DUAL INDUCTION LOG

Company Patterson Energy
Well Zeigler #1-35
Field Trico
County Graham State Kansas

Location: API # : 15 065 24175

1630' FSL & 2970' FEL

SEC 35 TWP 10S RGE 21W

Other Services
ML
CDNL

Elevation
K.B. 2095'
D.F. 2094'
G.L. 2090'

Permanent Datum	Ground Level	Elevation 2090'
Log Measured From	KB 5' AGL	
Drilling Measured From	KB	

Date	11/02/19		
Run Number	One		
Depth Driller	3750'		
Depth Logger	3748'		
Bottom Logged Interval	3746'		
Top Log Interval	220'		
Casing Driller	8 5/8"@ 235'		
Casing Logger	235'		
Bit Size	7 7/8"		
Type Fluid in Hole	Chemical	Chlorides 3000 PPM	
Density / Viscosity	9.2/54		
pH / Fluid Loss	9.5/8.8		
Source of Sample	Pit		
Rm @ Meas. Temp	2.0@65degf		
Rmf @ Meas. Temp	1.6@65degf		
Rmc @ Meas. Temp	2.6@65degf		
Source of Rmf / Rmc	Calculated		
Rm @ BHT	1.3@103degf		
Time Circulation Stopped	5:30 p.m		
Time Logger on Bottom	7:25 p.m		
Maximum Recorded Temperature	103degf		
Equipment Number	T-605		
Location	Hays, KS.		
Recorded By	Casey Patterson		
Witnessed By	Mr. Marc Downing	Mr. Zach Patterson	

<<< Fold Here >>>

Comments

Ellis,KS North on Ellis Ave. to N County Line Rd/EE Rd.,
West on N County Line Rd./EE Rd. 5 mi. to 380 th Rd.,North 1/2 mi. on 380TH Rd.,
East Through Cattle Guard and East to South Into Location Down Existin Lease Rd.

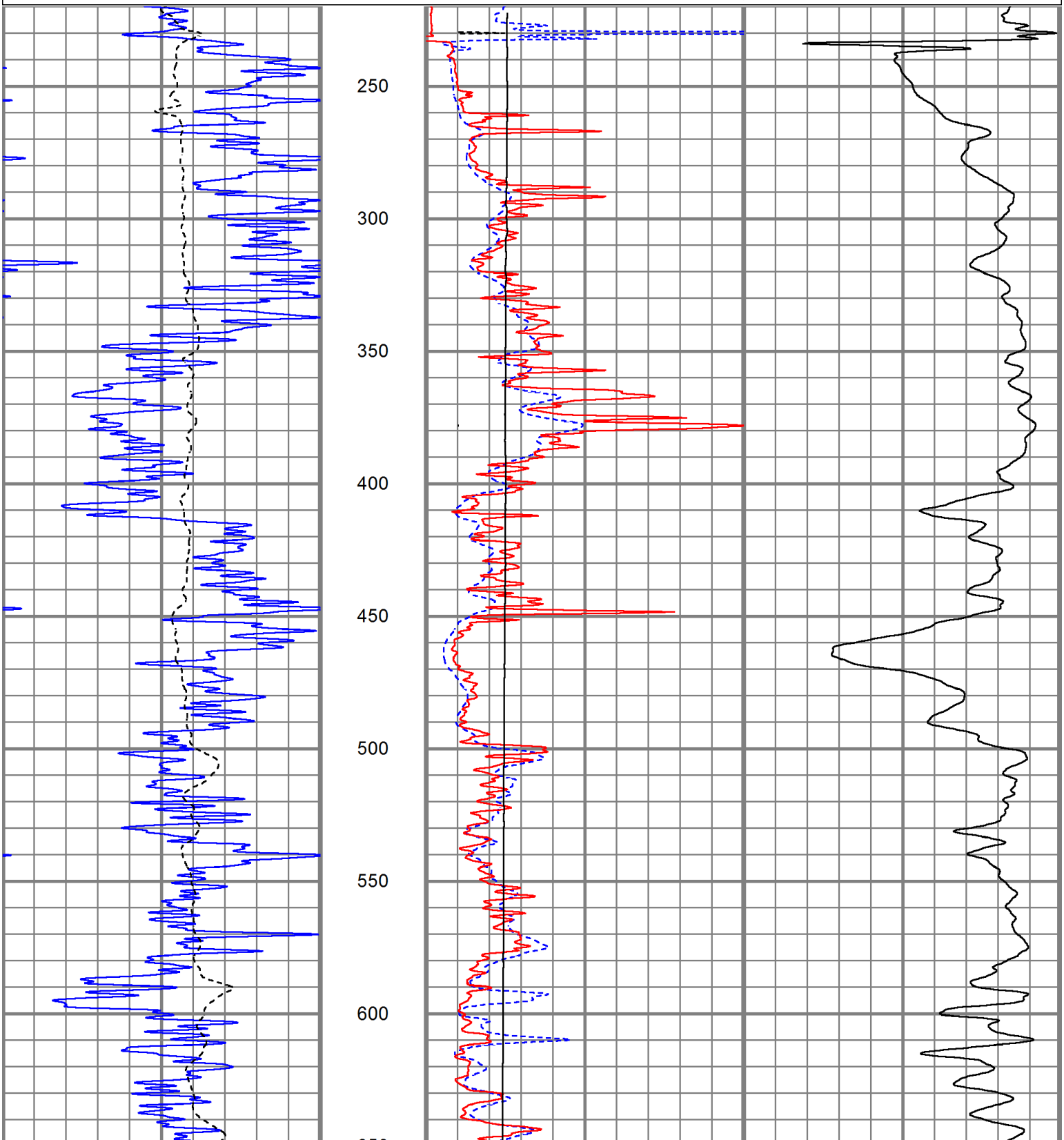
Thanks for using Gemini Wireline LLC
785-625-1182

