



Weatherford
180

SPECTRAL GAMMA RAY

COMPANY

SANDRIDGE EXPLORATION AND PRODUCTION LLC.

WELL

ALTON 3306 1-23

FIELD

STOHRVILLE

PROVINCE/COUNTY

HARPER

COUNTRY/STATE

U.S.A / KANSAS

LOCATION

660' FNL & 560' FWL

SEC

TWP
33S

RGE
6W

Other Services
MPD/MDN
MAI/MFE
MML

API Number

15-077-219520000

Permit Number

DC13109

Permanent Datum G.L., Elevation 1308 feet

Log Measured From KB

Drilling Measured From K.B. @ 9 FEET

Date

27-JUL-2013

Elevations:
KB 1317.00
DF 1316.00
GL 1308.00

Run Number

ONE

Service Order

3539902

Depth Driller

4920.00

Depth Logger

4918.00

First Reading

4876.00

Last Reading

2800.00

Casing Driller

630.00

Casing Logger

628.00

Bit Size

7.875

Hole Fluid Type

CHEMICAL

Density / Viscosity

8.80 lb/USg

PH / Fluid Loss

9.80

Sample Source

FLOWLINE

Rm @ Measured Temp

0.66 @ 83.0

Rmf @ Measured Temp

0.48 @ 83.0

Rmc @ Measured Temp

0.80 @ 83.0

Source Rmf / Rmc

CALC

Rm @ BHT

0.41 @134.0

Time Since Circulation

4 HOURS

Max Recorded Temp

134.00

Equipment / Base

13057

Recorded By

ROB HOFFMAN

Witnessed By

TAMMY ALCORN

JOB #

LB13-215

BOREHOLE RECORD

Last Edited: 27-JUL-2013 23:40

Bit Size
inches

7.875

Depth From
feet

630.00

Depth To
feet

4920.00

CASING RECORD

Type

Size
inches

8.625

Depth From
feet

0.00

Shoe Depth
feet

630.00

Weight
pounds/ft

24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.05.9583.

MCG, SGS, MML, MDN, MPD, MFE, MAI RUN IN COMBINATION.

- HARDWARE: DUAL BOWSPRING USED ON MDN.
0.5 INCH STANDOFF USED ON MFE.
0.5 INCH STANDOFF USED ON MAI.

- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY.

- BOREHOLE RUGOSITY, TIGHT PULLS, AND WASHOUTS WILL AFFECT DATA QUALITY.

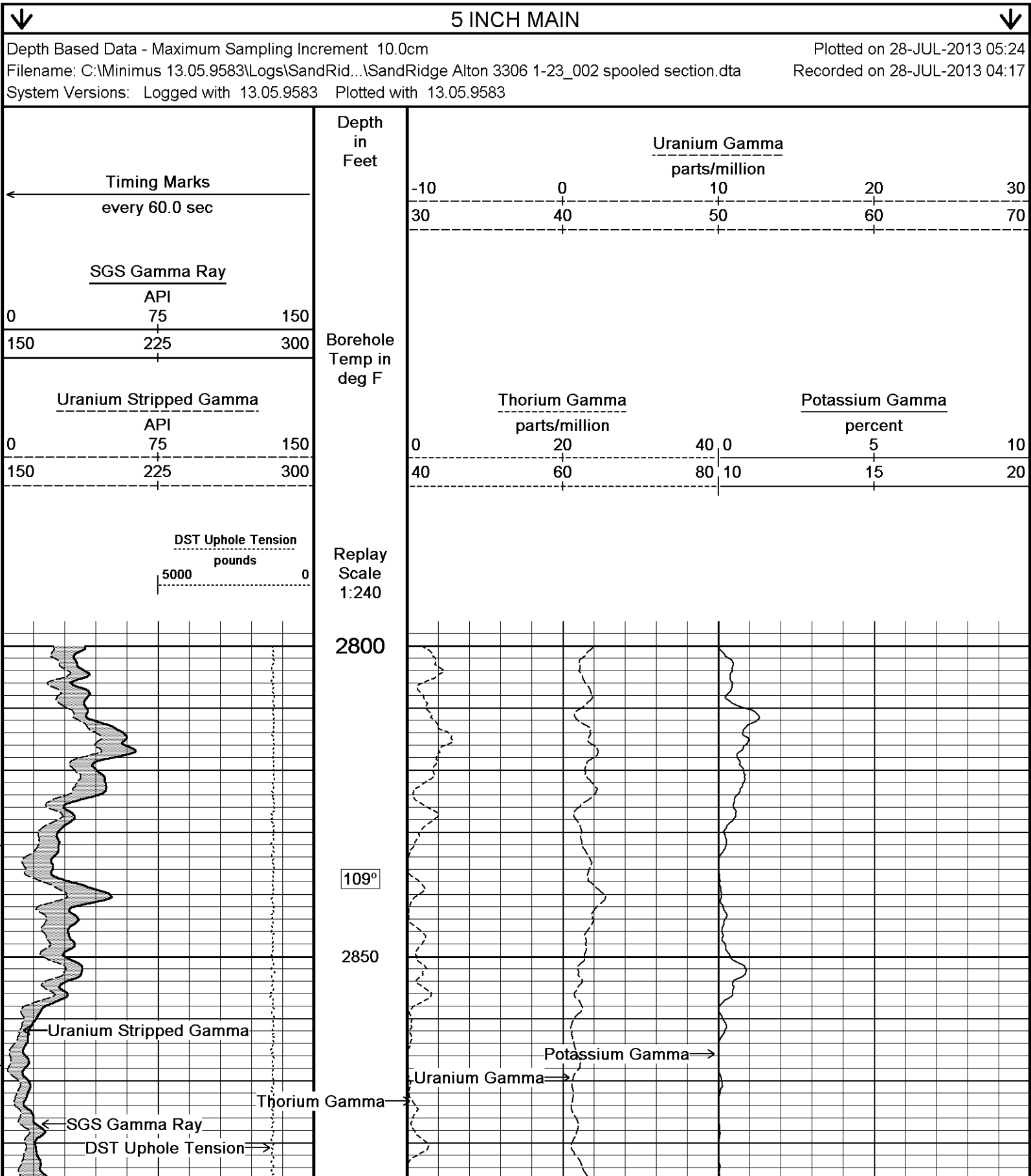
- ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

