

Confidentiality Requested:

Yes  No

**KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

**Form must be Typed**

**Form must be Signed**

**All blanks must be Filled**

**WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening  Re-perf.  Conv. to EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to [kcc-well-logs@kcc.ks.gov](mailto:kcc-well-logs@kcc.ks.gov). Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

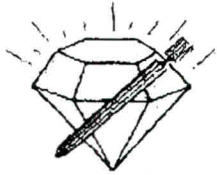
TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	E-Land Ventures, LLC
Well Name	FLEMING 2-30
Doc ID	1357241

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
	None		





**DIAMOND TESTING**  
 P.O. Box 157  
 HOISINGTON, KANSAS 67544  
 (800) 542-7313  
**DRILL-STEM TEST TICKET**  
 FILE: **FLEMING2DST1**

TIME ON: 04:56  
 TIME OFF: 12:41

Company E-Land Ventures, LLC Lease & Well No. Fleming #2-30  
 Contractor C&G Drilg. Rig # 2 Charge to E-Land Ventures, LLC  
 Elevation 1384' KB Formation Arbuckle Effective Pay \_\_\_\_\_ Ft. Ticket No. F475  
 Date 4/1/17 Sec 30 Twp. \_\_\_\_\_ 28 S Range \_\_\_\_\_ 6E W County Butler State KANSAS  
 Test Approved By Austin Garner Diamond Representative Jake Fahrenbruch

Formation Test No. 1 Interval Tested from 3070 ft. to 3173 ft. Total Depth 3173 ft.  
 Packer Depth 3065 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
 Packer Depth 3070 SP ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
 Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) 3075 ft. Recorder Number 5951 Cap. 5000 P.S.I.  
 Bottom Recorder Depth (Outside) 3076 ft. Recorder Number 5586 Cap. 5000 P.S.I.  
 Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 48 (1# LCM) Drill Collar Length 37 ft. I.D. 2 1/4 in.  
 Weight 9.2 Water Loss 6.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
 Chlorides 600 P.P.M. Drill Pipe Length 2,813 ft. I.D. 3 1/2 in.  
 Jars: Make STERLING Serial Number Shale Packer Test Tool Length 20 ft. Tool Size 3 1/2-FH in.  
 Did Well Flow? \_\_\_\_\_ Reversed Out \_\_\_\_\_ Anchor Length 103 ft. Size 4 1/2-FH in.  
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: Surface blow, increased to .75"

2nd Open: No blow.

Recovered <u>10</u> ft. of <u>Drilling Mud</u>	<u>1000%</u> mud
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Remarks:	Price Job
	Other Charges
	Insurance
	Total

Time Set Packer(s) 07:04 A.M. P.M. Time Started Off Bottom 10:19 A.M. P.M. Maximum Temperature 100 F

Initial Hydrostatic Pressure..... (A) 1452 P.S.I.  
 Initial Flow Period..... Minutes 30 (B) 24 P.S.I. to (C) 26 P.S.I.  
 Initial Closed In Period..... Minutes 45 (D) 651 P.S.I.  
 Final Flow Period..... Minutes 30 (E) 26 P.S.I. to (F) 26 P.S.I.  
 Final Closed In Period..... Minutes 90 (G) 806 P.S.I.  
 Final Hydrostatic Pressure..... (H) 1449 P.S.I.

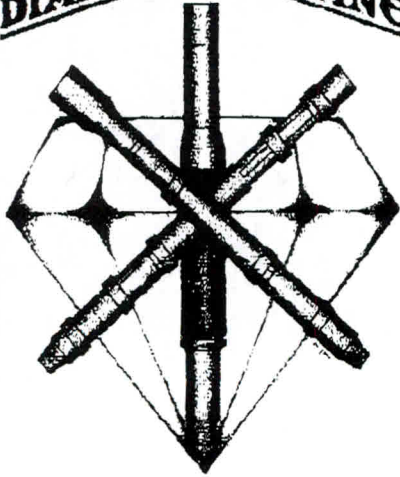
Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# DIAMOND TESTING GENERAL REPORT

Jake Fahrenbruch, Tester

Cell: (620) 282-8977 / Office: (800) 542-7313

DIAMOND TESTING



## TEST INFORMATION

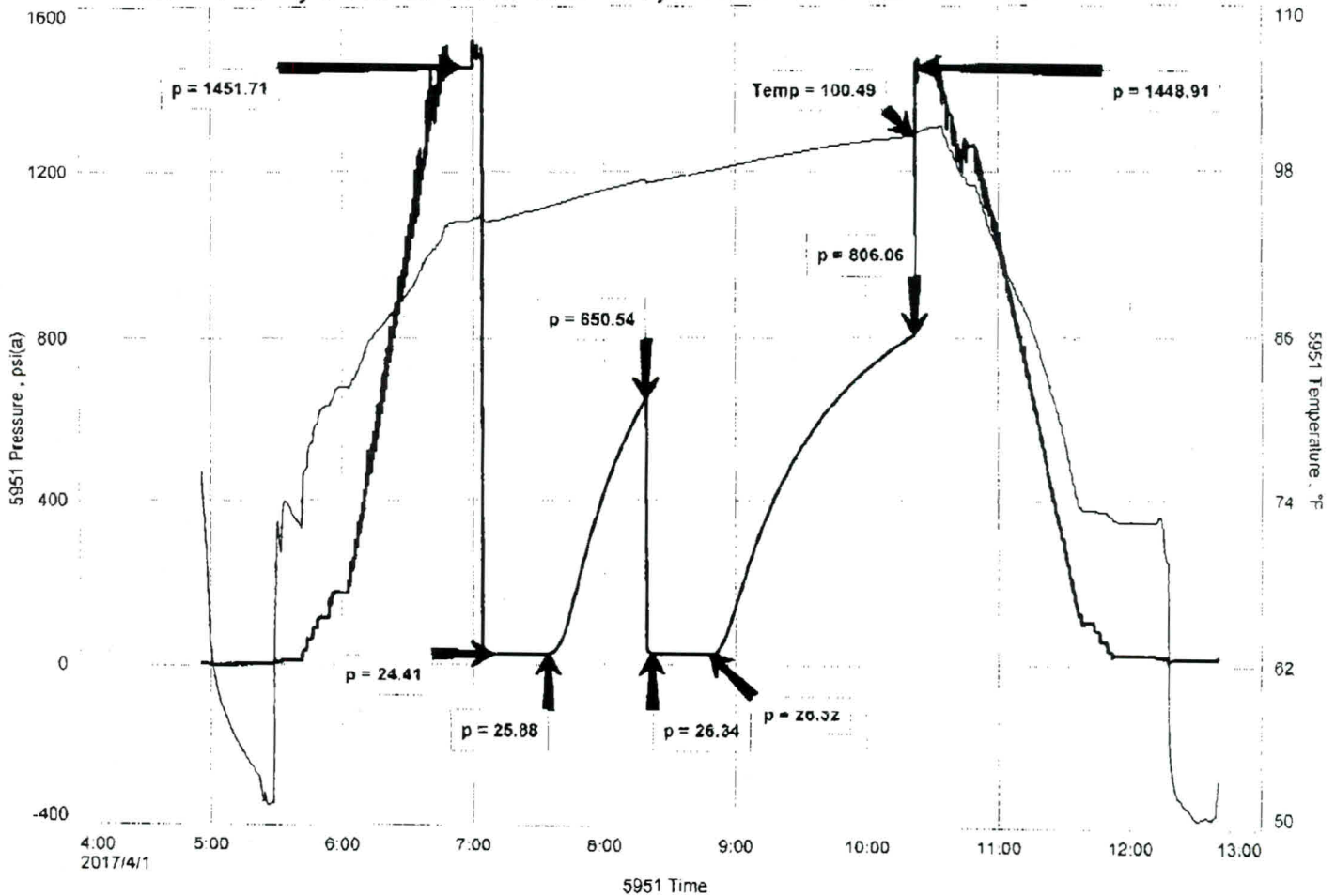
Well Name	Fleming #2-30
Company Name	E-Land Ventures, LLC
Formation	DST #1, Arbuckle 3070'-3173'
Test Type	Bottom-Hole w/Shale Packer
Surface Location	Sec 30-28s-6e-Butler Co.-KS
KB Elevation (SL)	1384.000
Gauge Name	5951
Start Test Date	2017/04/01
Start Test Time	04:56:00
Final Test Date	2017/04/01
Final Test Time	12:41:00
Job Number	F475
Contact	Willard McAndrew
Site Contact	Austin Garner

## TEST RESULTS

Initial flow, surface blow, increased to .75".  
Final flow, no blow.

Recovered 10' of drilling mud, 100% mud.

## DST #1, FLEMING #2-30, ARBUCKLE 3070'-3173'



810 E 7<sup>TH</sup>  
 PO Box 92  
 EUREKA, KS 67045  
 (620) 583-5561



**Cement or Acid Field Report**

Ticket No. **3215**

Foreman Kevin McCoy

Camp EUREKA

Date	Cust. ID #	Lease & Well Number	Section	Township	Range	County	State	
3-27-17	1226	Fleming # 2-30	30	28S	6E	Butler	Ks	
Customer E-Land Ventures, LLC			Unit #		Driver		Unit #	Driver
Mailing Address 6009 W. PARKER Rd # 149-273			105		DAVE G.			
City PLANO			110		Zevi A.			
State TX								
Zip Code 75093								
Safety Meeting KM DG ZA								

Job Type SURFACE Hole Depth 220' KB Slurry Vol. 27 BBL Tubing \_\_\_\_\_  
 Casing Depth 210' S.L. Hole Size 12 1/4" Slurry Wt. 15.2 \* Drill Pipe \_\_\_\_\_  
 Casing Size & Wt. 8 5/8" Cement Left in Casing 15' Water Gal/SK 5.5 Other \_\_\_\_\_  
 Displacement 13.2 BBL Displacement PSI \_\_\_\_\_ Bump Plug to \_\_\_\_\_ BPM \_\_\_\_\_

Remarks: SAFETY Meeting: Rig up to 8 5/8 Casing. BREAK Circulation w/ BBL Fresh water. Mixed 115 SKS CLASS "A" Cement w/ 3% CACL2, 2% GEL @ 15\*/gal, yield 1.35 = 27 BBL Slurry. Displace w/ 13.2 BBL Fresh water. Shut casing in. Good Cement Returns to SURFACE = 6 BBL Slurry to Pit. Job Complete. Rig down.

Code	Qty or Units	Description of Product or Services	Unit Price	Total
C 101	1	Pump Charge	840.00	840.00
C 107	15	Mileage	3.95	59.25
C 200	115 SKS	CLASS "A" Cement	15.00	1725.00
C 205	325 *	CACL2 3%	.60 *	195.00
C 206	215 *	GEL 2%	.20 *	43.00
C 108A	5.41 TONS	Ton Mileage	M/C	345.00
C 506	3	8 5/8 CENTRALIZERS (ON # 1, 2, 4)	65.00	195.00
			Sub Total	3402.25
			LESS 5%	177.40
			6.75% Sales Tax	145.67
Authorization <u>[Signature]</u> Title <u>C&amp;G Drilling Toolpusher</u>			Total	3370.52

I agree to the payment terms and conditions of services provided on the back of this job ticket. Any amendments to payment terms must be in writing on the front of this job ticket or in the Customer's records at ELITE's office

# HALLIBURTON

## ARRAY COMPENSATED TRUE RESISTIVITY LOG

COMPANY	E-LAND VENTURES		
WELL	FLEMING 2-30		
FIELD/BLOCK	WILDCAT		
COUNTY	BUTLER		
STATE	KANSAS		
Permanent Datum	GL	Elev. 1375.0 ft	
Log measured from	KB	D.F. 1384.0 ft	
Drilling measured from	KB	G.L. 1375.0 ft	
Date	03-Apr-17		
Run No.	1		
Depth - Driller	3500.0 ft		
Depth - Logger	3491.0 ft		
Bottom - Logged Interval	3481.0 ft		
Bottom - Logged Interval	220.0 ft		
Casing - Driller	8.625 in @ 210.0 ft		
Casing - Logger	220.0 ft @		
Bit Size	7.875 in @		
Type Fluid in Hole	Water Based Mud @		
Density	9.3 ppg	42.00 s/qt	
PH	9.00 pH	7.2 cptom	
Source of Sample	MUD PIT		
Rm @ Meas. Temperature	2.00 ohmm	@ 75.00 degF	@
Rmf @ Meas. Temperature	1.70 ohmm	@ 75.00 degF	@
Rmc @ Meas. Temperature	2.30 ohmm	@ 75.00 degF	@
Source Rmf	CALC	CALC	
Rm @ BHT	1.78 ohmm	@ 116.0 degF	@
Time Since Circulation	04:44 hr		
Time on Bottom	03-Apr-17 13:14		
Max. Rec. Temperature	116.00 degF	@ 3491.0 ft	@
Equipment Location	11072142	KANSAS	
Recorded By	MICHAEL RICHTER		
Witnessed By	MARK CRAWFORD		
	AUSTIN GARNIER		

Fold here

Service Ticket No.: 903937651				API No.: 15-015-24080				PGM Version: WL INSITE R5.0.5 (Build 8)						
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES								
Date	Sample No.					Type Log	Depth	Scale Up Hole	Scale Down Hole					
Depth-Driller														
Type Fluid in Hole														
Density	Viscosity													
Ph	Fluid Loss													
Source of Sample						RESISTIVITY EQUIPMENT DATA								
Rm @ Meas. Temp		@		@		Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other				
Rmf @ Meas. Temp.		@		@		ONE	S-11024142	NONE	CENT	N/A				
Rmc @ Meas. Temp.		@		@			I-11026094							
Source Rmf	Rmc	CALC	CALC											
Rm @ BHT	1.78 ohmm @ 116 degF				@									
Rmf @ BHT	1.51 ohmm @ 116 degF				@									
Rmc @ BHT	2.04 ohmm @ 116 degF				@									
EQUIPMENT DATA														
GAMMA			ACOUSTIC			DENSITY			NEUTRON					
Run No.	ONE		Run No.	ONE		Run No.	ONE		Run No.	ONE				
Serial No.	11013114		Serial No.	10939050		Serial No.	10844781		Serial No.	10993115				
Model No.	GTET		Model No.	BSAT		Model No.	SDLT		Model No.	DSNT				
Diameter	3.625"		No. of Cent.	2		Diameter	4.6"		Diameter	3.625"				
Detector Model No.	GTET		Spacing	0.5"		Log Type	GAM-GAM		Log Type	NEU-NEU				
Type	SCINT					Source Type	Am241Be		Source Type	Cs-137				
Length	8"		LSA [Y/N]			Serial No.	DSN-424		Serial No.	5168GW				
Distance to Source	N/A		FWDA [Y/N ]			Strength	1.5 Ci		Strength	15 Ci				
LOGGING DATA														
GENERAL				GAMMA		ACOUSTIC		DENSITY		NEUTRON				
Run	Depth		Speed	Scale		Scale		Scale		Scale				
No.	From	To	ft/min	L	R	L	R	L	R	L	R			
ONE	TD	CSG	REC	0	150	30	-10	47.6 us/ft	30	-10	2.71 g/cc	30	-10	LIME



DIRECTIONAL INFORMATION

Maximum Deviation @ KOP @  
 CLIENT REPORTED VERTICAL WELL  
 Remarks: GTET-DSNT-SDLT-BSAT-ACRT RUN IN COMBINATION  
 ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING  
 CHLORIDES REPORTED AT 600ppm  
 NO POST-CALS COMPLETED AS PER CLIENT REQUEST  
 RIG: C&G #2  
 CREW: K. KING, J. ROBERSON, C. ORTIZ  
 THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES -- EL RENO, OK -- 405.278.9685

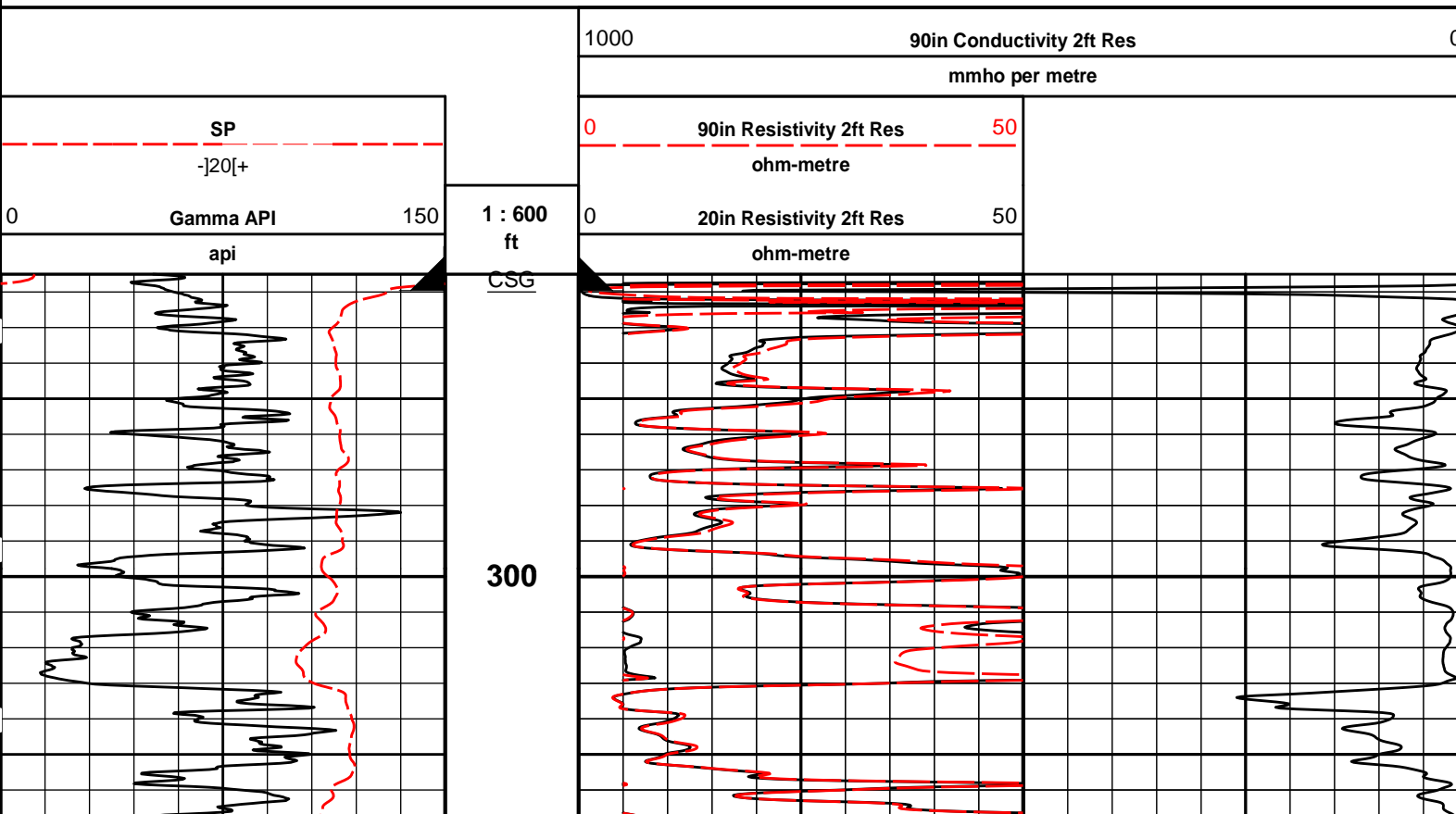
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

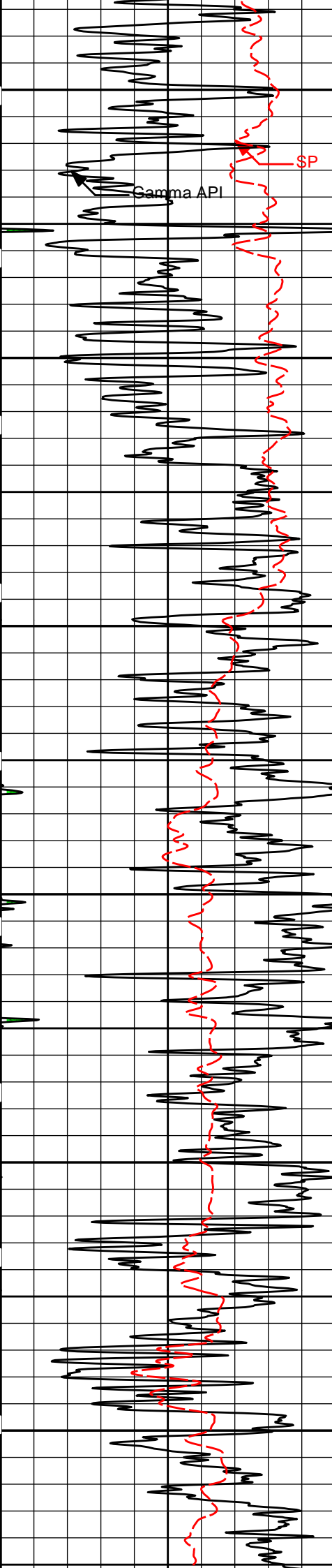
HALLIBURTON



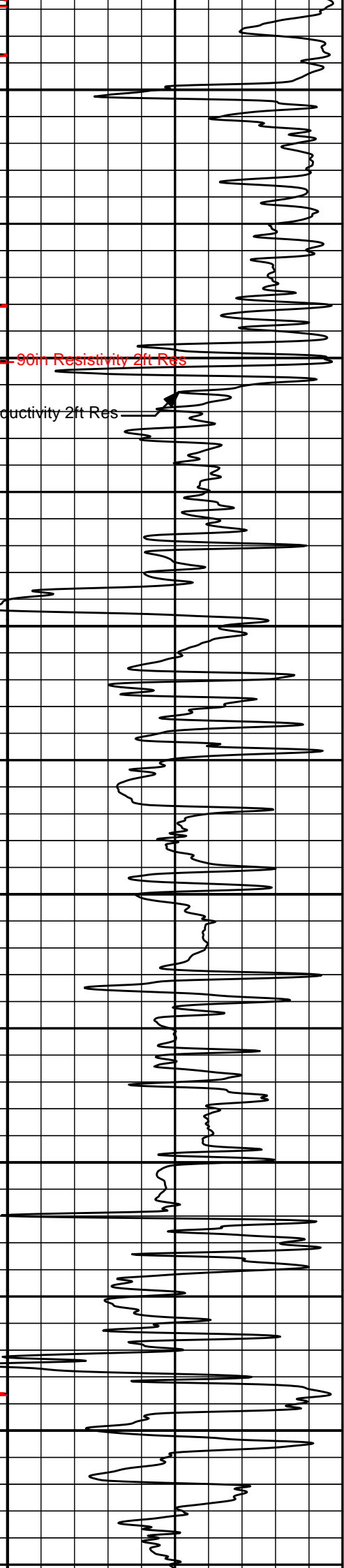
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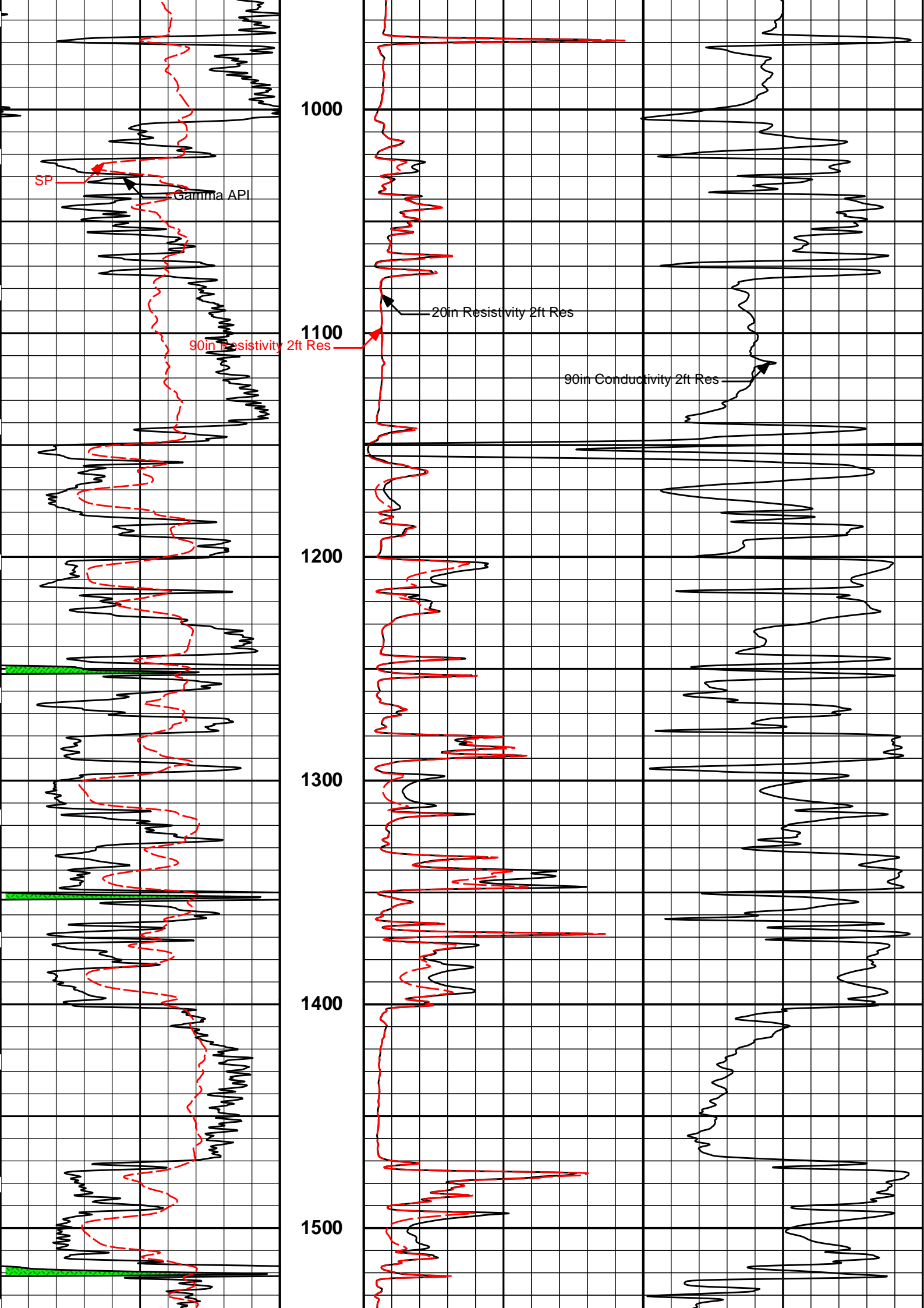
**2 IN = 100 FT MD  
 MAIN PASS**

