



**DUAL
INDUCTION
LOG**

Company **STROKE OF LUCK ENERGY &
CUSTER VALLEY # 04-0517**
Well **CUSTER VALLEY # 04-0517**
Field **SOLOMON**
County **ELLIS** State **KANSAS**

Location: **API #: 15-051-26874-0000**
1154' FSL & 2362' FWL
Permanent Datum **GROUND LEVEL Elevation 2057**
Log Measured From **KELLY BUSHING 11' A.G.L**
Drilling Measured From **KELLY BUSHING**
Elevation **K.B. 2068
D.F. 2066
G.L. 2057**

Date	6/17/17
Run Number	ONE
Depth Driller	3700
Depth Logger	3700
Bottom Logged Interval	3698
Top Log Interval	00
Casing Driller	8 5/8" @ 350'
Casing Logger	350'
Bit Size	7 7/8
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.0/44
PH / Fluid Loss	9.0/16.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.30 @ 81F
Rmt @ Meas. Temp	.22 @ 81F
Rmc @ Meas. Temp	.36 @ 81F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.21 @ 113F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	
Maximum Recorded Temperature	113F
Equipment Number	3802
Location	HAYS, KANSAS
Recorded By	JASON CAPPELLUCCI
Witnessed By	KEVIN BAILEY

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
DIRECTIONS
HAYS, KS. - NORTH TO BUCKEYE RD. - WEST TO HYACINTH RD. - NORTH
TO DEAD END - EAST & NORTH INTO

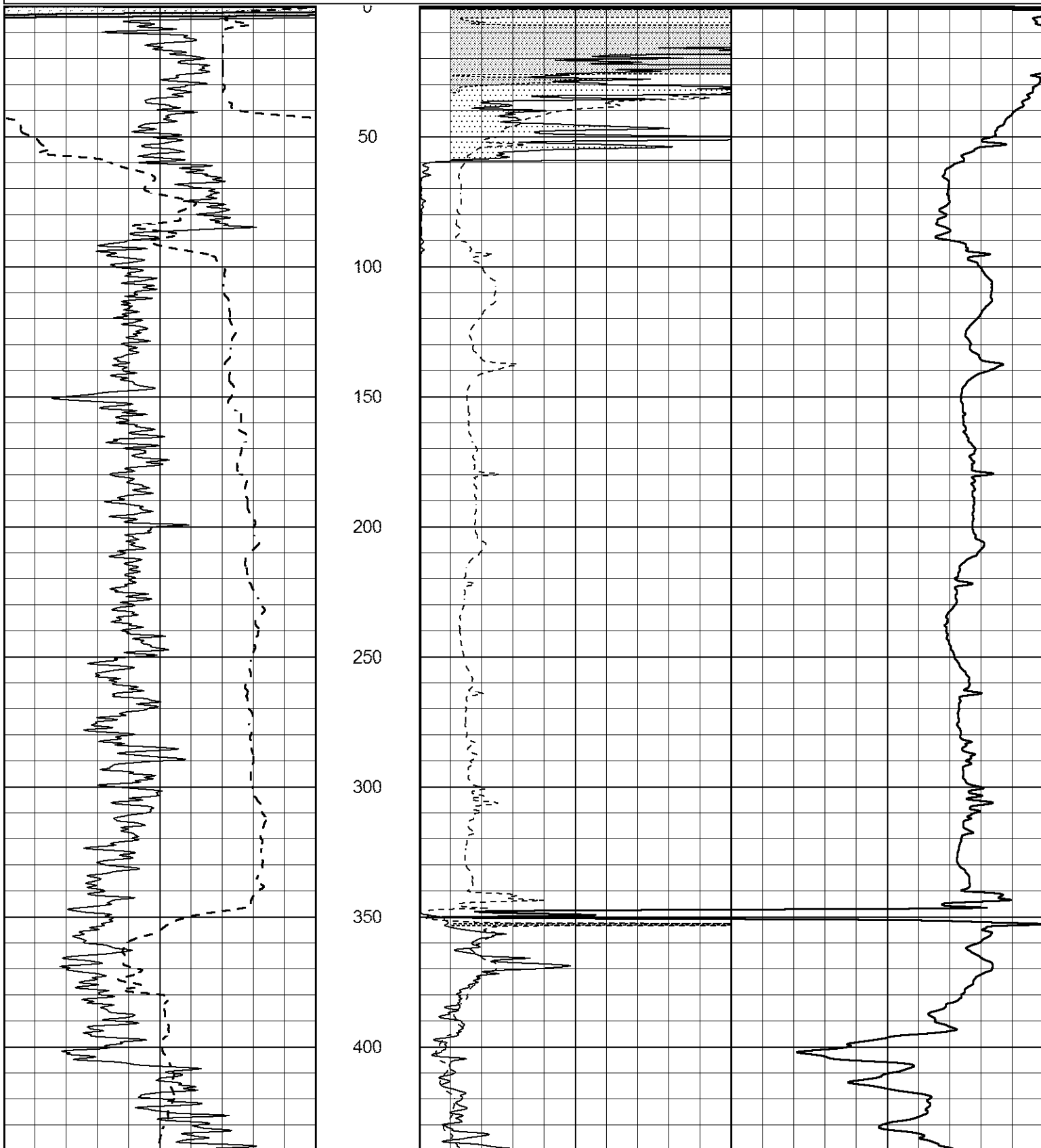


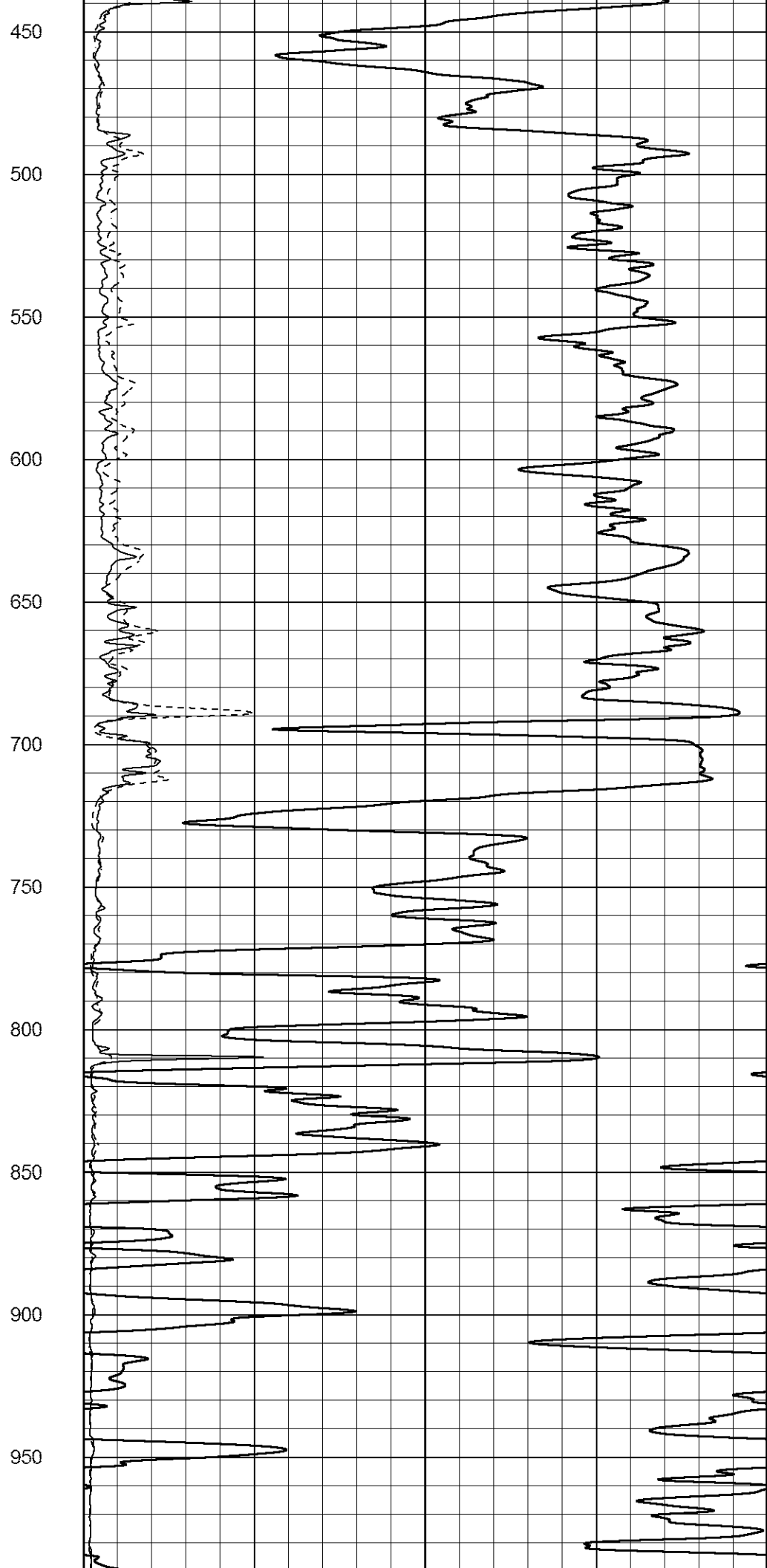
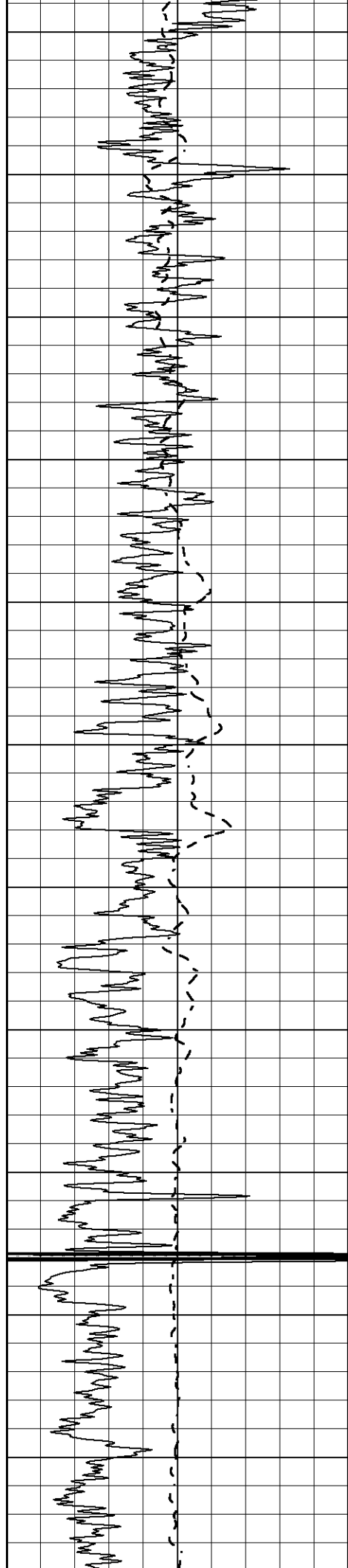
MAIN SECTION

