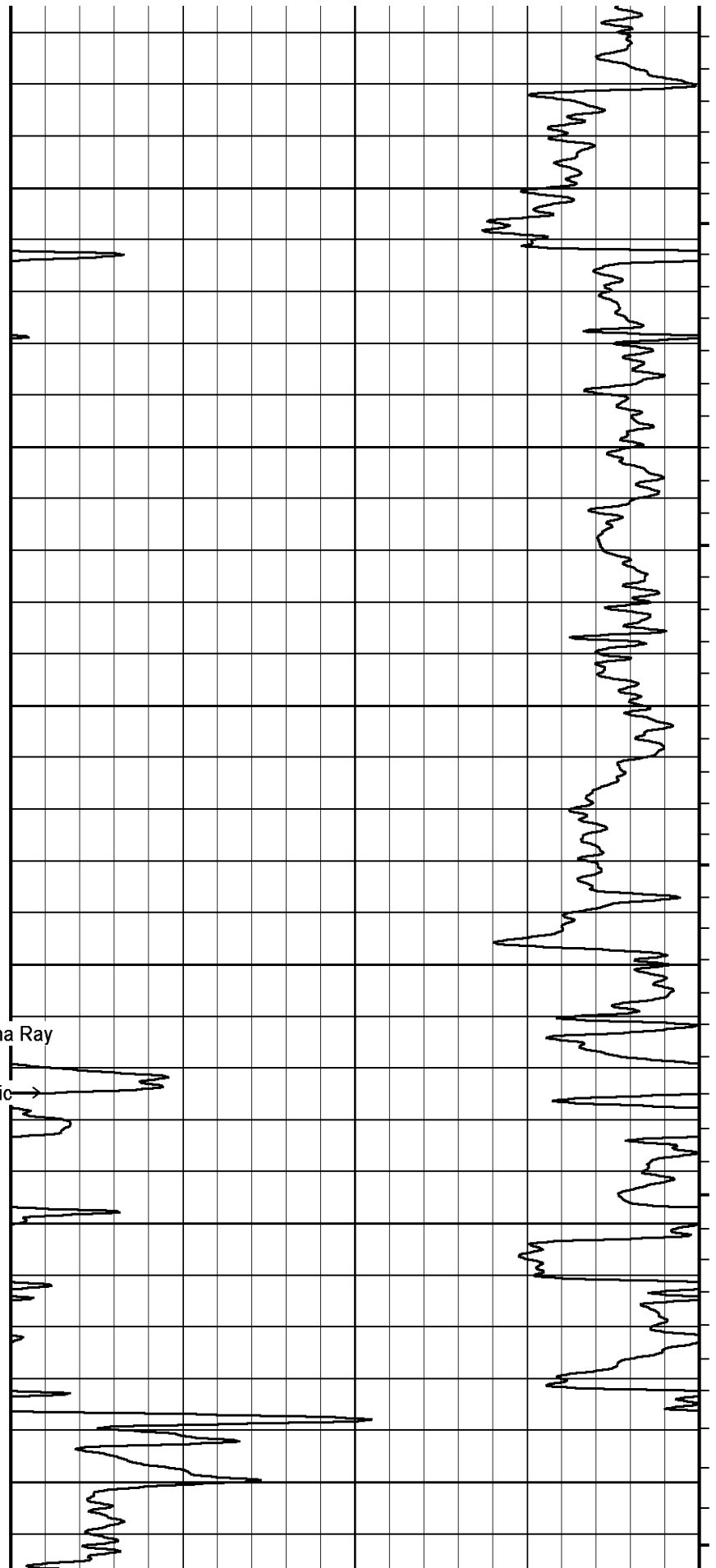
Density Caliper

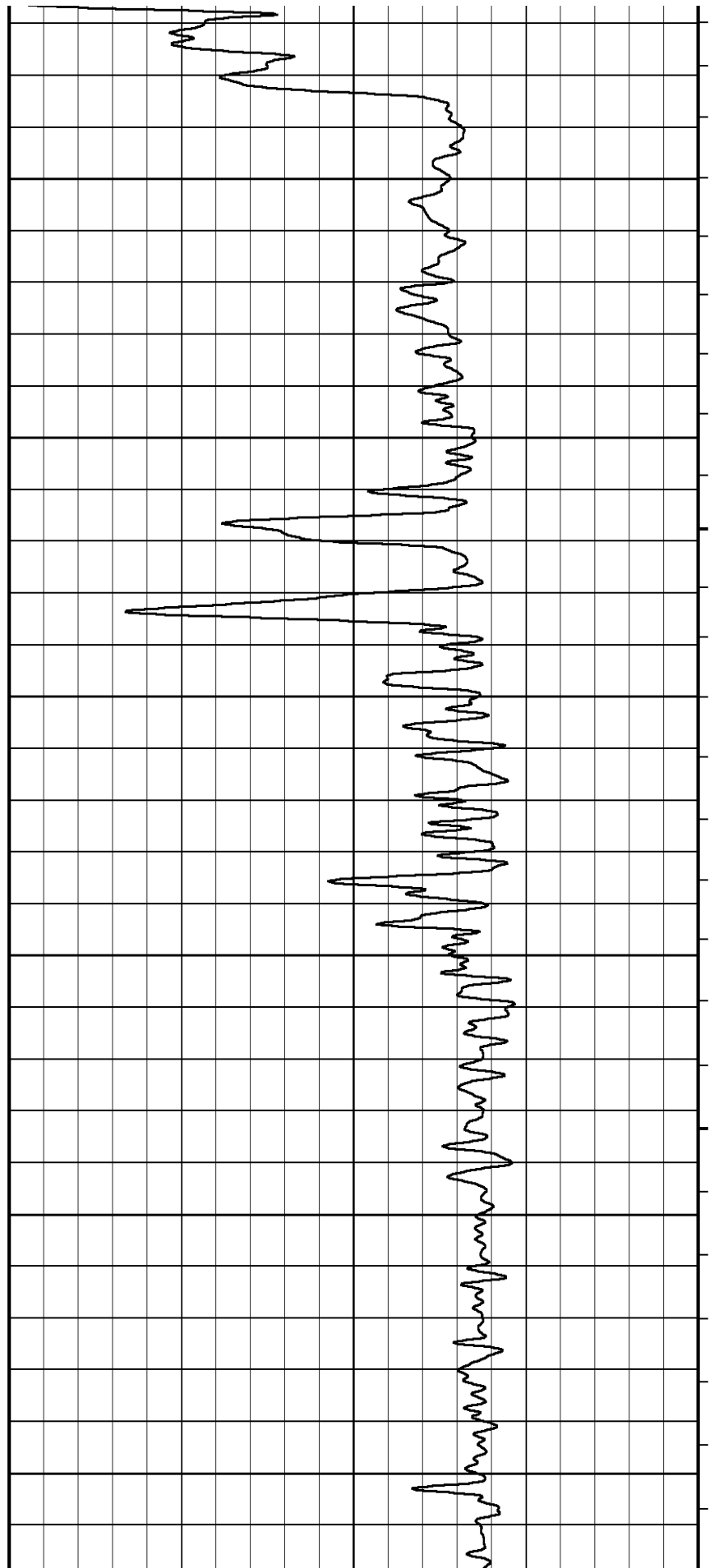
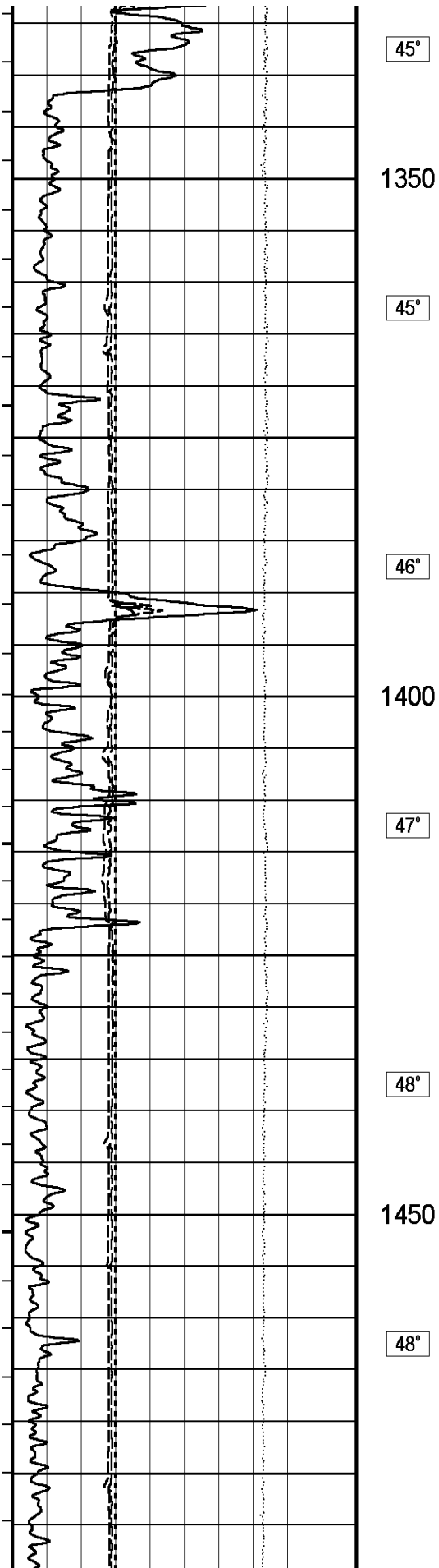
DST Upole Tension

43°

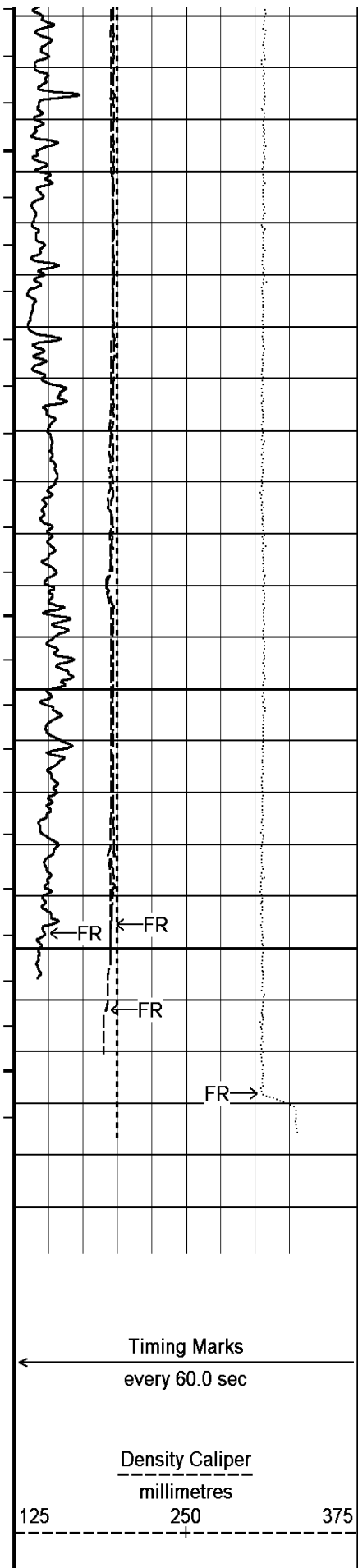
1300

43°









49°

1500

50°

50°

1550

50°

1600

Depth  
in  
Metres

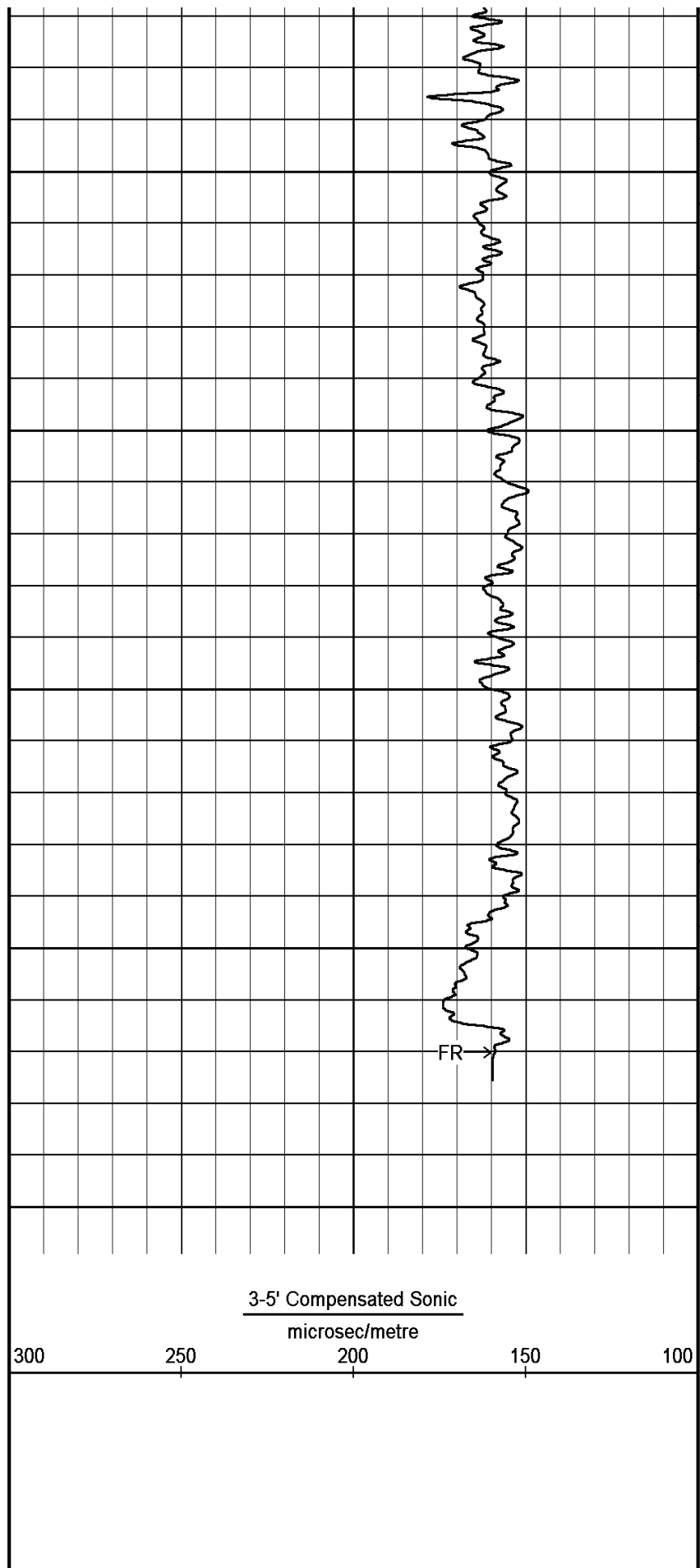
Timing Marks  
every 60.0 sec

Density Caliper  
millimetres

125

250

375



3-5' Compensated Sonic  
microsec/metre

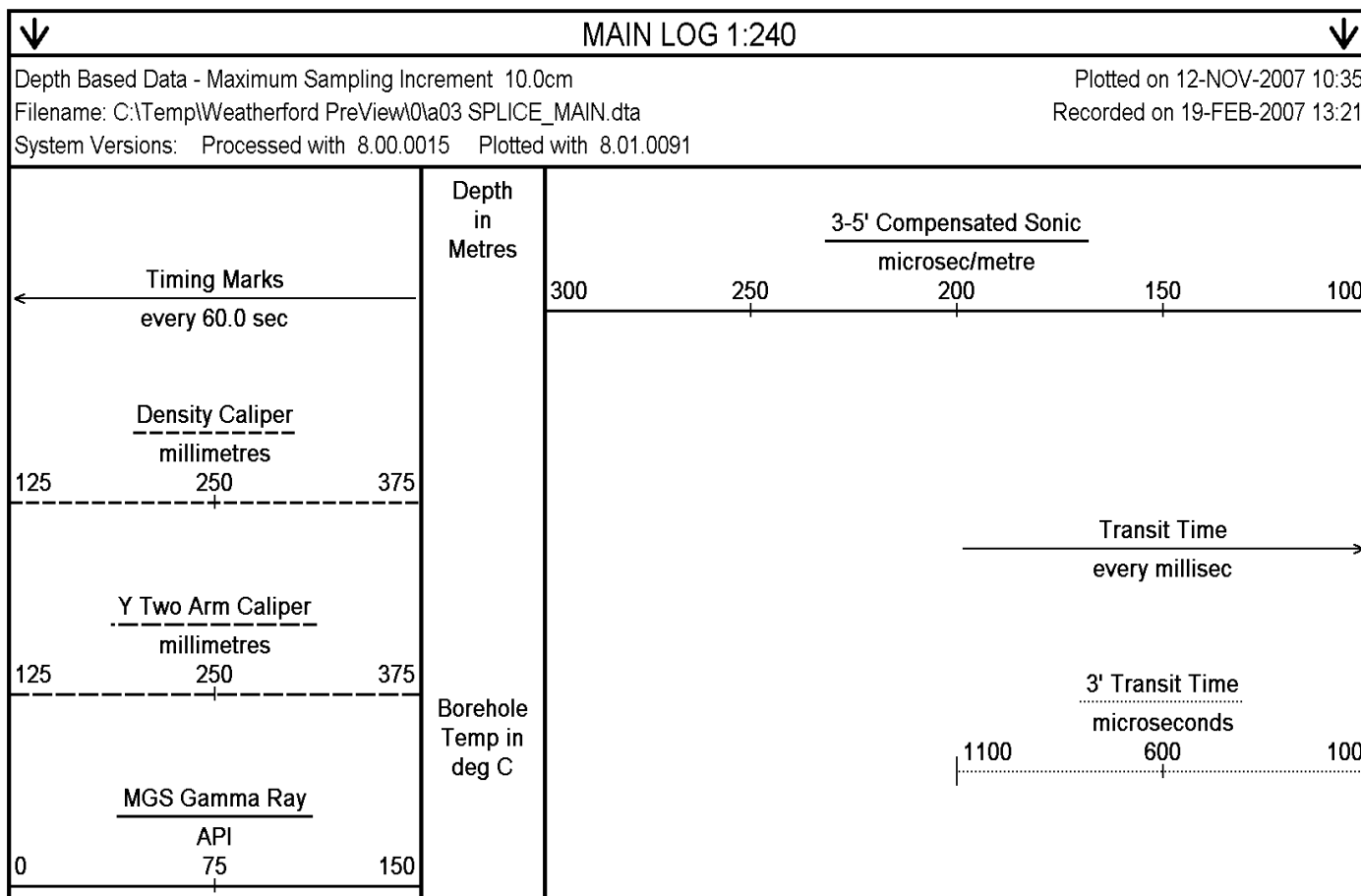
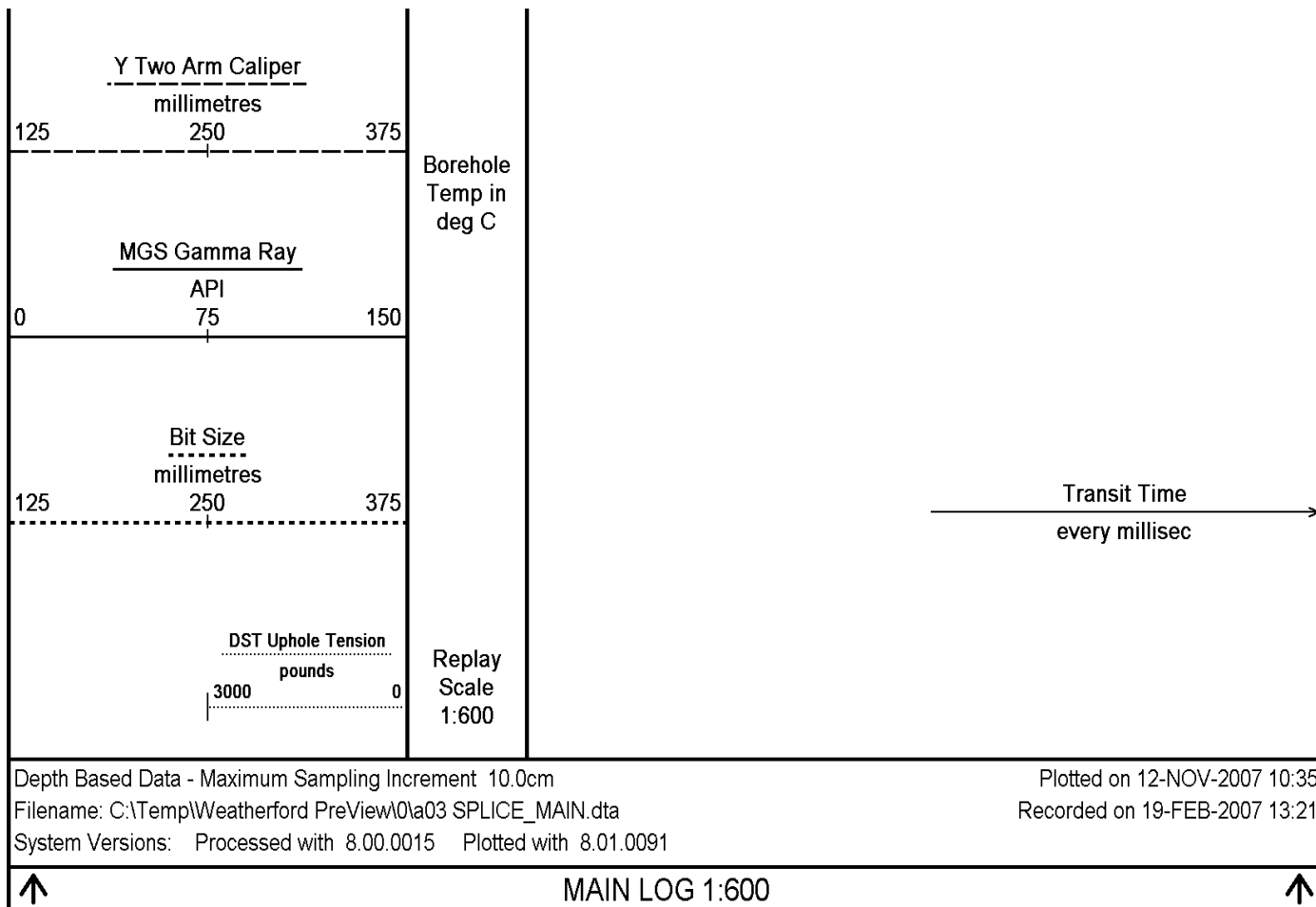
300

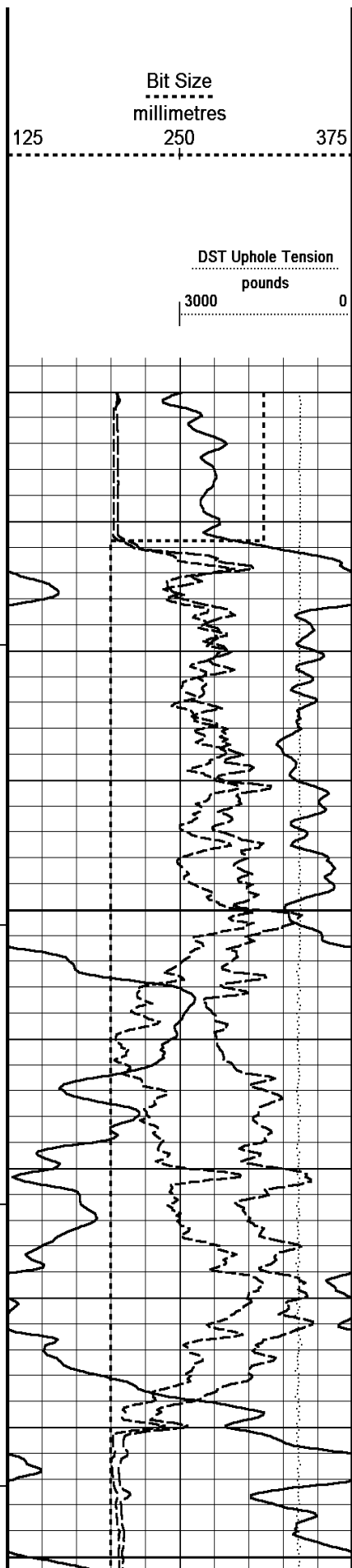
250

200

150

100





Replay  
Scale  
1:240

430

Casing  
Shoe

27°

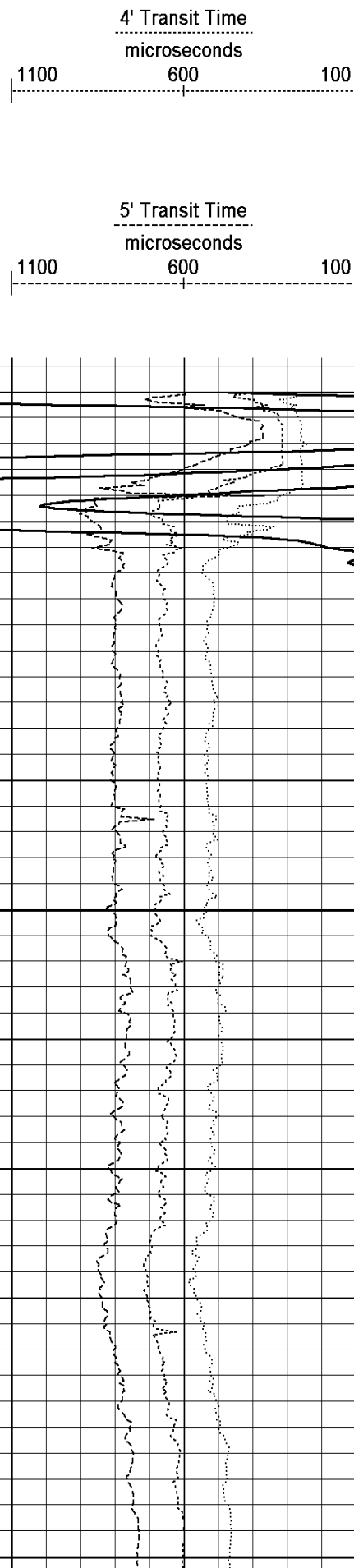
440

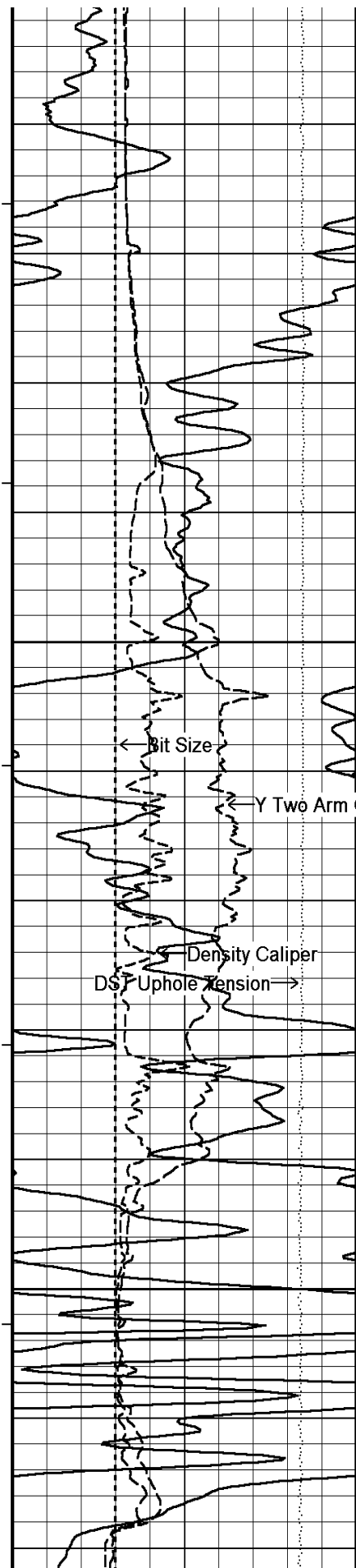
450

460

27°

470





480

27°

490

500

510

28°

520

530

MGS Gamma Ray

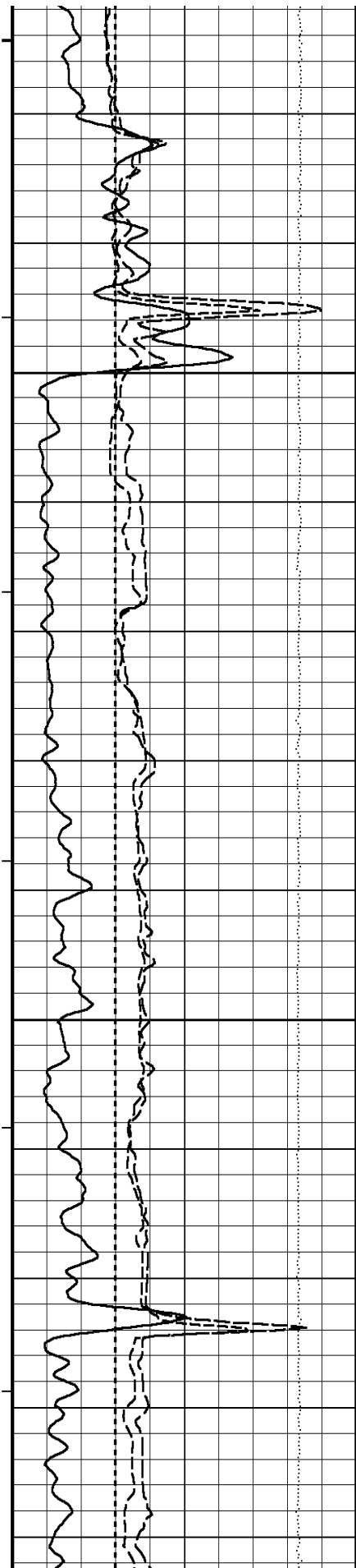
Y Two Arm Caliper

3-5' Compensated Sonic

5' Transit Time

4' Transit Time

3' Transit Time



$28^{\circ}$

540

550

560

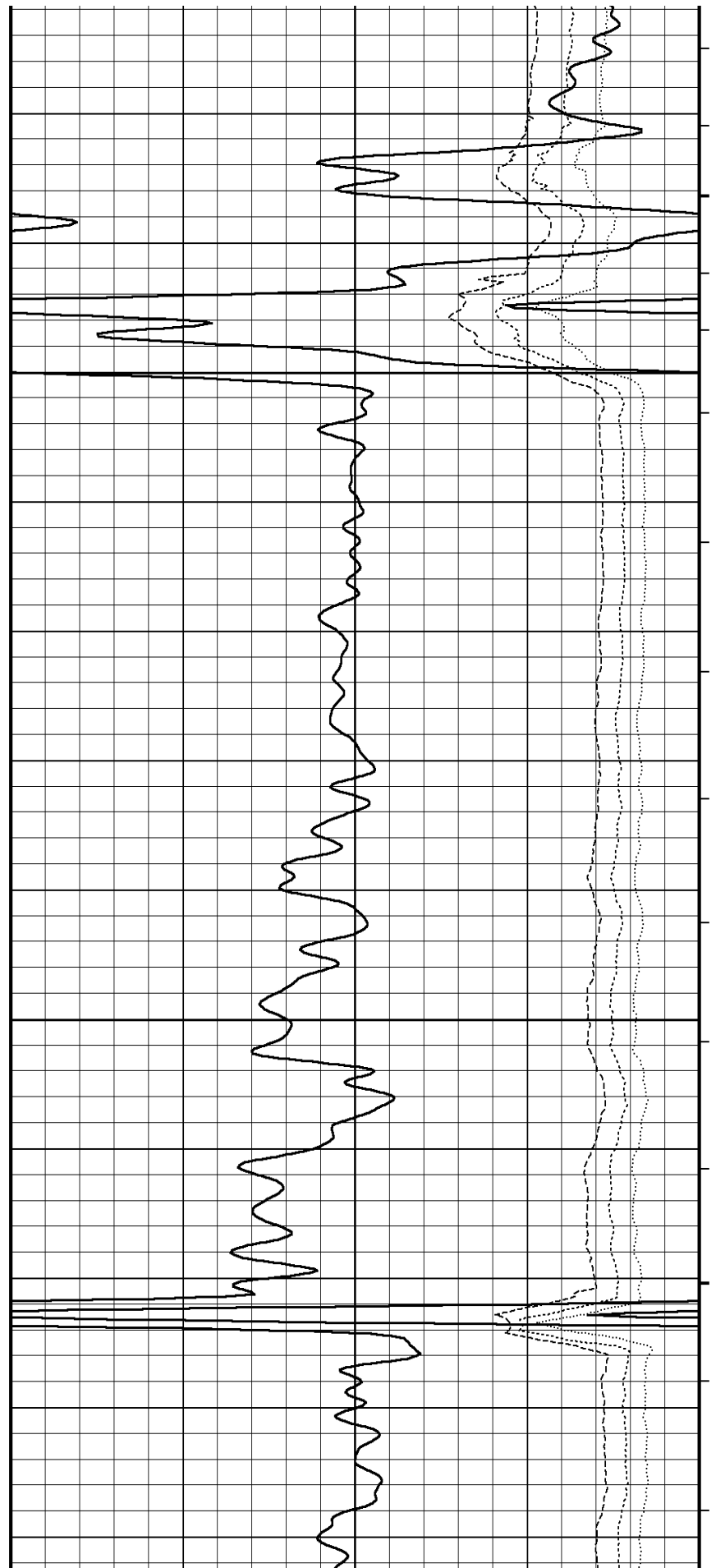
$28^{\circ}$

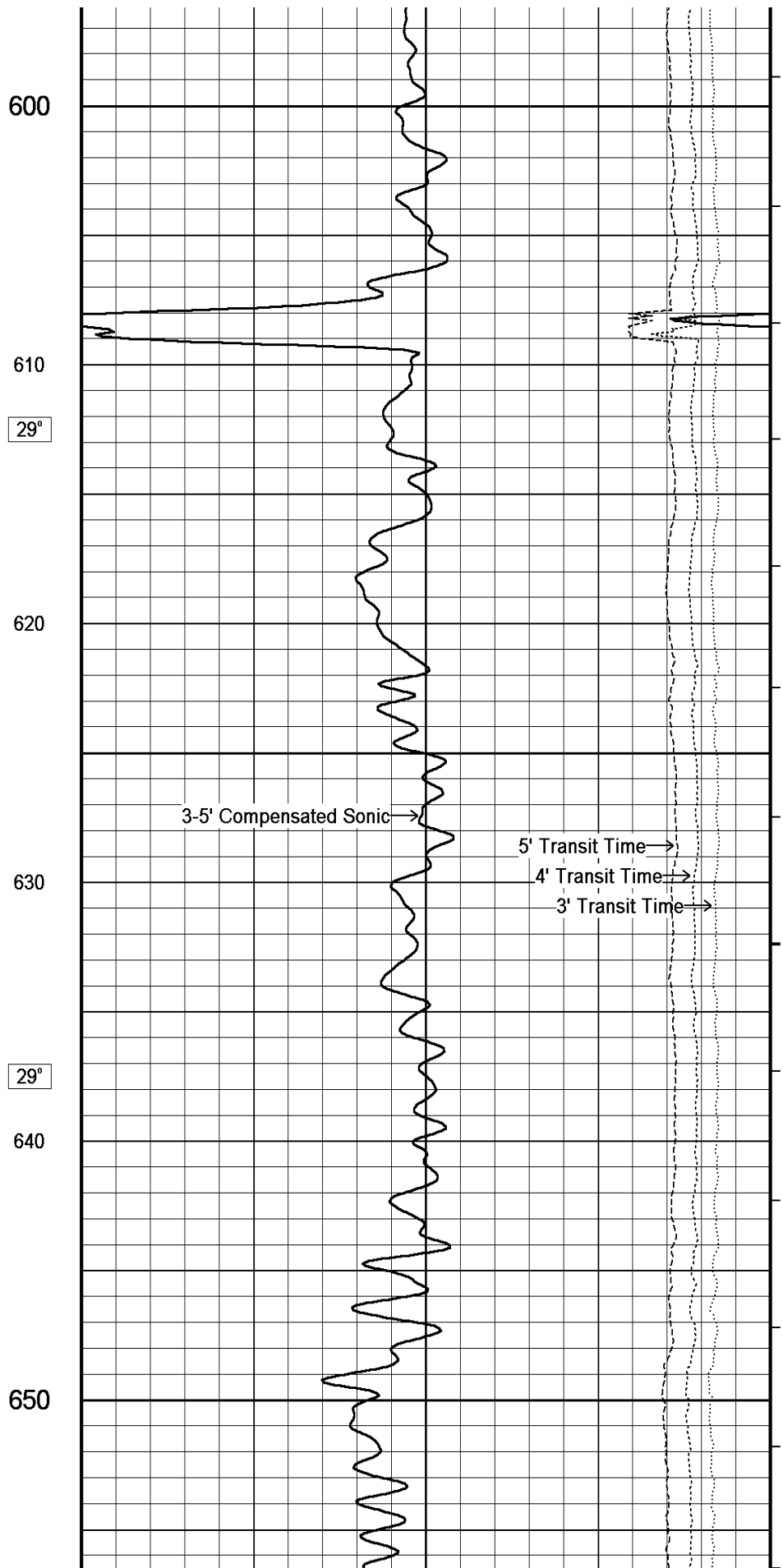
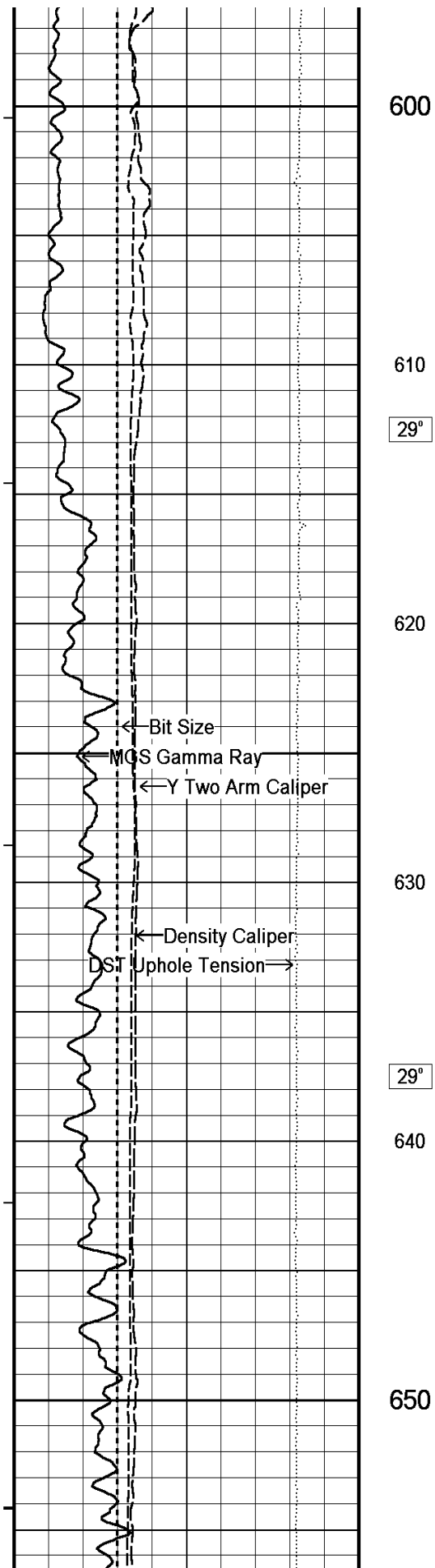
570

