

HALLIBURTON

MICRO LOG

COMPANY WELL FIELD/BLOCK COUNTY STATE	VAL ENERGY WERNER V1-31 WILSON COWLEY KANSAS
Permanent Datum Log measured from Drilling measured from	GL KB KB KB
Date Run No. Depth - Driller Depth - Logger Bottom - Logged Interval Top - Logged Interval Casing - Driller Casing - Logger Bit Size Type Fluid in Hole Density PH Source of Sample Rm @ Meas. Temperature Rmf @ Meas. Temperature Rmc @ Meas. Temperature Source Rmf Rm @ BHT Time Since Circulation Time on Bottom Max. Rec. Temperature Equipment Recorded By Witnessed By	Sect. 31 Twp. 32S Rge. 6E Elev. 1291.0 ft 10.0 ft above perm. Datum Elev.: K.B. 1301.0 ft D.F. 1299.0 ft G.L. 1291.0 ft Other Services: DSNT/SDLT ACRT WSTT XRMI
API No. Location LAT: 37°15' N LONG: 96°55' W	15-035-24500-00-00 535' FSL 535' FWL
COMPANY WELL FIELD/BLOCK COUNTY STATE	VAL ENERGY WERNER V1-31 WILSON COWLEY KANSAS

Date Run No. Depth - Driller Depth - Logger Bottom - Logged Interval Top - Logged Interval Casing - Driller Casing - Logger Bit Size Type Fluid in Hole Density PH Source of Sample Rm @ Meas. Temperature Rmf @ Meas. Temperature Rmc @ Meas. Temperature Source Rmf Rm @ BHT Time Since Circulation Time on Bottom Max. Rec. Temperature Equipment Recorded By Witnessed By	ONE 3580.00 ft 3580.0 ft 3557.0 ft 500.0 ft 8.625 in @ 307.0 ft 305.0 ft 7.875 in @ WATER BASED 9.5 ppg @ 49.00 s/qt 10.00 pH @ 8.0 cp/m FLOWLINE 1.800 ohmm @ 70.00 degF 1.50 ohmm @ 70.00 degF 2.100 ohmm @ 70.00 degF MEASURED 1.27 ohmm @ 102.0 degF 4.0 hr 03-Apr-13 21:53 102.0 degF @ 3580.0 ft 10782954 LIBERAL THOMAS HYDE J. BAKER
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Fold here

Service Ticket No.: 900337201 API Serial No.: 15-035-24500-00-00 PGM Version: WL INSITE R3.8.4 (Build 5)

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	MICRO	RUBBER	ADJ.	N/A
Rmc @ Meas. Temp.		@		@		10685803			
Source Rmf	Rmc								
Rm @ BHT		@		@					
Rmf @ BHT		@		@					
Rmc @ BHT		@		@					

EQUIPMENT DATA							
GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.		Run No.		Run No.	
Serial No.	10748374	Serial No.		Serial No.		Serial No.	
Model No.	GTET	Model No.		Model No.		Model No.	
Diameter	3.625"	No. of Cent.		Diameter		Diameter	
Detector Model No.	T-102	Spacing		Log Type		Log Type	
Type	SCINT			Source Type		Source Type	
Length	8"	LSA [Y/N]		Serial No.		Serial No.	
Distance to Source	10'	FWDA [Y/N]		Strength		Strength	

LOGGING DATA

GENERAL			GAMMA		ACOUSTIC		DENSITY		NEUTRON		
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R	
ONE	3580	1800	REC	0	150						
	800	500									

DIRECTIONAL INFORMATION

Maximum Deviation @ KOP @

Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING

CHLORIDES REPORTED AT 1000 MG/L

LCM REPORTED AT 3 PPB

HOLE WAS TIGHT

CALIPER WAS CLOSED FROM 1892-1844 DUE TO TIGHT HOLE

TODAY'S CREW F. VILLA J. ALBRIGHT

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES LIBERAL, KANSAS 620-624-8123

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



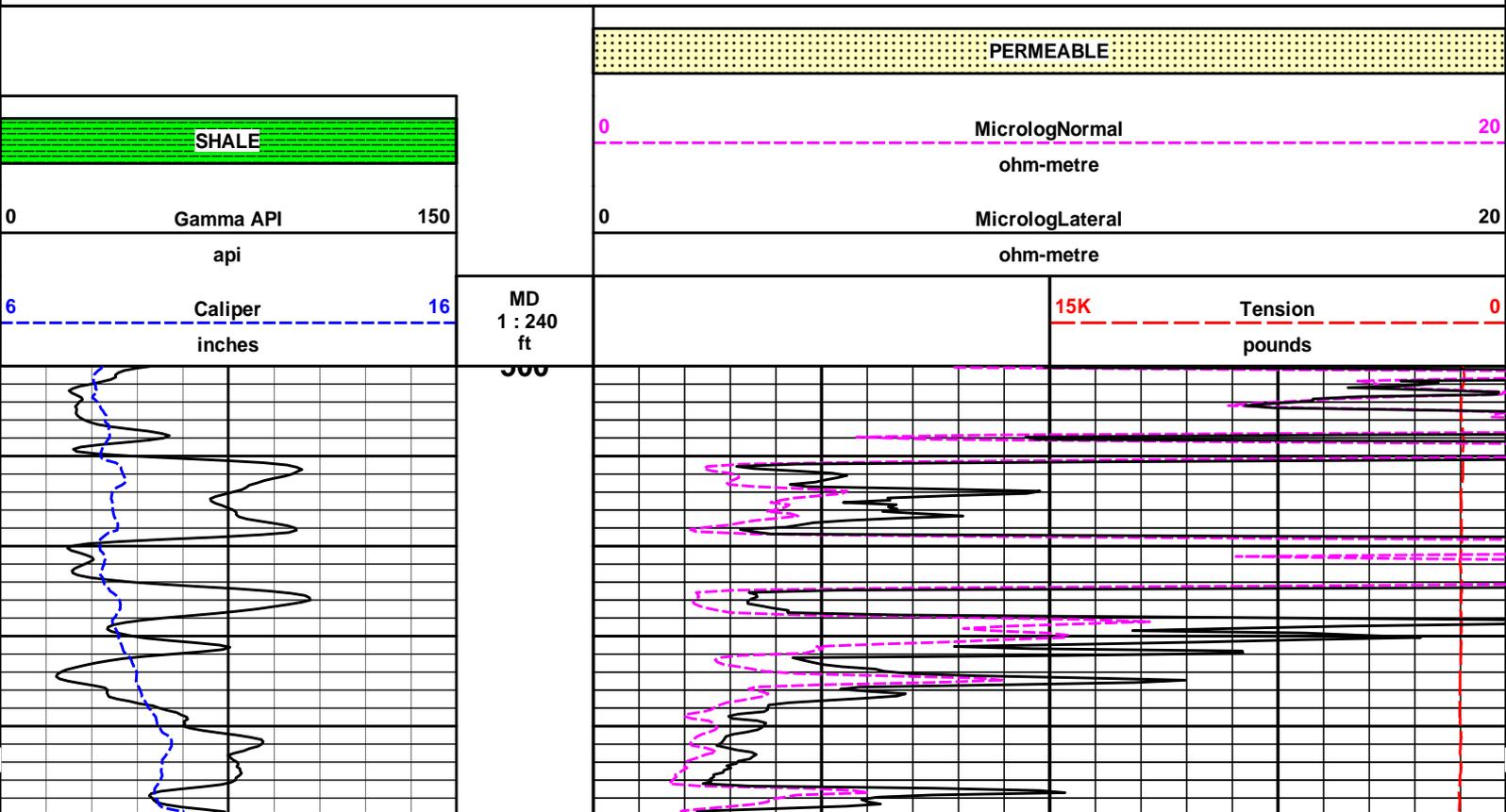
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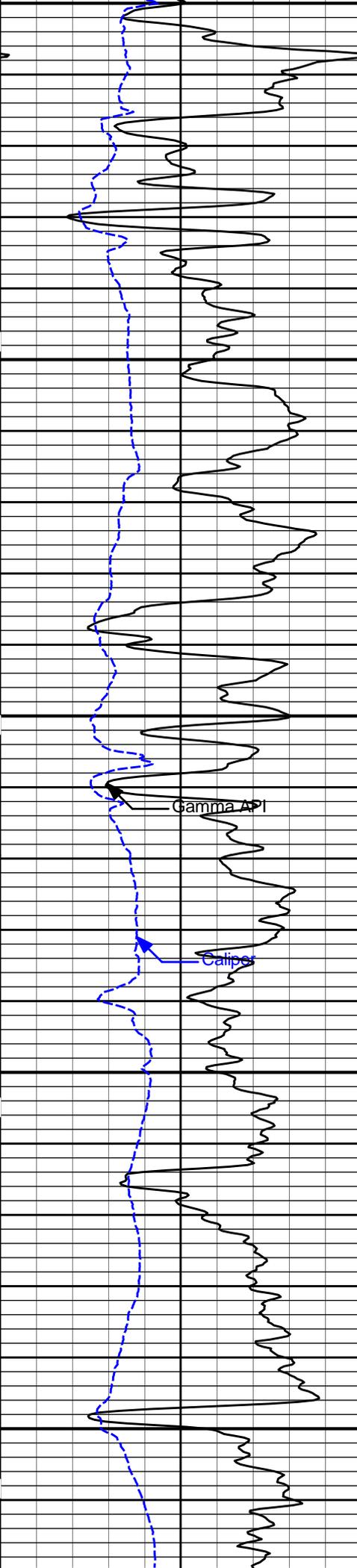
Plot Range: 500 ft to 800 ft