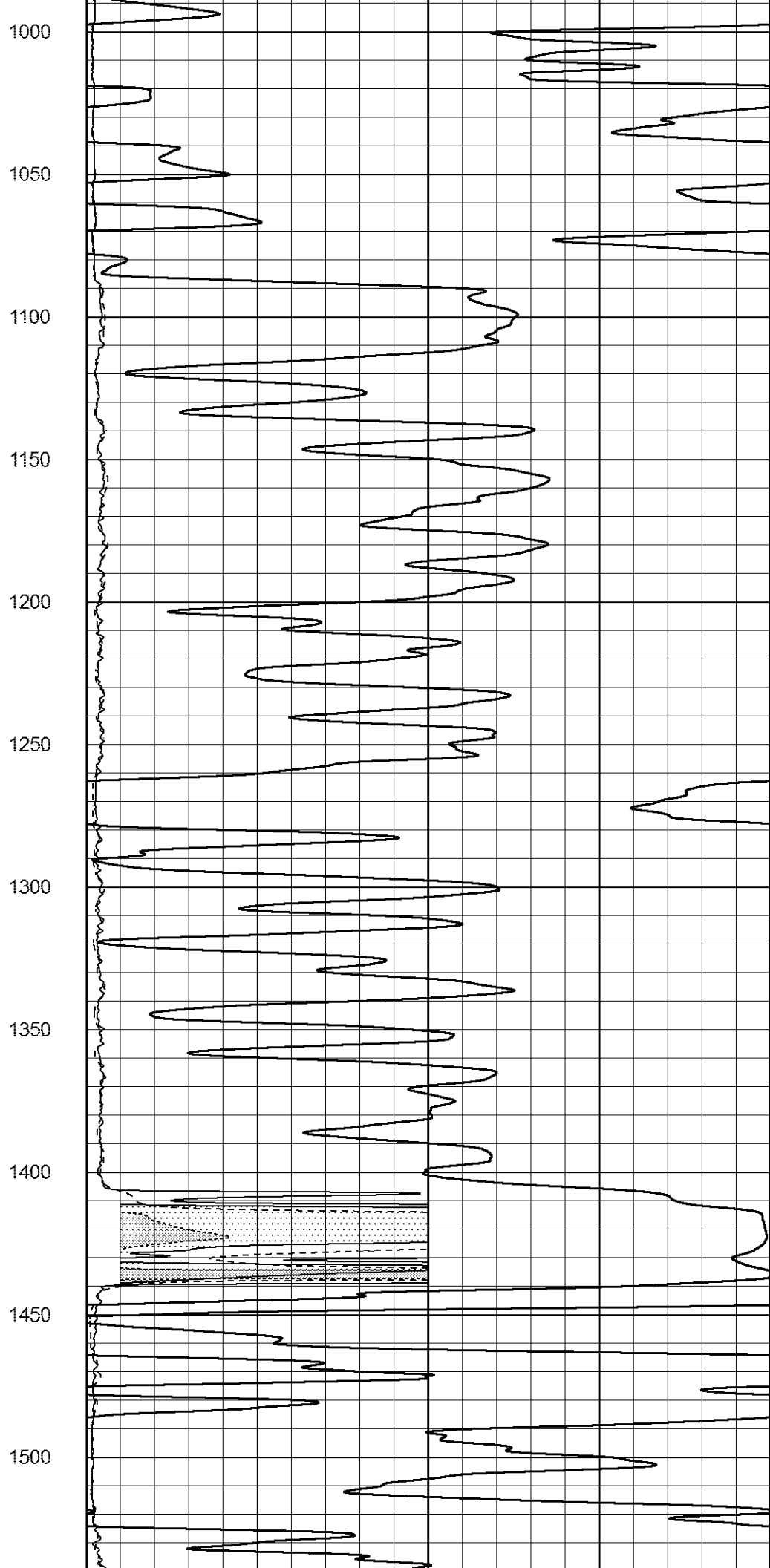
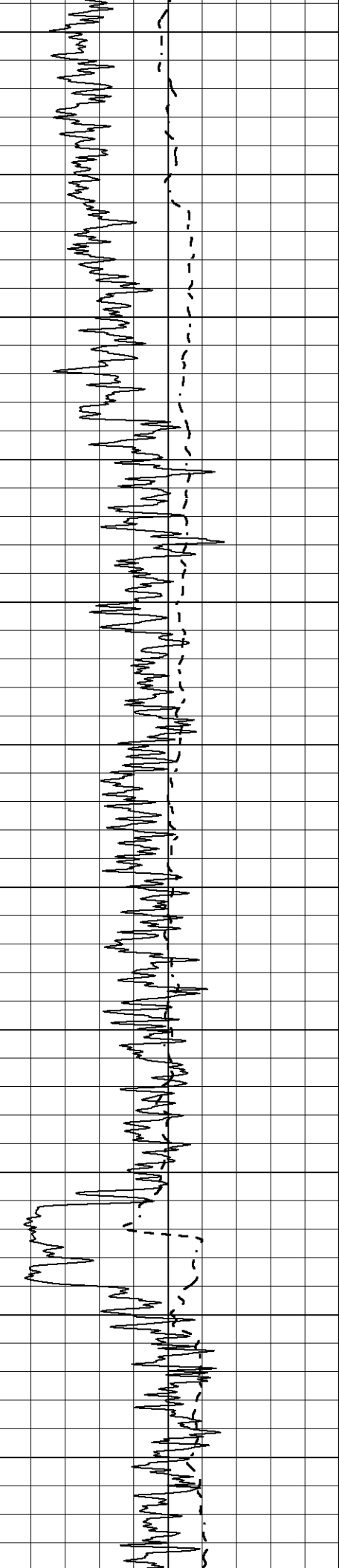
Database File 1150ddn.db
 Dataset Pathname pass3.3
 Presentation Format _dil2
 Dataset Creation Sat Jun 17 06:52:35 2017
 Charted by Depth in Feet scaled 1:600

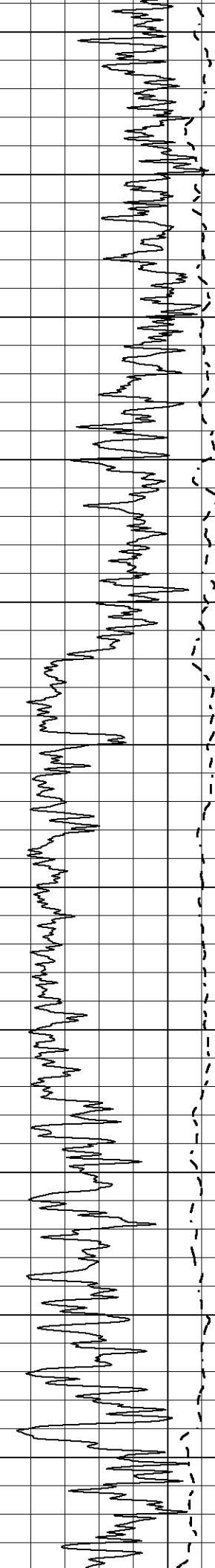
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500