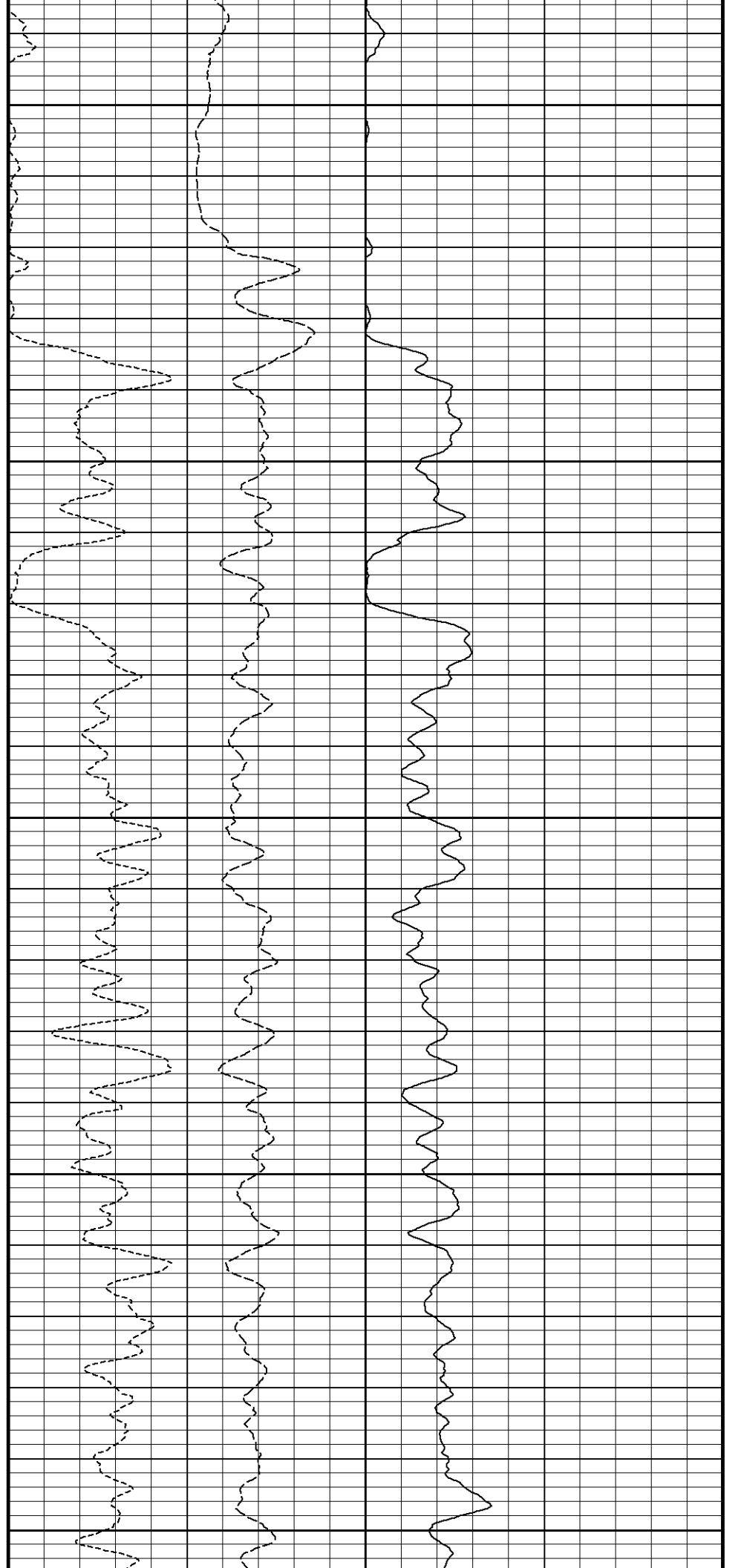
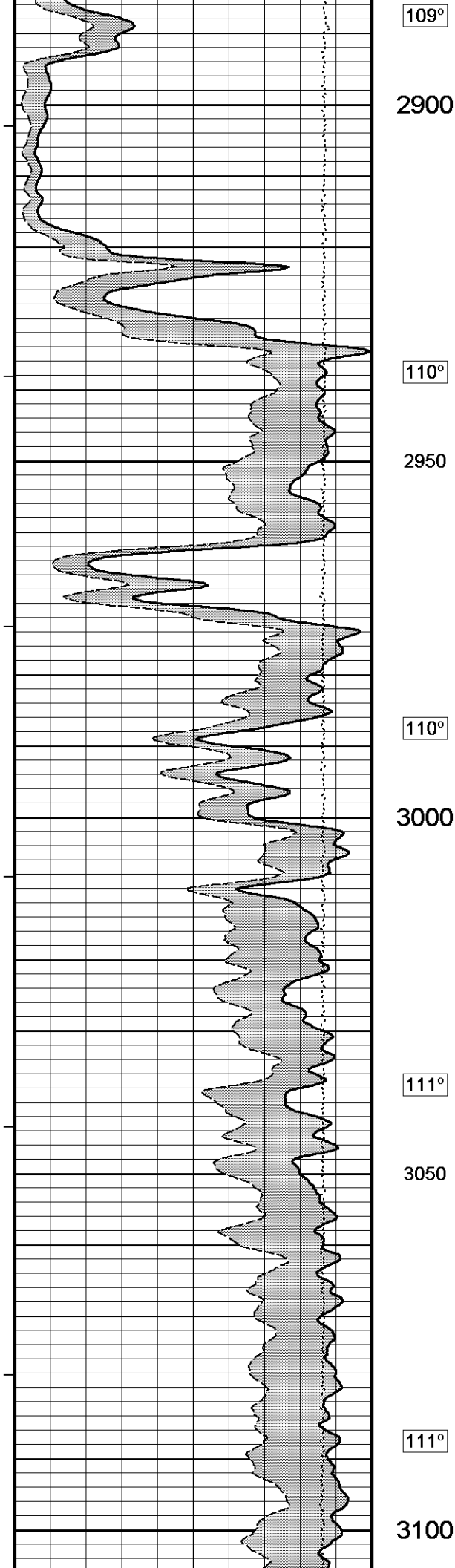
- ANNULAR HOLE VOLUME WITH 5.5 INCH PRODUCTION CASING FROM TD TO SURFACE CASING: 442 CU.FT.

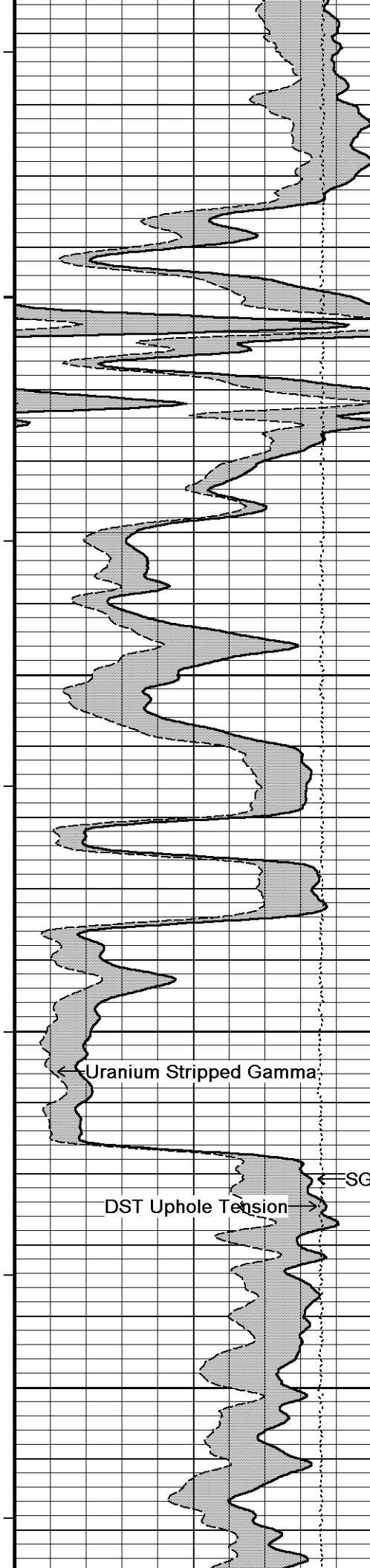
- RIG: HORIZON RIG #3

- ENGINEER: ROB HOFFMAN

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.