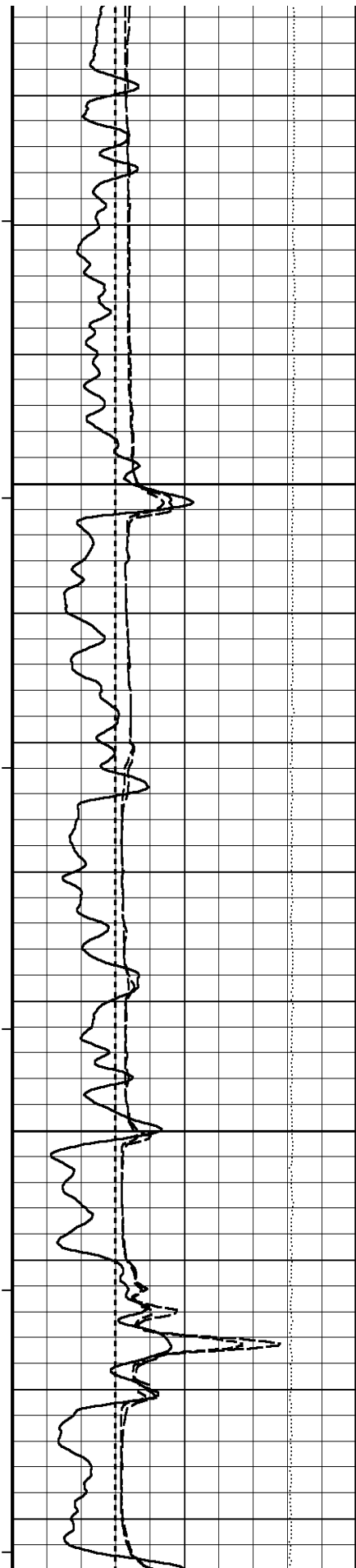
580

$29^{\circ}$

590







660

29°

670

680

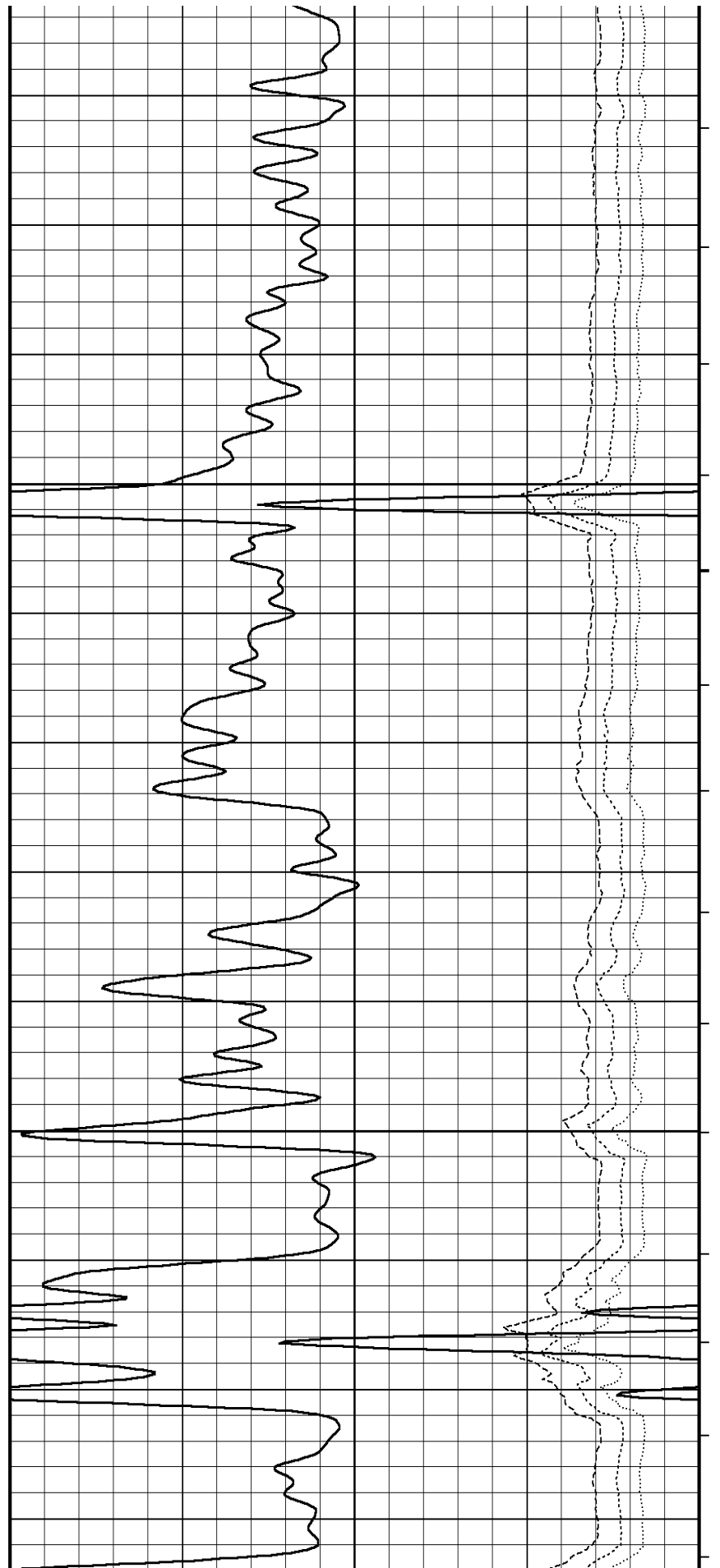
30°

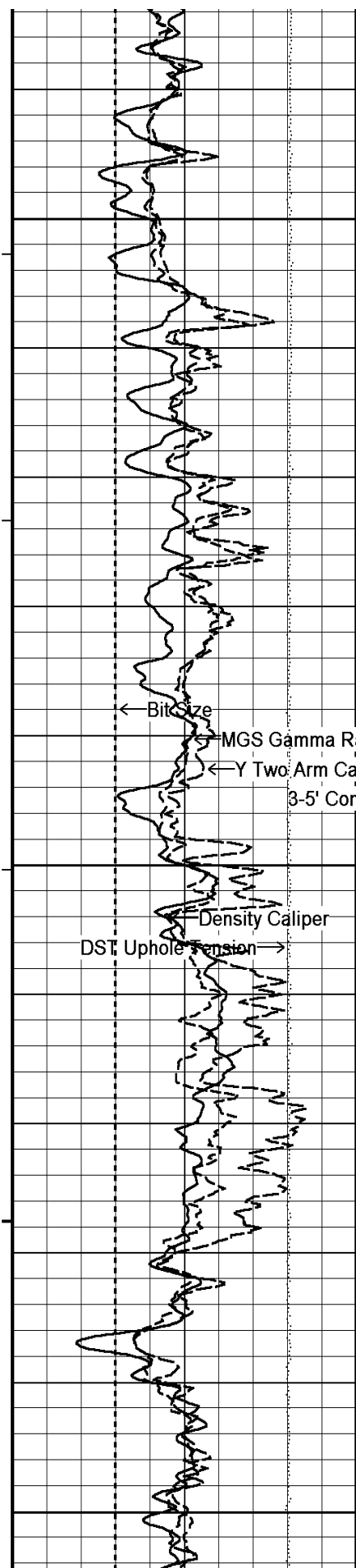
690

700

710

30°





720

730

31°

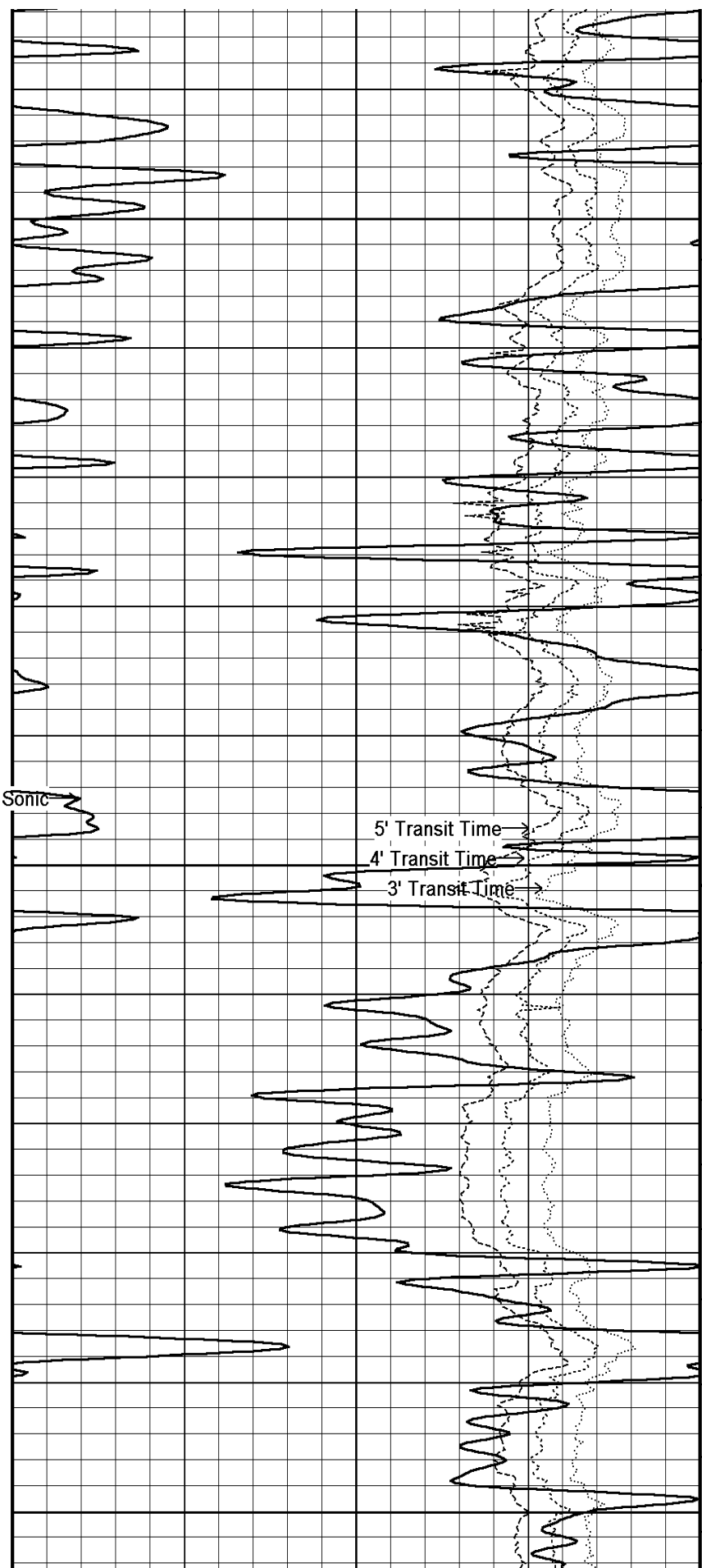
740

750

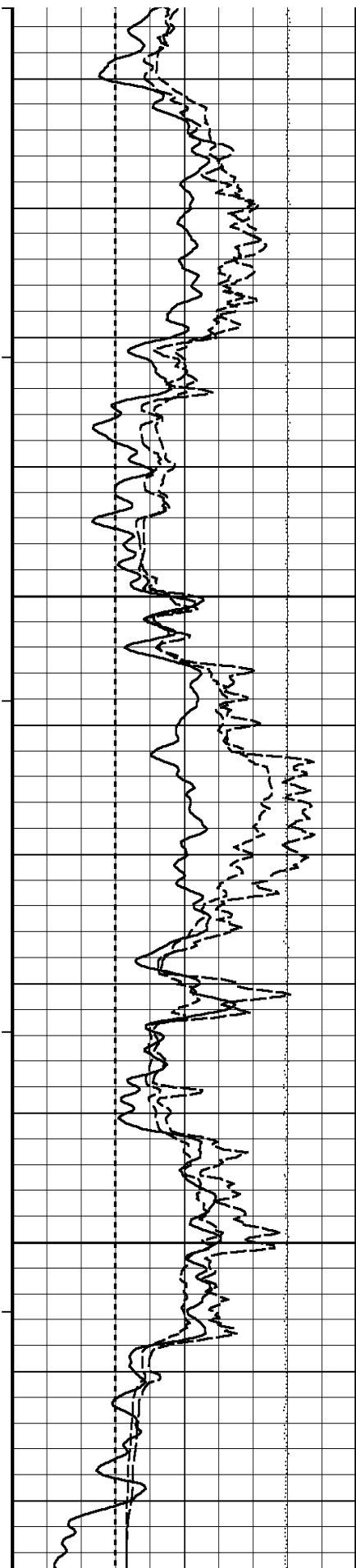
760

32°

770







780

32°

790

800

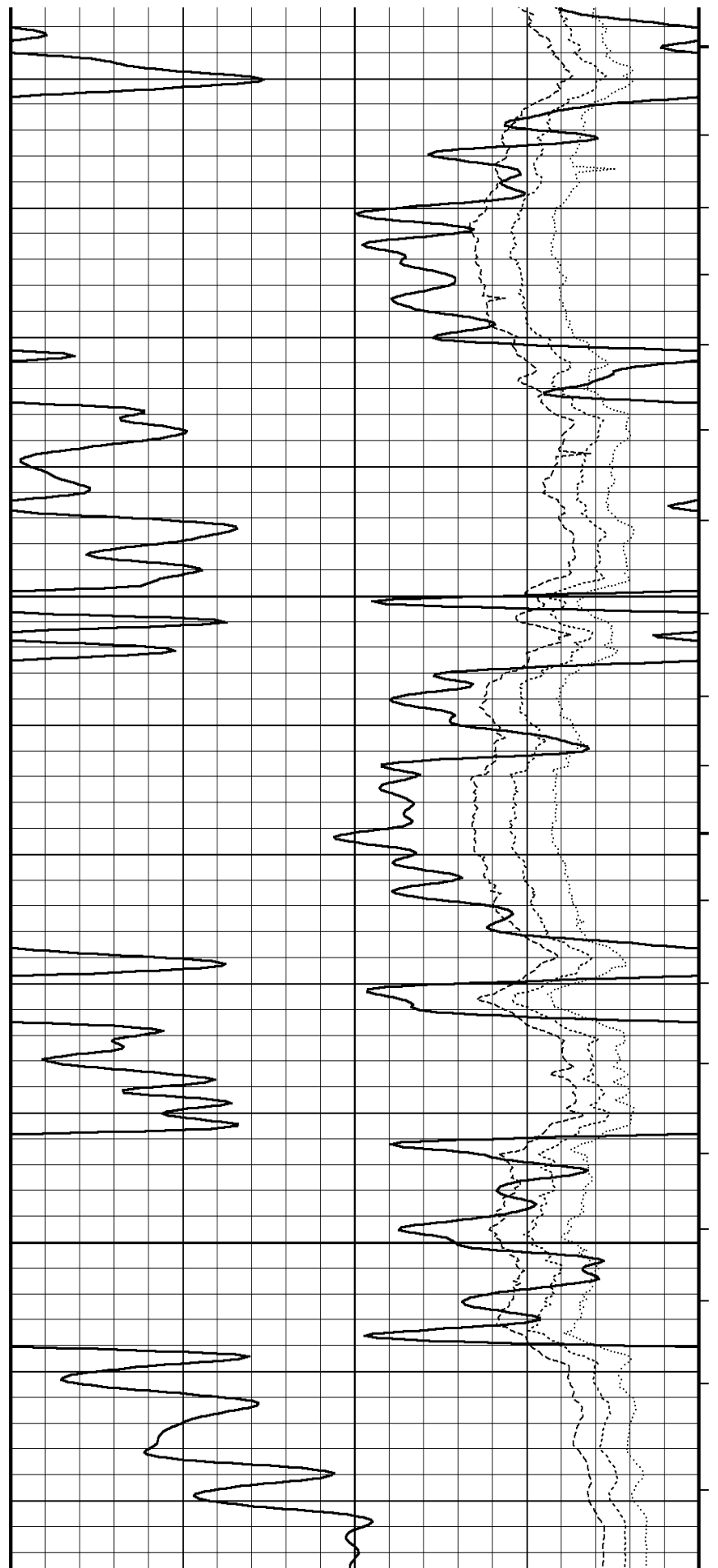
810

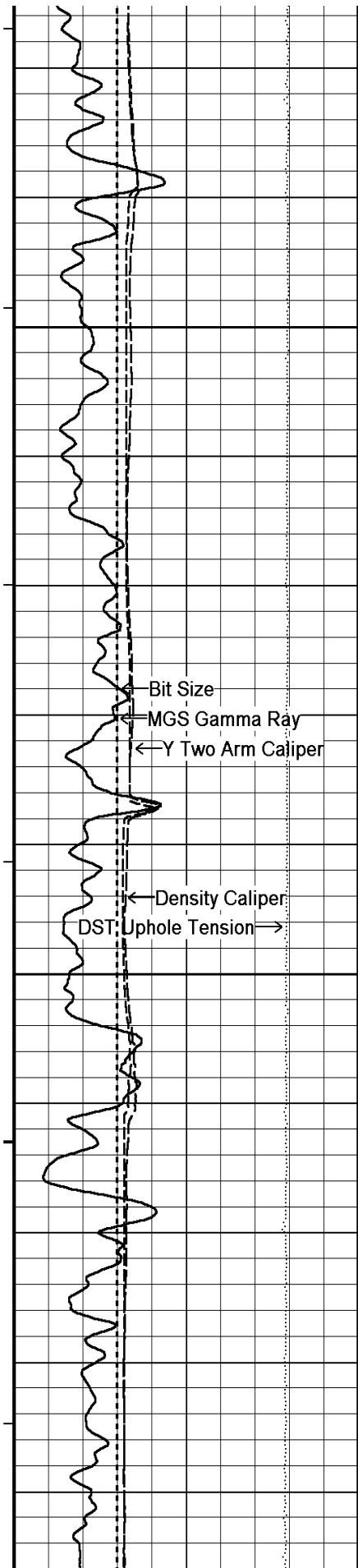
33°

820

830

33°





33°

840

850

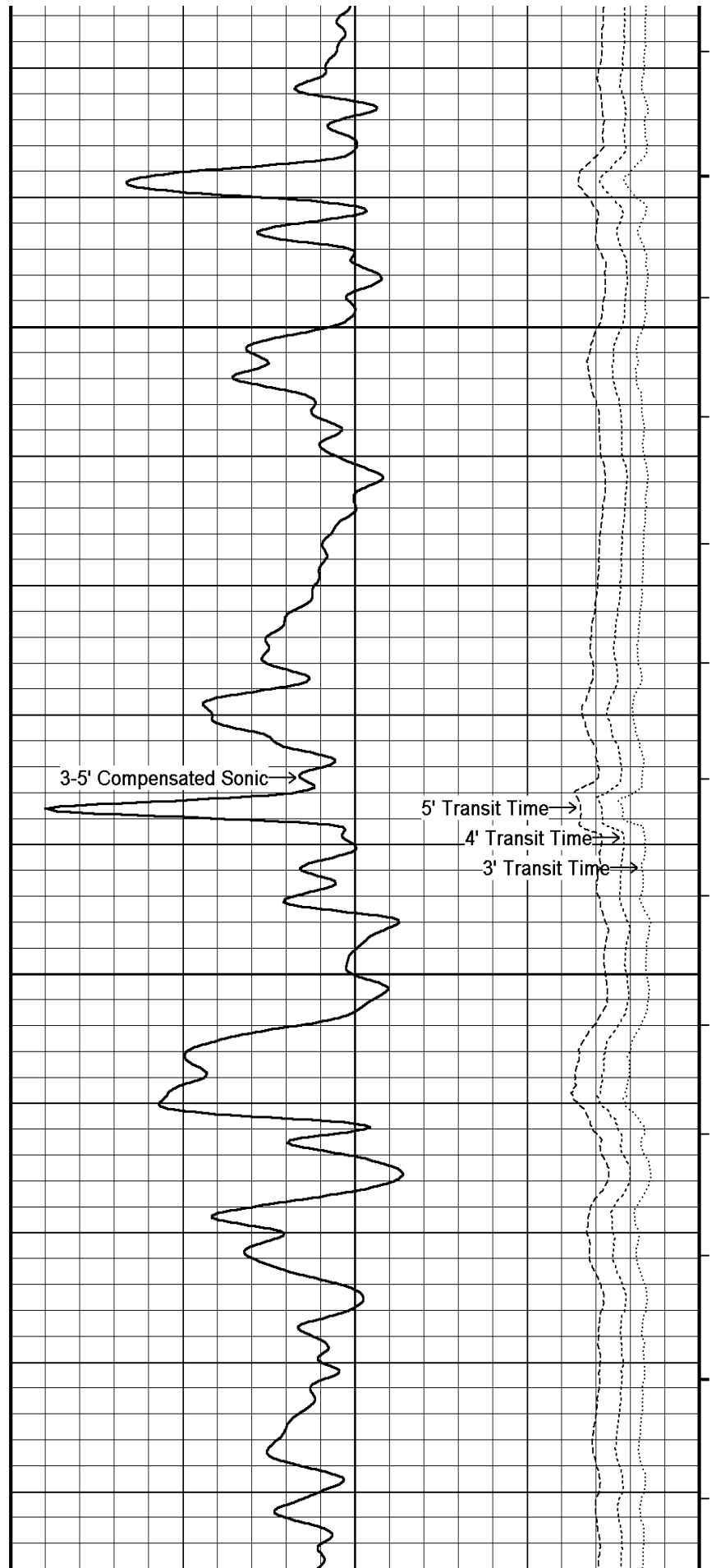
860

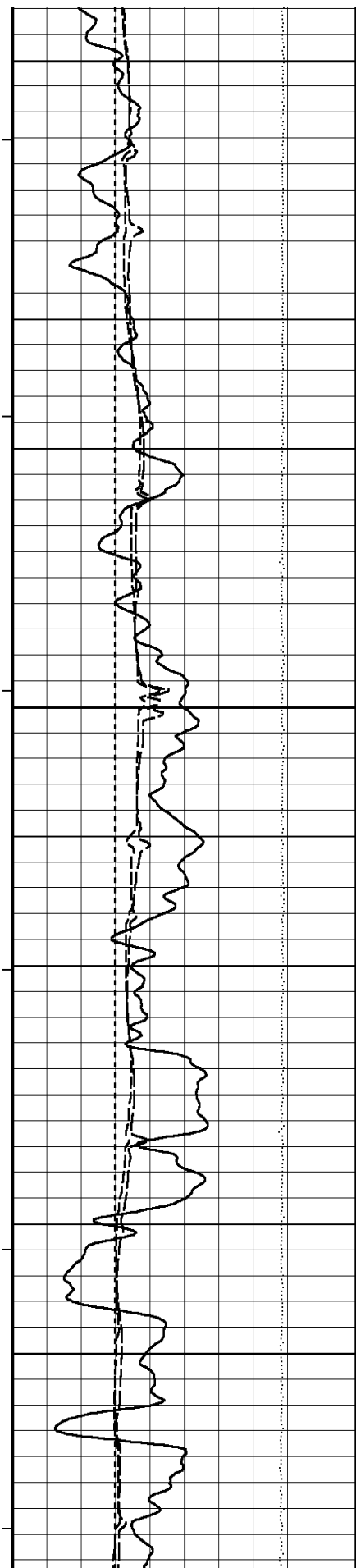
870

880

34°

890





900

910

34°

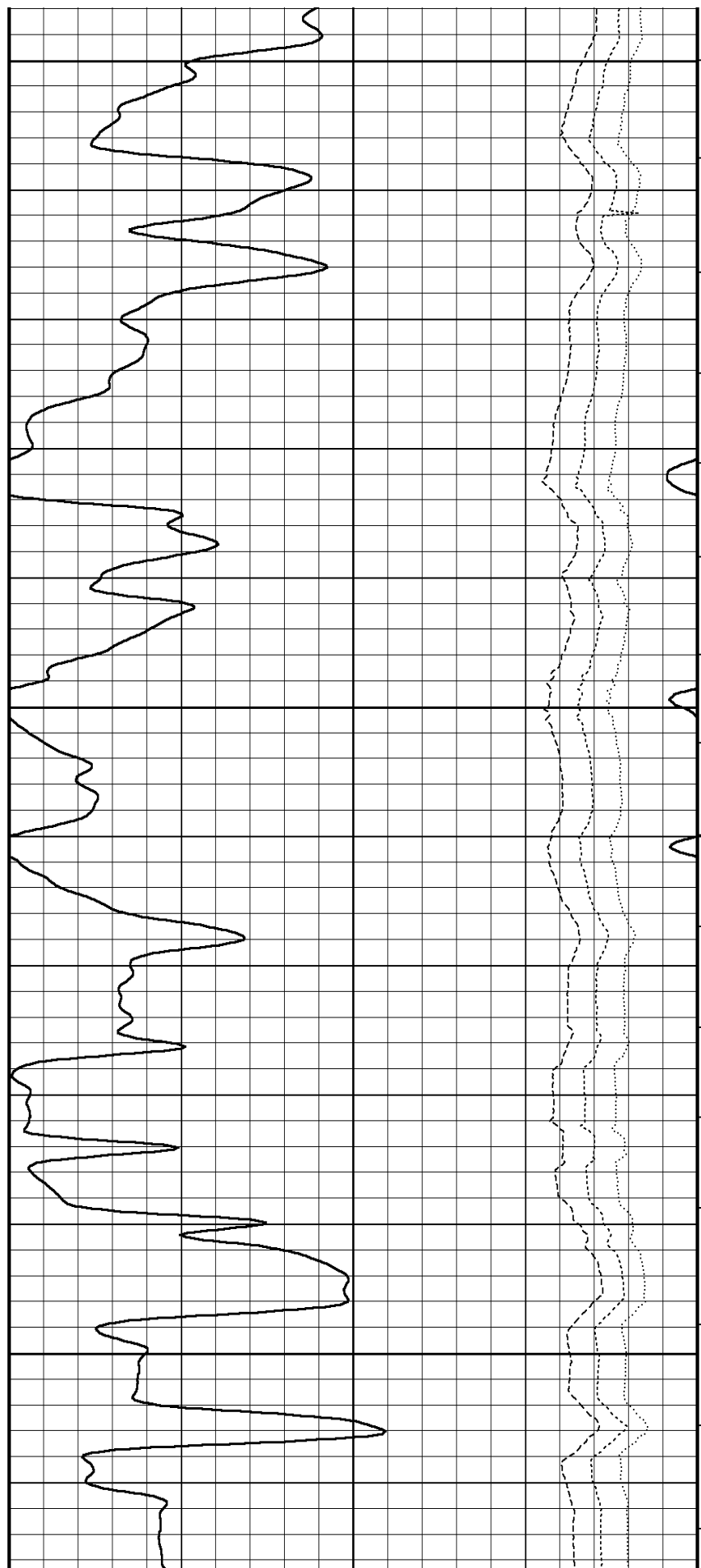
920

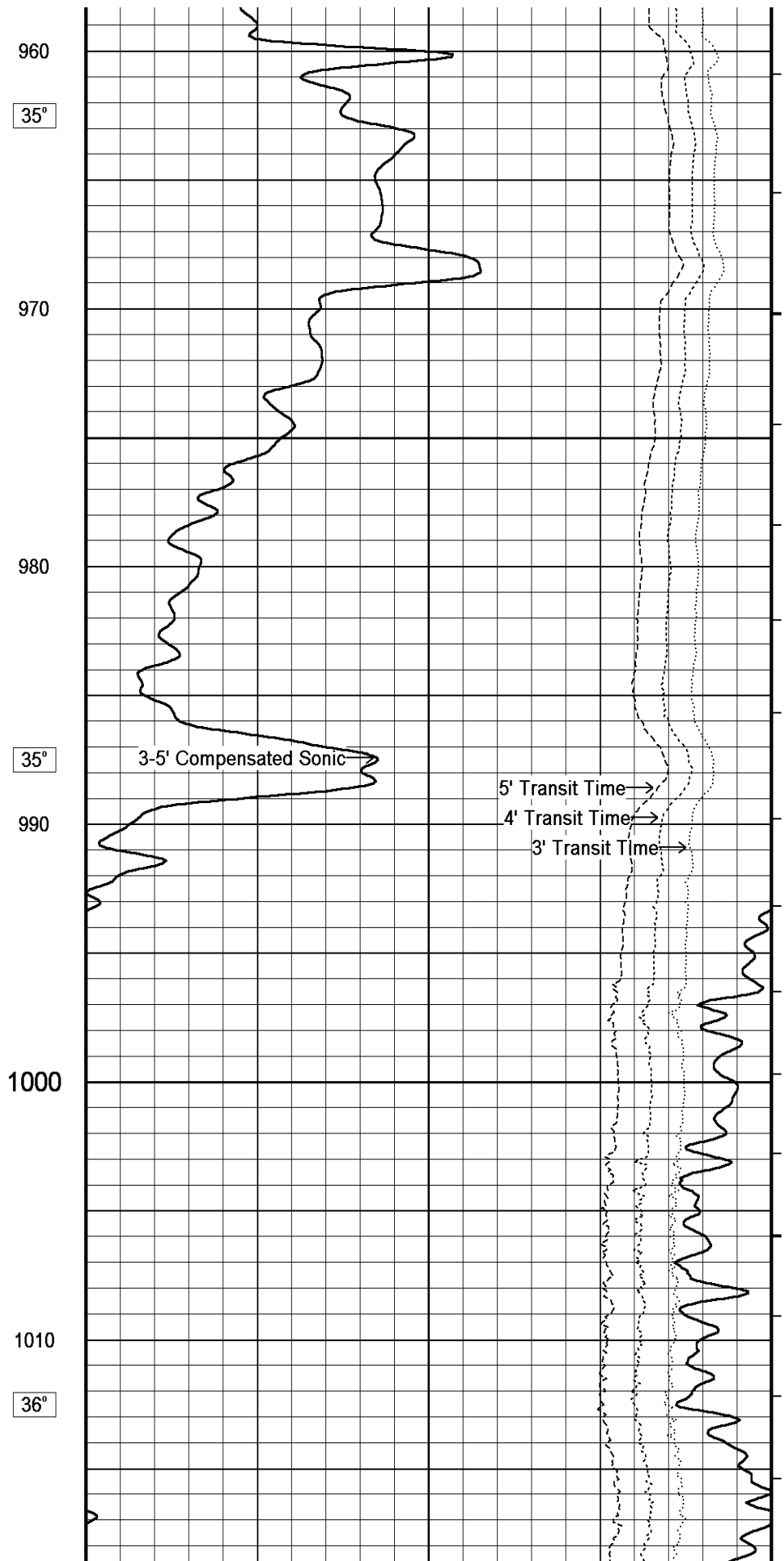
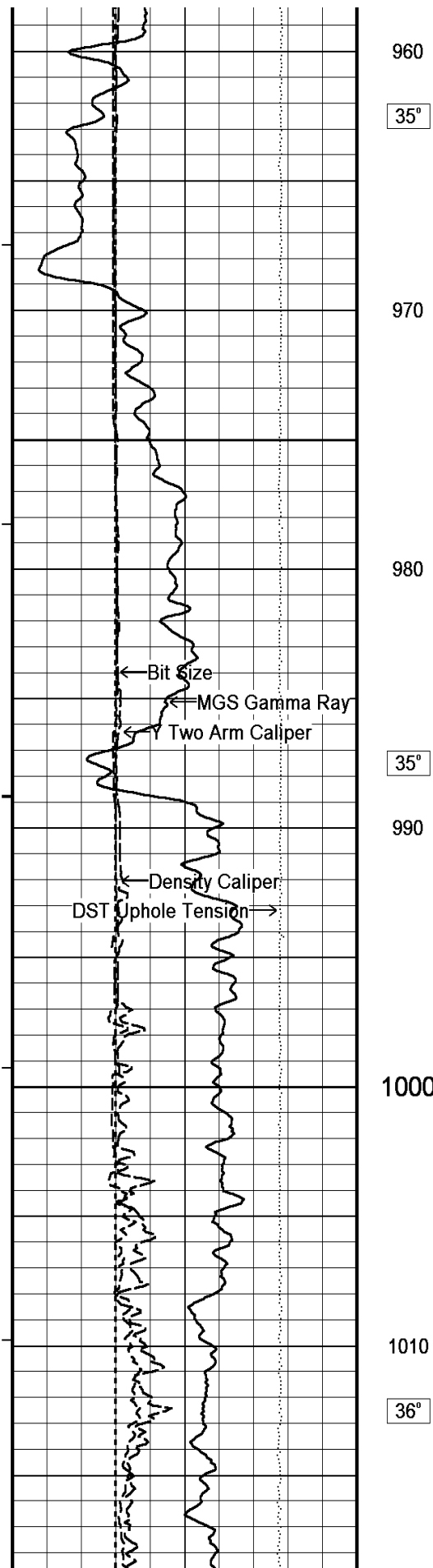
930

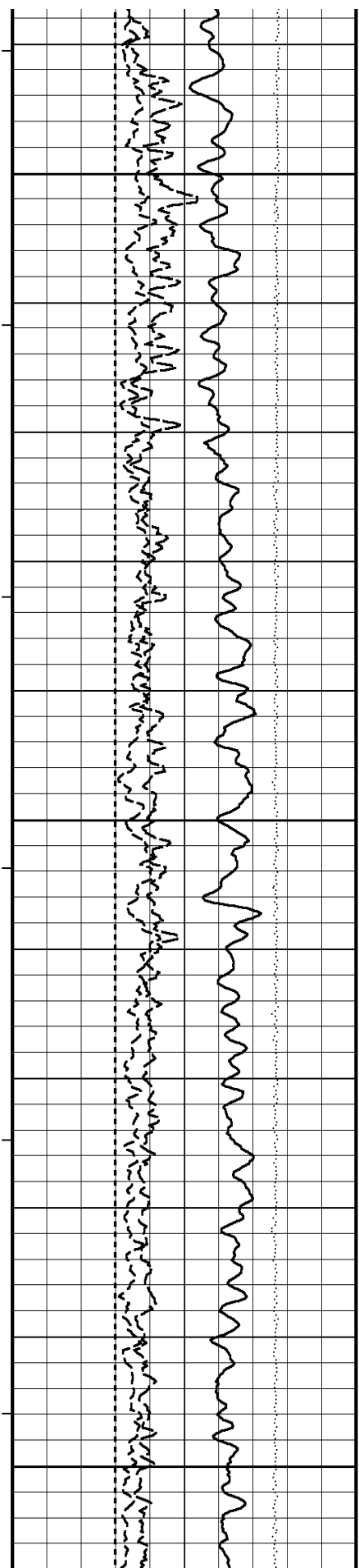
34°

940

950







1020

1030

36°

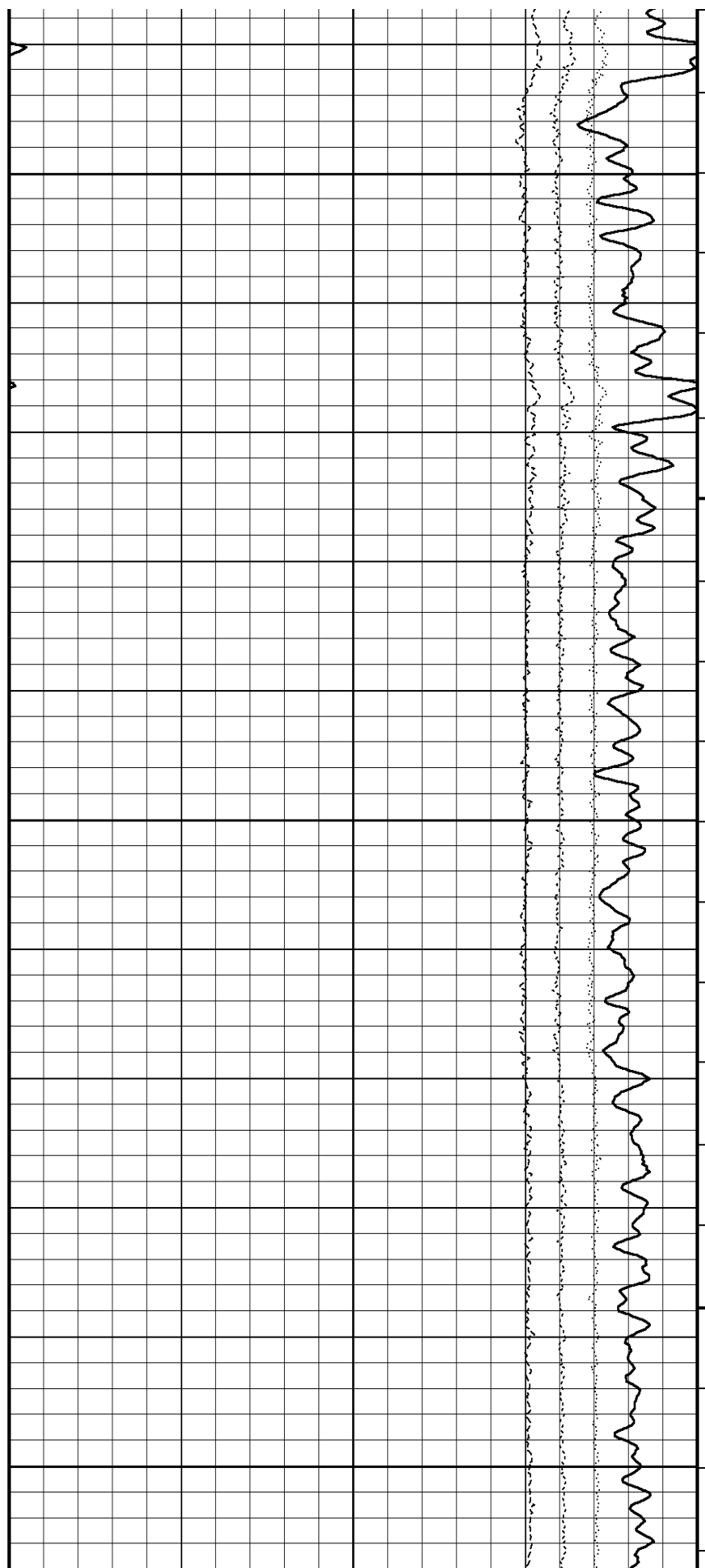
1040

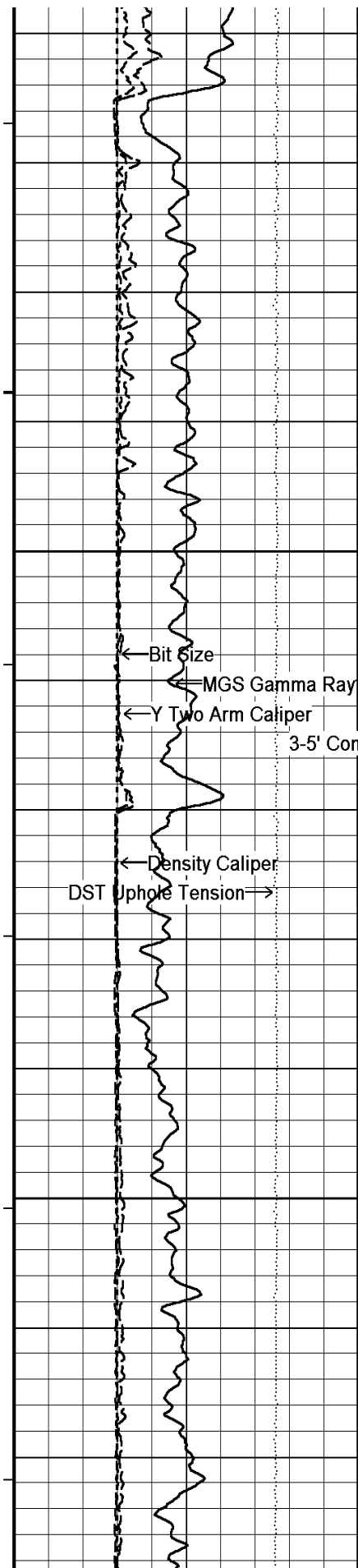
1050

1060

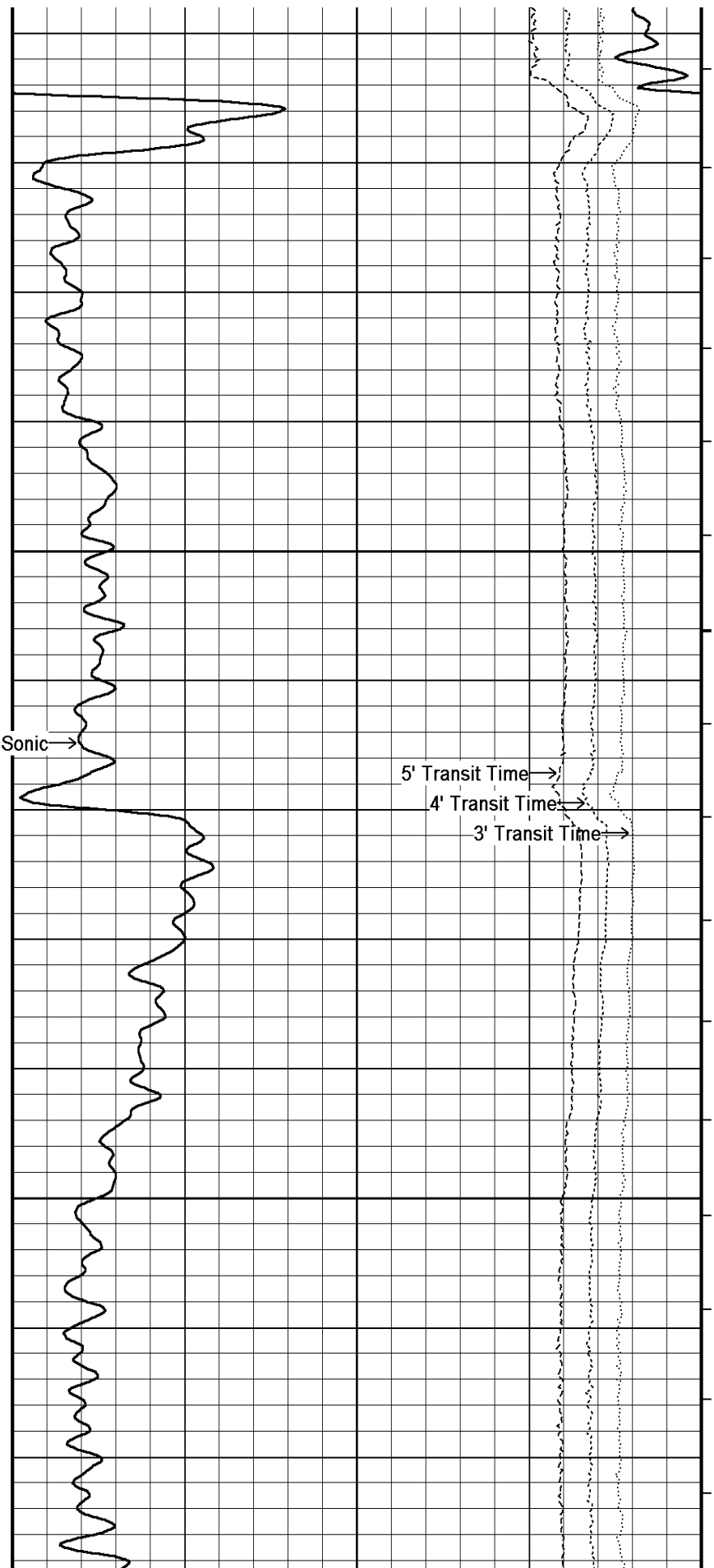
37°

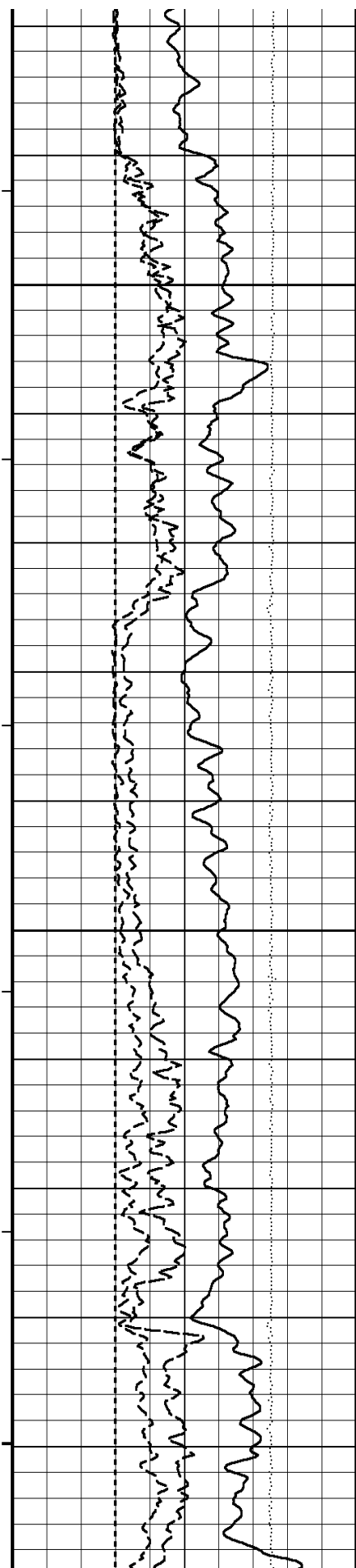
1070





1080  
38°  
1090  
1100  
1110  
38°  
1120  
1130  
39°





1140

1150

1160

39°

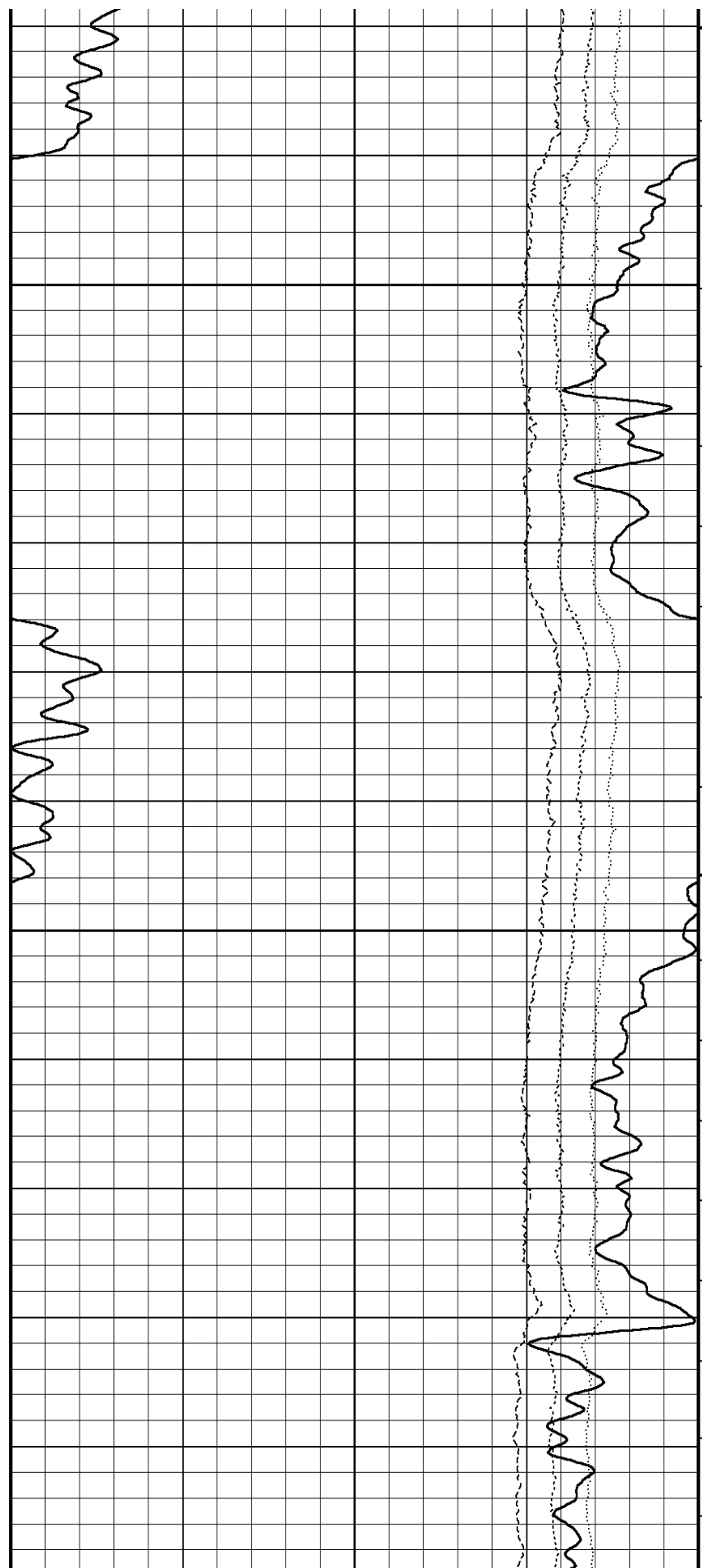
1170

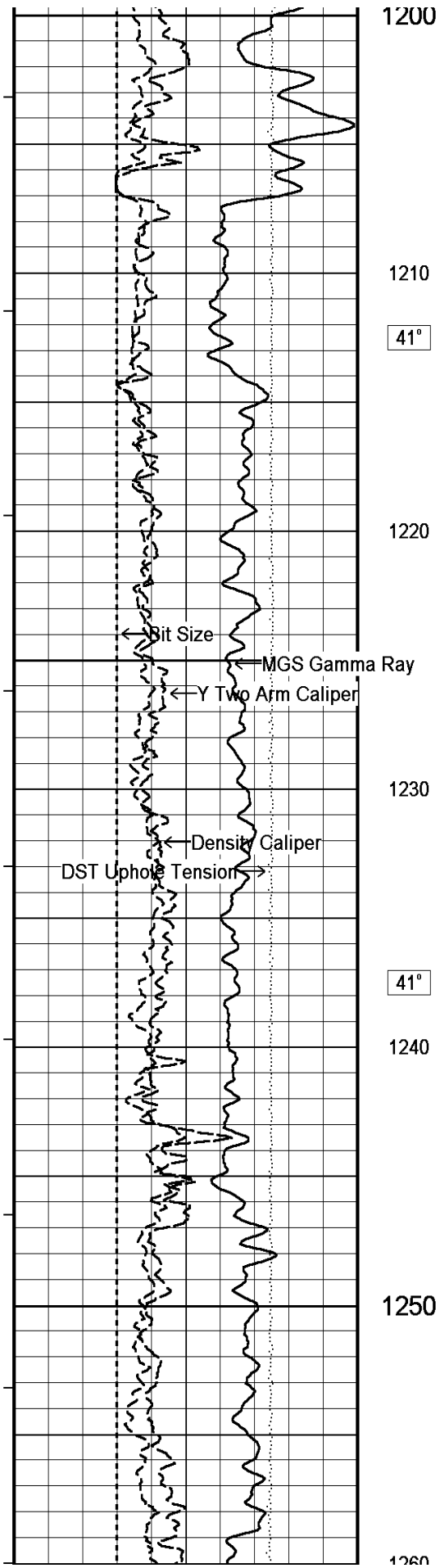
1180

40°

1190

...





1200

1210

1220

1230

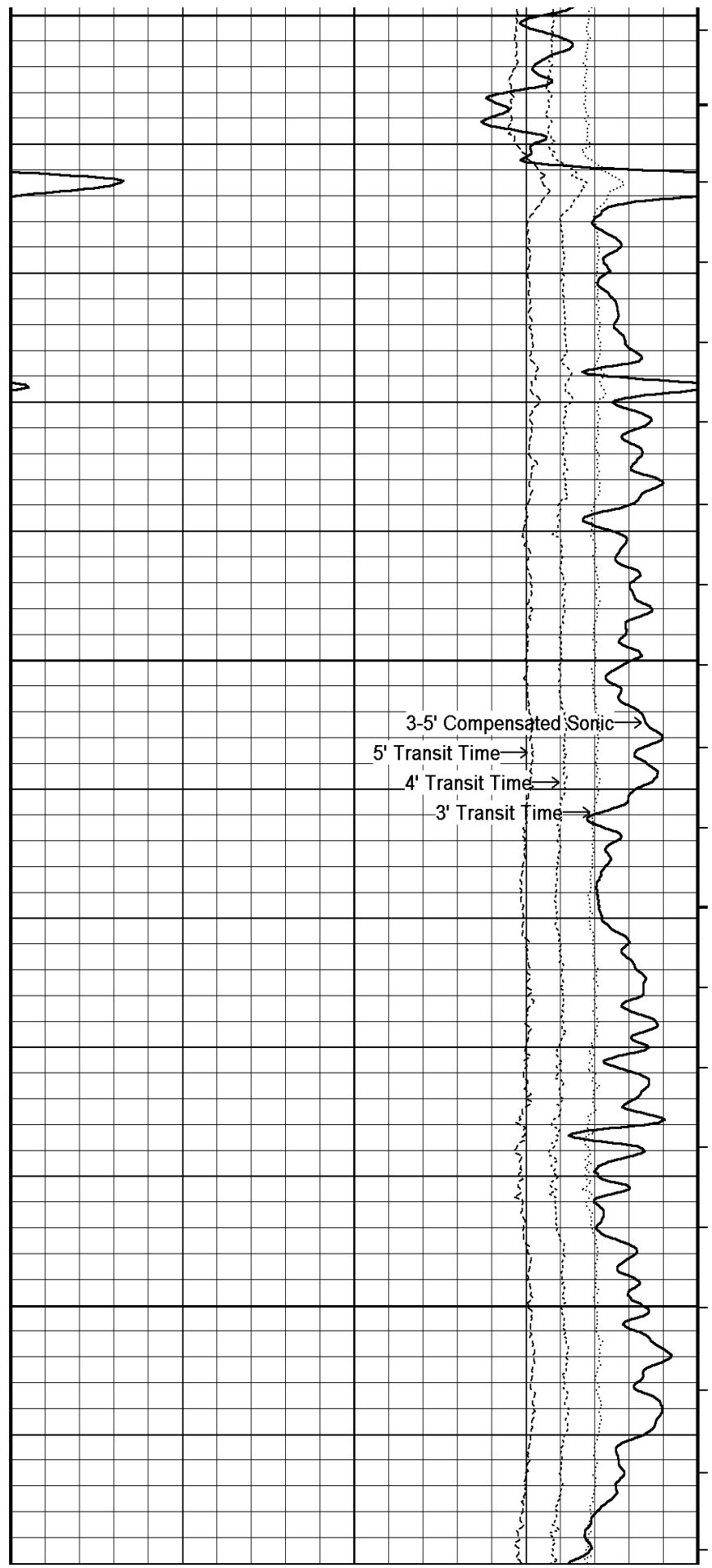
1240

1250

1260

$41^\circ$

$41^\circ$



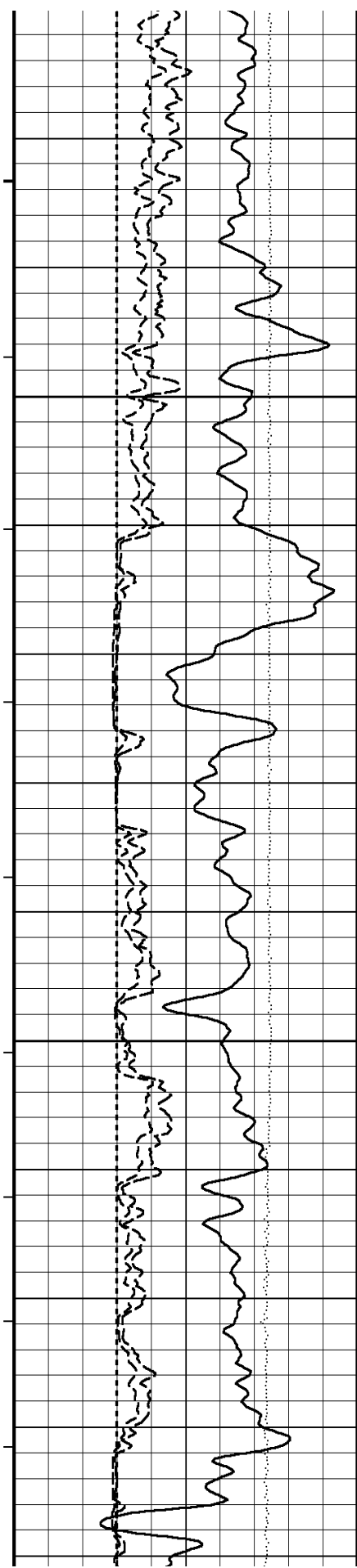
3-5' Compensated Sonic

5' Transit Time

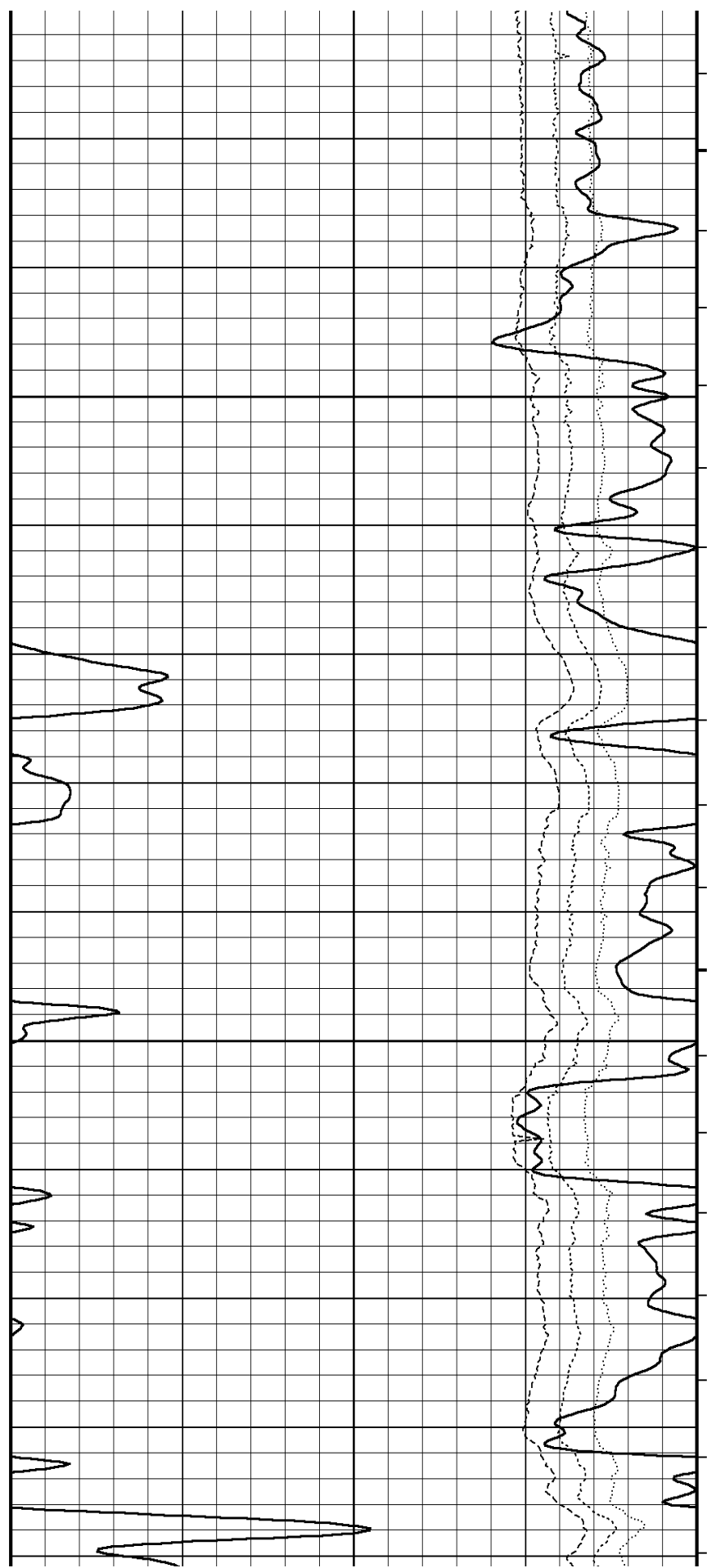
4' Transit Time

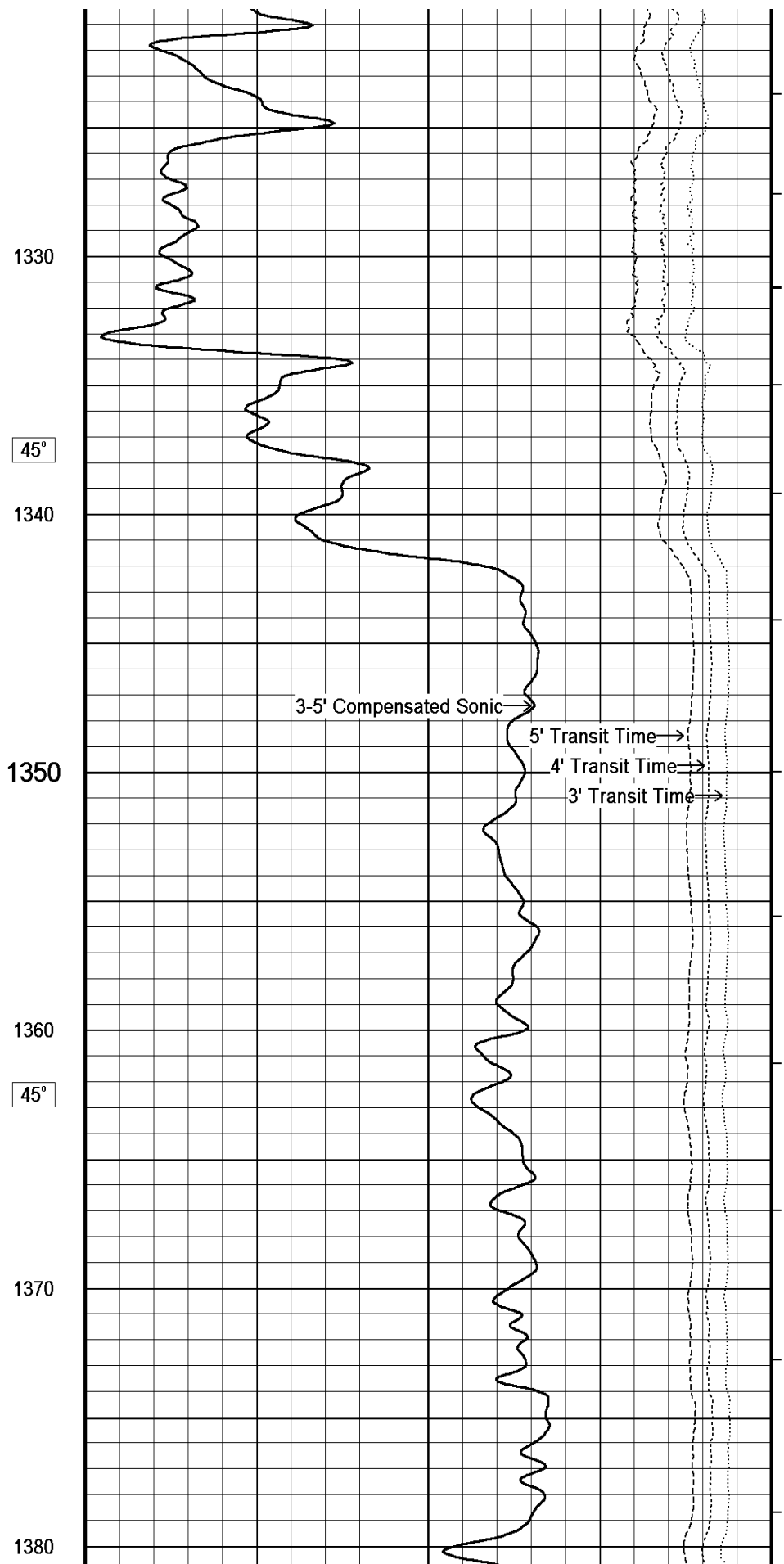
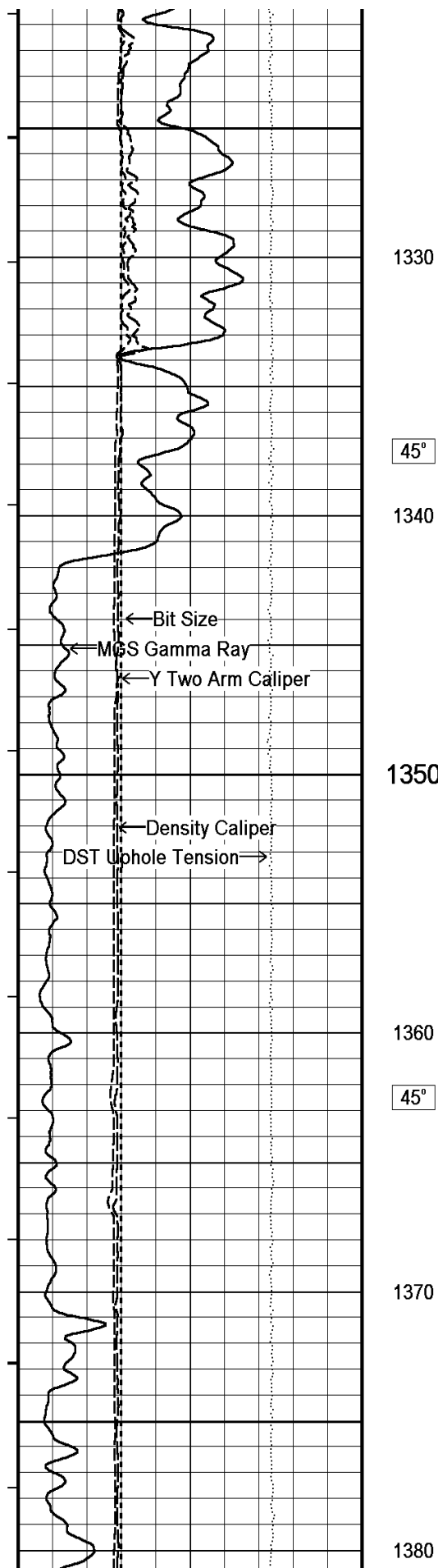
3' Transit Time