1550

1600

1650

1700

1750

1800

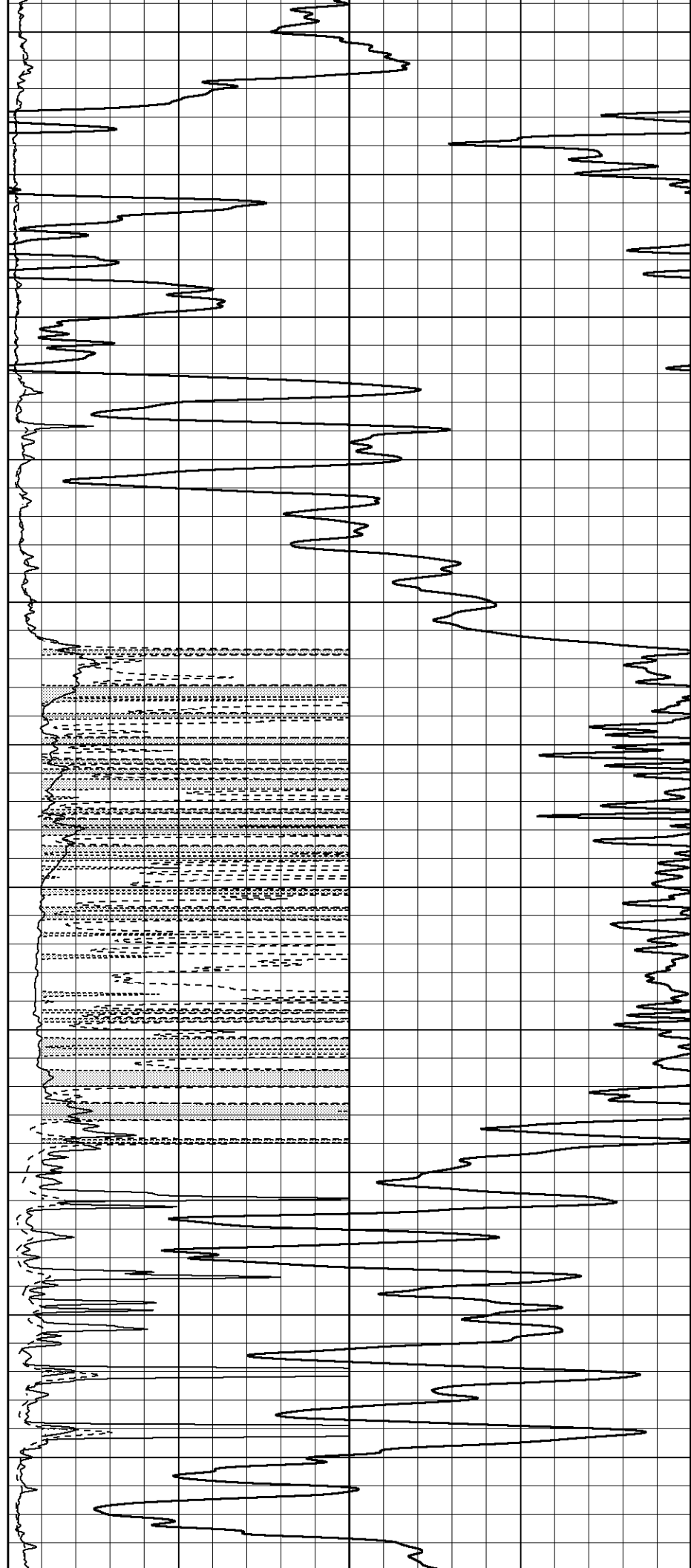
1850

1900

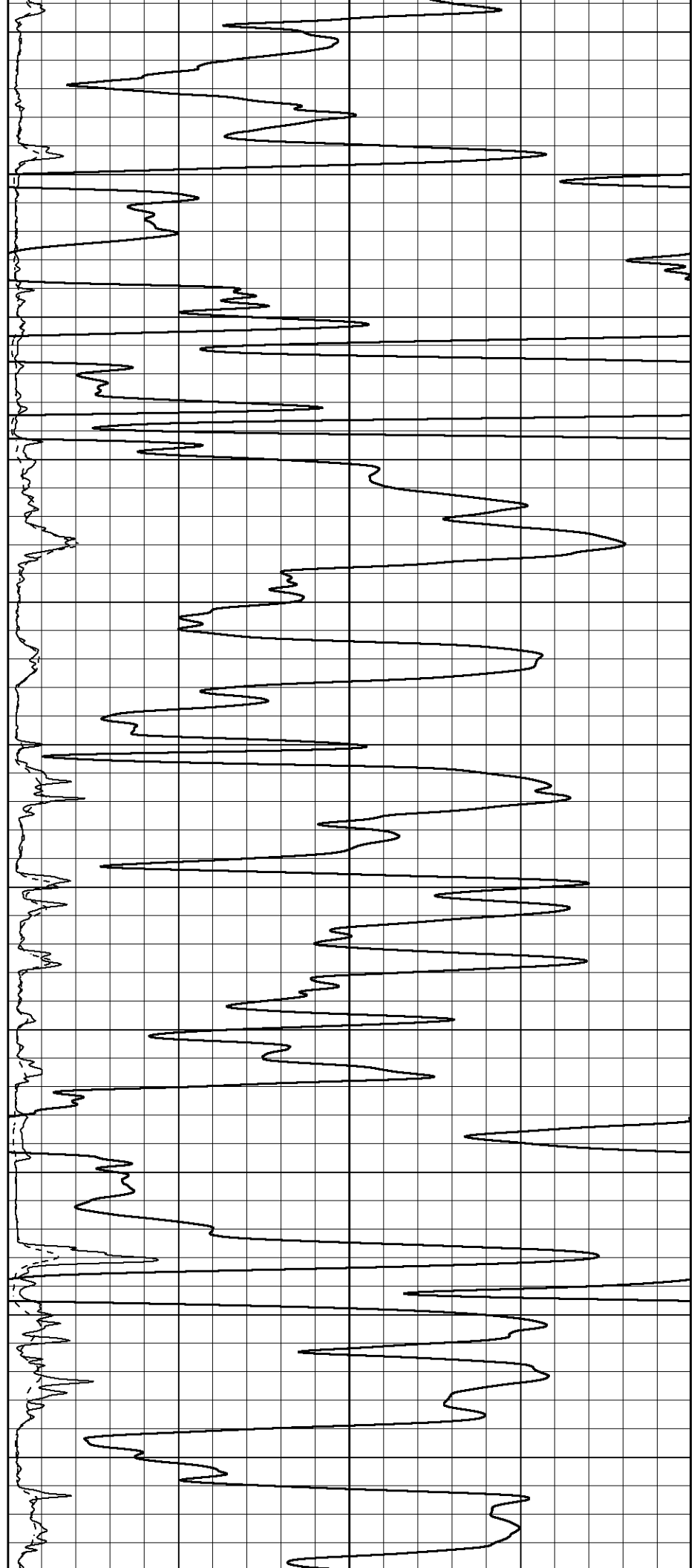
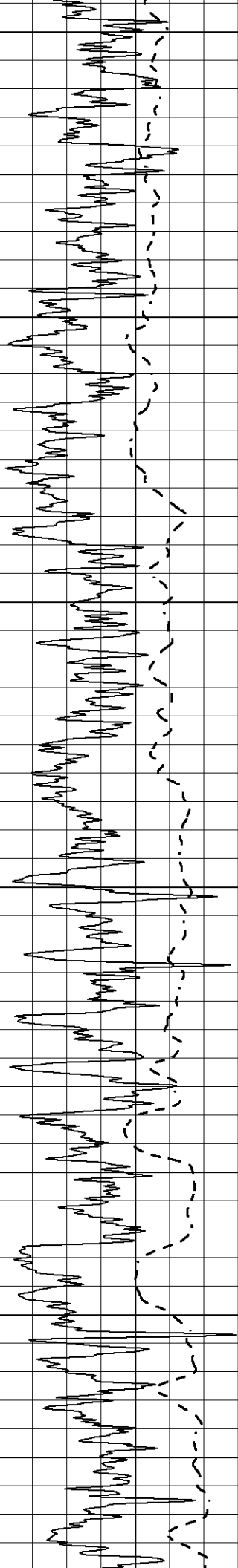
1950