111°

3150

112°

3200

113°

3250

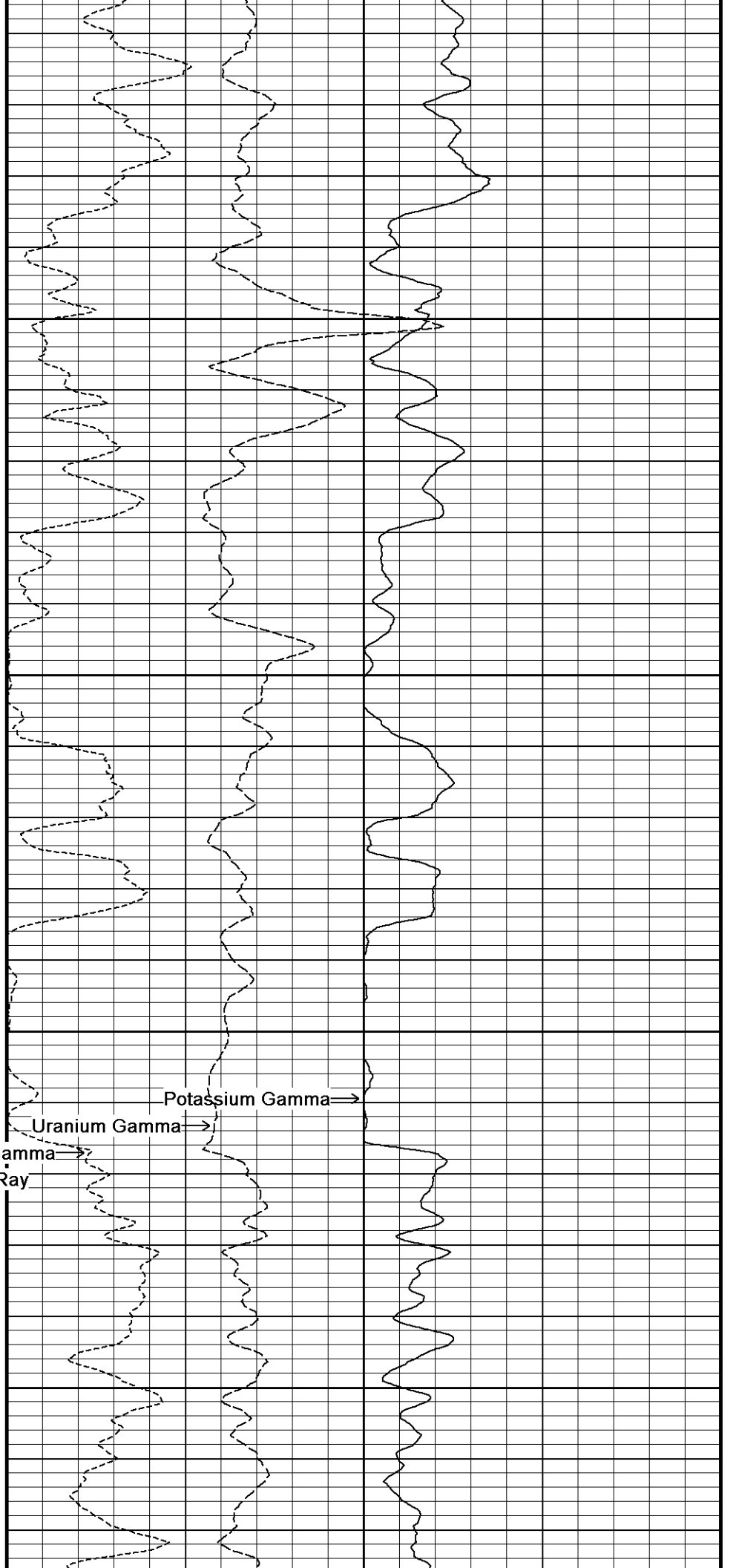
Uranium Stripped Gamma

DST Uphole Tension

SGS Gamma Ray

113°

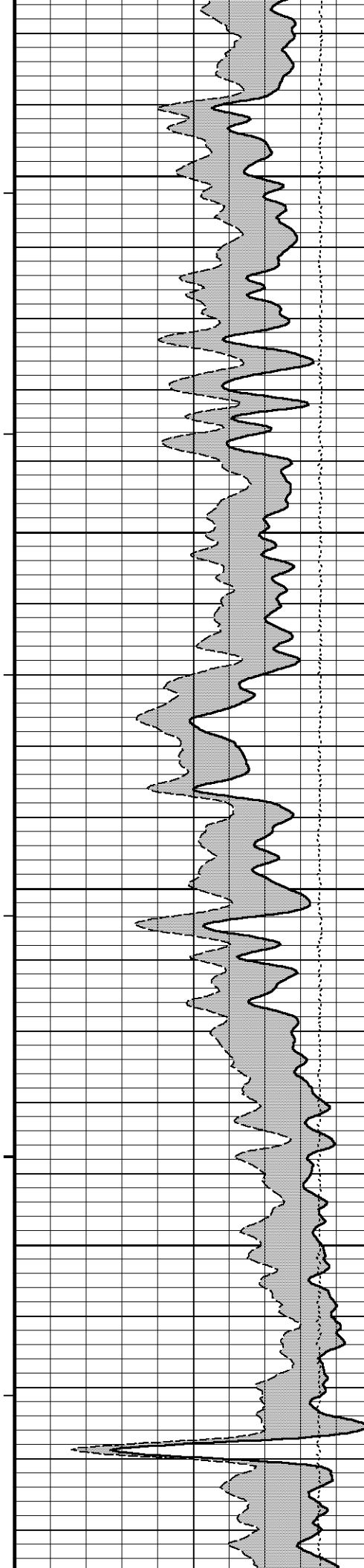
3300



Potassium Gamma

Uranium Gamma

Thorium Gamma



113°

3350

114°

3400

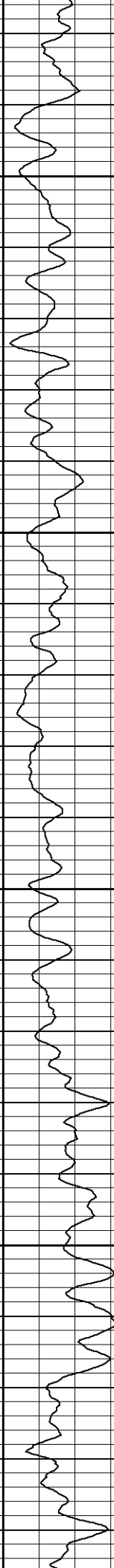
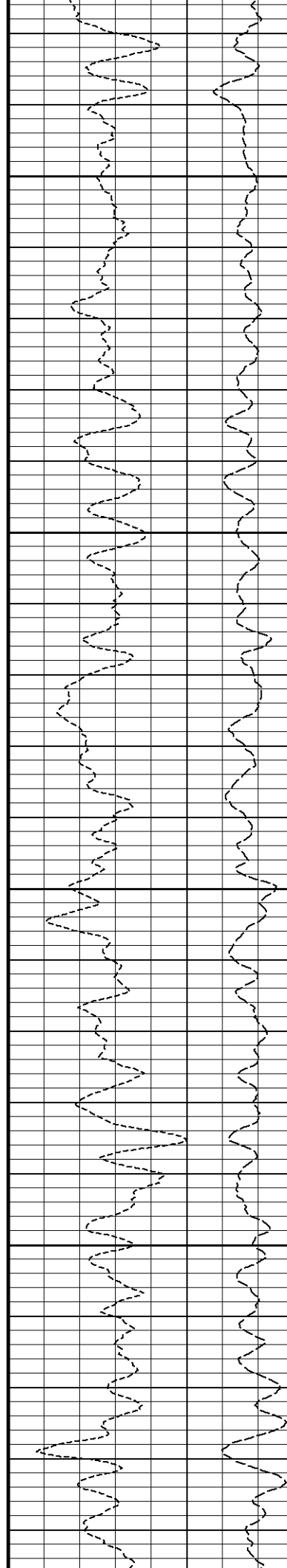
115°