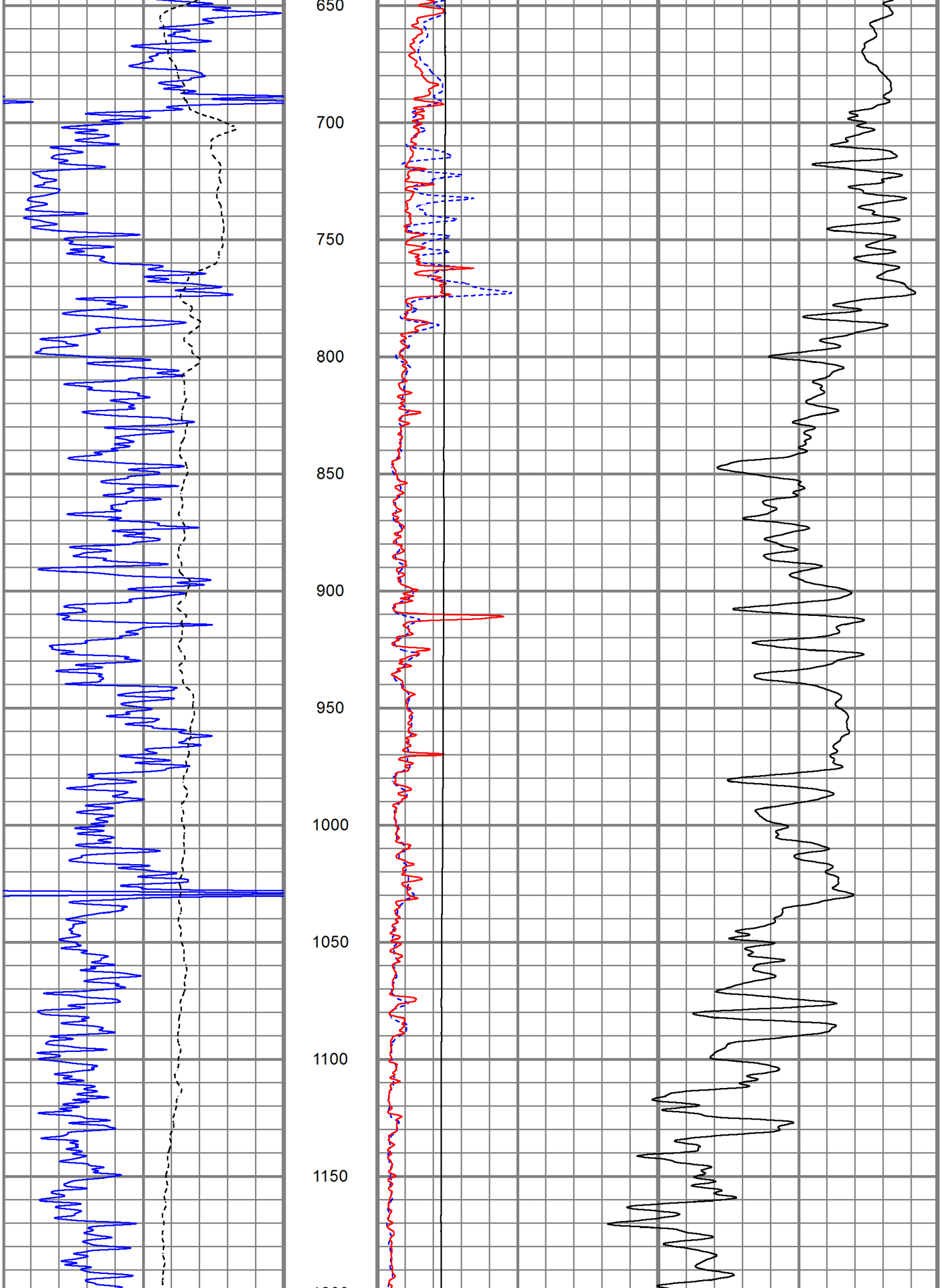
MAIN PASS

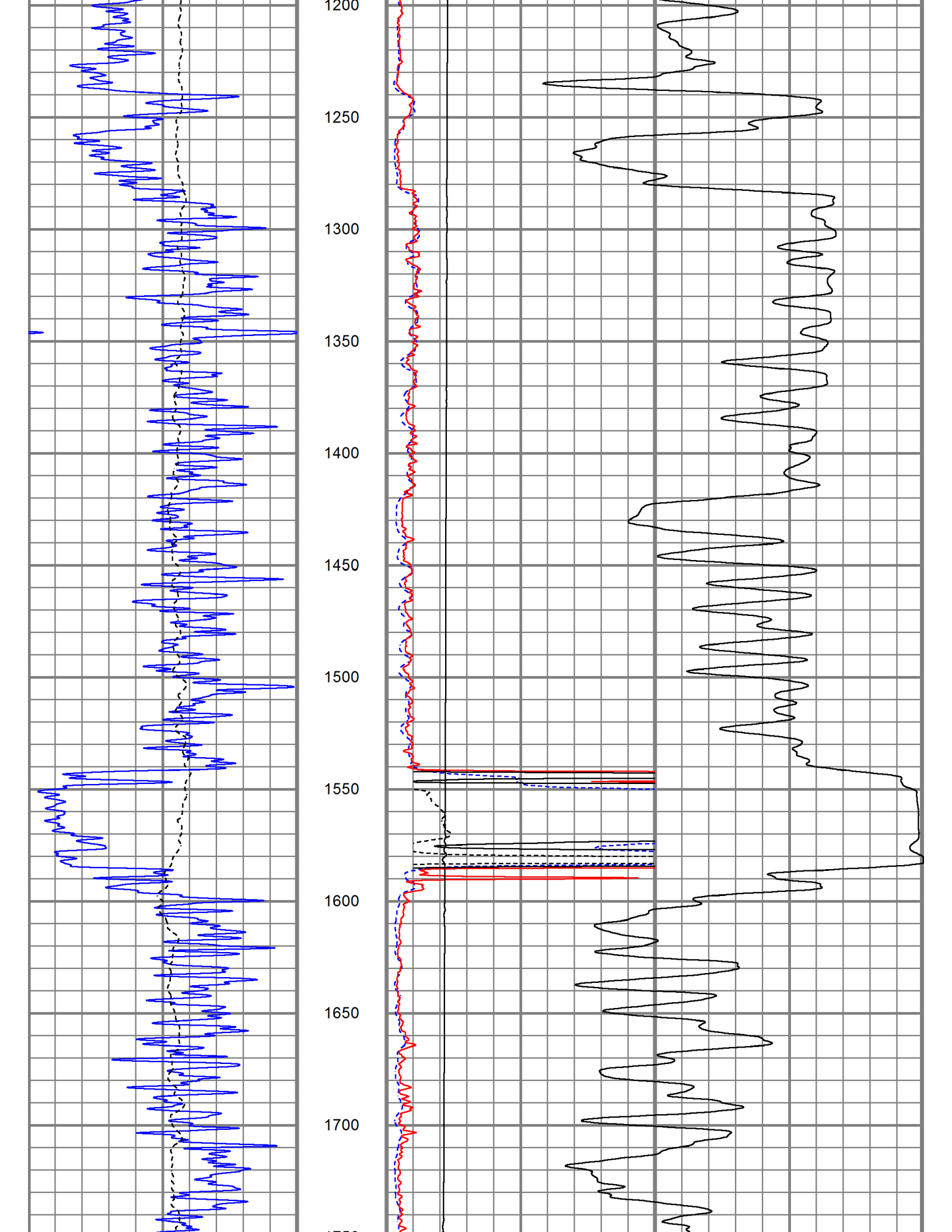
Database File	pezeigler#1-35oh.db
Dataset Pathname	pass3.1
Presentation Format	kdillinn
Dataset Creation	Sat Nov 02 20:35:30 2019
Charted by	Depth in Feet scaled 1:600