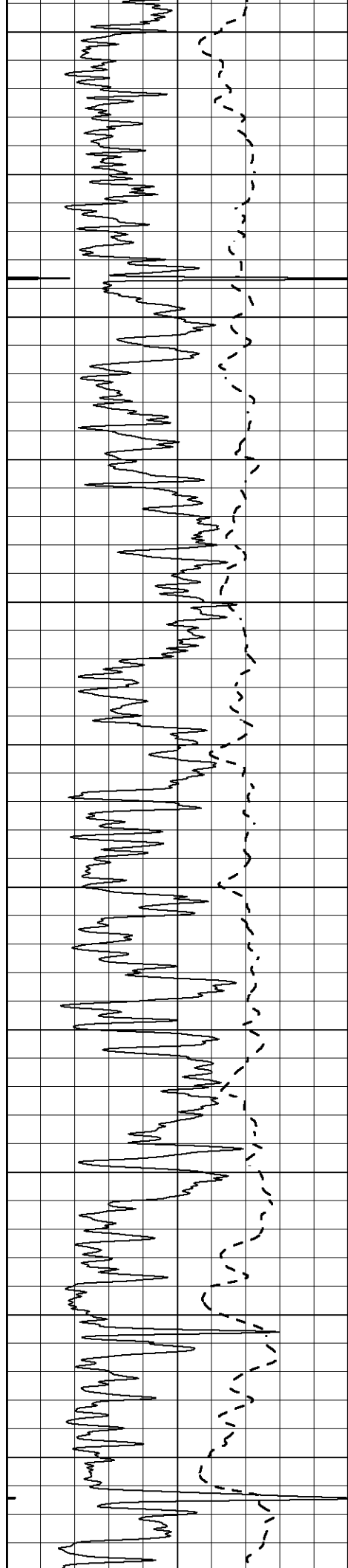
2000

2050



2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600





2650

2700

2750

2800

2850

2900

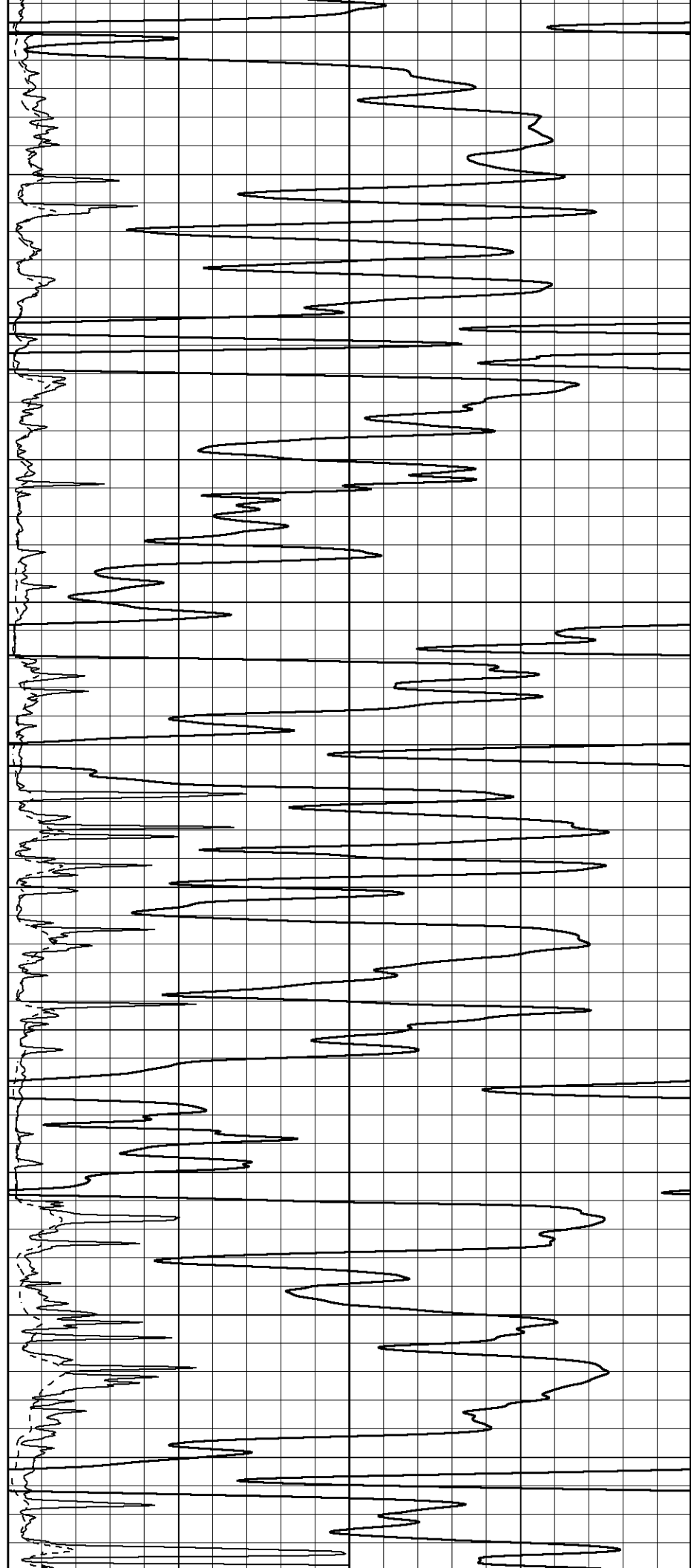
2950

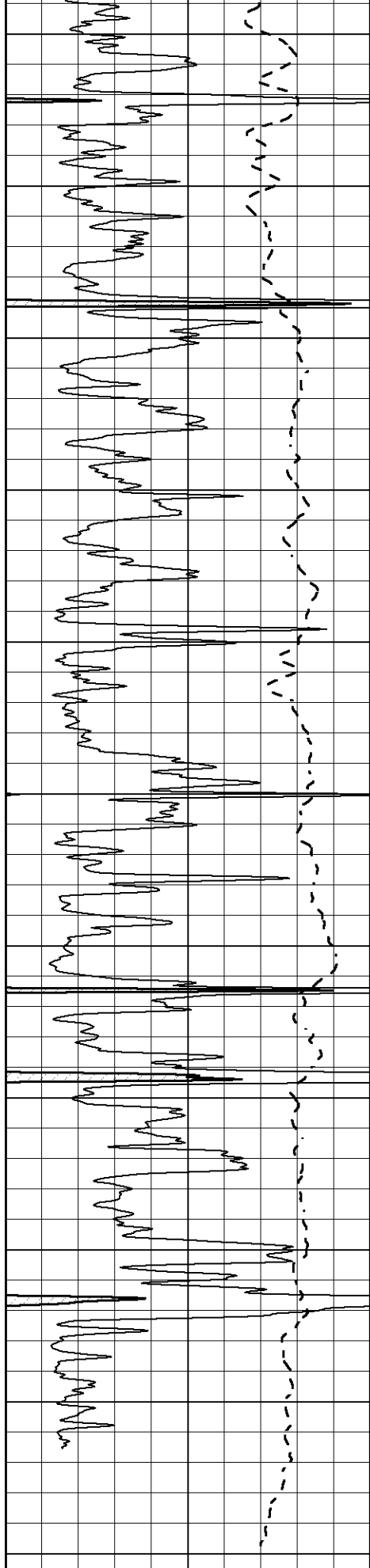
3000

3050

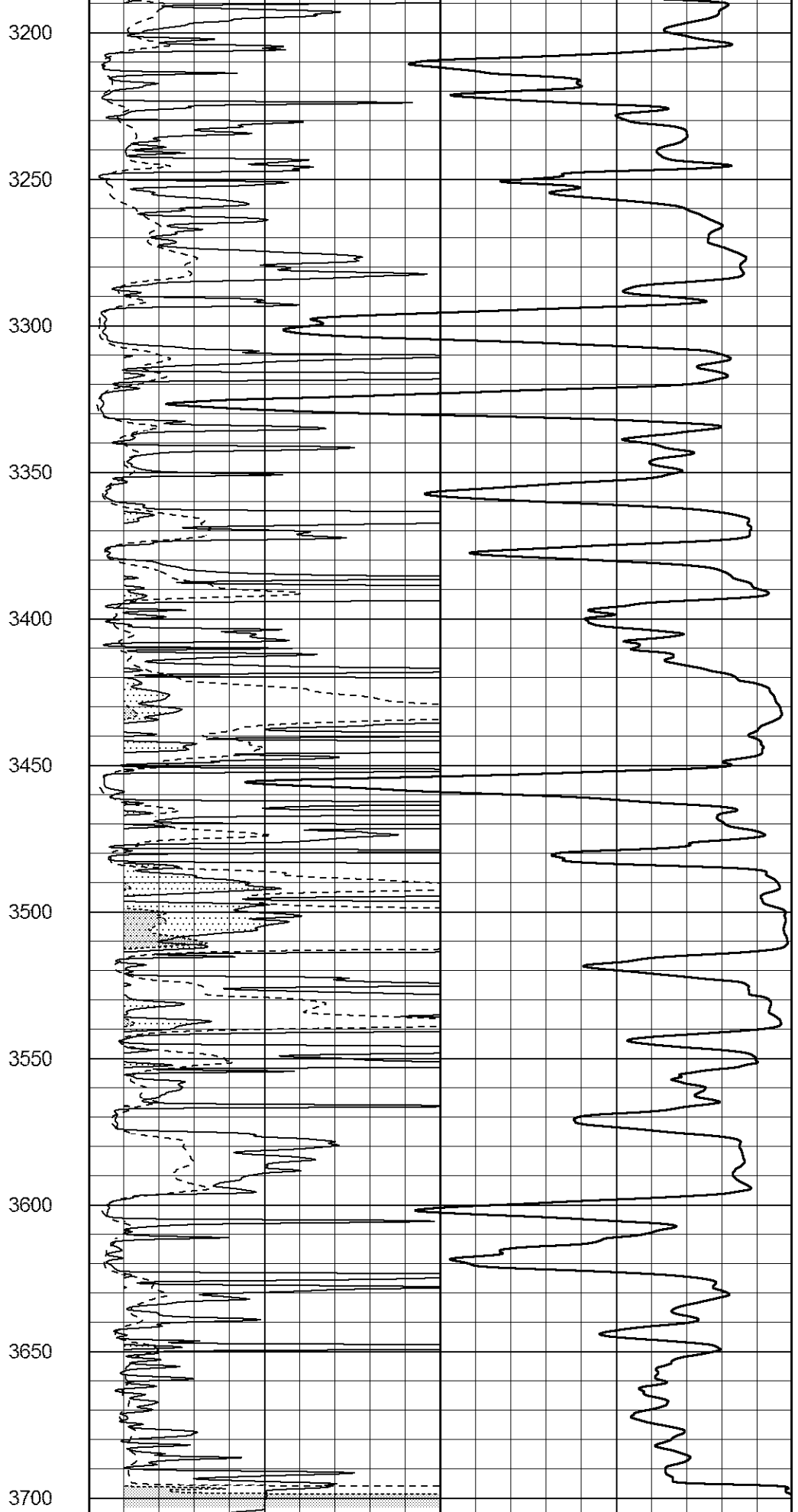
3100

3150



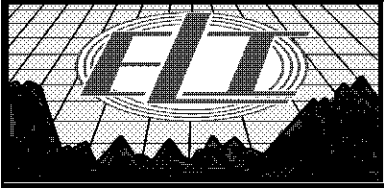


0	Gamma Ray (GAPI)	150
-100	SP (mV)	100



1000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50

50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

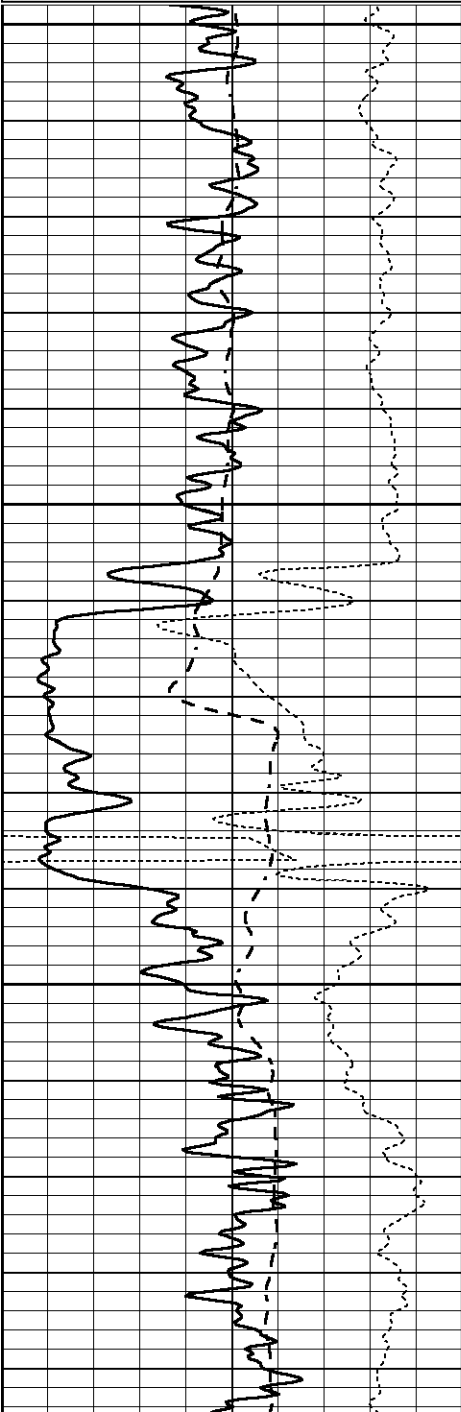


ANHYDRITE

Database File 1150ddn.db
 Dataset Pathname pass3.2
 Presentation Format _dil
 Dataset Creation Sat Jun 17 06:16:27 2017
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