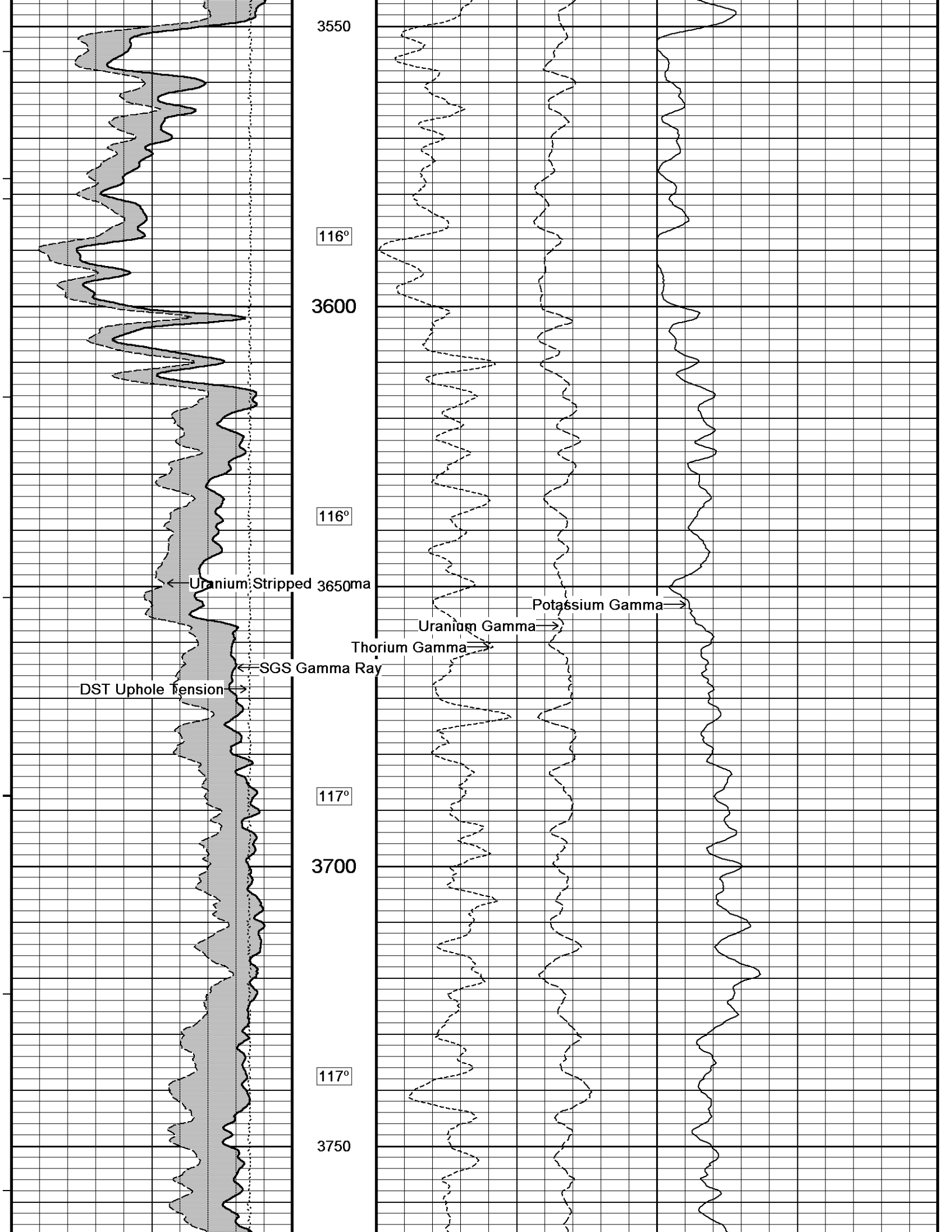
3450

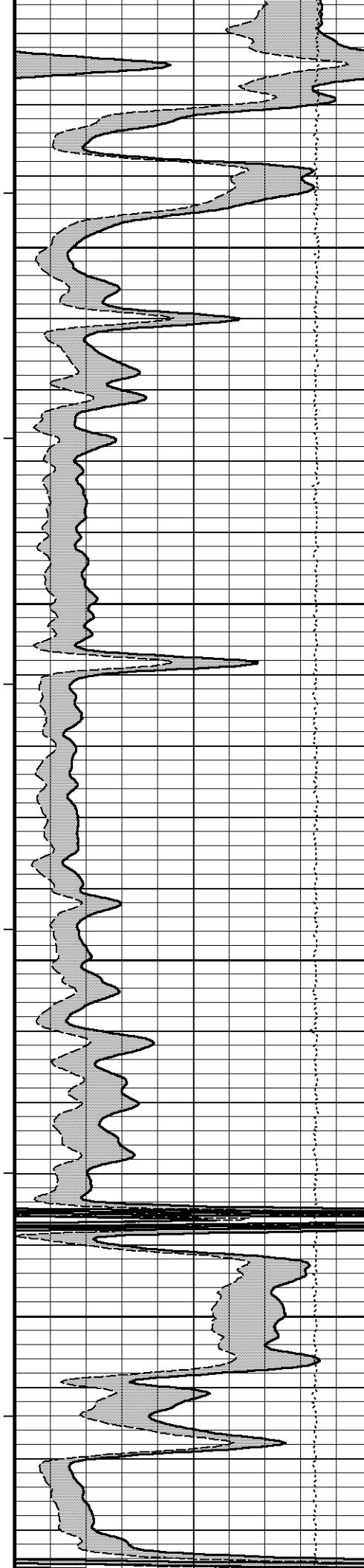
115°

3500

115°







118°

3800

118°

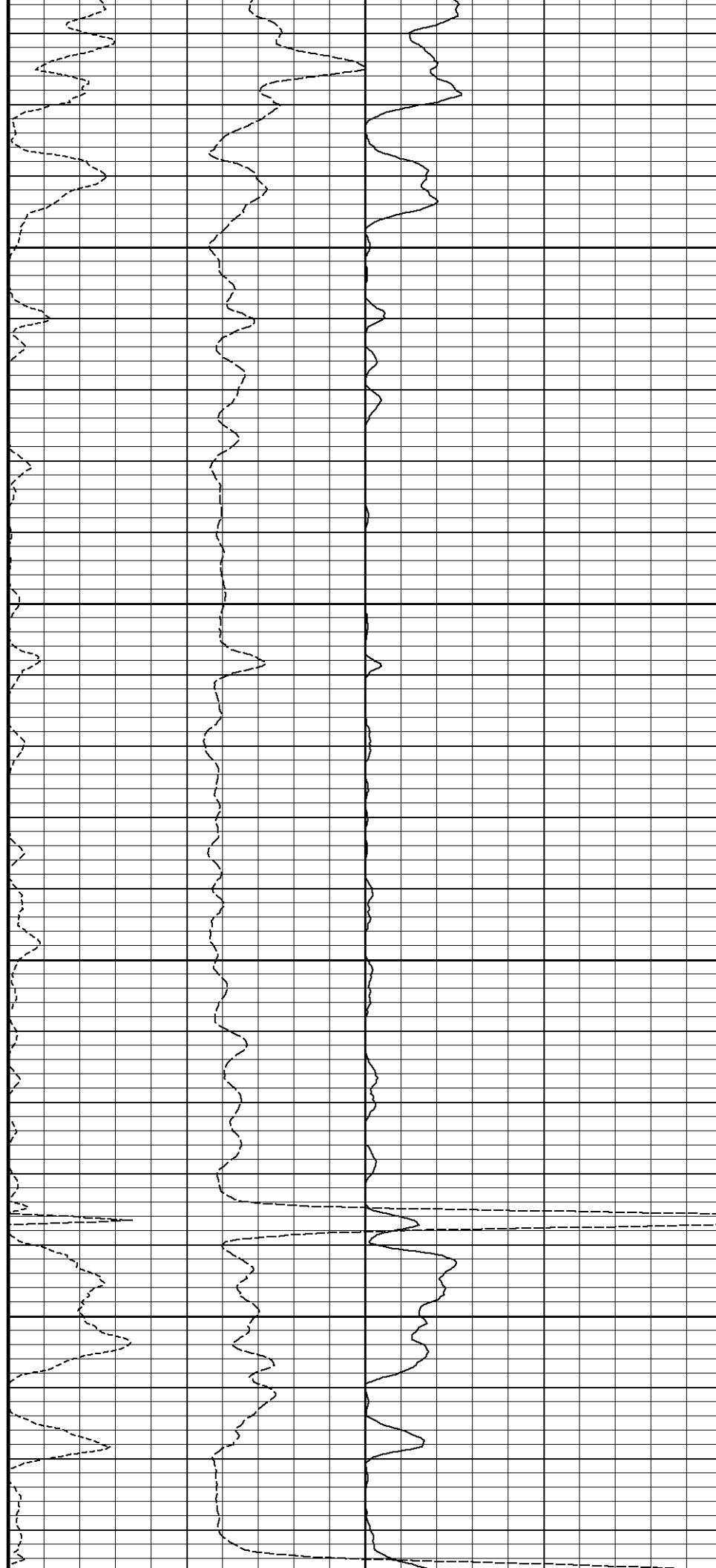
3850

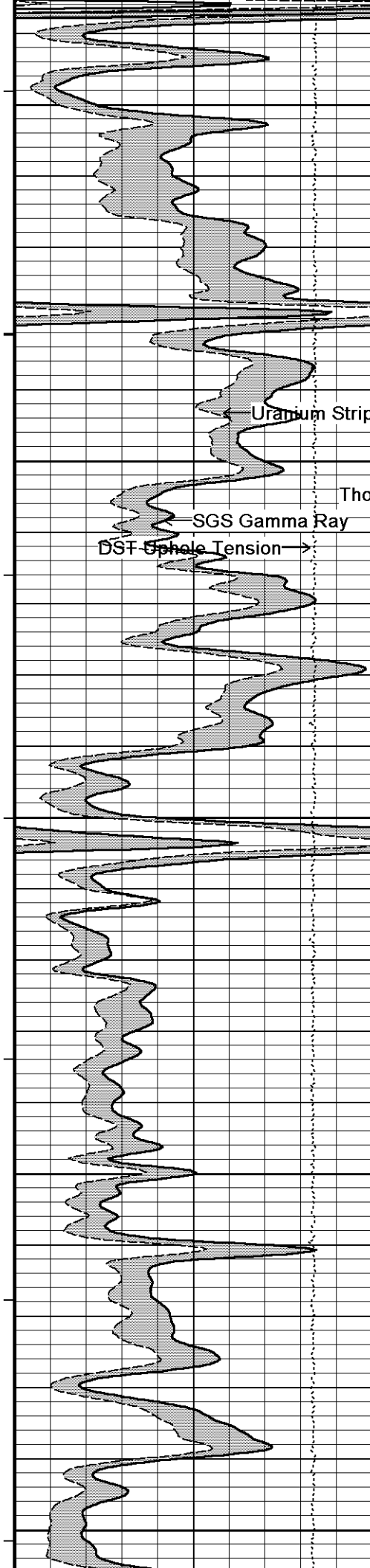
118°

3900

119°

3950





119°

4000

119°

4050

120°

4100

120°

4150

121°

4200

Uranium Stripped Gamma

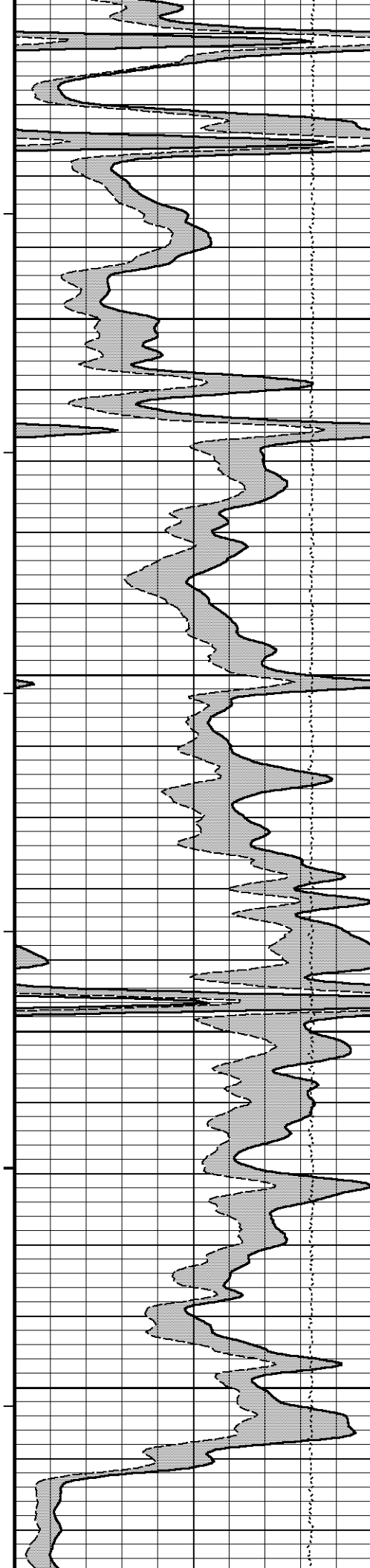
SGS Gamma Ray

DST Spore Tension

Thorium Gamma

Uranium Gamma