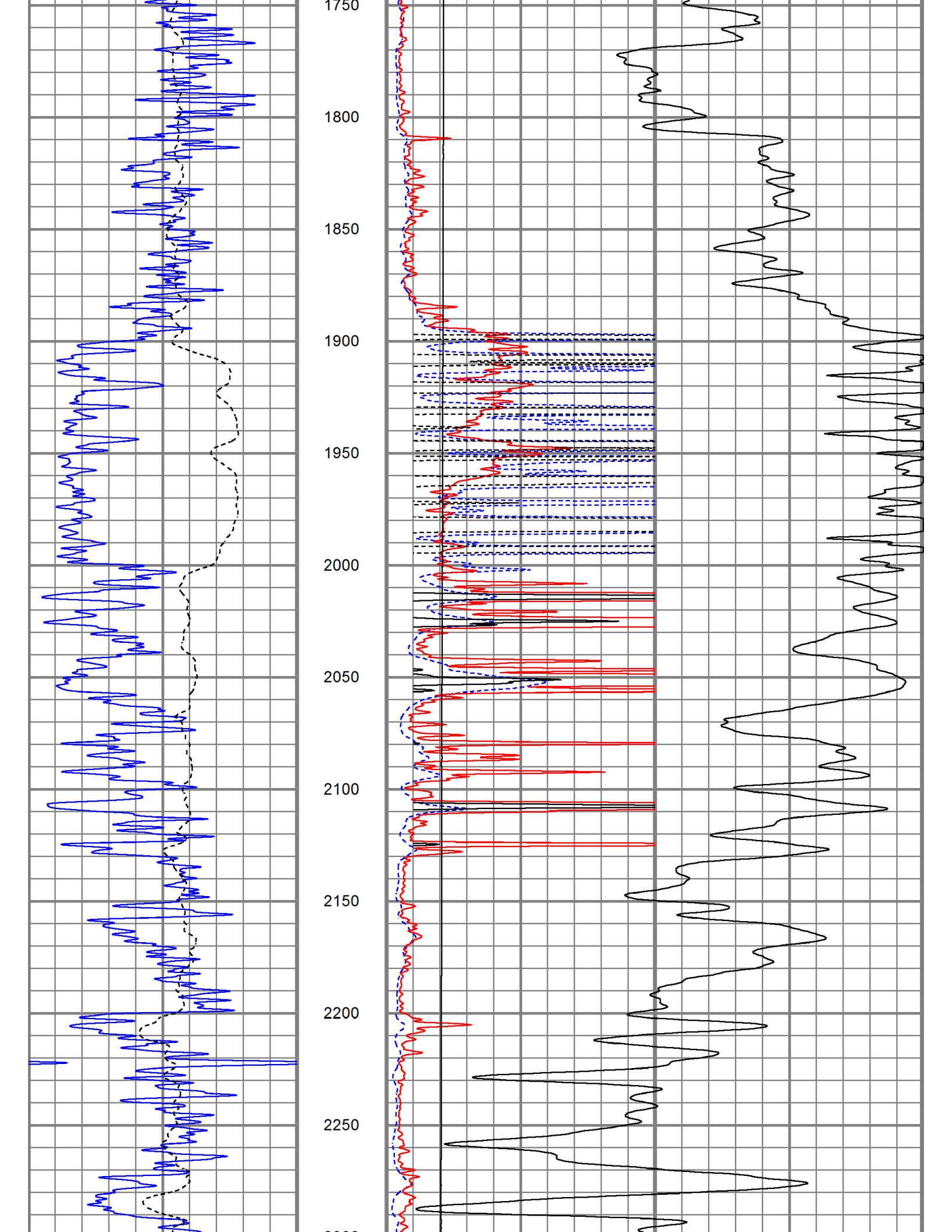
0	GR (GAPI)	150
-100	SP (mV)	100

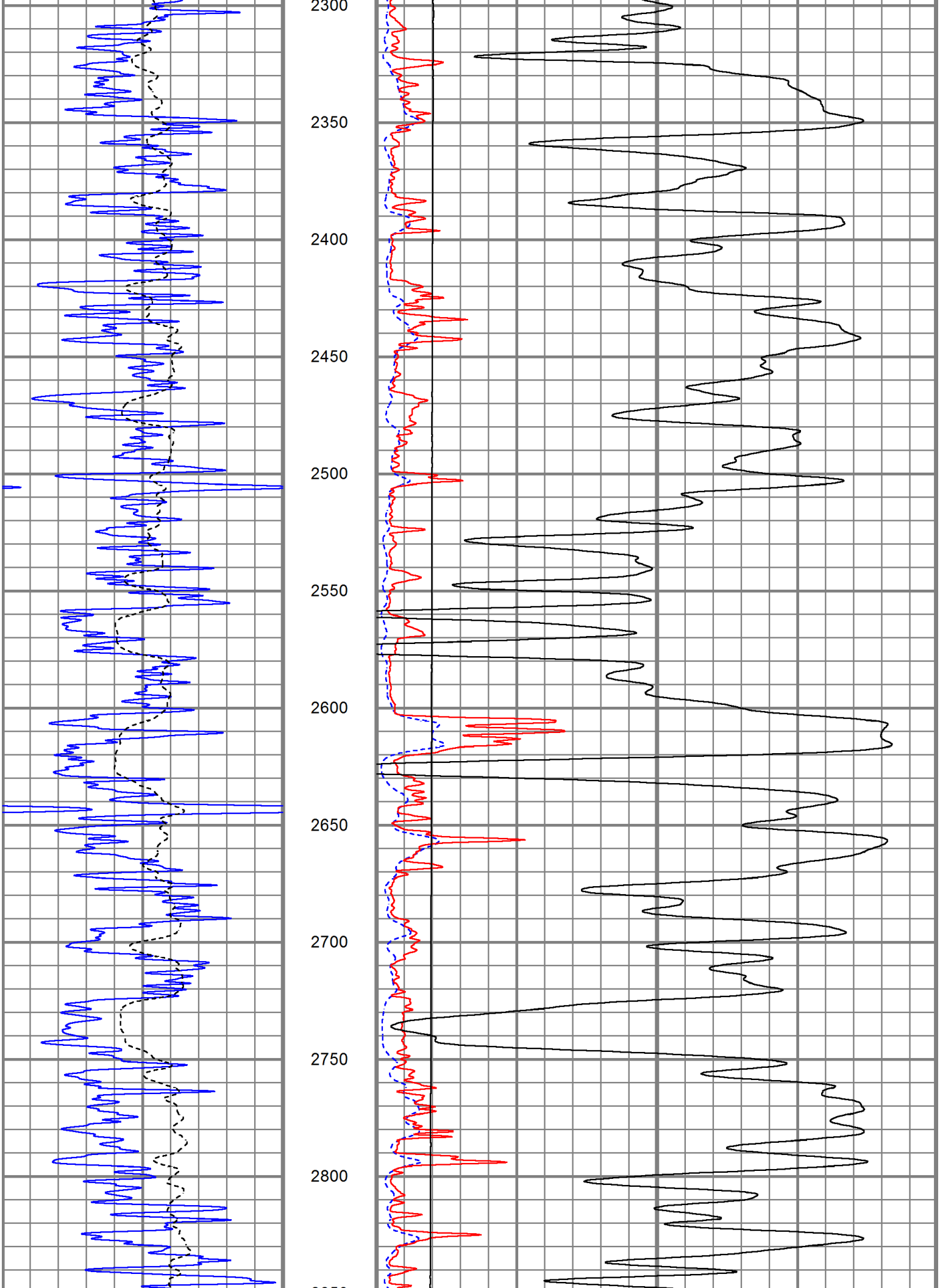
1000	CILD (mmho/m)	0
10000	LTEN (lb)	0
0	RILD (Ohm-m)	50
0	RLL3 (Ohm-m)	50
50	RILD x 10 (Ohm-m)	500
50	RLL3 x 10 (Ohm-m)	500