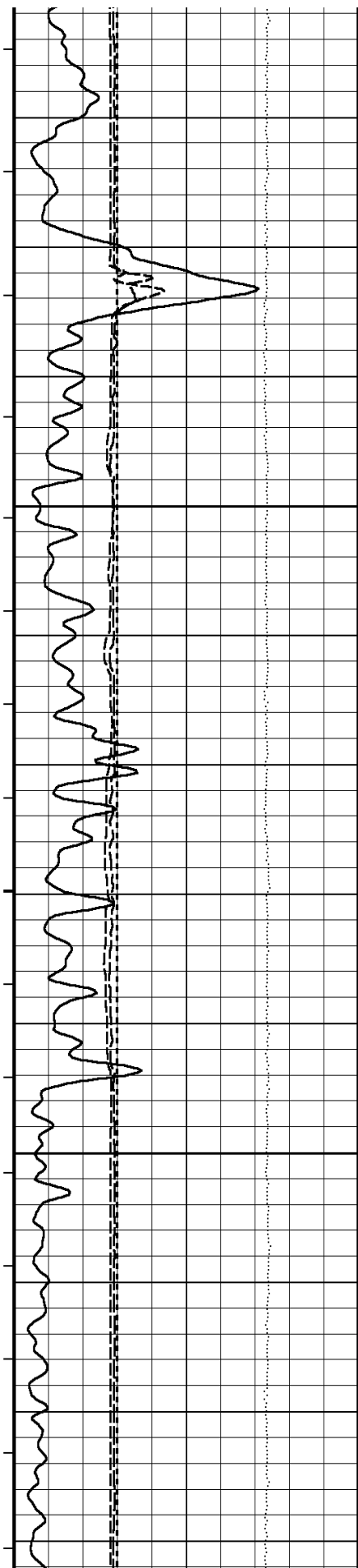




1260 42° 1270 1280 1290 1300 1310 43° 1320







46°

1390

1400

1410

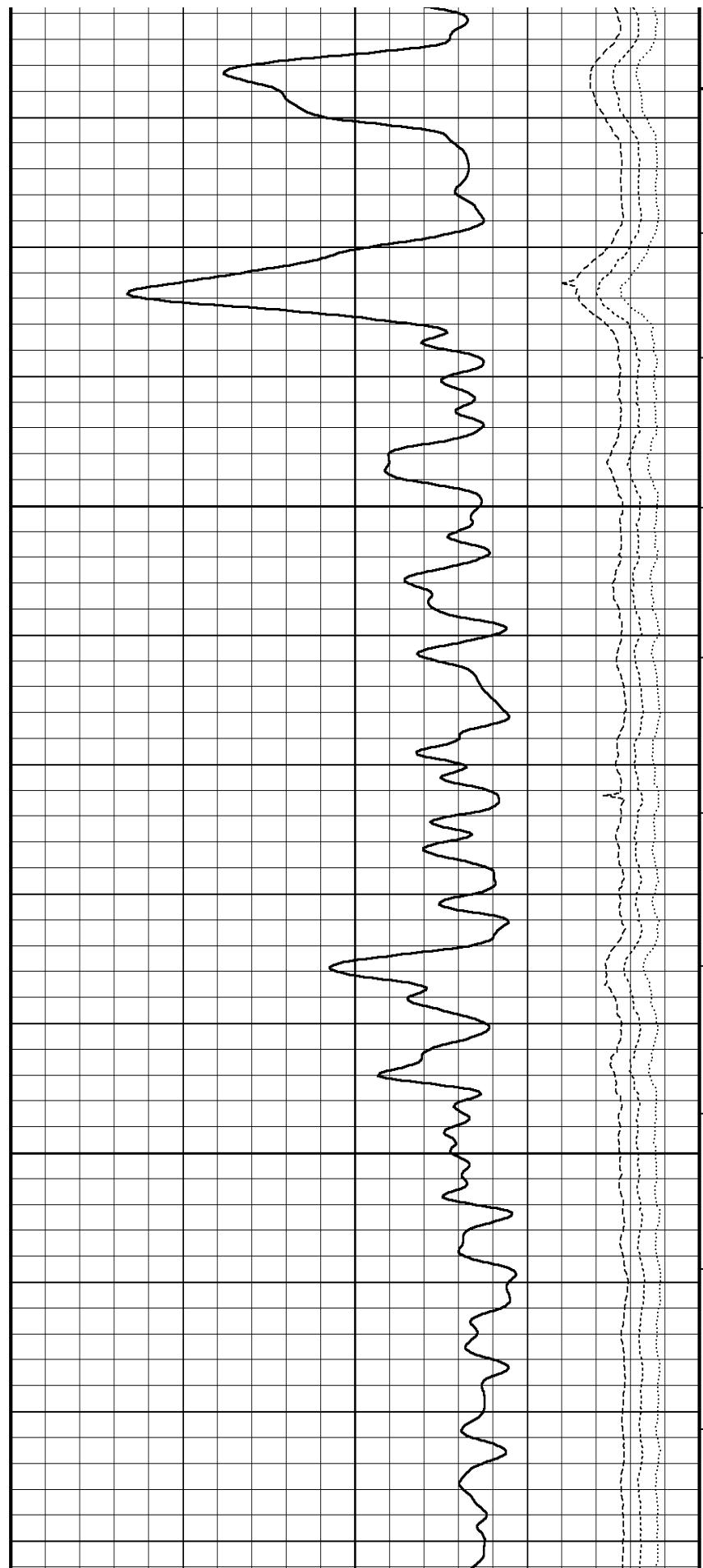
47°

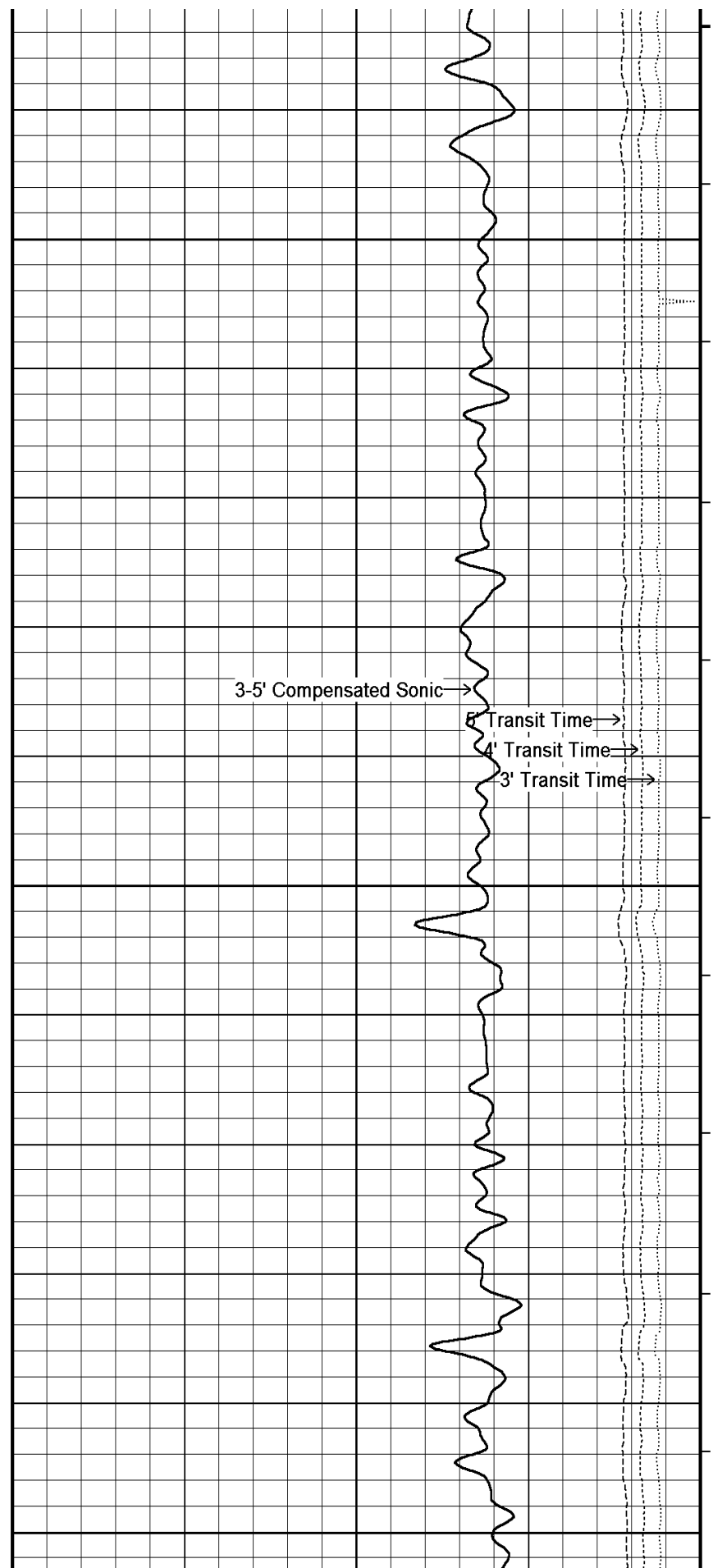
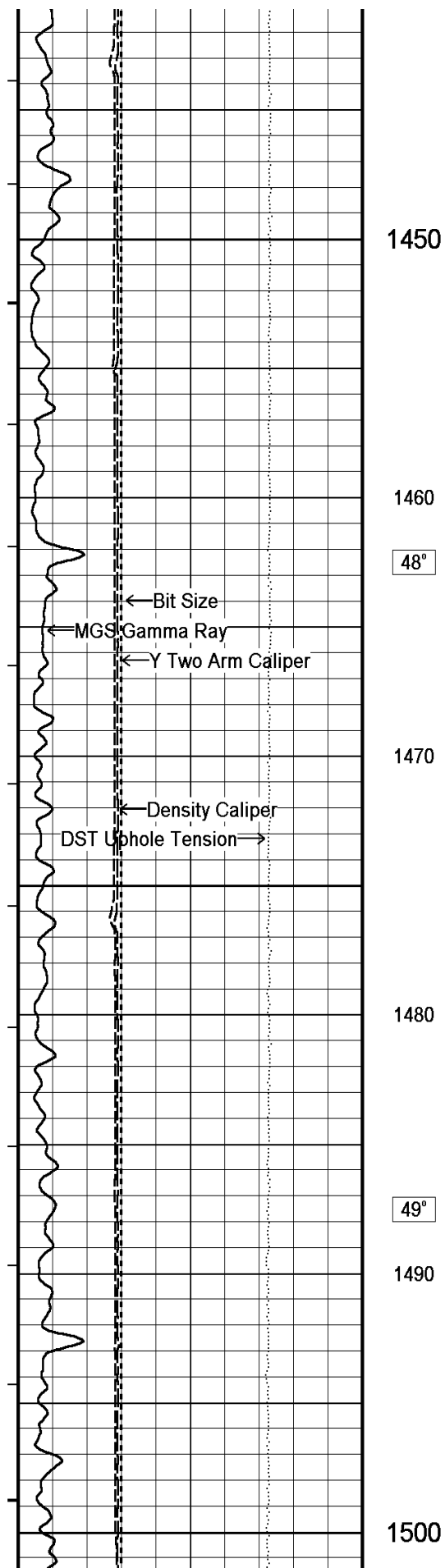
1420

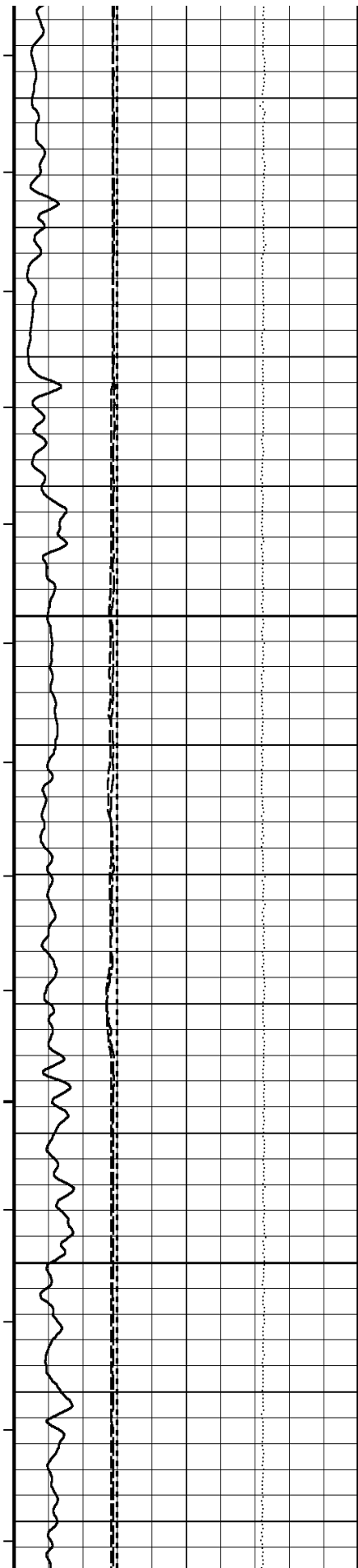
1430

48°

1440







1510

50°

1520

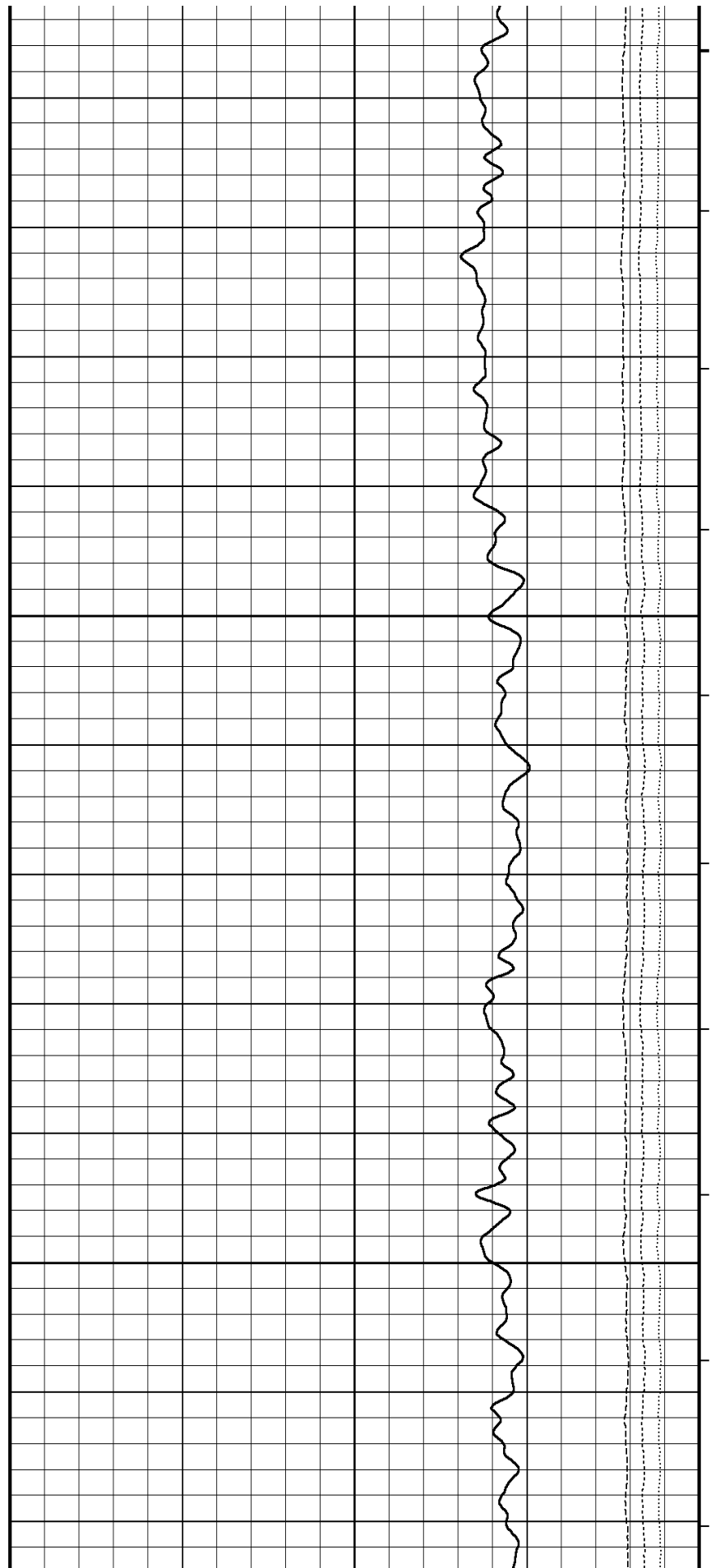
1530

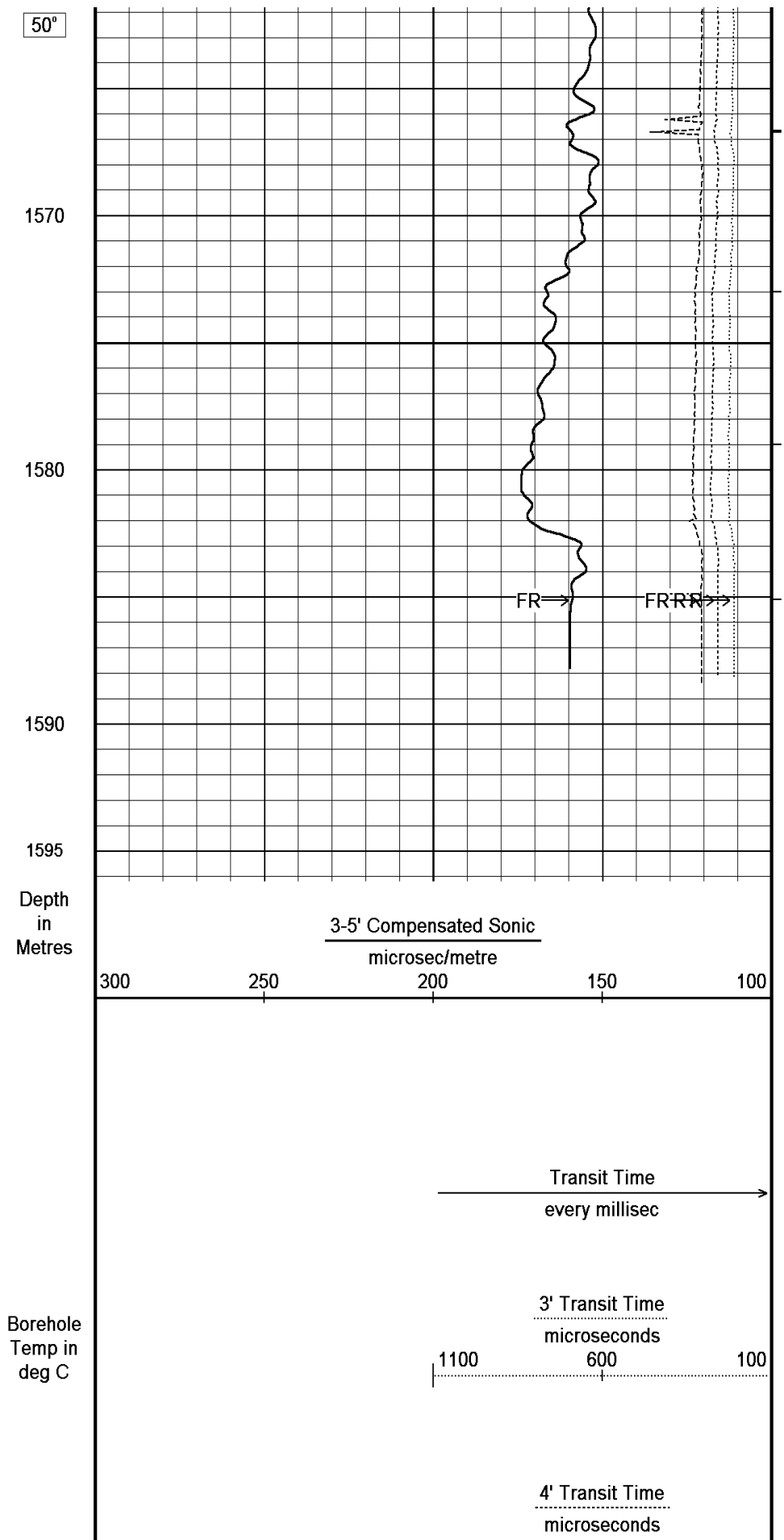
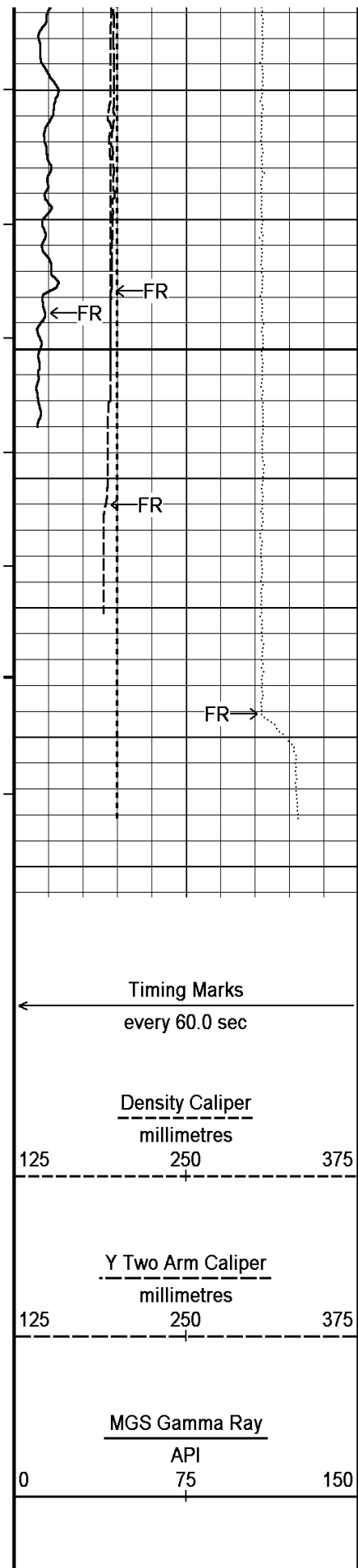
50°

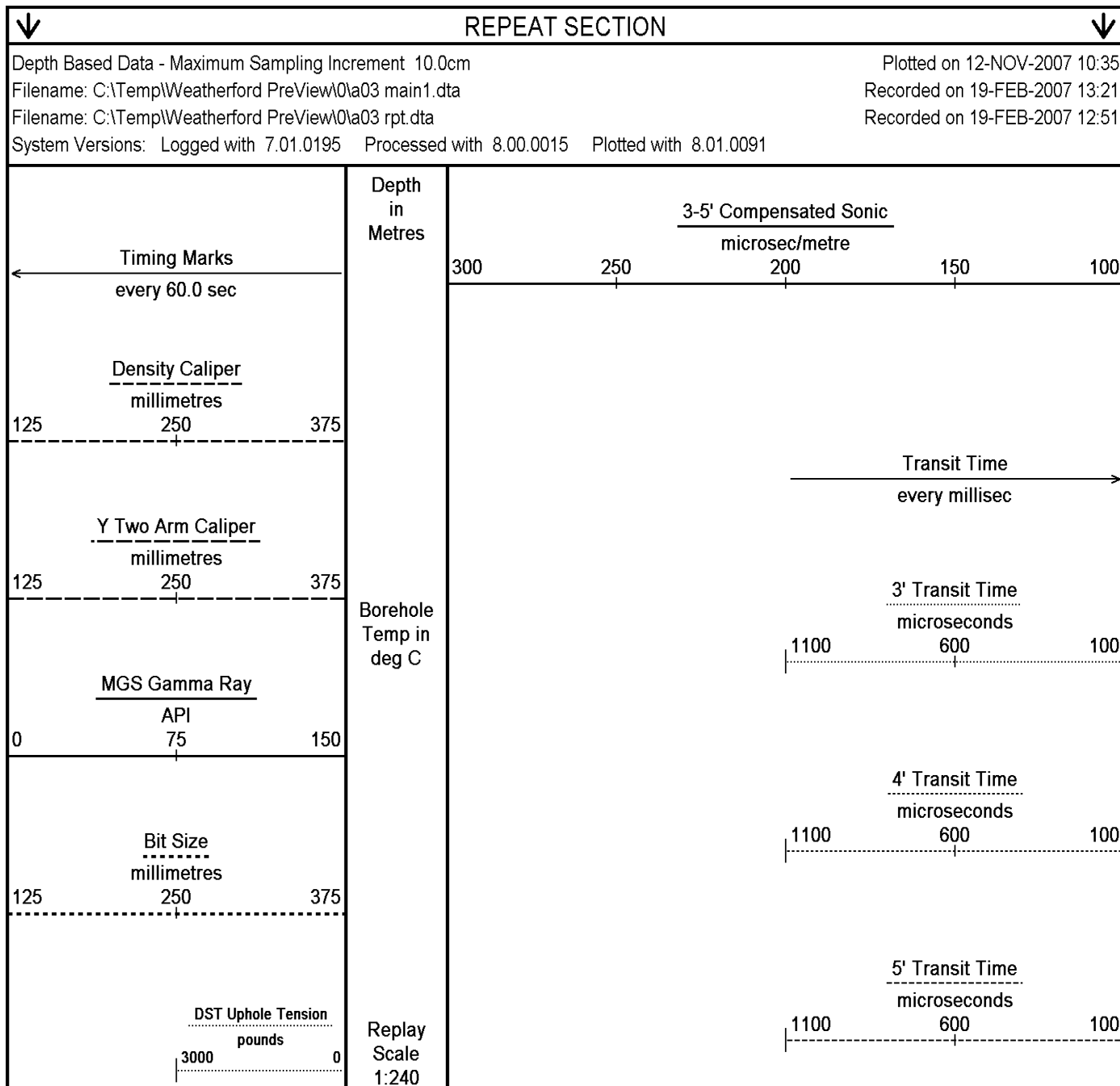
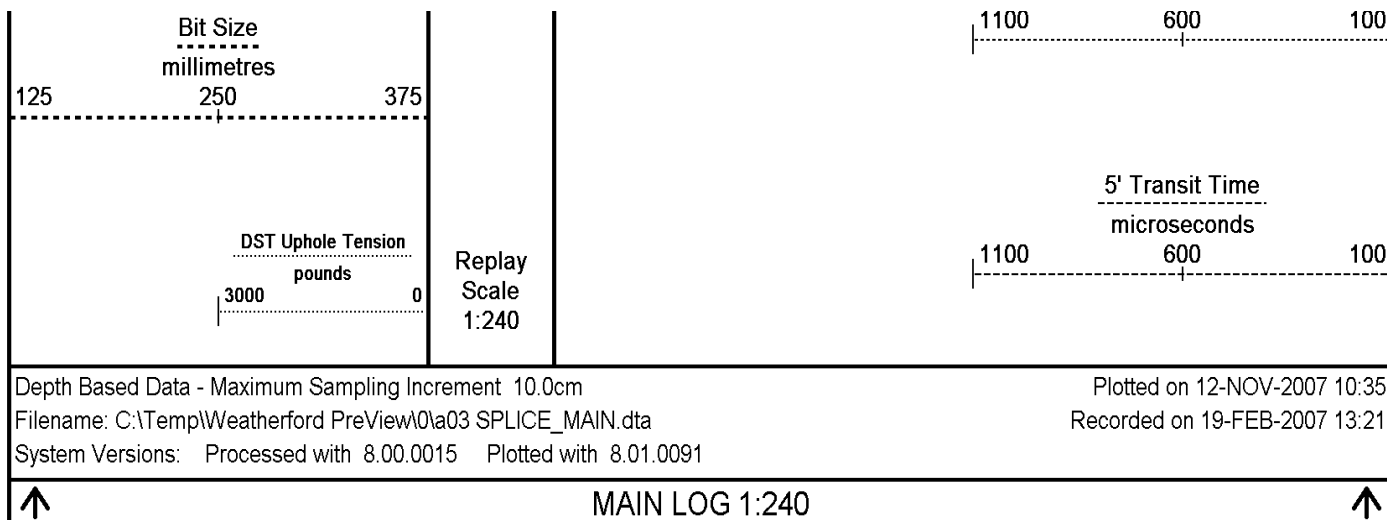
1540

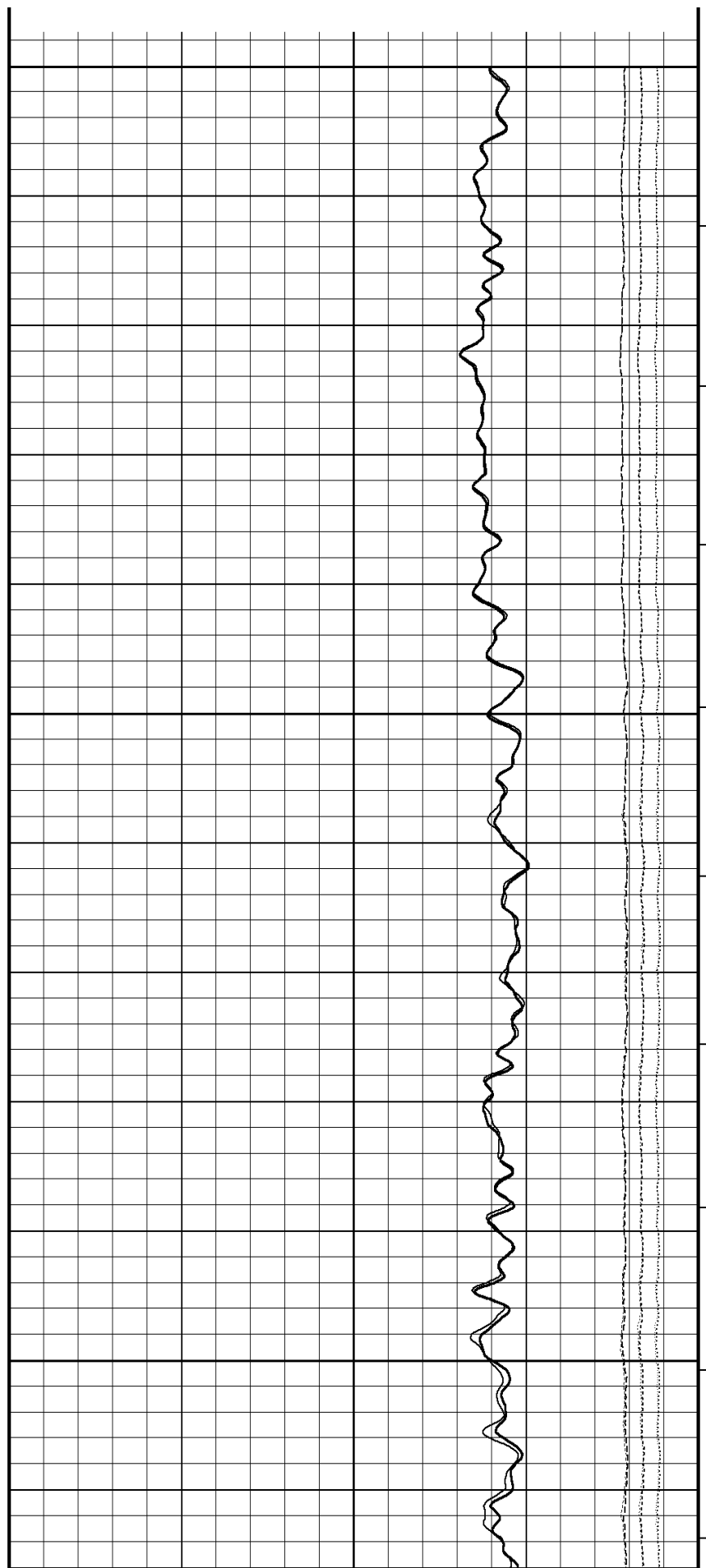
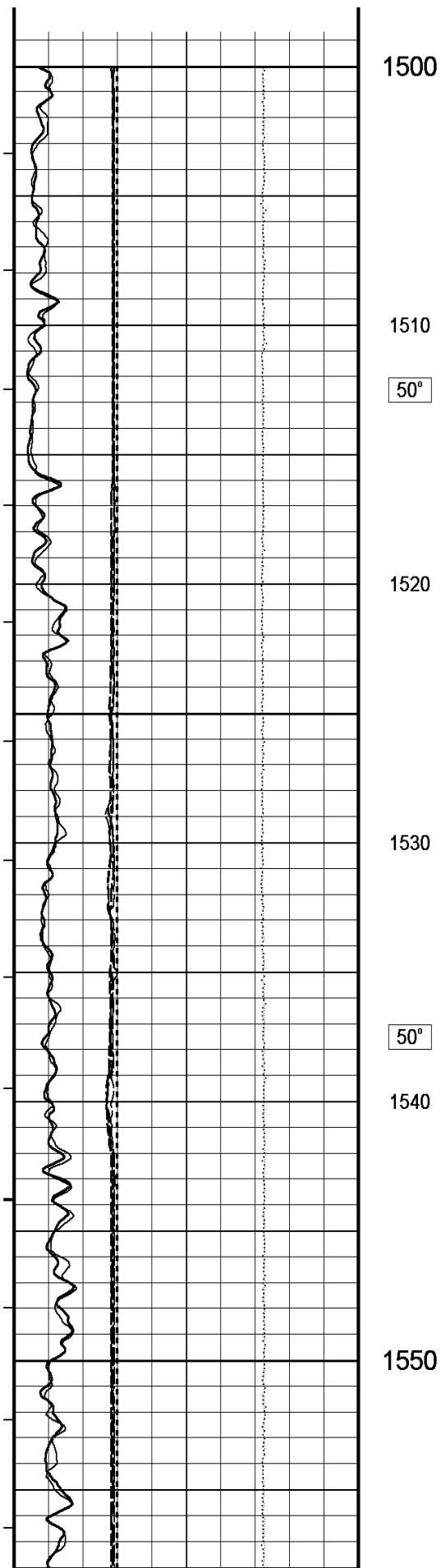
1550

1560

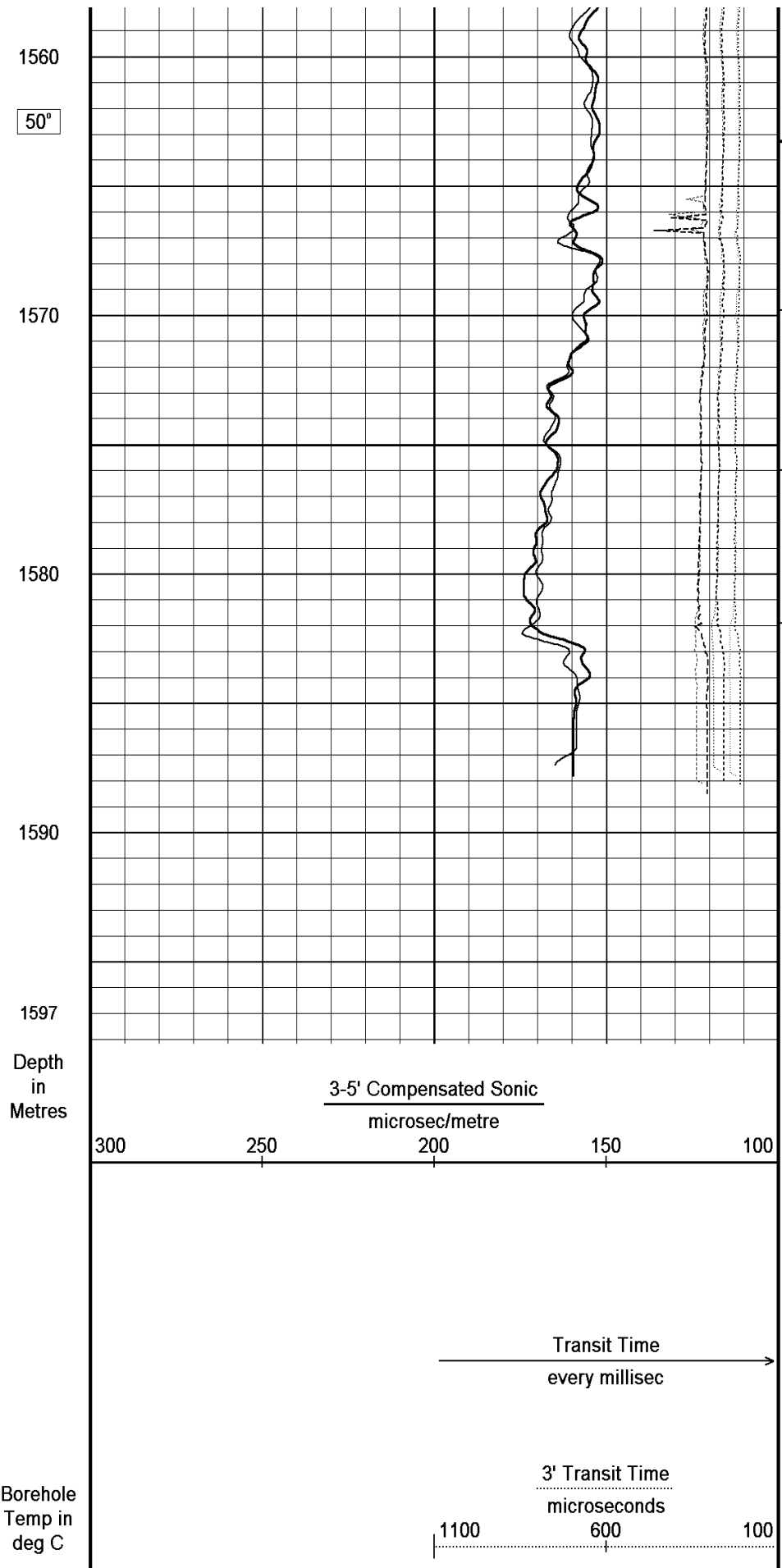
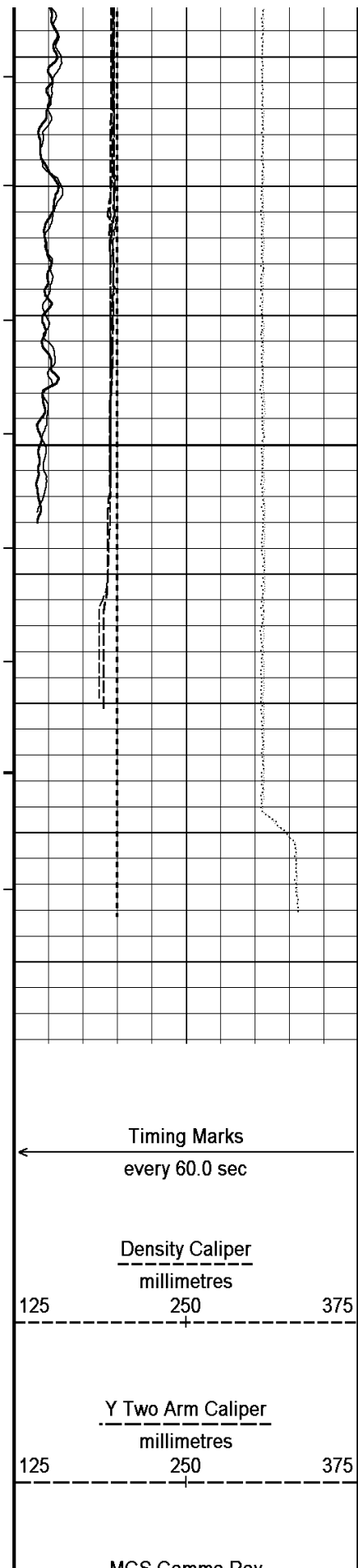


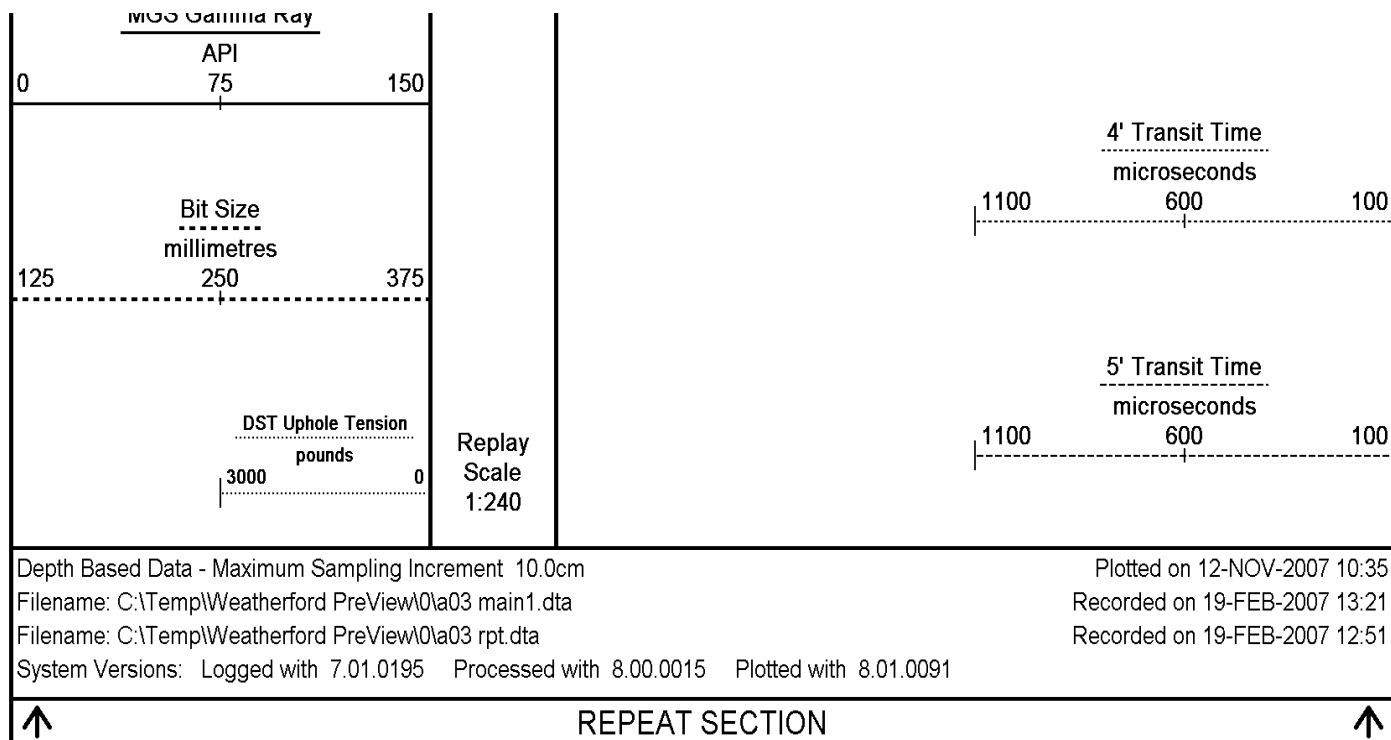












BEFORE SURVEY CALIBRATION			C:\Temp\Weatherford PreView\0\03 rpt.dta
General Constants All 000		Last Edited on 19-FEB-2007,12:14	
General Parameters			
Mud Resistivity	1.110	ohm-metres	
Mud Resistivity Temperature	25.000	degrees C	
Water Level	0.000	metres	
Density/Neutron Processing	Wet Hole		
Hole/Annular Volume and Differential Caliper Parameters			
HVOL Caliper 1	Density Caliper		
HVOL Caliper 2	Y Two Arm Caliper		
Annular Volume Diameter	139.700	mm	
Caliper for Differential Caliper	Density Caliper		
Rwa Parameters			
Porosity used	Base Density Porosity		
Resistivity used	Deep Induction		
RWA Constant A	0.610		
RWA Constant M	2.150		
Gamma Calibration MCG 131		Field Calibration on 19-FEB-2007,09:56	
	Measured	Calibrated (API)	
Background	46	30	
Calibrator (Gross)	1264	824	
Calibrator (Net)	1219	794	
Gamma Constants MCG 131		Last Edited on 19-FEB-2007,11:17	
Gamma Calibrator Number GRC 095			
Mud Density	1220.00	kg/m3	
Caliper Source for Processing	Density Caliper		
Tool Position	Centred		
Concentration of KCl	0.00	kppm	

SP Calibration MCG 131			Field Calibration on 9-FEB-2007 12:52
	Measured	Calibrated (mV)	
Reference 1	100.5	100.0	
Reference 2	-100.0	-100.0	
High Resolution Temperature Calibration MCG 131			Field Calibration on 15-DEC-2006,15:05
	Measured	Calibrated(Deg C)	
Lower	1.00	1.00	
Upper	10.00	10.00	
High Resolution Temperature Constants MCG 131			
Pre-filter Length	11		
FE Calibration MFE 111			Base Calibration on 15-FEB-2007 19:40 Field Check on 19-FEB-2007 12:14
Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	0.0	0.0	
Reference 2	983.2	126.8	
Base Check		278.8	
Field Check		279.0	
FE Constants MFE 111			Last Edited on 3-FEB-2007,04:36
Caliper Source for FE correction	Density Caliper		
Rm Source for FE correction	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Stand-off	Centred	millimetres	
Caliper Calibration MTC 024			Base Calibration on 6-FEB-2007 10:21 Field Calibration on 19-FEB-2007,12:42
Base Calibration			
Reading No	Measured	Calibrator Size (mm)	
1	15472	110.00	
2	18252	162.00	
3	21045	212.00	
4	23841	262.00	
5	26691	311.00	
6	N/A	N/A	
Field Calibration			
	Measured Caliper (mm)	Actual Caliper (mm)	
	209.10	205.70	
Gamma Calibration MGS 029			Field Calibration on 19-FEB-2007,09:56
	Measured	Calibrated (API)	
Background	58	38	
Calibrator (Gross)	1286	832	
Calibrator (Net)	1228	794	
Gamma Constants MGS 029			Last Edited on 19-FEB-2007,11:17
Gamma Calibrator Number	GRCC095		
Mud Density	1220.00	kg/m3	
Caliper Source for Processing	Density Caliper		
Tool Position	Centred		
Concentration of KCl	0.00	kppm	
SP Calibration MGS 029			Field Calibration on 7-DEC-2006,17:01

	Measured	Calibrated (mV)		
Reference 1	100.0	100.0		
Reference 2	-100.0	-100.0		
High Resolution Temperature Calibration MGS 029			Field Calibration on 7-DEC-2006,17:01	
	Measured	Calibrated(Deg C)		
Lower	1.00	1.00		
Upper	5.00	5.00		
High Resolution Temperature Constants MGS 029				
Pre-filter Length	11			
Micro Normal and Micro Inverse Calibration MML 015			Base Calibration on 19-FEB-2007,09:53 Field Check on 19-FEB-2007,12:39	
Base Calibration				
Channel	Resistor 1	Measured Resistor 2	Calibrated (ohm-m) Resistor 1	Resistor 2
Micro Normal	9.9	48.5	5.1	25.6
Micro Inverse	9.9	48.7	3.4	16.9
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	79.8		79.8	
Micro Inverse	52.6		52.5	
Micro Normal and Micro Inverse Constants MML 015			Last Edited on 19-FEB-2007,09:53	
Micro Normal K Factor	0.5110			
Micro Inverse K Factor	0.3380			
Standoff Offset	N/A		millimetres	
Caliper Calibration MML 015			Base Calibration on 19-FEB-2007,09:55 Field Calibration on 19-FEB-2007,12:42	
Base Calibration				
Reading No	Measured		Calibrator Size (mm)	
1	13860		162.00	
2	17089		212.00	
3	20617		262.00	
4	24375		311.00	
5	27976		355.00	
6	N/A		N/A	
Field Calibration				
	Measured Caliper (mm)		Actual Caliper (mm)	
	210.20		205.70	
Neutron Calibration MDN 016			Base Calibration on 11-JAN-2007 20:47 Field Check on 19-FEB-2007 10:29	
Base Calibration				
	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3219	98	3714	110
Ratio	32.703		33.764	
Field Calibrator at Base			Calibrated (cps)	
			2486	3648
Ratio	0.681			
Field Check			Calibrated (cps)	
			2589	3773
Ratio	0.686			
Neutron Constants MDN 016			Last Edited on 17-FEB-2007,21:41	
Neutron Source Id	277			

Neutron Jig Number	Nb3b	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	mm
Mud Density	1000.00	kg/m3
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kPa
Temperature Source	Constant Value	
Temperature	20.00	degrees C
Mud Salinity	0.00	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

### Photo Density Calibration MPD 130

Base Calibration on 12-MAR-2007,15:18  
Field Check on

Density Calibration		Measured		Calibrated (sdu)	
Base Calibration		Near	Far	Near	Far
Reference 1	70908	37221	60352	31615	
Reference 2	28626	3008	25043	2540	

Field Check at Base  
1027.6 1384.5

Field Check  
0.0 0.0

PE Calibration		Measured		Calibrated
Base Calibration		WH	Ratio	Ratio
Background	WS 184	909		
Reference 1	30385	71000	0.431	0.400
Reference 2	7753	26700	0.293	0.272

Field Check at Base  
184.1 909.1

Field Check  
0.0 0.0

### Density Constants MPD 130

Last Edited on 19-FEB-2007,11:18

Density Source Id	16151b
Nylon Calibrator Number	608
Aluminium/Fe Calibrator Number	608
Density Shoe Profile	4 inch
Caliper Source for Processing	Density Caliper
PE Correction to Density	Not Applied
Mud Density	1220.00 kg/m3
Mud Density Z/A Correction	1.11
Mud Filtrate Density	1000.00 kg/m3
Dry Hole Mud Filtrate Density	1000.00 kg/m3
DNCT	0.00 kg/m3
CRCT	0.00 kg/m3
Density Z/A Correction	Advanced
Matrix Density (kg/m3)	Depth (m)
2710.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

# Caliper Calibration MPD 130

Base Calibration on 19-FEB-2007 10:46  
Field Calibration on 19-FEB-2007,12:42

## Base Calibration

Reading No	Measured	Calibrator Size (mm)
1	18240	110.00
2	28320	162.00
3	38188	212.00
4	48355	262.00
5	58464	311.00
6	N/A	N/A

## Field Calibration

Measured Caliper (mm)	Actual Caliper (mm)
210.10	205.70

# Sonic Constants MSS 003

Last Edited on 19-FEB-2007,11:18

Maximum Boundary Contrast	328.08	micro-sec/m
Fluid Transit Time	620.08	micro-sec/m
Limestone Transit Time	155.84	micro-sec/m
Sandstone Transit Time	182.09	micro-sec/m
Dolomite Transit Time	142.72	micro-sec/m
Sonic used for Porosities	3-5' Compensated Sonic	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	N/A	micro-sec
MX3FT	N/A	micro-sec
Hunt-Raymer Constant	83.13	micro-sec/ft

## Fixed Gate Parameters

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

## Down Hole Fixed Gate Parameters

Gate Start	N/A	micro-sec
Gate Width	N/A	micro-sec
Initial Discriminator Level	0.0000	mVolts

## Full Waveform Parameters

Use 3' Waveform to derive TR	N/A
Use 4' Waveform to derive TR	N/A
Use 5' Waveform to derive TR	N/A
Use 6' Waveform to derive TR	N/A
3' Waveform Discriminator Level	N/A mV
4' Waveform Discriminator Level	N/A mV
5' Waveform Discriminator Level	N/A mV
6' Waveform Discriminator Level	N/A mV
3' Waveform Filter	N/A
4' Waveform Filter	N/A
5' Waveform Filter	N/A
6' Waveform Filter	N/A
Semblance Level	N/A
Semblance Window Width	N/A micro-sec
Sonic 1 Despiker	N/A N/A
Sonic 2 Despiker	N/A N/A

## Induction Calibration MAI 154

Base Calibration on 14-JAN-2007 01:38

Field Check on 19-FEB-2007 12:36

## Base Calibration

## Test Loop Calibration

Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	16.6	470.6	9.3	966.2
2	6.3	383.0	7.6	821.4
3	4.0	264.7	5.2	566.0
4	2.3	136.2	2.6	279.2

Array Temperature 22.3 Deg C

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	13.1	3867.2	15.7	3866.2
2	29.6	3530.7	30.3	3528.1
3	26.8	3001.8	27.2	2999.2
4	18.4	2040.8	18.6	2039.1
Deep	15.3	1926.8	15.8	1925.2
Medium	39.6	3962.8	39.7	3959.0
Shallow	45.8	5270.7	46.7	5266.7

Array Temperature 12.1 31.4 Deg C

## Induction Constants MAI 154

Last Edited on 19-FEB-2007,11:18

Induction Model	VECTAR		
Caliper for Borehole Corr.	Density Caliper		
Hole Size for Borehole Correction	N/A	millimetres	
Stand-off	25.40	millimetres	
Number of Fins on Stand-off	5.0000		
Stand-off Fin Width	25.4000	millimetres	
Borehole Corr. Rm Source	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Squasher Start	0.0020	mhos/metre	

## Borehole Normalisation

DRM1	0.0000	DRC1	0.0000
DRM2	0.0000	DRC2	0.0000
MRM1	0.0000	MRC1	0.0000
MRM2	0.0000	MRC2	0.0000
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000

## Calibration Site Corrections

Channel 1	0.00	mmhos/metre
Channel 2	0.00	mmhos/metre
Channel 3	0.00	mmhos/metre
Channel 4	0.00	mmhos/metre

## Apparent Porosity and Water Saturation Constants

Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	100.00	percent
Resistivity of Water for Apor and Sw	0.05	ohm-m
Resistivity of Mud Filtrate for Sw	0.00	ohm-m

## High Resolution Temperature Calibration MAI 154

Field Calibration on 16-DEC-2006,08:07

	Measured	Calibrated(Deg C)
Lower	1.00	1.00
Upper	10.00	10.00

## DOWNHOLE EQUIPMENT

C:\Temp\Weatherford PreView\01a03 rpt.dta

Compact Gamma  
MCG 131 Length: 2.65 m

Weight: 63.9 lb

20.79 m

GRGC - Gamma Ray

19.91 m

CGXT - MCG External Temperature

Compact Focused Electric  
MFE 111 Length: 1.84 m

Weight: 48.5 lb

18.79 m

FEFE - Shallow FE

Compact Two Arm Caliper  
MTC 24 Length: 2.17 m

Weight: 61.7 lb

16.34 m

CLYC - Y Two Arm Caliper

Compact Short Gamma  
MGS 29 Length: 1.04 m

Weight: 24.3 lb

15.47 m

GRGM - MGS Gamma Ray

Compact InterSonde Crank  
ISC 151 Length: 0.71 m

Weight: 24.3 lb

Compact Micro-log  
MML 15 Length: 2.43 m

Weight: 81.6 lb

12.10 m

MINV - Micro-inverse

12.10 m

MNRL - Micro-normal

Compact Neutron  
MDN 16 Length: 1.53 m

Weight: 50.7 lb

10.64 m

NPRS - Sandstone Neutron Por.

Compact Density/Caliper  
MPD 130 Length: 2.92 m

Weight: 90.4 lb

8.06 m

AVOL - Annular Volume

8.06 m

HVOL - Hole Volume

8.06 m

CLDC - Density Caliper

7.85 m

DPRS - Sandstone Density Por.

7.85 m

DCOR - Density Correction

7.83 m

PDPE - PE



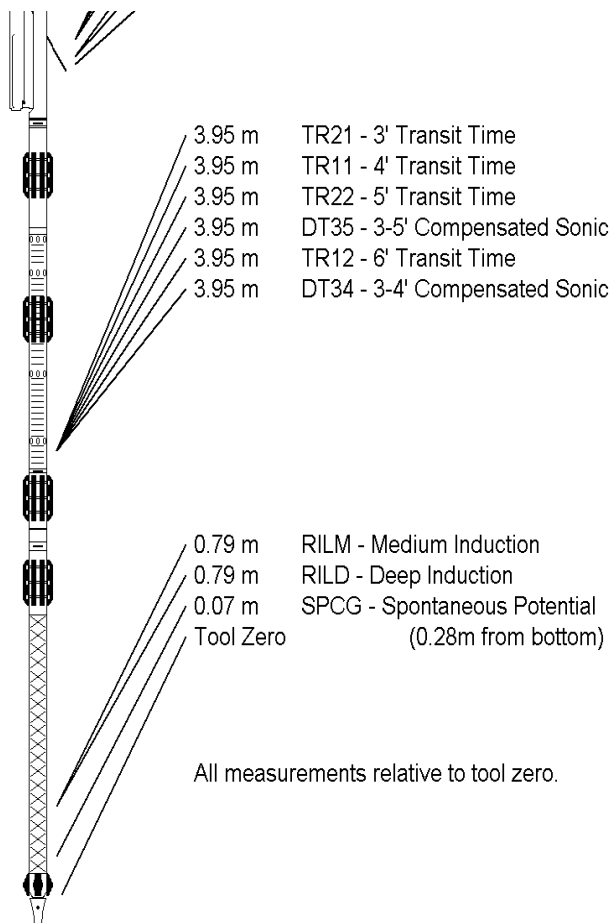


Compact Sonic  
MSS 3 Length: 3.82 m Weight: 72.8 lb

Compact Induction  
MAI 154 Length: 3.29 m Weight: 48.5 lb

Compact Hole Finder  
HFS 1 Length: 0.24 m Weight: 2.2 lb

Total Length: 22.64 m Weight: 568.8 lb



COMPANY	PARAMOUNT RESOURCES LTD.
WELL	PARA ET AL CAMERON A-03
FIELD	CAMERON HILLS
PROVINCE/COUNTY	NORTHWEST TERRITORIES
COUNTRY/STATE	CANADA

Elevation Kelly Bushing	772.80	metres	First Reading	1585.10	metre
Elevation Drill Floor		metres	Depth Driller	1589.40	metres
Elevation Ground Level	767.40	metres	Depth Logger	1589.40	metres



**Weatherford®**

COMPENSATED SONIC



## ARRAY INDUCTION

COMPANY	PARAMOUNT RESOURCES LTD.			
WELL	PARA ET AL CAMERON A-03			
FIELD	CAMERON HILLS			
PROVINCE/COUNTY	NORTHWEST TERRITORIES			
COUNTRY/STATE	CANADA			
LOCATION	300A036010117300 <b>FIELD PRINT</b>			
LSD	SEC	TWP	RGE	Other Services
API Number				COMPENSATED SONIC
Permit Number 2047				MICROLOG
Permanent Datum GROUND LEVEL, Elevation 767.4 metres				Elevations: metres
Log Measured From 5.4 M above Permanent Datum				KB 772.80
Drilling Measured From KELLY BUSHING				DF
				GL 767.40
Date	19-FEB-2007			
Run Number	1			
Depth Driller	1589.40	metres		
Depth Logger	1589.40	metres		
First Reading	1588.30	metre		
Last Reading	436.00	metre		
Casing Driller	435.80	metres		
Casing Logger	436.00	metres		
Bit Size	200.00	mm		
Hole Fluid Type	GEL CHEM			
Density / Viscosity	1220.0 kg/M3	70.00 sec/L		
PH / Fluid Loss	10.50	10.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.11 @ 25.0	ohm-m		
Rmf @ Measured Temp	1.02 @ 25.0	ohm-m		
Rmc @ Measured Temp	1.26 @ 25.0	ohm-m		
Source Rmf / Rmc	PRESS	FILTER		
Rm @ BHT	0.71 @ 50.0	ohm-m		
Time Since Circulation	8 HRS			
Max Recorded Temp	50.00	deg C		
Equipment Name	COMPACT			
Equipment / Base	QUINT	GPR		
Recorded By	M. BONNELL			
Witnessed By	B. POWELL			
CIRC. STOP	04:30 FEB-19	Last Line		

BOREHOLE RECORD				Last Edited: 19-FEB-2007 11:16	
Bit Size millimetres		Depth From metres		Depth To metres	
311.000		0.00		435.80	
200.000		435.80		1589.40	
CASING RECORD					
Type	Size millimetres	Depth From metres	Shoe Depth metres	Weight pounds/ft	
SURFACE	219.100	0.00	435.80	24.00	

## REMARKS

- 1) SOFTWARE ISSUE: WLS 7.01.0195
- 2) CUSTOMER SCALES AND INTERVALS LOGGED.
- 3) MAI, MSS, MPD, MDN, MML, SKJ, MGS, MTC, MFE, MCG RAN IN COMBINATION.
- 4) HARDWARE: MAI: TWO 25.4 MM STANDOFFS  
MSS: THREE 25.4 MM STANDOFFS  
MDN: DUAL NEUTRON BOWSPRING  
MTC: ONE SIX-LEAF CENTRALIZER BOWSPRING

6) RIG: PD 220

7) HOLE \_CEMENT VOLUMES CALCULATED USING DENSITY CALIPER AND TWO ARM CALIPER IN COMBINATION :

HOLE VOLUME = 42.7 CU.M.

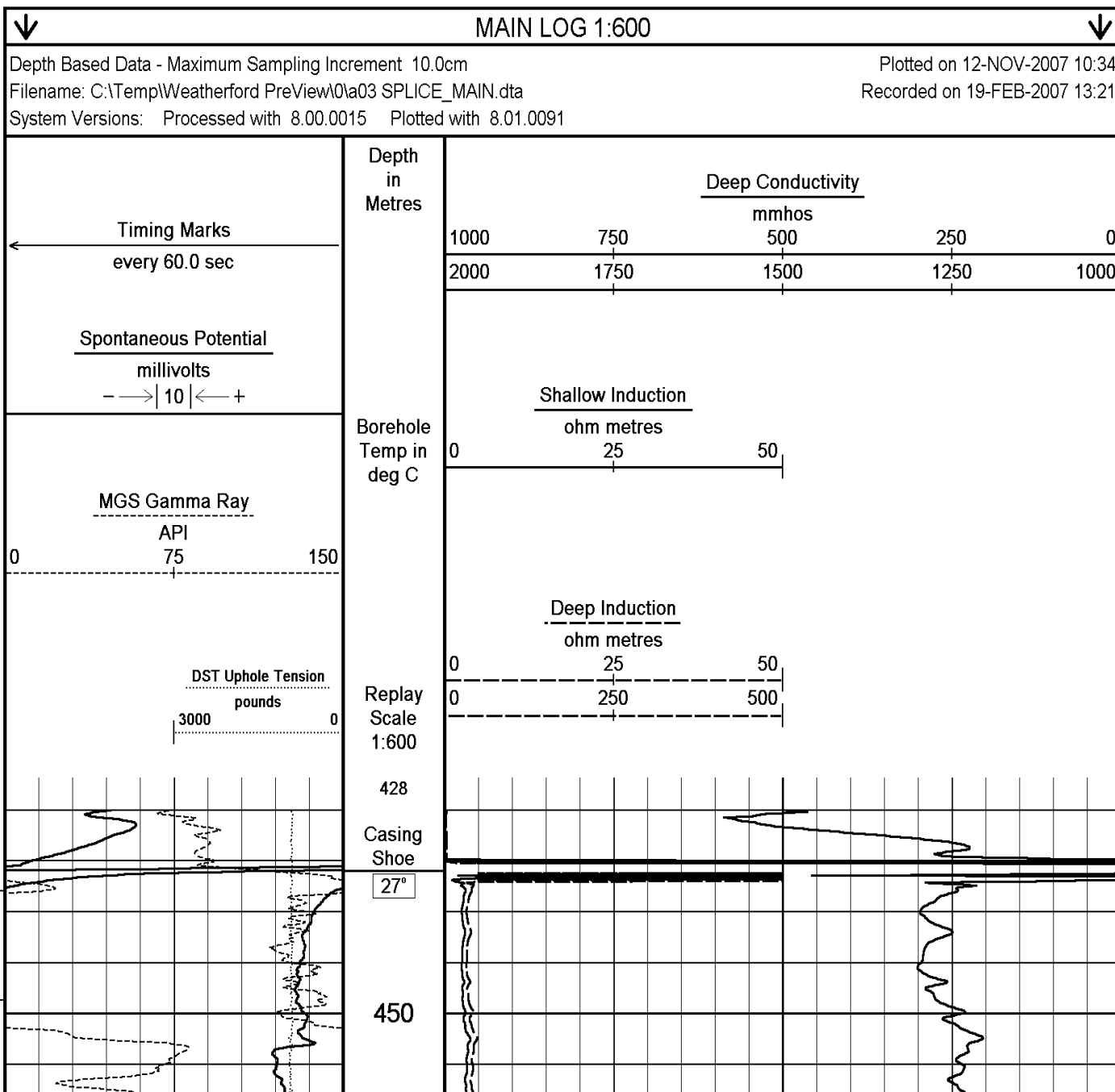
ANNULAR VOLUME USING 139.7 MM PRODUCTION CASING = 25.1 CU.M

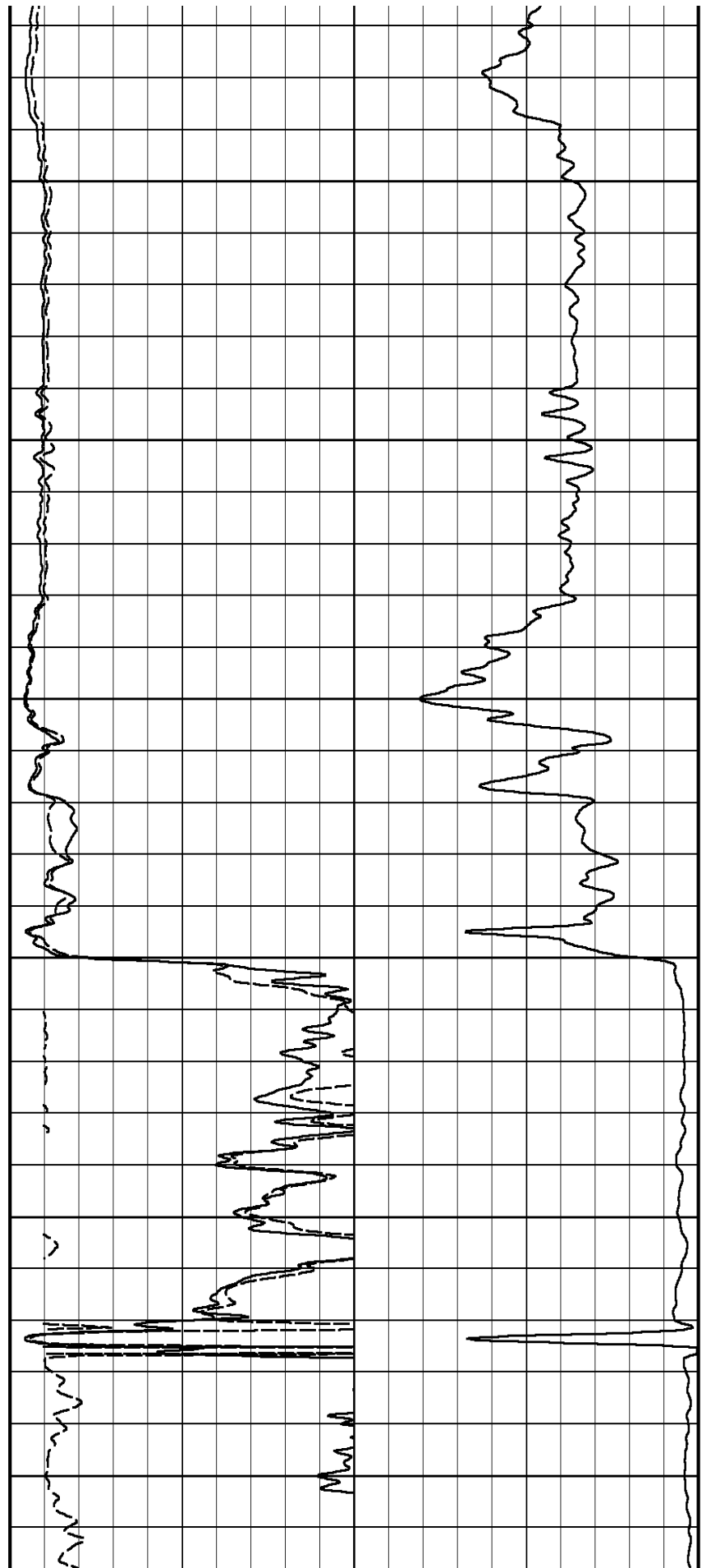
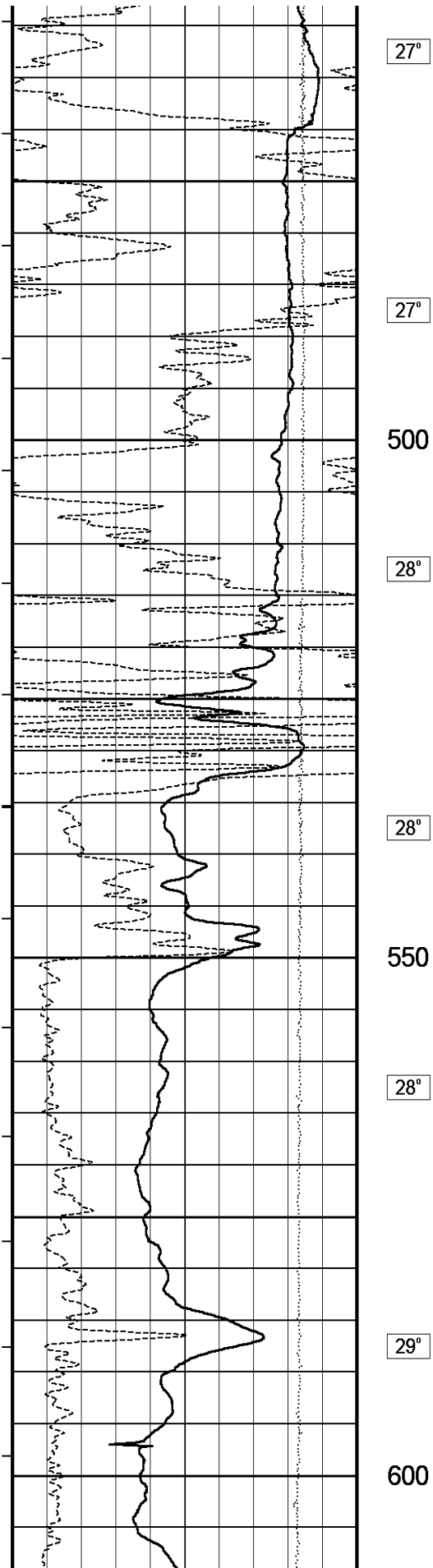
8) SONIC FREE PIPE: NOT FOUND

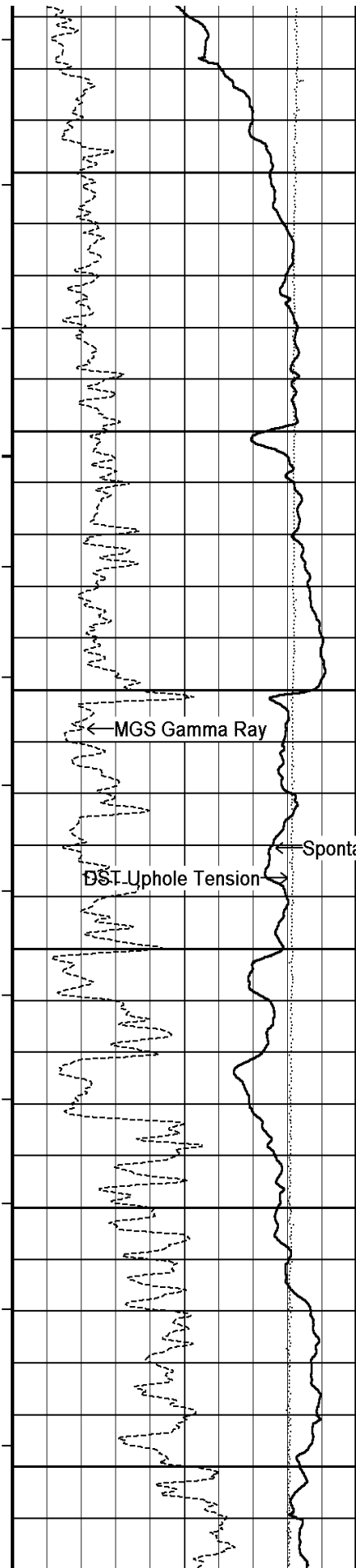
9) AREAS OF BOREHOLE RUGOSITY MAY CAUSE POOR DENSITY PAD CONTACT, HIGH DENSITY CORRECTION AND THUS INVALID DENSITY POROSITY DATA AT THOSE INTERVALS.

10) SALTY INDUCTION MODEL PRESENTED FROM TD-1410M.

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.







29°

29°

650

29°

30°

700

30°

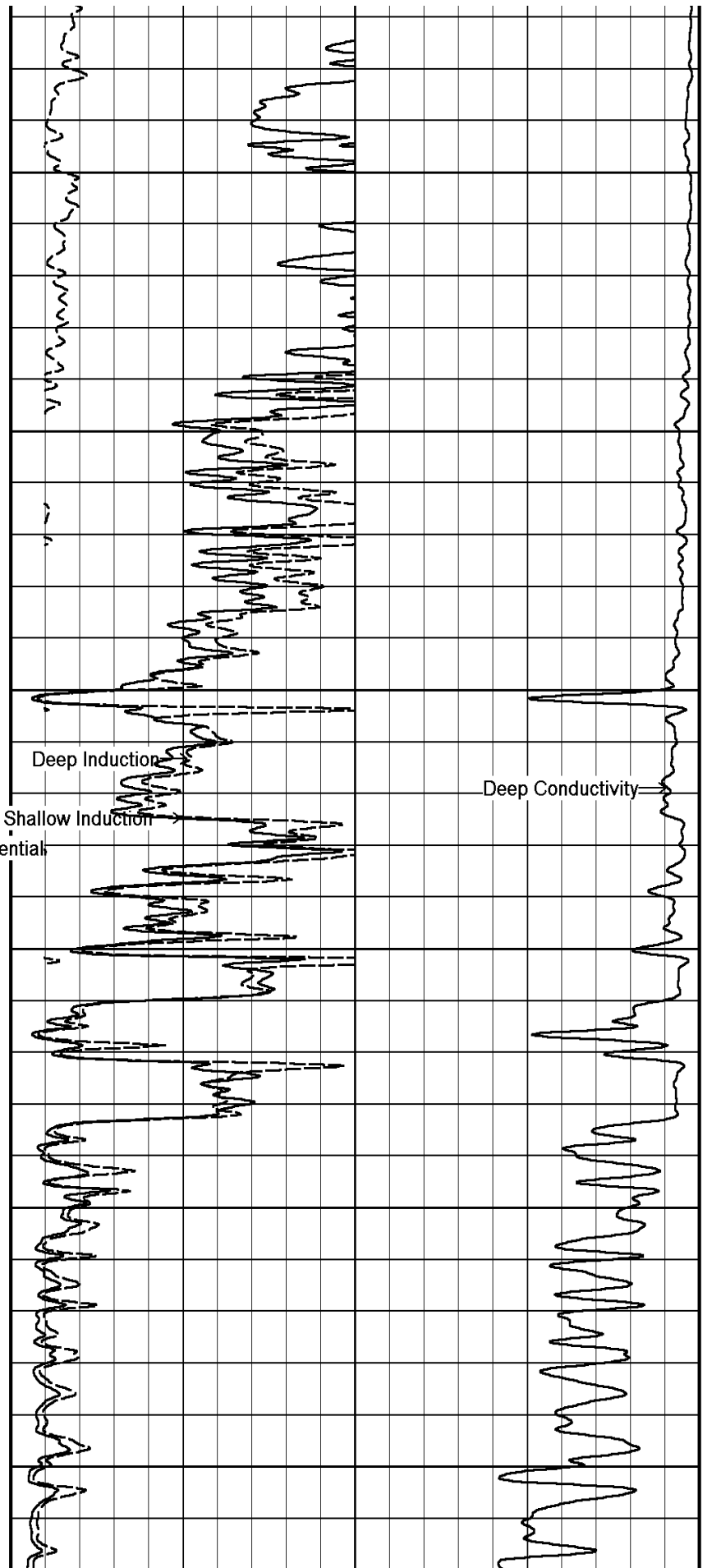
31°

750

MGS Gamma Ray

DST Uphole Tension

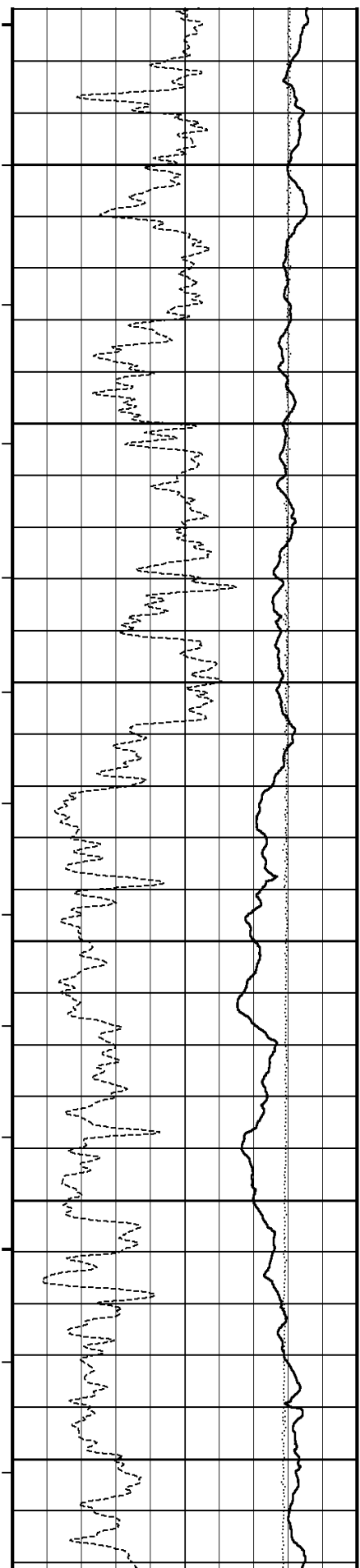
Spontaneous Potential



Deep Induction

Shallow Induction

Deep Conductivity



32°

32°

800

33°

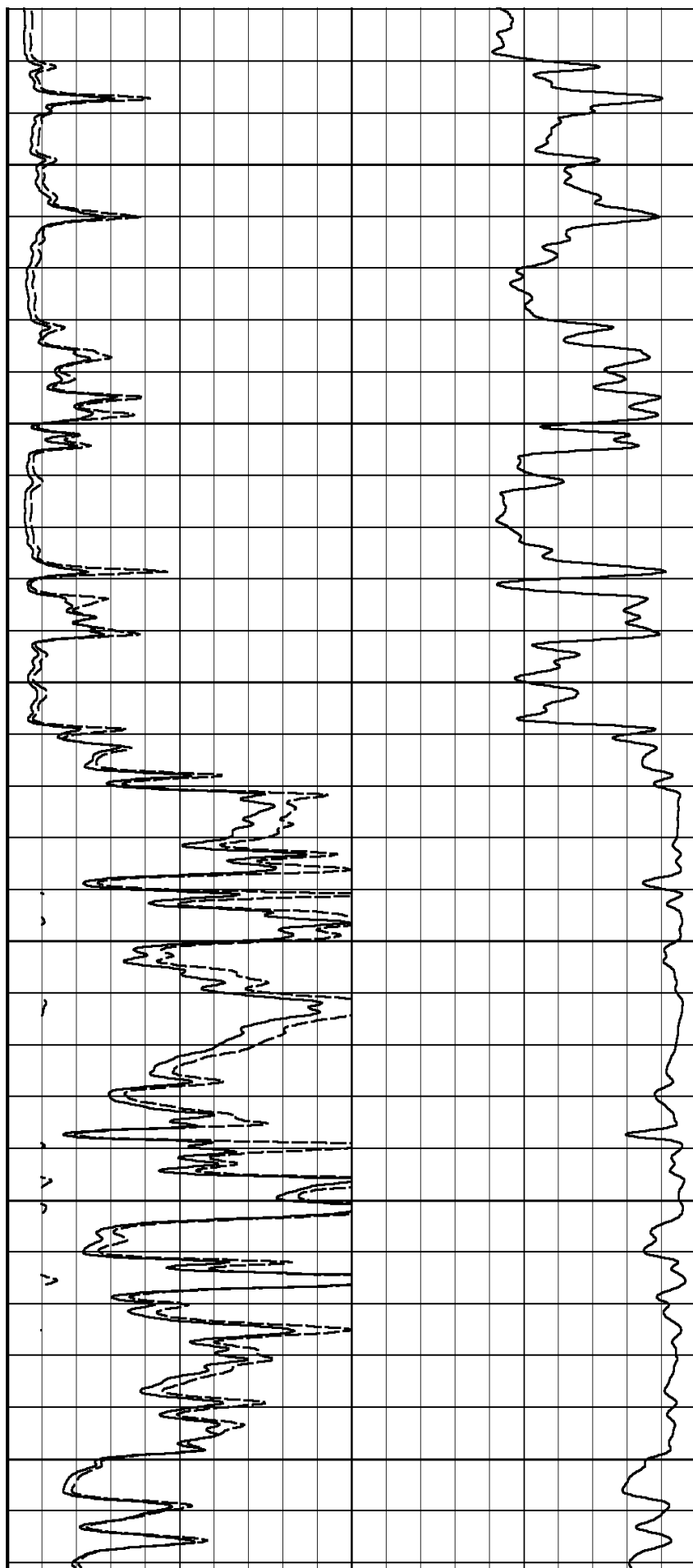
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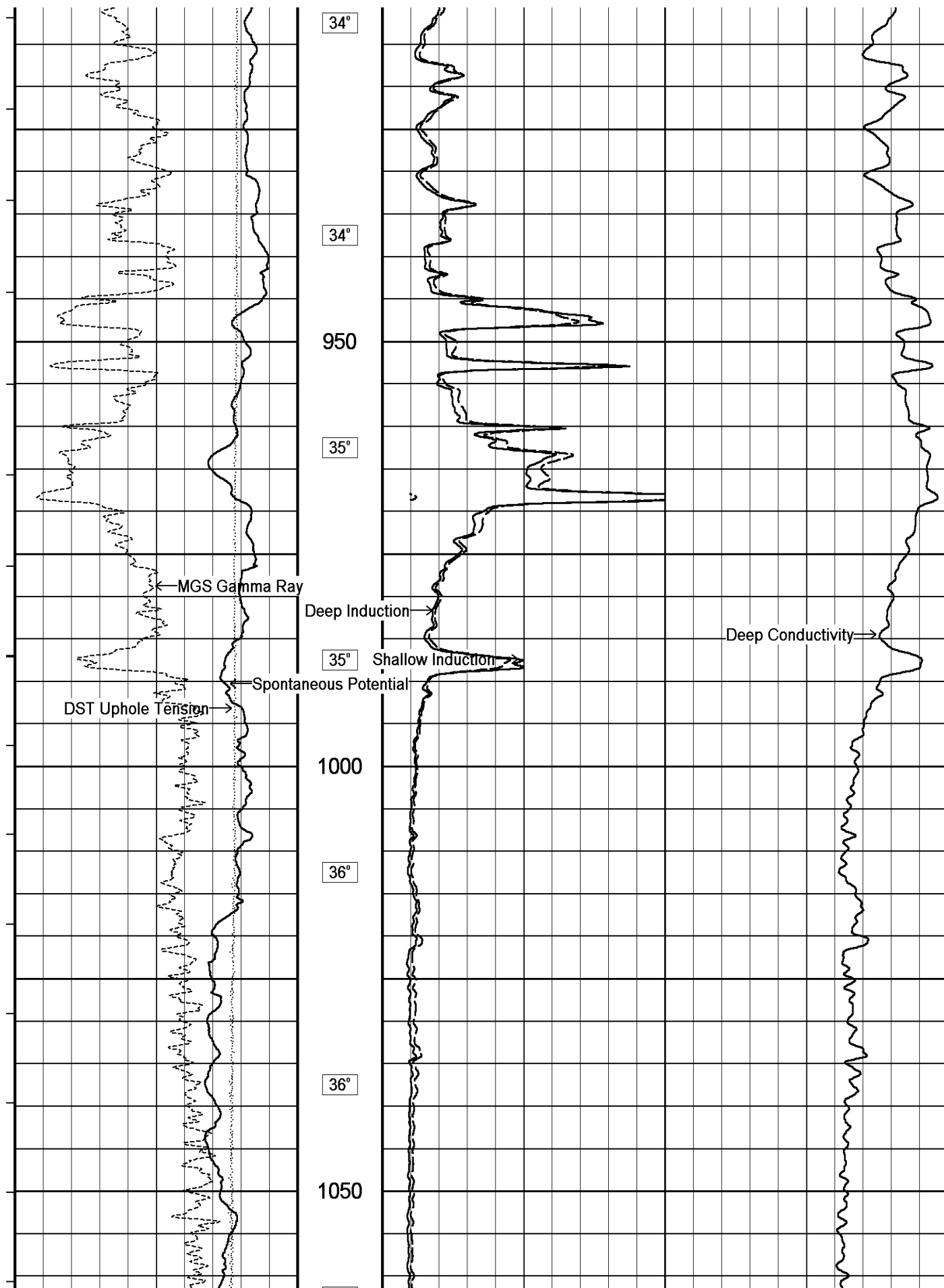
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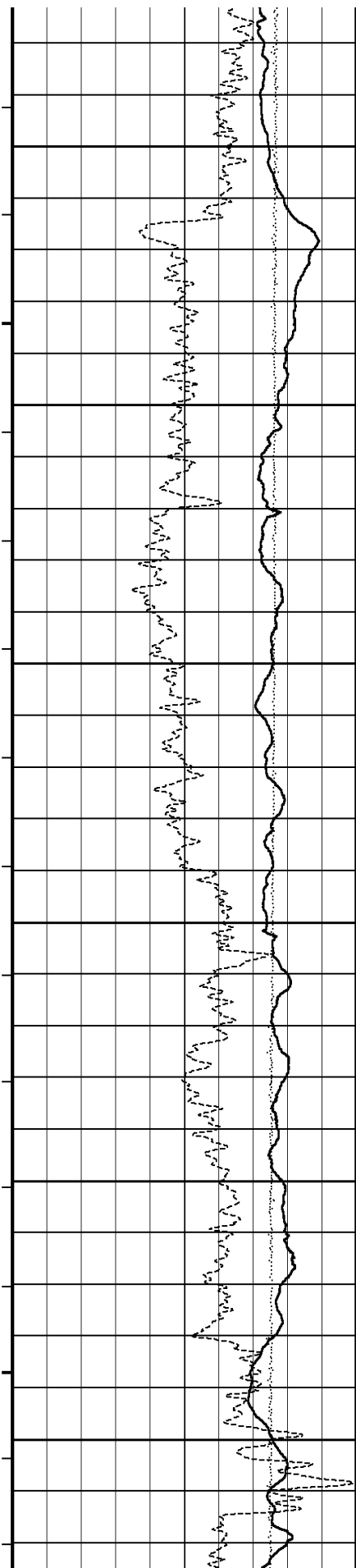
33°

34°

900







37°

38°

1100

38°

39°

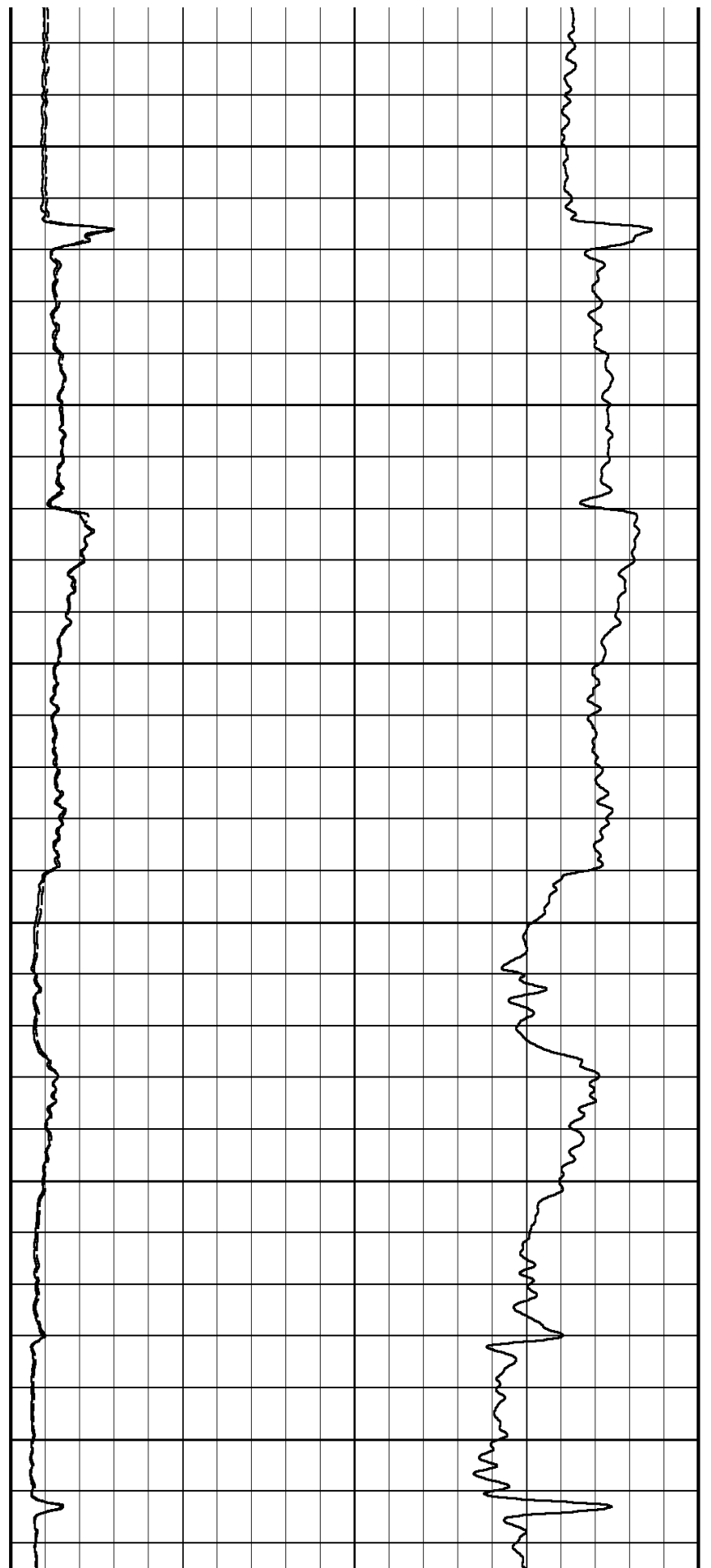
1150

39°

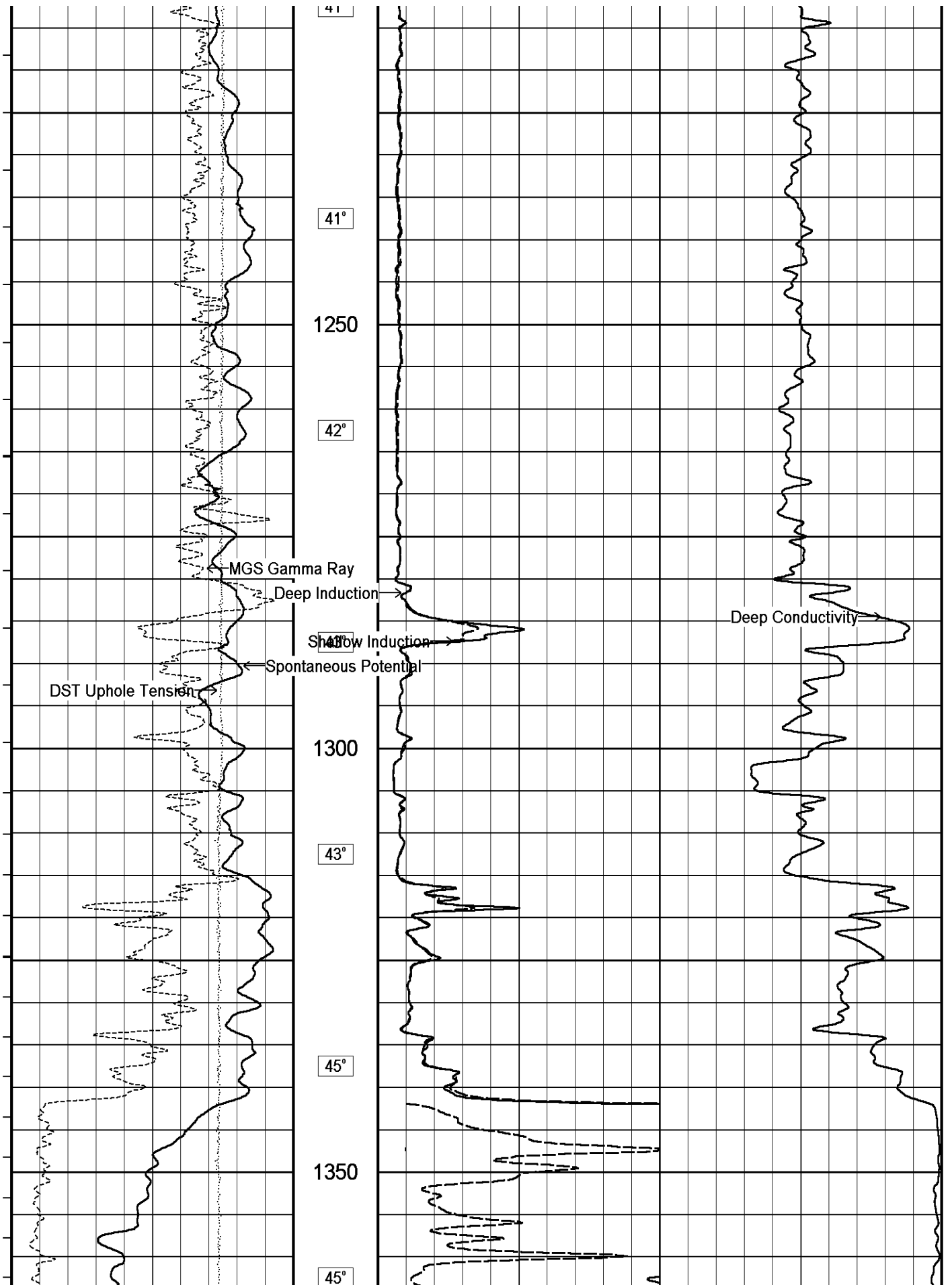
40°

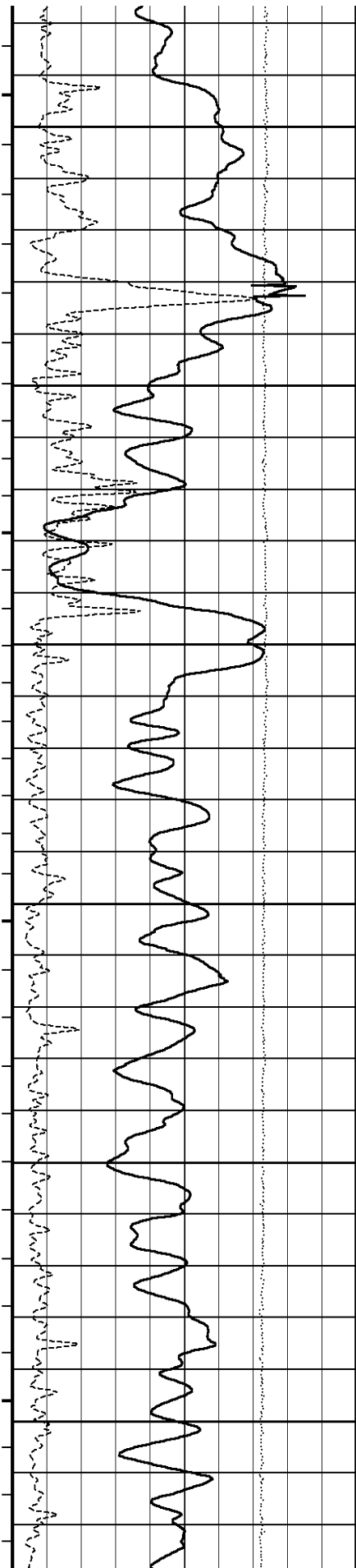
1200

44°

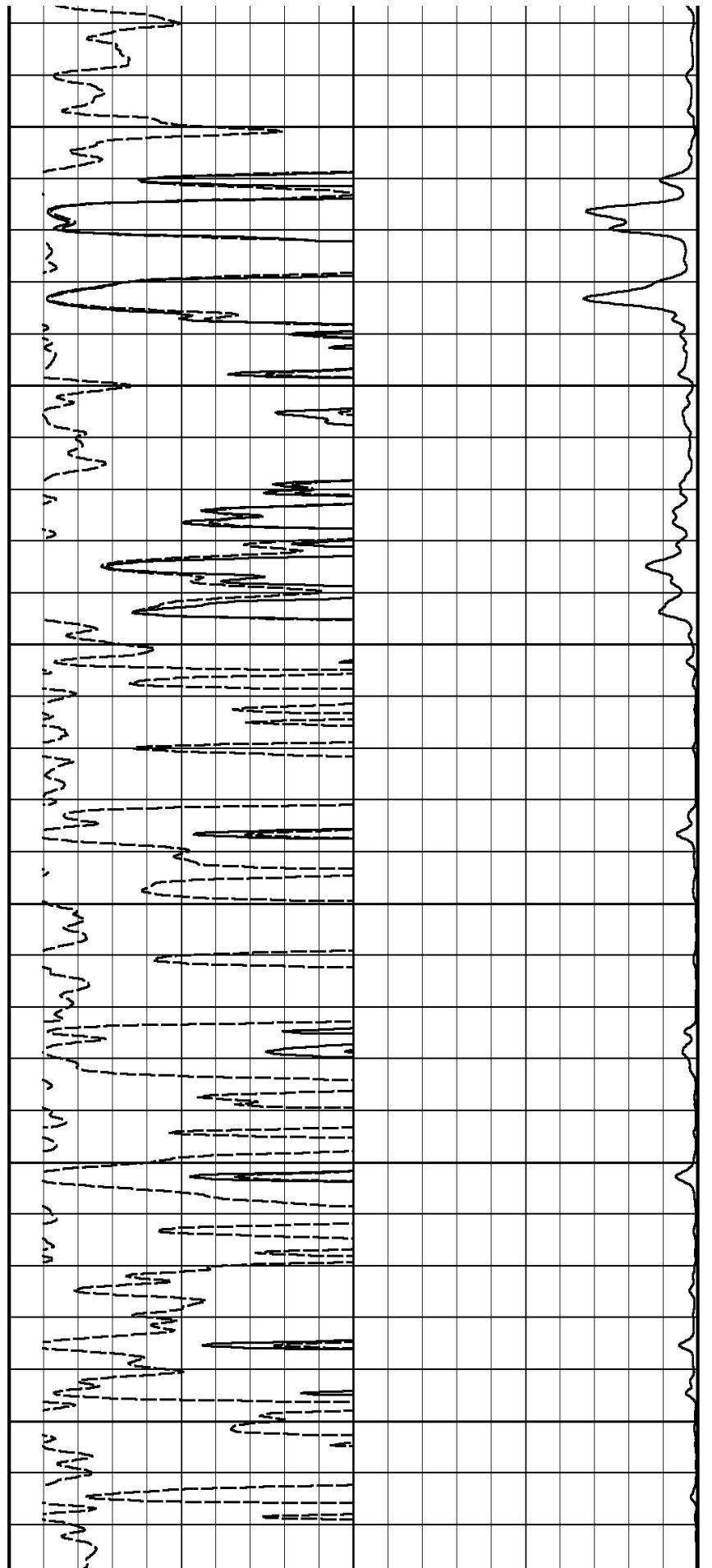


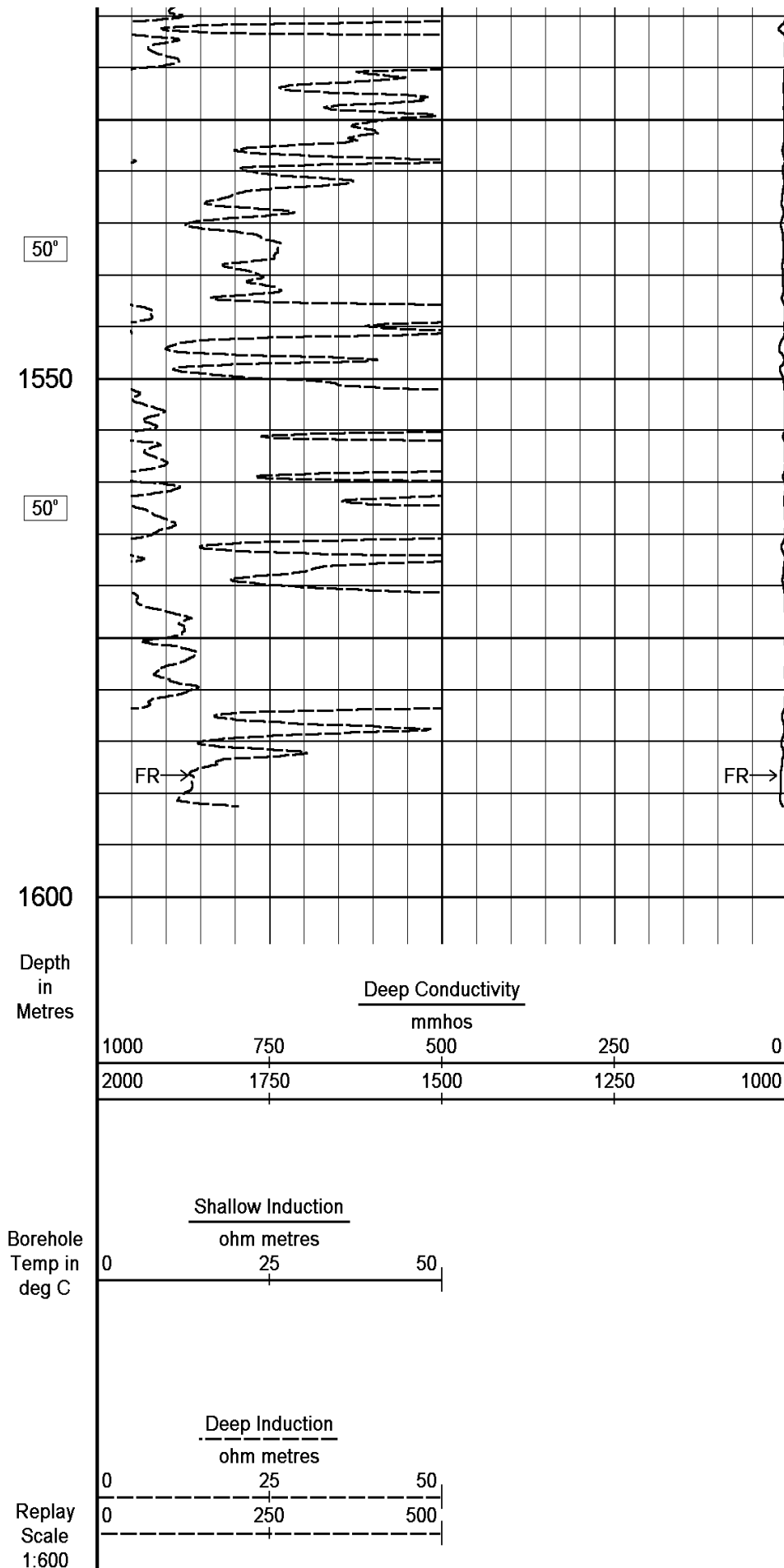
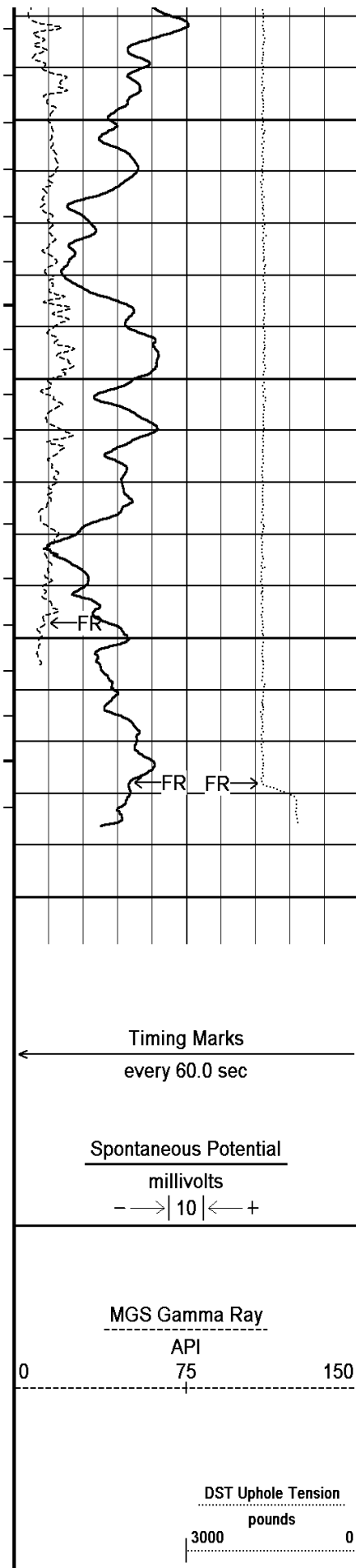






46° 1400 47° 48° 1450 48° 49° 1500 50°





Depth Based Data - Maximum Sampling Increment 10.0cm  
Filename: C:\Temp\Weatherford PreView\0\va03 SPLICE\_MAIN.dta  
System Versions: Processed with 8.00.0015 Plotted with 8.01.0091

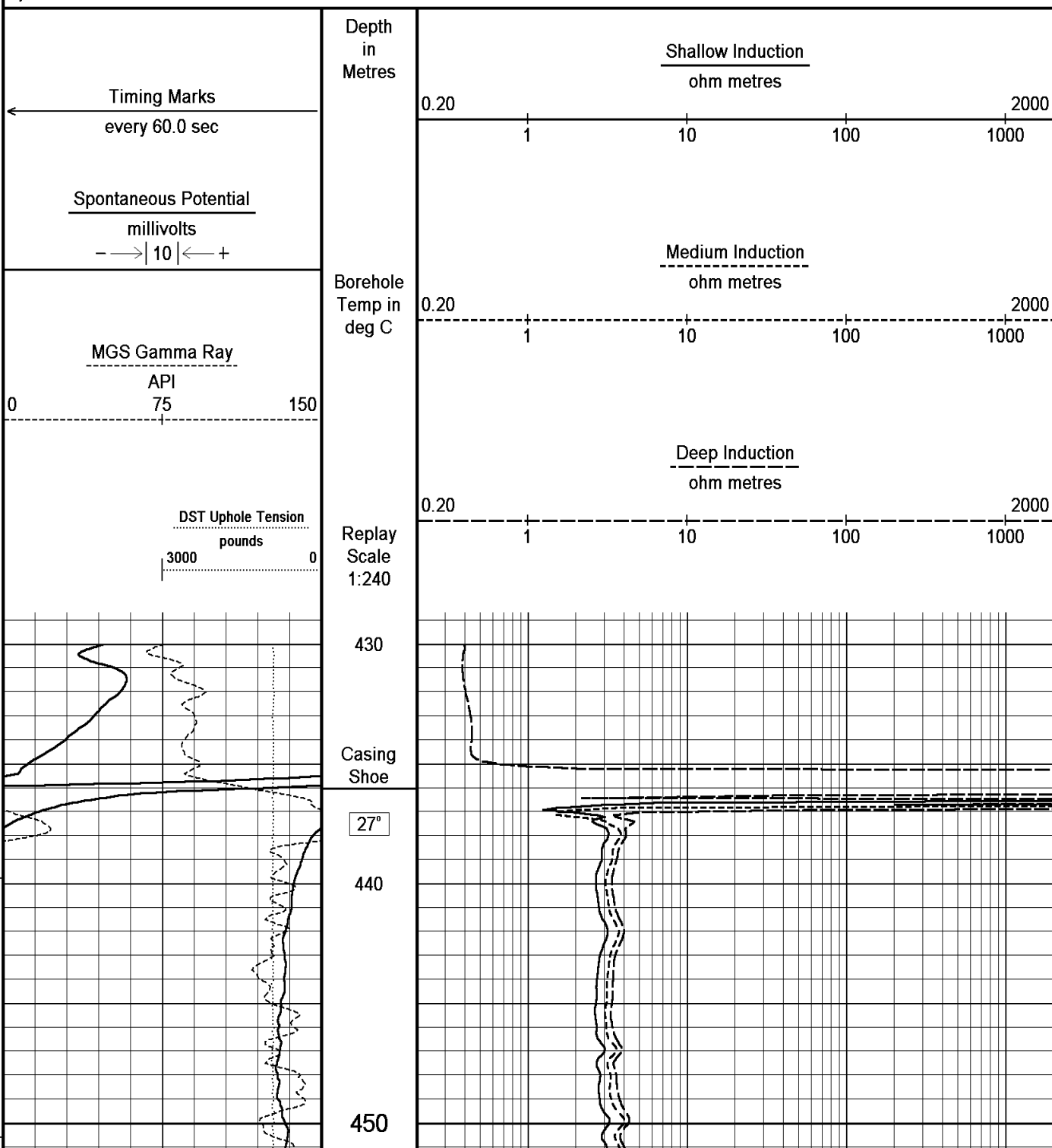
Plotted on 12-NOV-2007 10:34  
Recorded on 19-FEB-2007 13:21

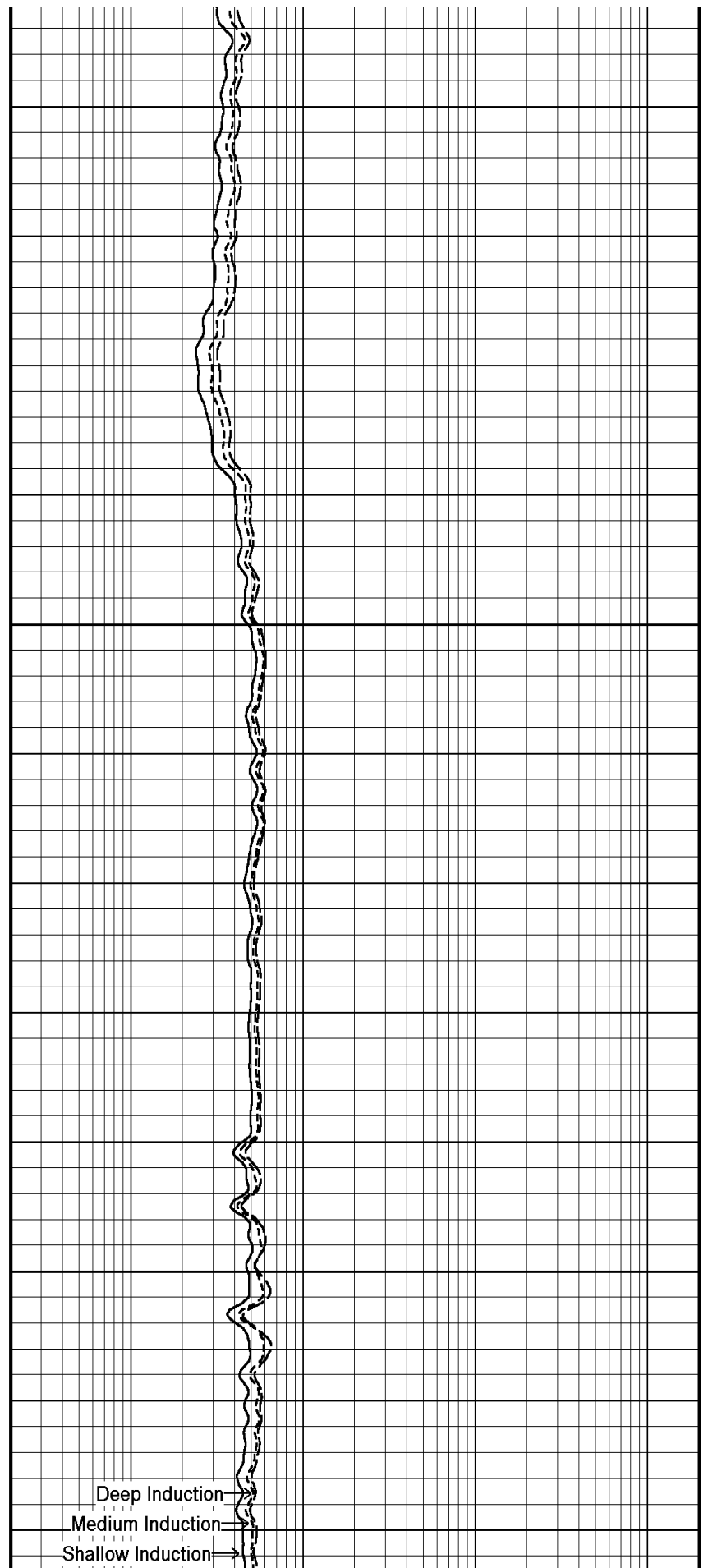
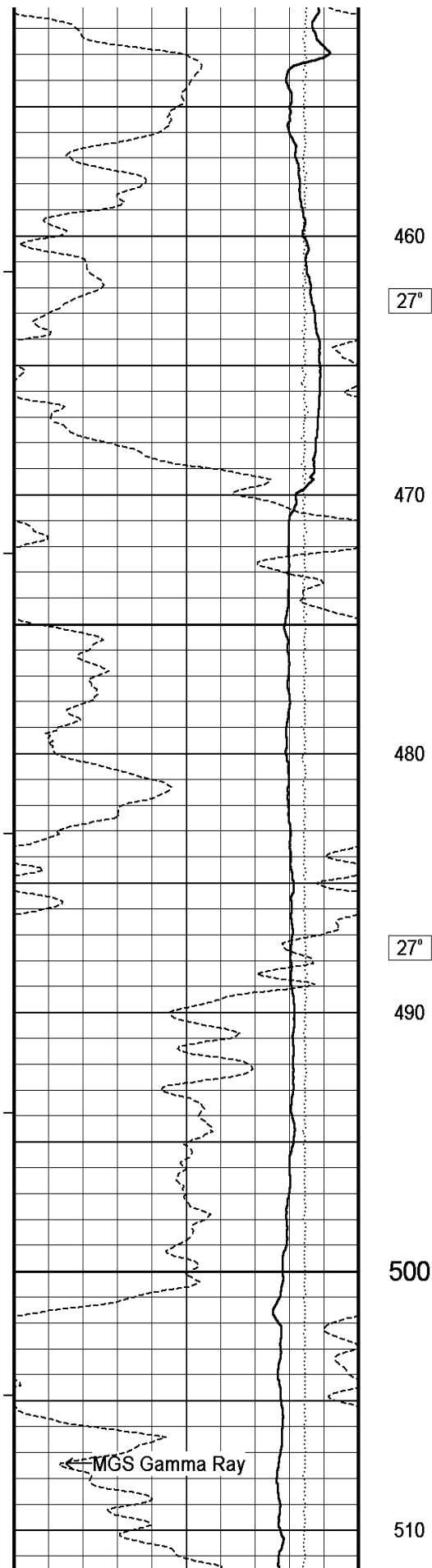
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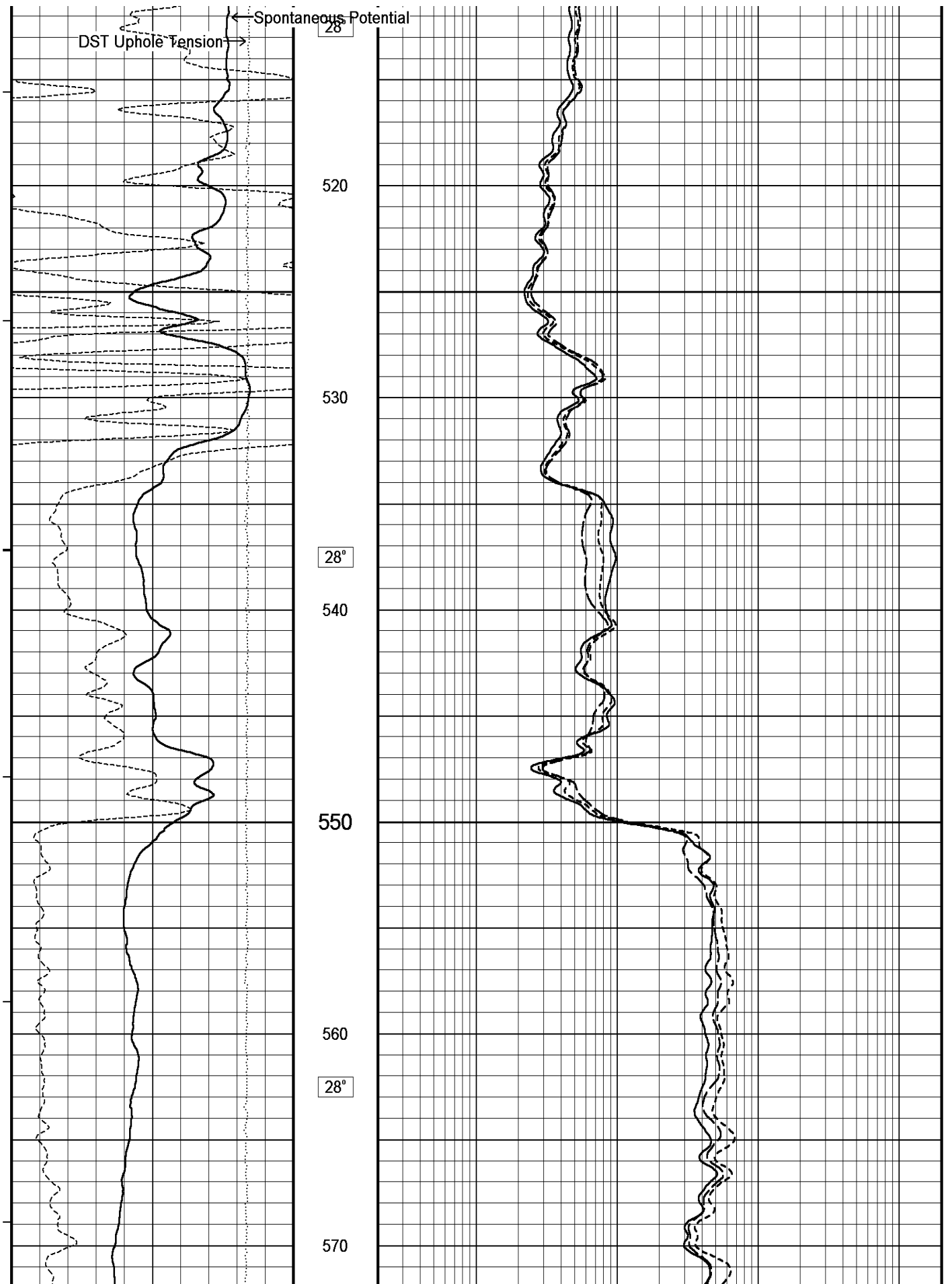
↓ MAIN LOG 1:240 ↓

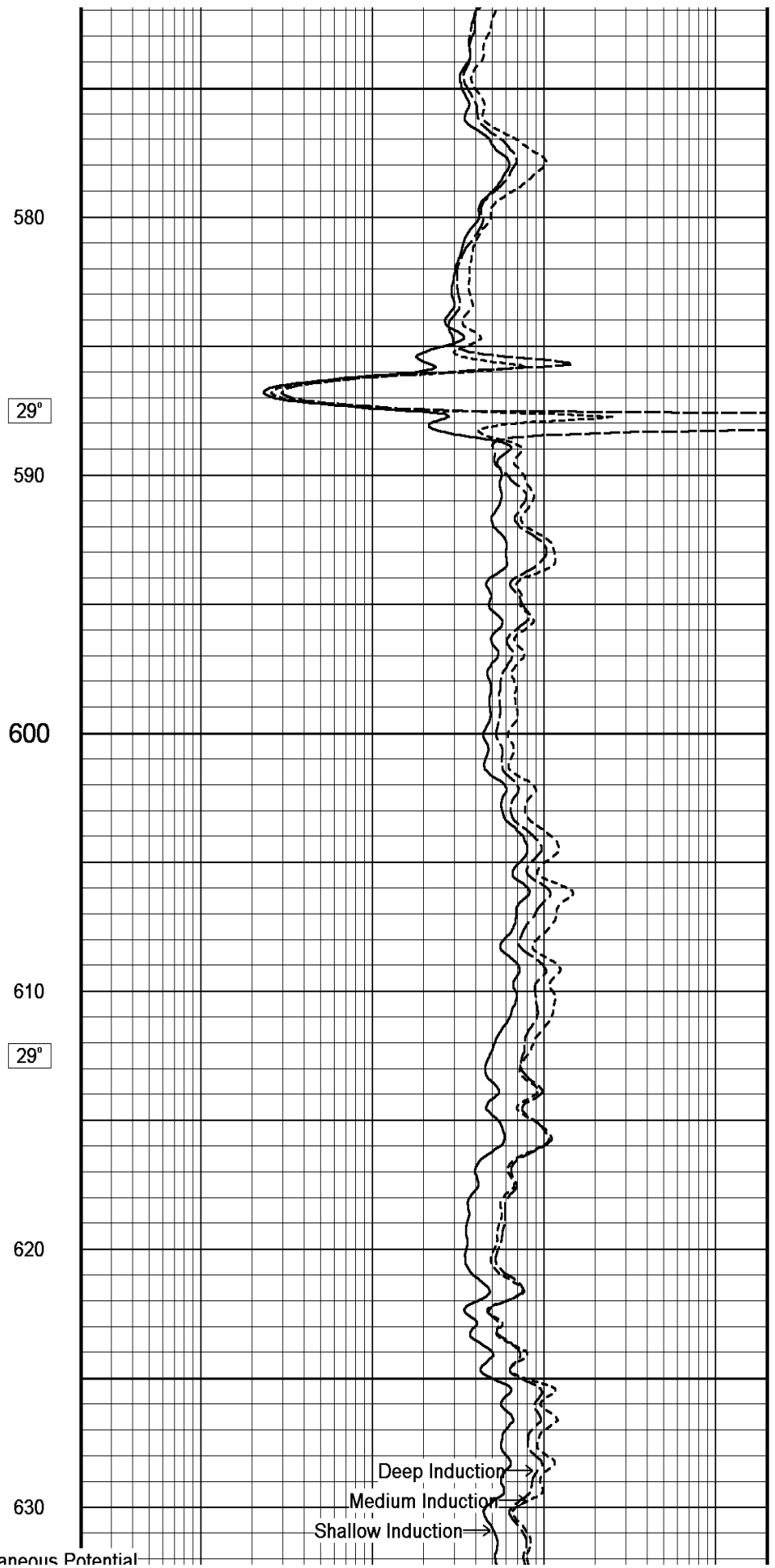
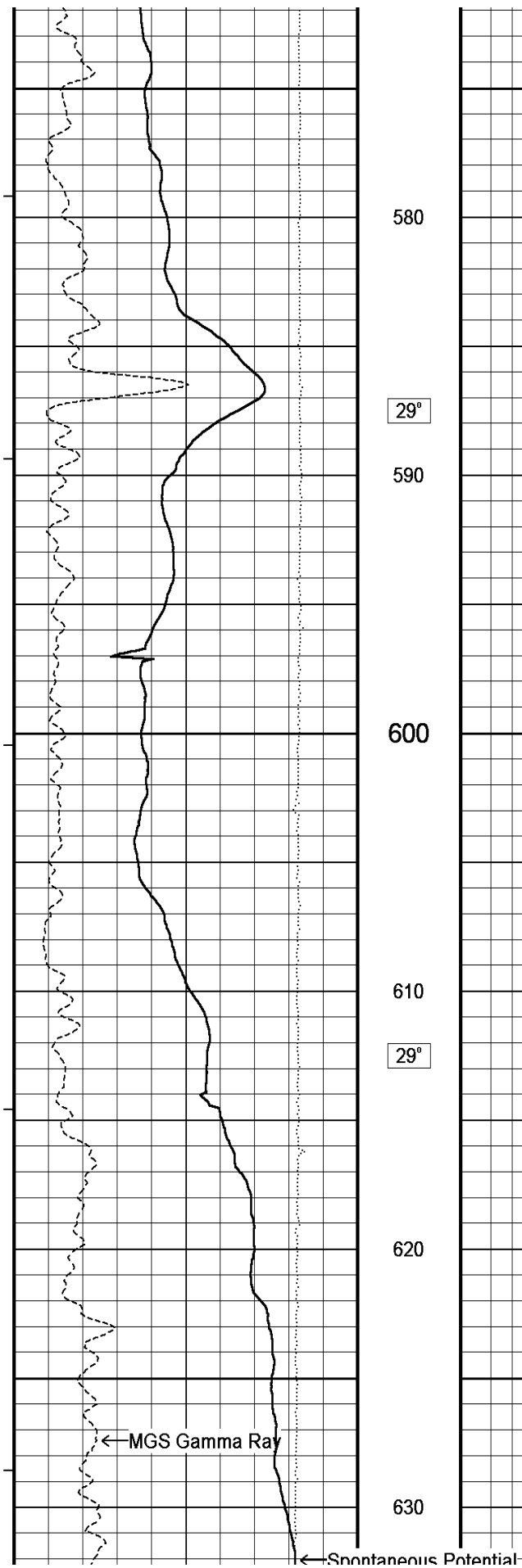
Depth Based Data - Maximum Sampling Increment 10.0cm  
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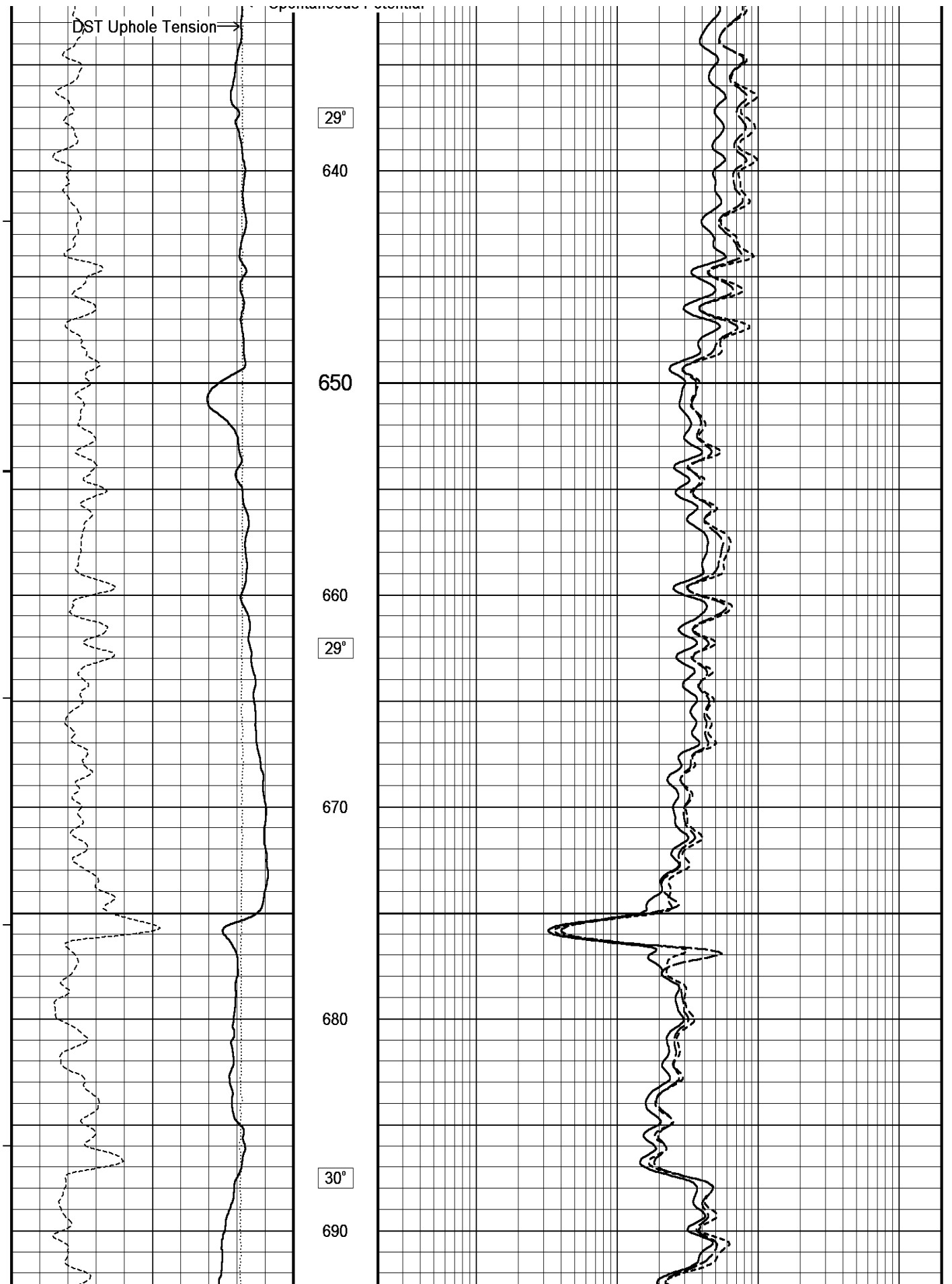
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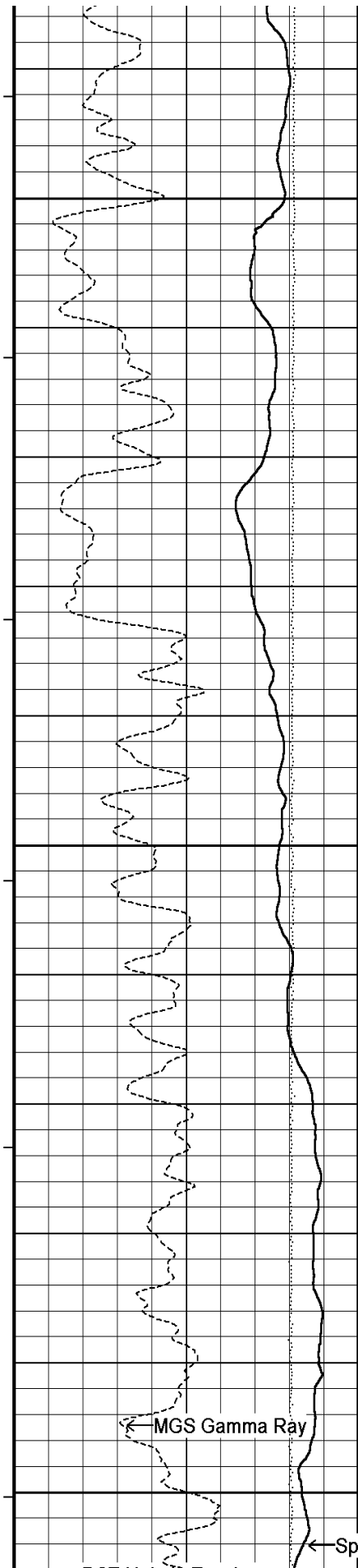












700

710

30°

720

730

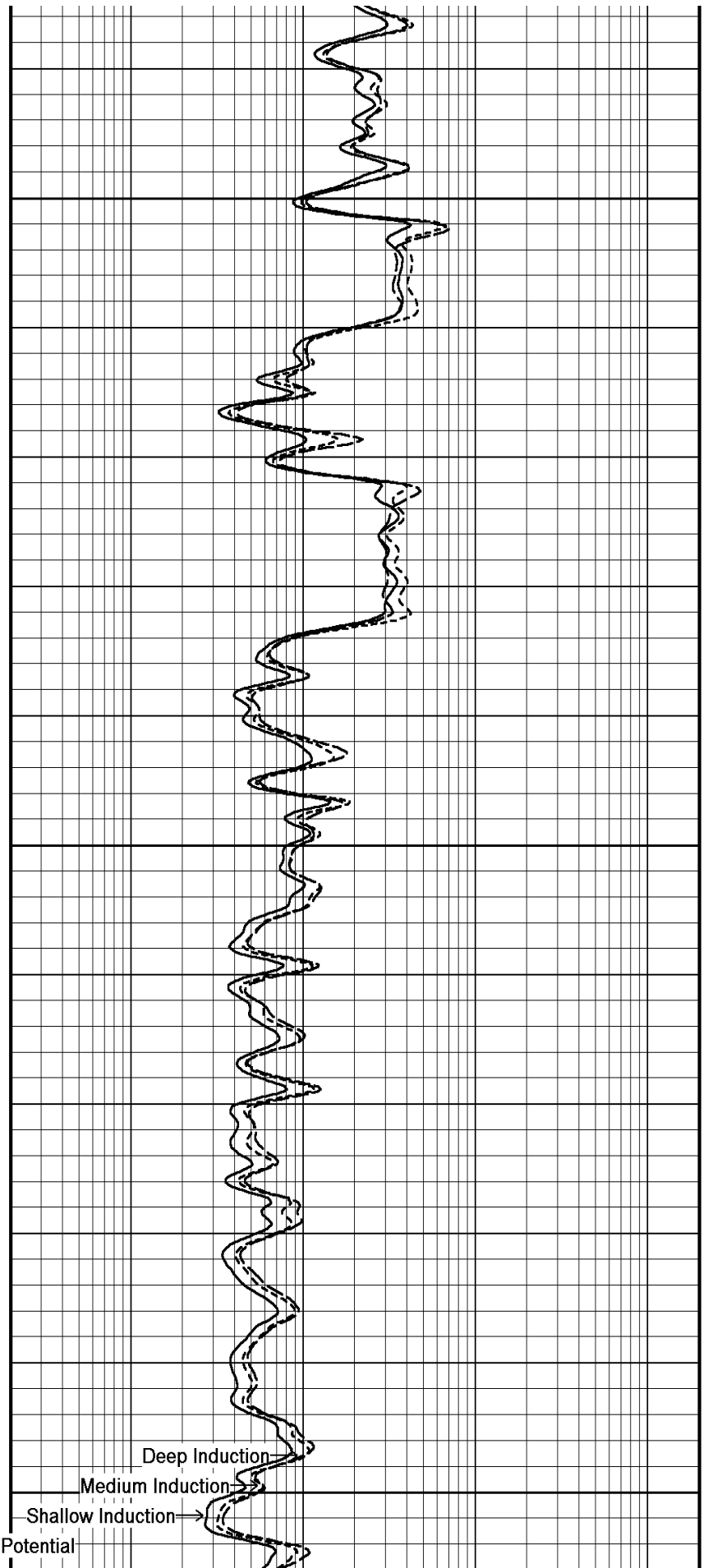
31°

740

750

← MGS Gamma Ray

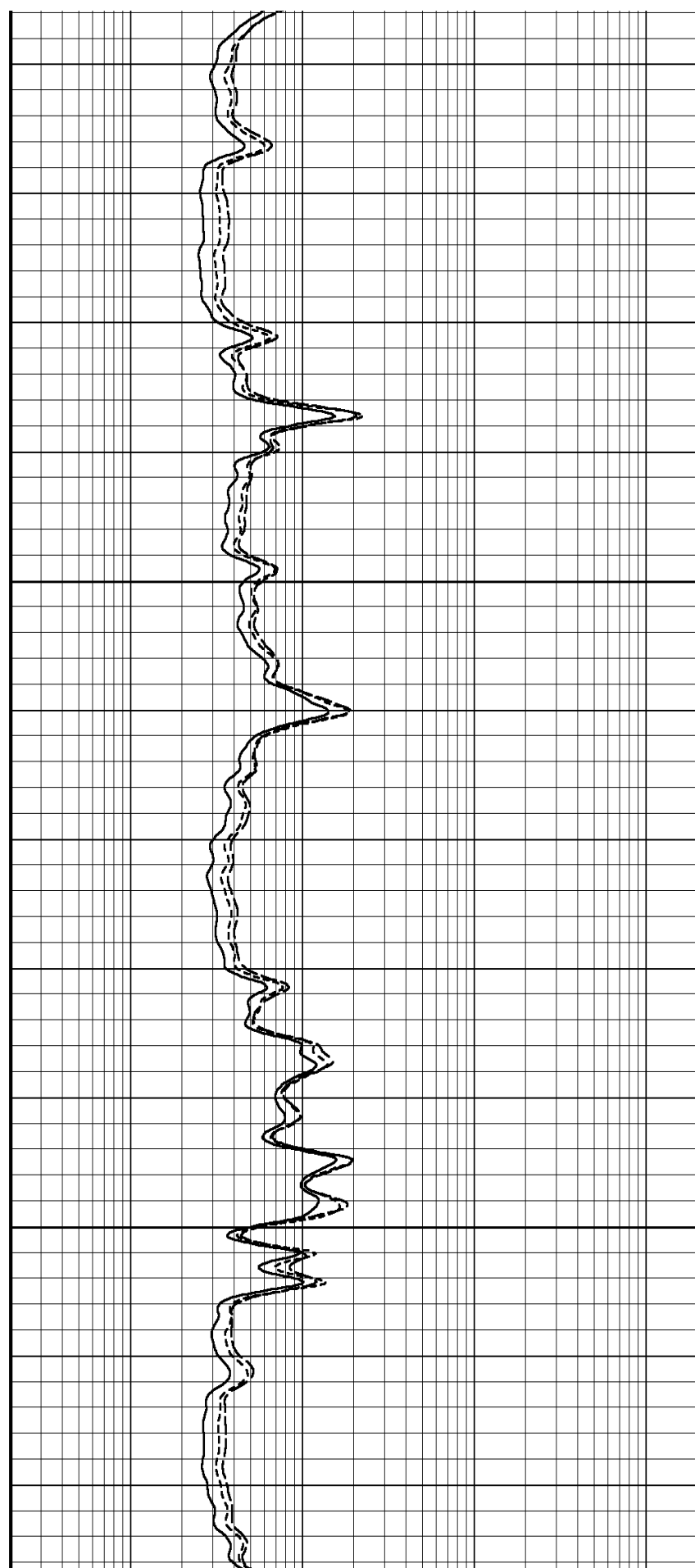
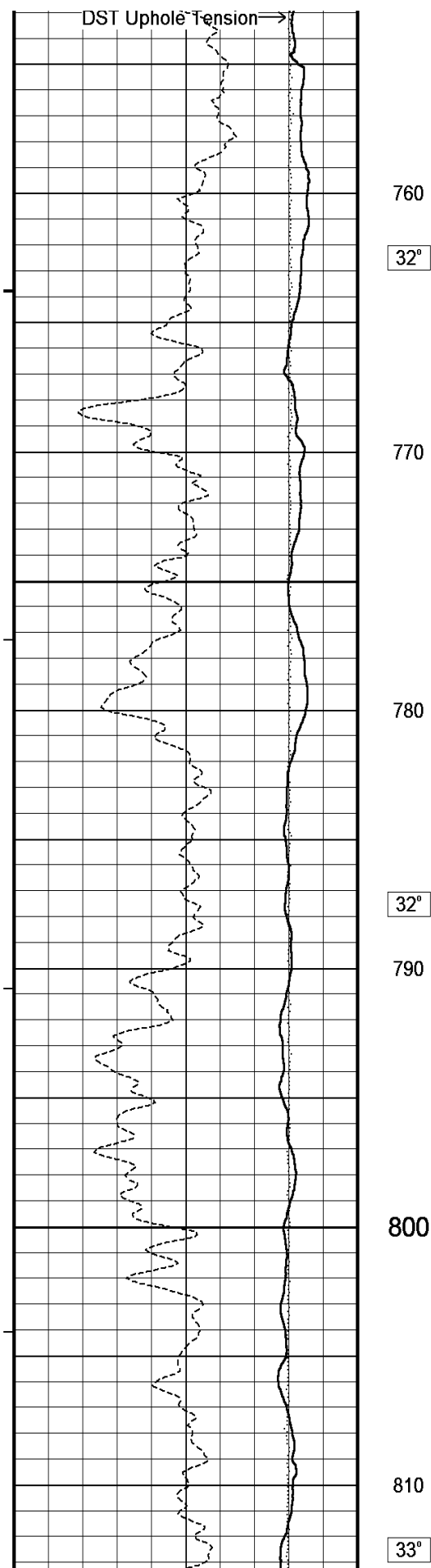
← Spontaneous Potential

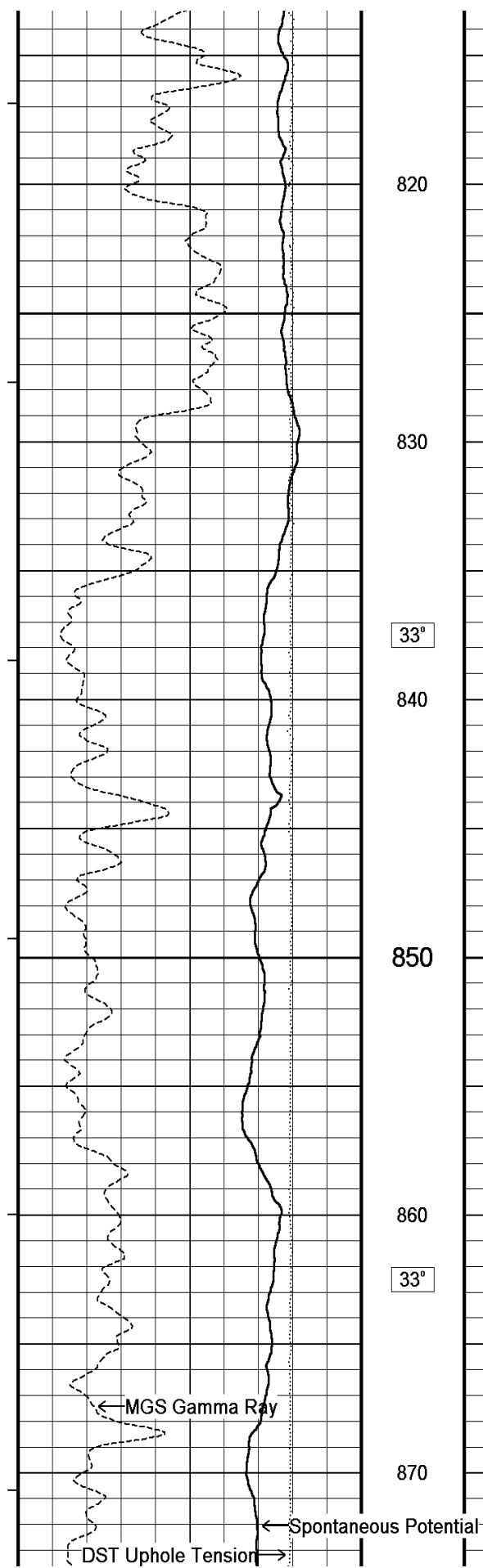


Deep Induction

Medium Induction

Shallow Induction →





820

830

33°

840

850

860

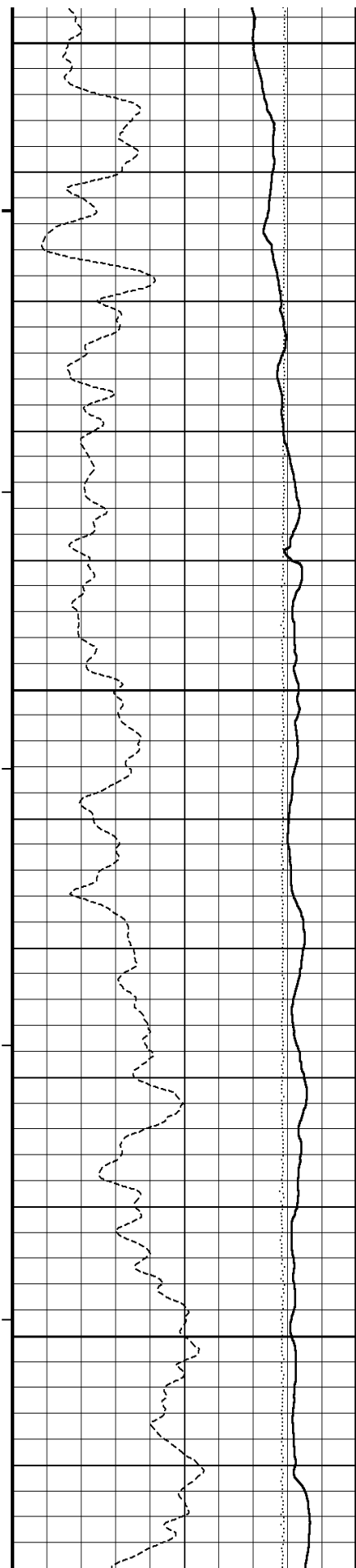
33°

870

Deep Induction

Medium Induction

Shallow Induction



880

34°

890

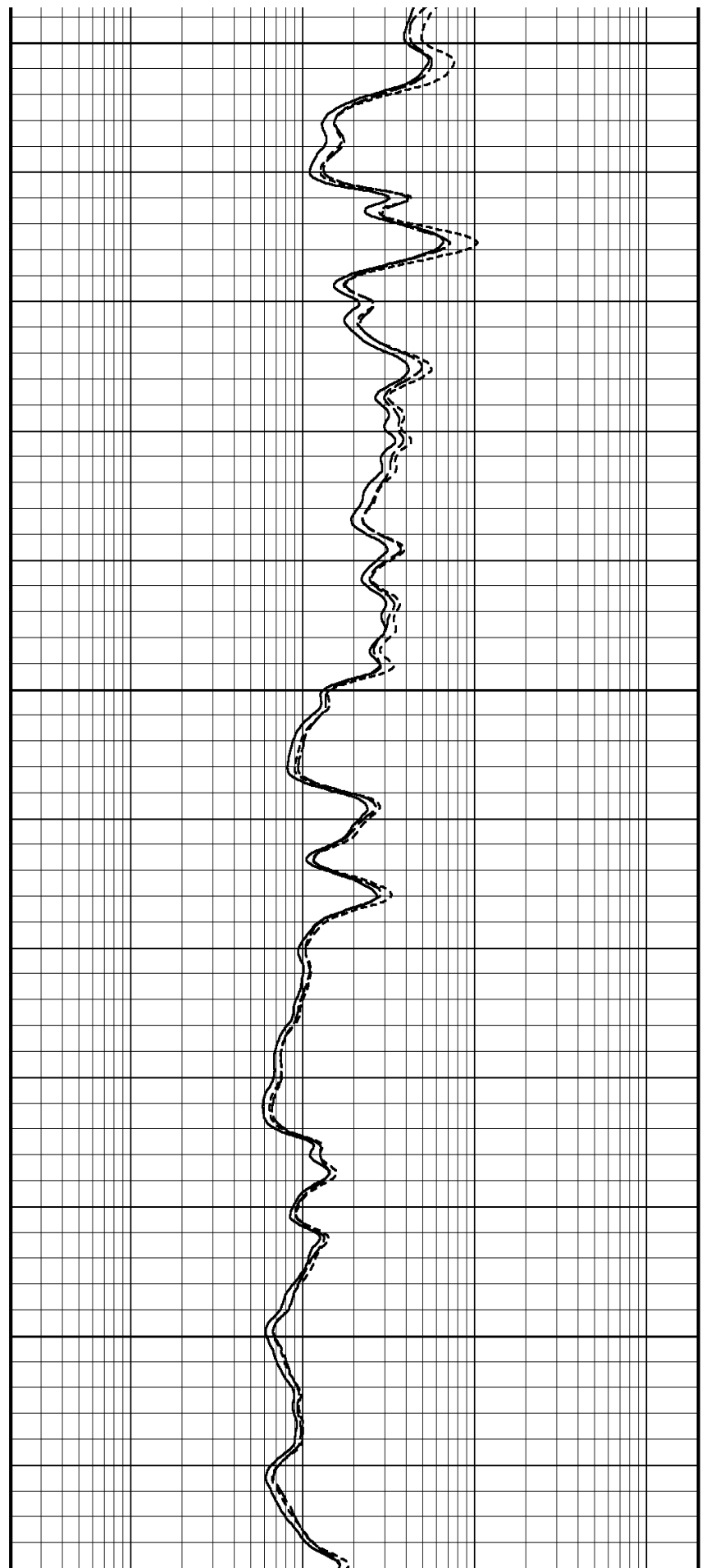
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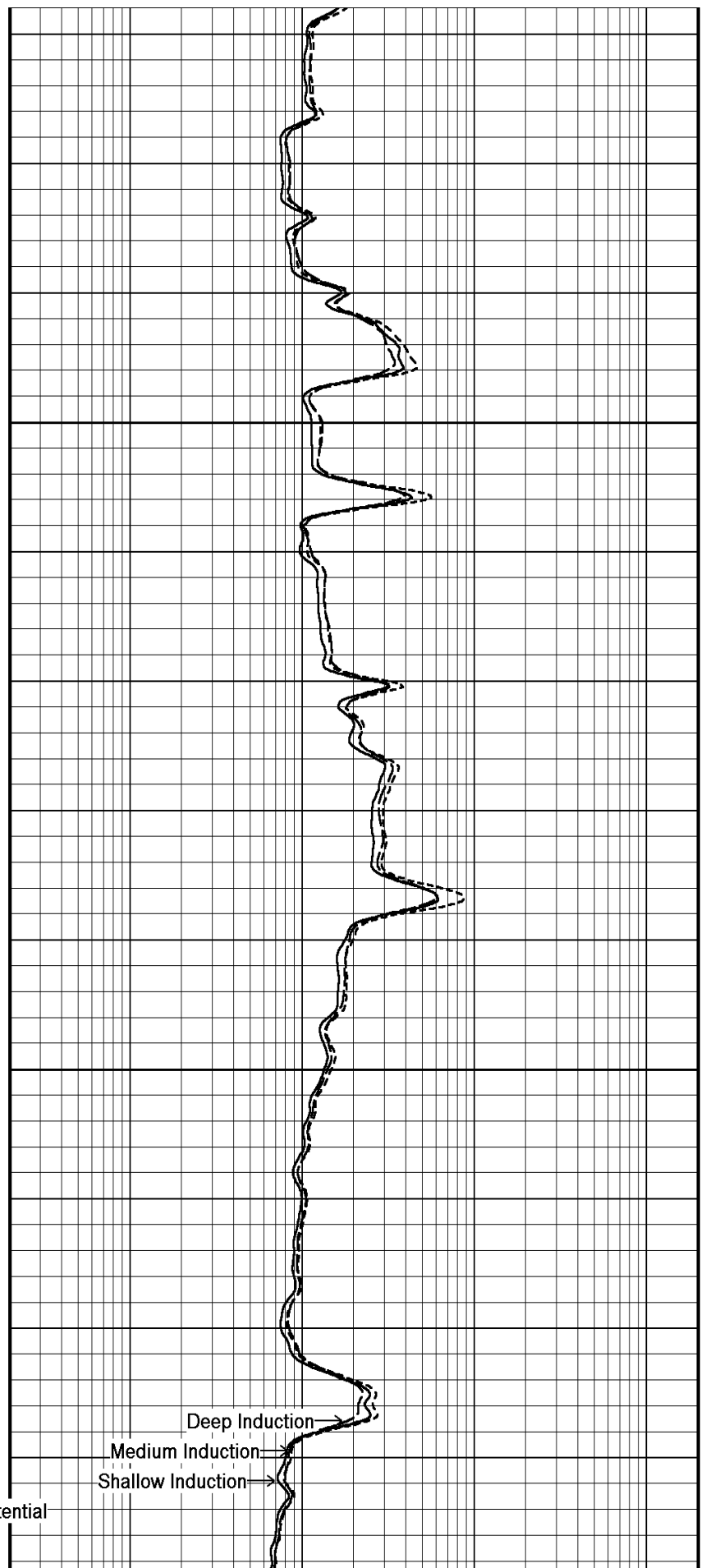
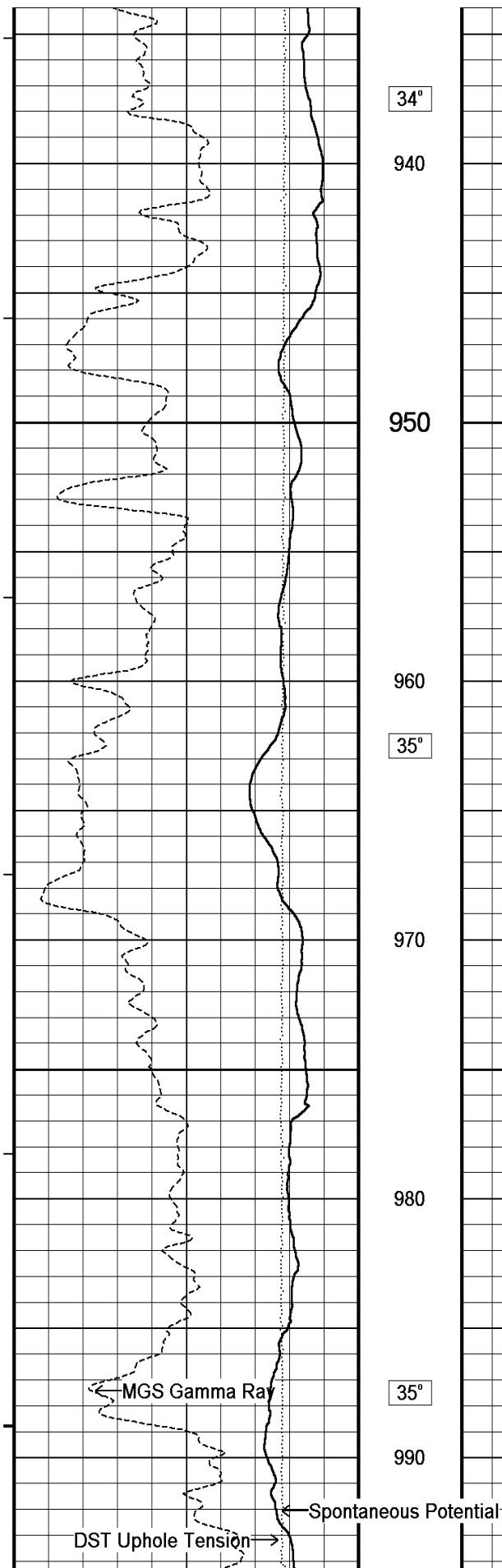
910

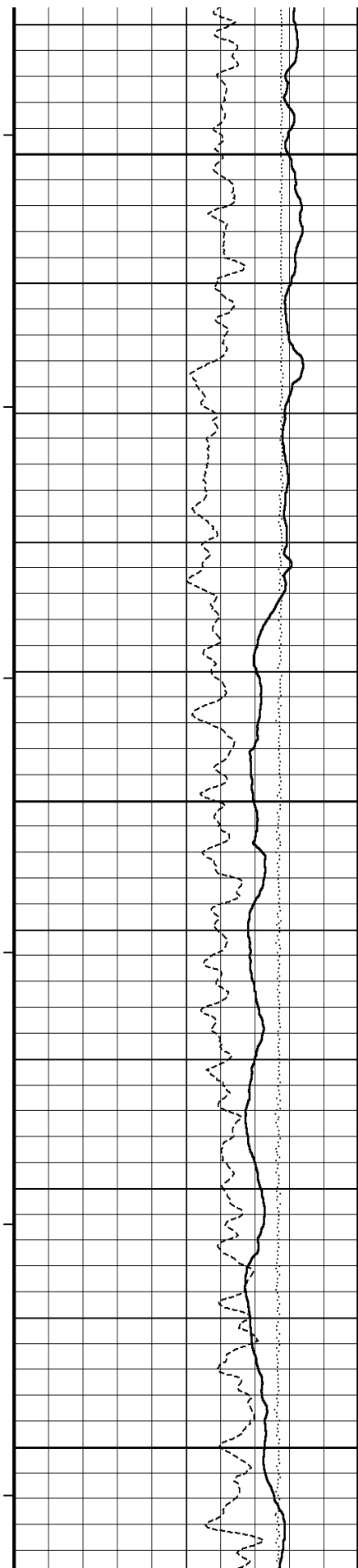
34°

920

930







1000

1010

36°

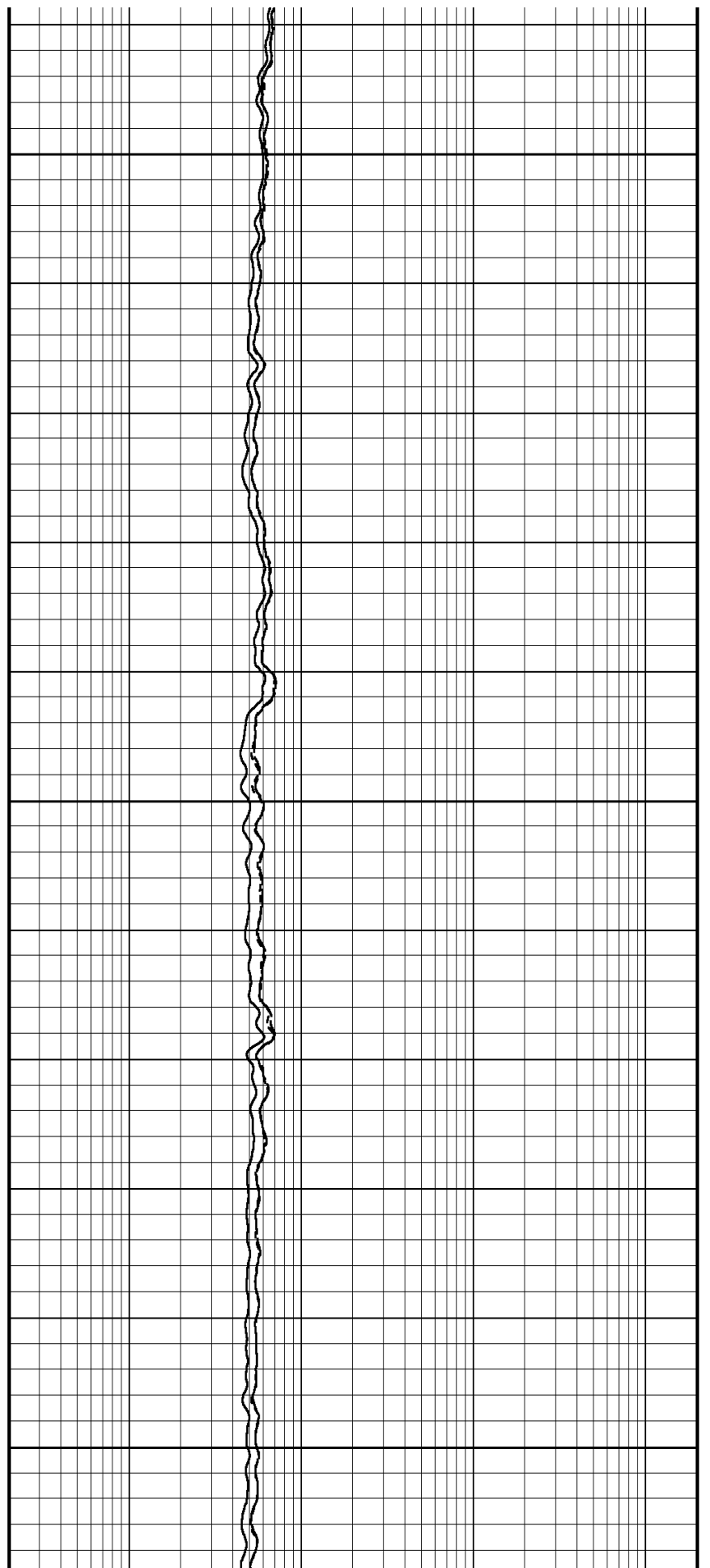
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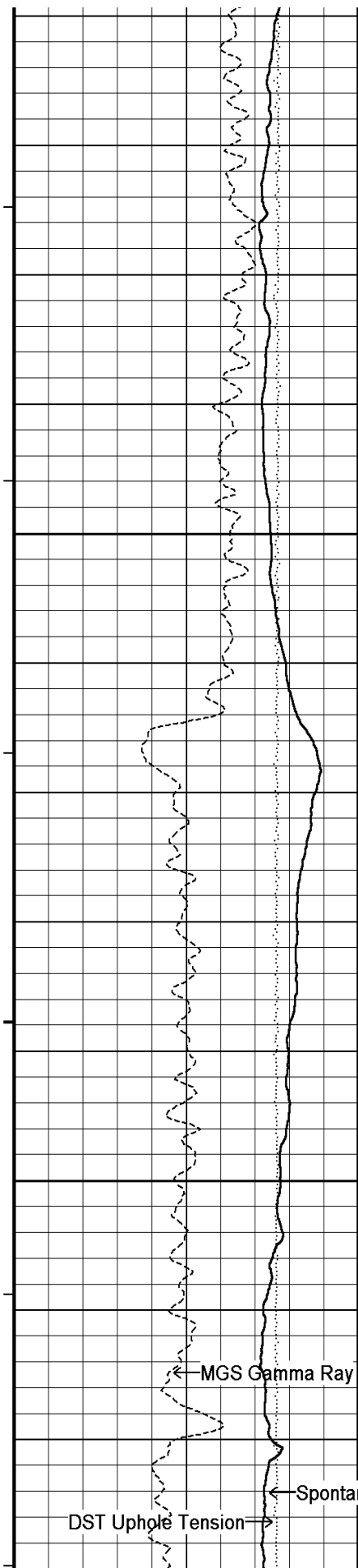
1030

36°

1040

1050





1060

37°

1070

1080

38°

1090

1100

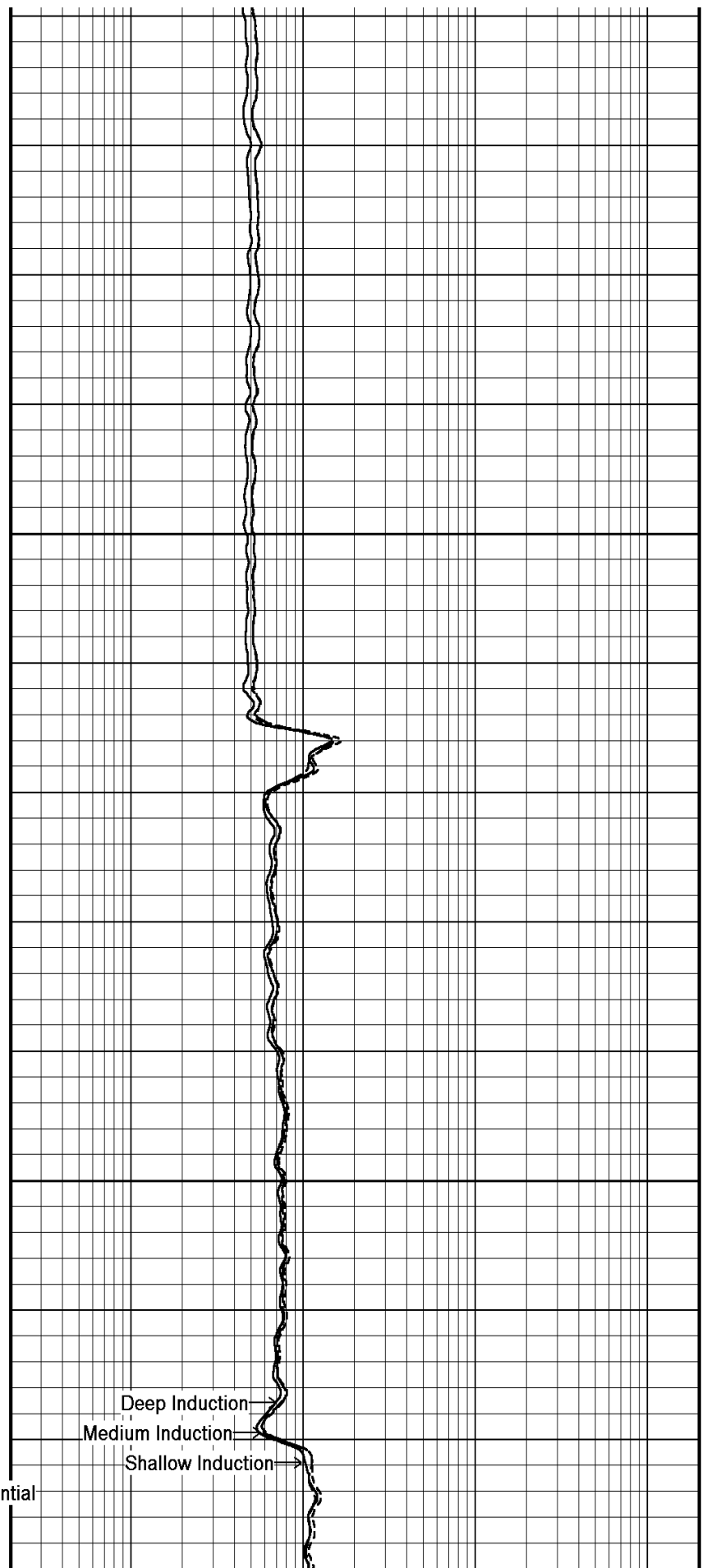
1110

38°

DST Uphole Tension

MGS Gamma Ray

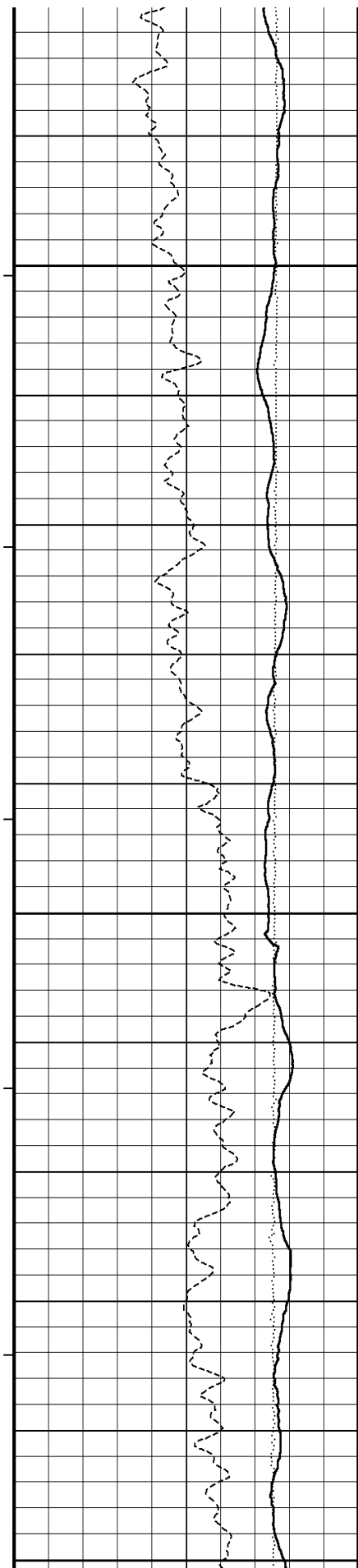
Spontaneous Potential



Deep Induction

Medium Induction

Shallow Induction



1120

1130

39°

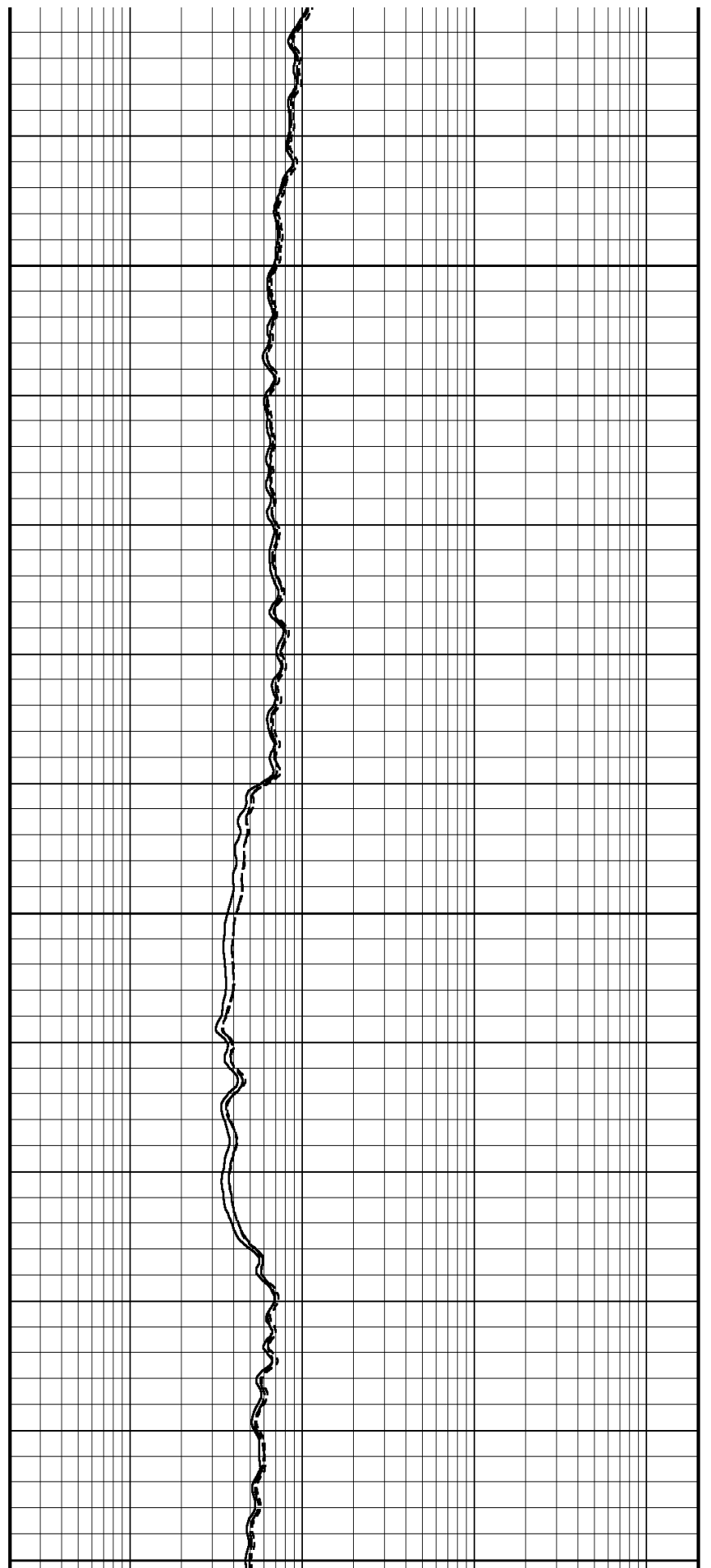
1140

1150

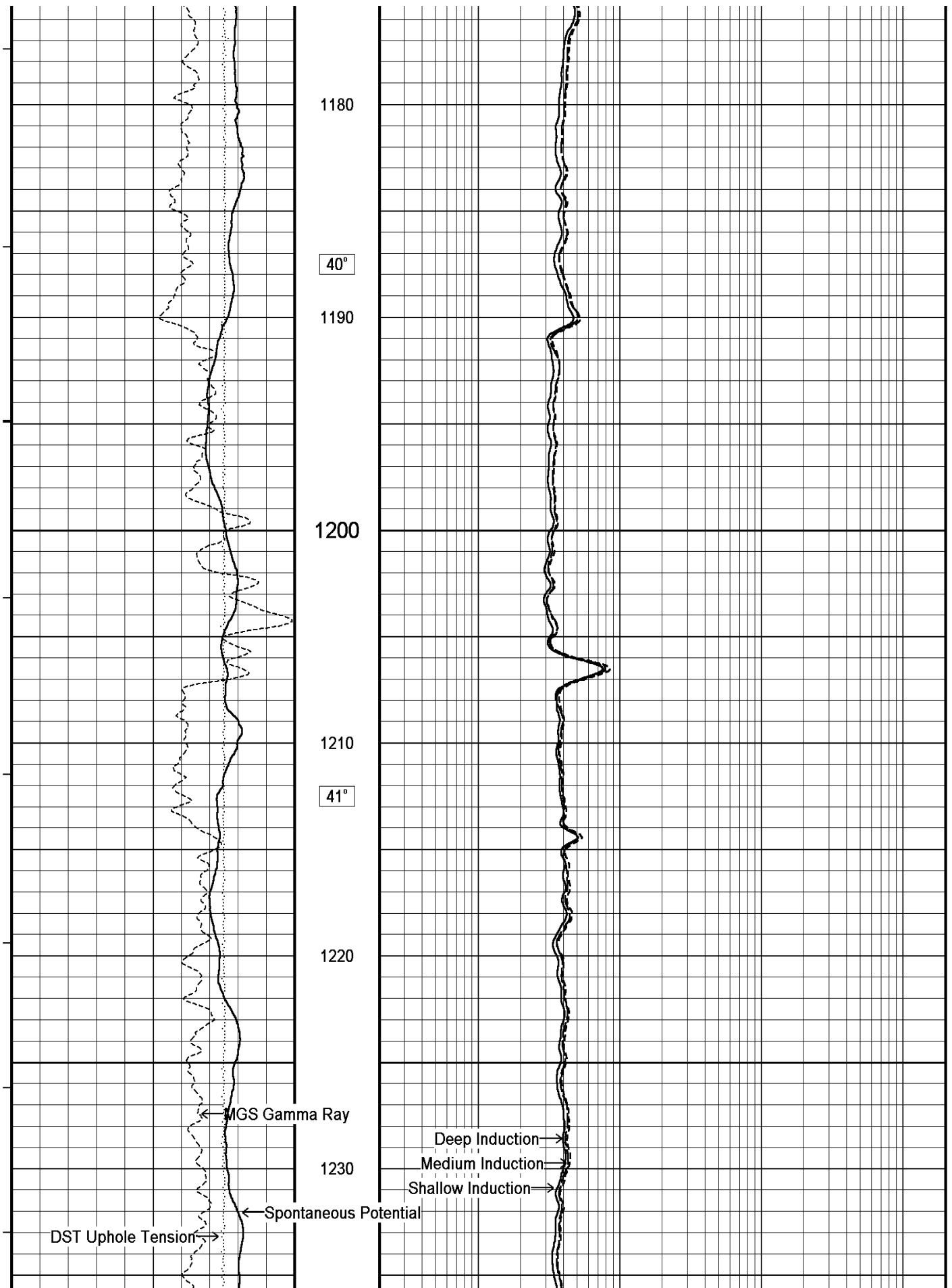
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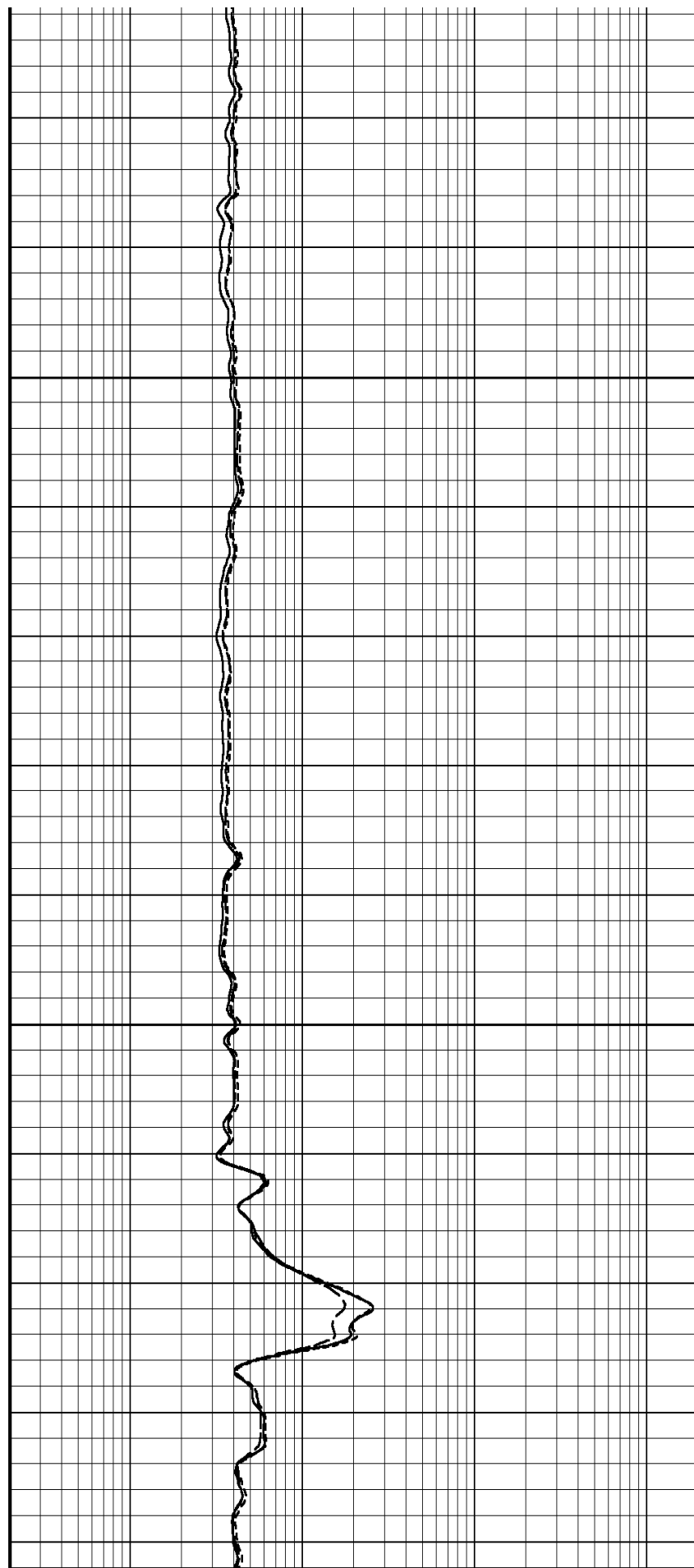
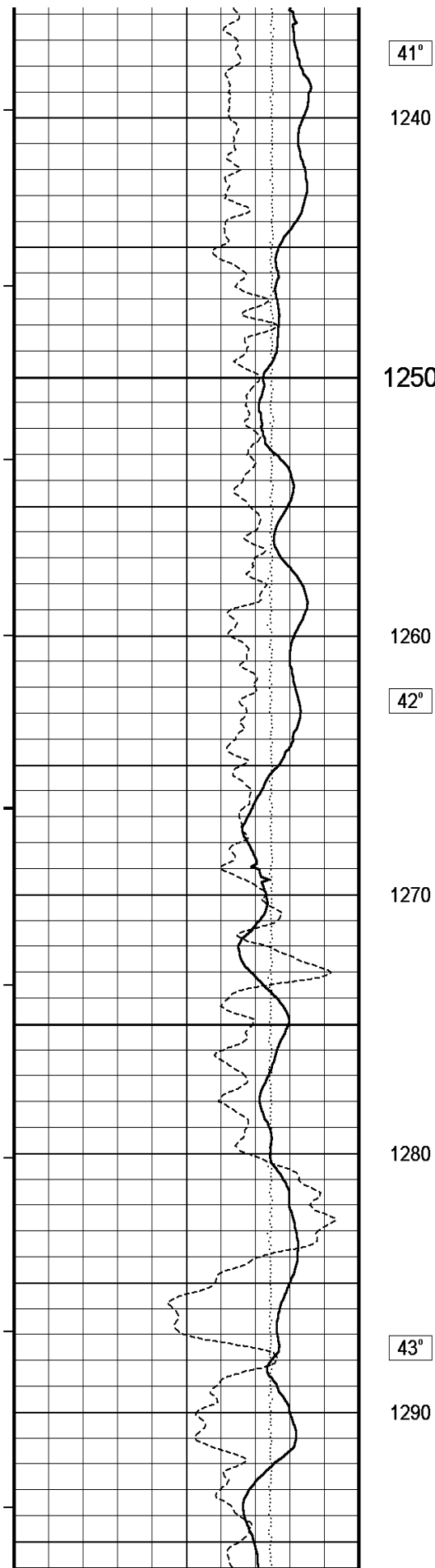
39°

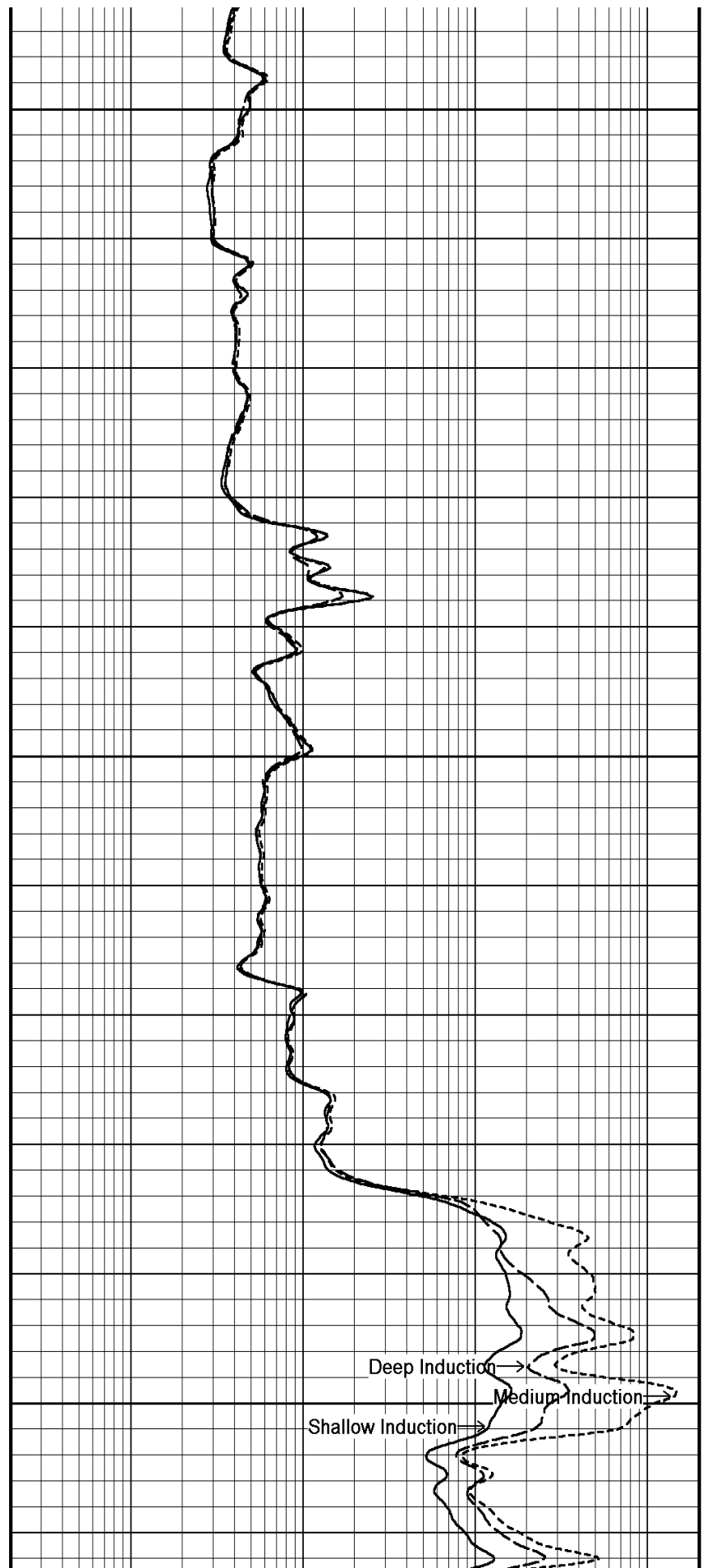
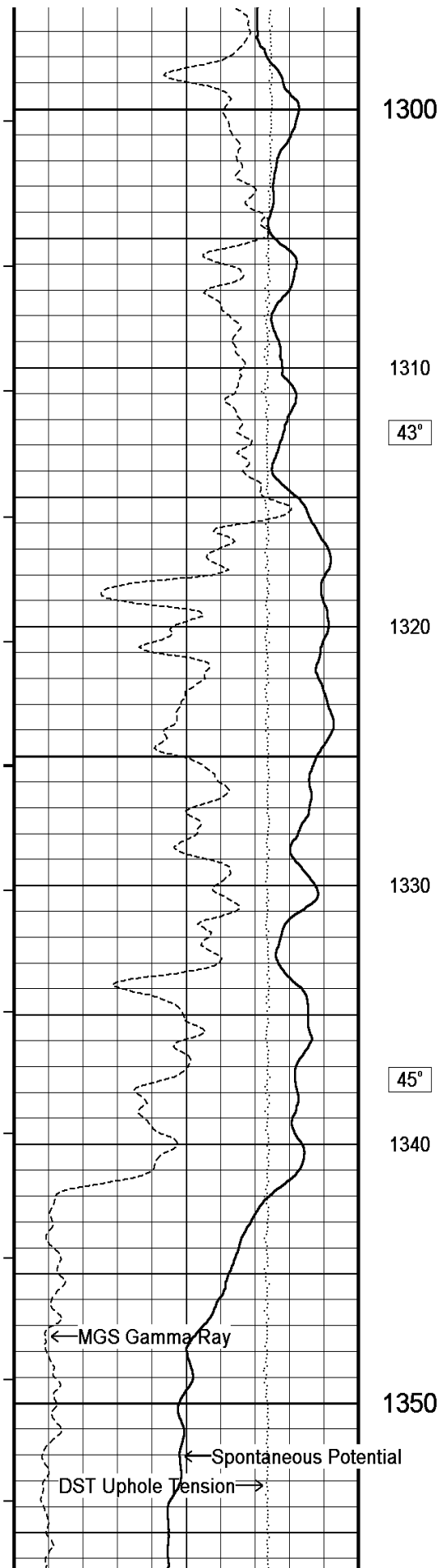
1170

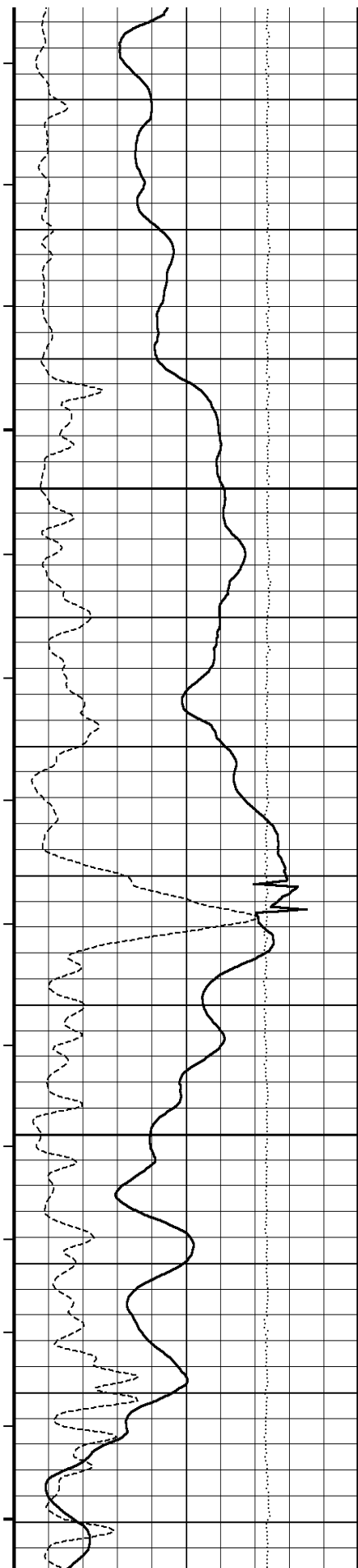












1360

45°

1370

1380

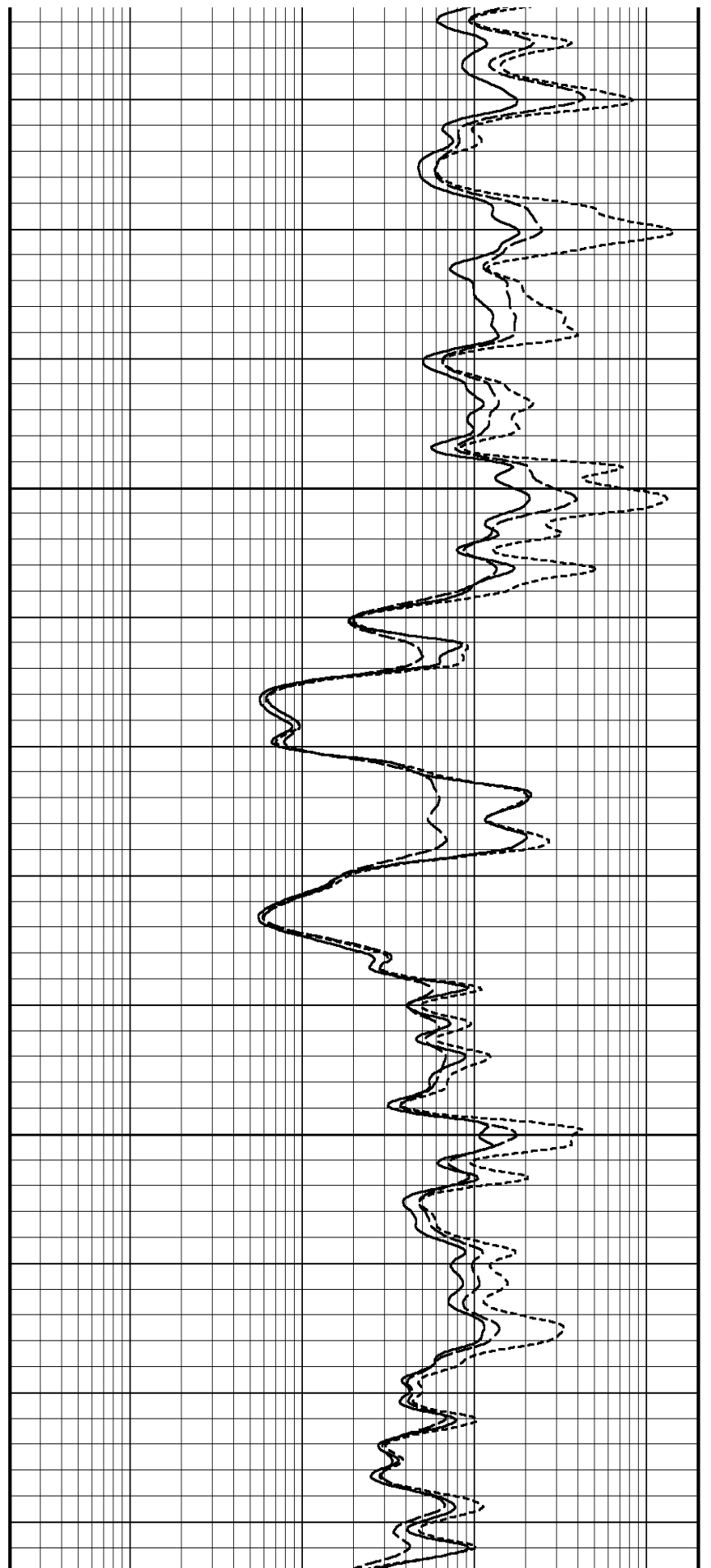
46°

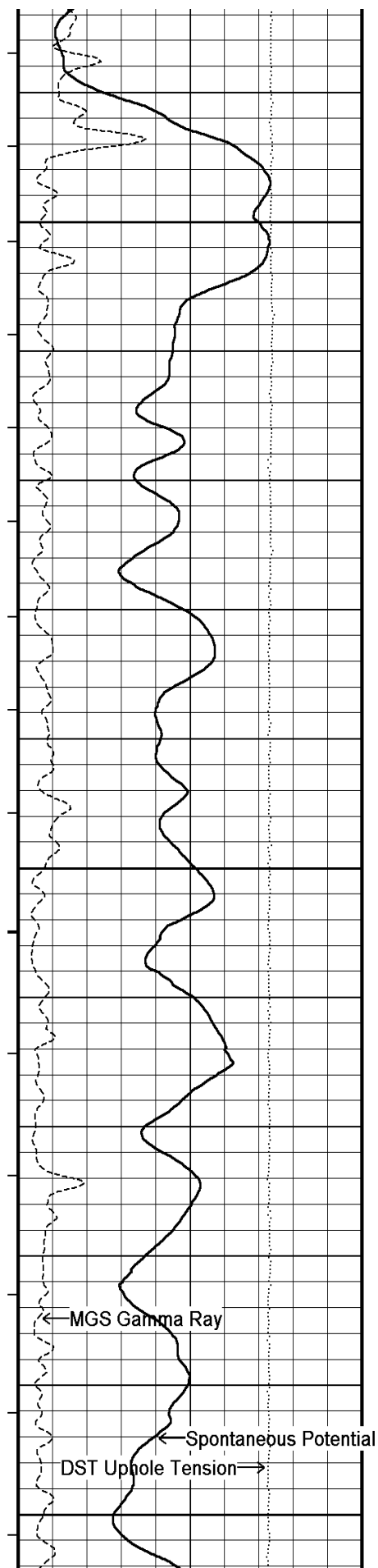
1390

1400

1410

47°





1420

1430

48°

1440

1450

1460

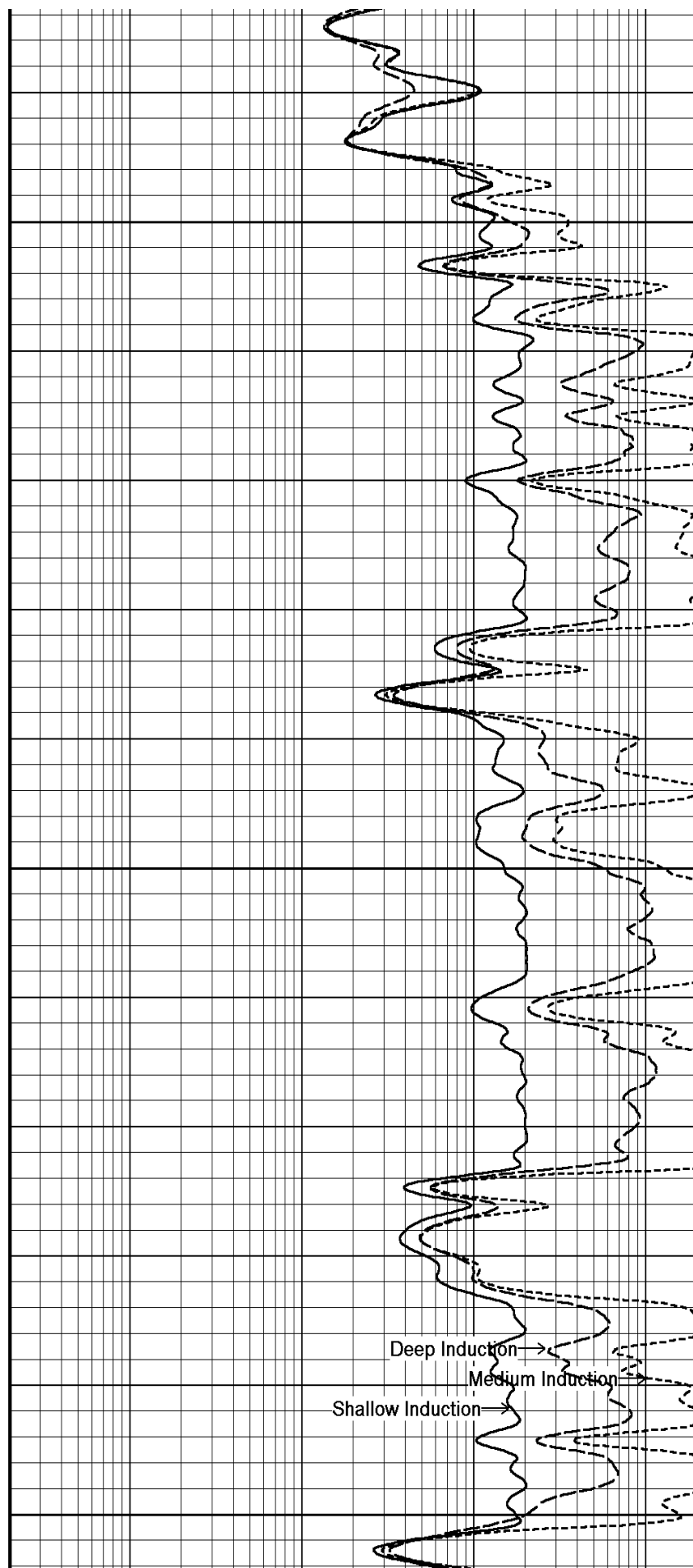
48°

1470

MGS Gamma Ray

Spontaneous Potential

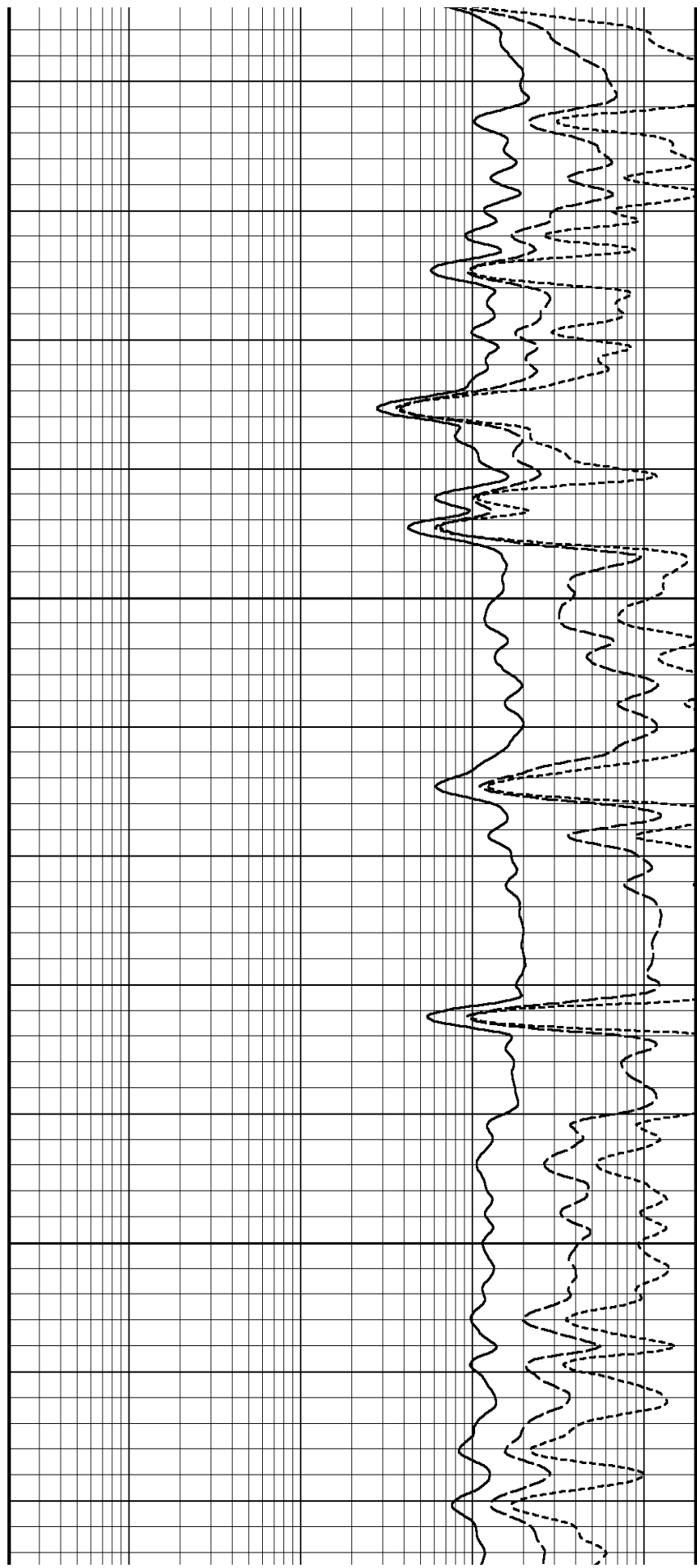
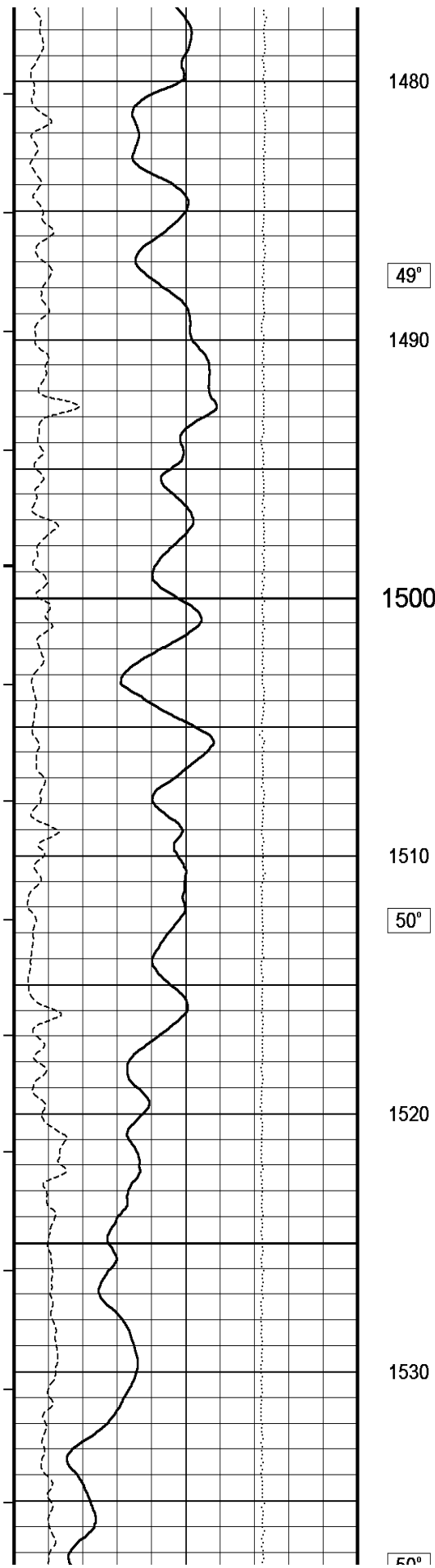
DST Uphole Tension