Potassium Gamma



121°

4250

120°

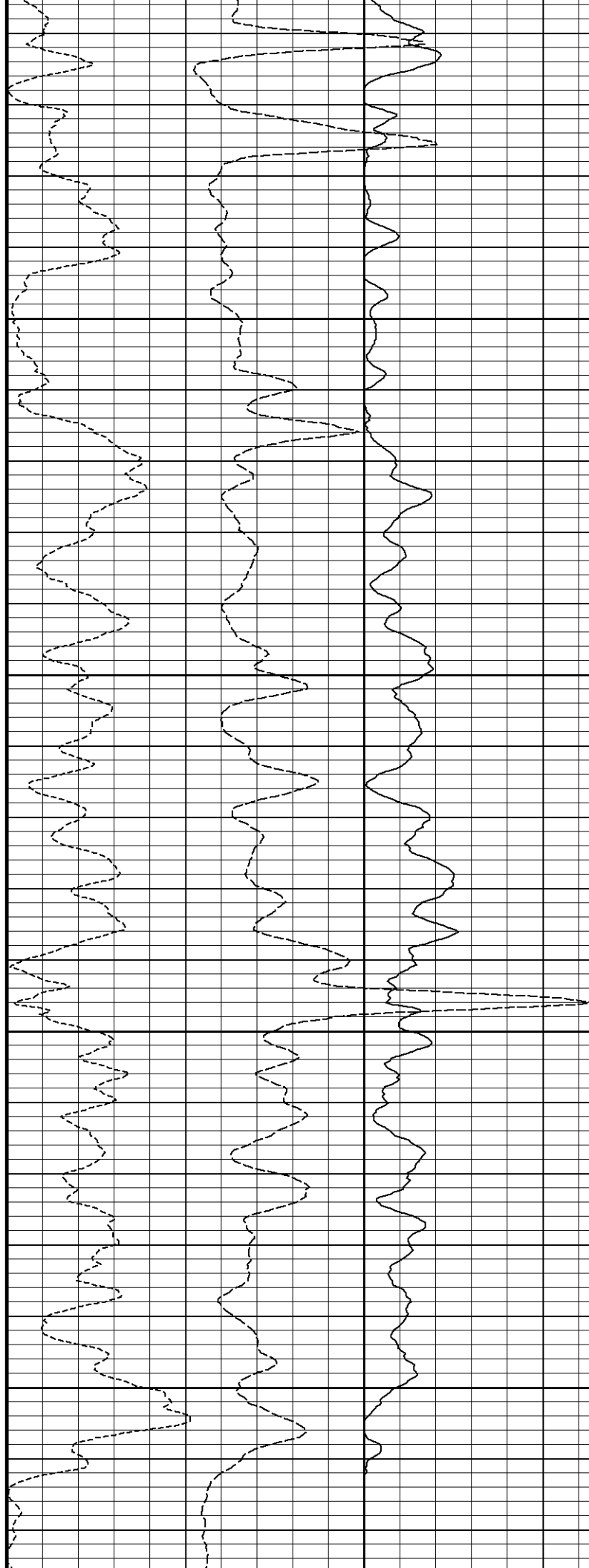
4300

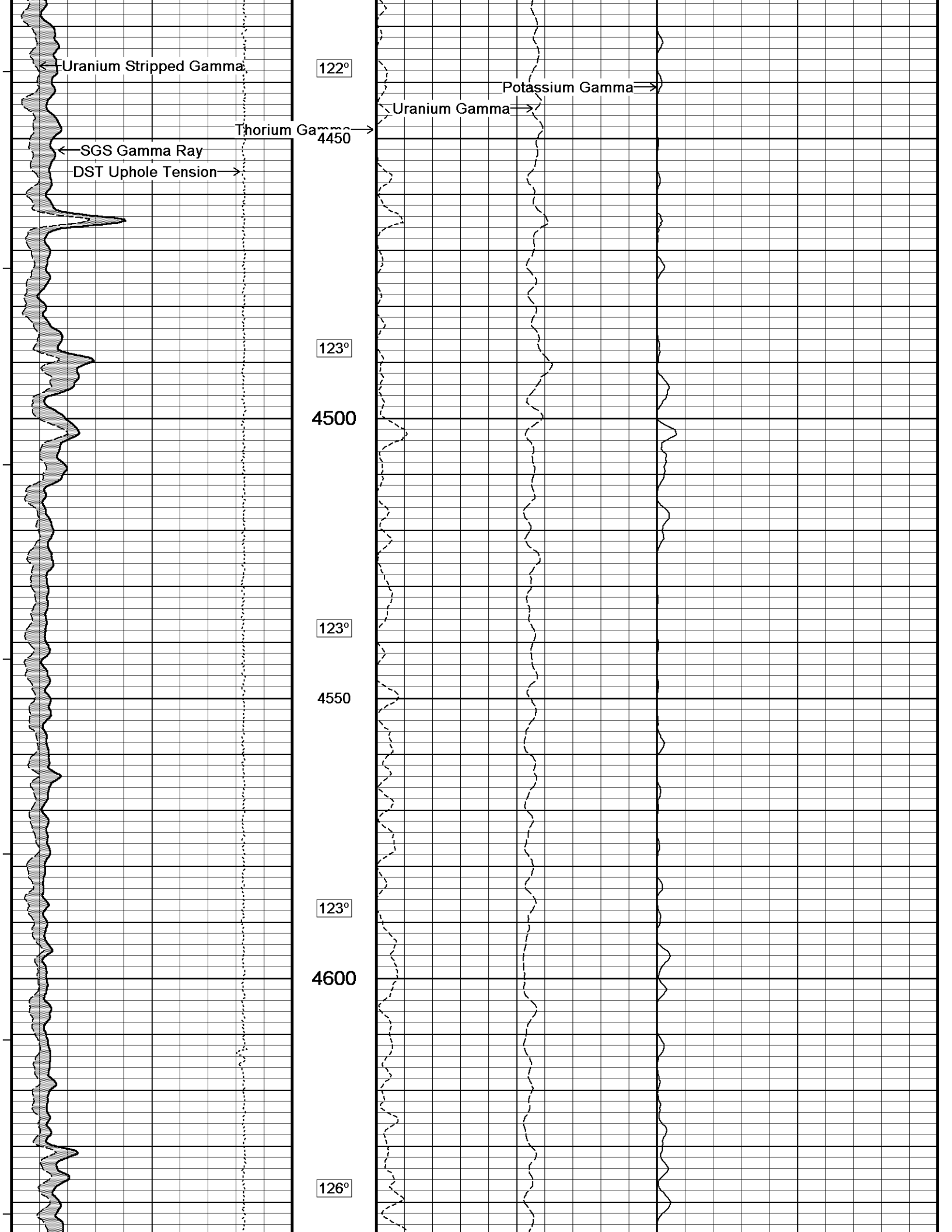
120°

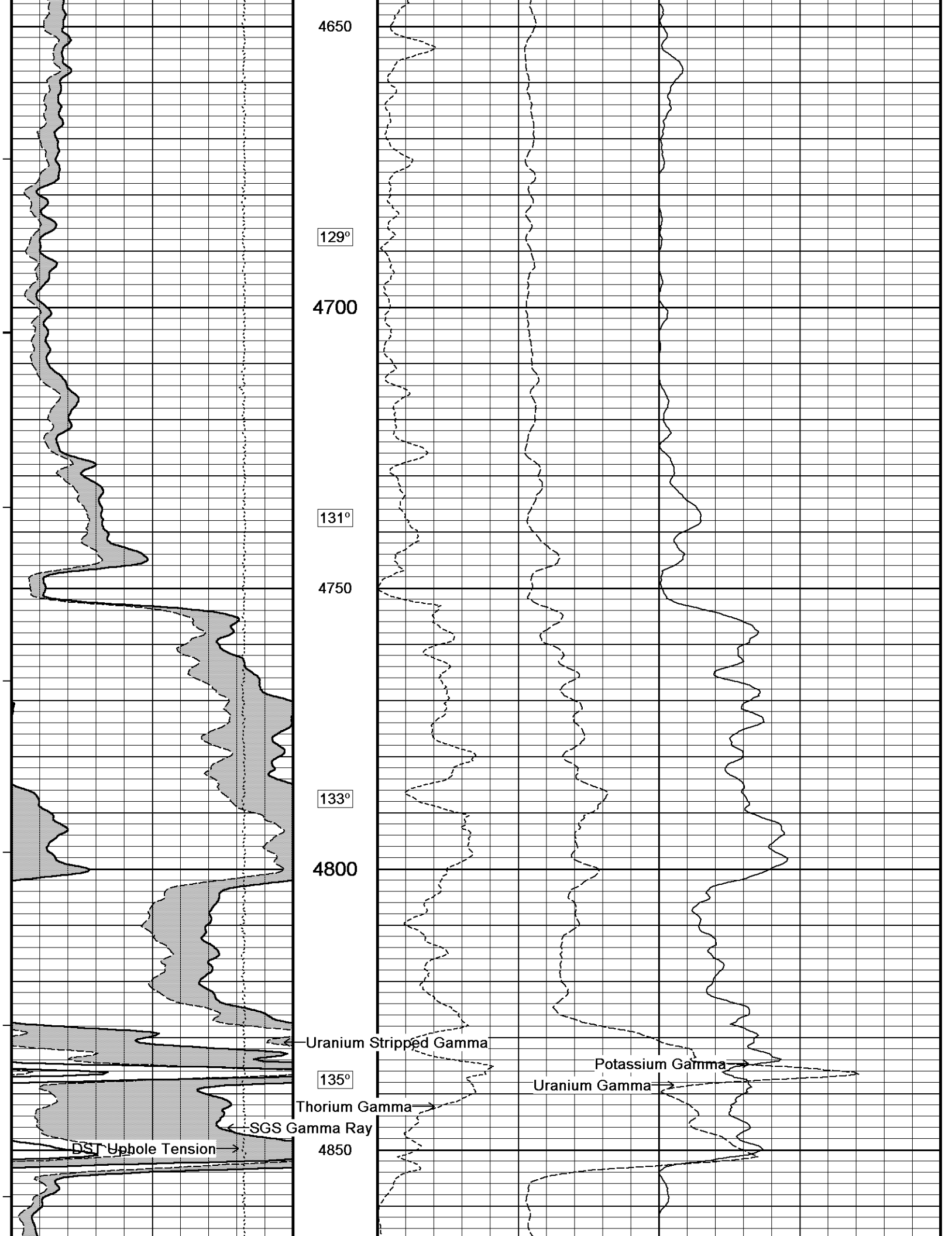
4350

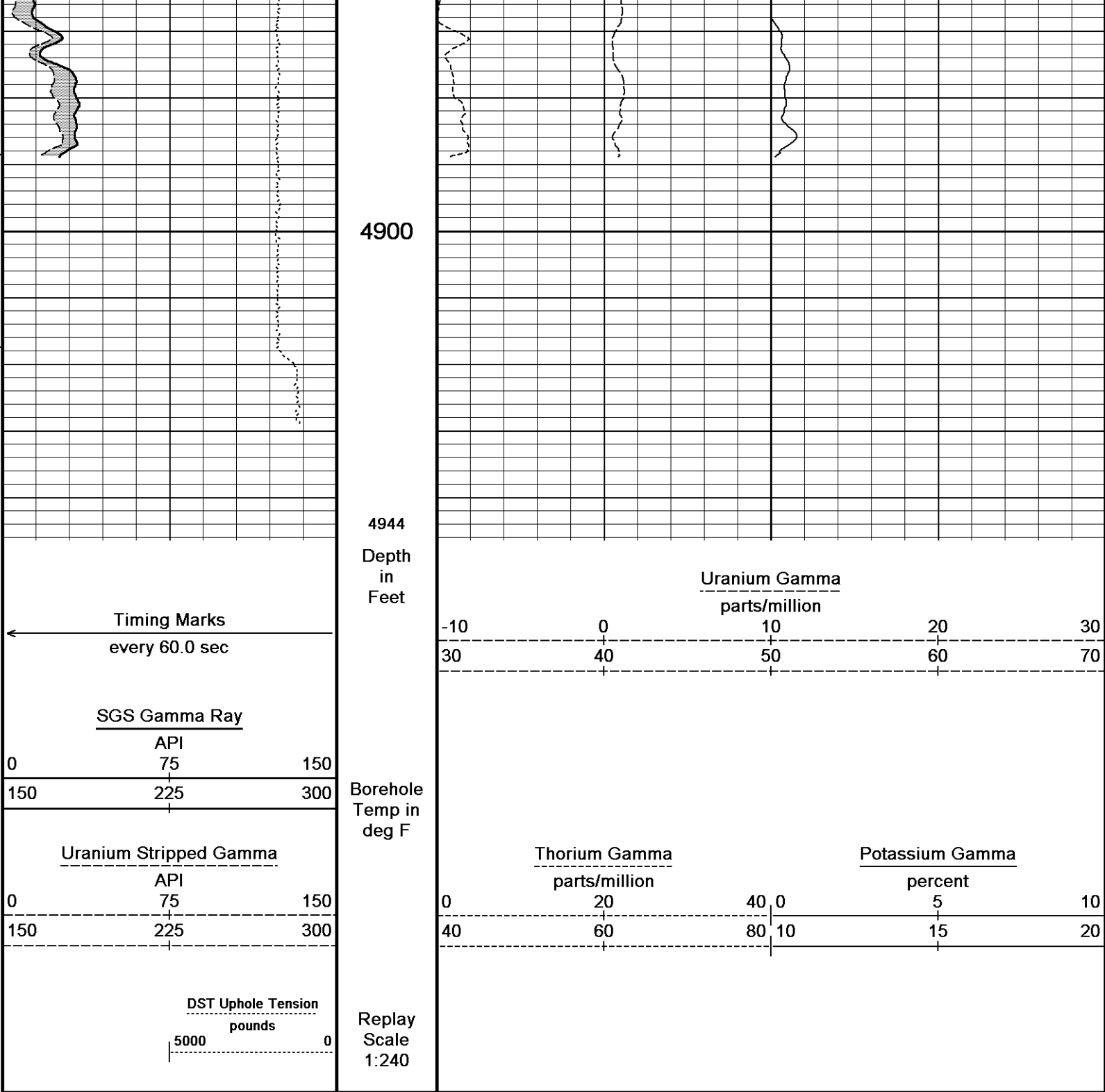
121°

4400







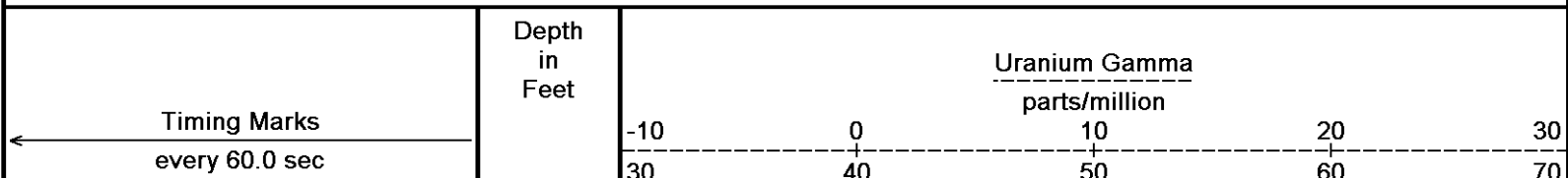


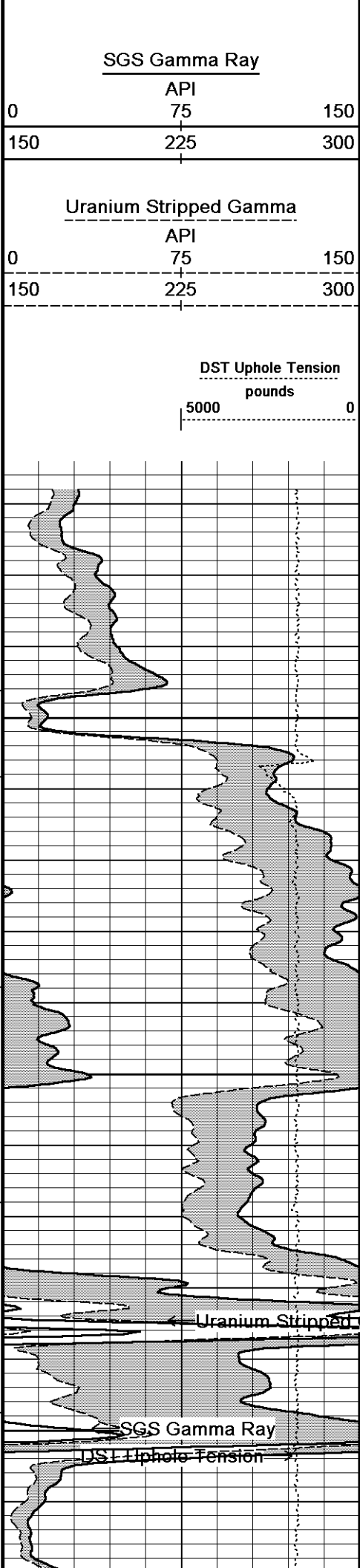
Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Minimus 13.05.9583\Logs\SandRid...\SandRidge Alton 3306 1-23_002 spooled section.dta
System Versions: Logged with 13.05.9583 Plotted with 13.05.9583
Plotted on 28-JUL-2013 05:24
Recorded on 28-JUL-2013 04:17

5 INCH MAIN

REPEAT SECTION

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Minimus 13.05.9583\Logs\SandRidge Alton 3306 1...\SandRidge Alton 3306 1-23_001.dta
System Versions: Logged with 13.05.9583 Plotted with 13.05.9583
Plotted on 28-JUL-2013 05:24
Recorded on 28-JUL-2013 02:43





Borehole
Temp in
deg F

Replay
Scale
1:240

4716

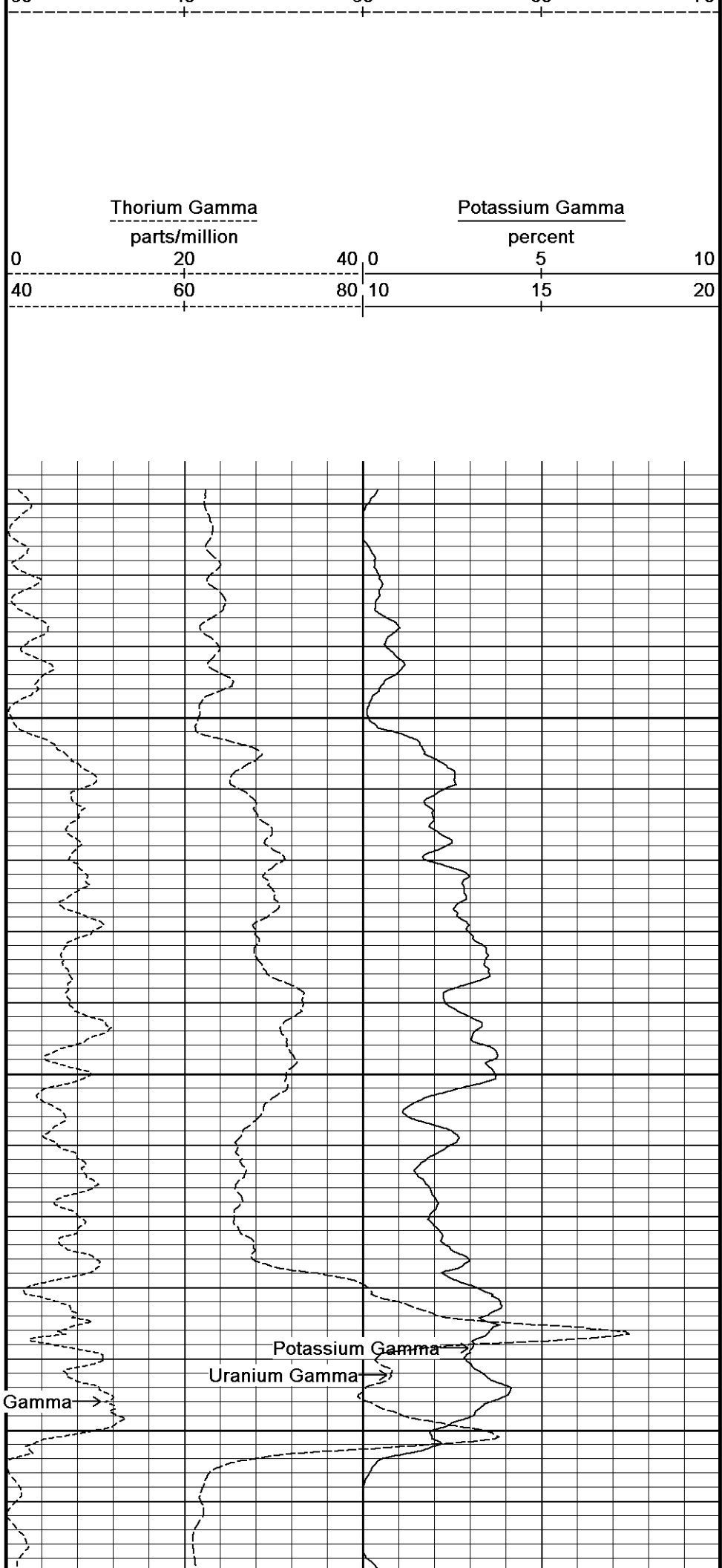
4750

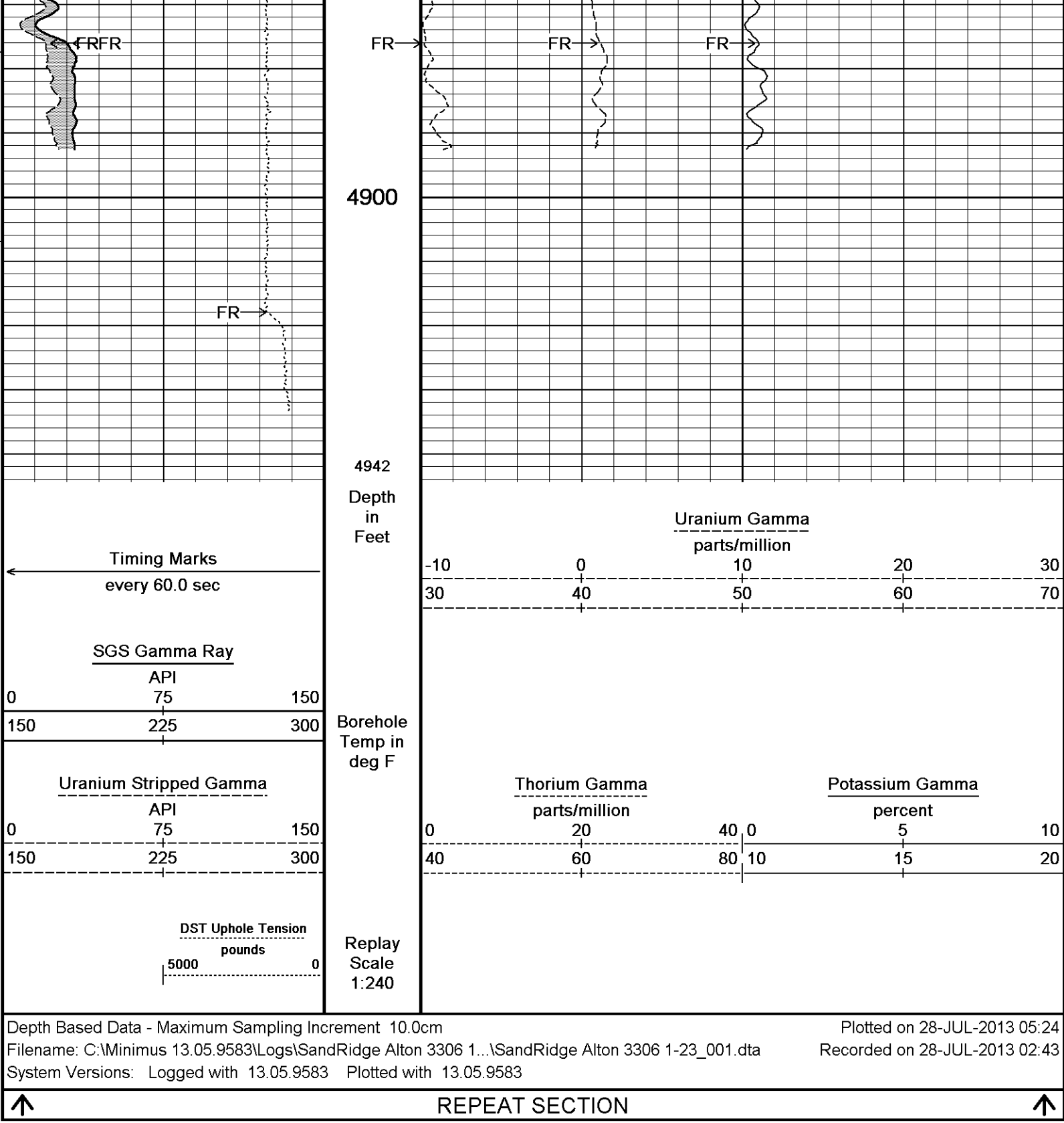
132°

4800

134°

Thorium Gamma
4850





BEFORE SURVEY CALIBRATION		
C:\Minimus 13.05.9583\Logs\SandRidge Alton 3306 1-23\SandRidge Alton 3306 1-23_002 spooled section.dta		
General Constants All 000		Last Edited on 27-JUL-2013,23:43
General Parameters		
Mud Resistivity	0.660	ohm-metres
Mud Resistivity Temperature	83.000	degrees F
Water Level	0.000	feet
Borehole Fluid Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HYGL Method	Single Caliper	

HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	5.500	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters	
Porosity used	Crossplot Porosity
Resistivity used	Array Ind. Six Res Rt
RWA Constant A	1.000
RWA Constant M	2.000
SW/APOR Tool Source	0.000

High Resolution Temperature Calibration MCG-D.K 442

Field Calibration on 15-JUL-2013,14:26

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MCG-D.K 442

Last Edited on 15-JUL-2013,14:26

Pre-filter Length 11

Spectral Gamma Calibration SGS-E.J 149

Base Calibration on 19-APR-2013,12:59

Field Calibration on 19-APR-2013,12:59

Base Calibration

Potassium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	76.7	23.0	2.3	0.9	1.5
Calibrator (Gross)	202.1	106.6	25.2	0.8	1.4
Calibrator (Net)	125.3	83.6	23.0	-0.1	-0.1

	K %	U ppm	Th ppm
Concentrations	5.8	0.0	0.0

Uranium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	76.7	23.0	2.3	0.9	1.5
Calibrator (Gross)	473.2	163.3	14.0	8.5	3.9
Calibrator (Net)	396.5	140.3	11.7	7.6	2.4

	K %	U ppm	Th ppm
Concentrations	0.0	9.8	0.0

Thorium Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	76.7	23.0	2.3	0.9	1.5
Calibrator (Gross)	389.8	138.7	11.1	6.4	15.6
Calibrator (Net)	313.1	115.7	8.8	5.5	14.1

	K %	U ppm	Th ppm
Concentrations	0.0	0.0	44.3

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	76.7	23.0	2.3	0.9	1.5