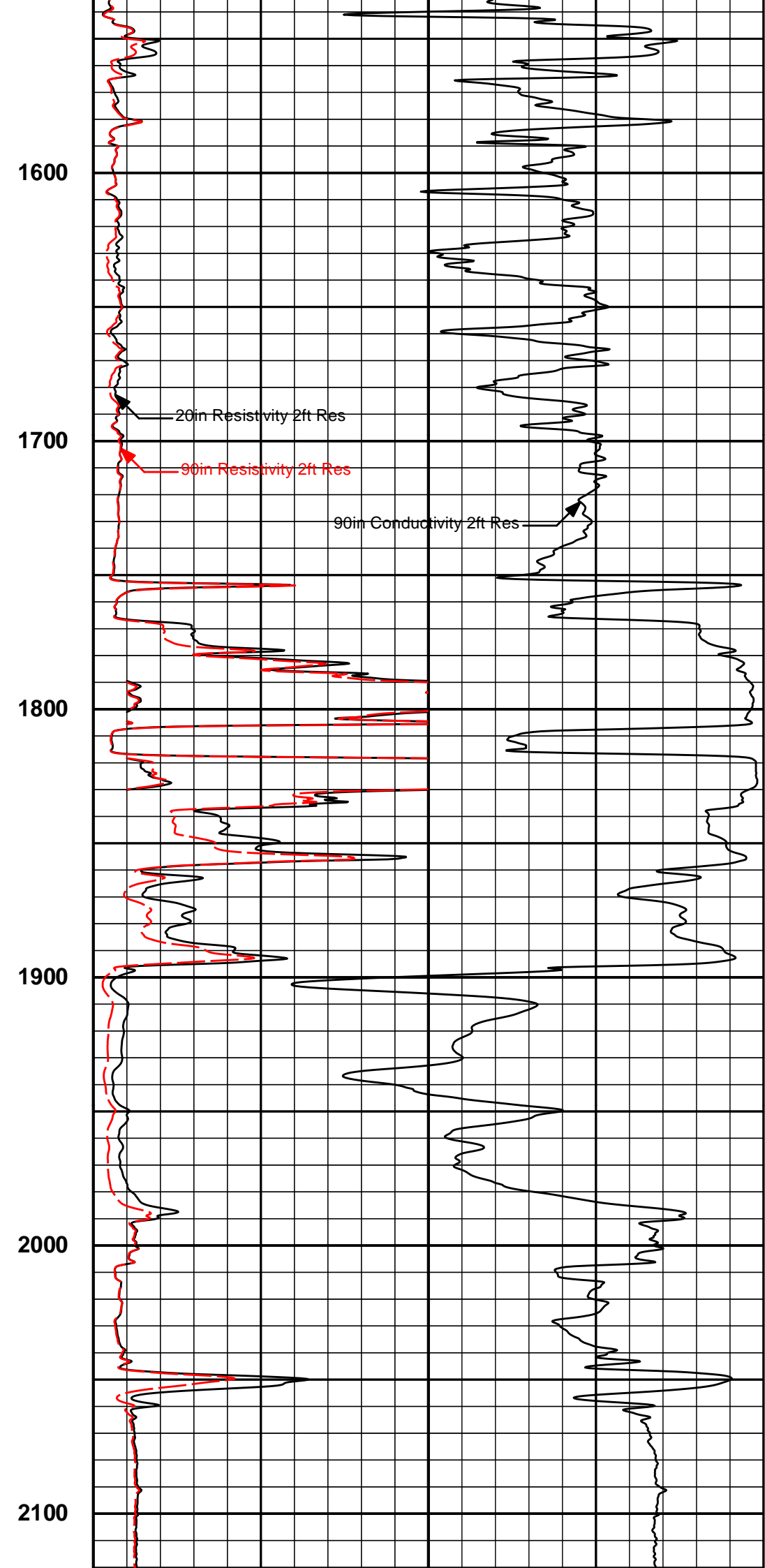
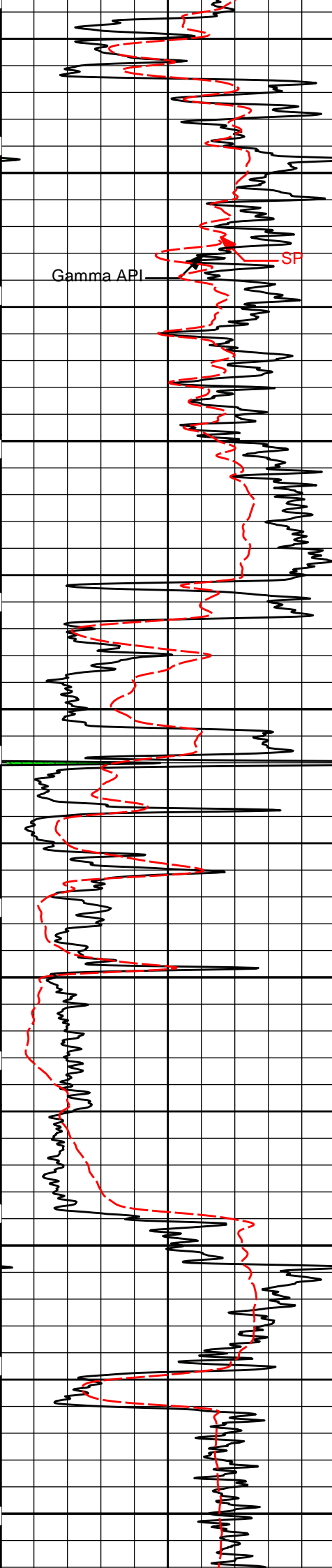


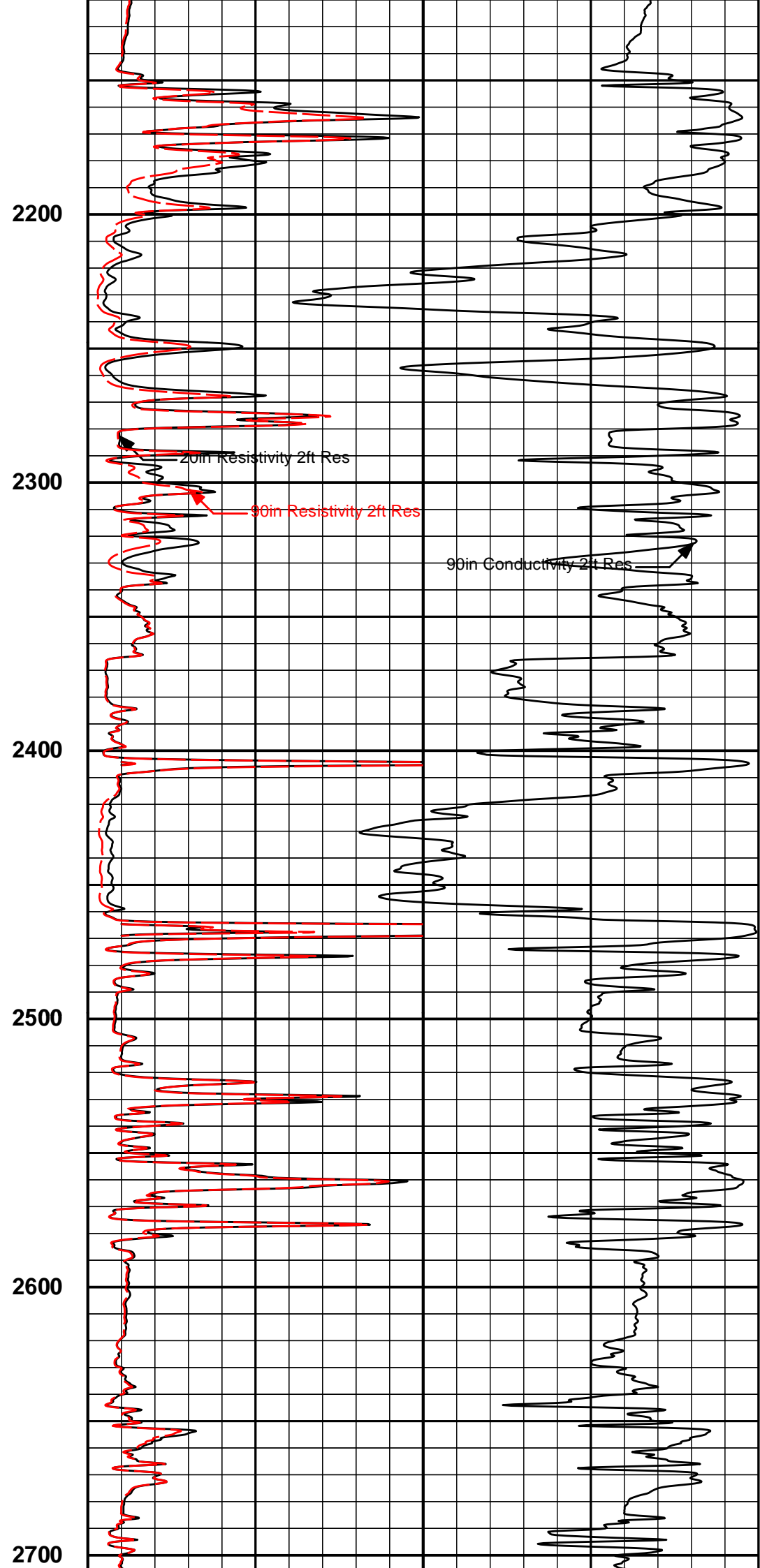
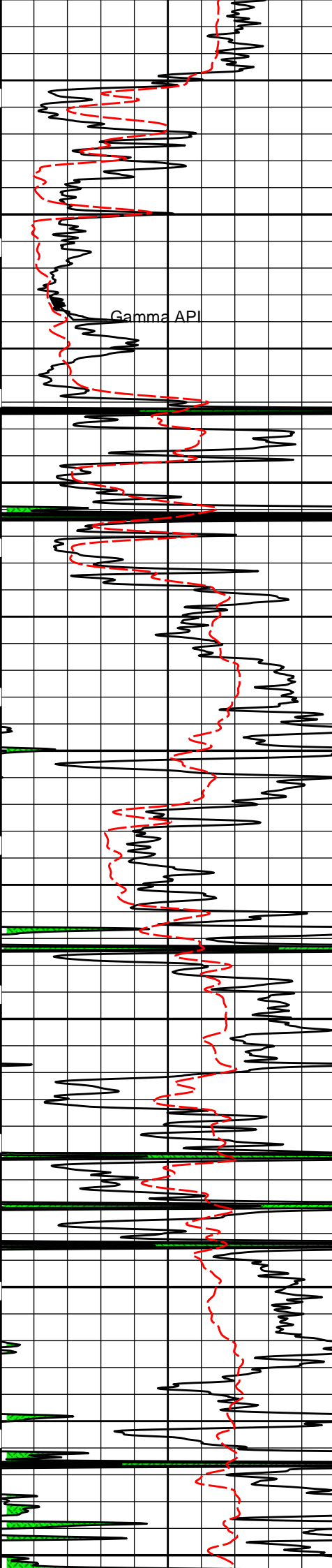


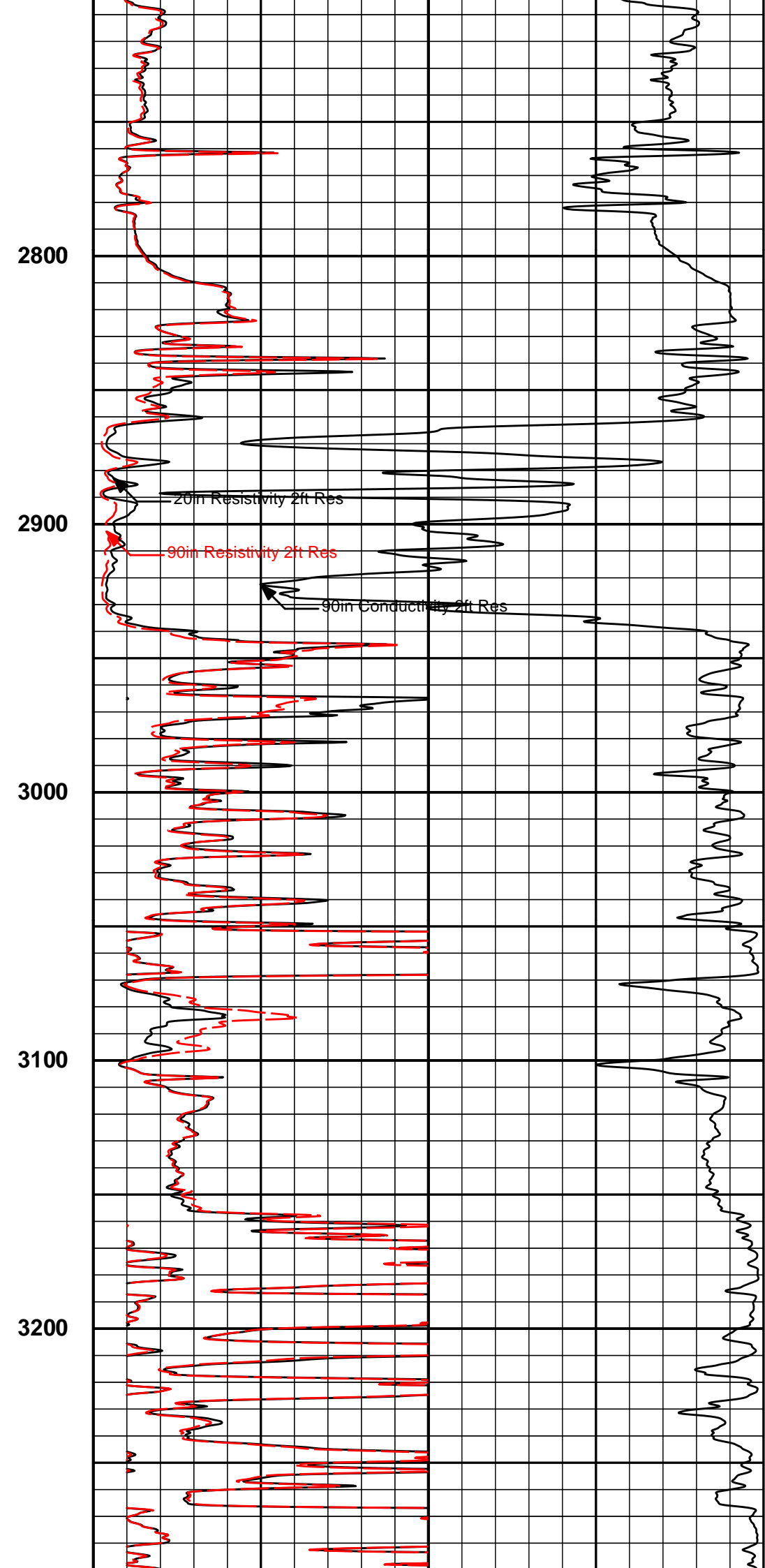
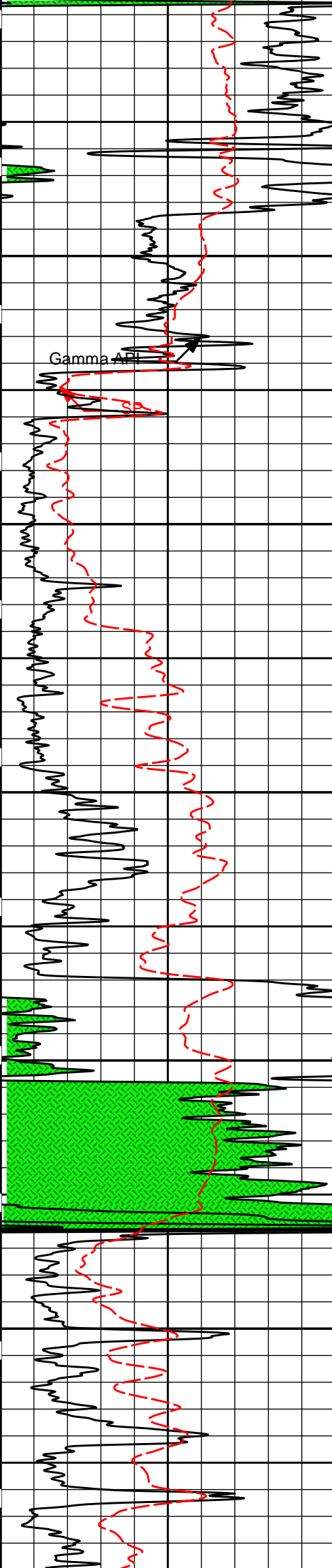
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500  
600  
700  
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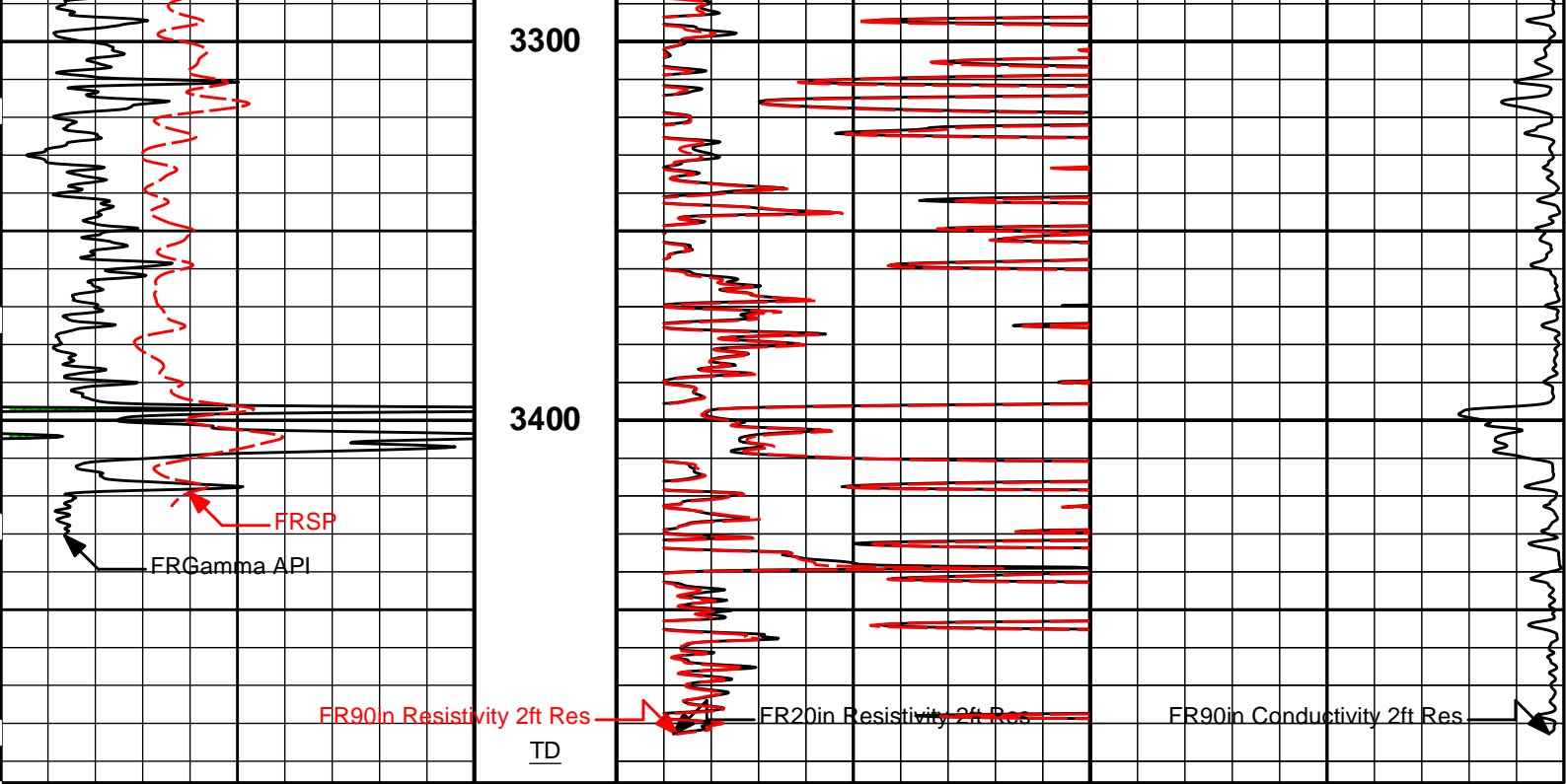












0	Gamma API	150	1 : 600 ft	0	20in Resistivity 2ft Res	50
	api			0	90in Resistivity 2ft Res	50
	SP					
	-]20[+			1000	90in Conductivity 2ft Res	0
					mmho per metre	

**HALLIBURTON**

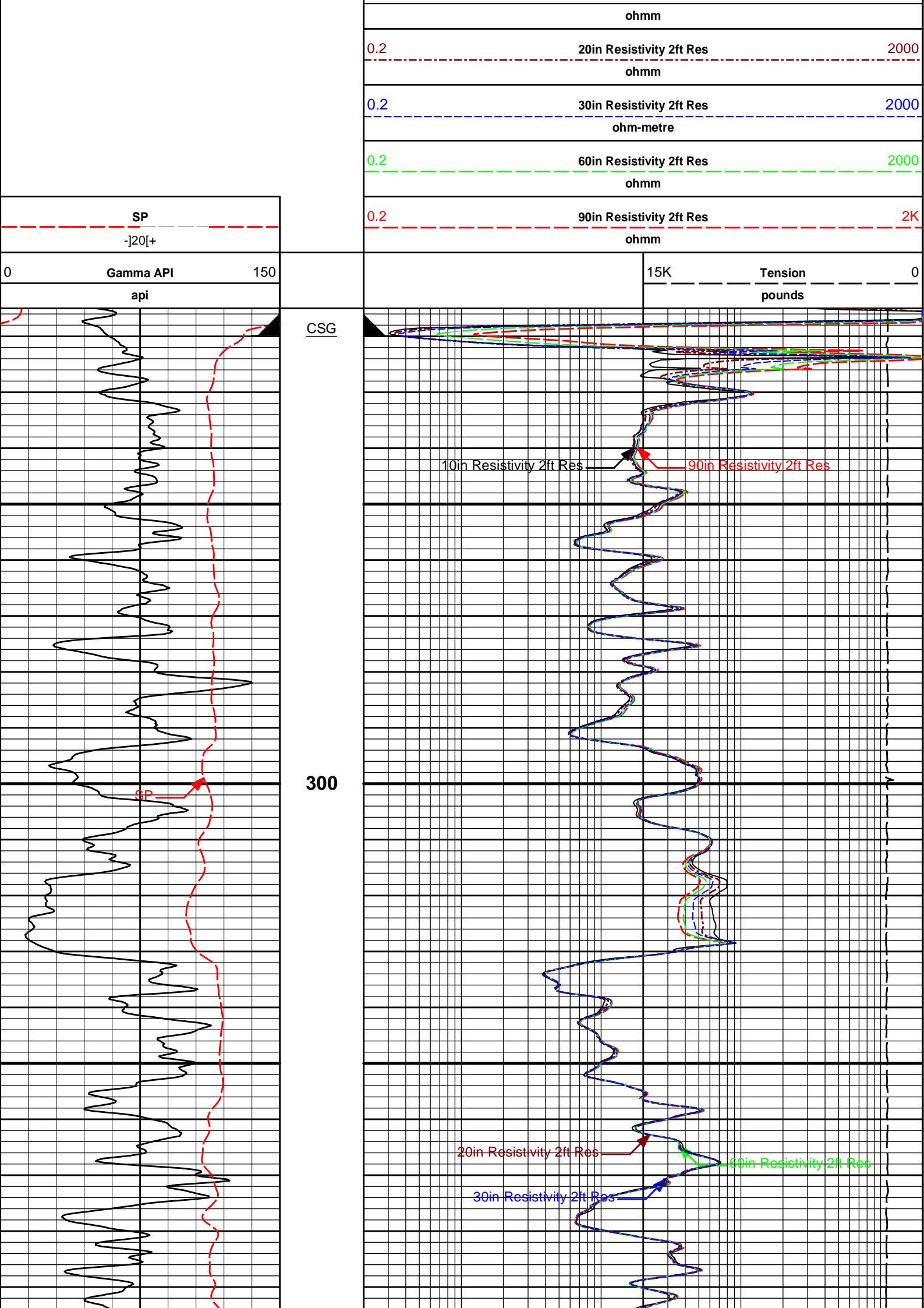
Plot Time: 03-Apr-17 16:59:05  
 Plot Range: 215 ft to 3495.67 ft  
 Data: E-LAND\_FLEM\_230\Well Based\MAIN\  
 Plot File: \\-LOCAL-E-LAND\_FLEM\_230\0001 GTET-DSN2-SDL2-BSAT-ACRT\ACRT\ELR\_ACRT\_2\_MAIN

**2 IN = 100 FT MD  
 MAIN PASS**

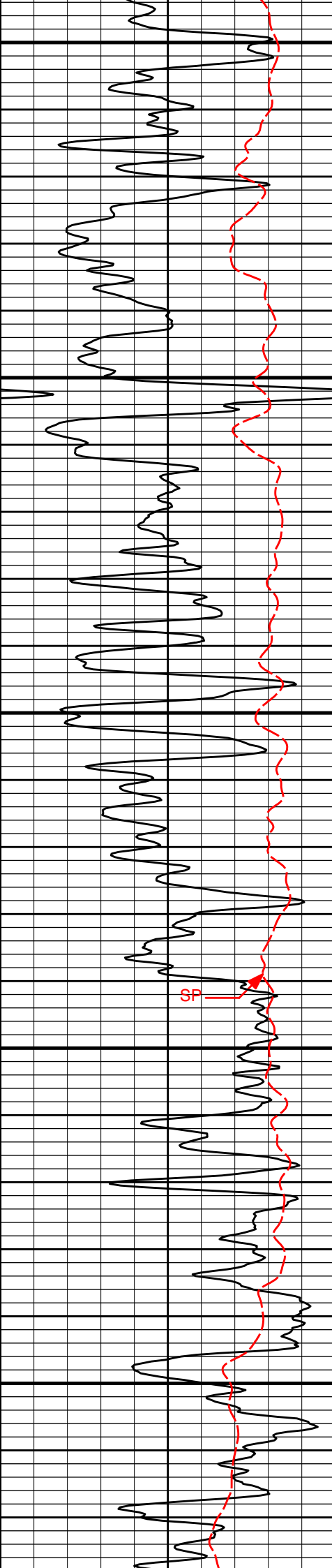
**HALLIBURTON**

Plot Time: 03-Apr-17 16:59:05  
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 Data: E-LAND\_FLEM\_230\Well Based\MAIN\  
 Plot File: \\-LOCAL-E-LAND\_FLEM\_230\0001 GTET-DSN2-SDL2-BSAT-ACRT\ACRT\ELR\_ACRT\_5\_MAIN