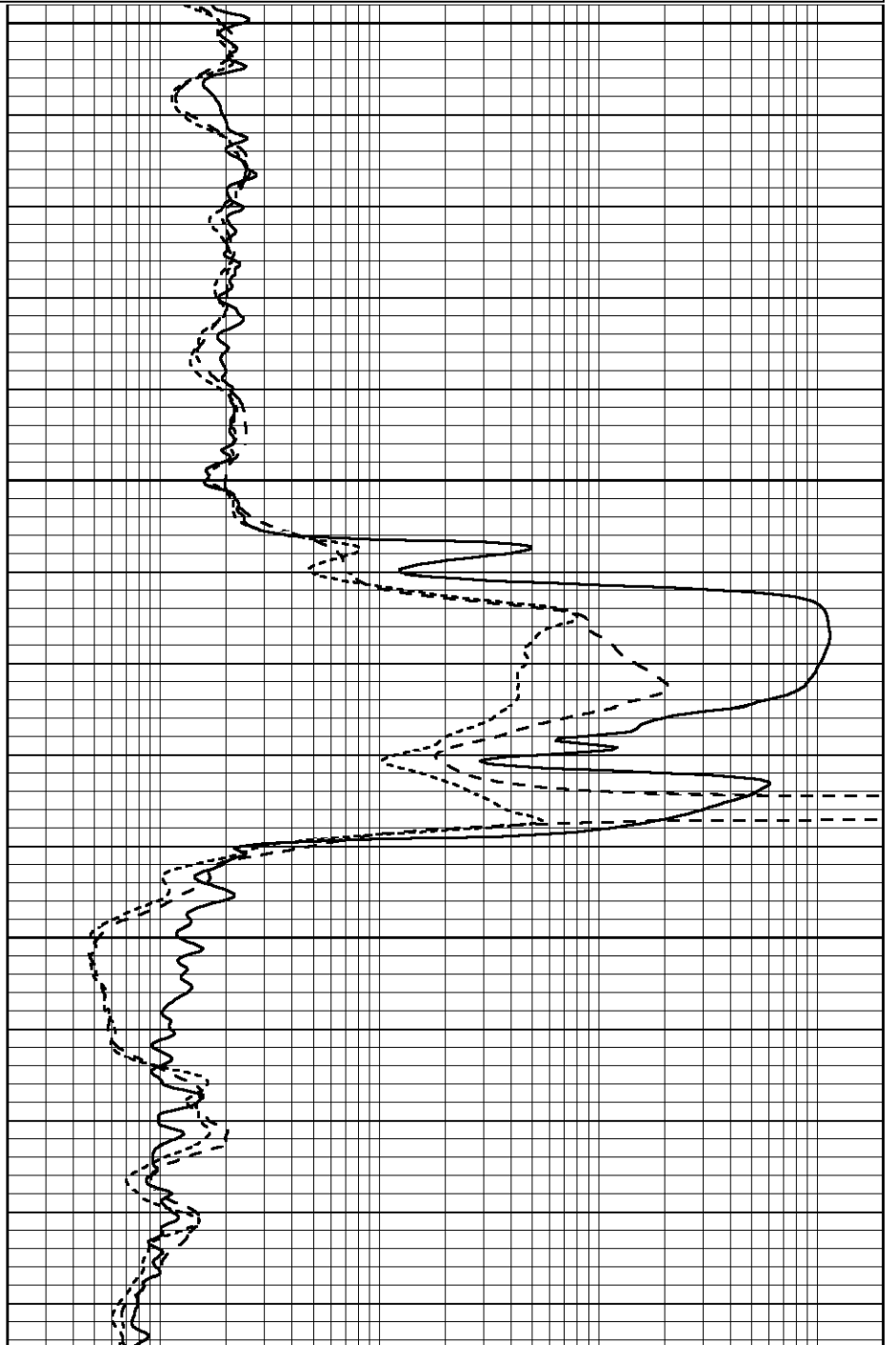
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



1350

1400

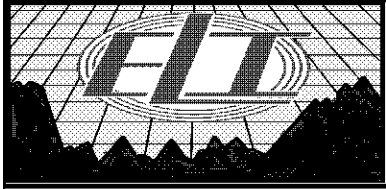
1450



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

1500

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

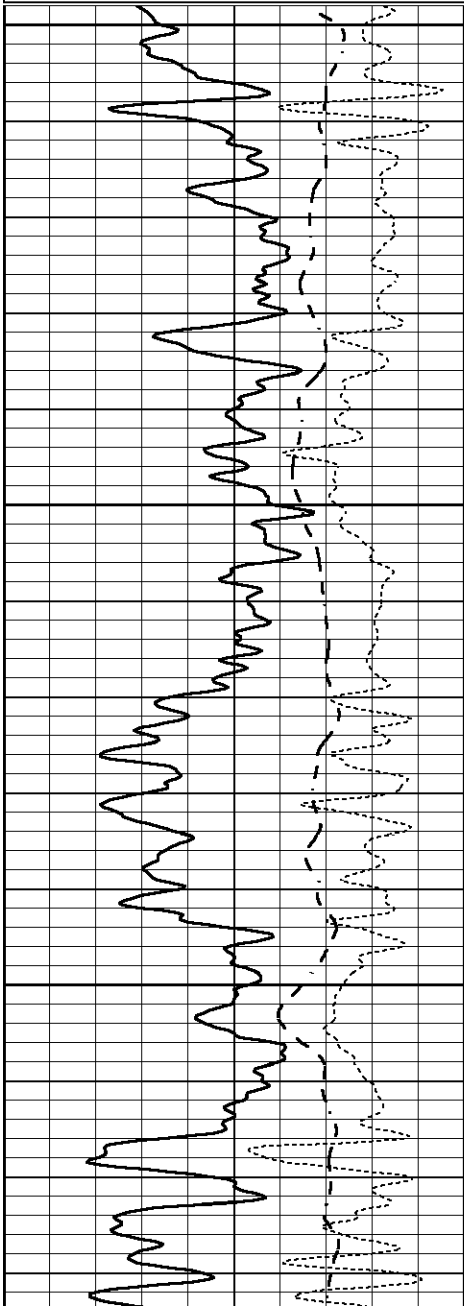


MAIN SECTION

Database File 1150ddn.db
 Dataset Pathname pass3.1
 Presentation Format _dil
 Dataset Creation Sat Jun 17 06:03:17 2017
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

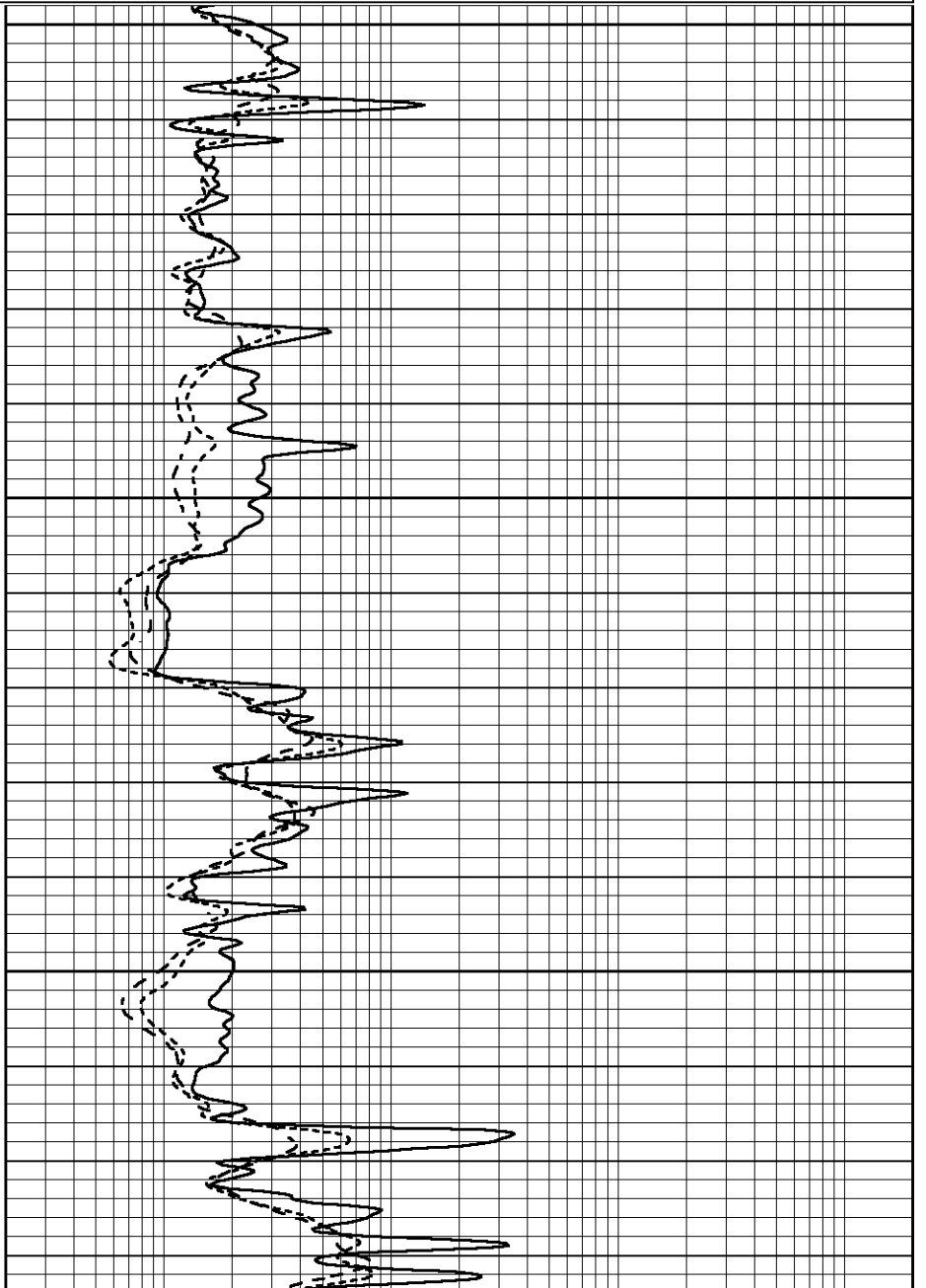
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