Calibrator (Gross)	902.4	361.7	45.0	13.8	18.8
Calibrator (Net)	825.6	338.7	42.7	12.9	17.3

Field Calibration

Gamma Ray

	Measured	Calibrated (API)
Background	109	22
Calibrator (Gross)	1346	272
Calibrator (Net)	1237	250

Mixture Calibrator

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	76.7	23.0	2.3	0.9	1.5
Calibrator (Gross)	902.4	361.7	45.0	13.8	18.8
Calibrator (Net)	825.6	338.7	42.7	12.9	17.3

Background Calibrator Number	000	
Mixture Calibrator Number	147-1	
Potassium Calibrator Number	148-1	
Uranium Calibrator Number	150-1	
Thorium Calibrator Number	149-1	
Mud Density	1.06	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

DOWNHOLE EQUIPMENT

C:\Minimus 13.05.9583\Logs\SandRidge Alton 3306 1-23\SandRidge Alton 3306 1-23_002 spooled section.dta

3/8" Triple Cone Cable Head (MCB C A)

MCB-C.A 5 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in

Compact Comms Gamma

MCG-D.K 442 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Spectral Gamma Ray Sub

SGS-E.J 149 LG: 7.78 ft WT: 105.8 lb OD: 3.54 in

Compact Micro-Resistivity

MMR-A 11 LG: 8.59 ft WT: 81.6 lb OD: 4.88 in

Compact Neutron

MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper

MPD-B 31 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

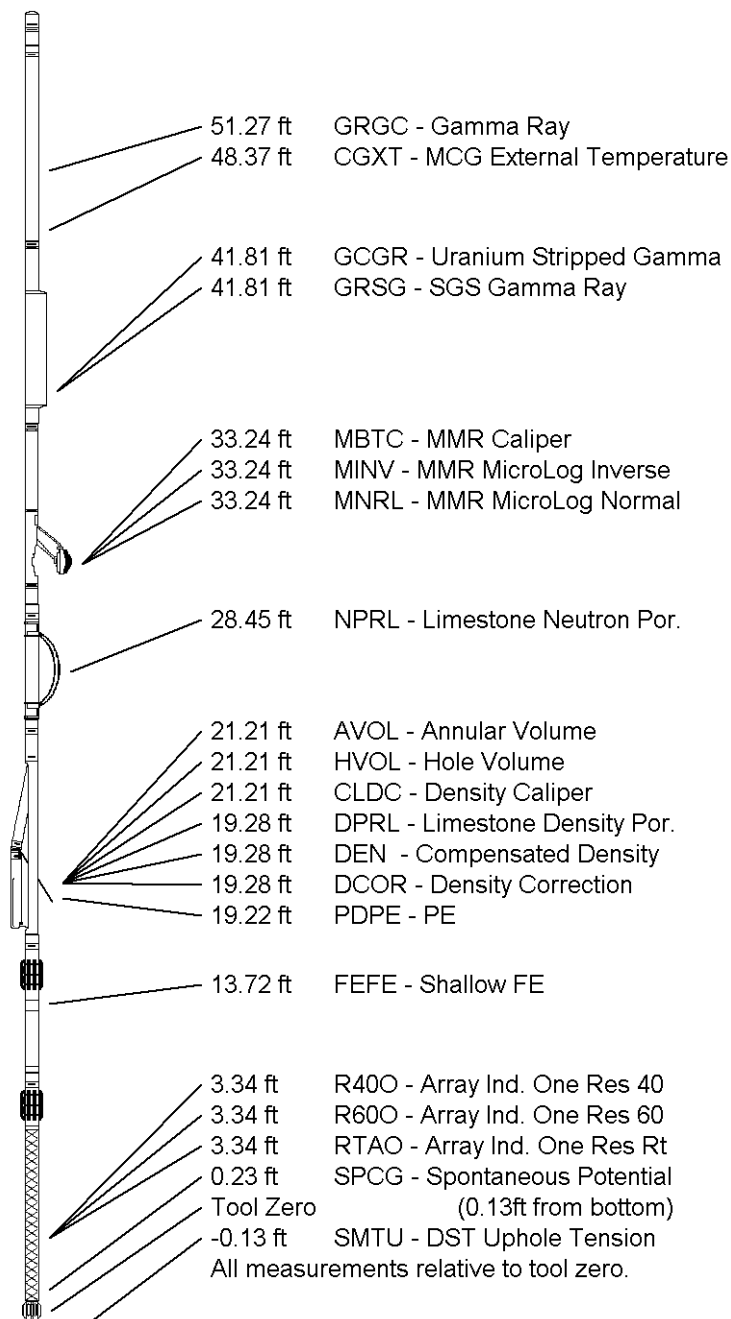
Compact Focussed Electric

MFE-B.J 352 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction

MAI-A.A 45 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 58.14 ft Weight: 504.9 lb



COMPANY
WELL
FIELD

SANDRIDGE EXPLORATION AND PRODUCTION LLC.
ALTON 3306 1-23
STOHRVILLE

FIELD STONKVILLE
PROVINCE/COUNTY HARPER
COUNTRY/STATE U.S.A / KANSAS

Elevation Kelly Bushing	1317.00	feet	First Reading	4876.00	feet
Elevation Drill Floor	1316.00	feet	Depth Driller	4920.00	feet
Elevation Ground Level	1308.00	feet	Depth Logger	4918.00	feet



Weatherford®

SPECTRAL GAMMA RAY