**5 IN = 100 FT MD  
 MAIN PASS**



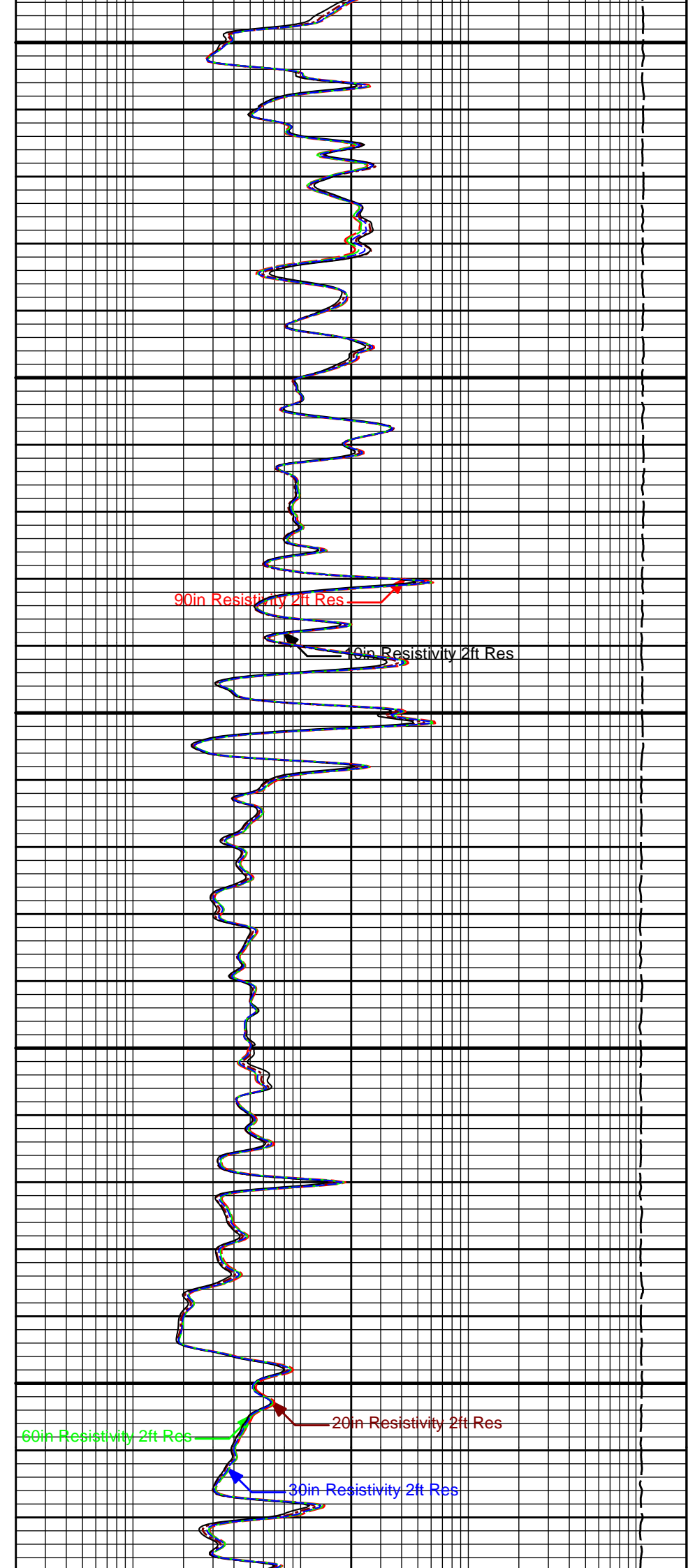


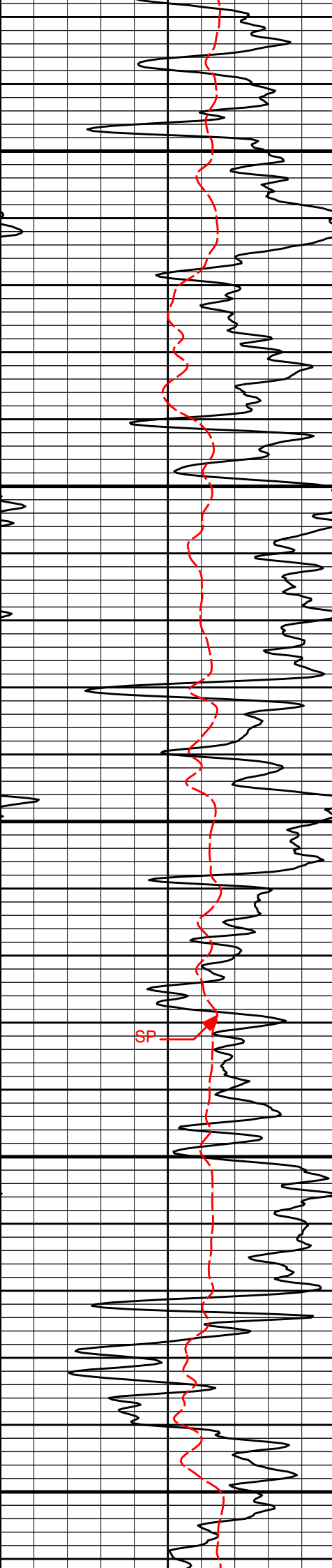


400

500

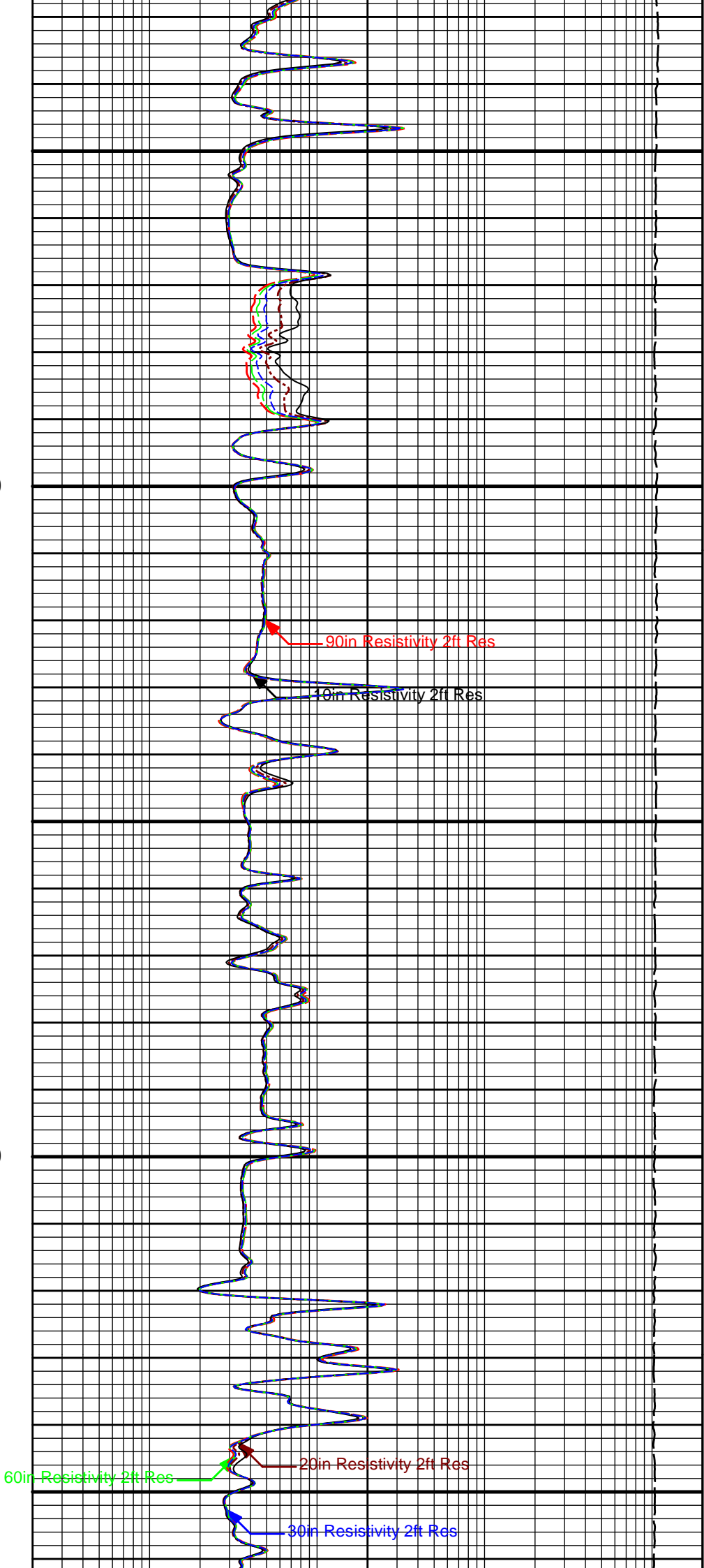
600





700

800



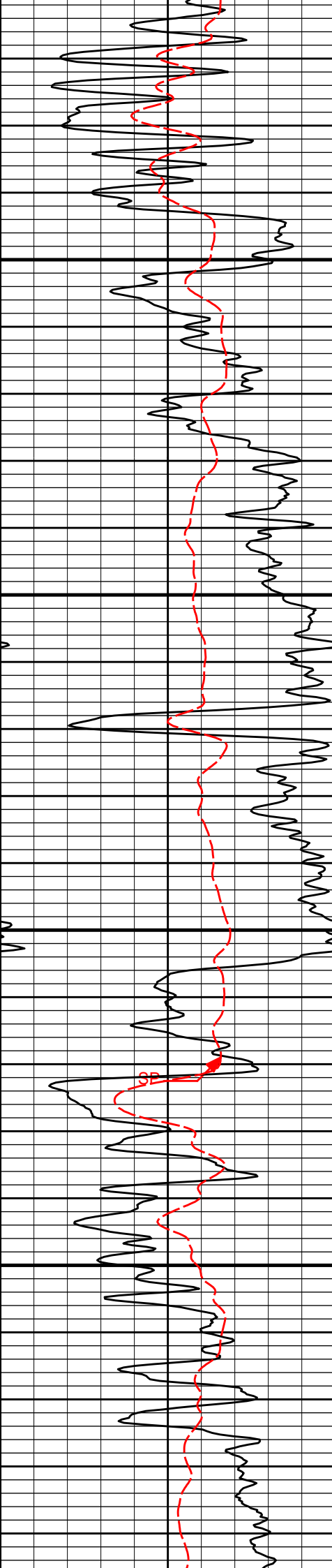
90in Resistivity 2ft Res

10in Resistivity 2ft Res

20in Resistivity 2ft Res

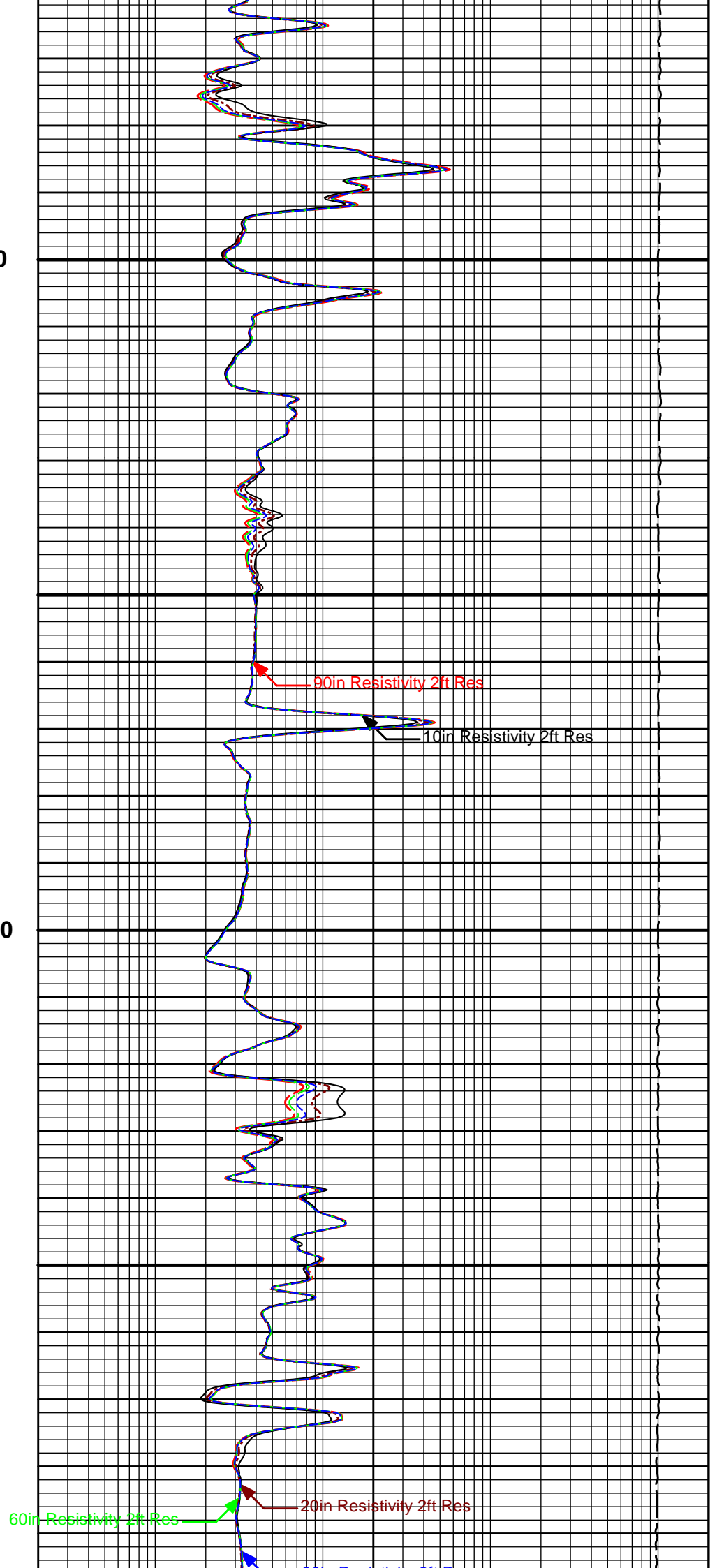
30in Resistivity 2ft Res

60in Resistivity 2ft Res



900

1000

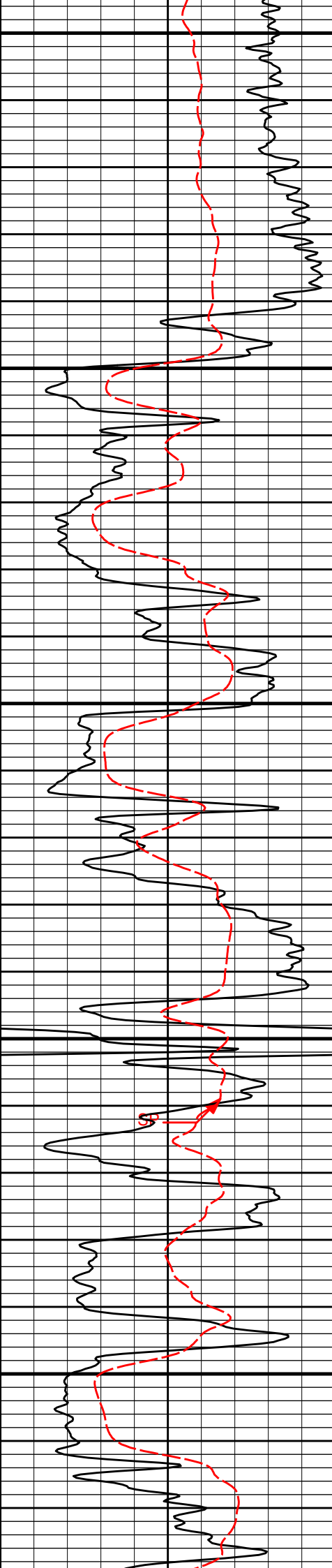


90in Resistivity 2ft Res

10in Resistivity 2ft Res

60in Resistivity 2ft Res

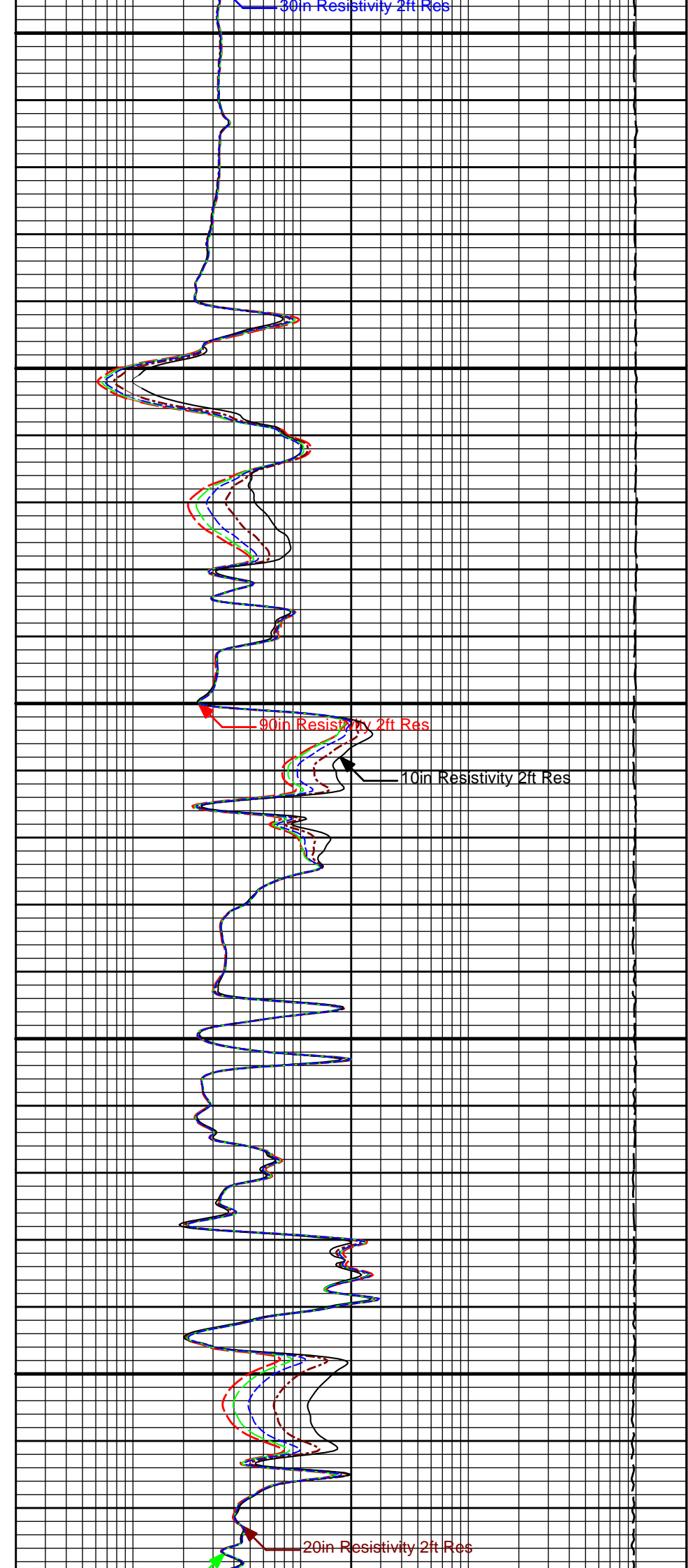
20in Resistivity 2ft Res



1100

1200

1300

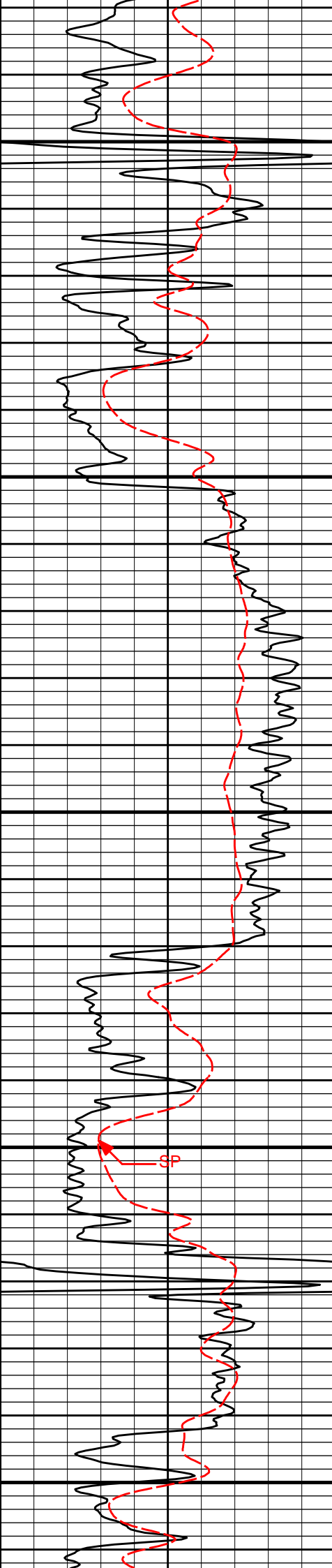


30in Resistivity 2ft Res

90in Resistivity 2ft Res

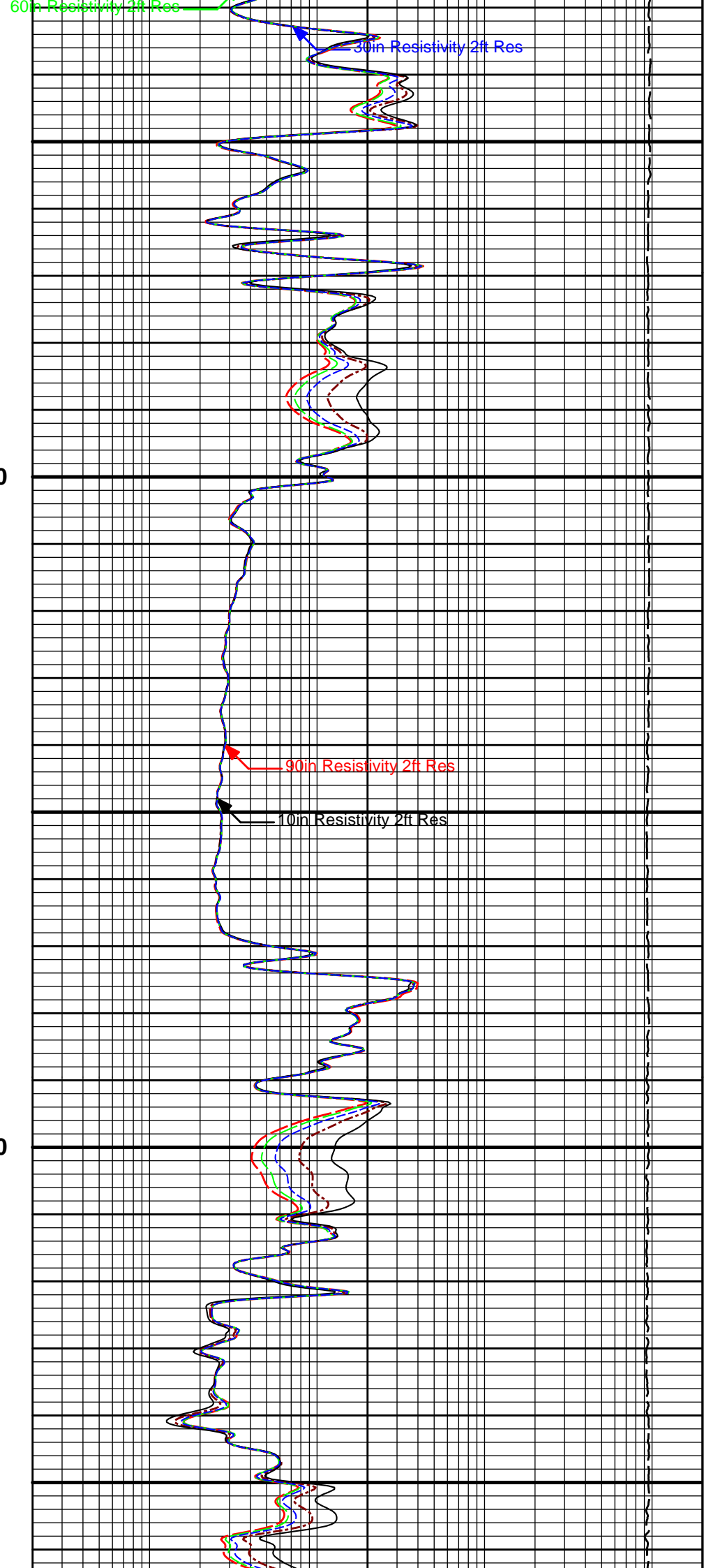
10in Resistivity 2ft Res

20in Resistivity 2ft Res



1400

1500

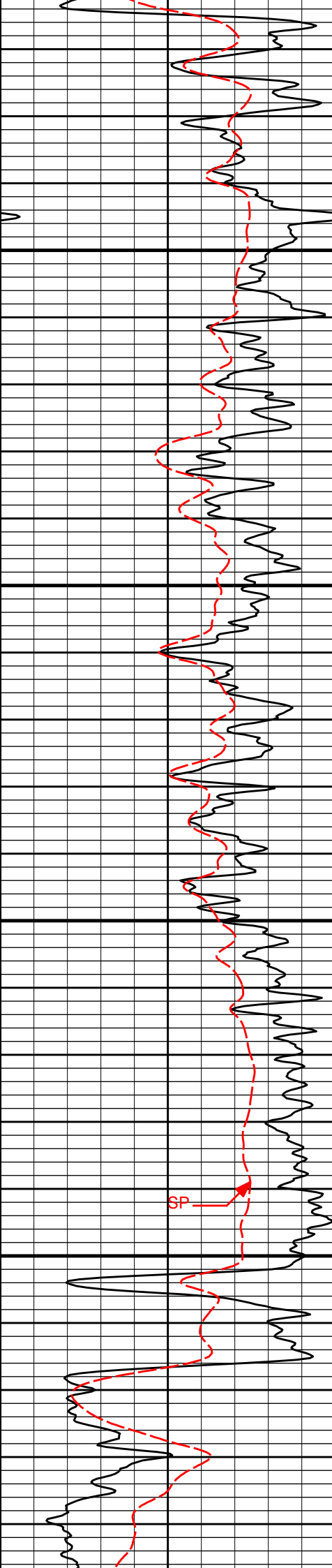


60in Resistivity 2ft Res

30in Resistivity 2ft Res

90in Resistivity 2ft Res

10in Resistivity 2ft Res



1600

1700

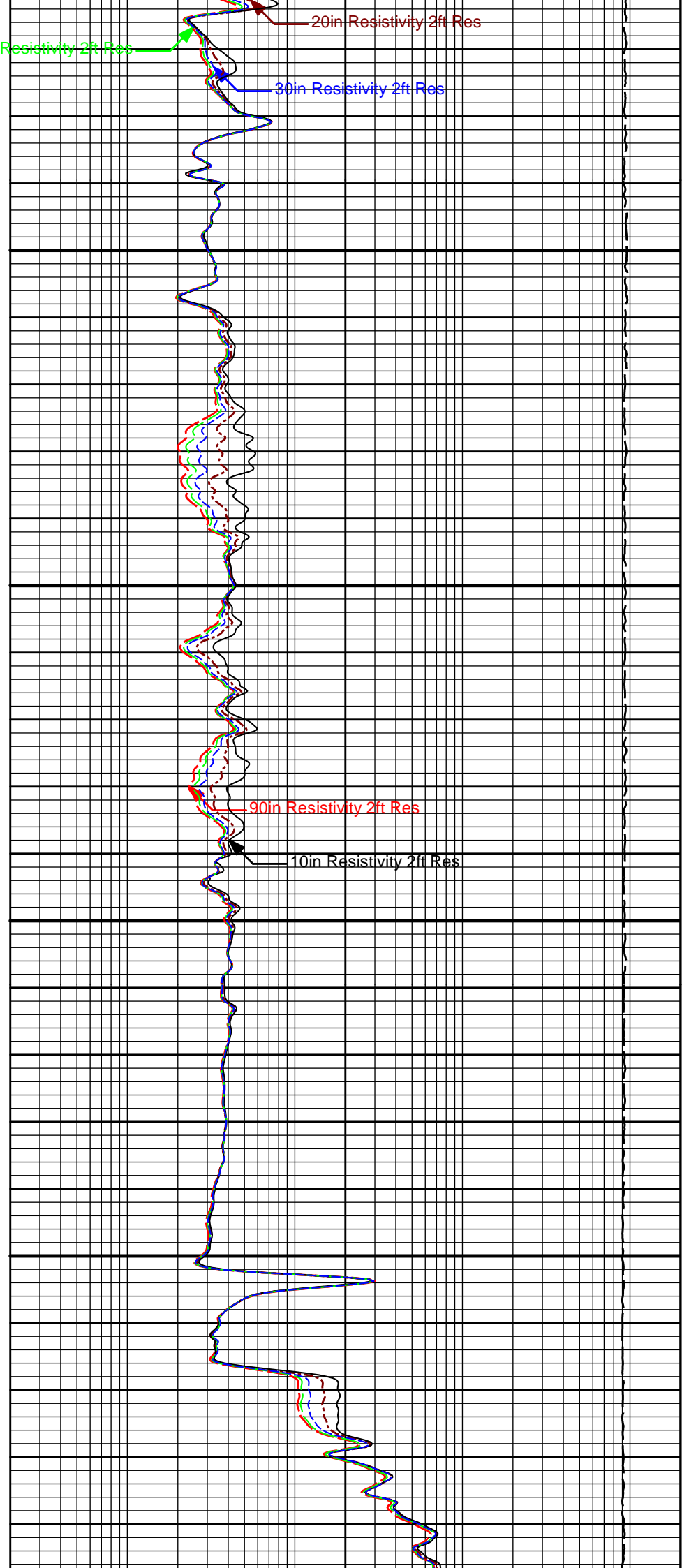
60in Resistivity 2ft Res

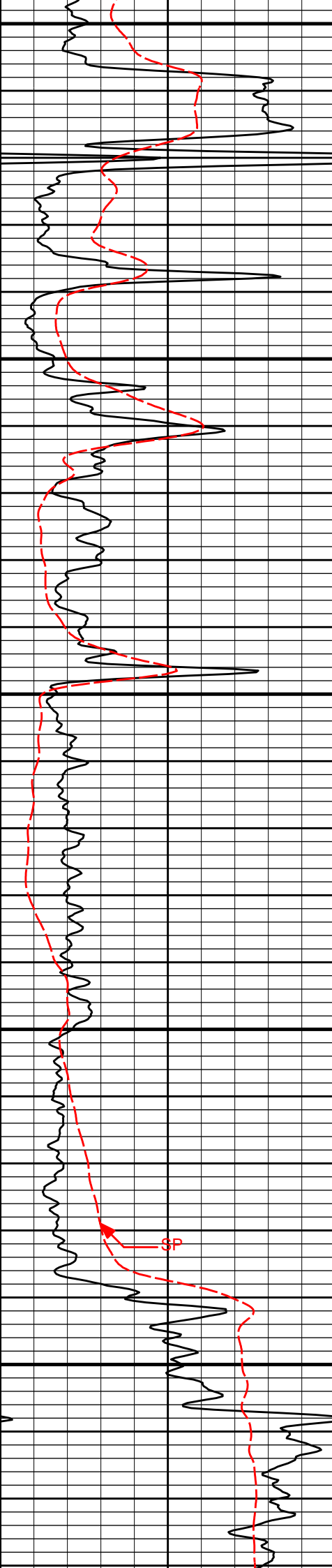
20in Resistivity 2ft Res

30in Resistivity 2ft Res

90in Resistivity 2ft Res

10in Resistivity 2ft Res





1800

20in Resistivity 2ft Res

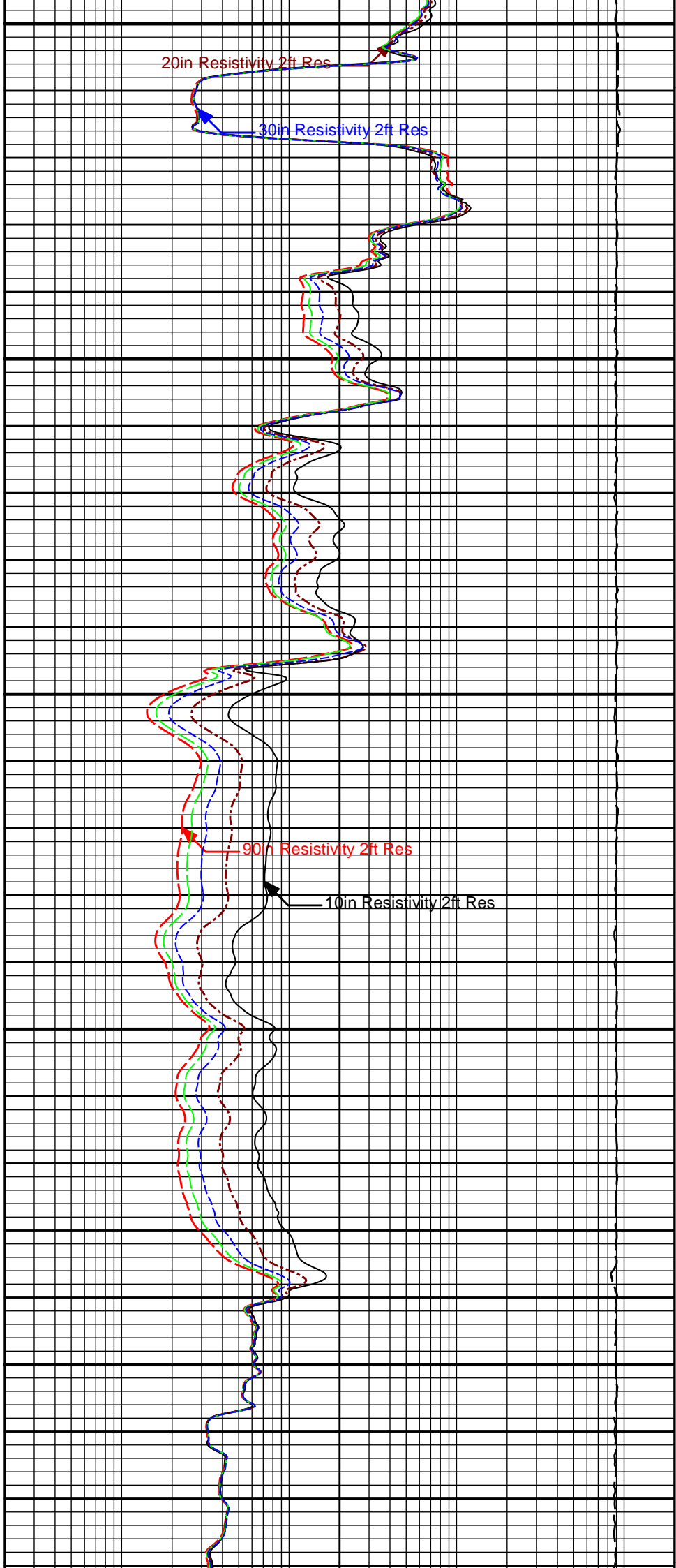