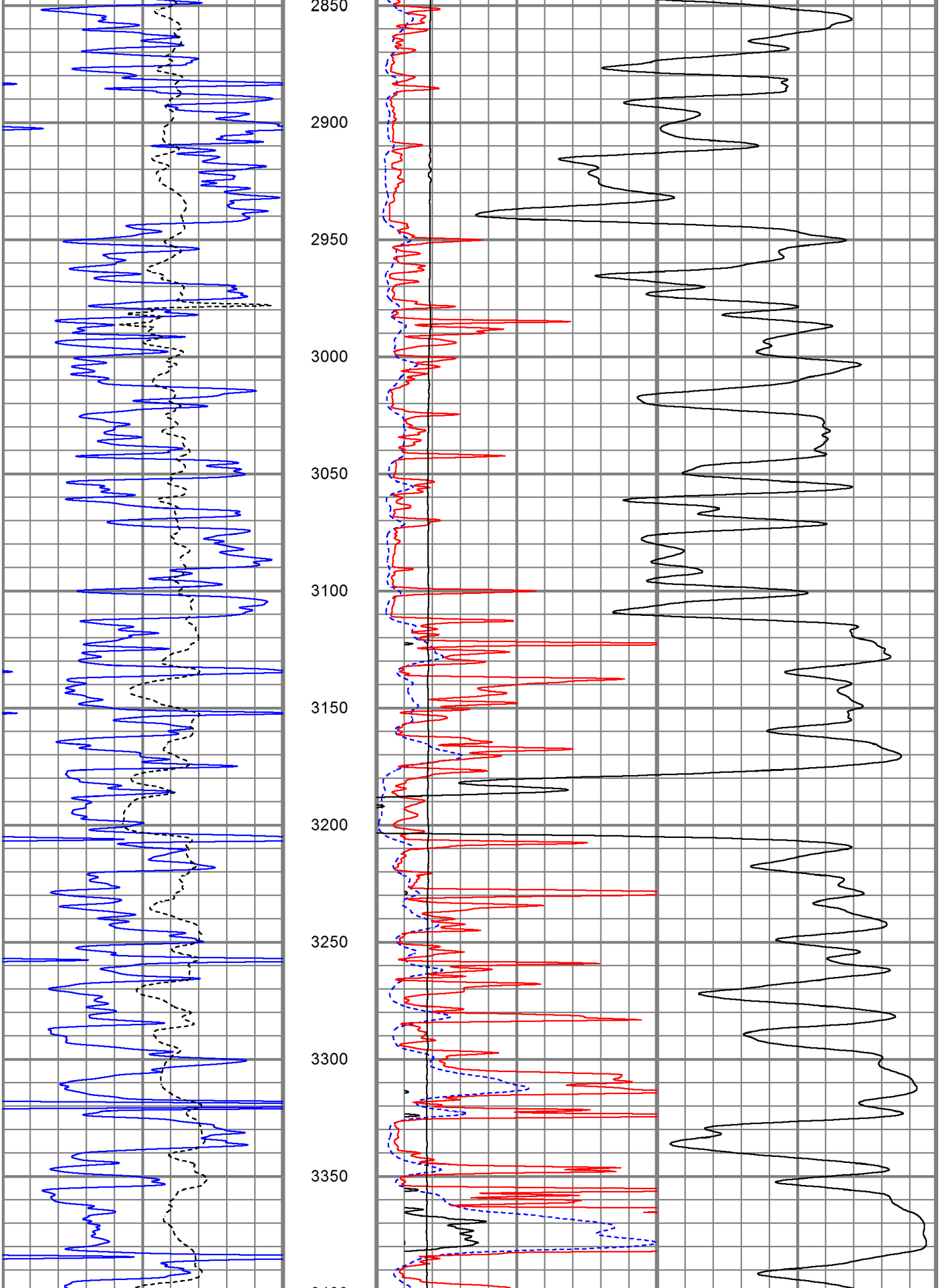


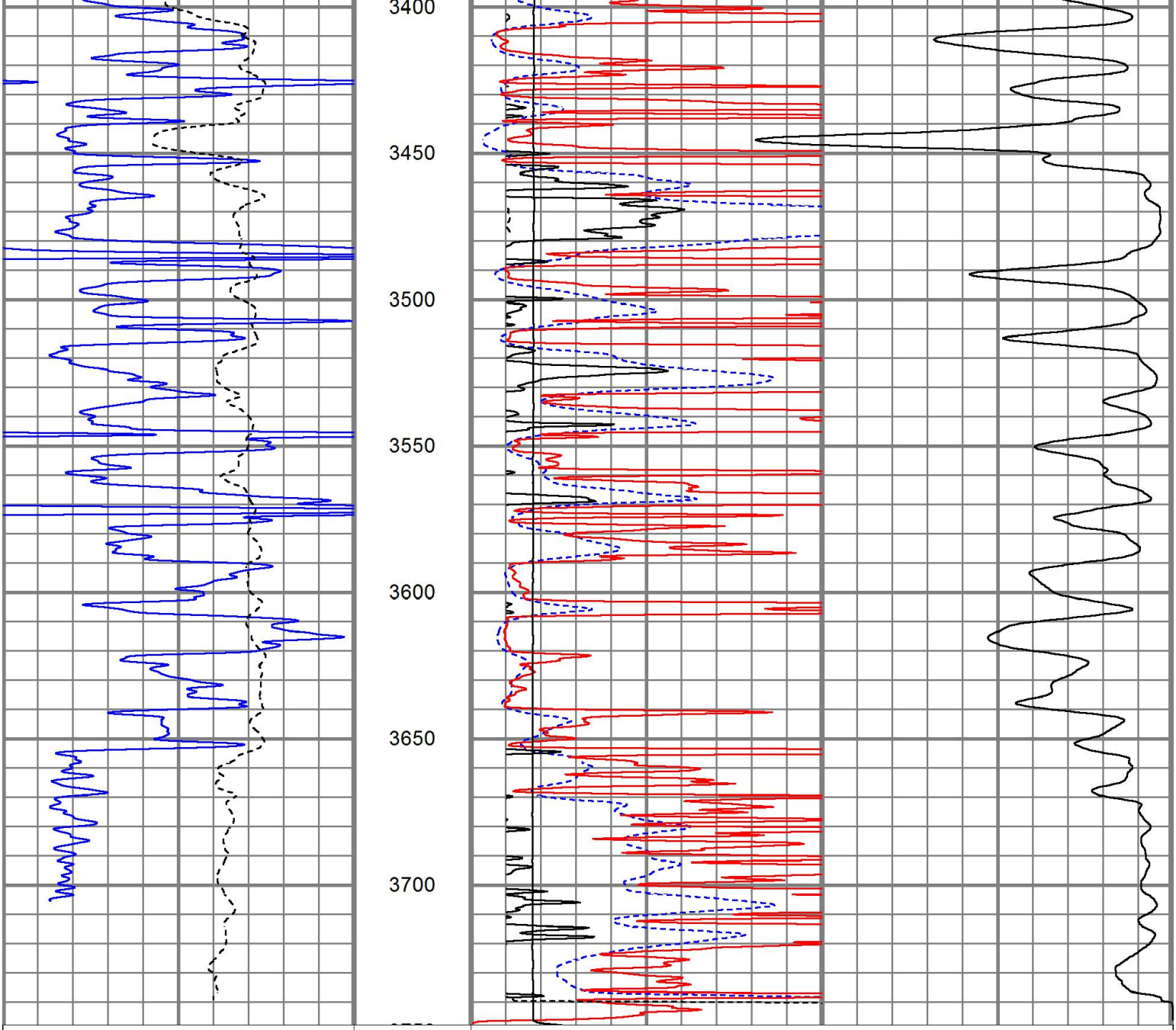

650
700
750
800
850
900
950
1000
1050
1100
1150


1200
1250
1300
1350
1400
1450
1500
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
3200
3250
3300
3350



0	GR (GAPI)	150
-100	SP (mV)	100

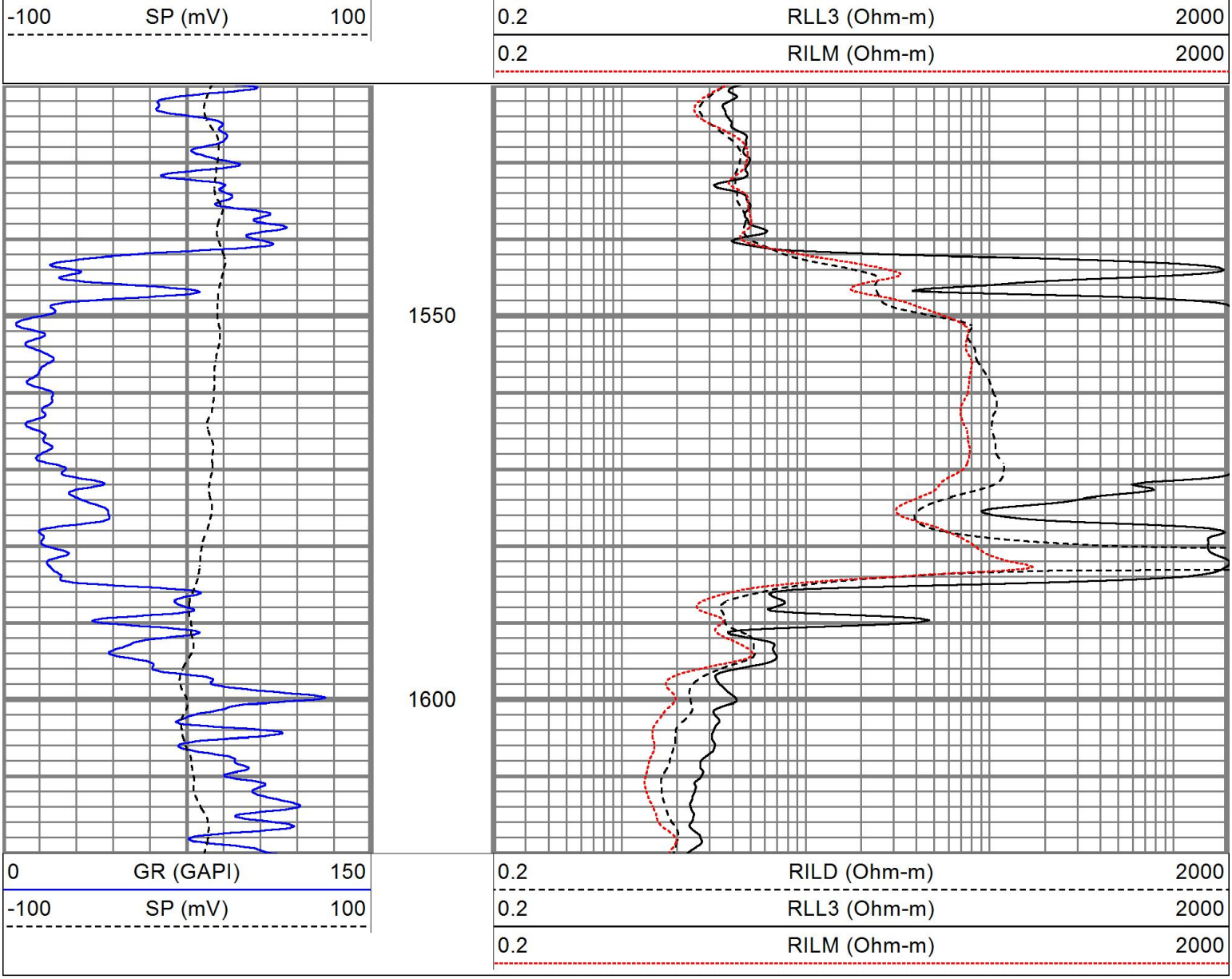
1000	CILD (mmho/m)	0
10000	LTEN (lb)	0
0	RILD (Ohm-m)	50
0	RLL3 (Ohm-m)	50
50	RILD x 10 (Ohm-m)	500
50	RLL3 x 10 (Ohm-m)	500

GEMINI WIRELINE

MAIN PASS

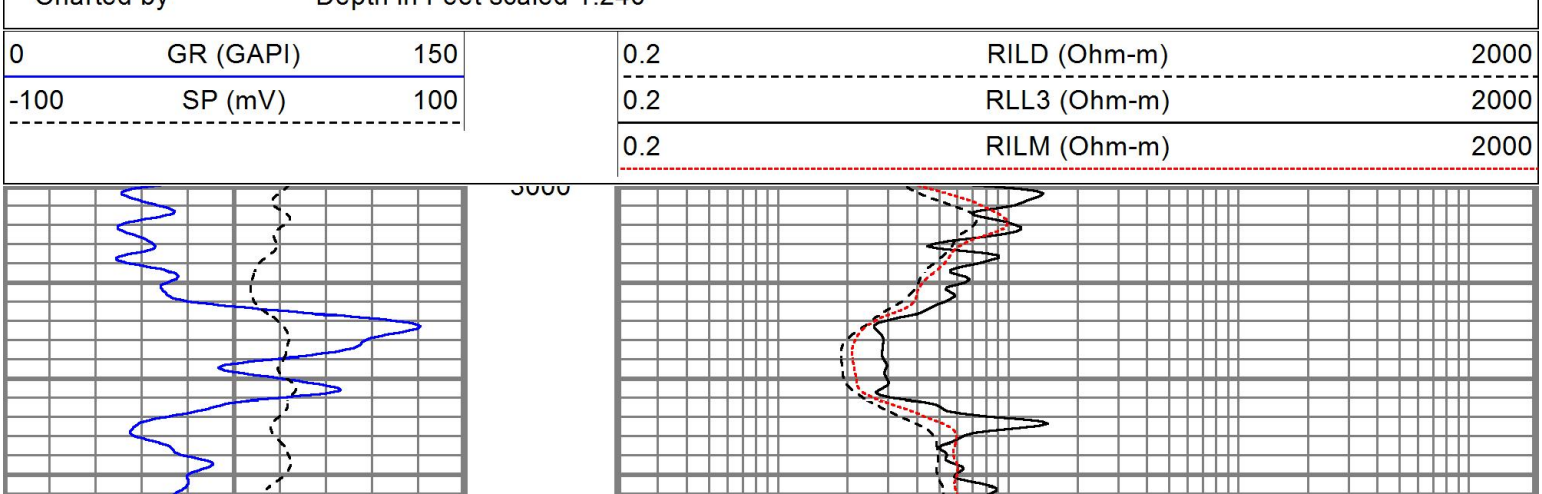
Database File	pezeigler#1-35oh.db
Dataset Pathname	pass3.1
Presentation Format	kdil
Dataset Creation	Sat Nov 02 20:35:30 2019
Charted by	Depth in Feet scaled 1:240

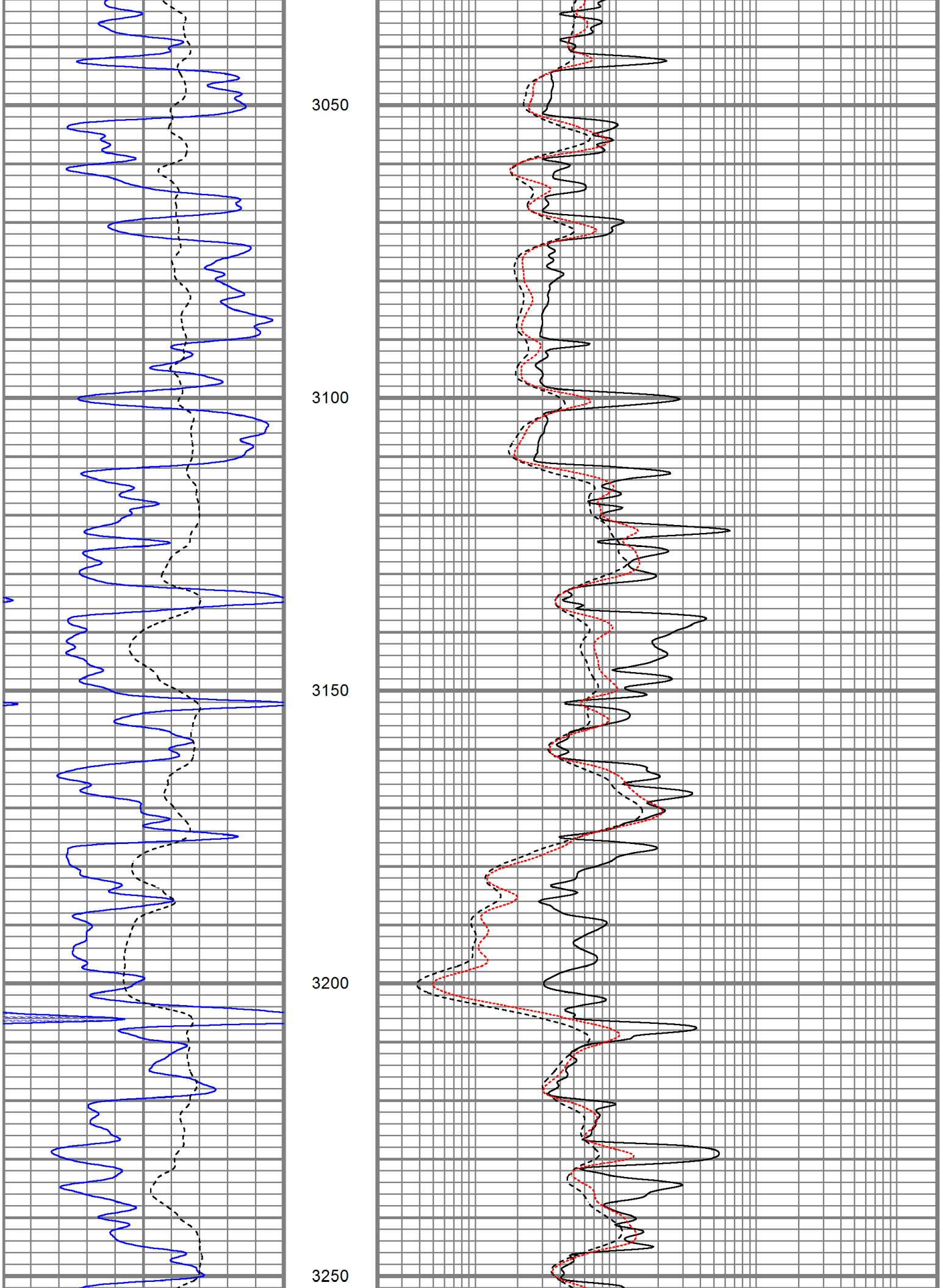
0	GR (GAPI)	150
0.2	RILD (Ohm-m)	2000

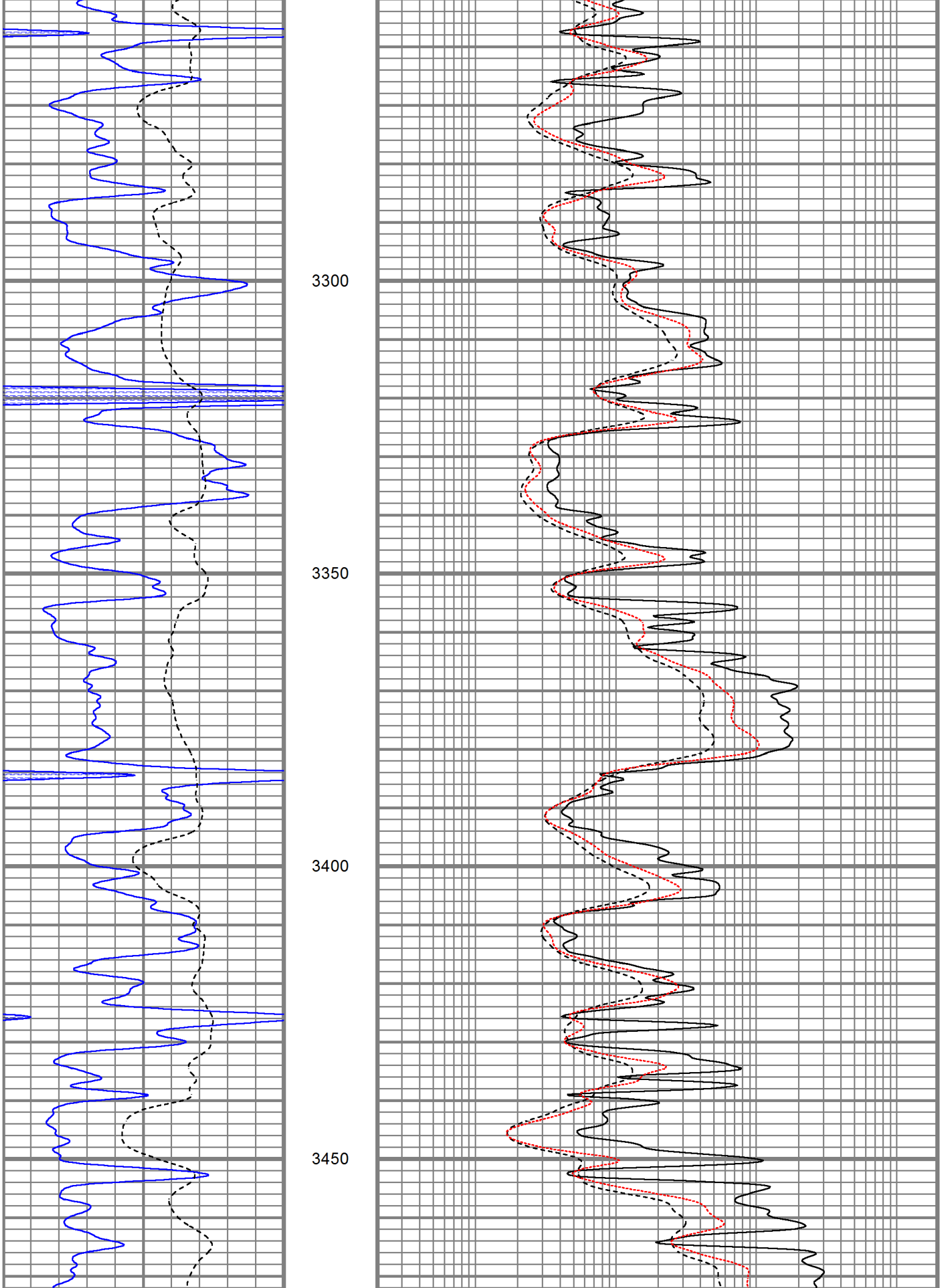


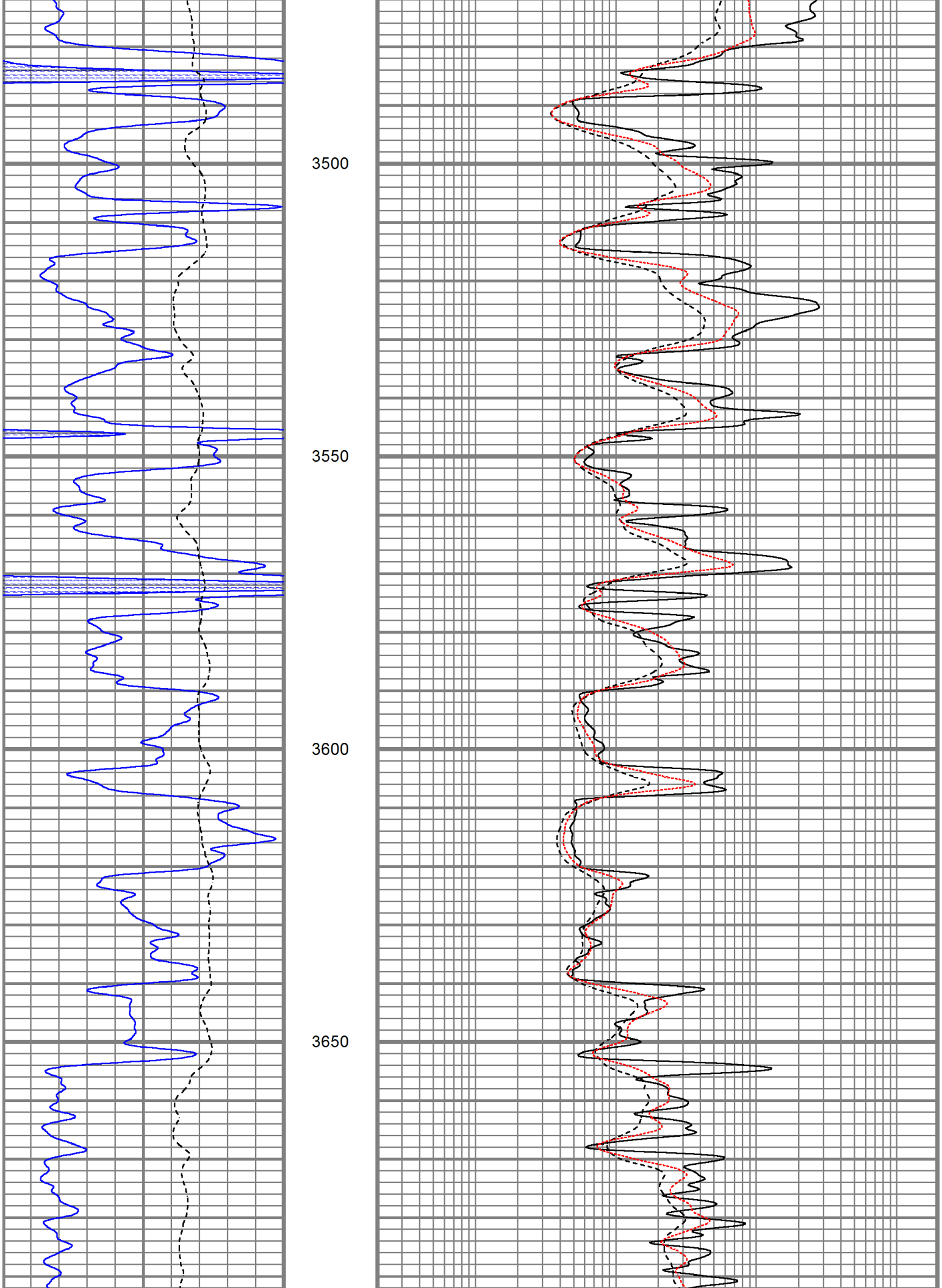
MAIN PASS

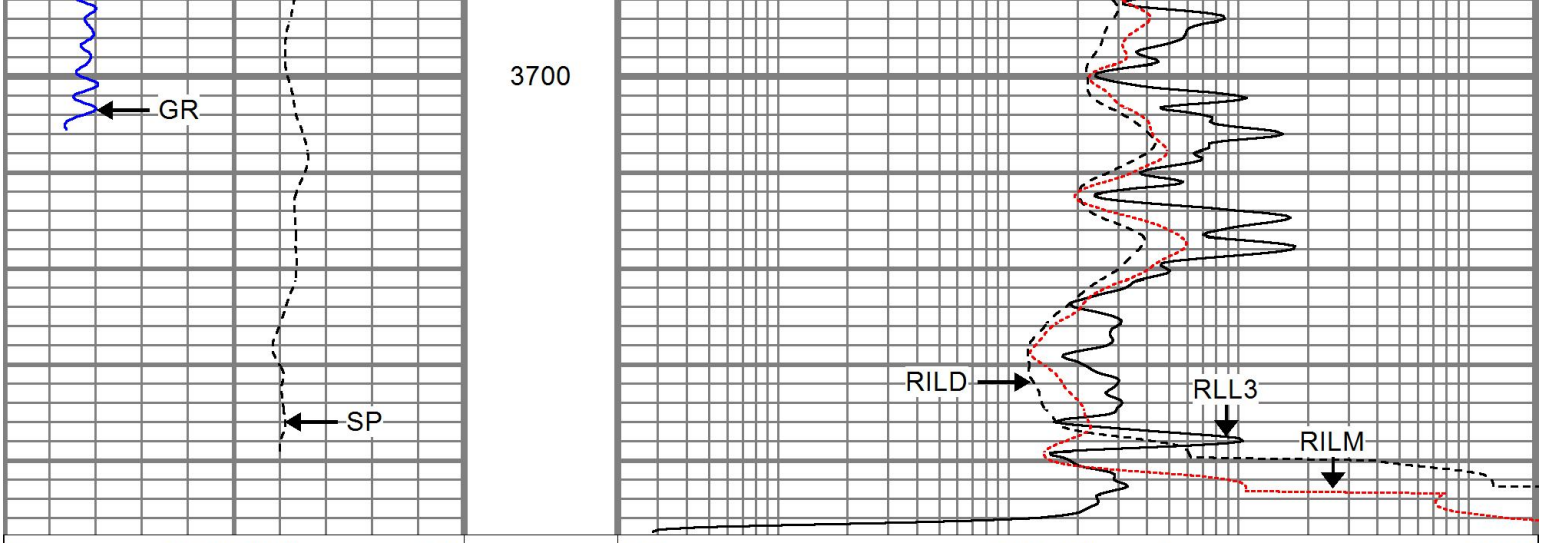
Database File	pezeigler#1-35oh.db
Dataset Pathname	pass3.1
Presentation Format	kdil
Dataset Creation	Sat Nov 02 20:35:30 2019
Charted by	Depth in Feet scaled 1:240




3050
3100
3150
3200
3250


3300
3350
3400
3450


3500
3550
3600
3650



0	GR (GAPI)	150
-100	SP (mV)	100

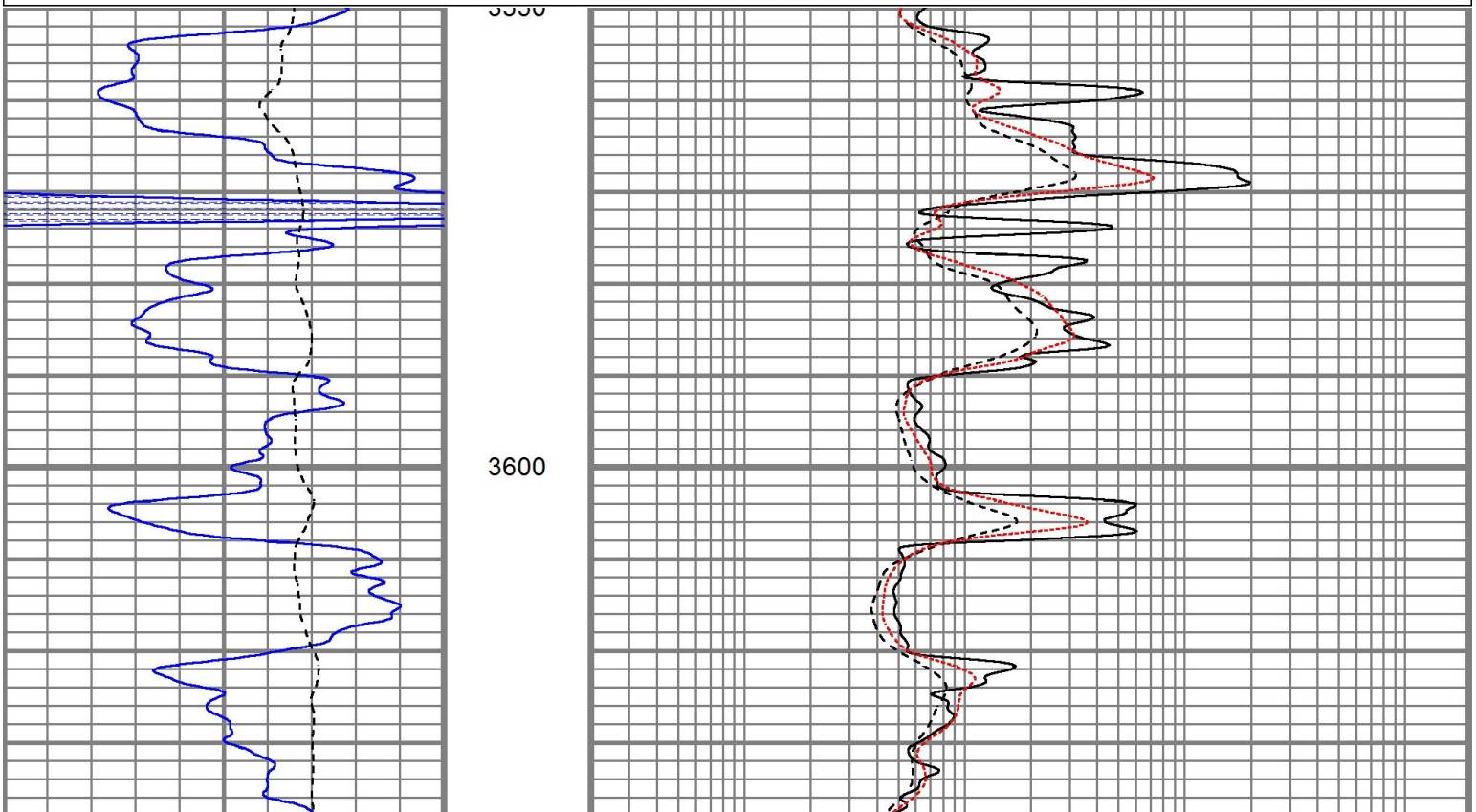
0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000