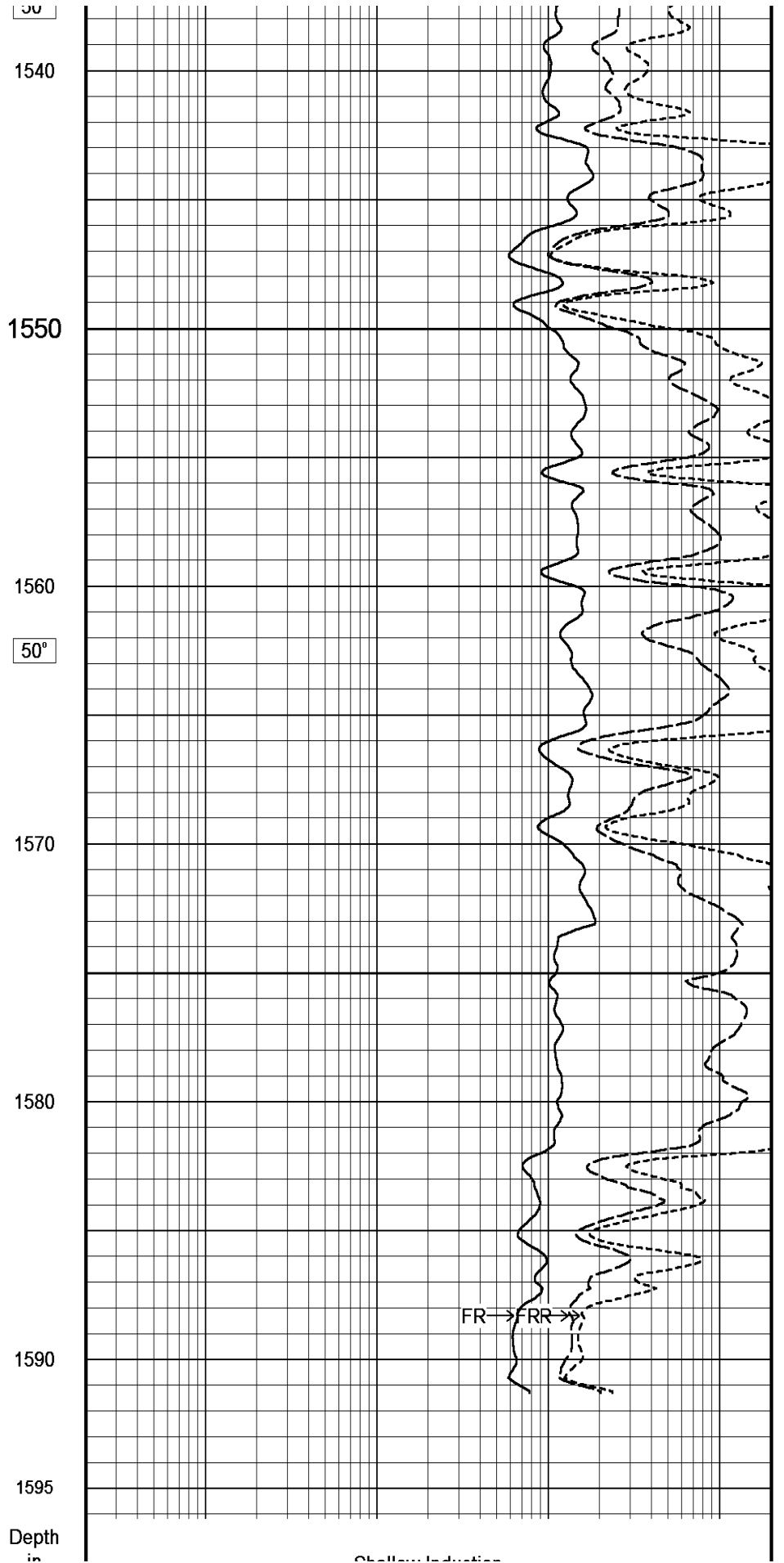
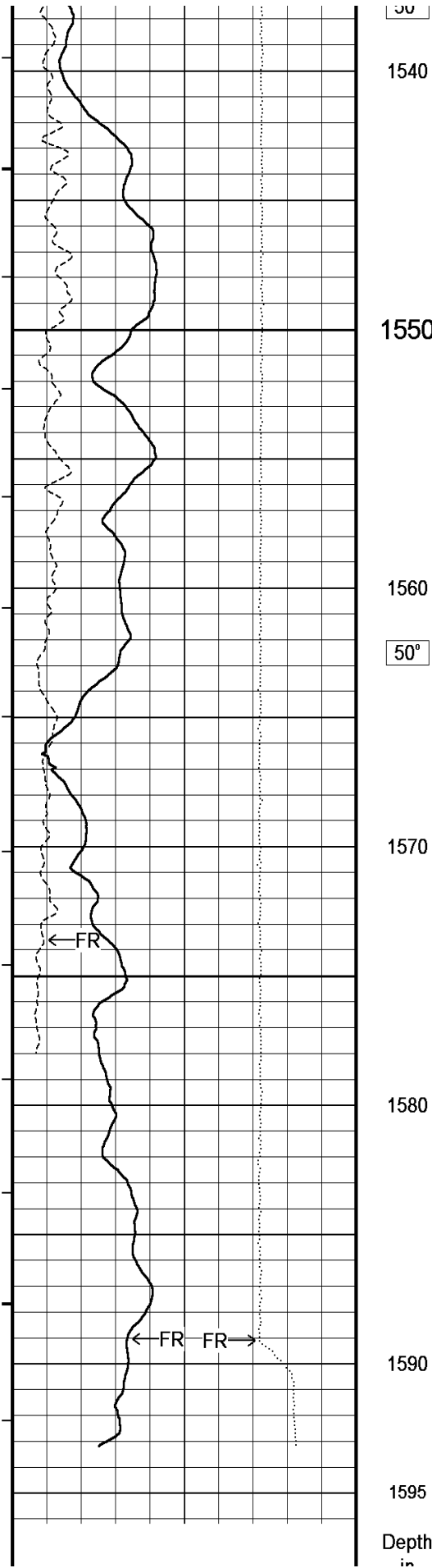


Deep Induction

Medium Induction

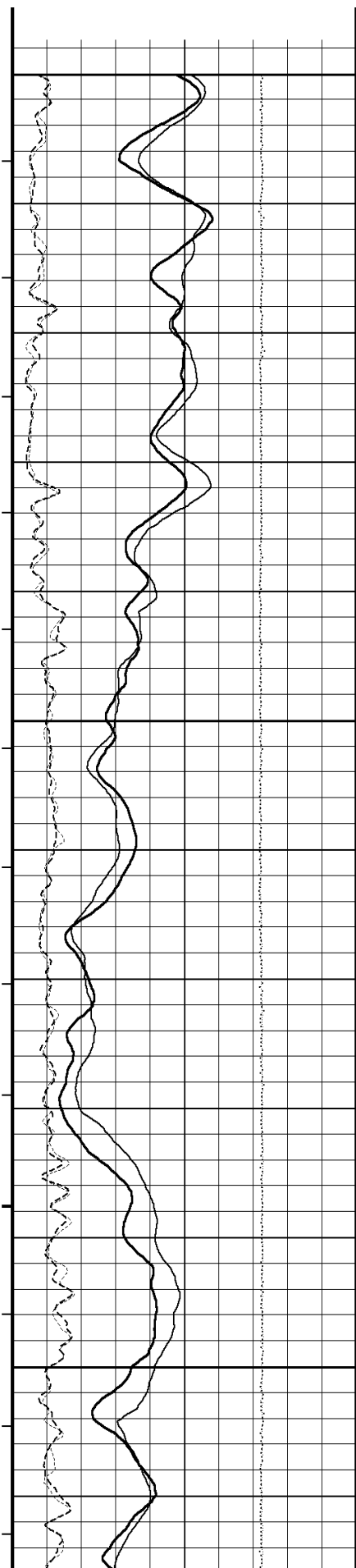
Shallow Induction











1500

1510

50°

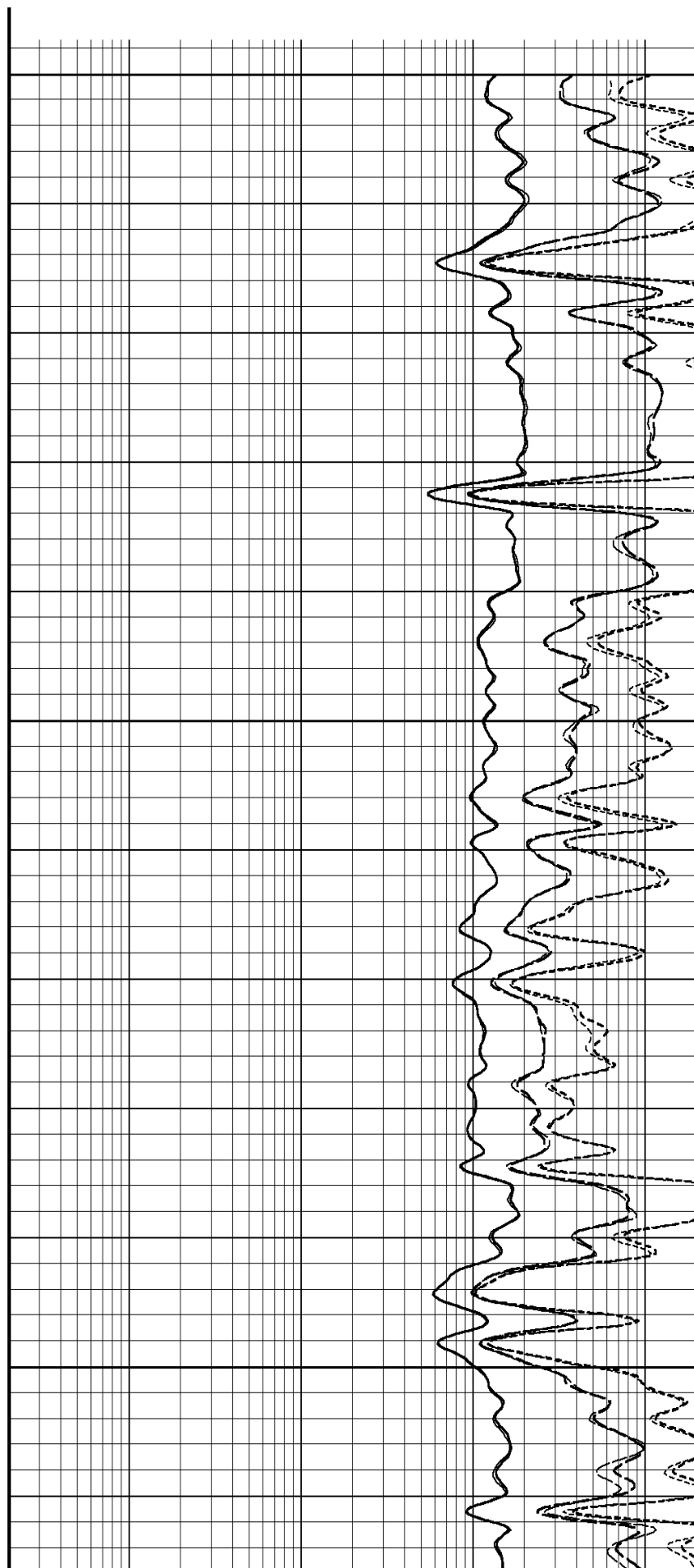
1520

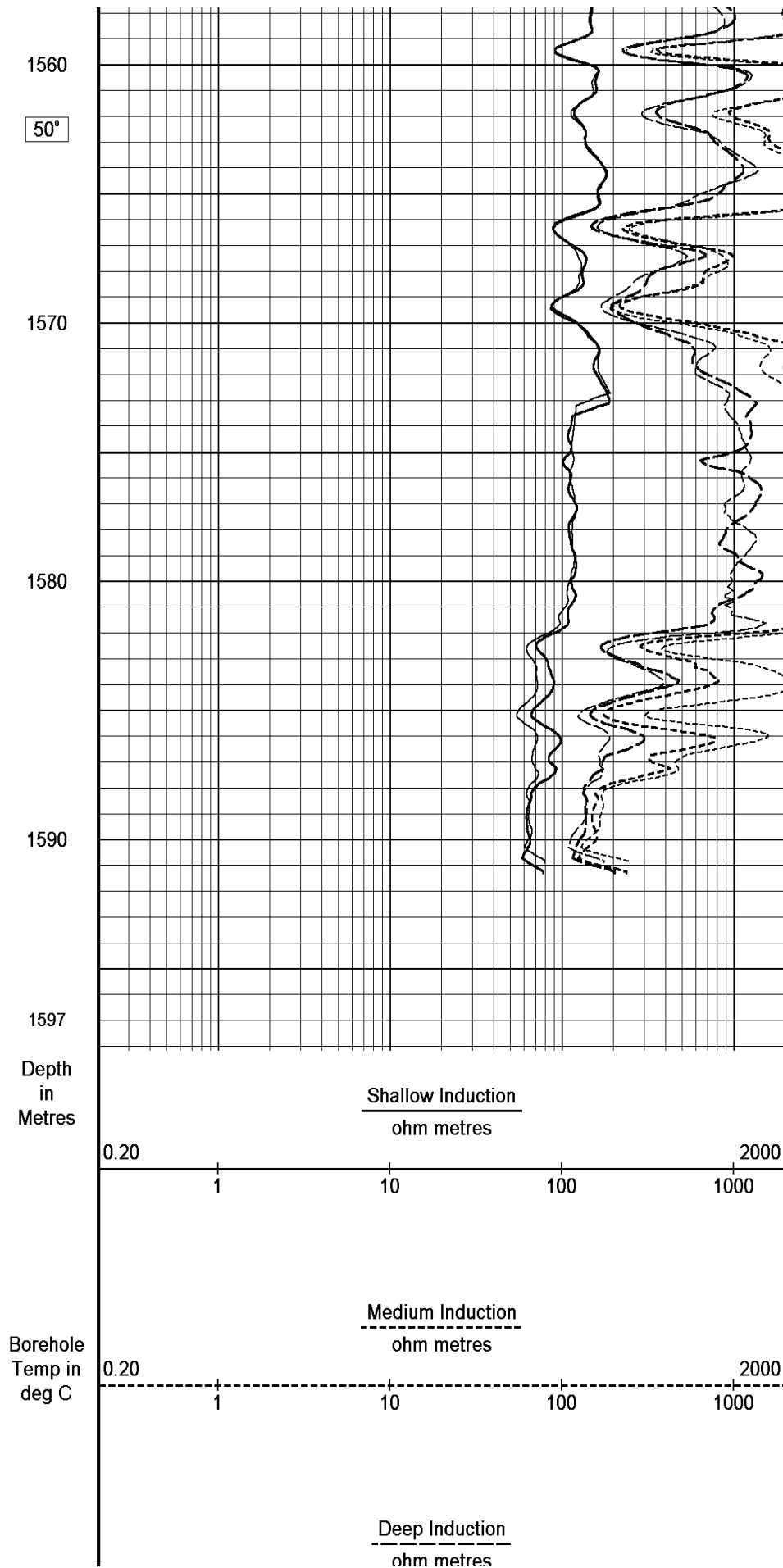
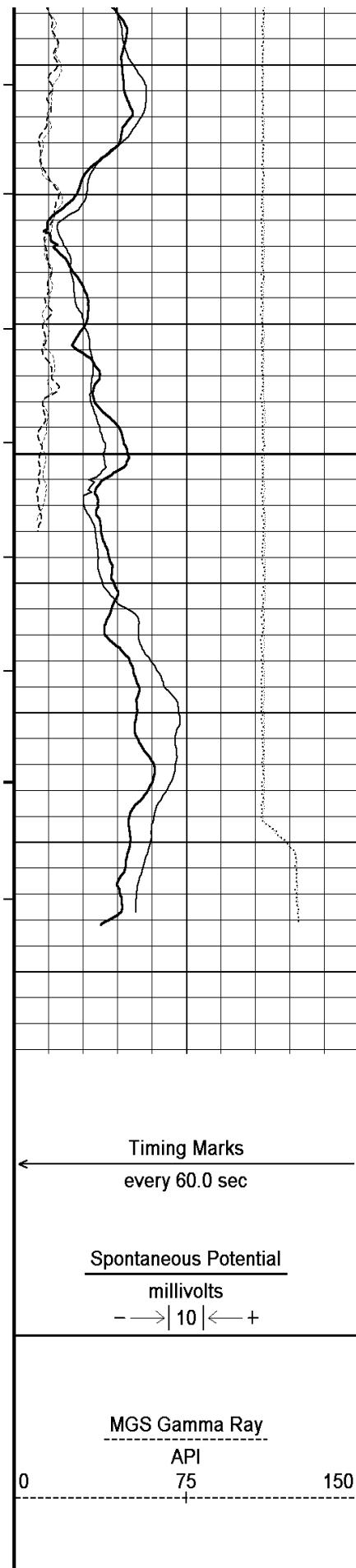
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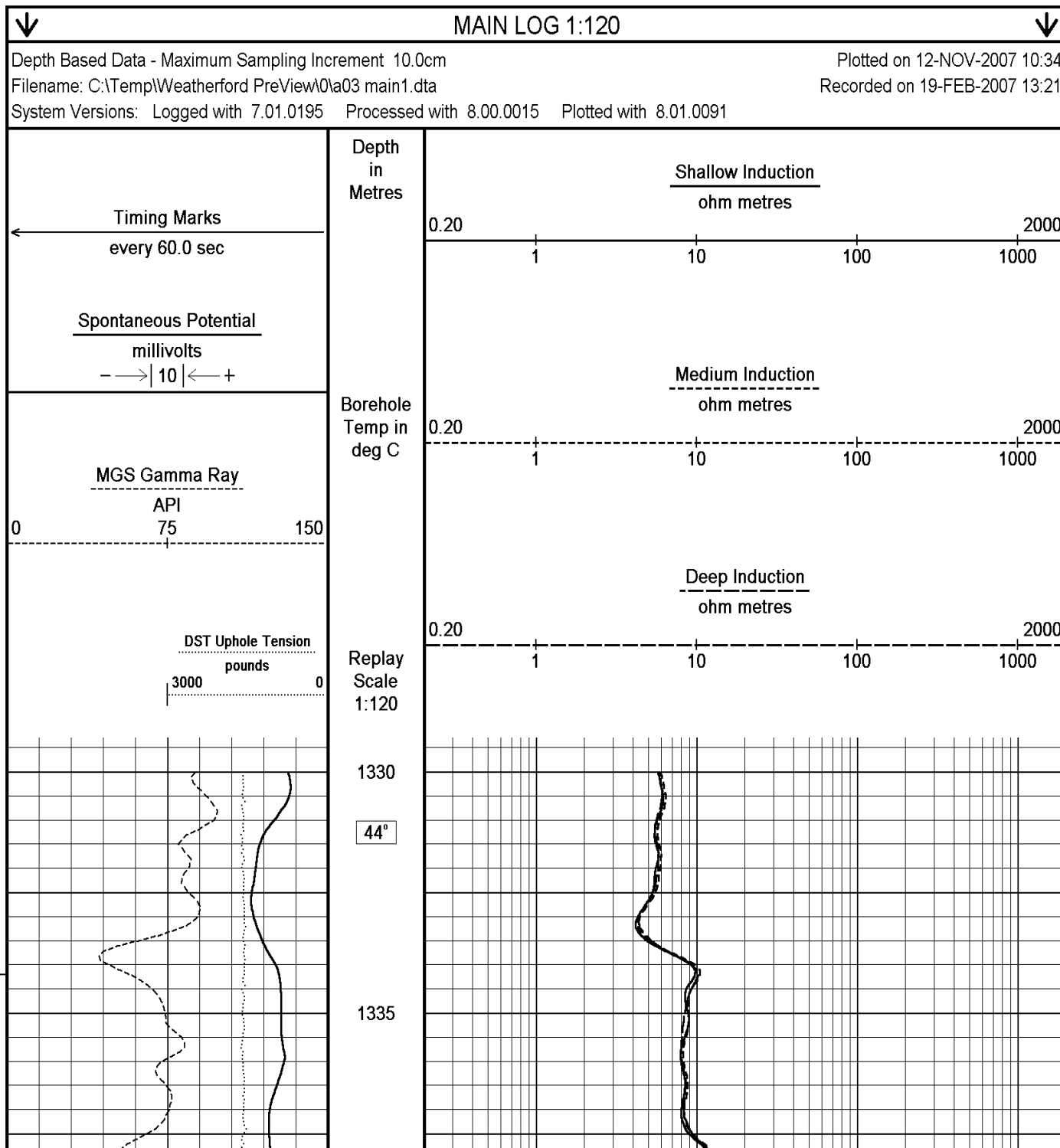
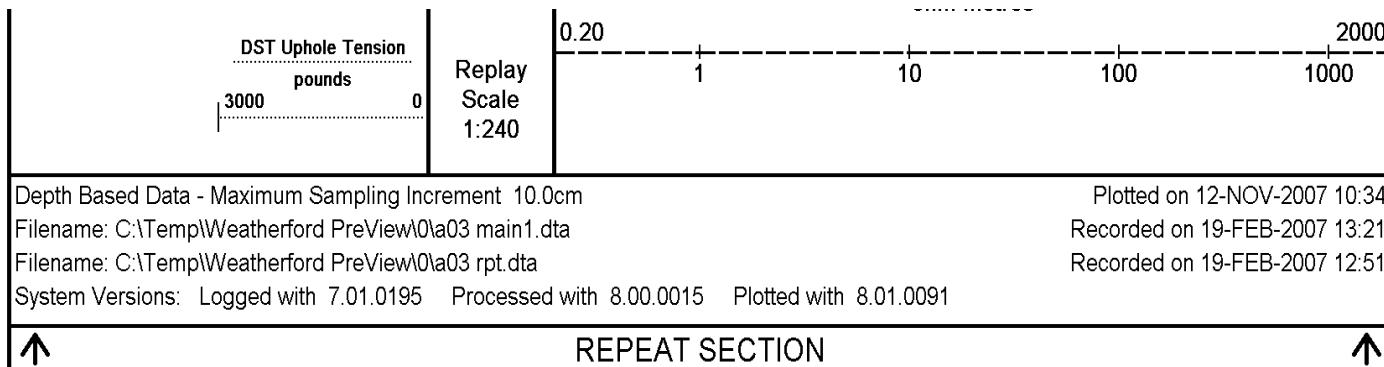
50°

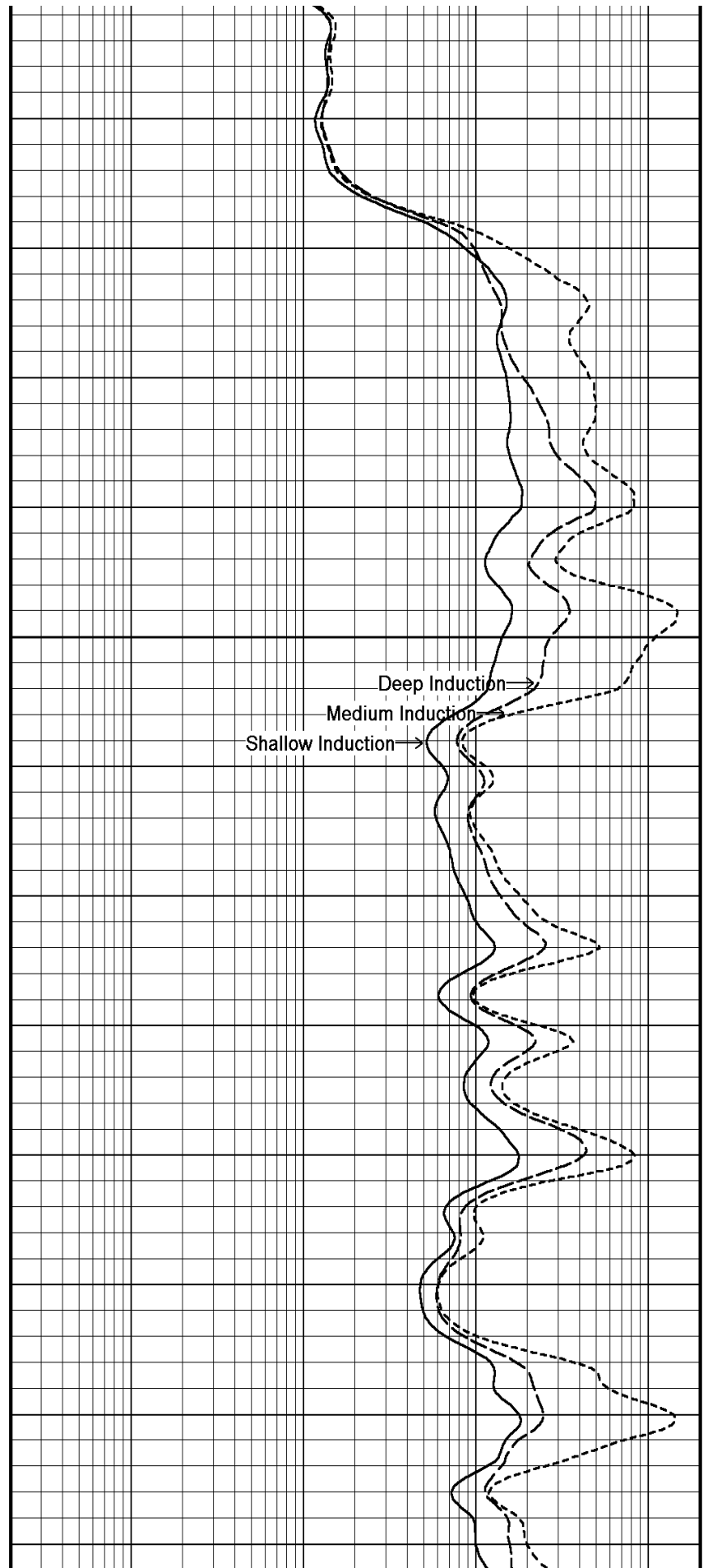
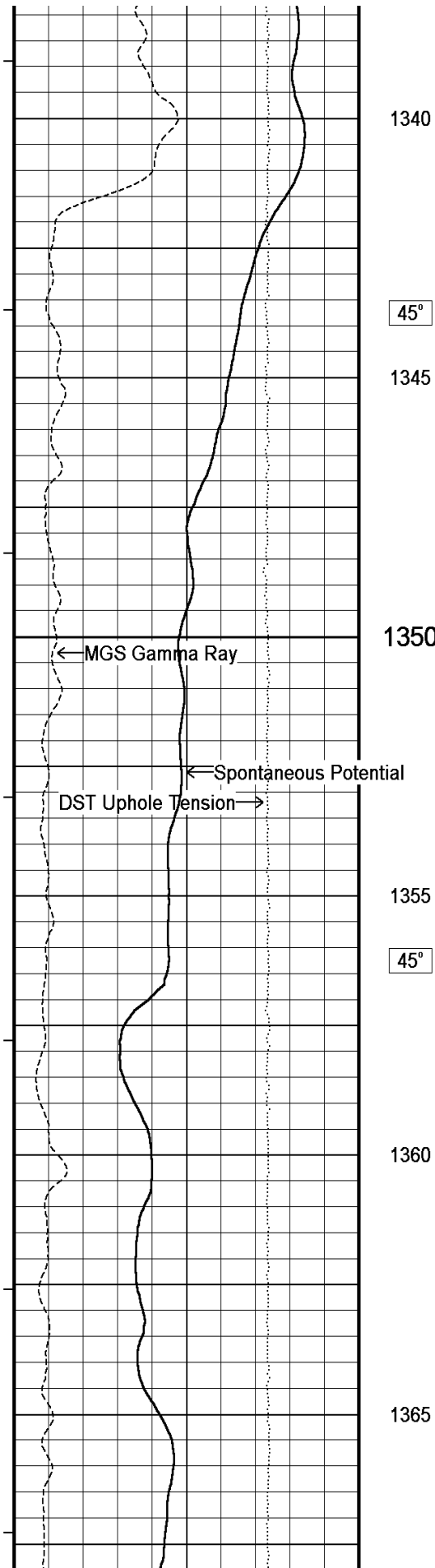
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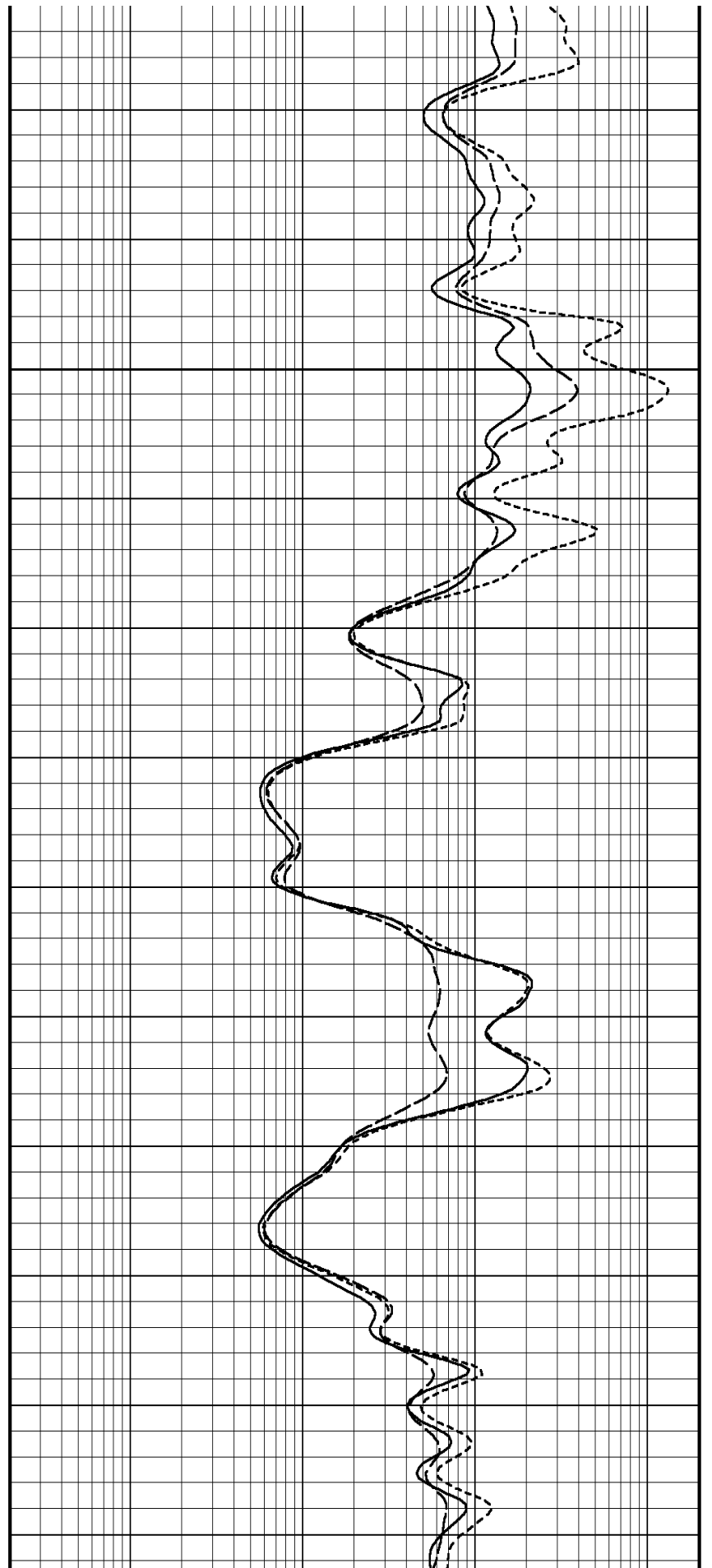
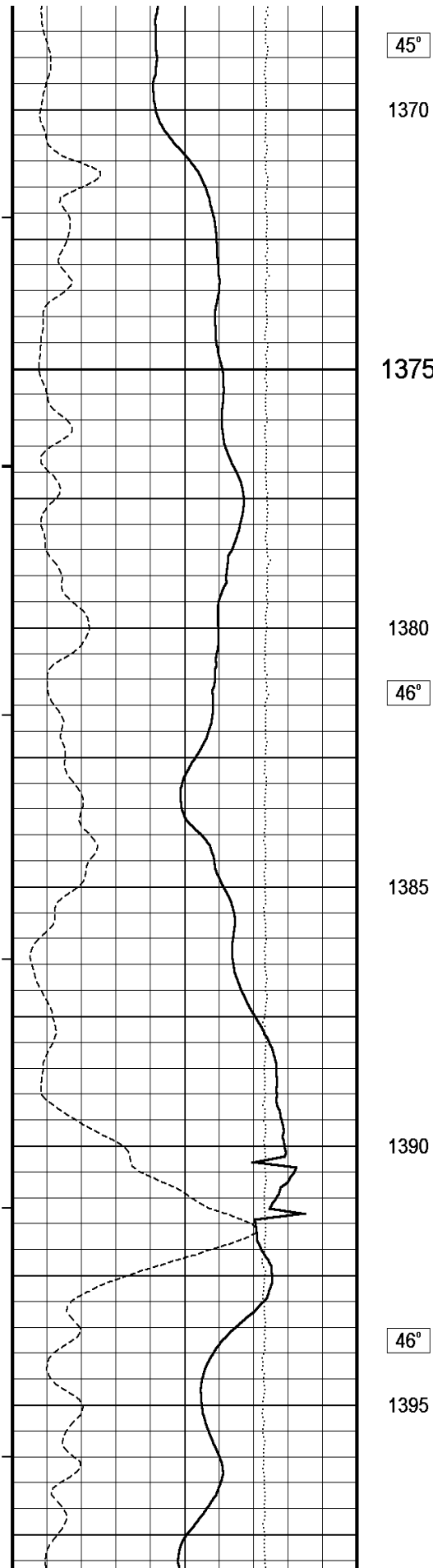
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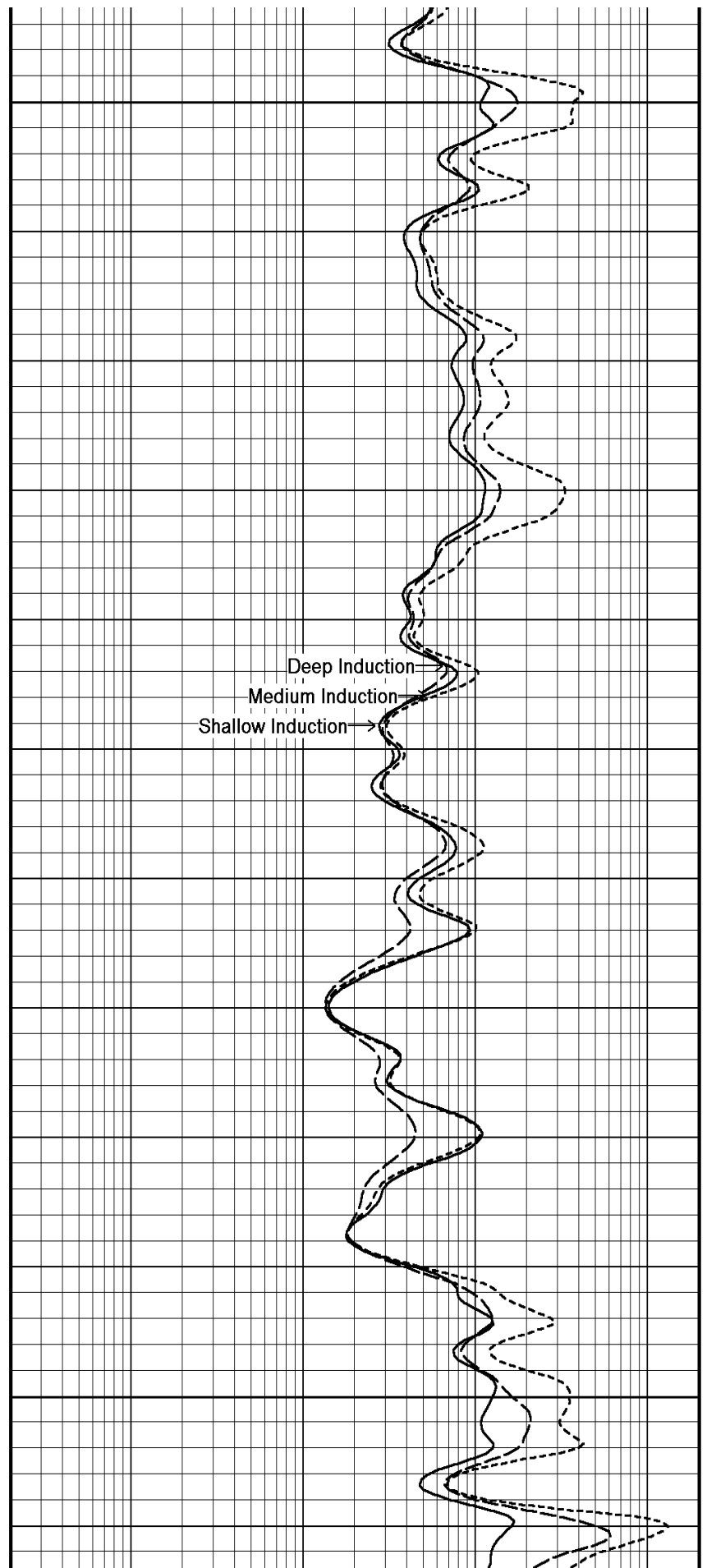
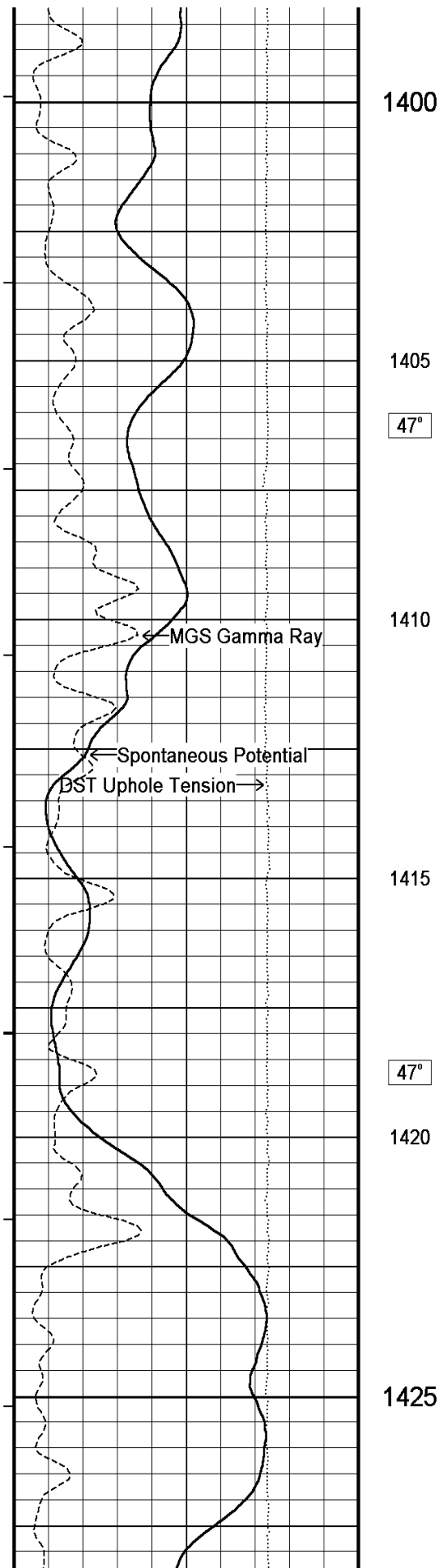


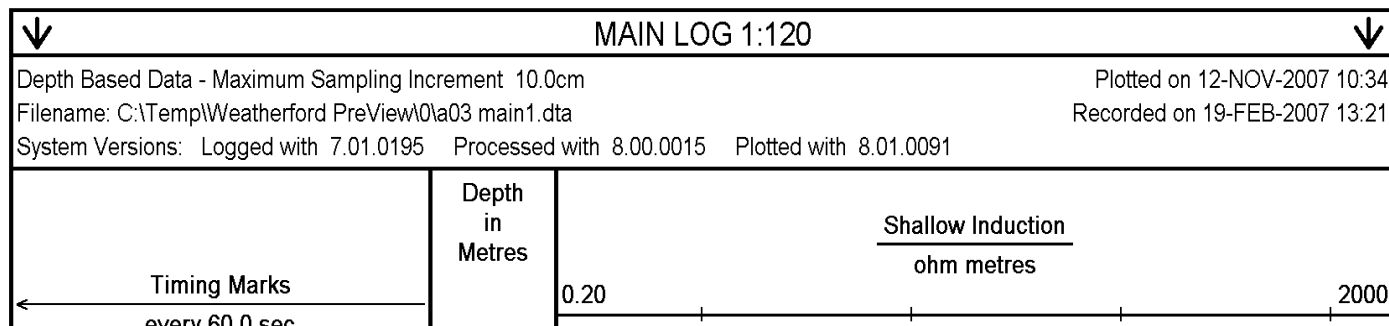
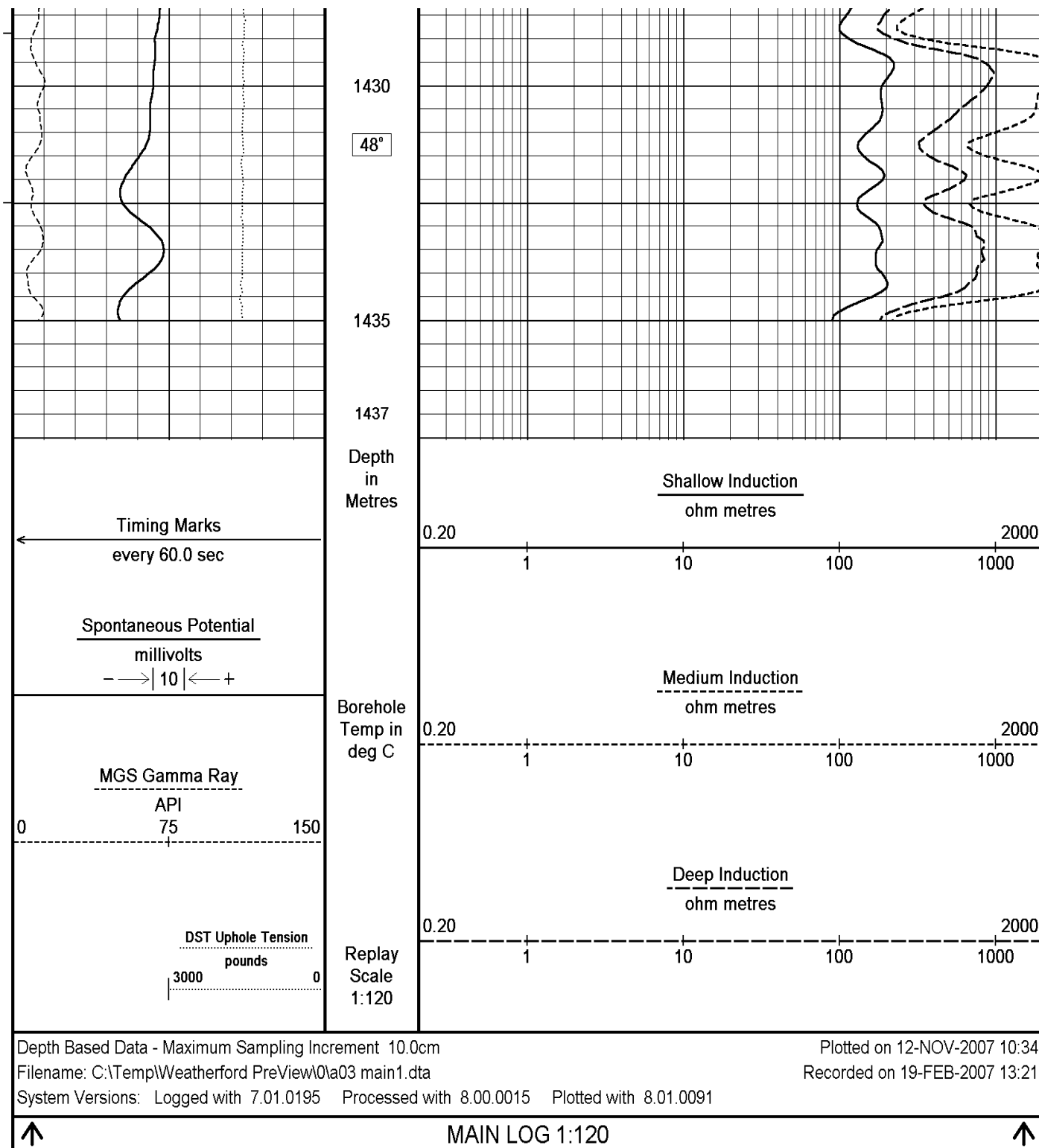


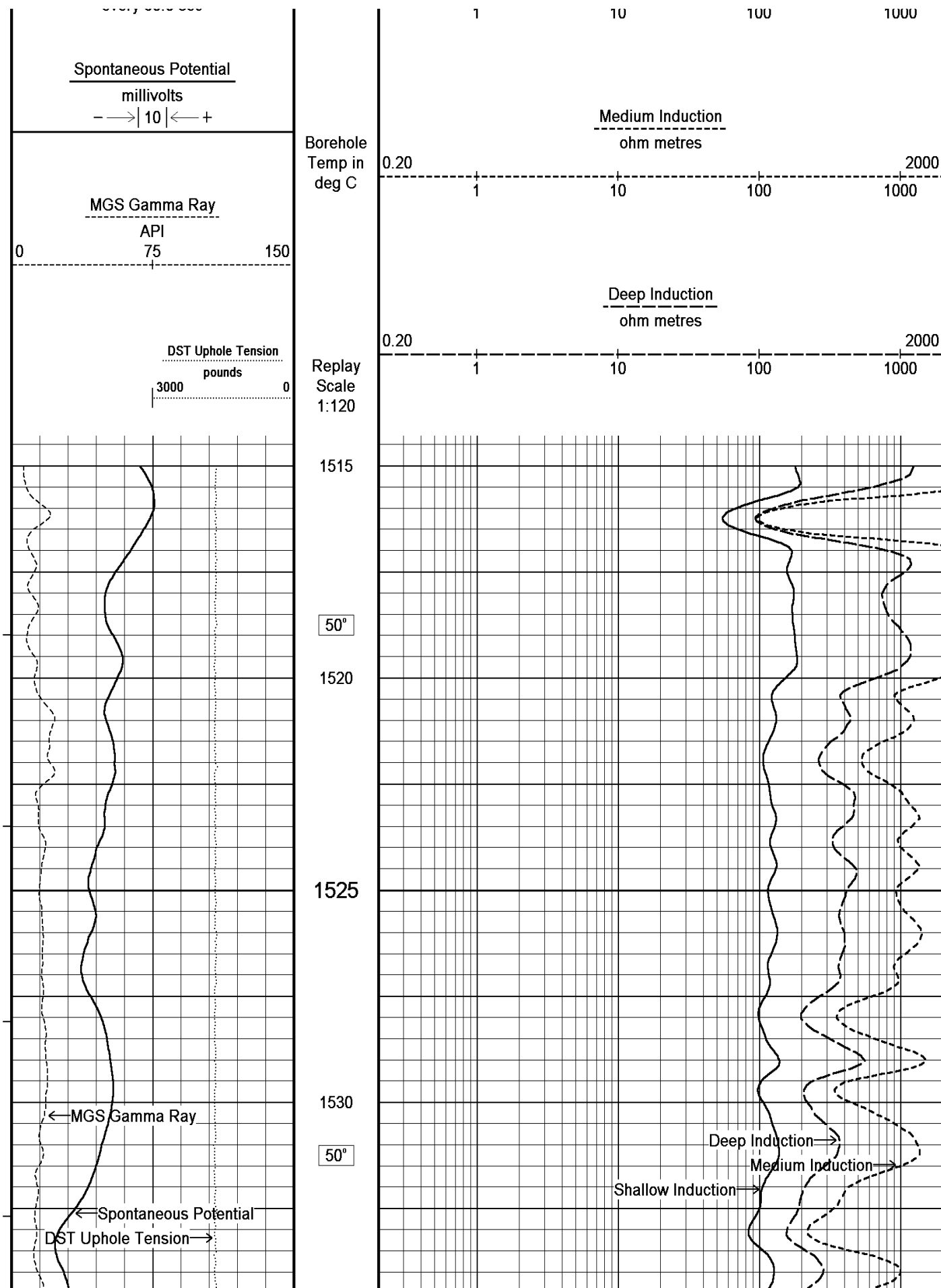




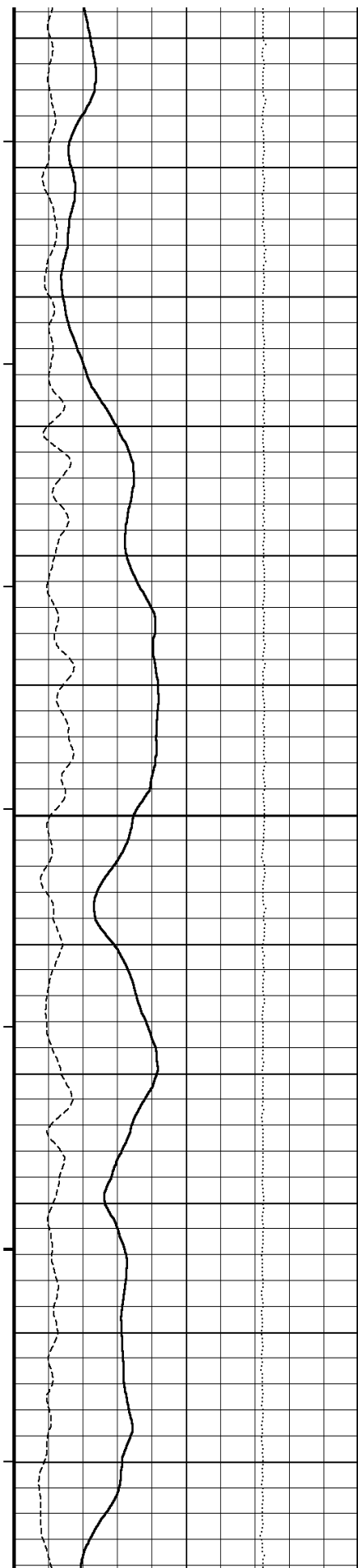












1535

1540

50°

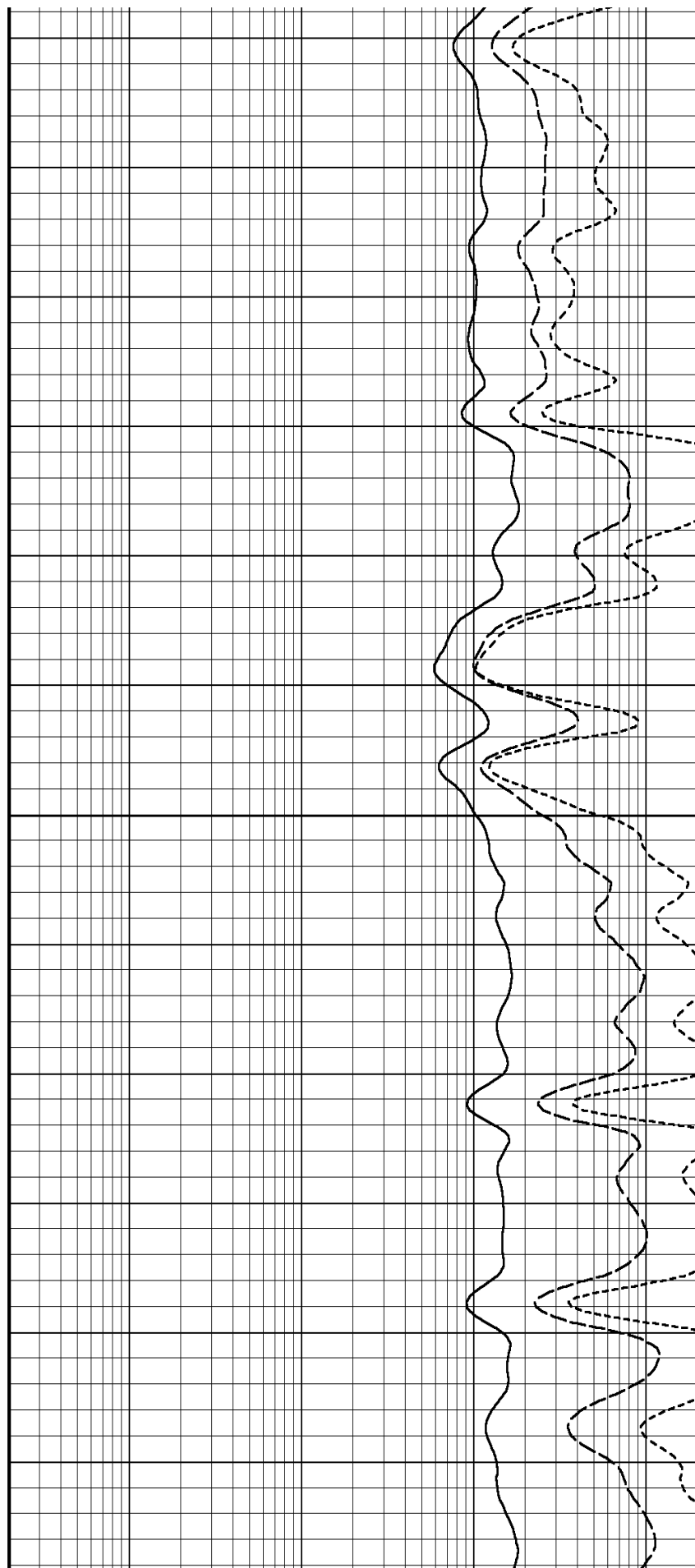
1545

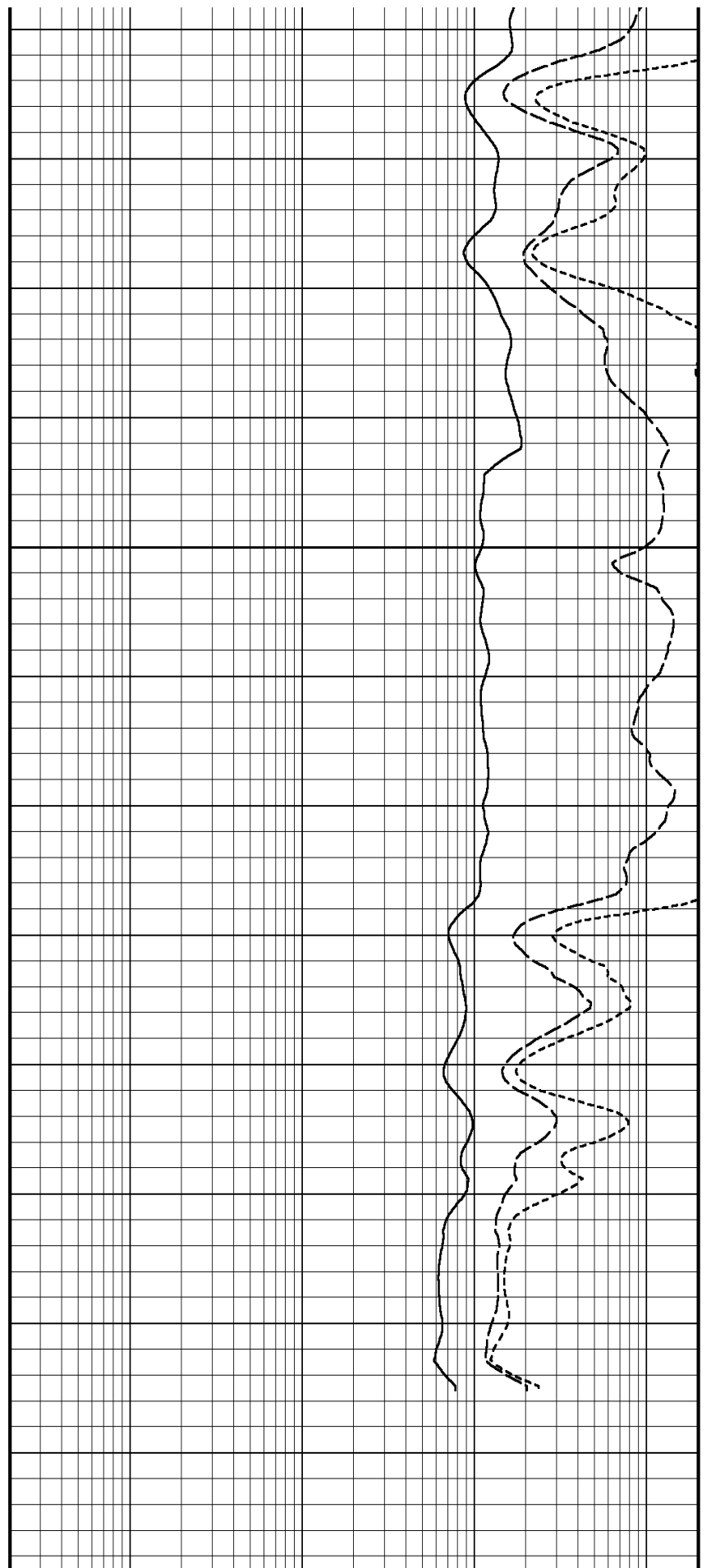
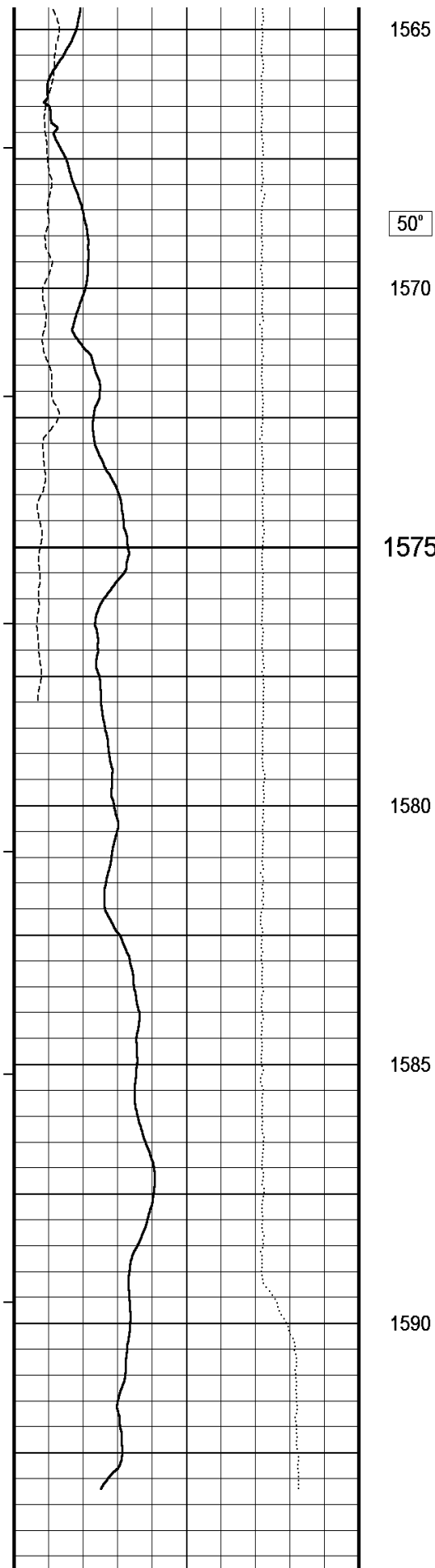
1550

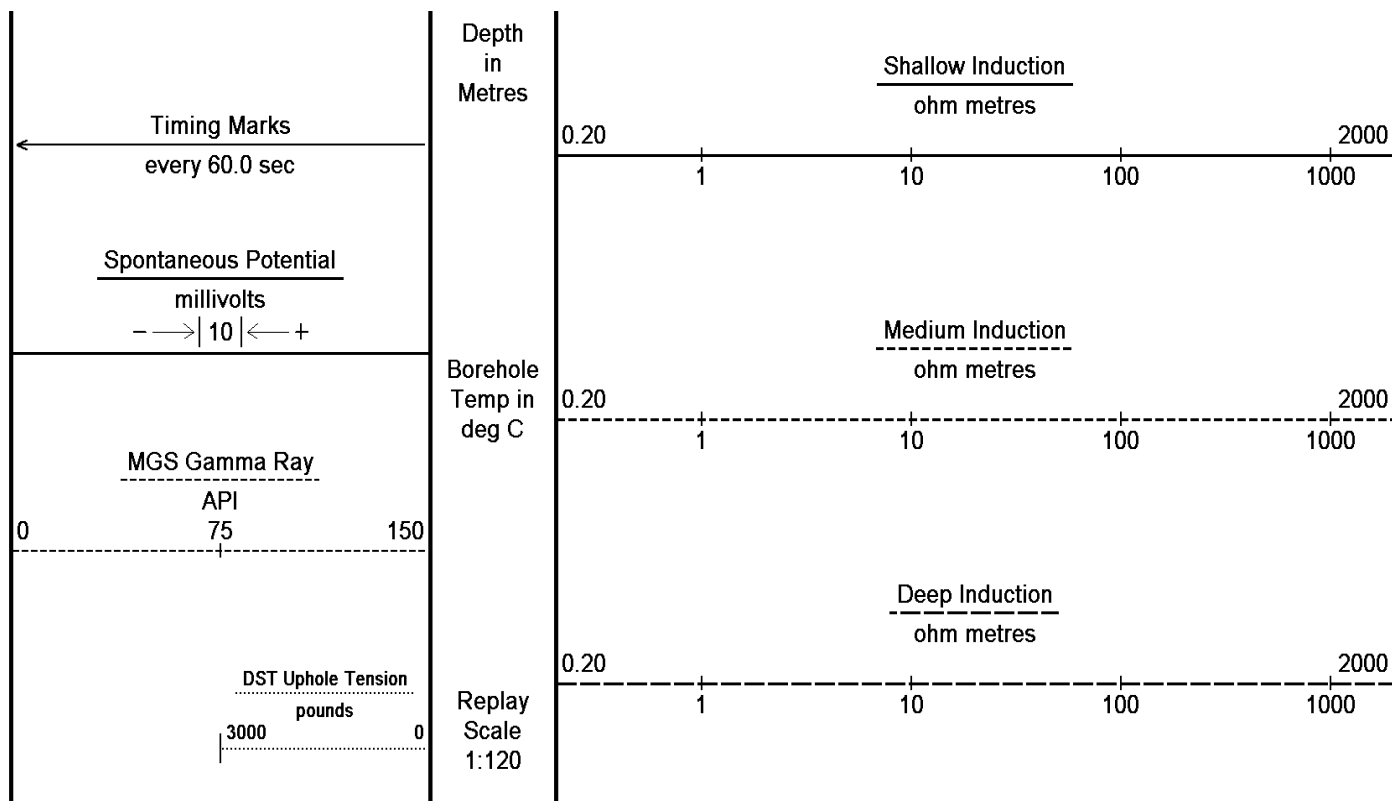
1555

50°

1560







Depth Based Data - Maximum Sampling Increment 10.0cm

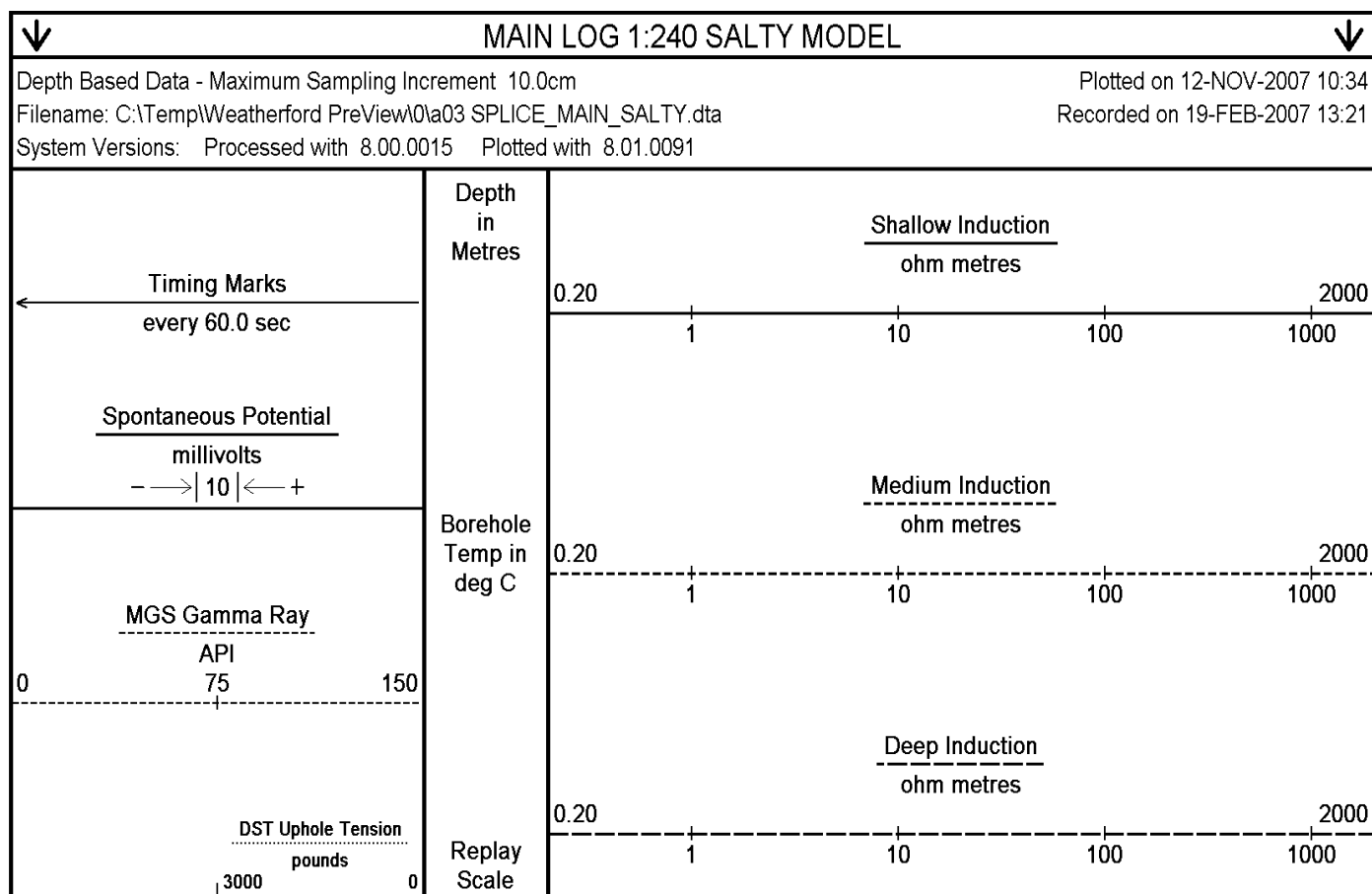
Plotted on 12-NOV-2007 10:34

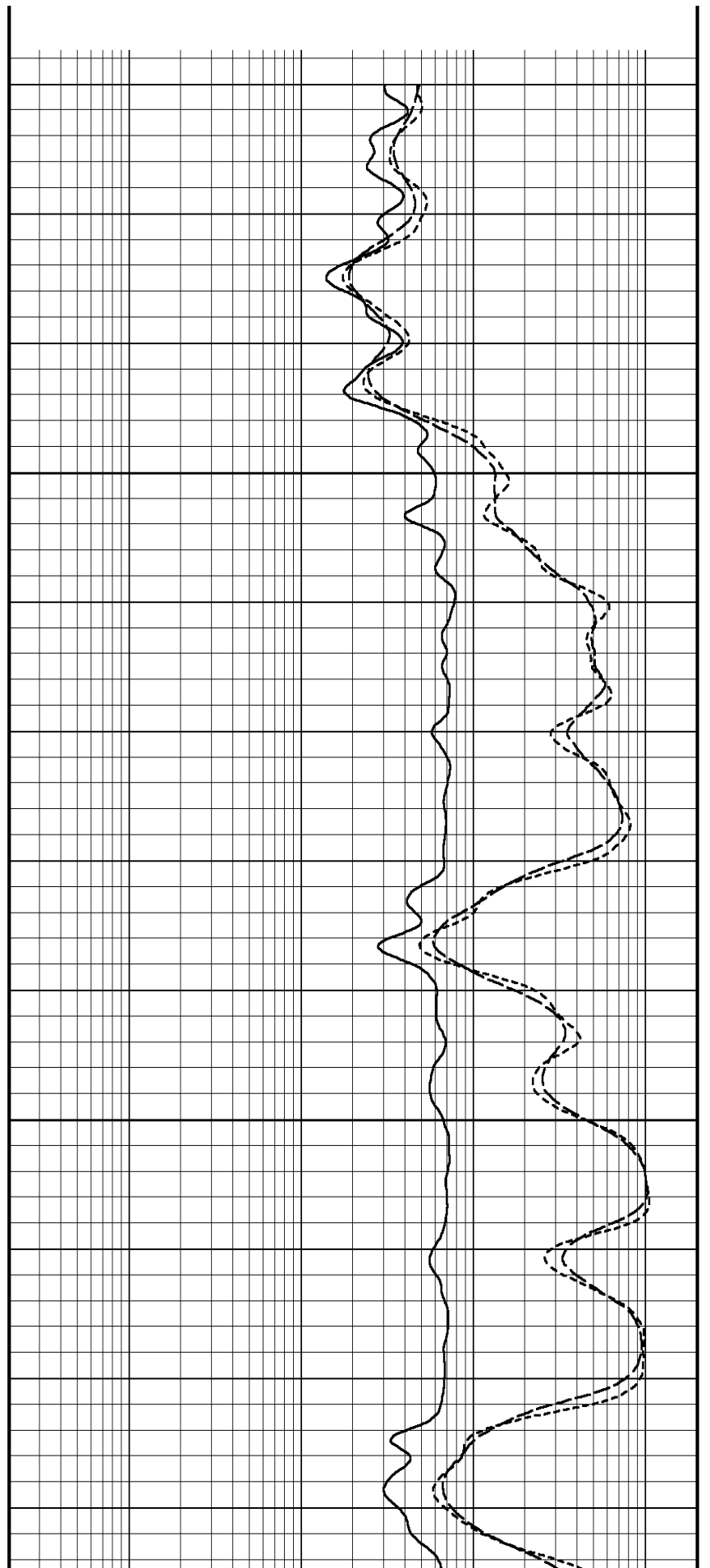
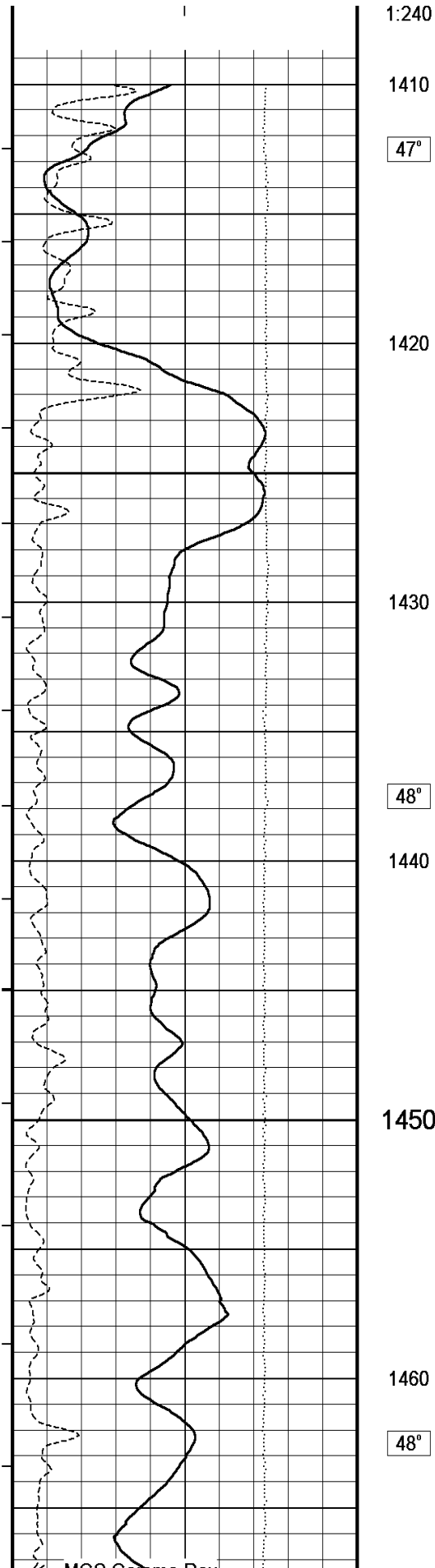
Filename: C:\Temp\Weatherford PreView\0\03 main1.dta

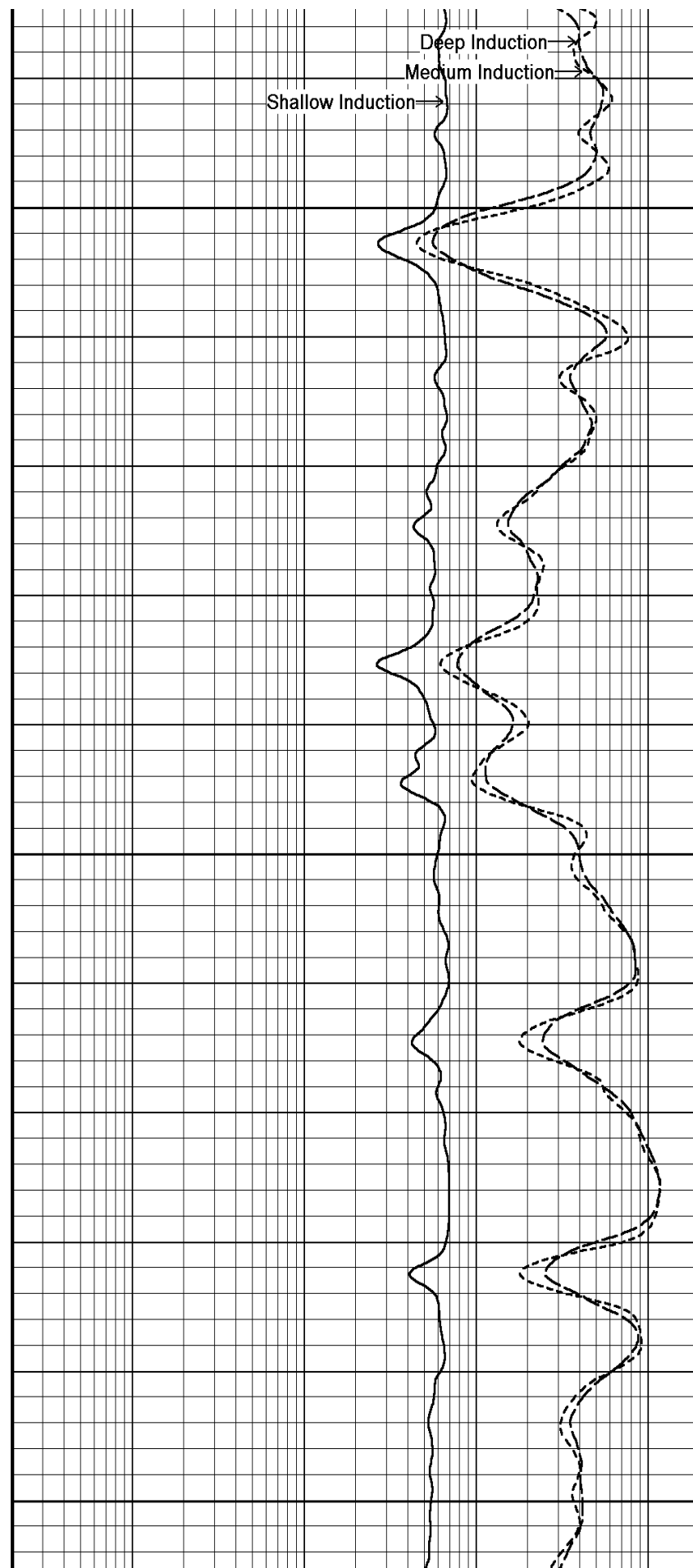
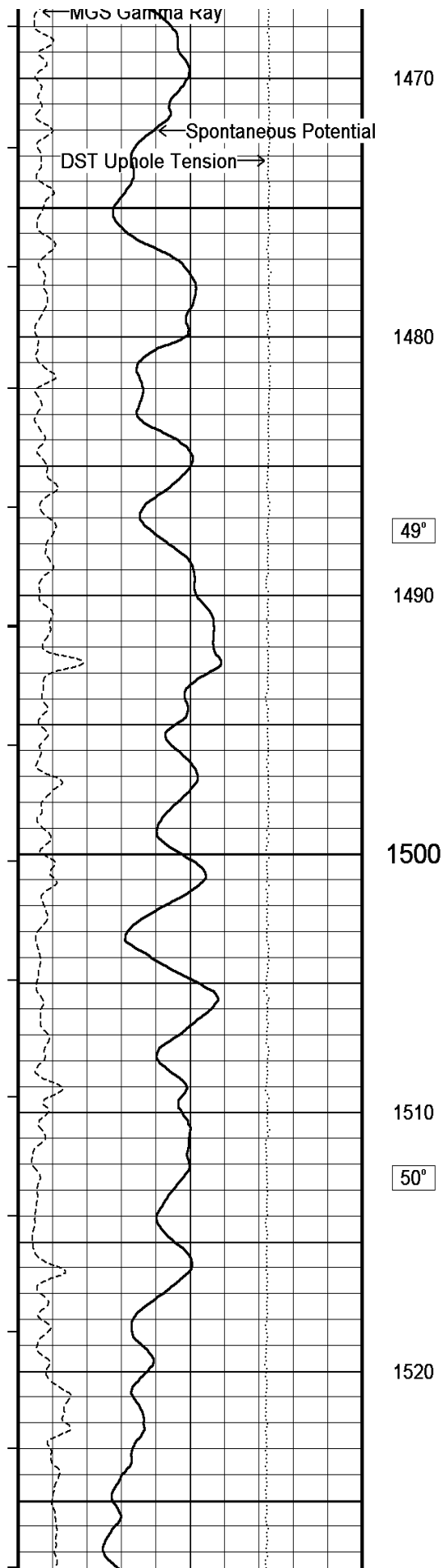
Recorded on 19-FEB-2007 13:21

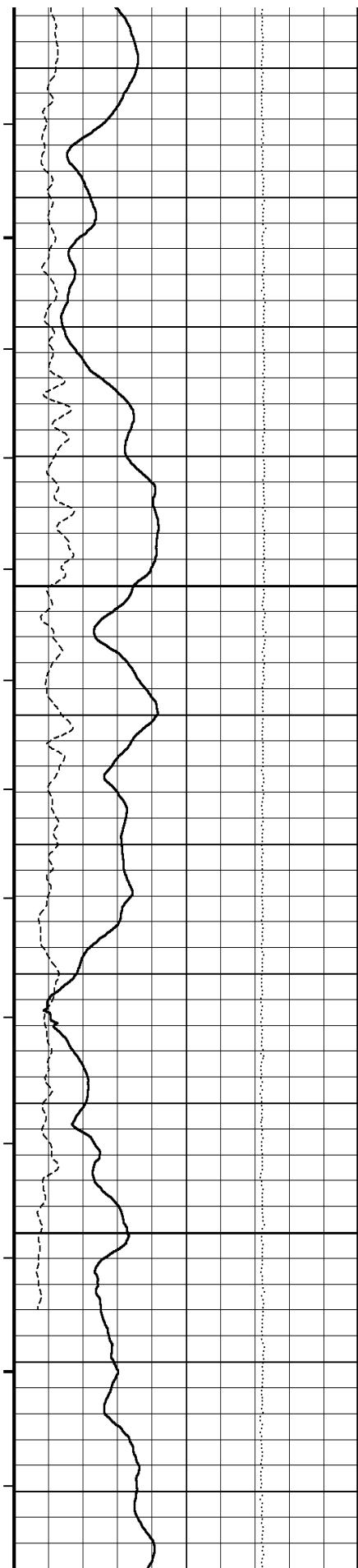
System Versions: Logged with 7.01.0195 Processed with 8.00.0015 Plotted with 8.01.0091

↑
↑
**MAIN LOG 1:120**









1530

50°

1540

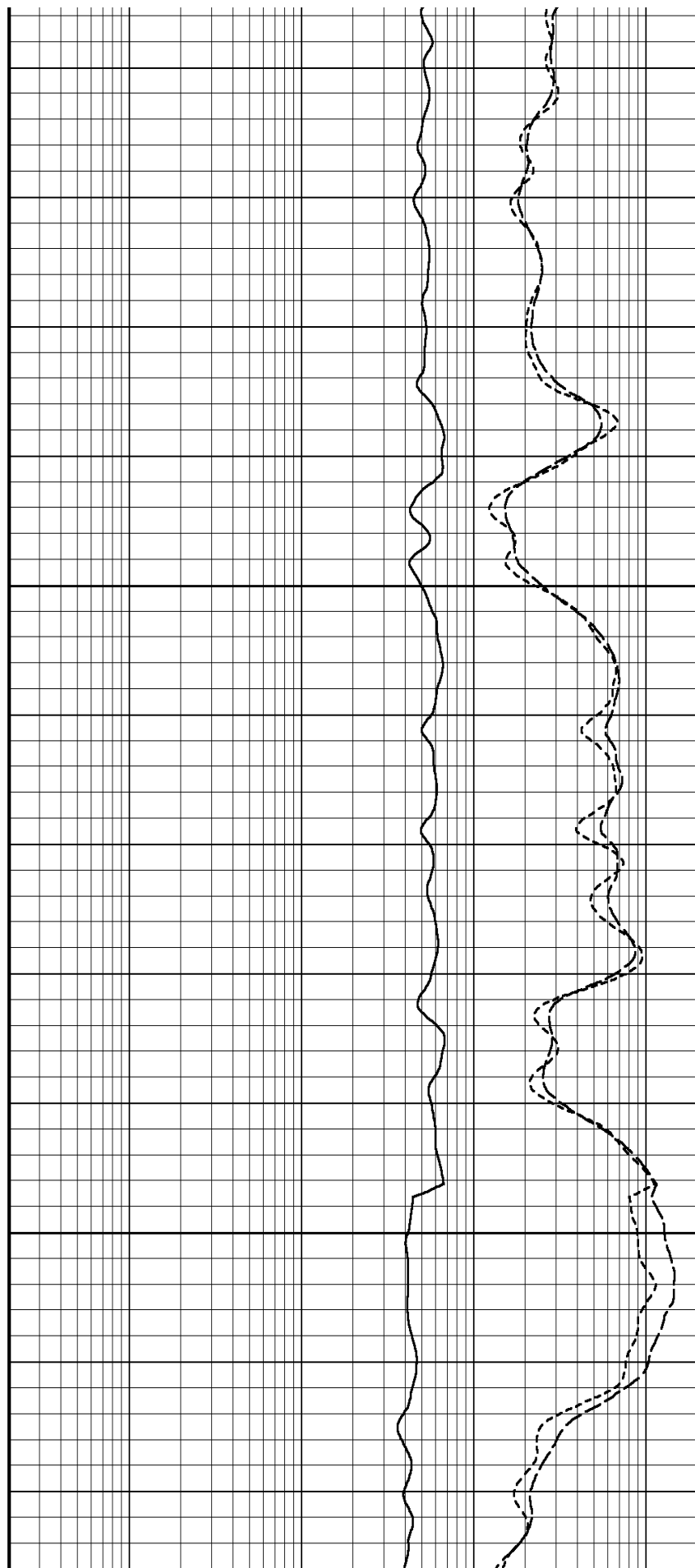
1550

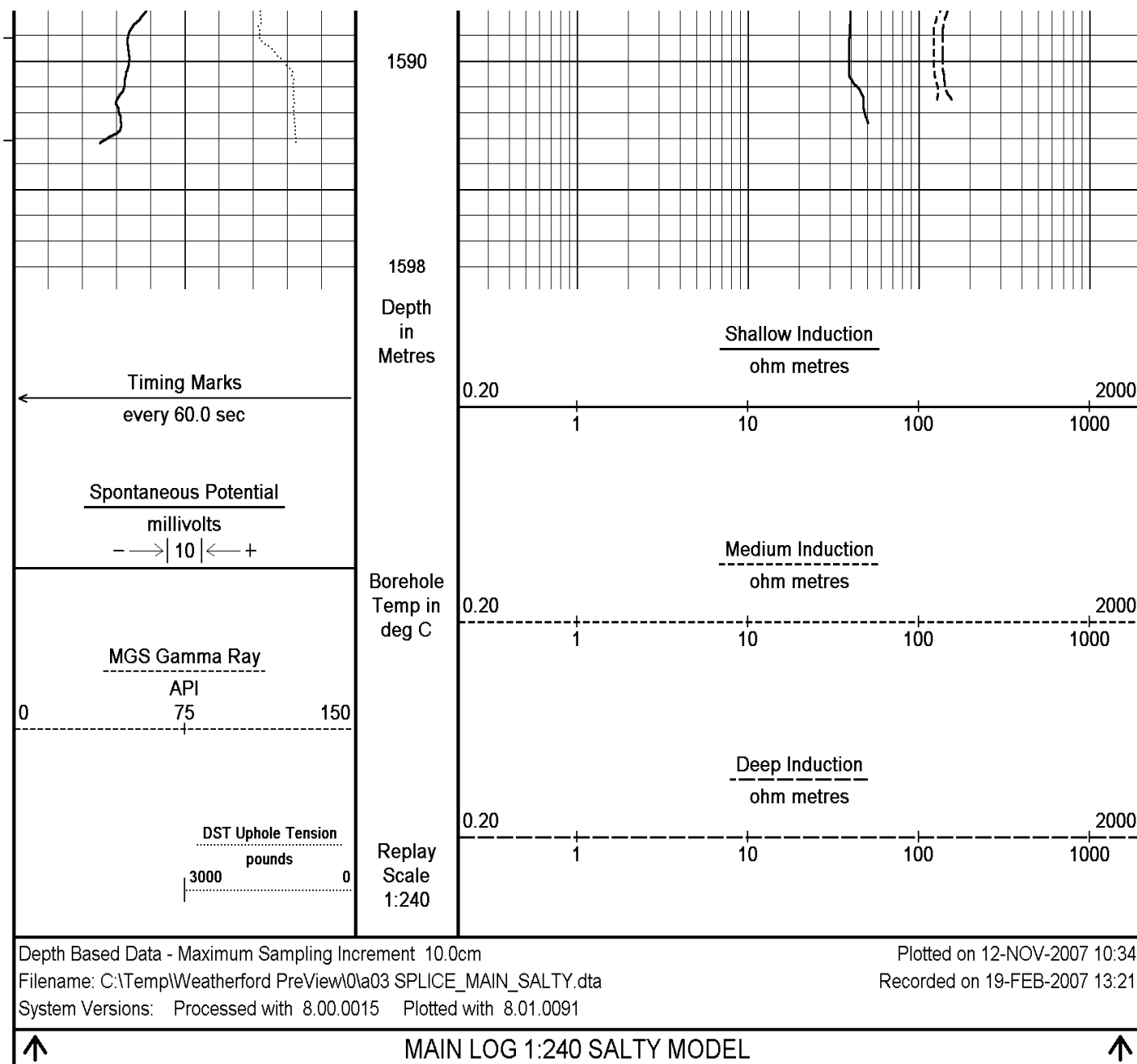
1560

50°

1570

1580





BEFORE SURVEY CALIBRATION		
C:\Temp\Weatherford PreView\0\03 rpt.dta		
General Constants All 000		Last Edited on 19-FEB-2007,12:14
General Parameters		
Mud Resistivity	1.110	ohm-metres
Mud Resistivity Temperature	25.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Y Two Arm Caliper	
Annular Volume Diameter	139.700	mm
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Deep Induction	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG 131			Field Calibration on 19-FEB-2007,09:56
	Measured	Calibrated (API)	
Background	46	30	
Calibrator (Gross)	1264	824	
Calibrator (Net)	1219	794	

Gamma Constants MCG 131			Last Edited on 19-FEB-2007,11:17
Gamma Calibrator Number	GRC 095		
Mud Density	1220.00	kg/m3	
Caliper Source for Processing	Density Caliper		
Tool Position	Centred		
Concentration of KCl	0.00	kppm	

SP Calibration MCG 131			Field Calibration on 9-FEB-2007 12:52
	Measured	Calibrated (mV)	
Reference 1	100.5	100.0	
Reference 2	-100.0	-100.0	

High Resolution Temperature Calibration MCG 131			Field Calibration on 15-DEC-2006,15:05
	Measured	Calibrated(Deg C)	
Lower	1.00	1.00	
Upper	10.00	10.00	

High Resolution Temperature Constants MCG 131		
Pre-filter Length	11	

FE Calibration MFE 111			Base Calibration on 15-FEB-2007 19:40 Field Check on 19-FEB-2007 12:14
Base Calibration			
	Measured	Calibrated (ohm-m)	
Reference 1	0.0	0.0	
Reference 2	983.2	126.8	
Base Check		278.8	
Field Check		279.0	

FE Constants MFE 111			Last Edited on 3-FEB-2007,04:36
Caliper Source for FE correction	Density Caliper		
Rm Source for FE correction	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Stand-off	Centred	millimetres	

Caliper Calibration MTC 024			Base Calibration on 6-FEB-2007 10:21 Field Calibration on 19-FEB-2007,12:42
Base Calibration			
Reading No	Measured	Calibrator Size (mm)	
1	15472	110.00	
2	18252	162.00	
3	21045	212.00	
4	23841	262.00	
5	26691	311.00	
6	N/A	N/A	
Field Calibration			



Measured Caliper (mm)		Actual Caliper (mm)		
209.10		205.70		
Gamma Calibration MGS 029				
		Field Calibration on 19-FEB-2007,09:56		
	Measured	Calibrated (API)		
Background	58	38		
Calibrator (Gross)	1286	832		
Calibrator (Net)	1228	794		
Gamma Constants MGS 029				
		Last Edited on 19-FEB-2007,11:17		
Gamma Calibrator Number	GRCC095			
Mud Density	1220.00	kg/m3		
Caliper Source for Processing	Density Caliper			
Tool Position	Centred			
Concentration of KCl	0.00	kppm		
SP Calibration MGS 029				
		Field Calibration on 7-DEC-2006,17:01		
	Measured	Calibrated (mV)		
Reference 1	100.0	100.0		
Reference 2	-100.0	-100.0		
High Resolution Temperature Calibration MGS 029				
		Field Calibration on 7-DEC-2006,17:01		
	Measured	Calibrated(Deg C)		
Lower	1.00	1.00		
Upper	5.00	5.00		
High Resolution Temperature Constants MGS 029				
Pre-filter Length	11			
Micro Normal and Micro Inverse Calibration MML 015				
		Base Calibration on 19-FEB-2007,09:53		
		Field Check on 19-FEB-2007,12:39		
Base Calibration				
		Measured	Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	9.9	48.5	5.1	25.6
Micro Inverse	9.9	48.7	3.4	16.9
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	79.8		79.8	
Micro Inverse	52.6		52.5	
Micro Normal and Micro Inverse Constants MML 015				
		Last Edited on 19-FEB-2007,09:53		
Micro Normal K Factor	0.5110			
Micro Inverse K Factor	0.3380			
Standoff Offset	N/A millimetres			
Caliper Calibration MML 015				
		Base Calibration on 19-FEB-2007,09:55		
		Field Calibration on 19-FEB-2007,12:42		
Base Calibration				
Reading No	Measured	Calibrator Size (mm)		
1	13860	162.00		
2	17089	212.00		
3	20617	262.00		
4	24375	311.00		
5	27976	355.00		
6	N/A	N/A		
Field Calibration				
	Measured Caliper (mm)	Actual Caliper (mm)		
	210.20	205.70		

## Neutron Calibration MDN 016

Base Calibration on 11-JAN-2007 20:47

Field Check on 19-FEB-2007 10:29

## Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3219	98	3714	110
Ratio	32.703		33.764	

## Field Calibrator at Base

	Calibrated (cps)
	2486 3648
Ratio	0.681

## Field Check

	Calibrated (cps)
	2589 3773
Ratio	0.686

## Neutron Constants MDN 016

Last Edited on 17-FEB-2007,21:41

Neutron Source Id	277
Neutron Jig Number	N636
Epithermal Neutron	No
Caliper Source for Processing	Density Caliper
Stand-off	0.00 mm
Mud Density	1000.00 kg/m3
Limestone Sigma	7.10 cu
Sandstone Sigma	4.26 cu
Dolomite Sigma	4.70 cu
Formation Pressure Source	Constant Value
Formation Pressure	0.00 kPa
Temperature Source	Constant Value
Temperature	20.00 degrees C
Mud Salinity	0.00 kppm
Formation Fluid Salinity Source	Constant Value
Formation Fluid Salinity	0.00 kppm
Barite Mud Correction	Not Applied

## Photo Density Calibration MPD 130

Base Calibration on 12-MAR-2007,15:18

Field Check on

## Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	70908	37221	60352	31615
Reference 2	28626	3008	25043	2540

## Field Check at Base

1027.6 1384.5

## Field Check

0.0 0.0

## PE Calibration

Base Calibration	WS	Measured		Calibrated	
		WH	Ratio	Ratio	
Background	184	909			
Reference 1	30385	71000	0.431	0.400	
Reference 2	7753	26700	0.293	0.272	

## Field Check at Base

184.1 909.1

## Field Check

0.0 0.0

## Density Constants MPD 130

Last Edited on 19-FEB-2007,11:18

Density Source Id	16151b		
Nylon Calibrator Number	608		
Aluminium/Fe Calibrator Number	608		
Density Shoe Profile	4 inch		
Caliper Source for Processing	Density Caliper		
PE Correction to Density	Not Applied		
Mud Density	1220.00	kg/m3	
Mud Density Z/A Correction	1.11		
Mud Filtrate Density	1000.00	kg/m3	
Dry Hole Mud Filtrate Density	1000.00	kg/m3	
DNCT	0.00	kg/m3	
CRCT	0.00	kg/m3	
Density Z/A Correction	Advanced		
Matrix Density (kg/m3)	Depth (m)		
2710.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
0.00	0.00		
Caliper Calibration MPD 130			
			Base Calibration on 19-FEB-2007 10:46
			Field Calibration on 19-FEB-2007,12:42
Base Calibration			
Reading No	Measured	Calibrator Size (mm)	
1	18240	110.00	
2	28320	162.00	
3	38188	212.00	
4	48355	262.00	
5	58464	311.00	
6	N/A	N/A	
Field Calibration			
	Measured Caliper (mm)	Actual Caliper (mm)	
	210.10	205.70	
Sonic Constants MSS 003			
			Last Edited on 19-FEB-2007,11:18
Maximum Boundary Contrast	328.08	micro-sec/m	
Fluid Transit Time	620.08	micro-sec/m	
Limestone Transit Time	155.84	micro-sec/m	
Sandstone Transit Time	182.09	micro-sec/m	
Dolomite Transit Time	142.72	micro-sec/m	
Sonic used for Porosities	3-5' Compensated Sonic		
Correction for Sonde Skew	Applied		
Cycle Stretch Algorithm	Applied		
MN3FT	N/A	micro-sec	
MX3FT	N/A	micro-sec	
Hunt-Raymer Constant	83.13	micro-sec/ft	
Fixed Gate Parameters			
Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
Down Hole Fixed Gate Parameters			
Gate Start	N/A	micro-sec	
Gate Width	N/A	micro-sec	

Initial Discriminator Level	0.0000	mVolts
Full Waveform Parameters		
Use 3' Waveform to derive TR	N/A	
Use 4' Waveform to derive TR	N/A	
Use 5' Waveform to derive TR	N/A	
Use 6' Waveform to derive TR	N/A	
3' Waveform Discriminator Level	N/A	mV
4' Waveform Discriminator Level	N/A	mV
5' Waveform Discriminator Level	N/A	mV
6' Waveform Discriminator Level	N/A	mV
3' Waveform Filter	N/A	
4' Waveform Filter	N/A	
5' Waveform Filter	N/A	
6' Waveform Filter	N/A	
Semblance Level	N/A	
Semblance Window Width	N/A	micro-sec
Sonic 1 Despiker	N/A	N/A
Sonic 2 Despiker	N/A	N/A

#### Induction Calibration MAI 154

Base Calibration on 14-JAN-2007 01:38

Field Check on 19-FEB-2007 12:36

##### Base Calibration

##### Test Loop Calibration

Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	16.6	470.6	9.3	966.2
2	6.3	383.0	7.6	821.4
3	4.0	264.7	5.2	566.0
4	2.3	136.2	2.6	279.2

Array Temperature 22.3 Deg C

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	13.1	3867.2	15.7	3866.2
2	29.6	3530.7	30.3	3528.1
3	26.8	3001.8	27.2	2999.2
4	18.4	2040.8	18.6	2039.1
Deep	15.3	1926.8	15.8	1925.2
Medium	39.6	3962.8	39.7	3959.0
Shallow	45.8	5270.7	46.7	5266.7

Array Temperature 12.1 31.4 Deg C

#### Induction Constants MAI 154

Last Edited on 19-FEB-2007,11:18

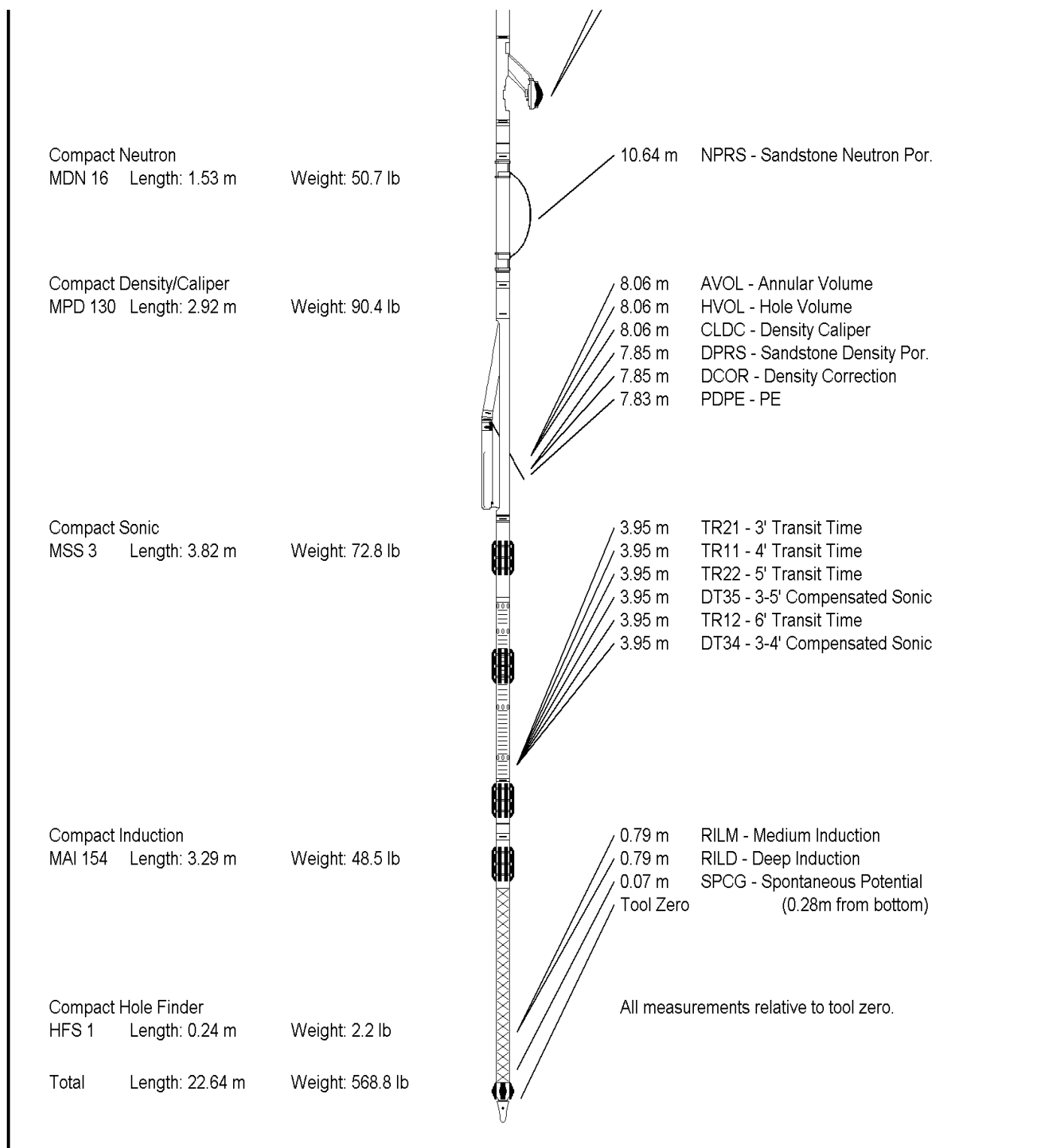
Induction Model	VECTAR
Caliper for Borehole Corr.	Density Caliper
Hole Size for Borehole Correction	N/A
Stand-off	25.40
Number of Fins on Stand-off	5.0000
Stand-off Fin Width	25.4000
Borehole Corr. Rm Source	Temperature Corr
Temp. for Rm Corr.	MCG External Temperature
Squasher Start	0.0020

##### Borehole Normalisation

DRM1	0.0000	DRC1	0.0000
DRM2	0.0000	DRC2	0.0000
MRM1	0.0000	MRC1	0.0000
MRM2	0.0000	MRC2	0.0000
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000

Calibration Site Corrections		
Channel 1	0.00	mmhos/metre
Channel 2	0.00	mmhos/metre
Channel 3	0.00	mmhos/metre
Channel 4	0.00	mmhos/metre
Apparent Porosity and Water Saturation Constants		
Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	100.00	percent
Resistivity of Water for Apor and Sw	0.05	ohm-m
Resistivity of Mud Filtrate for Sw	0.00	ohm-m
High Resolution Temperature Calibration MAI 154		
	Measured	Calibrated(Deg C)
Lower	1.00	1.00
Upper	10.00	10.00
High Resolution Temperature Constants MAI 154		
Pre-filter Length	11	

DOWNHOLE EQUIPMENT			C:\Temp\Weatherford PreView\01a03 rpt.dta	
Compact Gamma MCG 131 Length: 2.65 m Weight: 63.9 lb		20.79 m 19.91 m	GRGC - Gamma Ray CGXT - MCG External Temperature	
Compact Focussed Electric MFE 111 Length: 1.84 m Weight: 48.5 lb		18.79 m	FEFE - Shallow FE	
Compact Two Arm Caliper MTC 24 Length: 2.17 m Weight: 61.7 lb		16.34 m	CLYC - Y Two Arm Caliper	
Compact Short Gamma MGS 29 Length: 1.04 m Weight: 24.3 lb		15.47 m	GRGM - MGS Gamma Ray	
Compact InterSonde Crank ISC 151 Length: 0.71 m Weight: 24.3 lb				
Compact Micro-log MML 15 Length: 2.43 m Weight: 81.6 lb		12.10 m 12.10 m	MINV - Micro-inverse MNRL - Micro-normal	



COMPANY		PARAMOUNT RESOURCES LTD.			
WELL		PARA ET AL CAMERON A-03			
FIELD		CAMERON HILLS			
PROVINCE/COUNTY		NORTHWEST TERRITORIES			
COUNTRY/STATE		CANADA			
Elevation Kelly Bushing	772.80	metres	First Reading	1588.30	metre
Elevation Drill Floor		metres	Depth Driller	1589.40	metres
Elevation Ground Level	767.40	metres	Depth Logger	1589.40	metres



**Weatherford®**

ARRAY INDUCTION