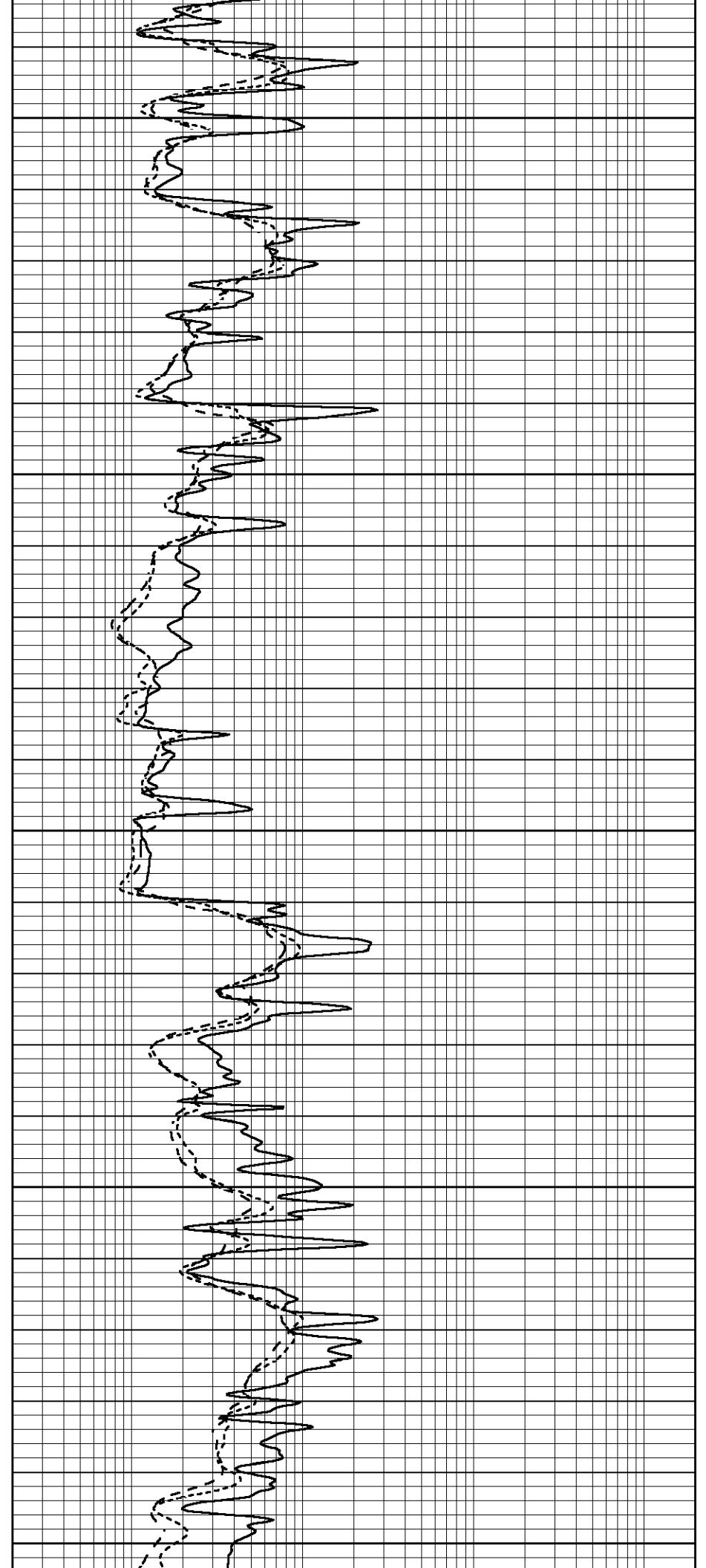
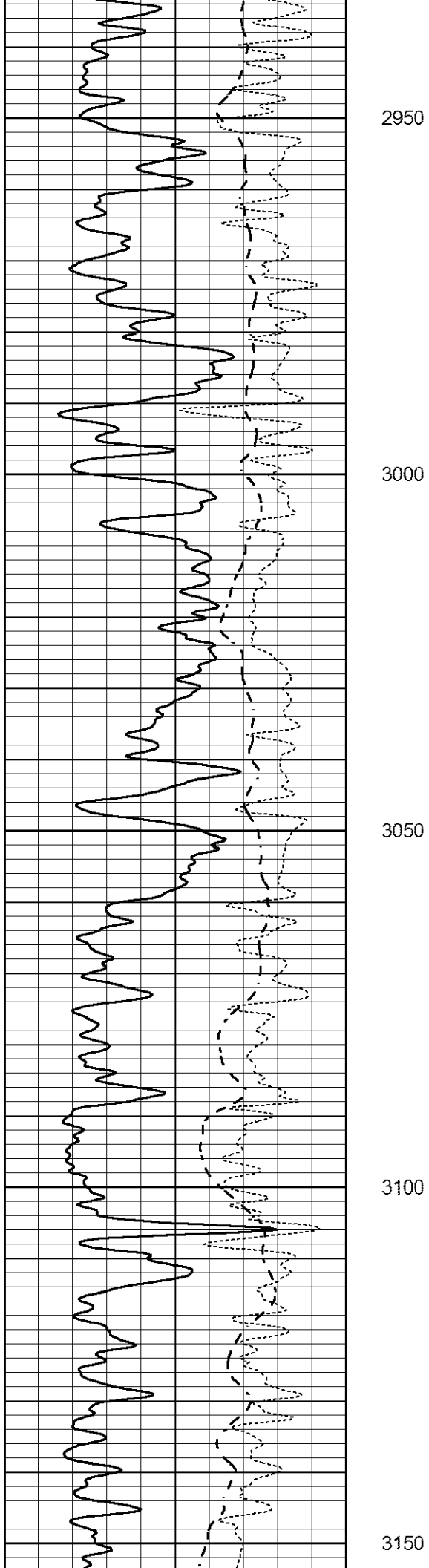