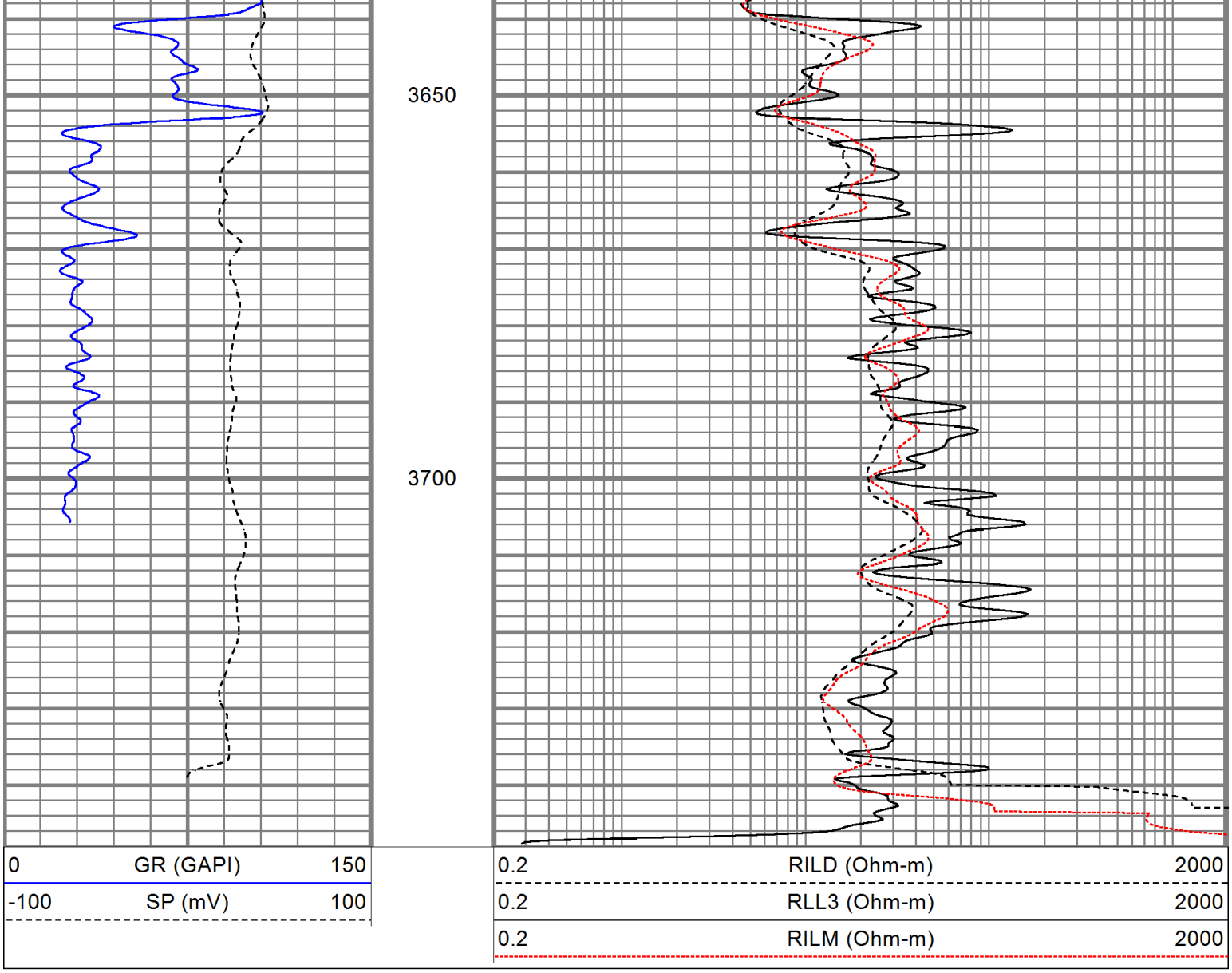
REPEAT SECTION

Database File	pezeigler#1-35oh.db
Dataset Pathname	pass1.1
Presentation Format	kdil
Dataset Creation	Sat Nov 02 20:06:37 2019
Charted by	Depth in Feet scaled 1:240

0	GR (GAPI)	150
-100	SP (mV)	100

0.2	RILD (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
0.2	RILM (Ohm-m)	2000





Calibration Report

Database File	pezeigler#1-35oh.db
Dataset Pathname	pass3.1
Dataset Creation	Sat Nov 02 20:35:30 2019

Dual Induction Calibration Report

Serial-Model:	5375-G
Surface Cal Performed:	Fri Apr 19 12:45:28 2019
Downhole Cal Performed:	Fri Apr 19 12:45:28 2019
After Survey Verification Performed:	Fri Apr 19 12:45:28 2019

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.002	0.642	V	0.000	350.000	mmho/m	546.631	-1.028
Medium	0.006	0.727	V	0.000	400.000	mmho/m	555.208	-3.897
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.642	V	0.000	350.000	mmho/m	546.502	-0.822
Medium	0.006	0.727	V	0.000	550.000	mmho/m	763.570	-4.829

Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	0.000	mmho/m	-0.206	349.877	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	0.014	399.930	mmho/m	1.000	0.000
Shallow	2.429	0.011	V	500.000	2.000	Ohm-m	200.929	0.282

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	1.000	0.000
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Neutron Calibration Report

Serial Number: AD5139
Tool Model: ADMY5139
Performed: (Not Performed)

Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Sensitivity: 1 NAPI/cps

Temperature Calibration Report

Serial Number: WithMC
Tool Model: WMC
Performed: Fri Apr 19 12:15:04 2019

	Reference		Reading	
Low Reference:	0.00	degF	0.00	degF
High Reference:	1.00	degF	1.00	degF

Gain: 1.00
Offset: 0.00
Delta Spacing 1

Inclinometer Calibration Report

Performed: Fri Apr 19 12:14:53 2019

	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	205.00	1843.00	-1.00	1.00	gee
Y Accelerometer	205.00	1843.00	-1.00	1.00	gee
Z Accelerometer					gee

Gamma Ray Calibration Report

Serial Number: WithMC
Tool Model: WMC
Performed: Fri Apr 19 12:14:18 2019

Calibrator Value: 1.0 GAPI

Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Sensor	Offset (ft)
GR	40.07
ACCY	38.91
ACCX	38.91
SSTAT	38.49
PSTAT	37.66
ASTAT	37.66
GRD	36.82
TEMP	36.82
NEU	32.76
LStat	24.30
LS8	23.64
LS7	23.64
LS6	23.64
LS5	23.64
LS4	23.64
LS3	23.64
LS2	23.64
LS1	23.64
LSV	23.64
LSD	23.62
SSV	23.43
SS8	23.43
SS7	23.43
SS6	23.43
SS5	23.43
SS4	23.43
SS3	23.43
SS2	23.43
SS1	23.43
DCAL	23.37
SSD	23.04
SP	10.60
CILD	10.60
CILM	6.89
RLL3	1.70
TR_Mon	0.00

Schematic

Description	Length (ft)	O.D. (in)	Weight (lb)
CHD-STD	0.50	1.69	1.00
ADT-WMC (WithMC) Admyr Telemetry With Mudcell	4.58	3.50	120.00
NEU-ADMY5139 (AD5139) Admyer NEU DIGITAL	5.65	3.50	50.00
ADT1LITH-A (1) Admyr Litho Density Tool	9.29	3.50	240.00
DIL-G (5375) Gearhart	21.47	4.00	345.00

Dataset:	pezeigler#1-35oh.db: field/well/run1/pass3.1
Total length:	41.49 ft
Total weight:	756.00 lb
O.D.:	4.00 in