30in Resistivity 2ft Res

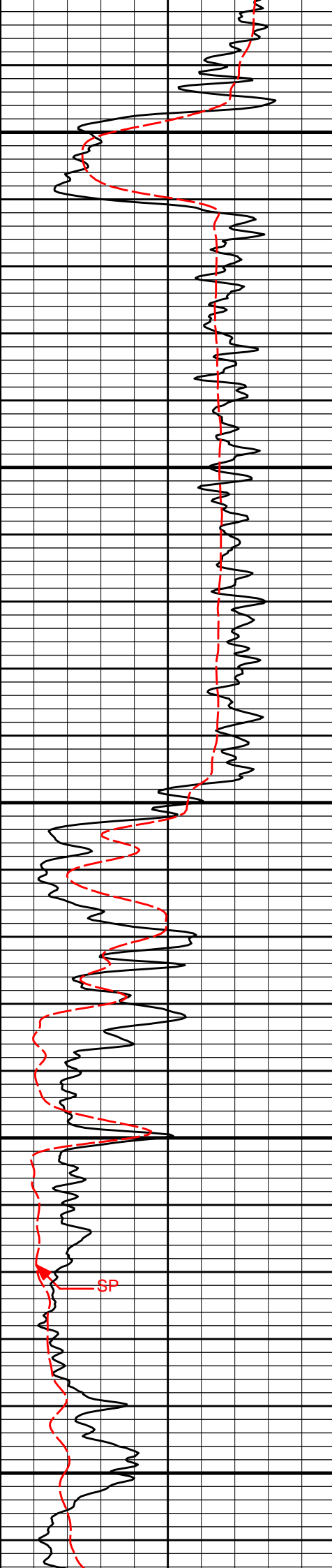
1900

90in Resistivity 2ft Res

10in Resistivity 2ft Res

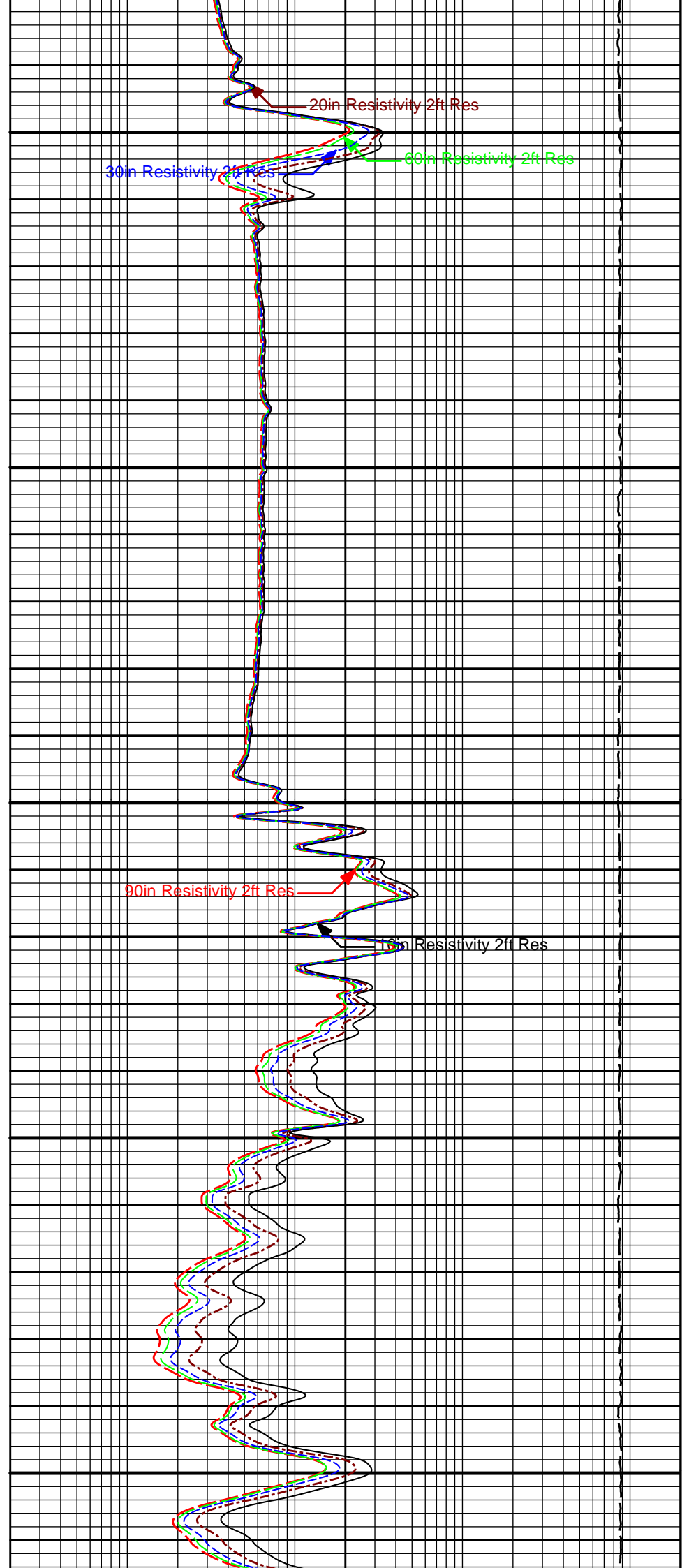
2000





2100

2200



20in Resistivity 2ft Res

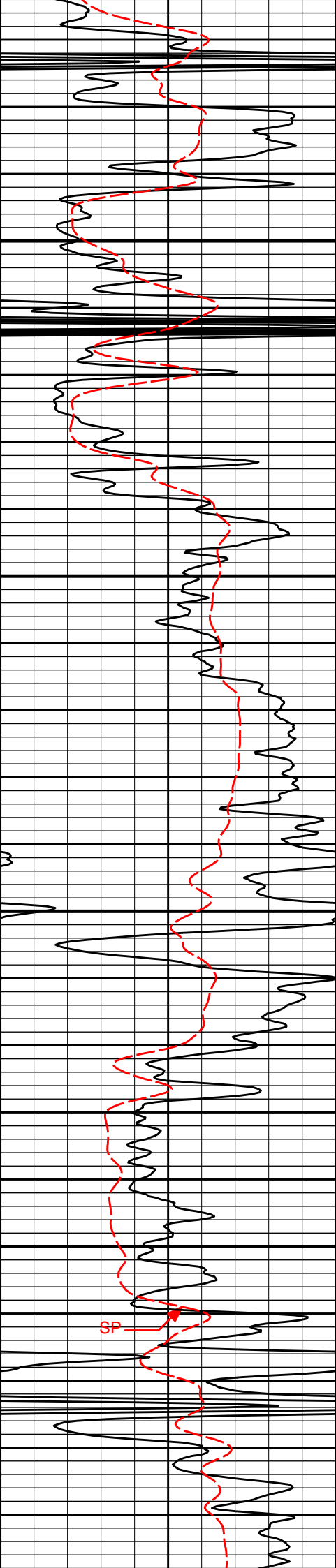
30in Resistivity 2ft Res

60in Resistivity 2ft Res

90in Resistivity 2ft Res

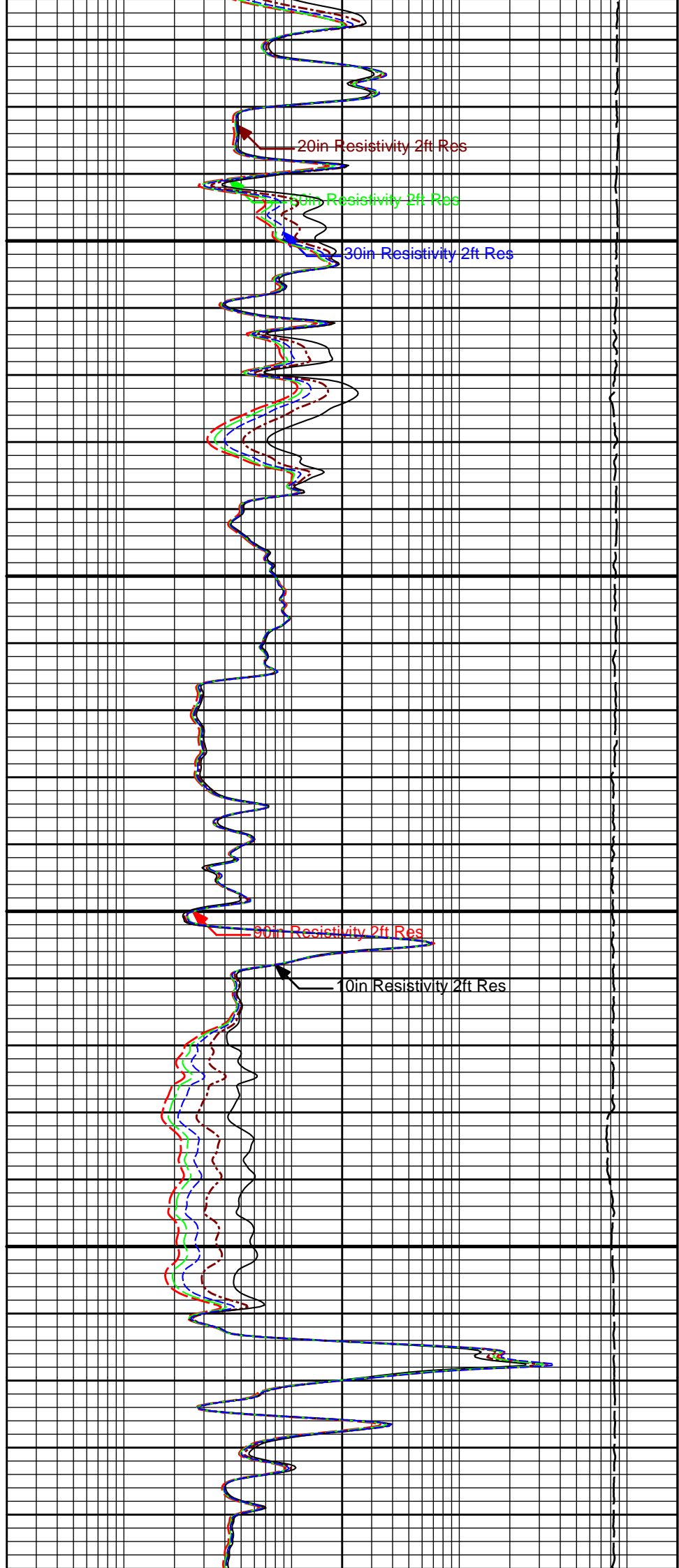
10in Resistivity 2ft Res





2300

2400



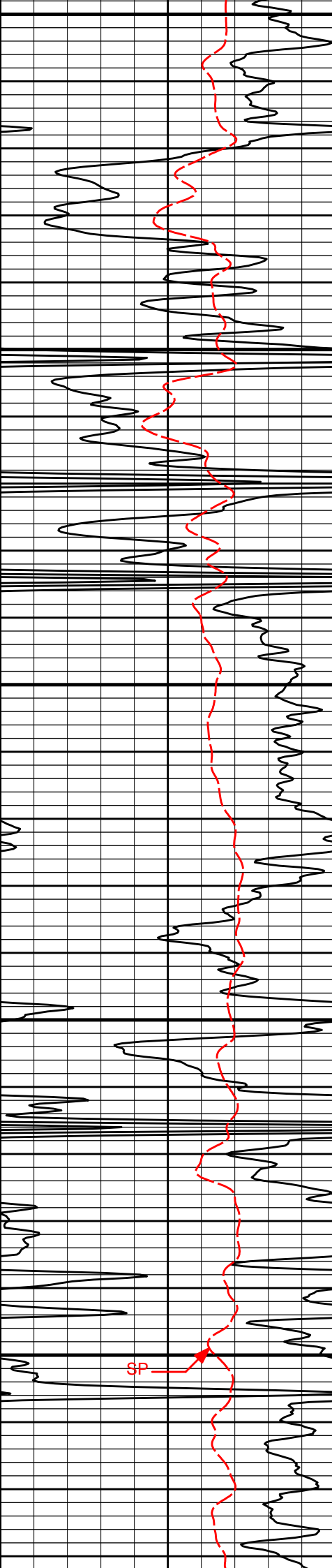
20in Resistivity 2ft Res

50in Resistivity 2ft Res

30in Resistivity 2ft Res

20in Resistivity 2ft Res

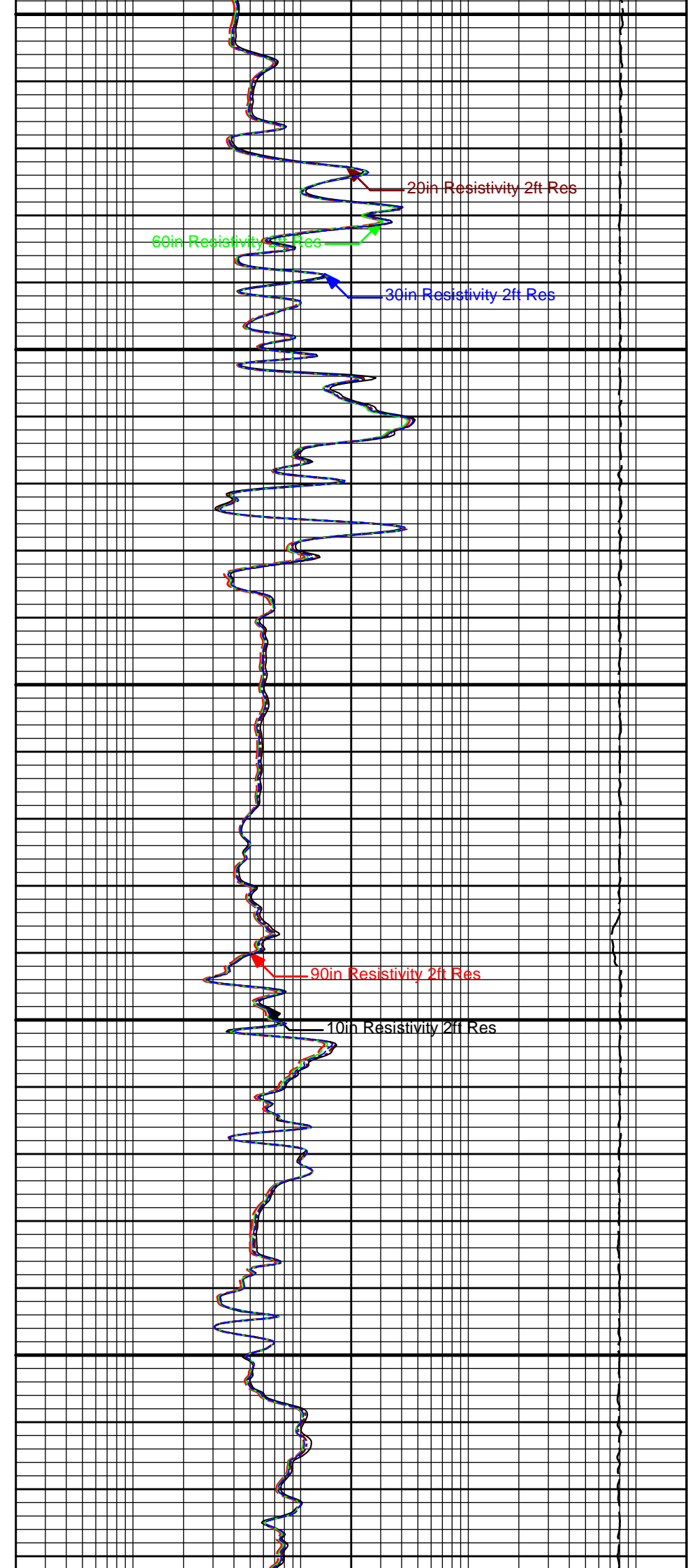
10in Resistivity 2ft Res



2500

2600

2700



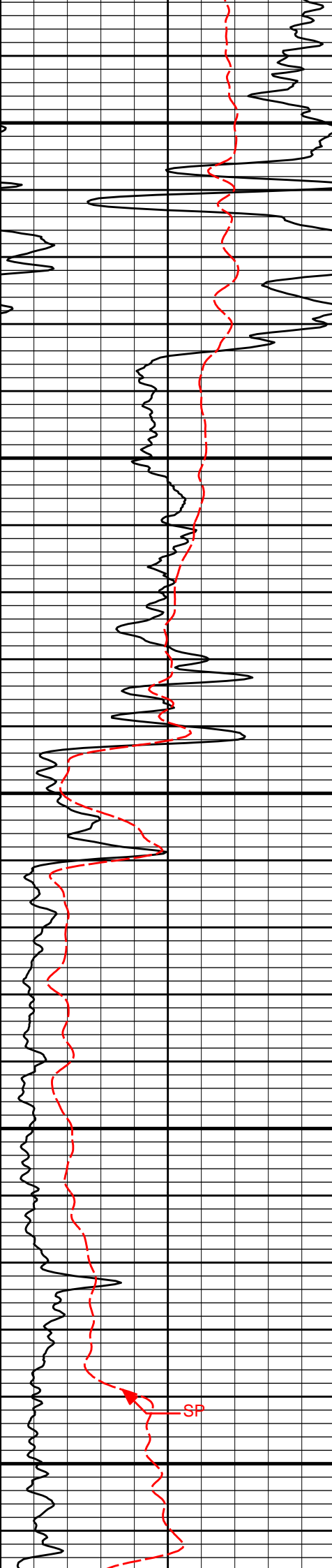
20in Resistivity 2ft Res

60in Resistivity 2ft Res

30in Resistivity 2ft Res

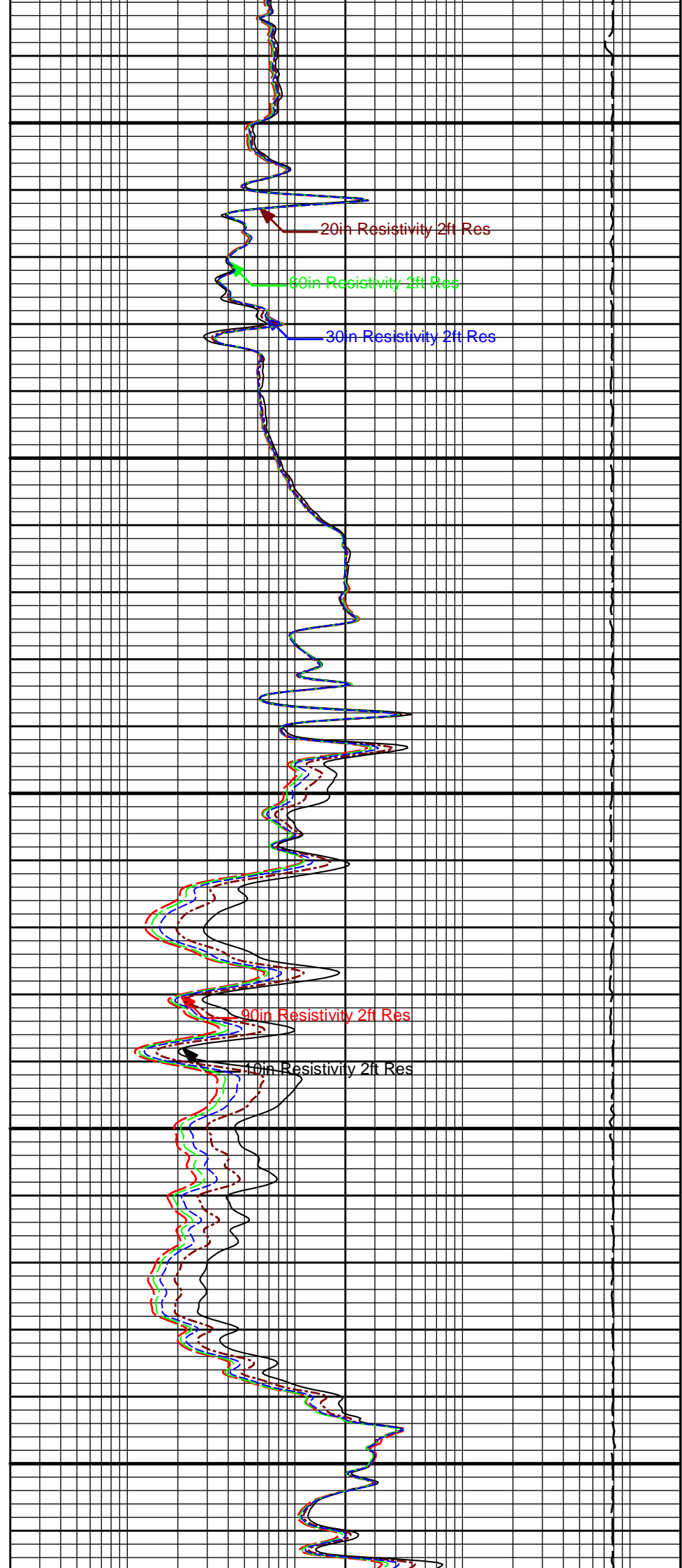
90in Resistivity 2ft Res

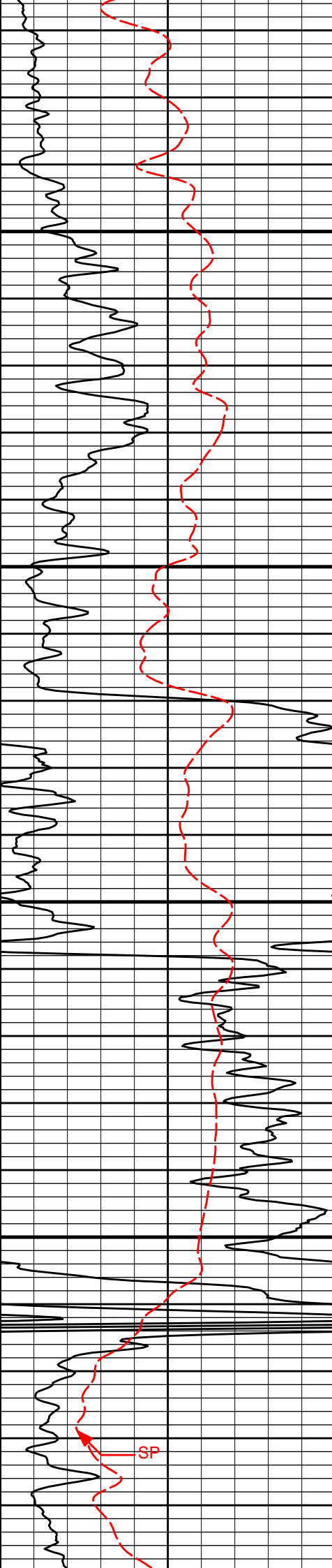
10in Resistivity 2ft Res



2800

2900

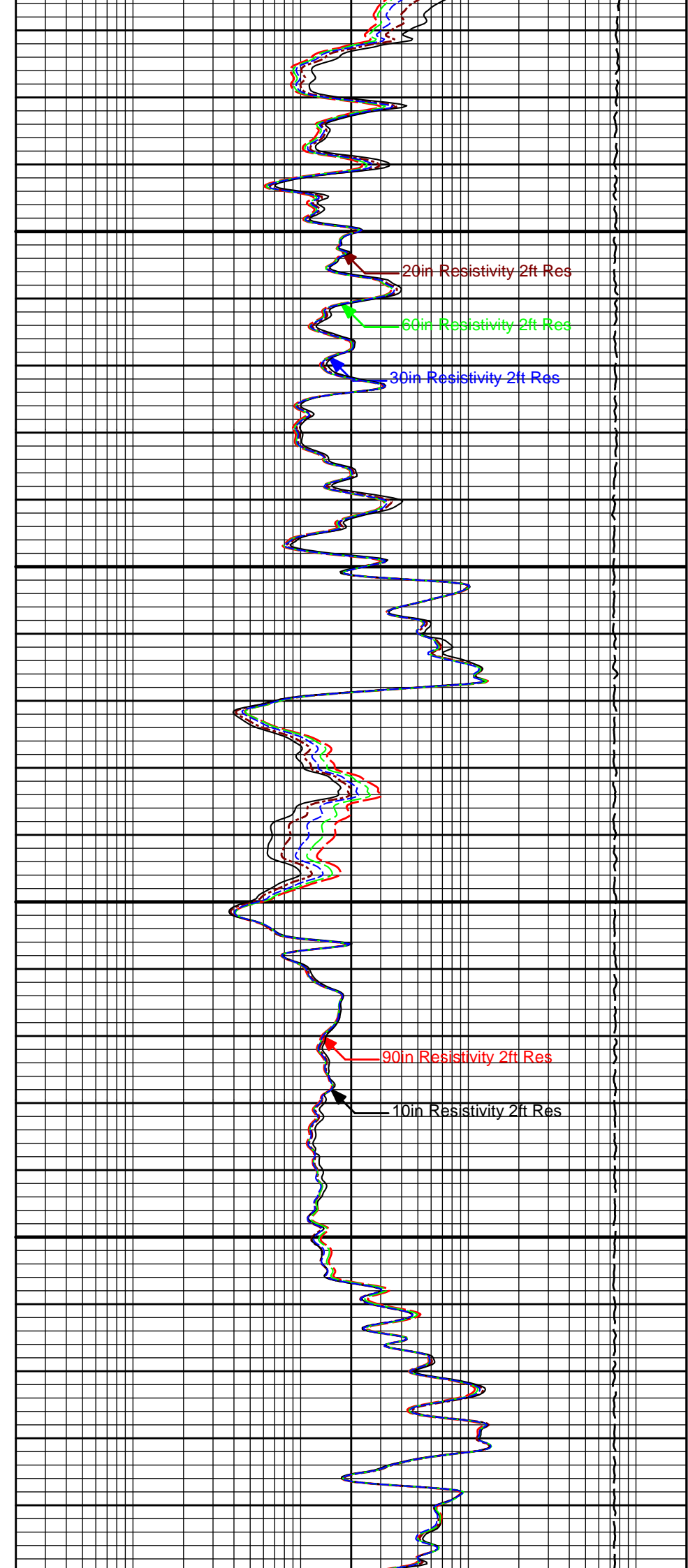


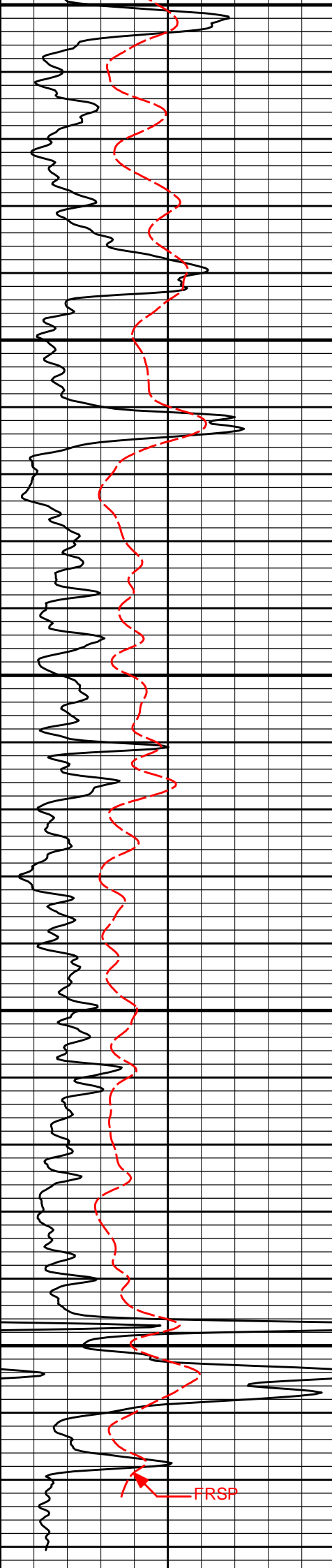


3000

3100

3200

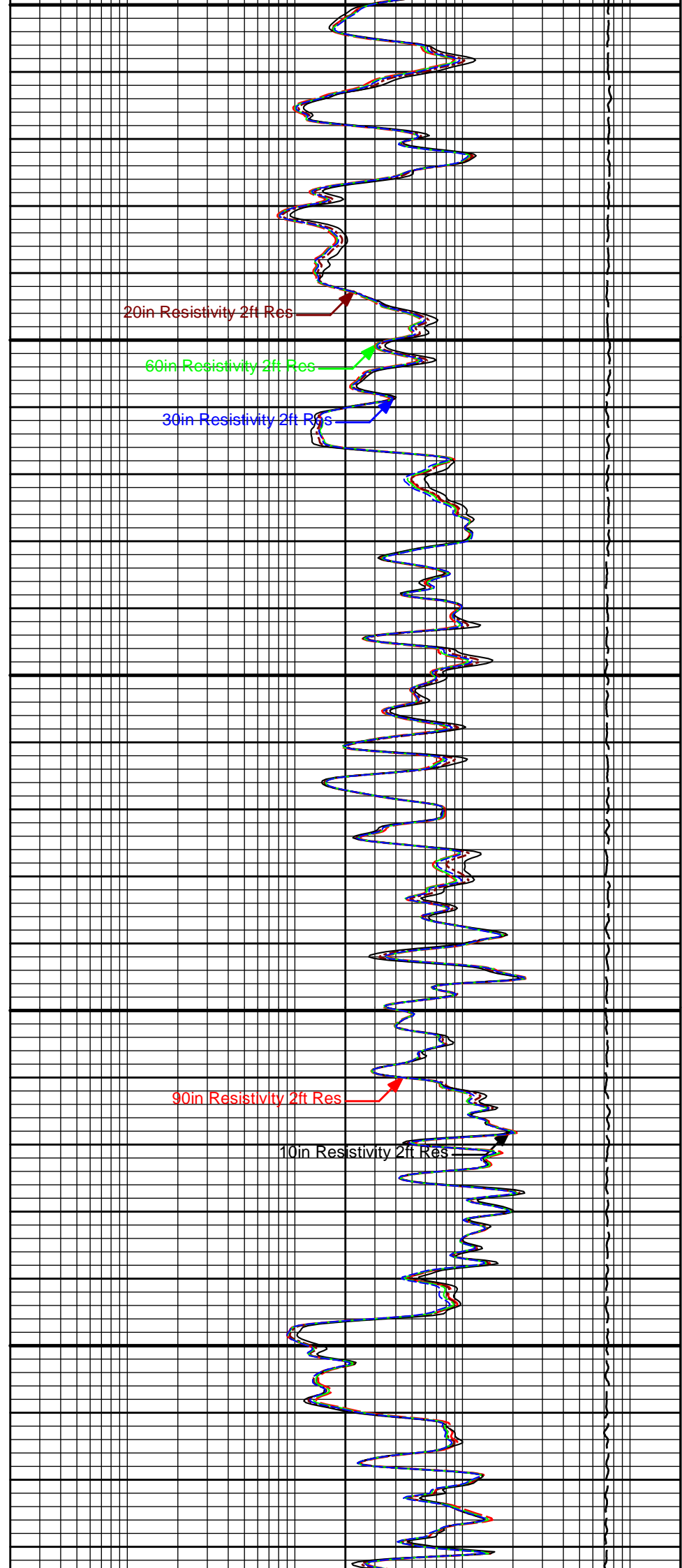


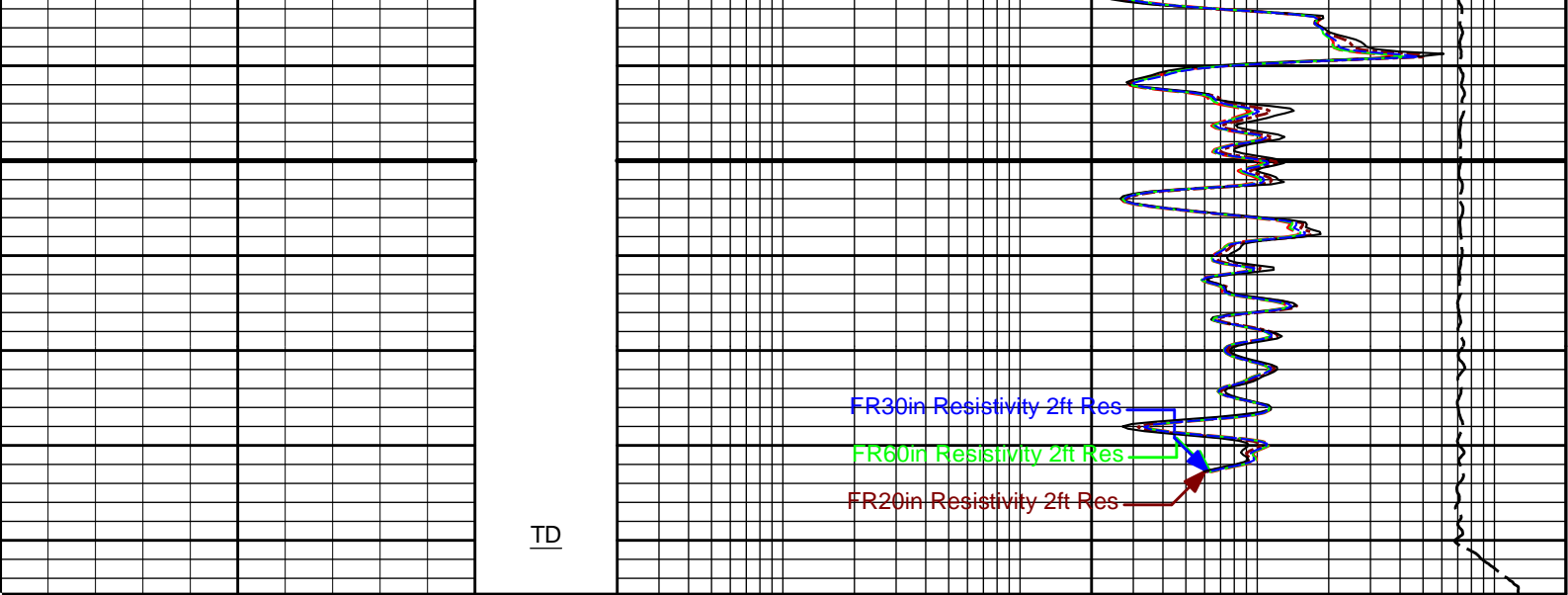


3200

3300

3400





0	Gamma API	150
	api	
	SP	
	-]20[+	

		15K	Tension	0
			pounds	
0.2	90in Resistivity 2ft Res			2K
	ohmm			
0.2	60in Resistivity 2ft Res			2000
	ohmm			
0.2	30in Resistivity 2ft Res			2000
	ohm-metre			
0.2	20in Resistivity 2ft Res			2000
	ohmm			
0.2	10in Resistivity 2ft Res			2K
	ohmm			

**HALLIBURTON**

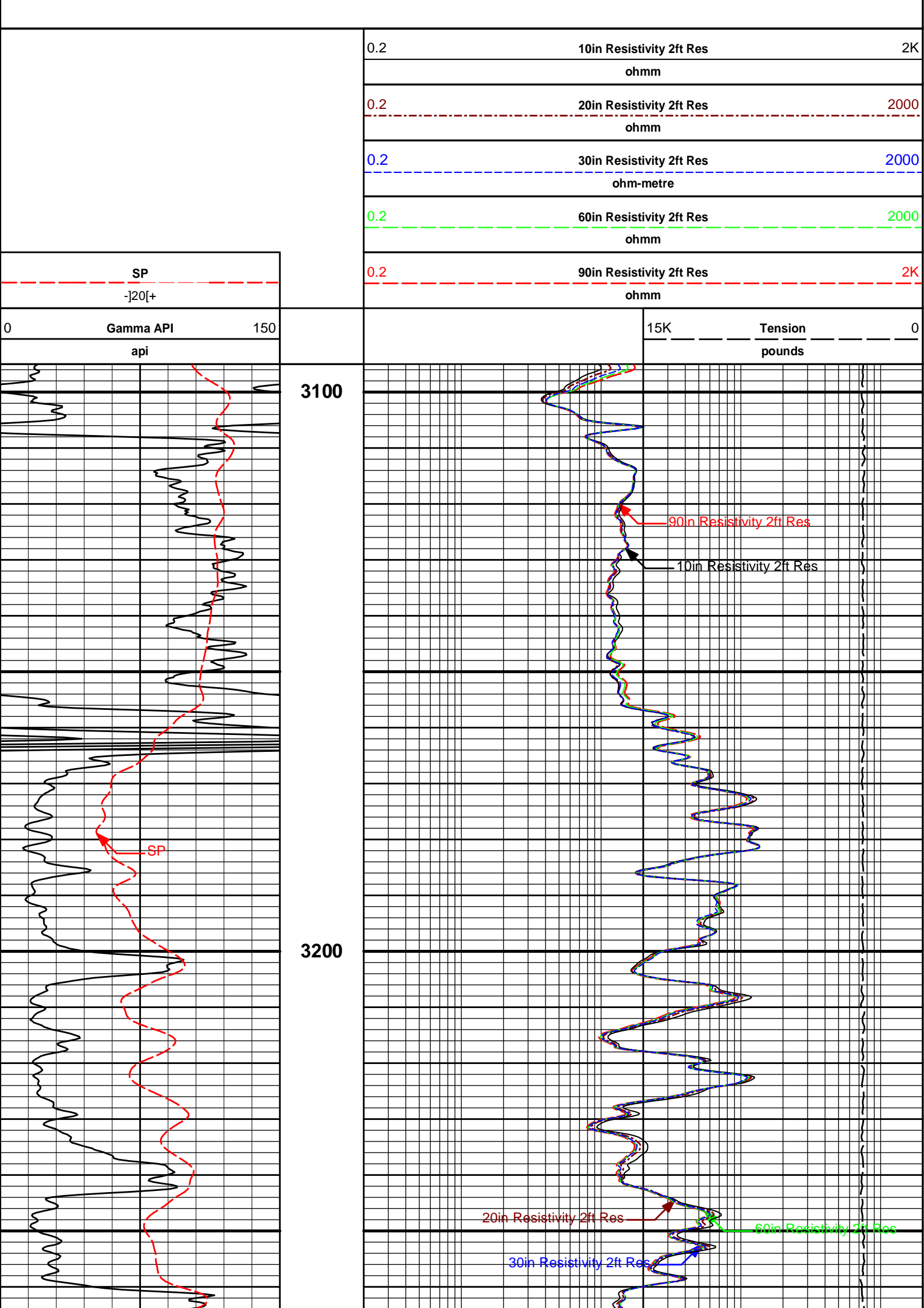
Plot Time: 03-Apr-17 16:59:08  
 Plot Range: 215 ft to 3495.67 ft  
 Data: E-LAND\_FLEM\_230Well Based\MAIN\  
 Plot File: \\-LOCAL-E-LAND\_FLEM\_230\0001 GTET-DSN2-SDL2-BSAT-ACRT\ACRT\ELR\_ACRT\_5\_MAIN

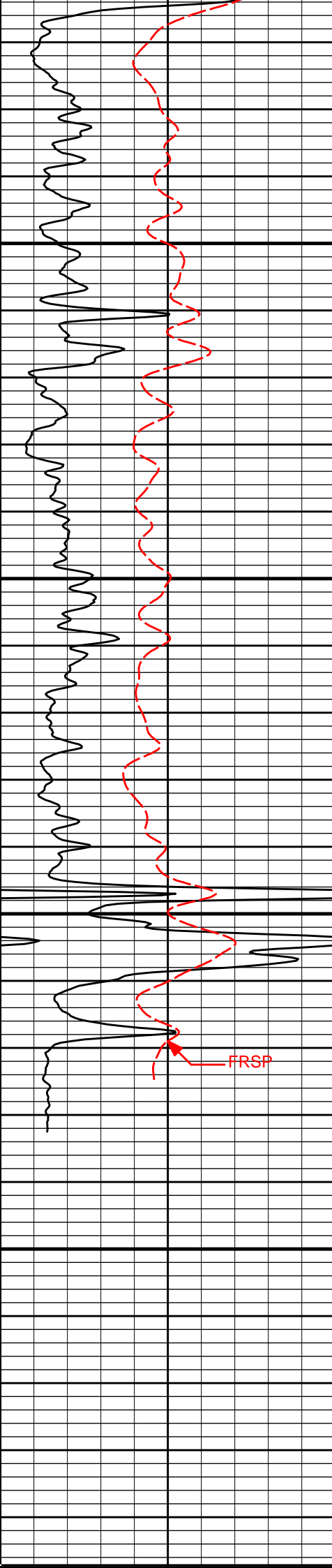
**5 IN = 100 FT MD  
 MAIN PASS**

**HALLIBURTON**

Plot Time: 03-Apr-17 16:59:09  
 Plot Range: 3095 ft to 3497.17 ft  
 Data: E-LAND\_FLEM\_230Well Based\REPEAT\  
 Plot File: \\-LOCAL-E-LAND\_FLEM\_230\0001 GTET-DSN2-SDL2-BSAT-ACRT\ACRT\ELR\_ACRT\_5\_REPEAT

**5 IN = 100 FT MD  
 REPEAT PASS**

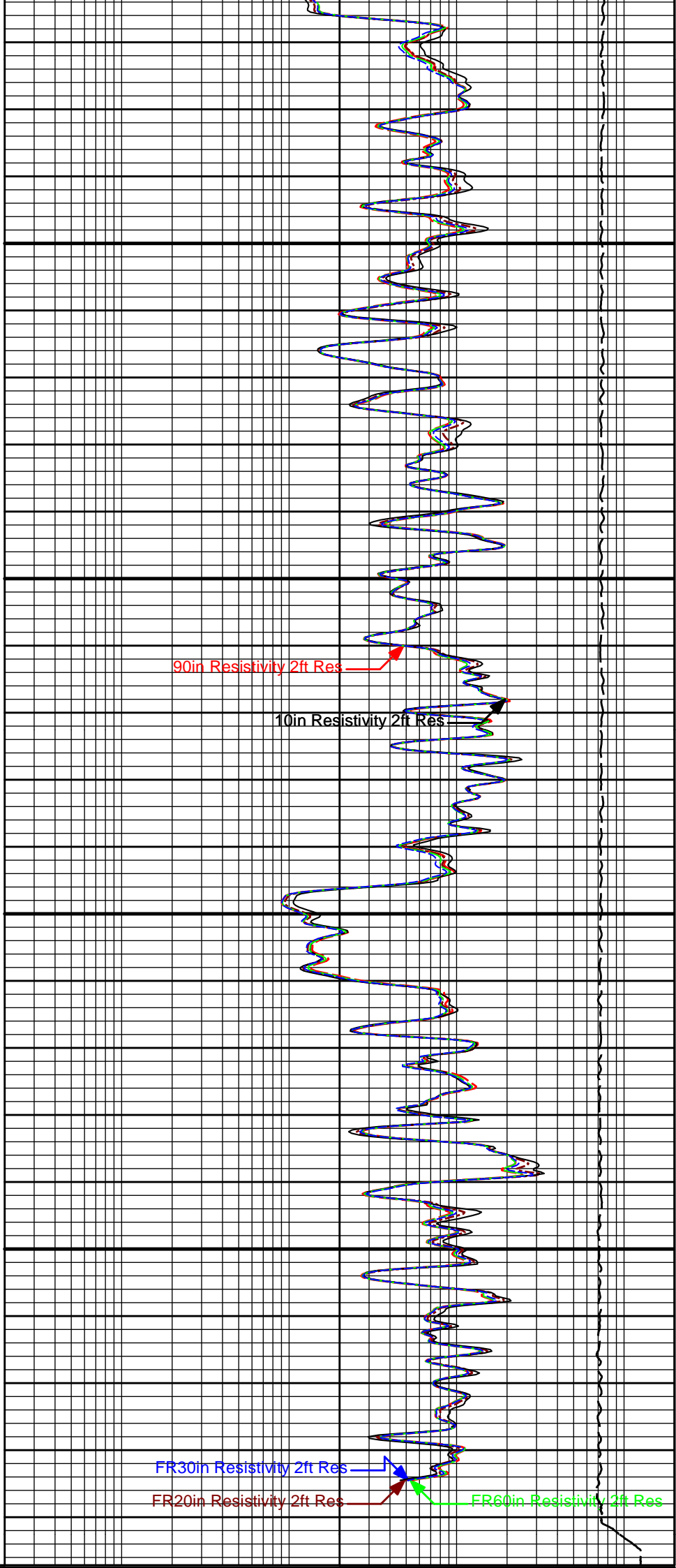




3300

3400

TD



90in Resistivity 2ft Res

10in Resistivity 2ft Res

FR30in Resistivity 2ft Res

FR20in Resistivity 2ft Res

FR60in Resistivity 2ft Res



0	Gamma API	150		15K	Tension	0
	api				pounds	
	SP		0.2	90in Resistivity 2ft Res		2K
	-]20[+			ohmm		
			0.2	60in Resistivity 2ft Res		2000
				ohmm		
			0.2	30in Resistivity 2ft Res		2000
				ohm-metre		
			0.2	20in Resistivity 2ft Res		2000
				ohmm		
			0.2	10in Resistivity 2ft Res		2K
				ohmm		

**HALLIBURTON**

Plot Time: 03-Apr-17 16:59:10  
Plot Range: 3095 ft to 3497.17 ft  
Data: E-LAND\_FLEM\_230\Well Based\REPEAT\  
Plot File: \\-LOCAL-E-LAND\_FLEM\_230\0001 GTET-DSN2-SDL2-BSAT-ACRT\ACRT\ELR\_ACRT\_5\_REPEAT

**5 IN = 100 FT MD  
REPEAT PASS**

**HALLIBURTON**

**PARAMETERS REPORT**

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	7.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.300	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	0.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	1.100	ohmm
	SHARED	TRM	Temperature of Mud	75.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	CSTR	Compressive Strength	1000.00	psia
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	3500.00	ft
	SHARED	BHT	Bottom Hole Temperature	115.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	CBM Temperature Master Tool	GTET	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Density	

Rwa / CrossPlot	AFAC	Archie A factor	0.6200	
Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
Rwa / CrossPlot	BHSM	Borehole Size Source Tool	SDLT2	
Rwa / CrossPlot	ROIN	Input for RO Calculation	Rwa	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
GTET	BHSM	Borehole Size Source Tool	SDLT2	
DSNT2	DNOK	Process DSN?	Yes	
DSNT2	DEOK	Process DSN EVR?	No	
DSNT2	NLIT	Neutron Lithology	Limestone	
DSNT2	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT2	DNTT	Temperature Correction Type	Gradient	
DSNT2	DNTT	Top Zone Temperature Value	75.0	degF
DSNT2	DNBT	DSN Bottom Zone Temperature Value	115.0	degF
DSNT2	DTDT	Top Depth for Temperature Gradient Calculation (Measured Depth)	0	ft
DSNT2	DBDT	Bottom Zone Temperature Depth (Measured Depth)	3500	ft
DSNT2	DPRS	DSN Pressure Correction Type	Gradient	
DSNT2	DNTP	DSN Top Zone Pressure Value	14.70	psia
DSNT2	DNBP	DSN Bottom Zone Pressure Value	1692.00	psia
DSNT2	DTDP	Top Depth for Pressure Gradient Calculation (Measured Depth)	0	ft
DSNT2	DNDP	Bottom Zone Pressure Depth (Measured Depth)	3500	ft
DSNT2	SHCO	View More Correction Options	No	
DSNT2	UTVD	Use TVD for Gradient Corrections?	No	
DSNT2	LHWT	Logging Horizontal Water Tank?	No	
DSNT2	BHSM	Borehole Size Source Tool	SDLT2	
SDLT2	CLOK	Process Caliper Outputs?	Yes	
Microlog Pad2	MLOK	Process MicroLog Outputs?	Yes	
SDLT Pad2	DNOK	Process Density?	Yes	
SDLT Pad2	DNOK	Process Density EVR?	No	
SDLT Pad2	CB	Logging Calibration Blocks?	No	
SDLT Pad2	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad2	DTWN	Disable temperature warning	No	
SDLT Pad2	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad2	DFL	Formation Density Fluid	1.000	g/cc
SDLT Pad2	BHSM	Borehole Size Source Tool	SDLT2	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Frequency Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Frequency Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Pore Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	User define	
BSAT	DTMA	Delta -T Matrix	47.60	uspf
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.19	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt Sonde	TPOS	Tool Position	Centered	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	

ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMAX	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
ACRt Sonde	BHSM	Borehole Size Source Tool	SDLT2	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	

BOTTOM

Data: E-LAND\_FLEM\_230\0001 GTET-DSN2-SDL2-BSAT-ACRT\IDLE

Date: 03-Apr-17 16:08:15

**HALLIBURTON**

## CALIBRATION REPORT

### NATURAL GAMMA RAY TOOL SHOP CALIBRATION

**Tool Name:** GTET - 11048627      **Reference Calibration Date:** 15-Feb-17 10:19:56  
**Engineer:** JORGE ORLANDO PEREZ      **Calibration Date:** 13-Mar-17 14:58:10  
**Software Version:** WL INSITE R5.0.5 (Build 8)      **Calibration Version:** 1

Calibrator Source S/N: TB-146  
 Calibrator API Reference:265.00 api  
 Equivalent Calibrator API Reference:269.6 api

Measurement	Measured	Calibrated	Units
Background	27.5	27.5	api
Background + Calibrator	296.5	297.2	api
Calibrator	269.0	269.6	api

### NATURAL GAMMA RAY TOOL FIELD CALIBRATION

**Tool Name:** GTET - 11048627      **Reference Calibration Date:** 13-Mar-17 14:58:10  
**Engineer:** THOMAS HYDE      **Calibration Date:** 21-Mar-17 13:37:53  
**Software Version:** WL INSITE R5.0.5 (Build 8)      **Calibration Version:** 1

Calibrator Source S/N: TB-146  
 Calibrator API Reference:265.00 api  
 Equivalent Calibrator API Reference:269.6 api

Field Verification	Shop	Field	Units
Background	27.5	29.2	api
Background + Calibrator	297.2	302.5	api
Calibrator	269.6	273.3	api

Shop	Field	Difference	Tolerance
269.6	273.3	-3.7	+/- 9.00

### ACCELEROMETER SHOP CALIBRATION

**Tool Name:** GTET - 11048627      **Reference Calibration Date:** 15-May-09 12:42:57  
**Engineer:** W.MILLER      **Calibration Date:** 13-Jan-10 16:35:19  
**Software Version:** WL INSITE R2.6.1 (Build 9)      **Calibration Version:** 1

Horizontal-1 Telemetry	Horizontal-2 Telemetry	Vertical Telemetry	Units
-78.18	-48.18	-16407.09	cnts

Coefficient	Coefficient Value	Tolerance
Gain	-0.000061	----
Offset	-0.004	----
Noise	0.0003	0.0000 - 0.0030

Orientation	Measured	Tolerance	Calibrated	Tolerance
-------------	----------	-----------	------------	-----------

Horizontal	0.00	-0.10 - 0.10	0.00	-0.10 - 0.10
Vertical	1.00	0.90 - 1.10	1.00	0.90 - 1.10

### DUAL SPACED NEUTRON SHOP CALIBRATION

<b>Tool Name:</b> DSNT2 - 10993115	<b>Reference Calibration Date:</b> 15-Feb-17 10:08:17
<b>Engineer:</b> JORGE ORLANDO PEREZ	<b>Calibration Date:</b> 13-Mar-17 11:43:34
<b>Software Version:</b> WL INSITE R5.0.5 (Build 8)	<b>Calibration Version:</b> 1

Logging Source S/N: DSN-424  
 Tank Serial Number: 12345678  
 Reference value assigned to Tank: 56.100  
 Snow Block S/N: 12345678  
 Calibration Tank Water Temperature: 65 degF  
 Min. Tool Housing Outside Diameter: 3.625 in

#### CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.99927	0.99592	0.900 - 1.100

#### WATER TANK SUMMARY (Horizontal Water Tank)

Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (decp):	0.2368	0.2358	0.0011	+/- 0.0020
Calibrated Ratio:	10.5950	10.5595	0.035	+/- 0.050

#### VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0809	0.02000 - 0.09000

#### PASS/FAIL SUMMARY

Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

### DUAL SPACED NEUTRON FIELD CALIBRATION

<b>Tool Name:</b> DSNT2 - 10993115	<b>Reference Calibration Date:</b> 13-Mar-17 11:43:34
<b>Engineer:</b> THOMAS HYDE	<b>Calibration Date:</b> 21-Mar-17 13:46:13
<b>Software Version:</b> WL INSITE R5.0.5 (Build 8)	<b>Calibration Version:</b> 1

Logging Source S/N: DSN-424  
 Snow Block S/N: 12345678

#### NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0809	0.0777	-0.0032	+/- 0.0150

#### PASS/FAIL SUMMARY

Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

### DENSITY CALIPER SHOP CALIBRATION

<b>Tool Name:</b> SDLT2 - 10960494	<b>Reference Calibration Date:</b> 13-Mar-17 10:54:03
<b>Engineer:</b> JORGE ORLANDO PEREZ	<b>Calibration Date:</b> 13-Mar-17 10:59:42
<b>Software Version:</b> WL INSITE R5.0.5 (Build 8)	<b>Calibration Version:</b> 1
<b>Host Tool Name:</b> DSNT - 10993115	

#### CALIBRATION COEFFICIENTS

**CALIBRATION COEFFICIENTS**

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2911.10	-2900.89	-7000.00 - -1000.00
Pad Gain	0.0003786	0.0003767	0.0002000 - 0.0006000
Arm Offset	-1777.50	-2019.68	-5000.00 - 3000.00
Arm Gain	0.0005156	0.0005359	0.000300 - 0.000700
Arm Power	-0.000004876	-0.000006036	-0.000010000 - 0.000010000

The ring diameter is computed from:  $\text{DIAMETER} = \text{PAD EXTENSION} + \text{ARM EXTENSION} + \text{TOOL DIAMETER}$

Tool Diameter: 4.50 in

CALIBRATION RINGS				
Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	2.01	2.00	-0.01	+/- 0.20
Medium Ring (in)	3.76	3.75	-0.01	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.55	6.50	-0.05	+/- 0.20
Medium Ring (in)	8.26	8.25	-0.01	+/- 0.20
Large Ring (in)	15.00	15.00	0.00	+/- 0.20

PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed
PASS/FAIL SUMMARY	
Calibration-Coefficients Range Check:	Passed

**SDLT CALIPER FIELD CALIBRATION**

<b>Tool Name:</b>	<b>SDLT2 - 10960494</b>	<b>Reference Calibration Date:</b>	<b>13-Mar-17 10:59:42</b>
<b>Engineer:</b>	<b>THOMAS HYDE</b>	<b>Calibration Date:</b>	<b>21-Mar-17 13:39:03</b>
<b>Software Version:</b>	<b>WL INSITE R5.0.5 (Build 8)</b>	<b>Calibration Version:</b>	<b>1</b>

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.76	3.71	-0.06	+/- 0.10
Ring Diameter	8.25	8.15	-0.10	+/- 0.15

PASS/FAIL SUMMARY	
Pad Extension Check:	Passed
Diameter Check:	Passed

**MICRO LOG SHOP CALIBRATION**

<b>Tool Name:</b>	<b>Microlog Pad2 - 10960494</b>	<b>Reference Calibration Date:</b>	<b>13-Mar-17 11:10:33</b>
<b>Engineer:</b>	<b>JORGE ORLANDO PEREZ</b>	<b>Calibration Date:</b>	<b>13-Mar-17 11:12:02</b>
<b>Software Version:</b>	<b>WL INSITE R5.0.5 (Build 8)</b>	<b>Calibration Version:</b>	<b>1</b>
<b>Host Tool Name:</b>	<b>DSNT - 10993115</b>		

CALIBRATION COEFFICIENT SUMMARY					
Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.00	-0.01	-0.23	-0.21	ohmm
Calibration Point #1	0.01	0.00	-0.02	0.00	ohmm
Calibration Point #2	20.02	20.00	20.00	20.00	ohmm
Internal Reference	19.78	19.76	20.00	20.00	ohmm

Measurement	Micro Log Normal Tool Value	Micro Log Lateral Tool Value	Units
Tool Zero	0.75	0.57	V

Tool Zero	0.73	0.57	
Calibration Point #1	3.73	71.97	V
Calibration Point #2	5368.44	6939.49	V
Internal Reference	5304.54	6938.98	V

### MICRO LOG FIELD CHECK

**Tool Name:** Microlog Pad2 - 10960494      **Reference Calibration Date:** 13-Mar-17 11:12:02  
**Engineer:** THOMAS HYDE      **Calibration Date:** 21-Mar-17 13:34:39  
**Software Version:** WL INSITE R5.0.5 (Build 8)      **Calibration Version:** 1

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Shop	Field	Shop	Field	
Tool Zero	-0.01	-0.02	-0.21	-0.21	ohmm
Internal Reference	19.76	19.77	20.00	20.01	ohmm
Summary					
Signal	Shop	Field	Difference	Tolerance	
Microlog Normal	19.76	19.77	-0.01	+/- 0.80	
Microlog Lateral	20.00	20.01	-0.01	+/- 0.80	

### SPECTRAL DENSITY SHOP CALIBRATION

**Tool Name:** SDLT Pad2 - 10844781      **Reference Calibration Date:** 13-Mar-17 10:05:39  
**Engineer:** JORGE ORLANDO PEREZ      **Calibration Date:** 13-Mar-17 10:24:03  
**Software Version:** WL INSITE R5.0.5 (Build 8)      **Calibration Version:** 1

Logging Source S/N: 5168GW  
 Aluminum Block S/N: EL RENO STD ALUMINUM      Density: 2.581g/cc      Pe: 3.170  
 Magnesium Block S/N: EL RENO      Density: 1.687g/cc      Pe: 2.594

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0457	1.0364	0.90 - 1.10
Near Dens Gain	1.0261	1.0238	0.90 - 1.10
Near Peak Gain	1.0335	1.0221	0.90 - 1.10
Near Lith Gain	1.0253	1.0552	0.90 - 1.10
Far Bar Gain	1.0152	1.0145	0.90 - 1.10
Far Dens Gain	1.0028	1.0038	0.90 - 1.10
Far Peak Gain	0.9992	1.0000	0.90 - 1.10
Far Lith Gain	0.9785	0.9816	0.90 - 1.10
Near Bar Offset	-0.1210	-0.0376	NONE
Near Dens Offset	0.0288	0.0482	NONE
Near Peak Offset	-0.0463	0.0495	NONE
Near Lith Offset	0.0233	-0.2247	NONE
Far Bar Offset	0.1023	0.1095	NONE
Far Dens Offset	0.2000	0.1904	NONE
Far Peak Offset	0.2240	0.2182	NONE
Far Lith Offset	0.3690	0.3442	NONE
Near Bar Background	735.26	733.33	700 - 1450
Near Dens Background	243.40	239.77	230 - 480
Near Peak Background	104.80	105.24	100 - 210
Near Lith Background	129.73	129.58	125 - 260
Far Bar Background	478.61	478.31	450 - 900
Far Dens Background	188.66	188.83	175 - 345
Far Peak Background	73.88	74.80	70 - 140
Far Lith Background	76.35	77.92	75 - 145

### CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
<b>MAGNESIUM</b>				
Density (g/cc)	1.688	1.687	-0.001	+/- 0.015
Pe	2.572	2.551	-0.021	+/- 0.150
<b>ALUMINUM</b>				
Density (g/cc)	2.579	2.581	0.002	+/- 0.01500
Pe	3.090	3.123	0.033	+/- 0.150

<b>TOOL SUMMARY</b>				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
<b>QUALITY</b>				
Background	0.0007	+/- 0.0110	0.0005	+/- 0.0140
Magnesium Block	-0.0004	+/- 0.0110	-0.0016	+/- 0.0140
Aluminum Block	-0.0000	+/- 0.0110	-0.0006	+/- 0.0140
Resolution	9.75	6.00 - 11.50	8.79	6.00 - 11.50
Internal Verifier(B+D+P+L)	1208	1200 - 2700	820	800 - 1700

<b>PASS/FAIL SUMMARY</b>	
Background Quality Check:	Passed
Background Range Check:	Passed
Background Resolution Check:	Passed
Background Verification Check:	Passed
Magnesium Quality Check:	Passed
Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

### SPECTRAL DENSITY FIELD CHECK

**Tool Name:** SDLT Pad2 - 10844781      **Reference Calibration Date:** 13-Mar-17 10:24:03  
**Engineer:** THOMAS HYDE      **Calibration Date:** 21-Mar-17 13:37:47  
**Software Version:** WL INSITE R5.0.5 (Build 8)      **Calibration Version:** 1

Pad Temperature: 75.2 degF

<b>DENSITY FIELD CALIBRATION SUMMARY</b>				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1207.924	1211.575	3.651	14.107
Far (B+D+P+L) cps	819.864	822.039	2.175	15.798
Near Resolution	9.75	9.64	-0.110	0.50
Far Resolution	8.79	8.86	0.070	1.00

<b>PASS/FAIL SUMMARY</b>	
Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

### BSAT FIELD CASING CHECK

**Tool Name:** BSAT - 10939050      **Calibration Date:** 14-Mar-08 11:12:27  
**Engineer:** STEPHEN WEEKS  
**Software Version:** WL INSITE R2.0 (Build 22)      **Calibration Version:** 1

Pre-Log Check	Check Depth	Shop	Field	Difference	Tolerance	Units
Delta-T Compensated	2073.28	57000000.00	56.55	56,999,943.4500	1.00	uspf

### ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION

**Tool Name:** ACRt Sonde - 11024142      **Reference Calibration Date:** 10-Mar-17 17:01:23

TYPICAL GAIN RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.0407	1.05	0.95	1.0205	1.05	0.95	1.0166	1.05
A2 (50")	0.95	1.0437	1.05	0.95	1.0250	1.05	0.95	1.0236	1.05
A3 (29")	0.95	1.0370	1.05	0.95	1.0171	1.05	0.95	1.0134	1.05
A4 (17")	0.95	1.0327	1.05	0.95	1.0103	1.05	0.95	1.0082	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.0089	1.05	0.95	1.0062	1.05
A6 (6")	N/A	N/A	N/A	0.95	1.0007	1.05	0.95	0.9975	1.05

SONDE OFFSET									
Subarray	R12KHz			R36KHz			R72KHz		
	(mmho/m)			(mmho/m)			(mmho/m)		
A1 (80")	1.918			-3.913			-6.274		
A2 (50")	0.695			-3.804			-5.056		
A3 (29")	-12.000			-3.809			-3.987		
A4 (17")	-107.833			-33.868			-26.647		
A5 (10")	N/A			-105.783			-49.862		
A6 (6")	N/A			237.250			131.878		

TRANSMITTER CURRENT GAIN					R-MUD VERIFICATION			
Signal	Lower	R	Upper		Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
12K	0.6	0.85	1.3		Mud Cell	0.95	1.00	1.05
36K	1.0	1.83	2.0					
72K	1.0	1.10	2.0					

**PASS/FAIL SUMMARY**

GAIN RANGE CHK	PASS
SONDE OFFSET CHK	PASS

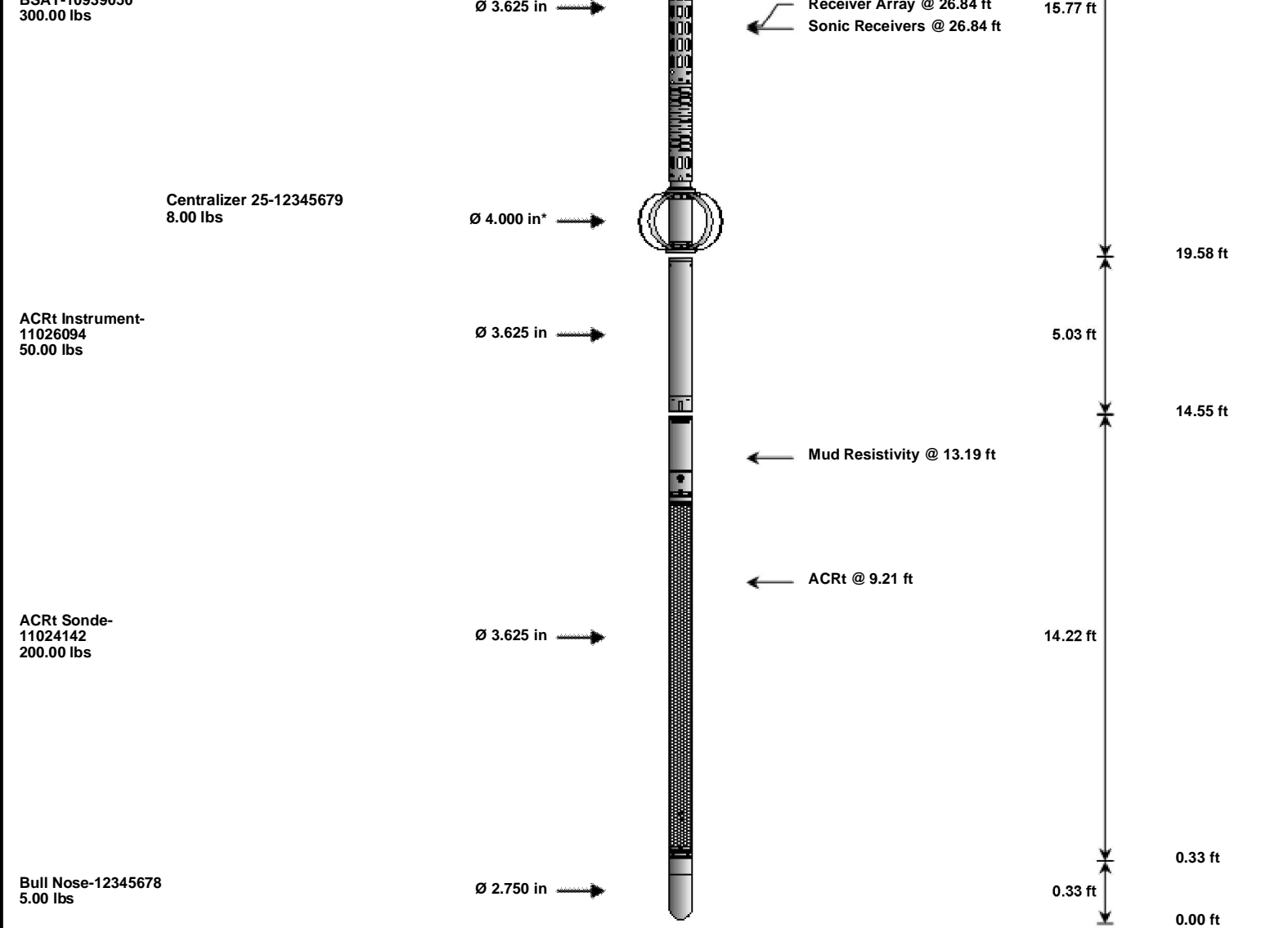
TOOL OK TO LOG

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
<b>GTET-11048627</b>						
Gamma Ray Calibrator	269.6	273.3	-----	-3.7	+/- 9.00	api
<b>DSNT2-10993115</b>						
Snow-Block Porosity	0.0809	0.0777	-----	0.0032	+/- 0.0150	decp
<b>SDLT2-10960494</b>						
Pad Extension	3.75	3.71	-----	0.04	+/-0.10	in
Ring Diameter	8.25	8.15	-----	0.10	+/-0.15	in
<b>Microlog Pad2-10960494</b>						
MicroLog Normal	19.76	19.77	-----	-0.01	+/-0.80	ohmm
MicroLog Lateral	20.00	20.01	-----	-0.01	+/-0.80	ohmm
<b>SDLT Pad2-10844781</b>						
Near(B+D+P+L)	1207.924	1211.575	-----	-3.651	+/-14.107	cps
Far(B+D+P+L)	819.864	822.039	-----	-2.175	+/-15.798	cps
<b>ACRt Sonde-11024142</b>						
Mud Cell	1.00	-----	-----	0	-----	ohm-m



**TOOL STRING DIAGRAM REPORT**

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length	
CH_HOS-11459024 37.50 lbs		Ø 2.750 in		← Temperature @ 76.74 ft	2.50 ft	77.24 ft	
XOHD-11572809 20.00 lbs		Ø 2.750 in Ø 3.625 in		← SP @ 72.01 ft	0.95 ft	74.74 ft	
SP Sub-11441455 60.00 lbs		Ø 3.625 in		← Z-Accelerometer @ 69.60 ft	3.74 ft	73.79 ft	
GTET-11048627 165.00 lbs		Ø 3.625 in		← GammaRay @ 63.99 ft	8.52 ft	70.05 ft	
DSNT2-10993115 174.00 lbs	DSN Decentralizer- 10993115 6.60 lbs	Ø 5.000 in* Ø 3.625 in		← DSN Far @ 54.59 ft ← DSN Near @ 53.84 ft	9.69 ft	61.53 ft	
SDLT2-10960494 360.00 lbs	SDLT Pad2-10844781 65.00 lbs Microlog Pad2-10960494 8.00 lbs	Ø 4.500 in Ø 4.500 in* Ø 4.750 in*		← Microlog @ 44.03 ft ← SDL Caliper @ 43.84 ft ← SDL @ 43.83 ft	10.81 ft	51.84 ft	
IQ Flex-11005585 140.00 lbs		Ø 3.625 in			5.67 ft	41.03 ft	
Centralizer 25-12345678 8.00 lbs		Ø 4.000 in*				35.36 ft	
BSAT-10939050							



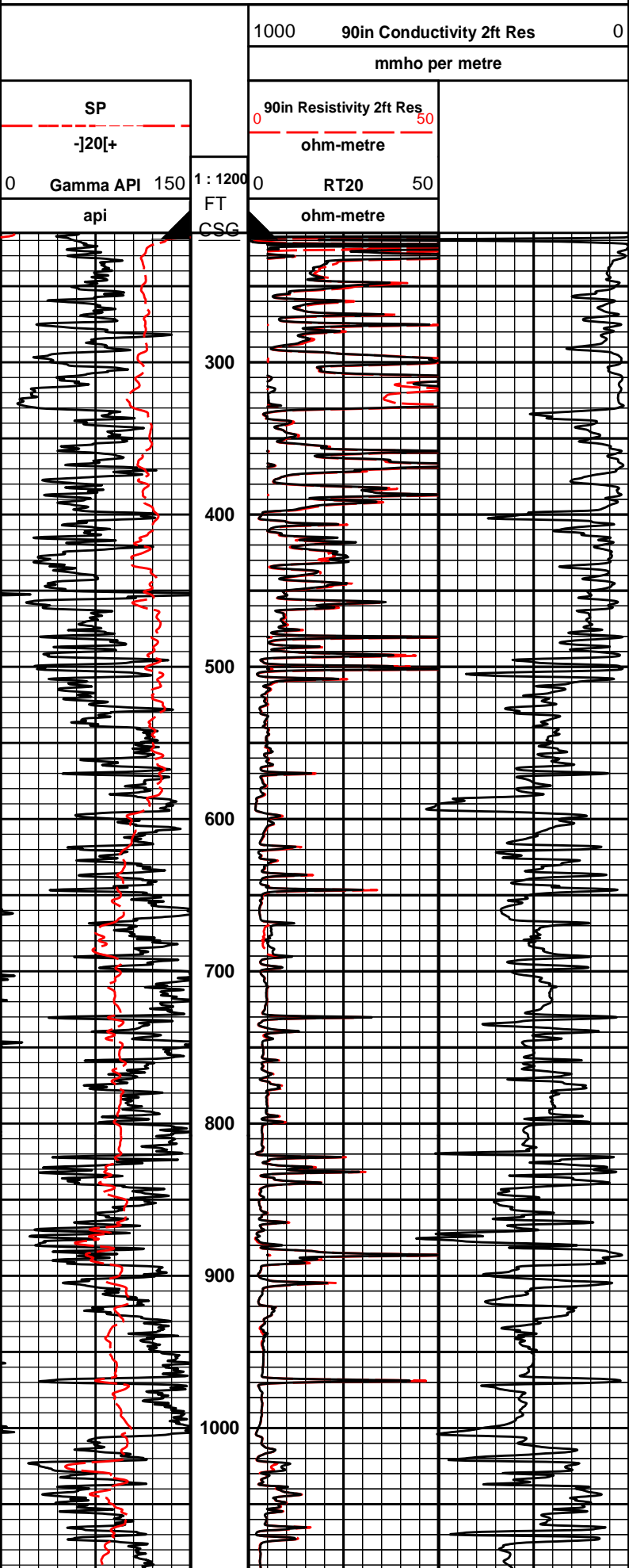
Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max. Log. Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell	11459024	37.50	2.50	74.74	300.00
XOHD	Hostile to Dits Cross Over	11572809	20.00	0.95	73.79	300.00
SP	SP Sub	11441455	60.00	3.74	70.05	300.00
GTET	Gamma Telemetry Tool	11048627	165.00	8.52	61.53	60.00
DSNT	Dual Spaced Neutron	10993115	174.00	9.69	51.84	60.00
DCNT	DSN Decentralizer	10993115	6.60	5.13	* 55.17	300.00
SDLT	Spectral Density Tool	10960494	360.00	10.81	41.03	60.00
SDLP	Density Insite Pad	10844781	65.00	2.55	* 43.24	60.00
MICP	Microlog Pad	10960494	8.00	1.00	* 43.53	60.00
IQF	IQ Flex tool	11005585	140.00	5.67	35.36	300.00
BSAT	Borehole Sonic Array Tool	10939050	300.00	15.77	19.58	60.00
OBCEN	Centralizer - 25 in. Overbody	12345679	8.00	2.08	* 19.67	300.00
OBCEN	Centralizer - 25 in. Overbody	12345678	8.00	2.08	* 32.66	300.00
ACRT	Array Compensated True Resistivity Instrument Section	11026094	50.00	5.03	14.55	120.00
ACRT	Array Compensated True Resistivity Sonde Section	11024142	200.00	14.22	0.33	120.00
BLNS	Bull Nose	12345678	5.00	0.33	0.00	300.00
<b>Total</b>			<b>1,607.10</b>	<b>77.24</b>		

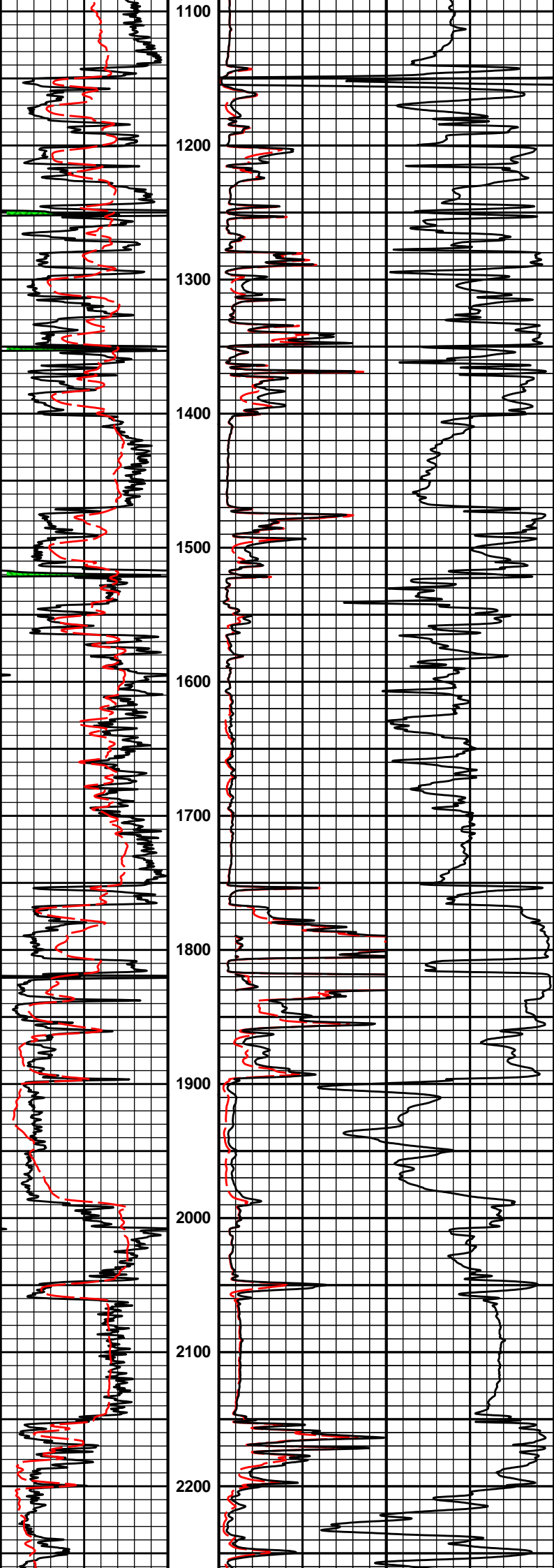
\* Not included in Total Length and Length Accumulation.

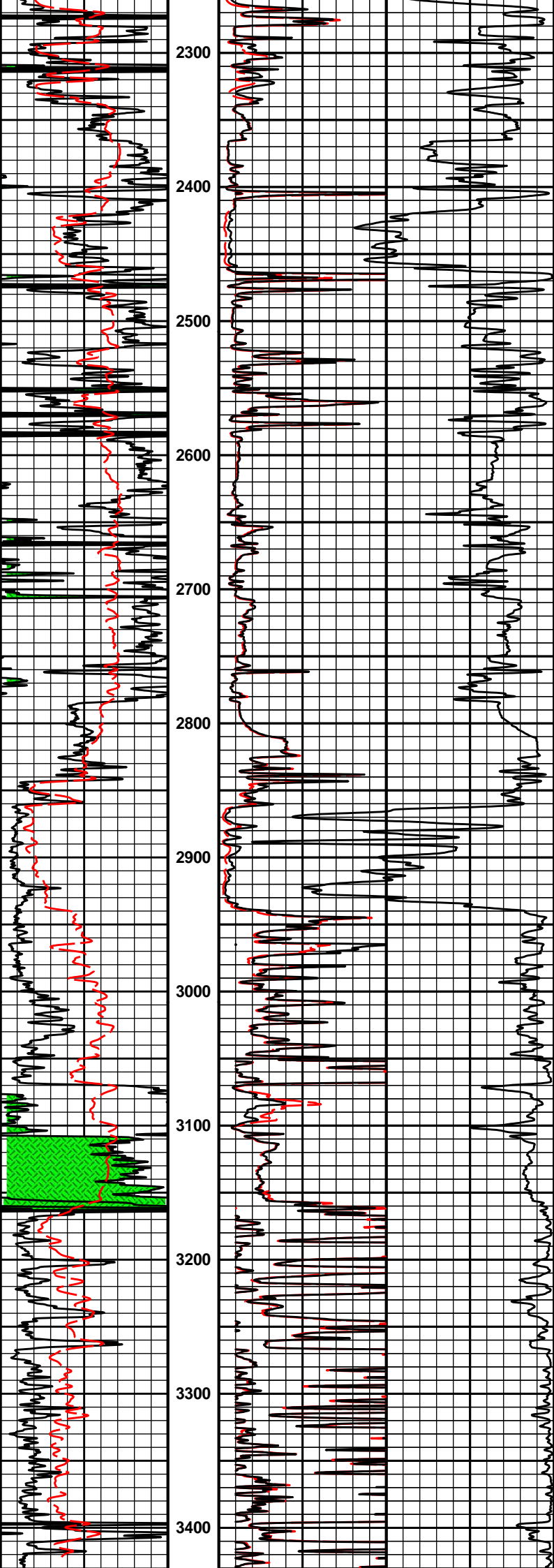
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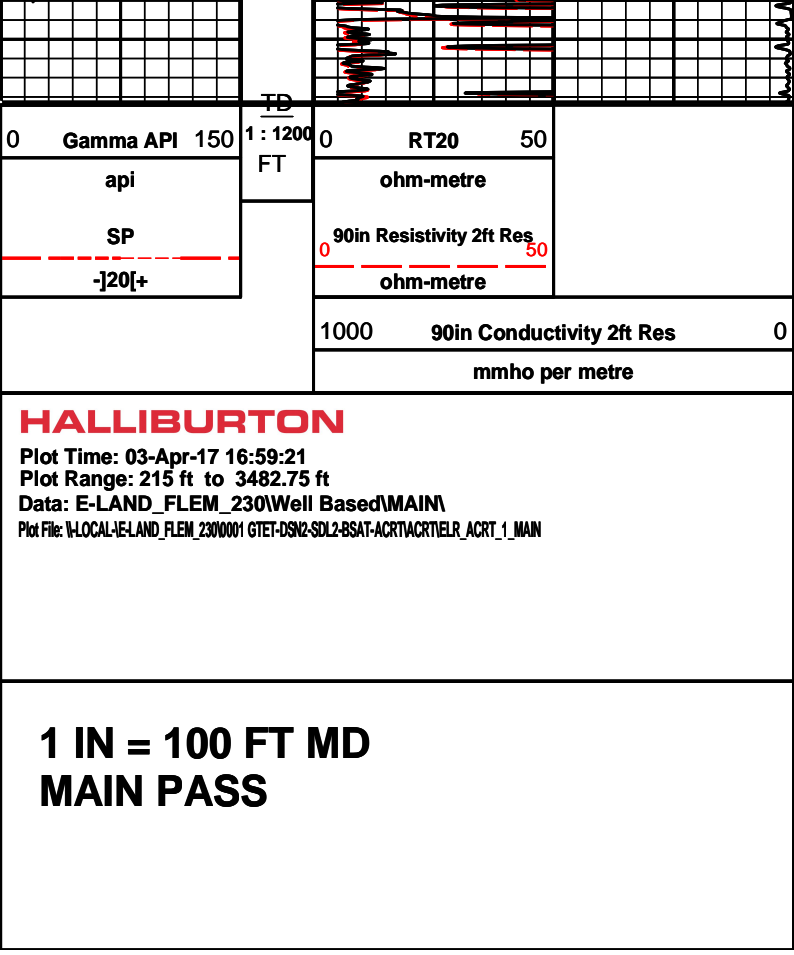
**HALLIBURTON**  
 Plot Time: 03-Apr-17 16:59:20  
 Plot Range: 215 ft to 3482.75 ft  
 Data: E-LAND\_FLEM\_230\Well Based\MAIN\  
 Plot File: \\LOCAL-IE-LAND\_FLEM\_230\0001 GTET-DSN2-SDL2-BSAT-ACRT\ACRT\ELR\_ACRT\_1\_MAIN

# 1 IN = 100 FT MD MAIN PASS









**HALLIBURTON**

Plot Time: 03-Apr-17 16:59:21  
 Plot Range: 215 ft to 3482.75 ft  
 Data: E-LAND\_FLEM\_230Well Based\MAIN  
 Plot File: \\LOCAL\E-LAND\_FLEM\_230\0001 GTET-DSN2-SDL2-BSAT-ACRTIACRTIELR\_ACR1\_1\_MAIN

**1 IN = 100 FT MD  
 MAIN PASS**

COMPANY	E-LAND VENTURES		
WELL	FLEMING 2-30		
FIELD	WILDCAT		
COUNTY	BUTLER	STATE	KANSAS

**HALLIBURTON**

ARRAY COMPENSATED  
 TRUE RESISTIVITY  
 LOG

# MBC WELL LOGGING LLC

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

Well Name: FLEMING # 2-30 E-LAND VENTURES LLC  
API 15-015-24080- 00: 35415  
Location: BUTLER COUNTY, KANSAS USA  
License Number: 32446  
Spud Date: 3-27--2017  
Surface Coordinates: 2078'fnl 1111'fwl SEC 30-T28s-R06E  
Bottom Hole Coordinates: HLS-DIL/SP/GR CNL/CAL/PE/BHV SONIC SFC- GR TO SFC'  
Ground Elevation (ft): 1375  
Logged Interval (ft): 2100 To: 3491  
Formation: ARBUCKLE  
Type of Drilling Fluid: FUD MUD CO AARON RUSH CELL (620)-218-1602

Region: FLEMING  
Drilling Completed: 4-03-17

C & G DRILLING 32701, MARFK CRAWFORD GEOLOGIST

K.B. Elevation (ft): 1384

Total Depth (ft): E-LOG

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com


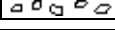
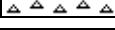




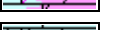
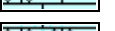


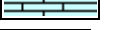









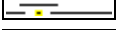




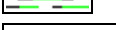


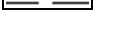
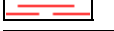



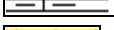
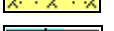
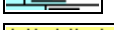


## OPERATOR

Company: E-LAND VENTURES  
Address: ATTN DAVID ARNDTS CELL (214)-803-3770  
6009 W PARKER ROAD #149-273  
PLANO, TEXAS 75093

## MUDLOGGER

Name: AUSTIN GARNER (620)655-2016  
Company: MBC WELL LOGGING LLC  
Address: 21156 RD 22  
MEADE, KANSAS 67864

### ROCK TYPES

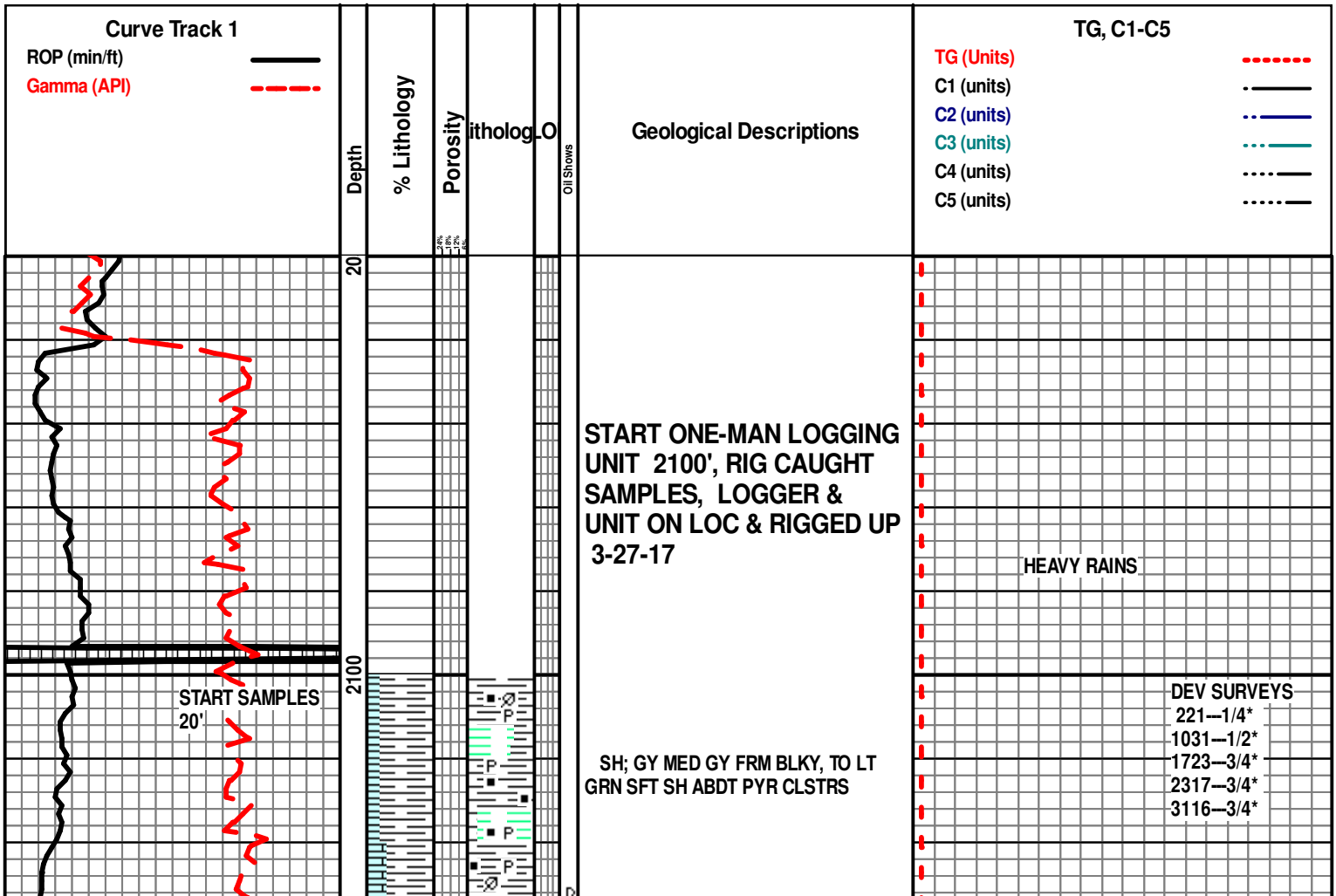
 Anhy  Brec  Cht  Coal  Congl  Dolo new  New dolomite 20  Newdolo ls 2  Ls & ooids  Oolitic ls -1	 Stgensndy-arkos  New ls-1  Carby shale  Lmy carby sh-3  Carb sh  Gyp  Slstst  Salt  Sndy sh--red  Sndy sh	 Slstst-1  Slty-shale  Lmy ss-1  Arkosic snd  Ss  Grn sh strk  Grn mott gy sh  New symbol  Lmy sh-2  Shale-1	 Red sh-1  Stgensndy-arkos  Sndy ool ls  Sndy-ls-1  Calc shale  Granitewash  Ls shly-b  Poor sortd ss  Snd-ls-sh
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### Comments

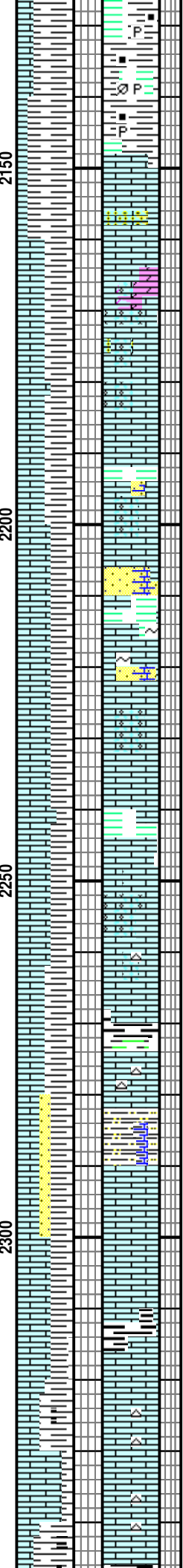
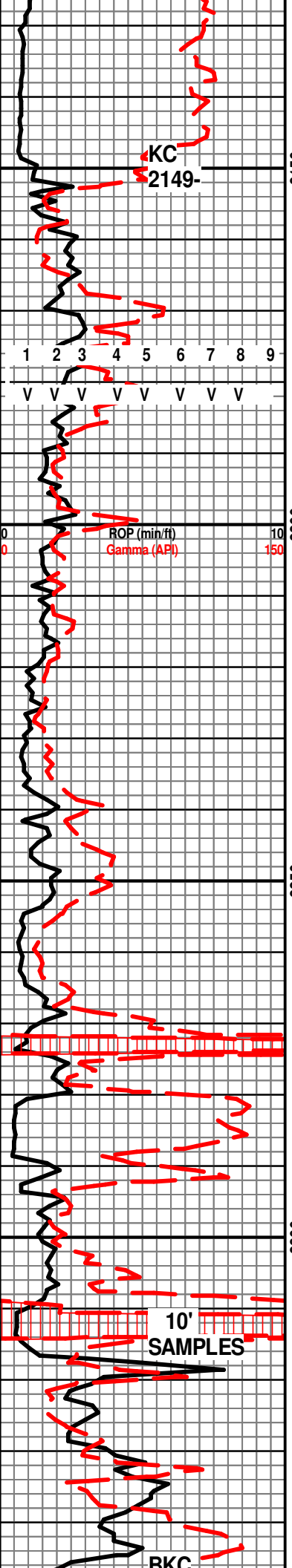
1. SPUD 3-27-17, SET 8/57" CSG 210, ELITE CEMENTING
2. 3-28-17--- drill out
3. 3-29-17--- 2173, TRIP PDC BIT 2317 RR 7/78 GTX 22/22/22
4. 3-30-17---- 2604
5. 3-31-17----2995 CFS 2788 15/30/45
6. 4-01-17----3173 CFS 3173 15/30/45--DST
7. 4-02-17----3308 CFS 3222 15/30/45, RR BIT GT27Y3/24'S
8. 4-03-17----3477 DRILL TO RTD 3491, CIRC TOH E-LOGS HLS

### DSTs

DIAMOND TESTING, (620) 653-7550  
 JAKE FAHRENBRUCH (629)282-8977  
 DST #1 3070-3173







SH; V/LT GY FISS, ABDT CARB LENS, MICA, PYR

LS; GY WH HD DNS SHLY XLN TO INCRS LT BUFF WH BIOSPARITIC//VF SHADOW OOL, NO ODOR, 20% AMBER FLOR NSOC

LS; LT TN BUFF TR BRTL BIOSPARITIC//VF SHADOW OOL, TR DK TN F-XTL DOLO LS W/RED BAND, INTBD GRN TO GY SH SCATT AMBER FLOR, NO ODOR, NSOC

LS; BUFF SLI TN WEATHD APPR TO SPARITIC//VF OOL, FREE CRIN & FUS/FOSS, FRGS, F-SUCROSIC EDGES IP, NO ODOR, FAINT GOLD TINT FLOR, NSOC

TR SS; V/LT GRN, CALC CMT, VF GR RD, ABDT GLAU, TR BRITE GRN SH, NFSOC\

LS; GY UIFF WH VF SPARITIC W/MICRO OOL, NO ODOR, MFNSOC

LS; WH BUFF HD F XLN SPARRY, SHADOW VFD SHALLOW OOLCAS, & OOL, FOSS PCES, NO ODOR, PURPL TO GOLD TINT FLOR NSOC  
INTBDS TITE VF SS STRINGERS

SH; GRNISH TINT BLK TO GRN, MOTT IP, CARB MATL

LS; BRN TN F XLN SPARIOTIC TO S-CHLKY, FRAC, FREE OPAQ CALC XTLS, CLR VIT CHT, NO ODOR, SME FAINT GOLD FLOR NSOC

SH; MED GY SFT VF/SLTY SNDY IP, ABDT MICA, & CARB MATL

TRIP PDC BIT 2317, RR BIT # 2 GT 25XG 22/22/22 JETS

LS; GY LT GY WH TN FRAC, F-XLN, SHLY, SH INCLUS, VF BRECCA EDGES, GTR SILIC FILL, NO ODOR, PURPL TO FAINT GOLD FLOR, NSOC

2103  
MUD CHECK  
WT 8.4  
VIS 29  
PV 2  
YP 4  
GEL 1/4  
PH 9.0  
FIL 13.6  
ALKFIL 0.20  
CHL 300  
CAL 20  
SOL 0.7  
\$ 3,235.00

HEAVY RAINS

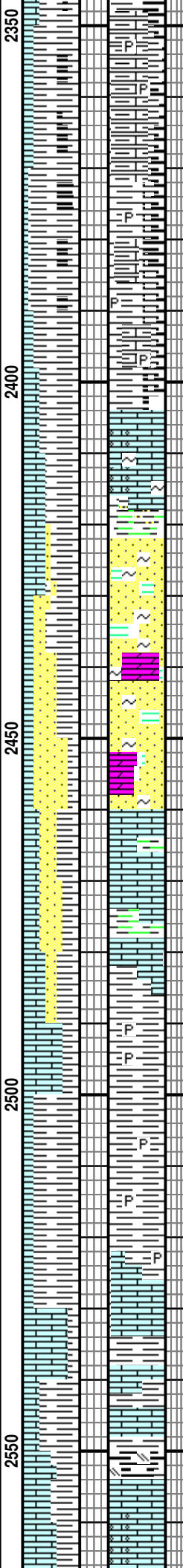
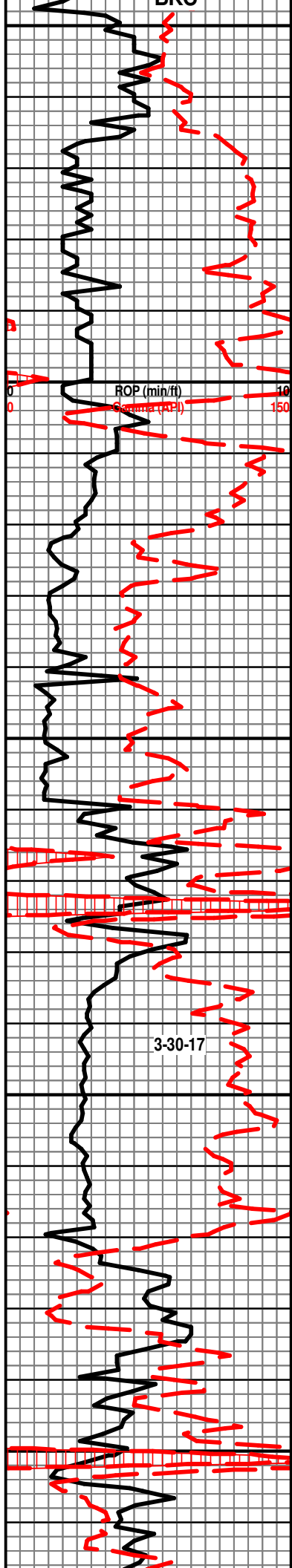
TG, C1-C5

JET PITS RAIN WATER, RUN PRE-MIX

MOVE EXTRATOR

10' SAMPLES

BKC



SH; BLK HD BLKY CALC,  
 B;K TO DK GY HD BLKY LMY GRDS  
 TO V/SHLY LS, MICA, SME PYR

SH BLK DK GY BLKY TO PLATY,  
 CALC, ABDT PYR CLSTRS

SH DK GY ABDT W/GRN TINT ABDT  
 PYR

LS; TN GY HD DNS FOSS XLN  
 LS; LT TN HD SPARITIC SHADOW VF  
 OOL, TO HD XLN W/TR GLAU, & CHOR,  
 SPICULES, MFNSOC NO ODOR

SS; LT GRNISH OPAQ, VF GR HD TT,  
 NFSOC

SS; V/LT GRN TINT- OPAQ, HD TT TO  
 MED FRI, VF GR, NON CALC, GRN  
 CLAY INTGR GRAIN, ABDT GLAU, &  
 BLK SPKS, INTBD BRN MOTT HD DNS  
 GRITTY DOLOM VF OOL, SCATT MED  
 GOLD FLOR, NO ODOR, NSOC

LS; TN GY HD DNS F-XLN, W/INTBD  
 SS STRINGERS

LS; LT TN GY HD F XLN TO S-CHLKY  
 SME MICRO FOSS, NO ODOR, MFNSOC

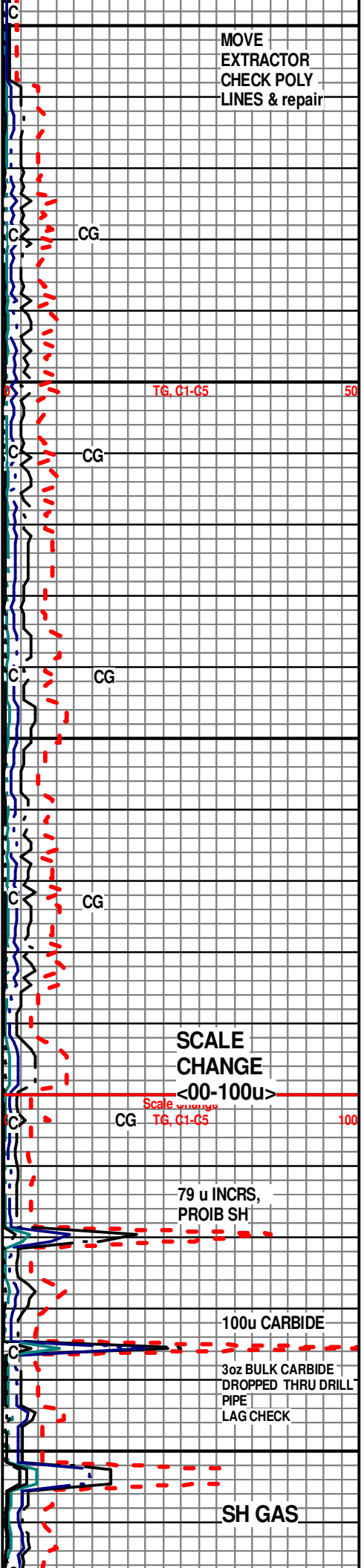
SH; MED TO DK GY FRM, BLKY, SME  
 CALC

SH DK GY FLAKEY NON CVALC, PYR  
 IP, SME GY WAXY

LS; LT GYISH TN P/SRTD  
 BIOSPARITIC, SME PYR, SHLY XLN LS  
 MFNSOC NO ODOR, INTBD GY-BRN  
 SH

SH; BLK CARB PYR GYP BANDS

LS; TN GY TN HGD DNS F XLN, SME  
 FOSS, TR OOL, MED GOLD FLOR,  
 NSOC NO ODOR



MOVE  
 EXTRACTOR  
 CHECK POLY  
 LINES & repair

CG

CG

CG

CG

CG

CG

TG, C1-C5

Scale change  
 TG, C1-C5

SCALE  
 CHANGE  
 <00-100u>

79 u INCRS,  
 PROIB SH

100u CARBIDE

3oz BULK CARBIDE  
 DROPPED THRU DRILL  
 PIPE  
 LAG CHECK

SH GAS

ROP (min/ft)

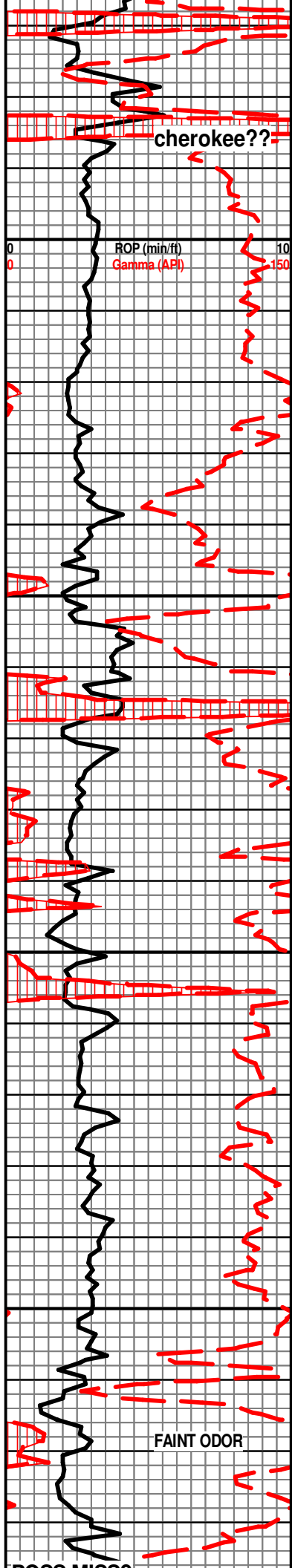
Gamma (API)

3-30-17

2350  
 2400  
 2450  
 2500  
 2550

50

100



SH; BLK CARB, BRTL TO HD DNS, MICA, SME PYR

LS; OFF WH TO TN HD FRAC XLN, FOSS FRGS, SME CHLKY, SME GOLD FLOR, NSOC NO ODOR

SS; LT GRNISH TN HD TOI BRTL CMTED, VF GR, SLI CALC, GLAU, MICA, SHLY, NO ODOR, PURPL FLOR NSOC

SH; BLK DK GYSLI GUMMY, CARBY TR TN BRN, SCATT PYR

SH; DK GY BLK, CARBY BLKY, LMY

SH; BLK CARBY SH SME SLI RED, PYR,

LS; GY TN TO SLI BRN, HD DNS XLN TO WEATHD APPR S CHLKY IP, MFNSOC NO ODOR

BLACK CARB SH, INTBD SS & LS STRINGERS

SH; BLK DULL, RGH TXT, CONTORTED, MED GY WAXY W/FOSS PCES, SCATT LS ^ SS STRINGERS

BLK CARB SH

VARY REDS TO GRN TO BLK SH GRN SH HAS CRM VF PELL

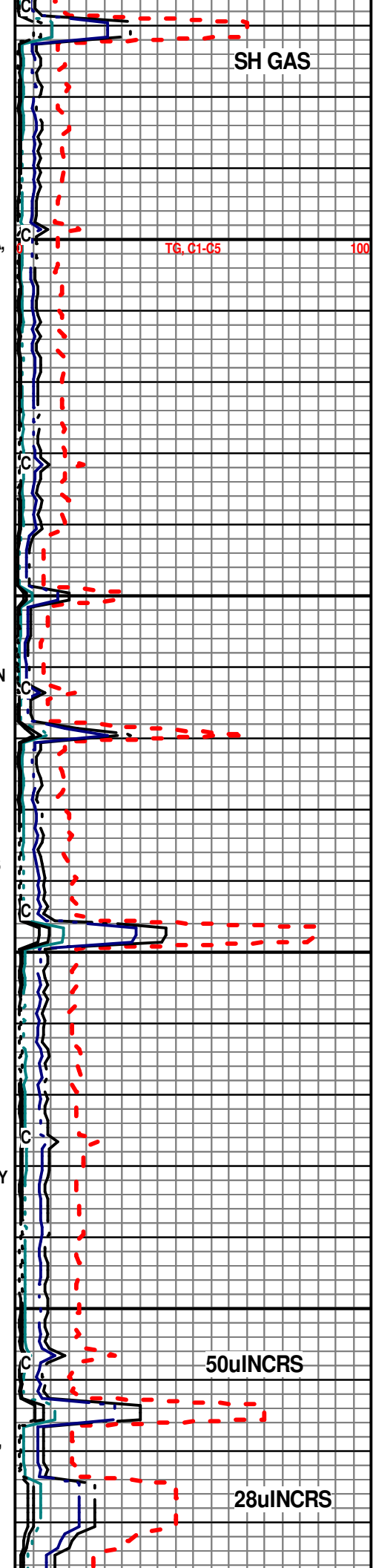
SLTST; GYISH SLI GRN, HD DNS SLTY SNDYS, SHLY, MICA, TR GLAU, INTBD LS STYRINGERS

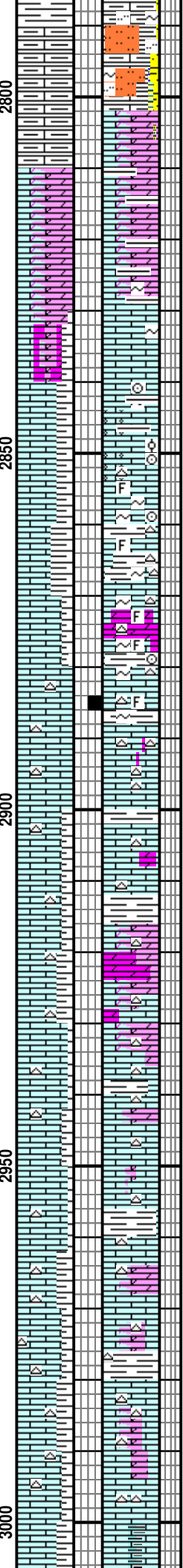
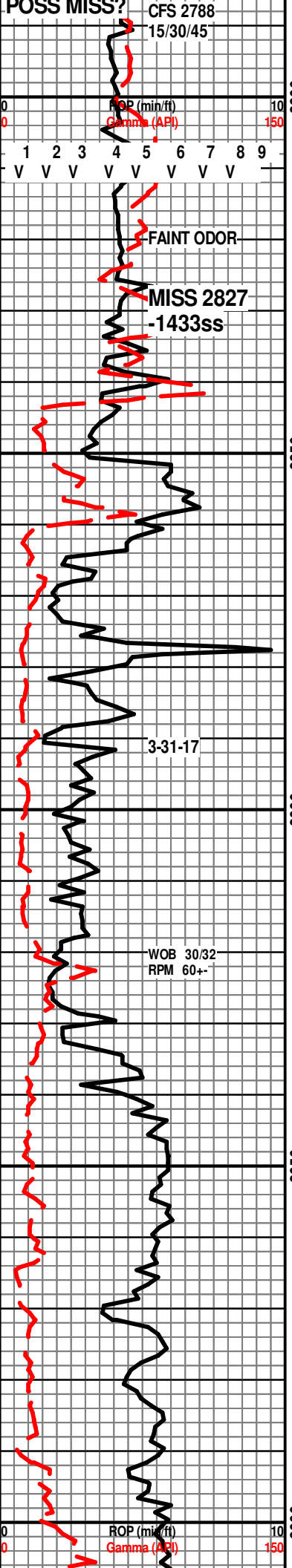
SH; BLK TO GRN, ABTD PYR

TR (1) SS;LT OFF WH GY, VF-F GR, MED TT, GRNS APPR COATED, BLK FLOR NSOC NODOR

COALY BLK SH V/PYRITIC, FREE PYR, ABTD SH W/ CARB LENS, ( POSS CHANNEL FILL?)

TR; (1) 30min CF===SSS, DIRTY GY WH VF GR, NO VIS POR, BLK FLOR NSOC NO ODOR





SH/LS; GY WH BLKY, , GLAU, 40%  
INSOLUB PARTICLES, NO SHOW

DK BRN ARGIL DOLOMITIC/LS, RGH  
TXT, PYR TR ORNG POSS FOSS TUBE  
OR CRIN, V/FAINT ODOR, SME FAINT  
GOLD FLOR, NSOC

LS; DK BRN TO TN SPARITIC FOSS  
DETYRT, GLAU PYUR, TR FAINT GOLD  
FLOR, NO ODOR, NSOC

LS; HEAVY FOSS GLAU CHOR W/  
CLR SPAR MATRIX NO SHOW

LS; CRM TN P/SRTD BIOSPARITIC,  
SME SILLIC FOSS FILL SME FREE  
CHT,F ABDT GLAU & CHOR, SME WH  
CHLJ, TR F-OVAL OOIDDS, DK PURPL  
FLOR NO ODOR, NSOC

LS; WH CRM, BUFF, SLI VF  
SUCROSIC/WEATHD CHLKY, TO DNS,  
FOSS CHT, FREE CRS SPAR XTLS,  
ABDT CRM WH CHLK, PURPL W/FAINT  
GOLD TINT, NO ODOR, NSOC

TR LT BUFF VF SUGARY DOLO

LS; TN-GY CRM, WEATHD APPR, TP  
SPAR CMTED XLN, SME SHADOW  
OOL, TN TO WH FOSS CHT, LAM GRN  
CLAY PURP FLOR NO ODOR NSOC

DOLO V/LT BUFF GRNY SHADOW  
FOSS, PYR, GY SEMI DULL CONTORTD  
CHT, BLK FLOR NO ODOR, NSOC

LS; WH-GY BUFF, VF GRNY WEATHD  
APPR, VIT CHT W/SPICULES, BLK  
FLOR, NO ODOR, NSOC

LS; CRM WH SLI GY WH SME HD DNS  
SME FOSS ABDT BLK TO GRN SH,  
BLK PURP FLOR NO ODOR, NSOC

LS; GYISH WH CRM WEATHD APPR,  
GRNY, FREE CRS CLR SPAR XTLS,  
PURPL FLOR NO ODOR, NSOC

LTY GY-GRNISH VF CALCITIC SH  
PRED LS GYWH HD DNS F XLN  
TR CRM, FREE CRS TO FLAT SPERLY

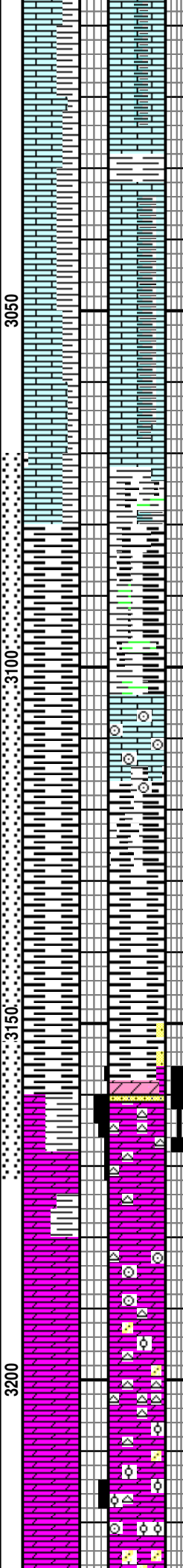
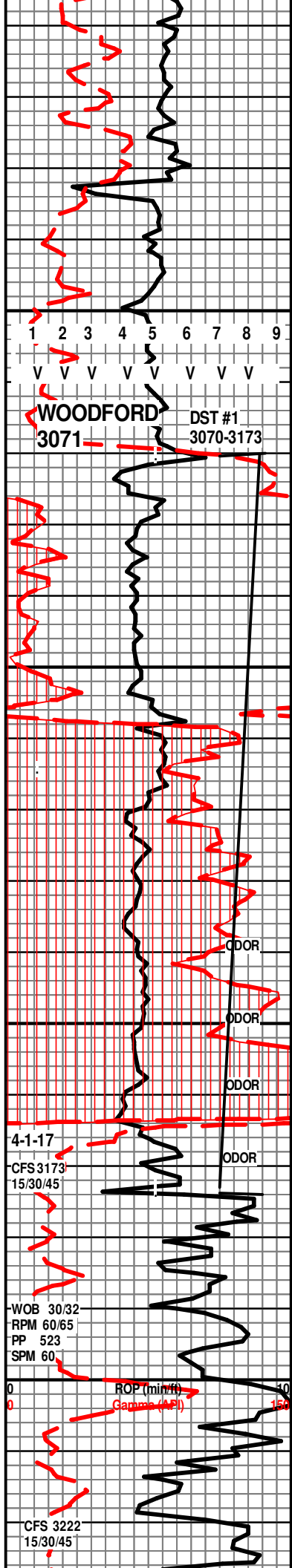
TG, C1-C5 100

SCALE  
CHANGE  
<0-50u>

Scale Change  
TG, C1-C5 50

2989  
MUD CHECK  
WT 9.2  
VIS 38  
PV 10  
YP 5  
GEL 5/10  
PH 8.5  
FIL 8  
ALKFIL 0.7  
CHL 700  
CCCAL 20  
SOL 6.4  
LCM 1  
\$ 7,934.00  
GEL 5/10 PH8.5

TG, C1-C5 50



TR CRIN, FREE CRS TO FLAT PBEELY  
QTZ W/SECD QTZ NO ODOR, PURPL  
FLOR NSOC

TN HD DNS FRAC XLN LS

SH; LT GY GY SME SLI BLK SFT  
GRITTY PRED LT GY FOSS DNS  
XLN, LS, MFNSOC NO ODOR

LS; WH GY WH SLI CRM, P/SRD  
DETRIT, FOSS PCES, SHLY IP, PURPL  
FLOR NO ODOR, NSOC

LS; LT GYISH TN CRM, WEATHD  
APPR, SHDW FOSS,, CRM WH CHLK,  
TR CHLKY VF OOL, SME FAINT GOLD  
FLOR NO ODOR, NSOC

SH; BLK BRN, SME OLIVE, NON  
CALC, ABTD FREE PYR

SH; BLK DK GY SME OLIVE, BLKY,  
SME BRN MUDST, ABTD FREE PYR

LS; P/SRTD F TO MED CRINOIDAL,  
SME MED OOL, SPAR TO CHLKY, ABTD  
PYR, PURPL TO BLK FLOR, NO ODOR,  
NSOC

SH; BLK V/DK BRN, SFT, CARBY,  
ABTD PYR CLSTRS, GOOD ODOR IN  
3040-3050 & 60 SMPLS, BLK FLOR,  
MILKY CRUSH CUT IN HCL

TR (1) SS CLR RD F-GR CLSTR W/BRN STNG,  
DULL YEL FLOR, MILKY CUT

DOLO; GY WH TO LT TN, F- SUGARY TO F TR  
MED XTLL, BLK INTR XYL STNG SME OVERALL TO  
SPLTCHY BRN STNG. PYR, TRANSP TO WH VIT  
CHT, SCATT BRITE YEL-WH FLOR, PRED DULL  
GOLD, STRONG PUMGENT ODOR CFS SMPLS, TR  
PP BLK FREE OIL, FLASH THIN MILKY CUT H2O  
WET, FREE OIL IN ACID CUT,

DOLO; LT GY TN F XLT, TR SHADOW  
CRIN GOLD FLOR NO ODOR, NSOC

DOLO; TN LT TN FHD DNS PYR  
INCLUS, SME CHT, FAINT GOLD  
MFNSOC NO ODOR

LS; BRN LT BUFF, VF F SUGARY, TR  
SHADOW VF OOL, INCRS LT BUFF VF  
DIVIDIED, SME YEL PRED DULL GOLD  
FLOR, NO ODOR, NSOC

MED TN TO BUFF HD DNS DOLO,  
SHADOW VF OOL & FOSS FPCS

DST # 1 3070-3173  
DIAMOND TESTER  
JAKE FAHRENBRUCH  
RECD 10' MUD-100% MUD  
IO BUILD TO 3/4" NBB  
2 OPEN NO BLOW

IHY	1452	FHY	1449
IO	24/26	ISIP	651
FO	26/26	FSIP	806
BHT	100*	30/45/30/90	

3173

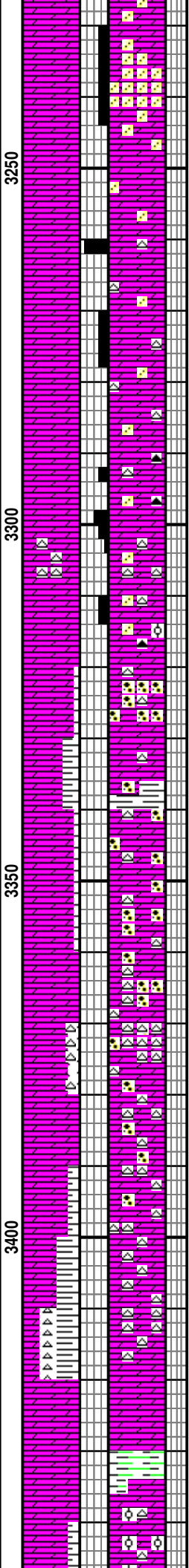
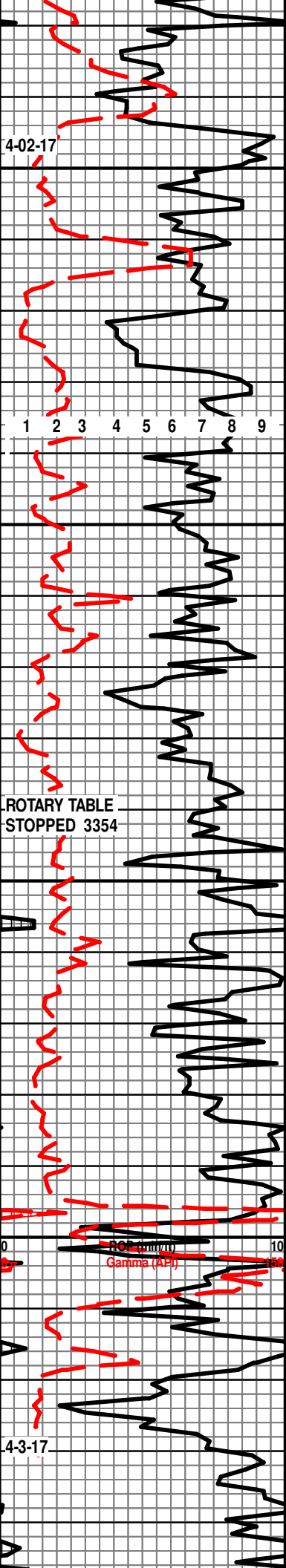
WT	9.2
VIS	48
PV	18
YP	9
GEL	10/25
PV	18
YP	9
FIL	6.8
ALKFIL	0.10
CHL	600
CVAL	20
SOL	6.4
LCM	1
	\$10,307.00

25u TG

RR BIT # 3  
GT 27Y 3/24 JETS  
IN 3173, OB  
MISSINBG  
BUTTONS

TG, C1-C5 50

5u INCRS



SHADW VF OOL & FOSS FRGS,  
INCRS MICRO SNDY PYR, NO ODOR,  
PALE DULL YEL FLOR NSOC

LT BUFF OFF WH VF SNDY, CLR QTZ RDS GRNS,  
DOLOM MALTRIX, GRDS TO SNDY DOLOM, SME  
COATED GRNS, PALE DULL YEL FLOR NO ODOR,  
NSOC

DOLO; LT BUFF VF DIVID, NO ODOR,  
WEAK DULL GOLD FLOR NSOC

DOLO; LT TN BRTL TR LT PALE  
GRNISH WH-BUFF, W/PELL, SUGARY  
PYR, DULL GOLD MFNSOC NO ODOR

DOL; DK BRN TN F-XLT, MOTT BRN IP,  
PYR, W/TN VIT CHT-SME W/PYR &  
SHDW CRIN, MED TO DULL WEAK  
GOLD FLOR, NSOC NO ODOR

DOLO; DK BRN SMO XLN PYR

DOLO; LT BUFF SME TN, BRTL CMT, W/F-R  
IRREGULAR ROUDED CLR QTZ, SMEDOLOMITIC  
SH, N/O FAINT GOLD FLOR NSOC

DOLO; DK BRN TN HD DNS MICRO SHDW OOL,  
TR IMBD CHT, N/O, MFNSOC

DOLO; BRN & LT BRN F-SUGARY, SME  
GRNISH-GY-BRN W/F-QTZ, TR SHADW OOL,,  
OOL-VIT CHT, PYR, MED DULL GOLD FLOR NSOC  
NO ODOR

DOLO; TN, MED TN, HD W/CRS TO PBLY OPAQ  
XTLS, BANDED W/CLR CHT LAYERS, OCC CHT  
IN OPAQ XTLS, PYR N/O F. GOLD FLOR NSOC

DOLO; LT BUFF SLI GY VF SNDY VF-XLT DOLO,  
& SILIC DOLO, N/O, GOLD FLO NSOC

CHT WH OPQ, CLR, COMNGLD BUFF DOL9O  
W/CRIN FRGS, N/O, GOLD MFNSOC

BUFF TN F XLN DOLO, CLR ANG VUG FILL, DK  
BRN PELL,, ABDT WH CHT W/TRACE FOSS, BRN  
SUGARY DOLO, N/O GLD MFNSOC N/O, GOLD  
MFNSOC

DOLO/ LT GY VF GRNY GY SHLY

DOLO; LT TN HD DNS XLN SMO

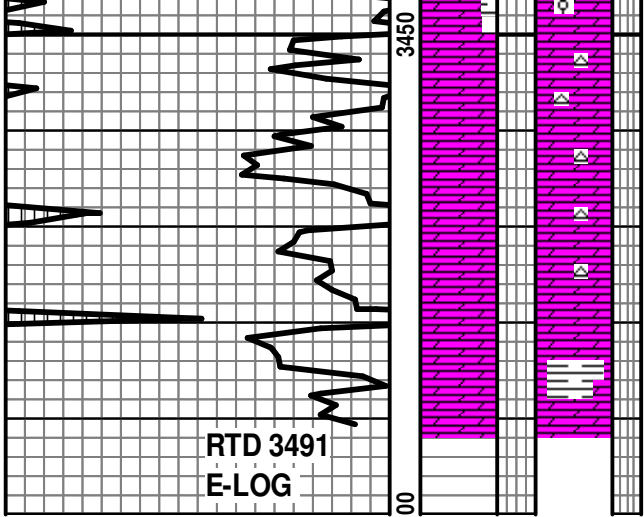
SH LT GYISH TO GRN WXY SH

DOLO BRN TO BUFF VF F XLT, SME W/VF-F OOL  
PELL, BRN VIT CHT, [YR,L N/O PRED PURPL

3311  
MUD CHECK  
WT 9.3  
VIS 40  
PV 14  
YP 6  
GEL 10/25  
PH 8  
FIL 7.6  
ALKFIL 0.12  
CHL 650  
CAL 25  
SOL 7.1  
LCM 2  
\$10,949.00

3oz BULK  
CARBIDE  
LAG CHK=  
120u 18min

TG, C1-C5 50  
DTG  
WORK ON PUMP  
3404



SCATT GOLD FLOR, NSOC

DOLO; BRN TN HD VF F XTL, IM D WH DULL  
TRIP CHT, N/O MFNSOC

DOLO; WH OFF WH LT BUFF F-XLN, CLR ANG  
VUG OR FRAC FILL, PYR, N/O FAINT GOLD FLOR  
NSOC

BRN TO BUFF DOLOMITIC  
BIOSPATIC/VFOOL, TR FRM GY SH W/SSCAYTY  
SPLTHCES & SPOTS, TRIP WH OOL CHT, N/O  
PURPL SME GOLD TINGE FLOR NSOC

THANKS FOR USING  
MBC WELL LOGGING  
AUSTIN & MARI A GARNER