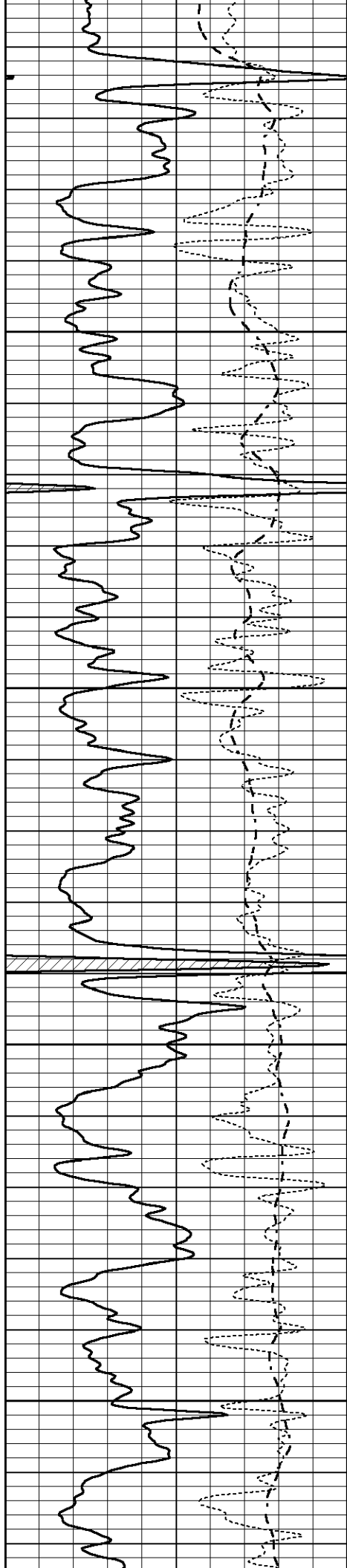
2800

2850

2900





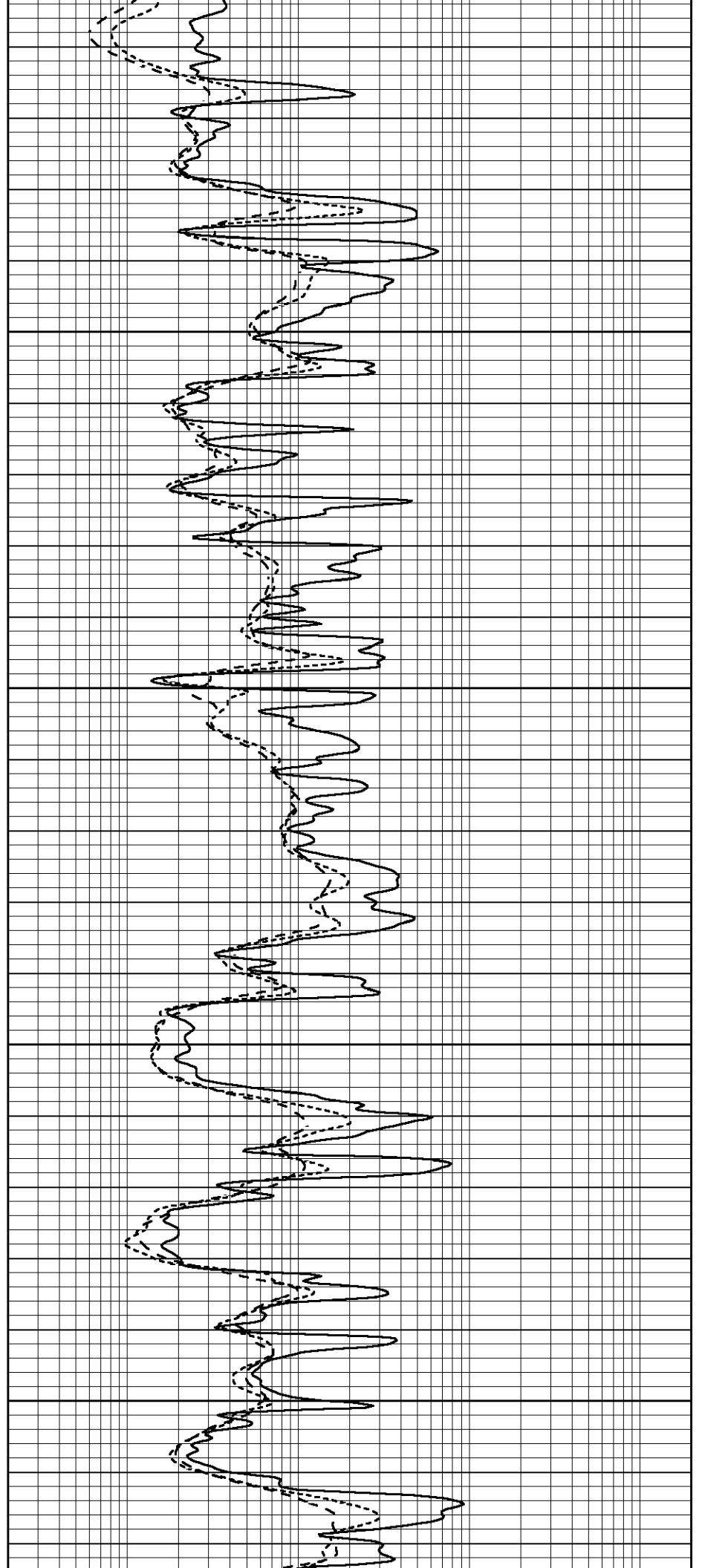


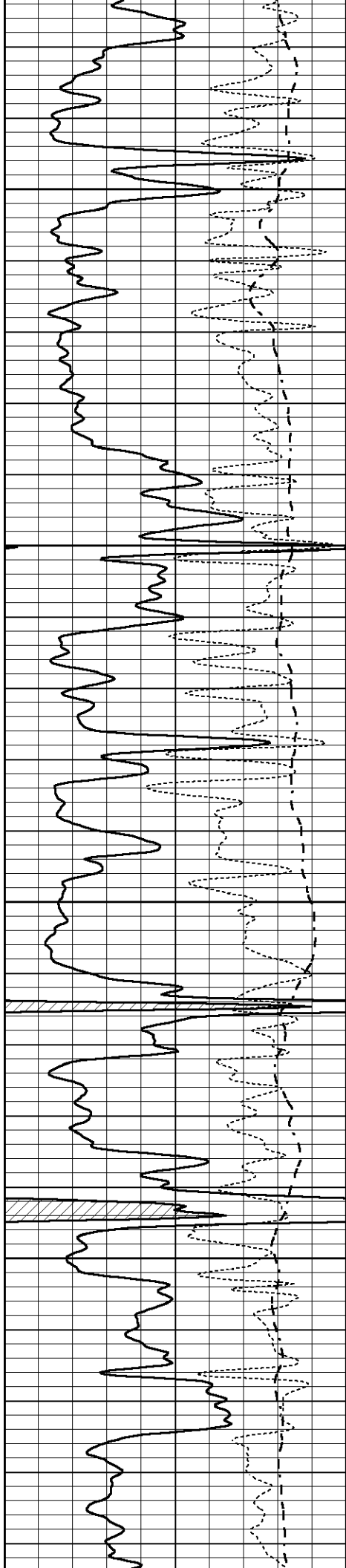
3200

3250

3300

3350



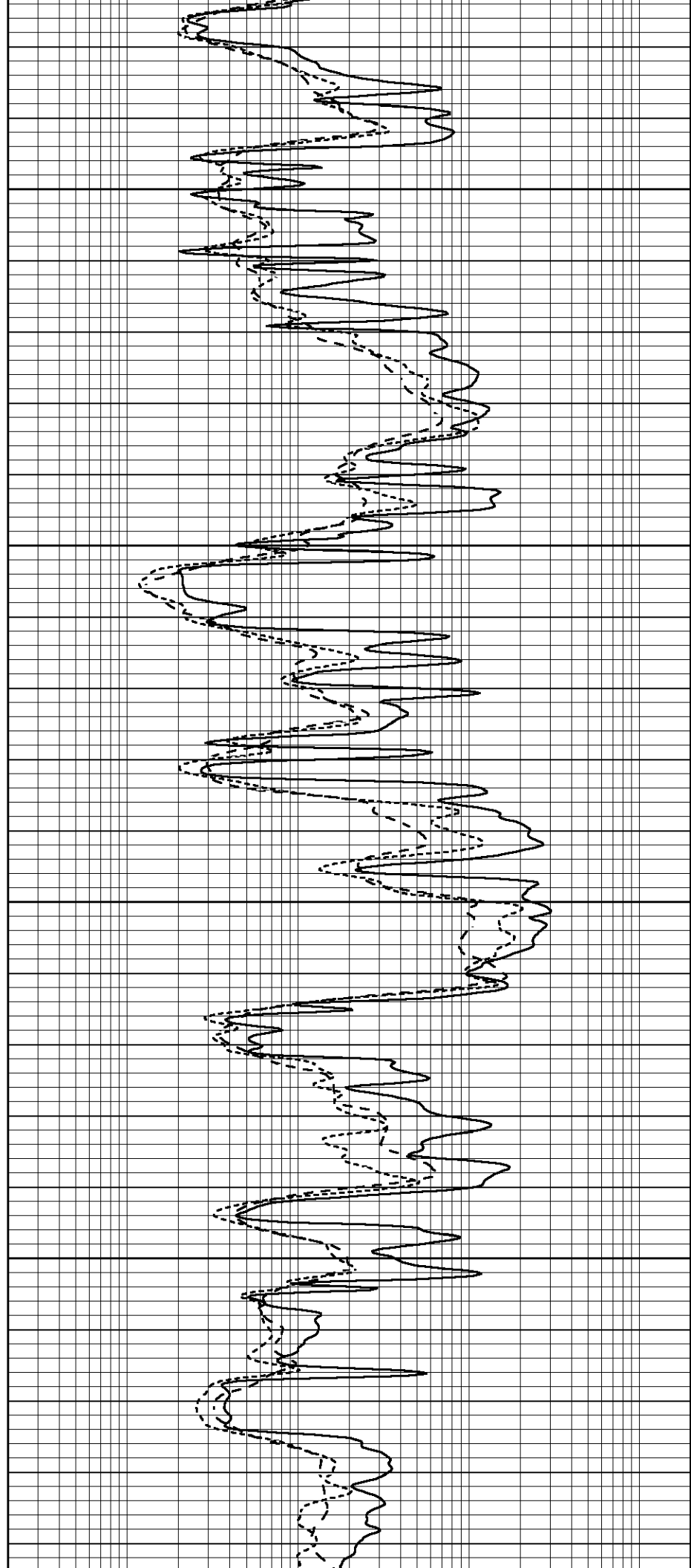


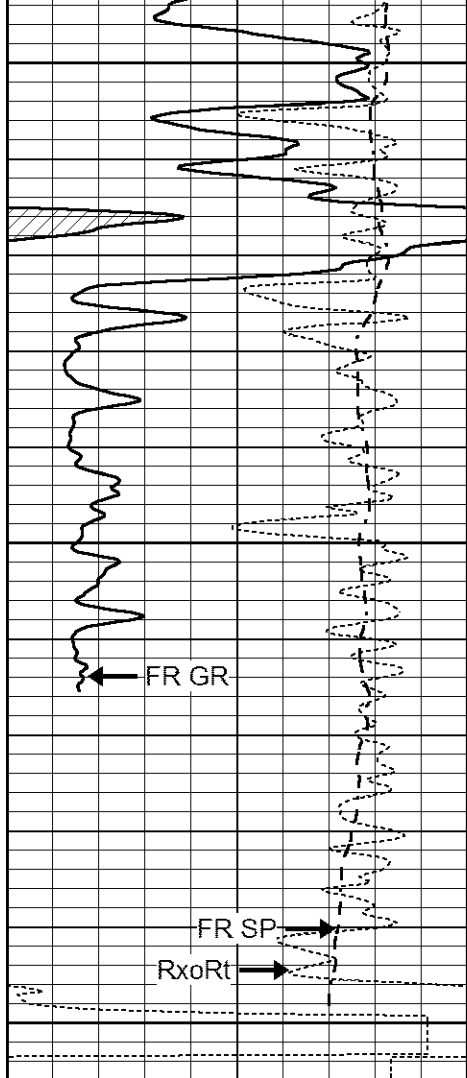
3400

3450

3500

3550





3600

3650

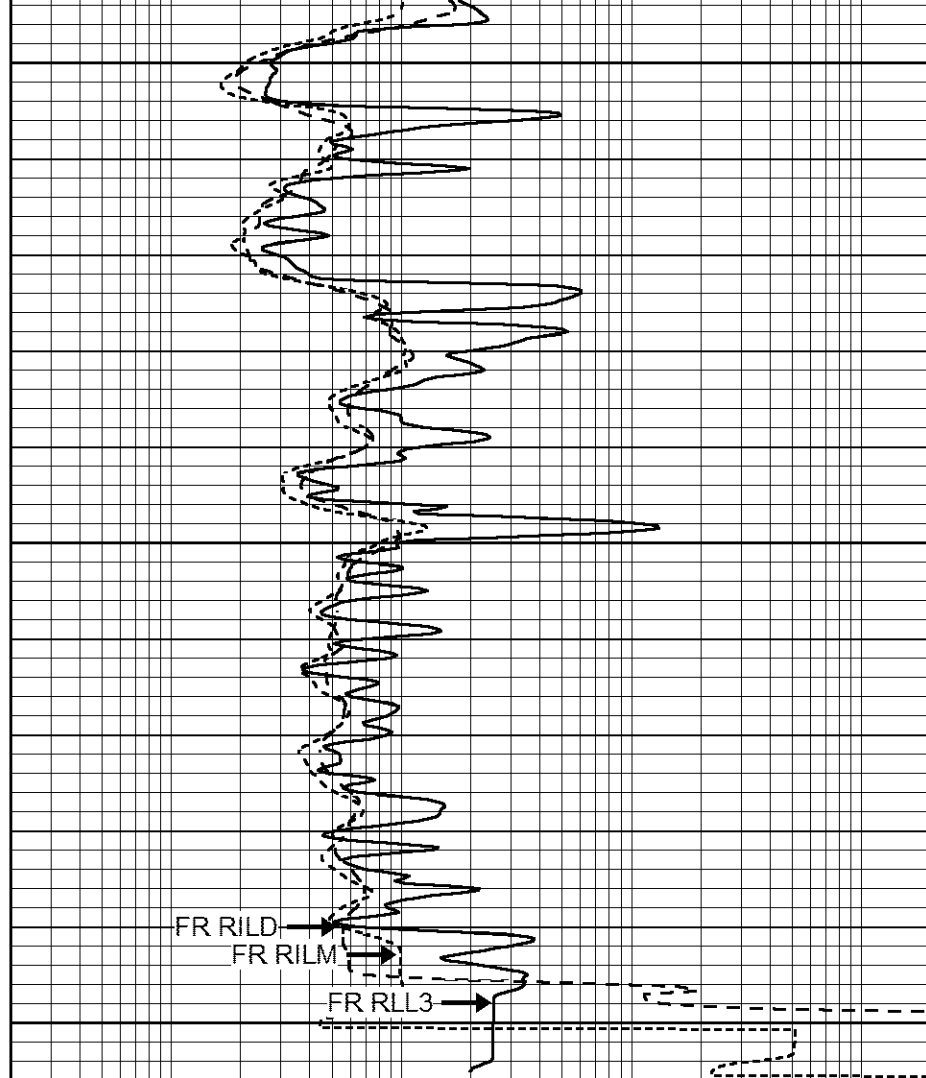
FR GR

FR SP

RxoRt

LTD 3700

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50



FR RILD

FR RILM

FR RLL3

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

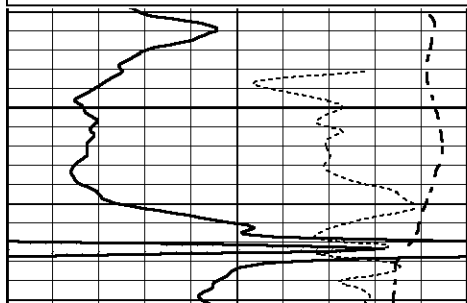


REPEAT SECTION

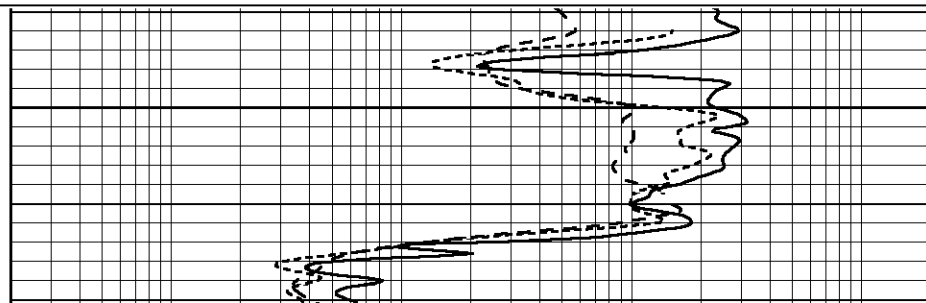
Database File 1150ddn.db
 Dataset Pathname pass2.1
 Presentation Format _dil
 Dataset Creation Sat Jun 17 06:05:56 2017
 Charted by Depth in Feet scaled 1:240