Data: WERNER_V1_31\Well Based\DAQ-0001-003\

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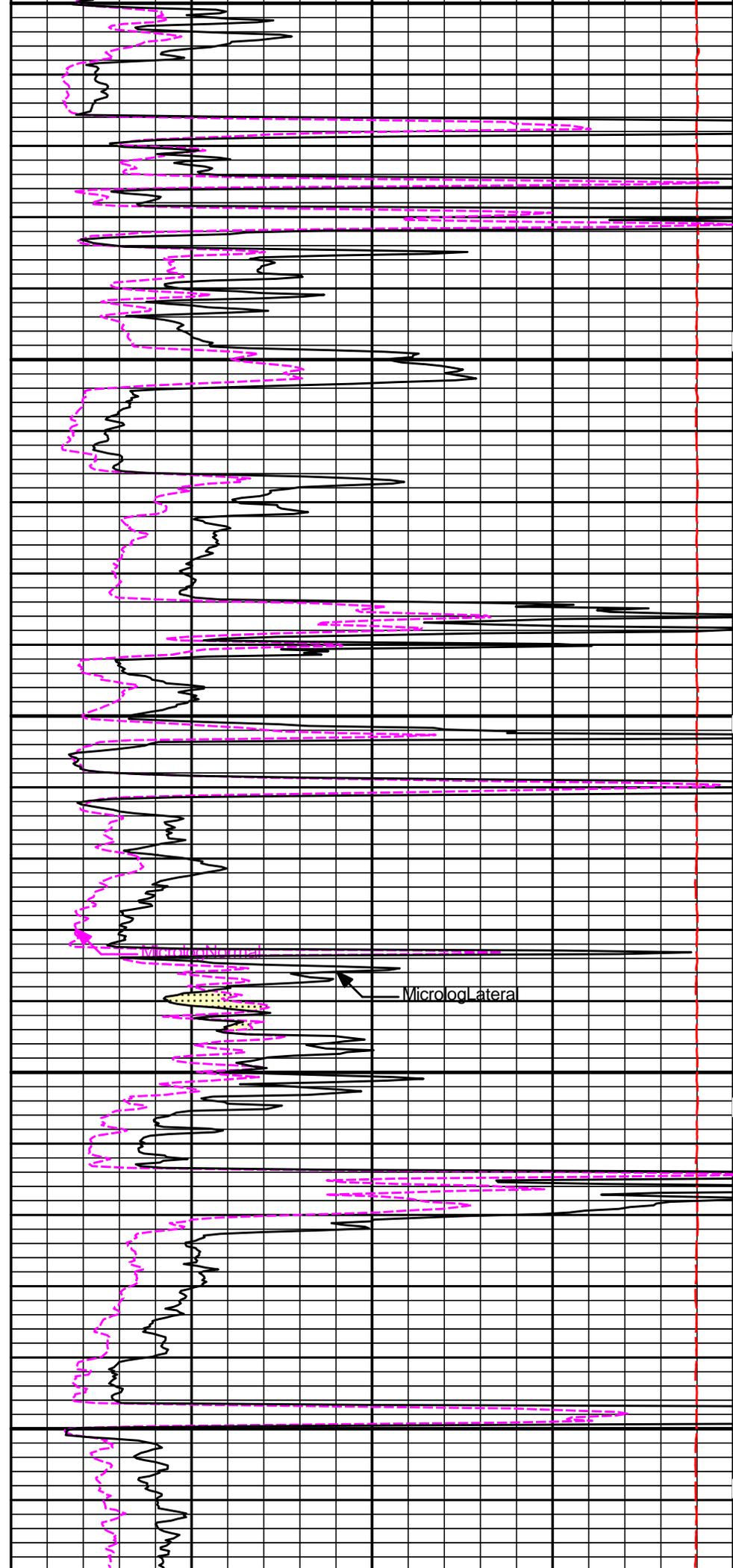
5 INCH MAIN LOG

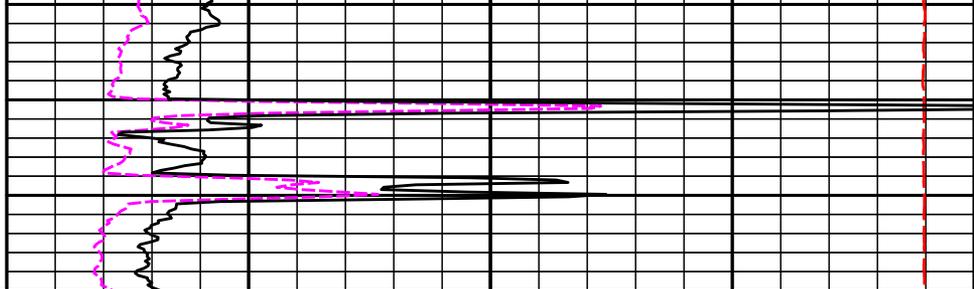
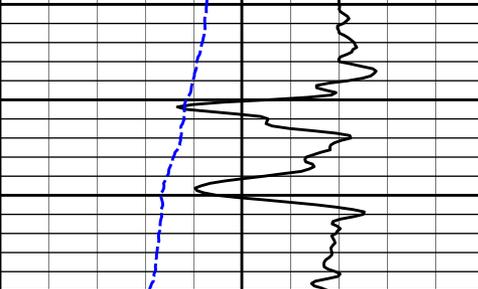




600

700





6	Caliper inches	16
0	Gamma API api	150
SHALE		

MD 1 : 240 ft

15K	Tension pounds	0
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0	MicrologLateral	20
---	-----------------	----

	ohm-metre	
--	-----------	--

0	MicrologNormal	20
---	----------------	----

	ohm-metre	
--	-----------	--

PERMEABLE		
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HALLIBURTON

Plot Time: 03-Apr-13 23:14:17
 Plot Range: 500 ft to 800 ft
 Data: WERNER_V1_31\Well Based\DAQ-0001-003\
 Plot File: \\LOCAL-WERNER_V1_31\0001 SP-GTET-DSN-SDL-ACRT-BNMMIC ROWMicrolog_IQ_5_main_lib

5 INCH MAIN LOG

HALLIBURTON

Plot Time: 03-Apr-13 23:14:17
 Plot Range: 1800 ft to 3582.75 ft
 Data: WERNER_V1_31\Well Based\DAQ-0001-003\
 Plot File: \\LOCAL-WERNER_V1_31\0001 SP-GTET-DSN-SDL-ACRT-BNMMIC ROWMicrolog_IQ_5_main_lib

5 INCH MAIN LOG

SHALE		
0	Gamma API api	150
6	Caliper inches	16

PERMEABLE		
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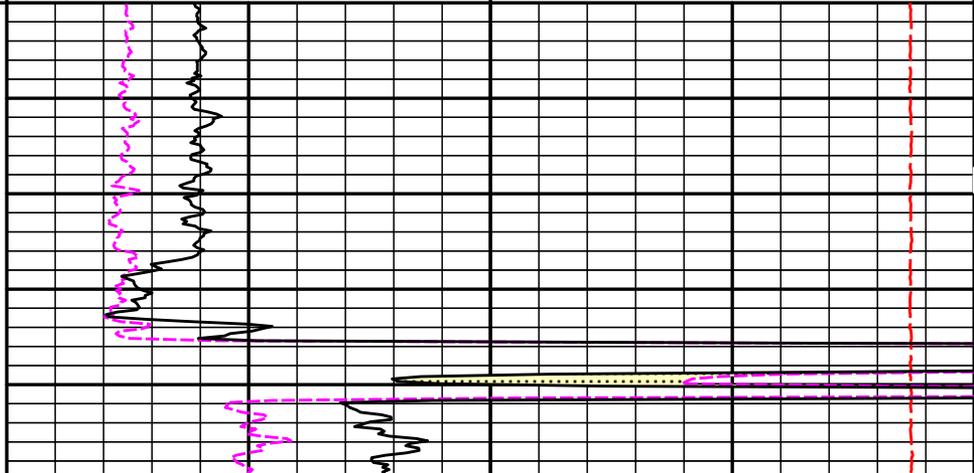
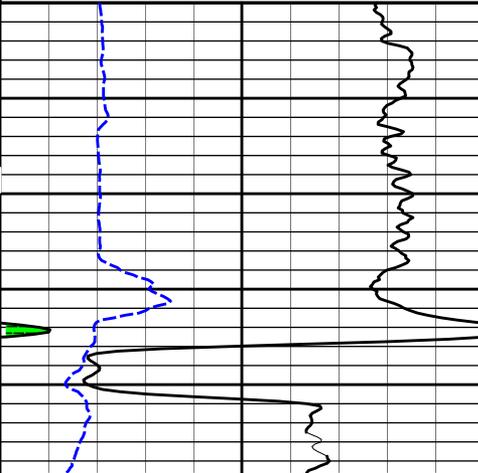
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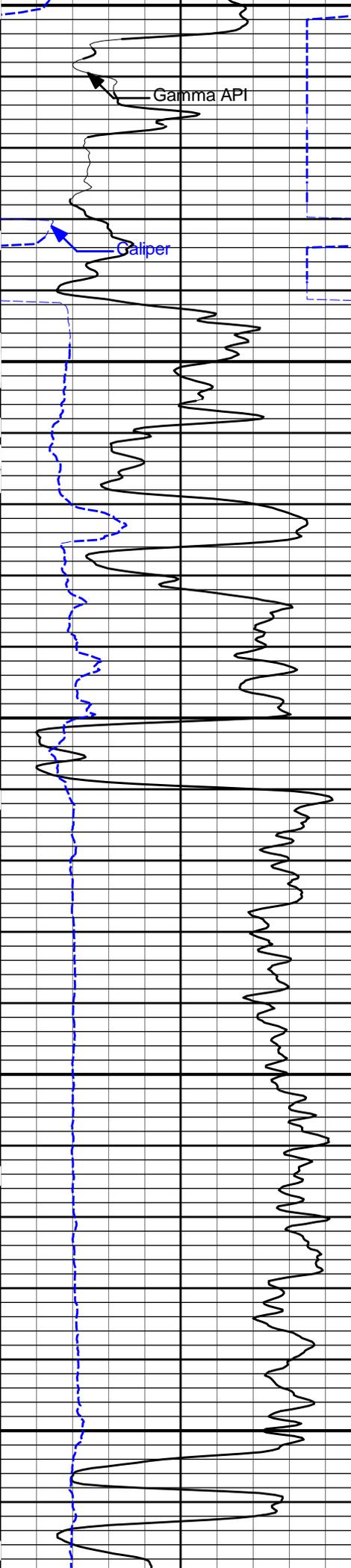
	ohm-metre	
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0	MicrologLateral	20
---	-----------------	----

	ohm-metre	
--	-----------	--

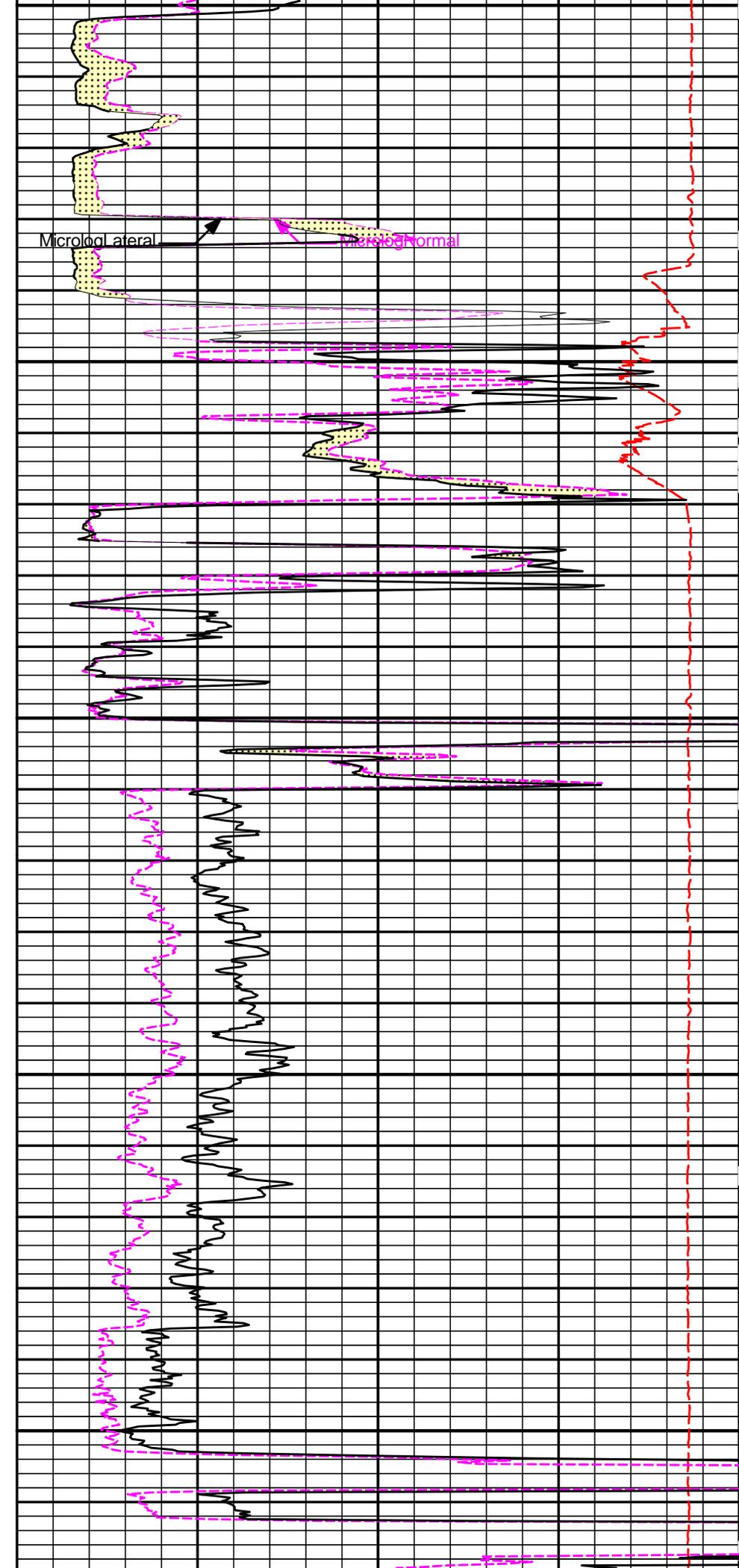
MD 1 : 240 ft	15K	Tension pounds	0
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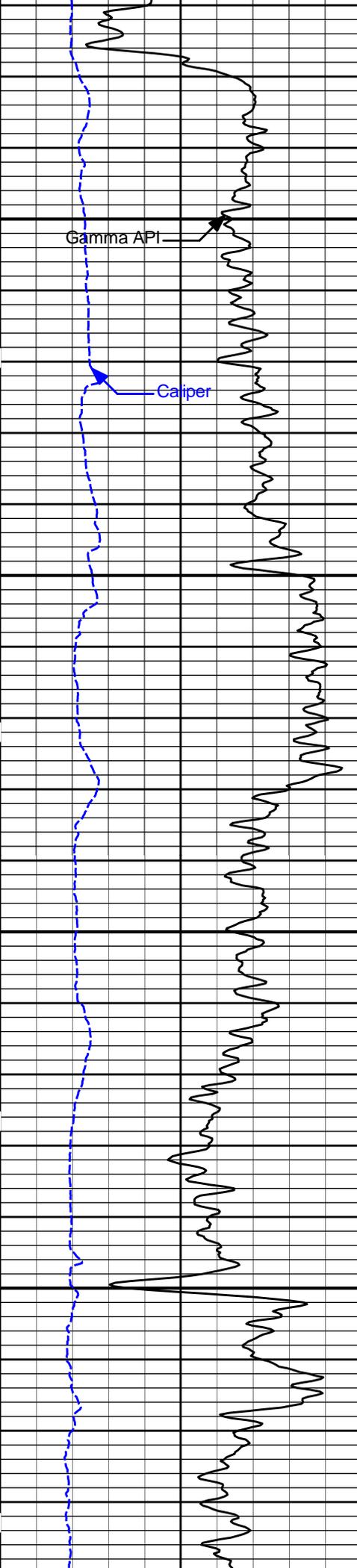
1900

2000



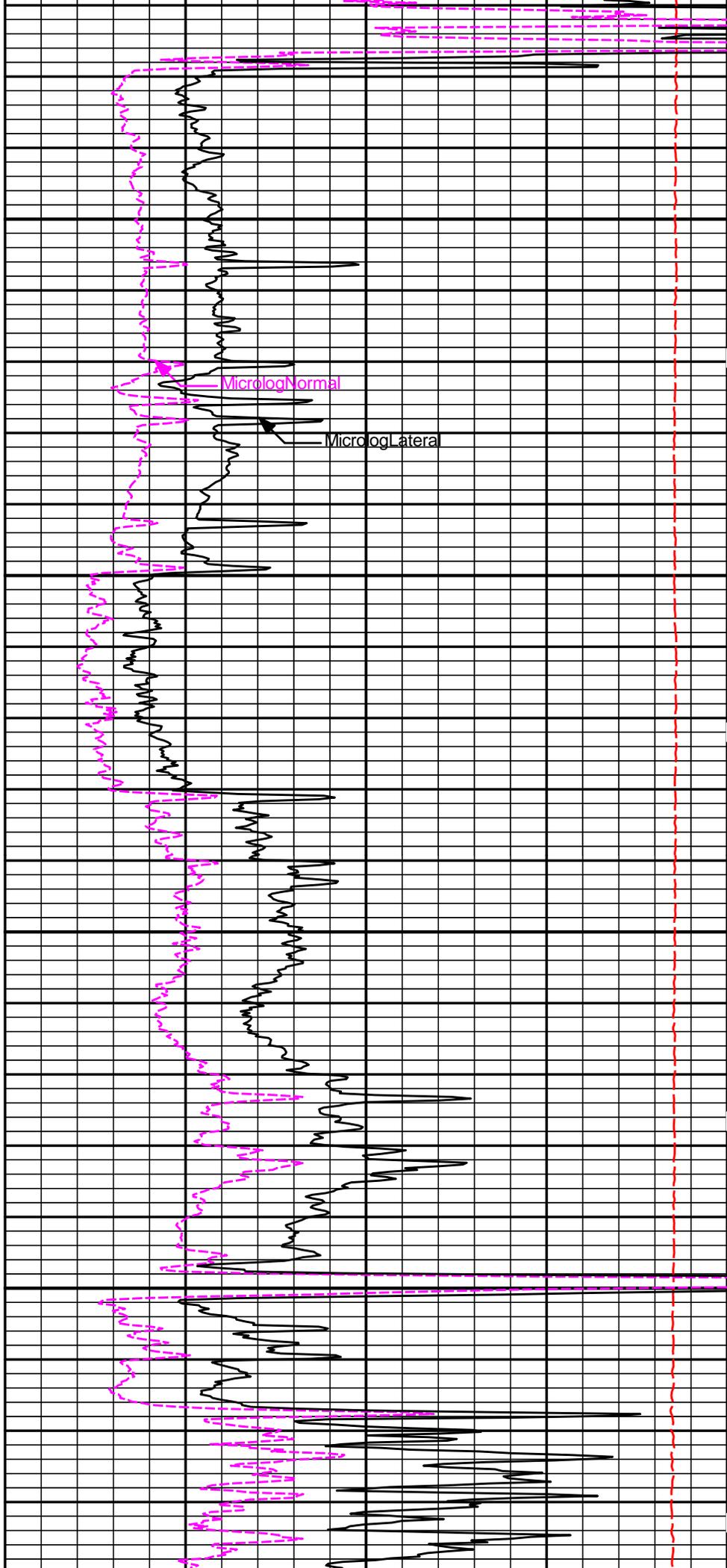
Microlog lateral

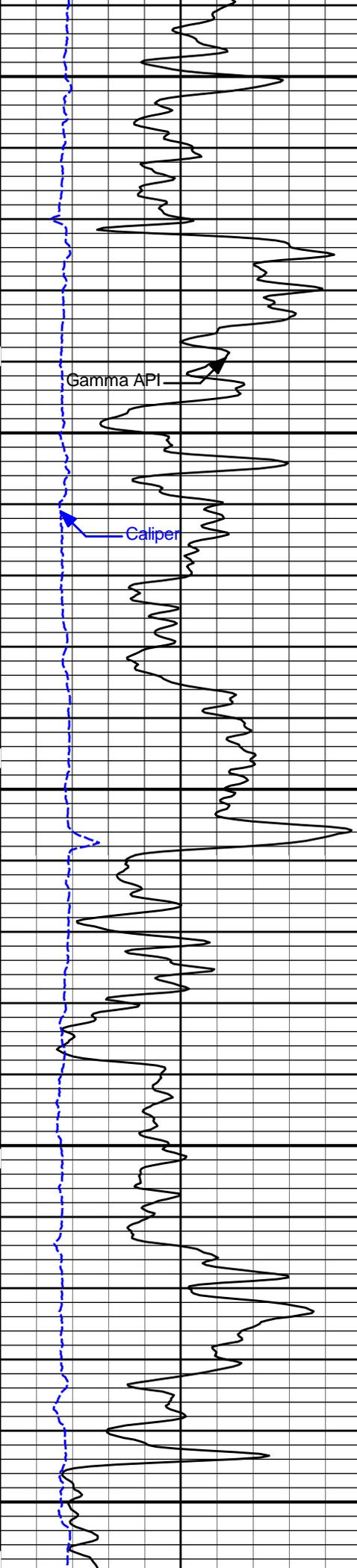
Microlog normal



2100

2200





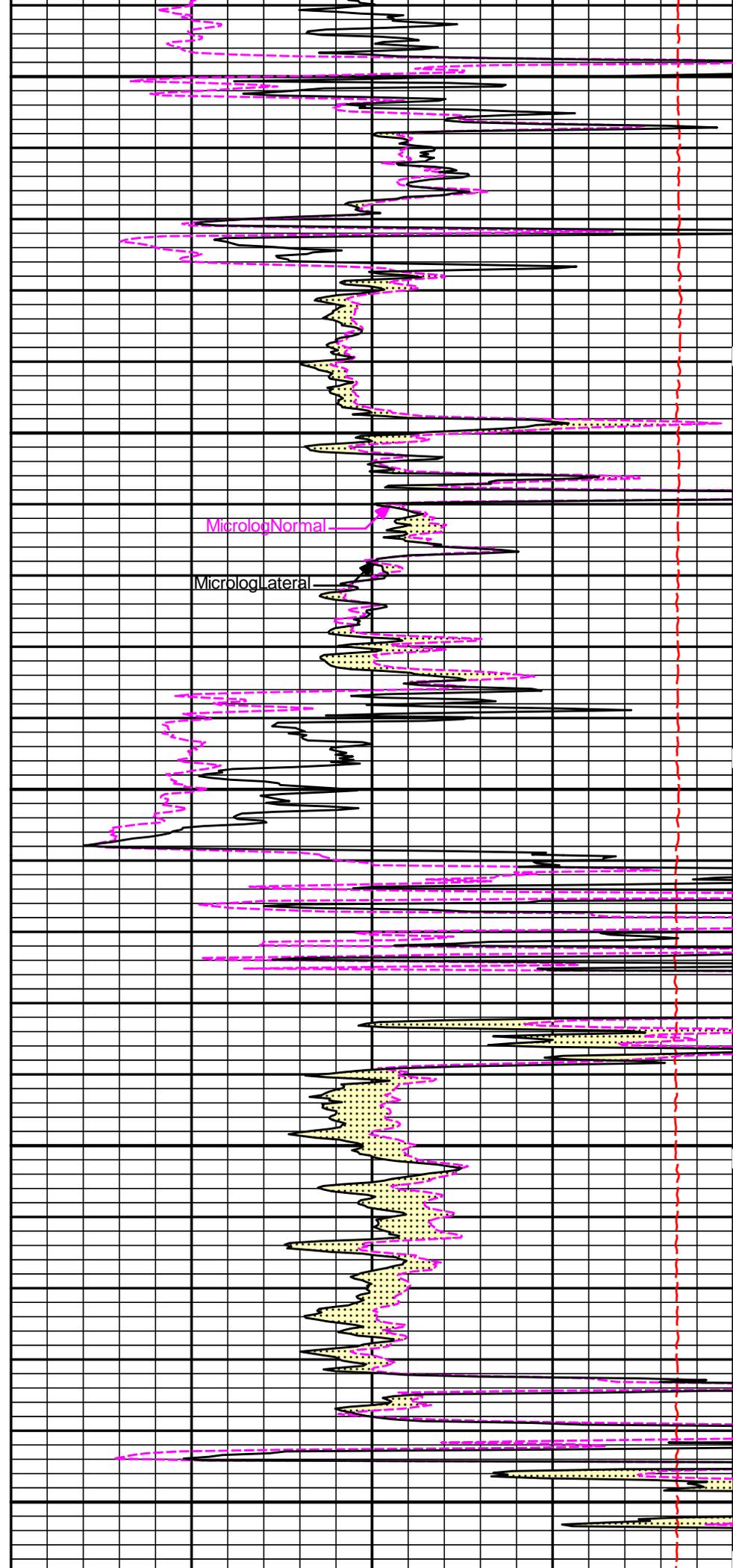
2300

Gamma API

Caliper

2400

2500



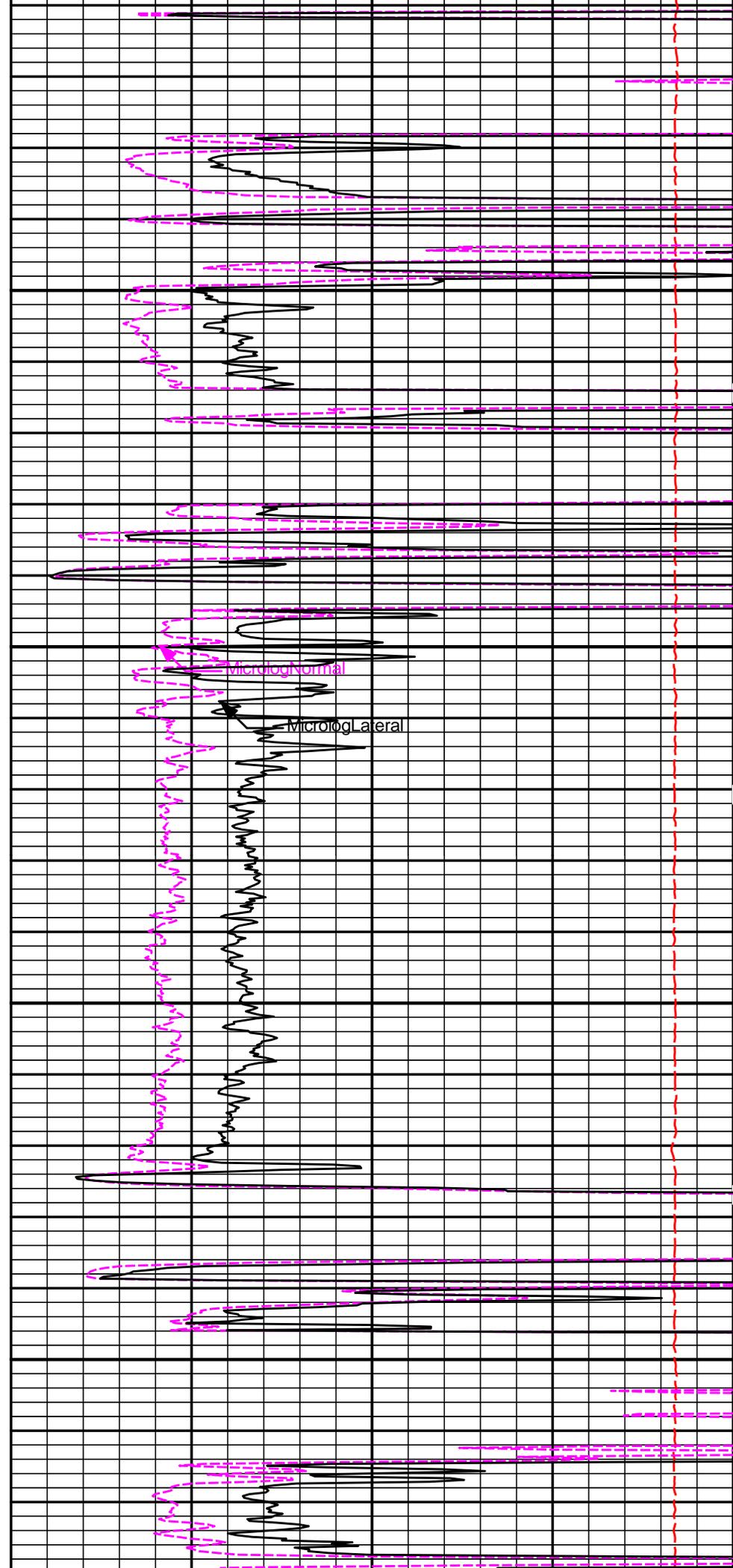
MicrologNormal

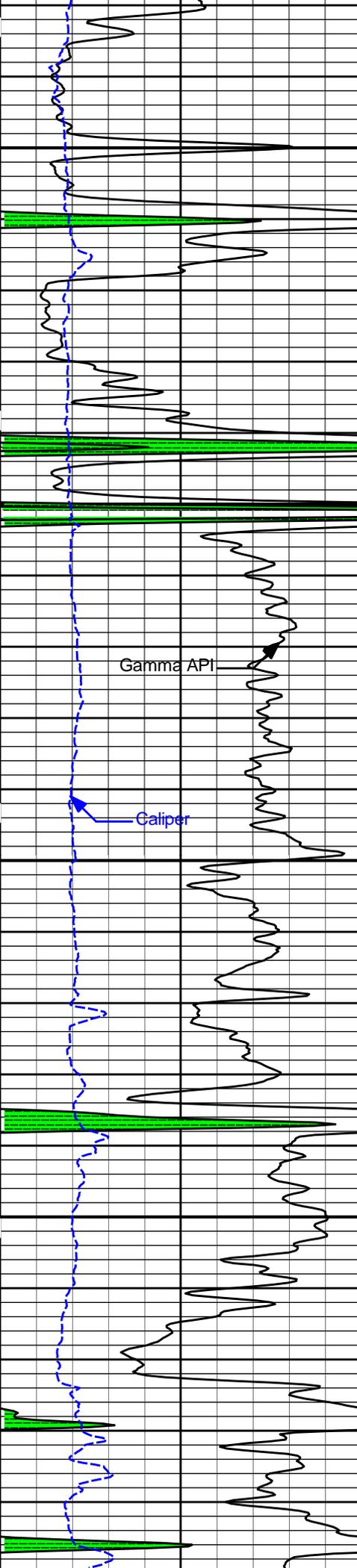
MicrologLateral



2600

2700



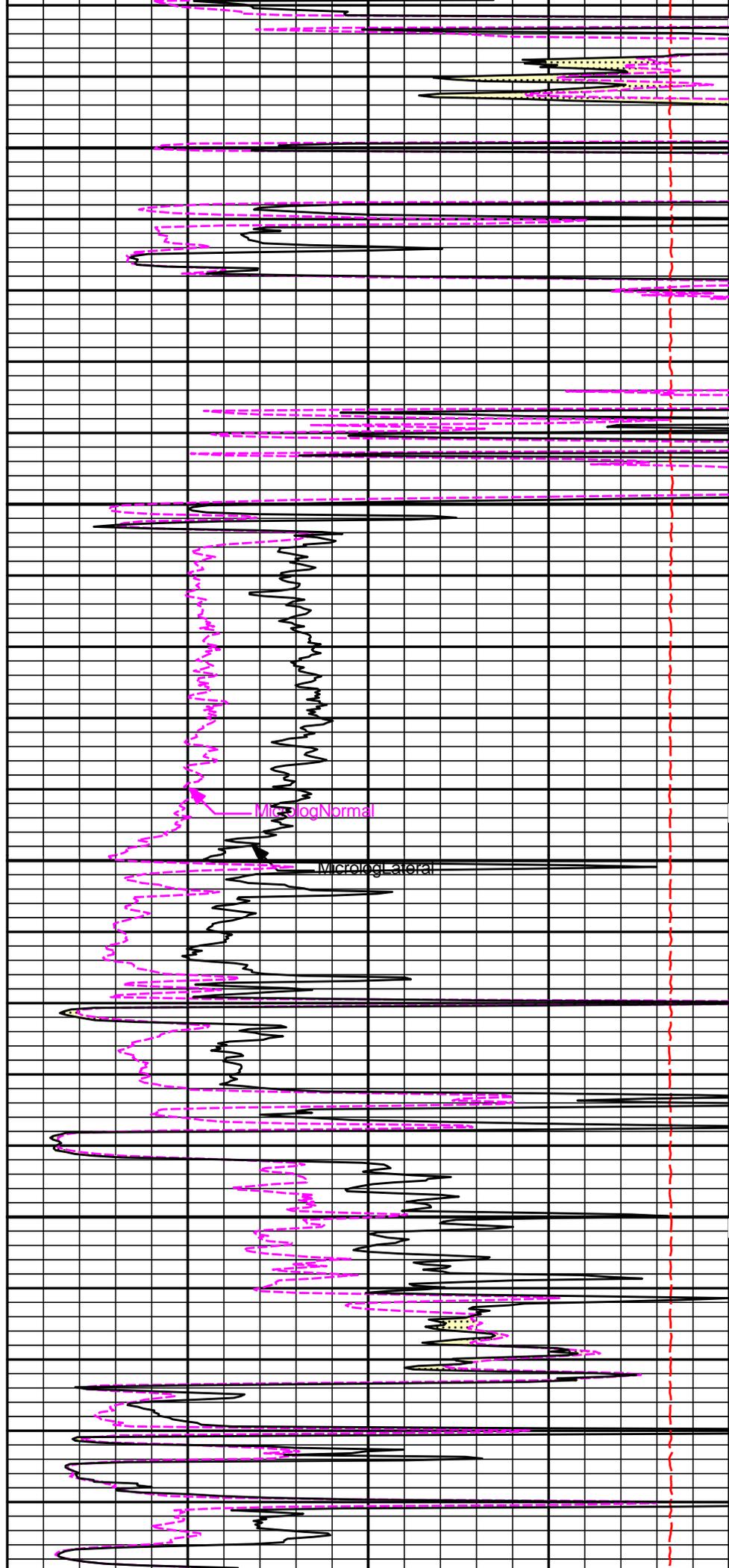


2800

Gamma API

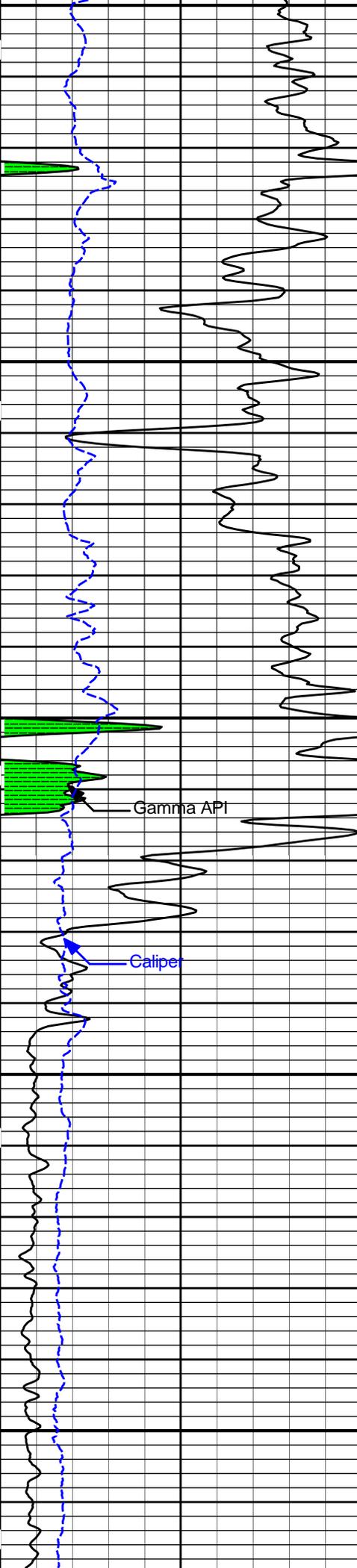
Caliper

2900



MicrologNormal

MicrologLateral

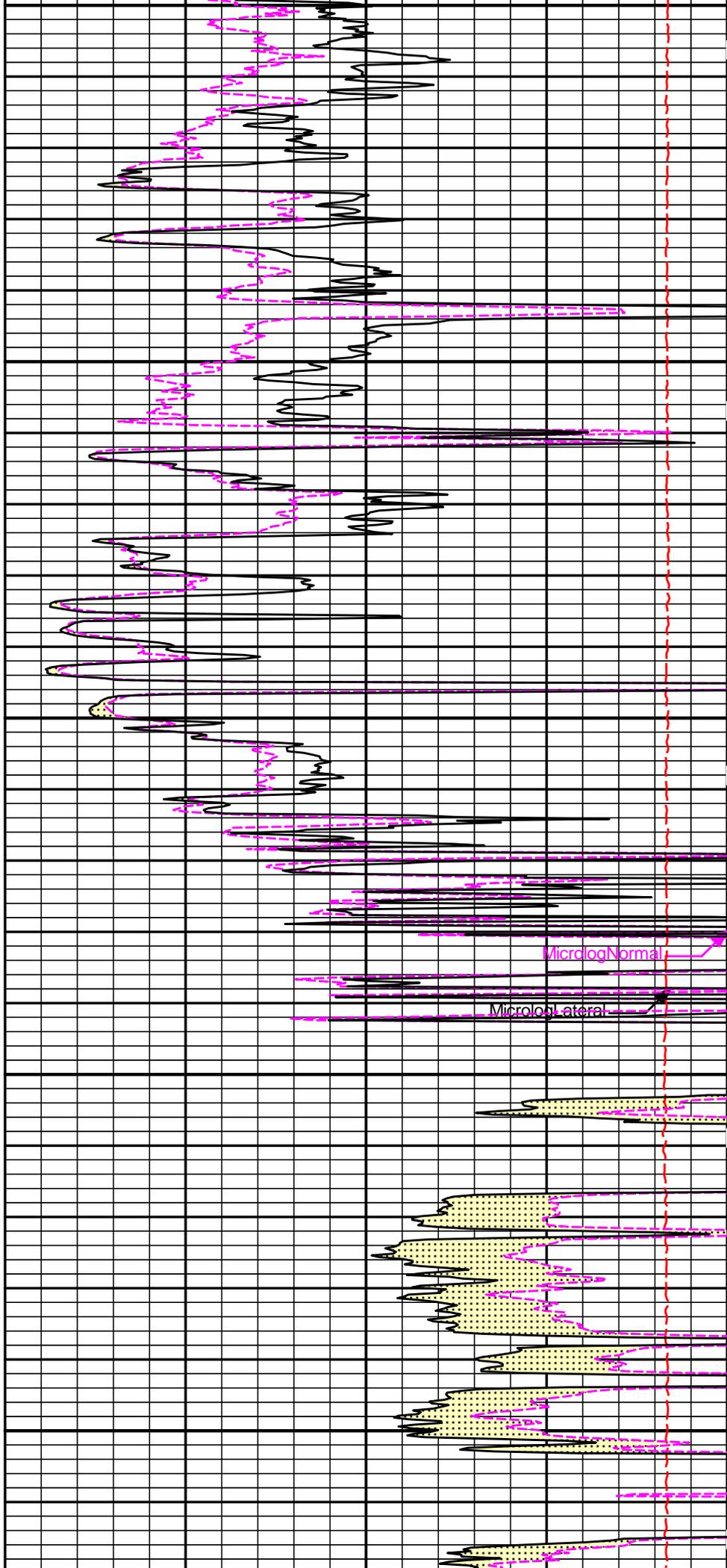


3000

3100

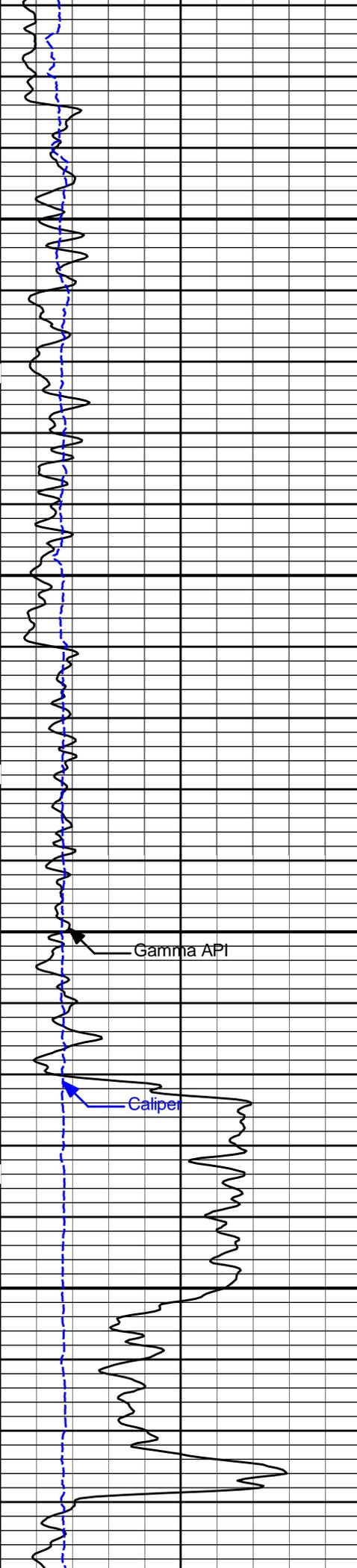
Gamma API

Calipe



MicrologNormal

MicrologLateral

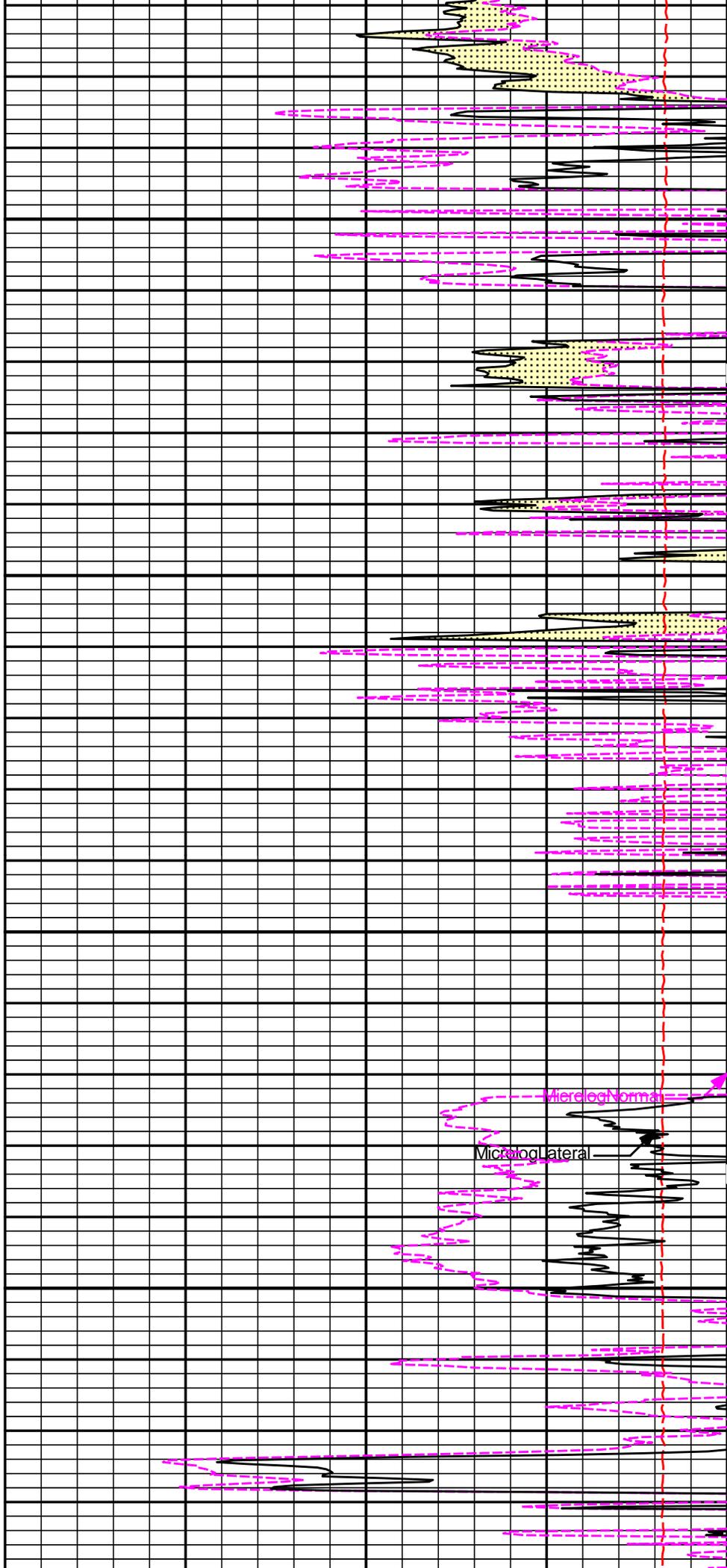


3200

3300

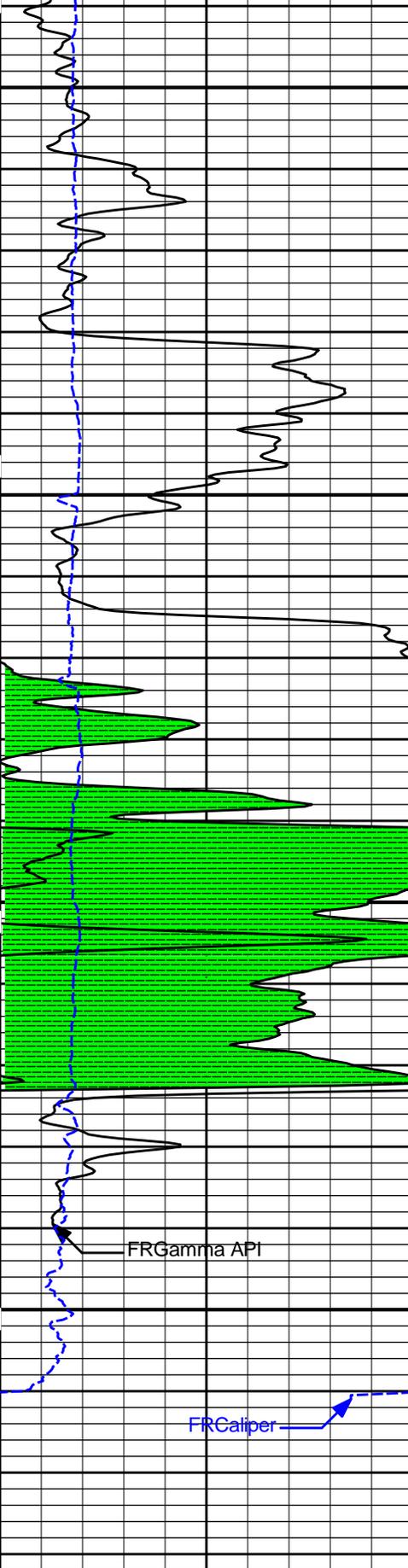
Gamma API

Caliper



MicrologNormal

MicrologLateral

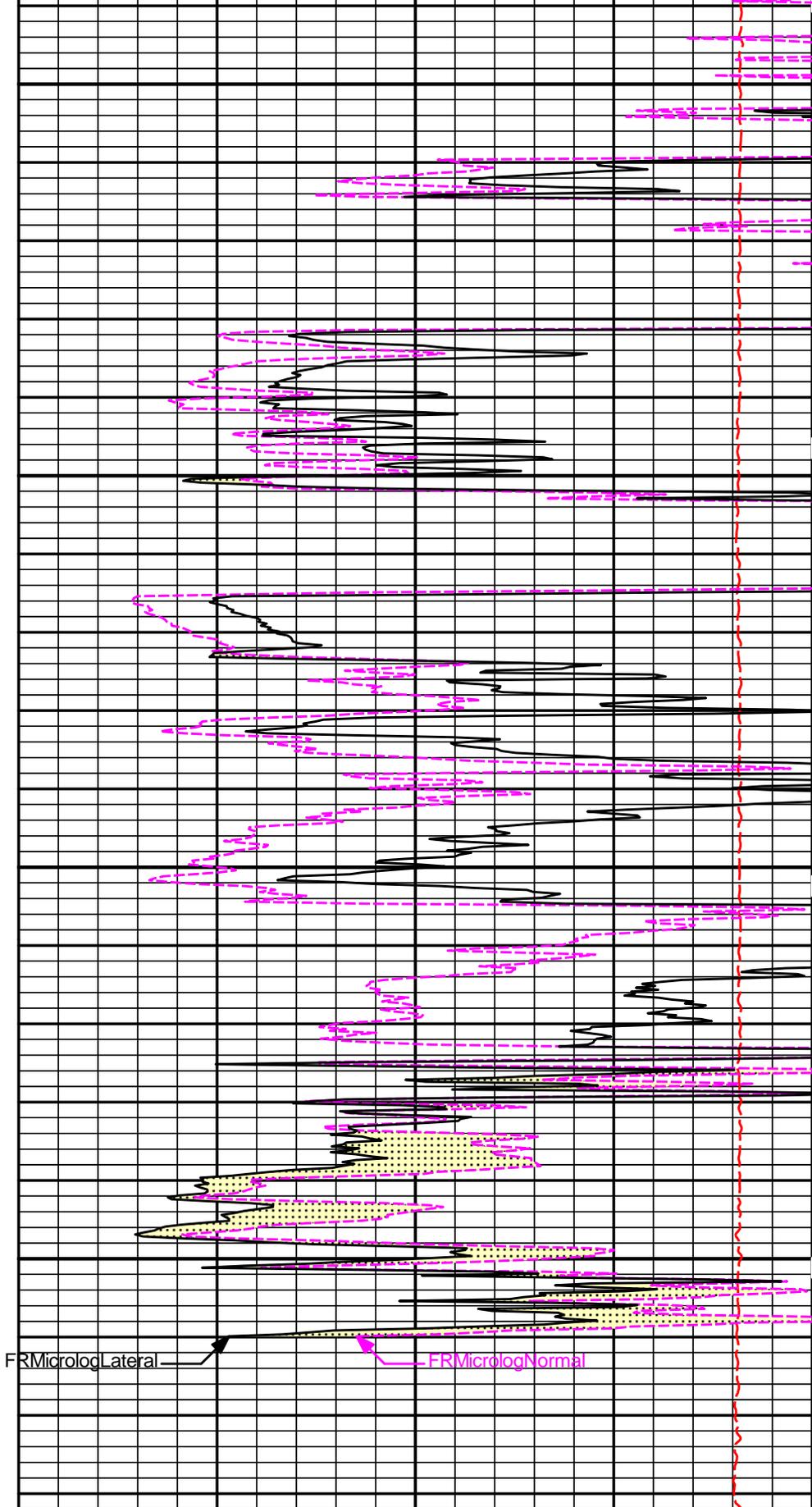


3400

3500

FRGamma API

FRCaliper



FRMicrologLateral

FRMicrologNormal

6	Caliper	16
	inches	

0	Gamma API	150
	api	

SHALE

MD	1 : 240
	ft

15K	Tension	0
	pounds	

0	MicrologLateral	20
	ohm-metre	

0	MicrologNormal	20
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ohm-metre

PERMEABLE

HALLIBURTON

Plot Time: 03-Apr-13 23:14:23

Plot Range: 1800 ft to 3582.75 ft

Data: WERNER_V1_31\Well Based\DAQ-0001-003\

Plot File: \\-LOCAL-WERNER_V1_31\0001 SP-GTET-DSN-SDL-ACRT-BNMMIC ROWMicrolog_IQ_5_main_lib

5 INCH MAIN LOG

HALLIBURTON

Plot Time: 03-Apr-13 23:14:24

Plot Range: 3280 ft to 3581.75 ft

Data: WERNER_V1_31\Well Based\DAQ-0001-002\

Plot File: \\-LOCAL-WERNER_V1_31\0001 SP-GTET-DSN-SDL-ACRT-BNMMIC ROWMicrolog_IQ_5_rep_lib

REPEAT SECTION

PERMEABLE

SHALE

0

MicrologNormal

20

ohm-metre

Gamma API

150

0

MicrologLateral

20

api

ohm-metre

Caliper

16

MD
1 : 240
ft

15K

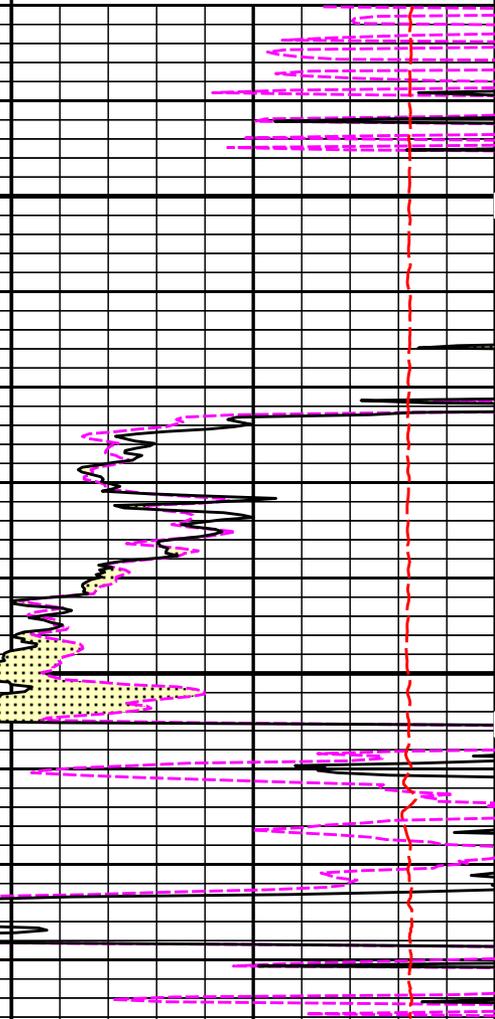
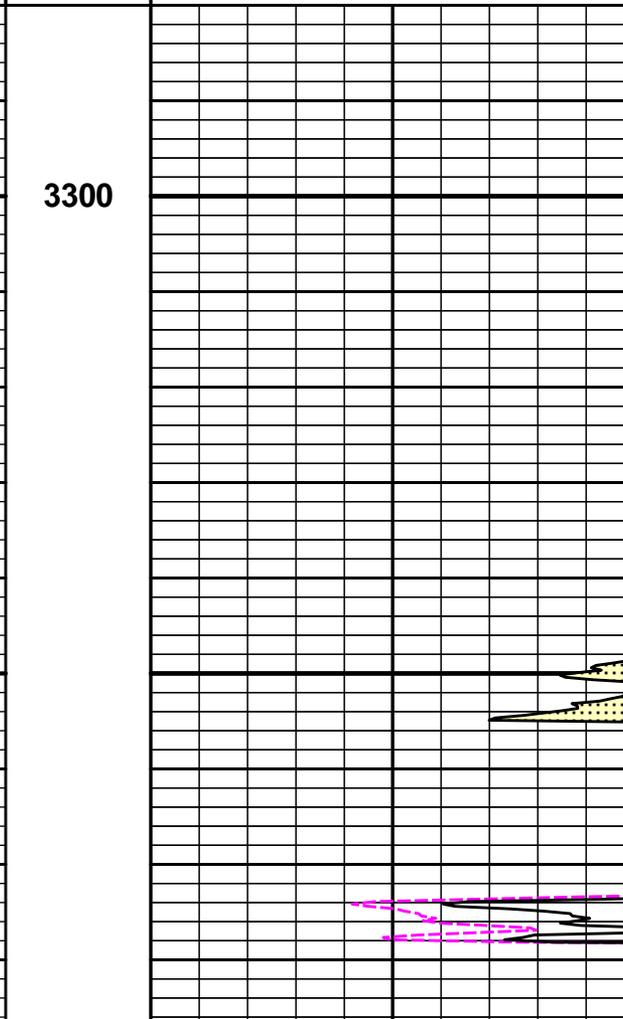
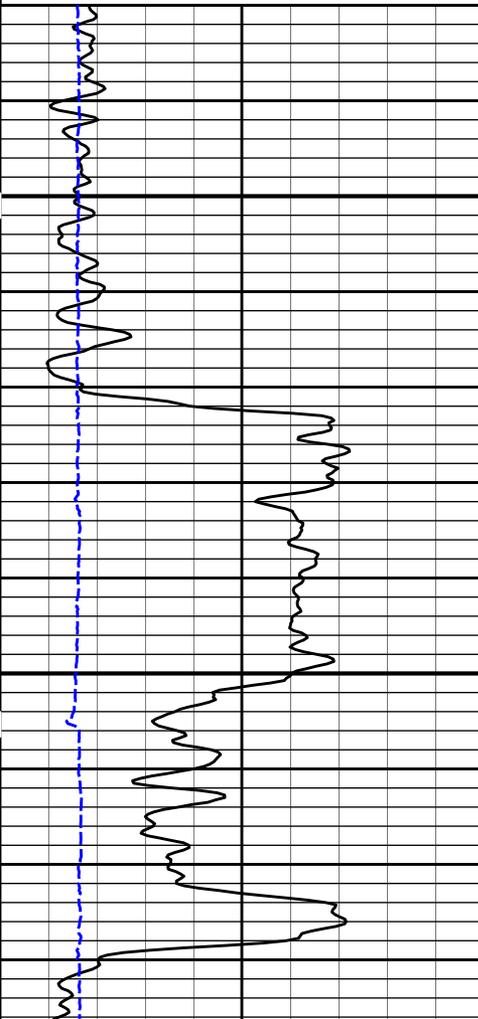
Tension

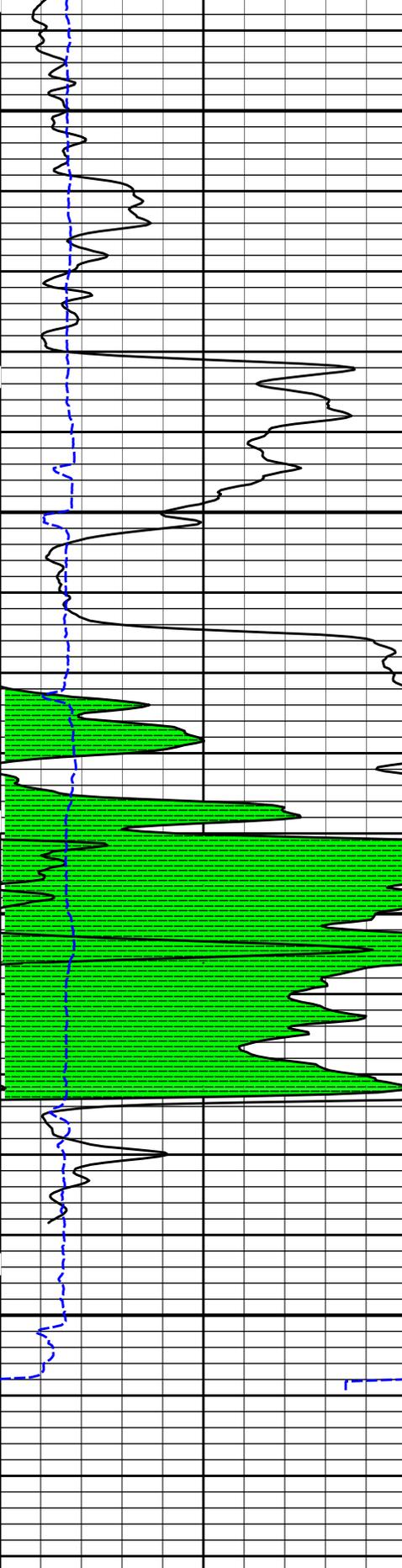
0

inches

pounds

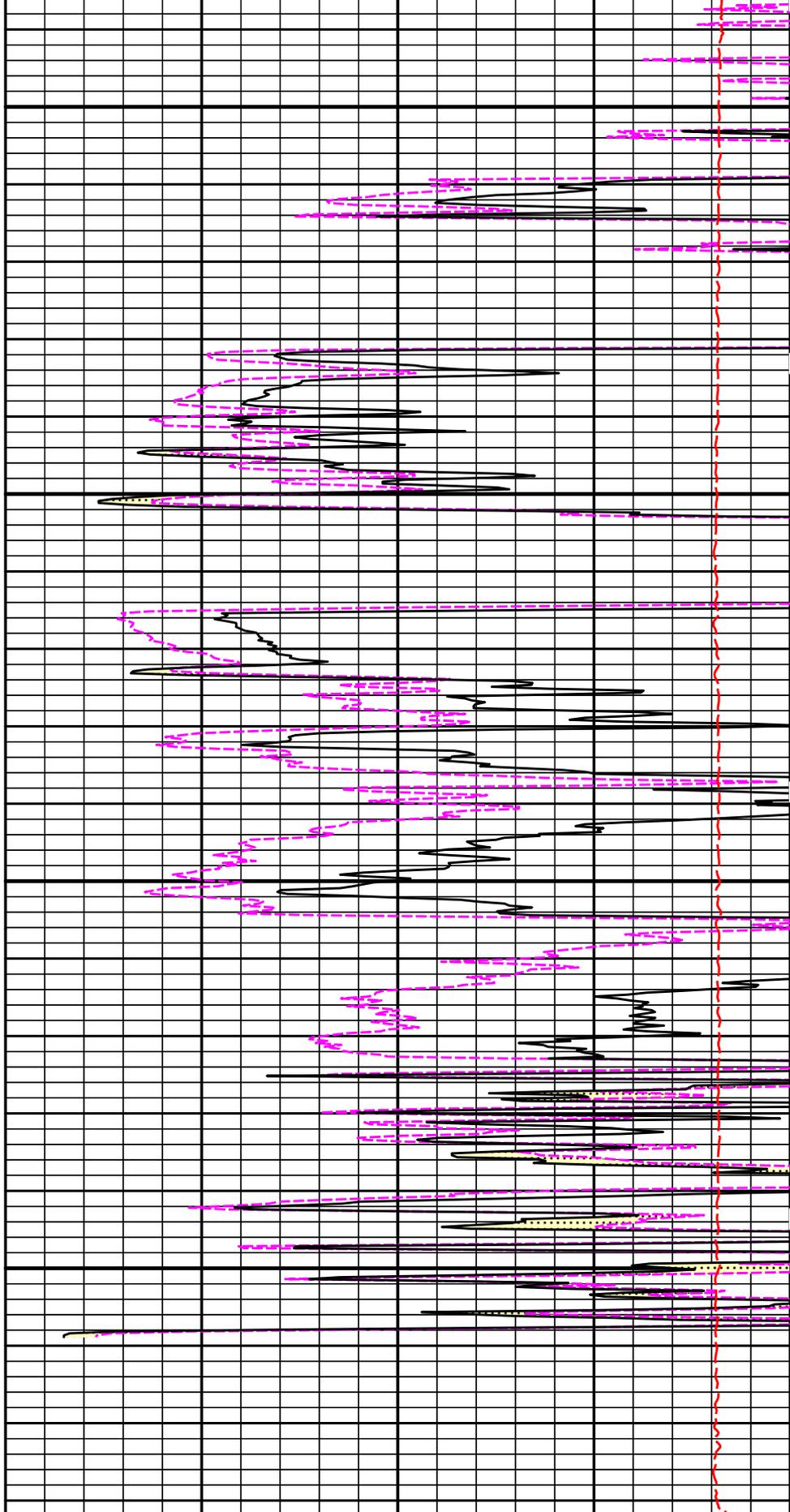
3300





3400

3500



6 Caliper 16
inches

0 Gamma API 150
api

MD
1 : 240
ft

15K Tension 0
pounds

0 MicrologLateral 20
ohm-metre

0 MicrologNormal 20

SHALE

ohm-metre

PERMEABLE

HALLIBURTON

Plot Time: 03-Apr-13 23:14:26
 Plot Range: 3280 ft to 3581.75 ft
 Data: WERNER_V1_31\Well Based\DAQ-0001-002\
 Plot File: \\LOCAL-WERNER_V1_31\0001 SP-GTET-DSN-SDL-ACRT-BNMMIC RO\Microlog_IQ_5_rep_lib

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS-954 37.50 lbs		Ø 2.750 in →		← Temperature @ 55.29 ft	3.03 ft	56.32 ft
XOHD-00000001 20.00 lbs		Ø 2.750 in → Ø 3.625 in →			0.95 ft	53.29 ft
SP Sub-12345678 60.00 lbs		Ø 3.625 in →		← SP @ 50.56 ft	3.74 ft	52.34 ft
GTET-10748374 165.00 lbs		Ø 3.625 in →		← GammaRay @ 42.54 ft	8.52 ft	48.60 ft
DSNT-10755066 174.00 lbs	DSN Decentralizer- 10755066 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →		← DSN Far @ 33.15 ft ← DSN Near @ 32.40 ft	9.69 ft	40.08 ft
SDLT-10685803 360.00 lbs	SDLT Pad-10714945 65.00 lbs Microlog Pad-10685803 8.00 lbs	Ø 4.500 in → Ø 4.750 in* → Ø 4.750 in* →		← Microlog @ 22.58 ft ← SDL Caliper @ 22.40 ft ← SDL @ 22.39 ft	10.81 ft	30.40 ft

ACRt Instrument-
I256
50.00 lbs

Ø 3.625 in →

5.03 ft

Regal Standoff 6_75-
00000001
20.00 lbs

Ø 6.750 in* →

14.55 ft

← Mud Resistivity @ 13.19 ft

ACRt Sonde-
10800784
200.00 lbs

Ø 3.625 in →

14.22 ft

← ACRt @ 9.21 ft

Bull Nose-00000001
5.00 lbs

Ø 2.750 in →

0.33 ft

0.33 ft

0.00 ft



Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max. Log. Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell	954	37.50	3.03	53.29	300.00
XOHD	Hostile to Dits Cross Over	00000001	20.00	0.95	52.34	300.00
SP	SP Sub	12345678	60.00	3.74	48.60	300.00
GTET	Gamma Telemetry Tool	10748374	165.00	8.52	40.08	60.00
DSNT	Dual Spaced Neutron	10755066	174.00	9.69	30.40	60.00
DCNT	DSN Decentralizer	10755066	6.60	5.13	* 33.73	300.00
SDLT	Spectral Density Tool	10685803	360.00	10.81	19.58	60.00
SDLP	Density Insite Pad	10714945	65.00	2.55	* 21.79	60.00
MICP	Microlog Pad	10685803	8.00	1.00	* 22.08	60.00
ACRt	Array Compensated True Resistivity Instrument Section	I256	50.00	5.03	14.55	300.00
ACRt	Array Compensated True Resistivity Sonde Section	10800784	200.00	14.22	0.33	300.00
RSOF	Regal Standoff 6.75in	00000001	20.00	0.52	* 13.52	300.00
BLNS	Bull Nose	00000001	5.00	0.33	0.00	300.00
Total			1,171.10	56.32		

* Not included in Total Length and Length Accumulation.

Data: WERNER_V1_31\0001 SP-GTET-DSN-SDL-ACRT-BN\IDLE

Date: 03-Apr-13 19:23:43

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 10748374

Reference Calibration Date: 17-Jan-13 13:03:23

Engineer: THOMAS HYDE

Calibration Date: 12-Mar-13 13:11:16

Software Version: WL INSITE R3.8.4 (Build 5)

Calibration Version: 1

Calibrator Source S/N: TB-185

Calibrator API Reference:228.00 api

Equivalent Calibrator API Reference:232.0 api

Measurement	Measured	Calibrated	Units
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Background	43.5	43.2	api
Background + Calibrator	277.4	275.2	api
Calibrator	233.9	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 10748374 **Reference Calibration Date:** 12-Mar-13 13:11:16
Engineer: THOMAS HYDE **Calibration Date:** 03-Apr-13 11:09:25
Software Version: WL INSITE R3.8.4 (Build 5) **Calibration Version:** 1

Calibrator Source S/N: TB-185
 Calibrator API Reference:228.00 api
 Equivalent Calibrator API Reference:232.0 api

Field Verification	Shop	Field	Units
Background	43.2	45.0	api
Background + Calibrator	275.2	275.2	api
Calibrator	232.0	230.3	api

Shop	Field	Difference	Tolerance
232.0	230.3	1.7	+/- 9.00

MICRO LOG SHOP CALIBRATION

Tool Name: Microlog Pad - 10685803 **Reference Calibration Date:** 05-Mar-13 16:37:45
Engineer: THOMAS HYDE **Calibration Date:** 02-Apr-13 00:32:27
Software Version: WL INSITE R3.8.4 (Build 5) **Calibration Version:** 1
Host Tool Name: DSNT - 10755066

CALIBRATION COEFFICIENT SUMMARY

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Measured	Calibrated	Measured	Calibrated	
Tool Zero	-0.07	-0.06	-0.00	0.00	ohmm
Calibration Point #1	-0.01	0.00	-0.00	0.00	ohmm
Calibration Point #2	20.00	20.00	20.01	20.00	ohmm
Internal Reference	19.95	19.94	20.01	20.01	ohmm

Measurement	Micro Log Normal Tool Value	Micro Log Lateral Tool Value	Units
Tool Zero	-0.23	0.68	V
Calibration Point #1	15.99	0.13	V
Calibration Point #2	5297.52	6874.08	V
Internal Reference	5282.58	6876.22	V

MICRO LOG FIELD CHECK

Tool Name: Microlog Pad - 10685803 **Reference Calibration Date:** 02-Apr-13 00:32:27
Engineer: THOMAS HYDE **Calibration Date:** 03-Apr-13 11:10:59
Software Version: WL INSITE R3.8.4 (Build 5) **Calibration Version:** 1

Measurement	Micro Log Normal		Micro Log Lateral		Units
	Shop	Field	Shop	Field	
Tool Zero	-0.06	-0.07	0.00	0.00	ohmm
Internal Reference	19.94	19.93	20.01	20.00	ohmm

Summary				
Signal	Shop	Field	Difference	Tolerance
Microlog Normal	19.94	19.93	0.01	+/- 0.80
Microlog Lateral	20.01	20.00	0.01	+/- 0.80

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10748374						
Gamma Ray Calibrator	232.0	230.3	-----	1.7	+/- 9.00	api
Microlog Pad-10685803						
MicroLog Normal	19.94	19.93	-----	0.01	+/-0.80	ohmm
MicroLog Lateral	20.01	20.00	-----	0.01	+/-0.80	ohmm

Data: WERNER_V1_31\0001 SP-GTET-DSN-SDL-ACRT-BNIDLE Date: 03-Apr-13 20:11:09

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	9.500	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	2.000	ohmm
	SHARED	TRM	Temperature of Mud	70.0	degF
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	ST	Surface Temperature	70.0	degF
	SHARED	TD	Total Well Depth	3580.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	Temperature Master Tool	NONE	
	SHARED	BHSM	Borehole Size Master Tool	NONE	
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes	
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic	
	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	
	GTET	GROK	Process Gamma Ray?	Yes	
	GTET	GRSO	Gamma Tool Standoff	0.000	in
	GTET	GEOK	Process Gamma Ray EVR?	No	
	GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
	DSNT	DNOK	Process DSN?	Yes	

DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DNSO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT Pad	DNOK	Process Density?	Yes	
SDLT Pad	DNOK	Process Density EVR?	No	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt Sonde	TPOS	Tool Position	Free Hanging	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm

BOTTOM

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INPUTS, DELAYS AND FILTERS TABLE

Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
CH_HOS				
DHTN	DownholeTension	0.00	BLK	0.000
SP Sub				
PLTC	Plot Control Mask	50.56	NO	
SP	Spontaneous Potential	50.56	BLK	1.250
SPR	Raw Spontaneous Potential	50.56	NO	
SPO	Spontaneous Potential Offset	50.56	NO	
GTET				
TPUL	Tension Pull	42.54	NO	
GR	Natural Gamma Ray API	42.54	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	42.54	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	42.54	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	

DSNT

TPUL	Tension Pull	32.30	NO	
RNDS	Near Detector Telemetry Counts	32.40	BLK	1.417
RFDS	Far Detector Telemetry Counts	33.15	TRI	0.583
DNTT	DSN Tool Temperature	32.40	NO	
DSNS	DSN Tool Status	32.30	NO	
ERND	Near Detector Telemetry Counts EVR	32.40	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	33.15	BLK	0.000
ENTM	DSN Tool Temperature EVR	32.40	NO	

SDLT

TPUL	Tension Pull	22.40	NO	
PCAL	Pad Caliper	22.40	TRI	0.250
ACAL	Arm Caliper	22.40	TRI	0.250

ACRt Sonde

TPUL	Tension Pull	2.73	NO	
F1R1	ACRT 12KHz - 80in R value	8.98	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	8.98	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.48	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.48	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	4.98	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	4.98	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	3.98	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	3.98	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.48	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.48	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.23	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.23	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	8.98	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	8.98	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.48	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.48	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	4.98	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	4.98	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	3.98	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	3.98	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.48	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.48	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.23	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.23	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	8.98	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	8.98	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.48	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.48	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	4.98	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	4.98	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	3.98	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	3.98	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.48	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.48	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.23	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.23	BLK	0.000
RMUD	Mud Resistivity	12.52	BLK	0.000
F1RT	Transmitter Current Raw 12K X Receiver	2.73	BLK	0.000
F1RF	Transmitter Current Raw 12K X Receiver	2.73	BLK	0.000

1XT	Transmitter Reference 12 KHz Imaginary Signal	2.73	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.73	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.73	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.73	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.73	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.73	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.73	BLK	0.000
ITMP	Instrument Temperature	2.73	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.73	NO	
TIDV	Instrument Temperature Derivative	2.73	NO	
TUDV	Upper Temperature Derivative	2.73	NO	
TLDV	Lower Temperature Derivative	2.73	NO	
TRBD	Receiver Board Temperature	2.73	NO	

SDLT Pad

TPUL	Tension Pull	22.39	NO	
NAB	Near Above	22.21	BLK	0.920
NHI	Near Cesium High	22.21	BLK	0.920
NLO	Near Cesium Low	22.21	BLK	0.920
NVA	Near Valley	22.21	BLK	0.920
NBA	Near Barite	22.21	BLK	0.920
NDE	Near Density	22.21	BLK	0.920
NPK	Near Peak	22.21	BLK	0.920
NLI	Near Lithology	22.21	BLK	0.920
NBAU	Near Barite Unfiltered	22.21	BLK	0.250
NLIU	Near Lithology Unfiltered	22.21	BLK	0.250
FAB	Far Above	22.56	BLK	0.250
FHI	Far Cesium High	22.56	BLK	0.250
FLO	Far Cesium Low	22.56	BLK	0.250
FVA	Far Valley	22.56	BLK	0.250
FBA	Far Barite	22.56	BLK	0.250
FDE	Far Density	22.56	BLK	0.250
FPK	Far Peak	22.56	BLK	0.250
FLI	Far Lithology	22.56	BLK	0.250
PTMP	Pad Temperature	22.40	BLK	0.920
NHV	Near Detector High Voltage	21.79	NO	
FHV	Far Detector High Voltage	21.79	NO	
ITMP	Instrument Temperature	21.79	NO	
DDHV	Detector High Voltage	21.79	NO	

Microlog Pad

TPUL	Tension Pull	22.58	NO	
MINV	Microlog Lateral	22.58	BLK	0.750
MNOR	Microlog Normal	22.58	BLK	0.750

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COMPANY **VAL ENERGY**

WELL **WERNER V1-31**

FIELD **WILSON**

COUNTY **COWLEY**

STATE **KANSAS**

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