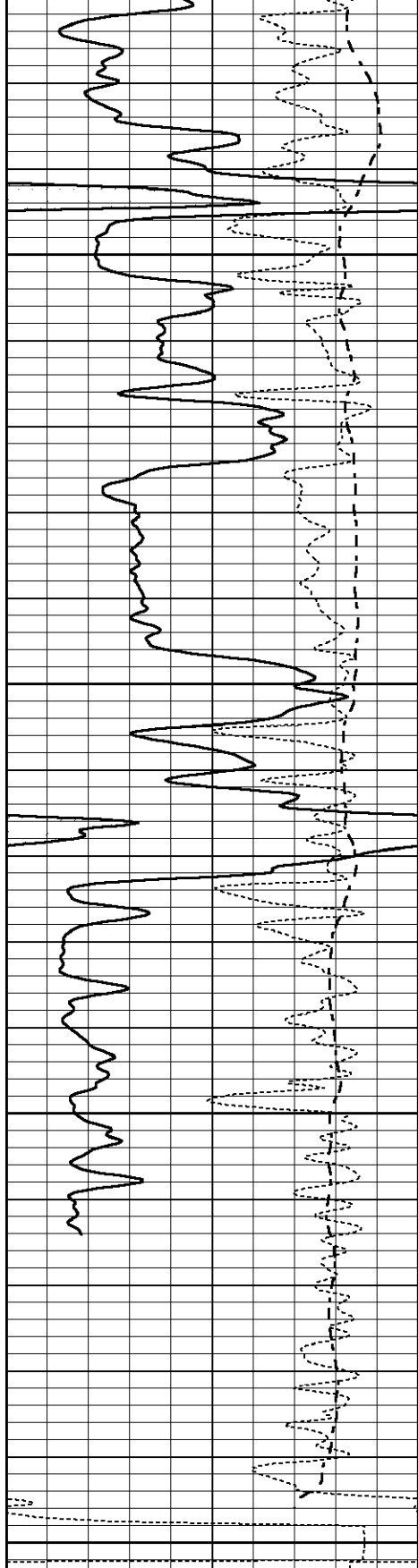
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



3500





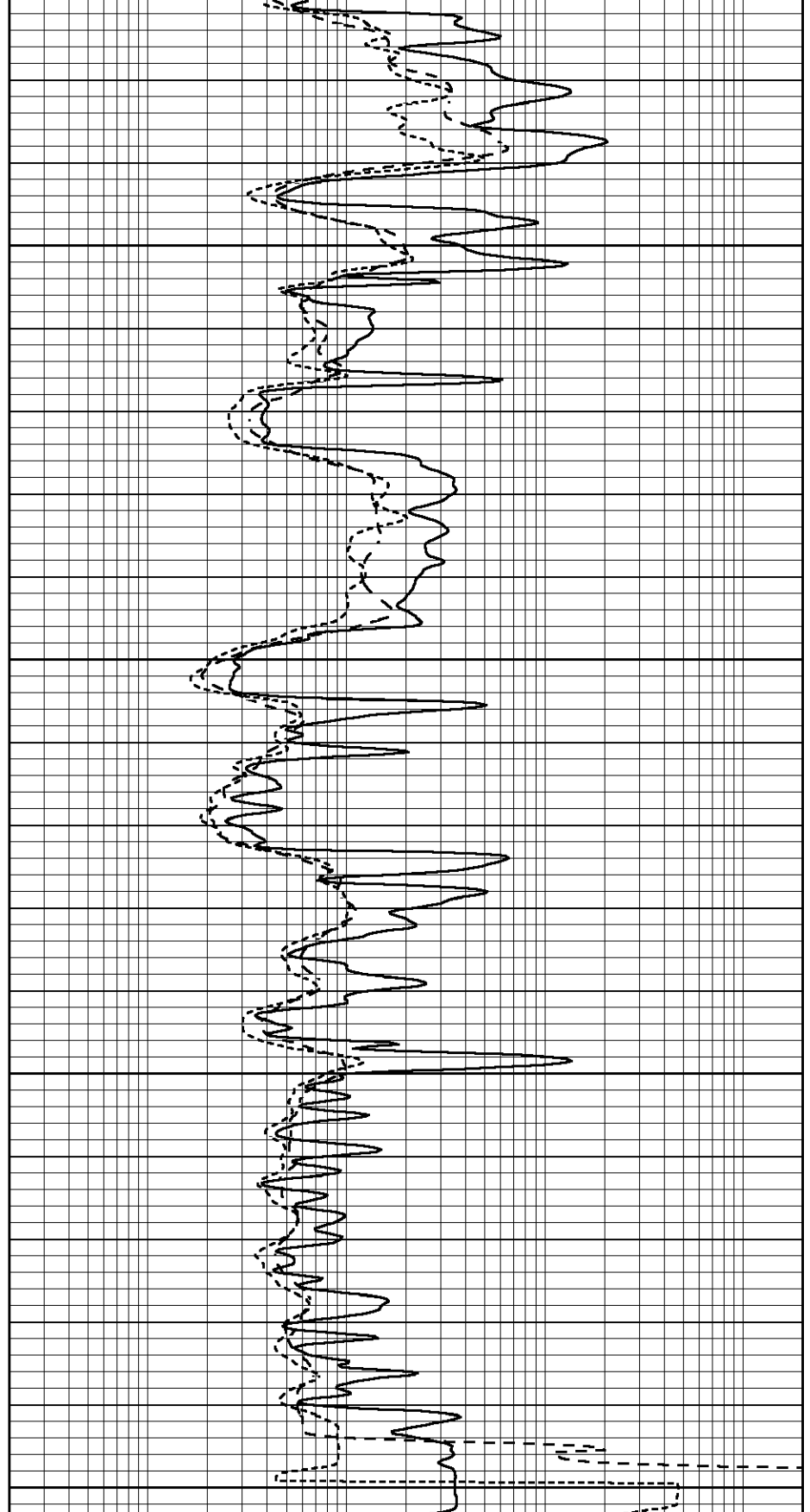
3550

3600

3650

3700

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50



0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

Calibration Report

Database File 1150ddn.db
 Dataset Pathname pass2.1
 Dataset Creation Sat Jun 17 06:05:56 2017

Dual Induction Calibration Report

Serial-Model: FW1410-56-Probe
 Surface Cal Performed: Fri Mar 13 14:03:50 2015
 Downhole Cal Performed: Fri Mar 13 15:37:29 2015
 After Survey Verification Performed: Fri Mar 13 15:37:29 2015

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	0.008	0.765	V	1.000	400.000	mmho/m	527.061	-3.201
Medium	-0.056	0.761	V	1.000	464.000	mmho/m	567.187	32.510
Internal:	Zero	Cal	V	Zero	Cal	mmho/m	m	b
Deep	0.005	0.624	V	0.000	400.000	mmho/m	645.611	-3.034
Medium	0.012	0.721	V	0.000	464.000	mmho/m	653.591	-7.532

Downhole Calibration

	Readings			References			Results	
	Zero	Cal	mmho/m	Zero	Cal	mmho/m	m'	b'
Deep	-0.647	301.329	mmho/m	-0.780	336.378	mmho/m	1.117	-0.058
Medium	38.256	411.013	mmho/m	39.046	441.706	mmho/m	1.080	-2.280
LL3		7.471	V		1500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.085	V		6000.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal	mmho/m	Zero	Cal	mmho/m	m'	b'
Deep	0.000	0.000	mmho/m	-0.647	301.329	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	38.256	411.013	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Litho Density Calibration Report

Serial: 140704
 Model: V4_10P
 Source Number: 74GBq-19

Master Calibration

Performed: Wed Feb 11 18:53:41 2015

	Background	Aluminum	Magnesium	
Window 1	613.01	6027.40	27508.60	cps
Window 2	48.21	1424.77	7132.66	cps
Window 4	266.48	1373.19	5767.15	cps
Window 5	622.07	10090.30	18937.90	cps
Window 6	49.07	1682.84	3271.18	cps
Window 8	298.04	3248.38	5980.58	cps
Bulk Density	-	2.6020	1.6830	g/cc
Pe	-	3.0000	2.5070	b/e

LS Alpha: : -1.8451 SS Alpha: : -0.7542 LS CPE: : 1.0882
 LS Beta: : 138648.8473 SS Beta: : 21960.9250 SS CPE: : 1.5181

Before Survey Background Counts Verification

Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

After Survey Background Counts Verification

Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

Lithodensity Caliper Calibration

Performed: Wed Feb 11 18:53:41 2015

Results		Readings		References (in)		Gain	Offset
Low	High	Low	High				
1107.5	7124.1	8.0	15.0			0.0	6.5

Before Survey Caliper Verification

Performed:

	Reference	Reading
Caliper (in)	_____	_____

After Survey Caliper Verification

Performed:

	Reference	Reading
Caliper (in)	_____	_____

Compensated Neutron Calibration Report

Serial Number: 080621PMC
Tool Model: NABORS

PRE-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

POST-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 070558
Tool Model: Probe1
Performed: Mon May 22 14:24:46 2017

Calibrator Value: 1.0 GAPI

Calibrator value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps