HALLIBURTON

WAVESONIC DELTA-T LOG

COMPANY	FALCON EXPLORATION, INC
WELL	RILEY WINKLER 1-6(SW)
FIELD/BLOCK	WILDCAT
COUNTY	GRAY
STATE	KANSAS

COMPANY **FALCON EXPLORATION, INC**
WELL **RILEY WINKLER 1-6(SW)**
FIELD/BLOCK **WILDCAT**
COUNTY **GRAY** STATE **KANSAS**

API No. 15-069-20503-00-00
Location (SHL) 2300' FSL & 2970' FEL
NE NE SW

Other Services:
DSNT/SDLT
MICROLOG
WSTT
ACRT

Sect. 6 Twp. 28S Rge. 29W

Permanent Datum GL Elev. 2787.0 ft
Log measured from KB , 13.0 ft above perm. Datum
Drilling measured from KB

Elev.: K.B. 2800.0 ft
D.F. 2800.0 ft
G.L. 2787.0 ft

Date	07-Feb-18		
Run No.	ONE		
Depth - Driller	1893.0 ft		
Depth - Logger	5302.0 ft		
Bottom - Logged Interval	5271.00 ft		
Top - Logged Interval	1892.00 ft		
Casing - Driller	8.625 in @ 1893.0 ft	@	@
Casing - Logger	1892.0 ft		
Bit Size	7.875 in		
Type Fluid in Hole	Water Based Mud		
Density / Viscosity	9.3 ppg / 75.00 s/qt		
PH / Fluid Loss	9.50 pH / 7.6 cptm		
Source of Sample	MUD PIT		
Rm @ Meas. Temperature	0.90 ohmm @ 75.00 degF	@	@
Rmf @ Meas. Temperature	0.78 ohmm @ 75.00 degF	@	@
Rmc @ Meas. Temperature	1.10 ohmm @ 75.00 degF	@	@
Source Rmf / Rmc	MEAS / MEAS		
Rm @ BHT	0.53 ohmm @ 131.0 degF	@	@
Time Since Circulation	5.0 hr		
Time on Bottom	07-Feb-18 04:48		
Max. Rec. Temperature	131.00 degF @ 5302.0 ft	@	@
Equipment / Location	12147634 / EL RENO		
Recorded By	JORGE ORLANDO PEREZ		
Witnessed By	DAVE WILLIAMS		

Fold here

Service Ticket No.: 904586269	API No.: 15-069-20503-00-00	PGM Version: WL INSITE R5.0.5 (Build 8)

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE					
Date	Sample No.				
Depth-Driller					
Type Fluid in Hole					
Density	Viscosity				
Ph	Fluid Loss				
Source of Sample					
Rm @ Meas. Temp		@		@	
Rmf @ Meas. Temp.		@		@	
Rmc @ Meas. Temp.		@		@	
Source Rmf	Rmc				
Rm @ BHT		@		@	
Rmf @ BHT		@		@	
Rmc @ BHT		@		@	

RESISTIVITY SCALE CHANGES			
Type Log	Depth	Scale Up Hole	Scale Down Hole

RESISTIVITY EQUIPMENT DATA				
Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other
ONE	ACRT	N/A	CENT	N/A
	I-11026095			
	S-11005908			

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	11958947	Serial No.	U70T00R44L98	Serial No.	10960494	Serial No.	11055304
Model No.	GTET	Model No.	WSTT	Model No.	SDLT	Model No.	DSNT
Diameter	3.625"	No. of Cent.	2	Diameter	5.5"	Diameter	3.625"
Detector Model No.	T-102	Spacing	EVEN	Log Type	GAM-GAM	Log Type	NEU-NEU
Type	SCINT			Source Type	CS137	Source Type	AM241BE
Length	8"	LSA [Y/N]		Serial No.	5168GW	Serial No.	DSN-424
Distance to Source	N/A	FWDA [Y/N]		Strength	1.5 Ci	Strength	15.0 Ci

LOGGING DATA

GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	TD	CSG	REC	0	150	30	-10	47.6 uSec/ft	30	-10	2.71 gr/cc	30	-10	LIME

ONE	TD	CSG	REC	0	150	30	-10	47.6 uSec/ft	30	-10	2.71 gr/cc	30	-10	LIME

DIRECTIONAL INFORMATION

Maximum Deviation	@	KOP	@

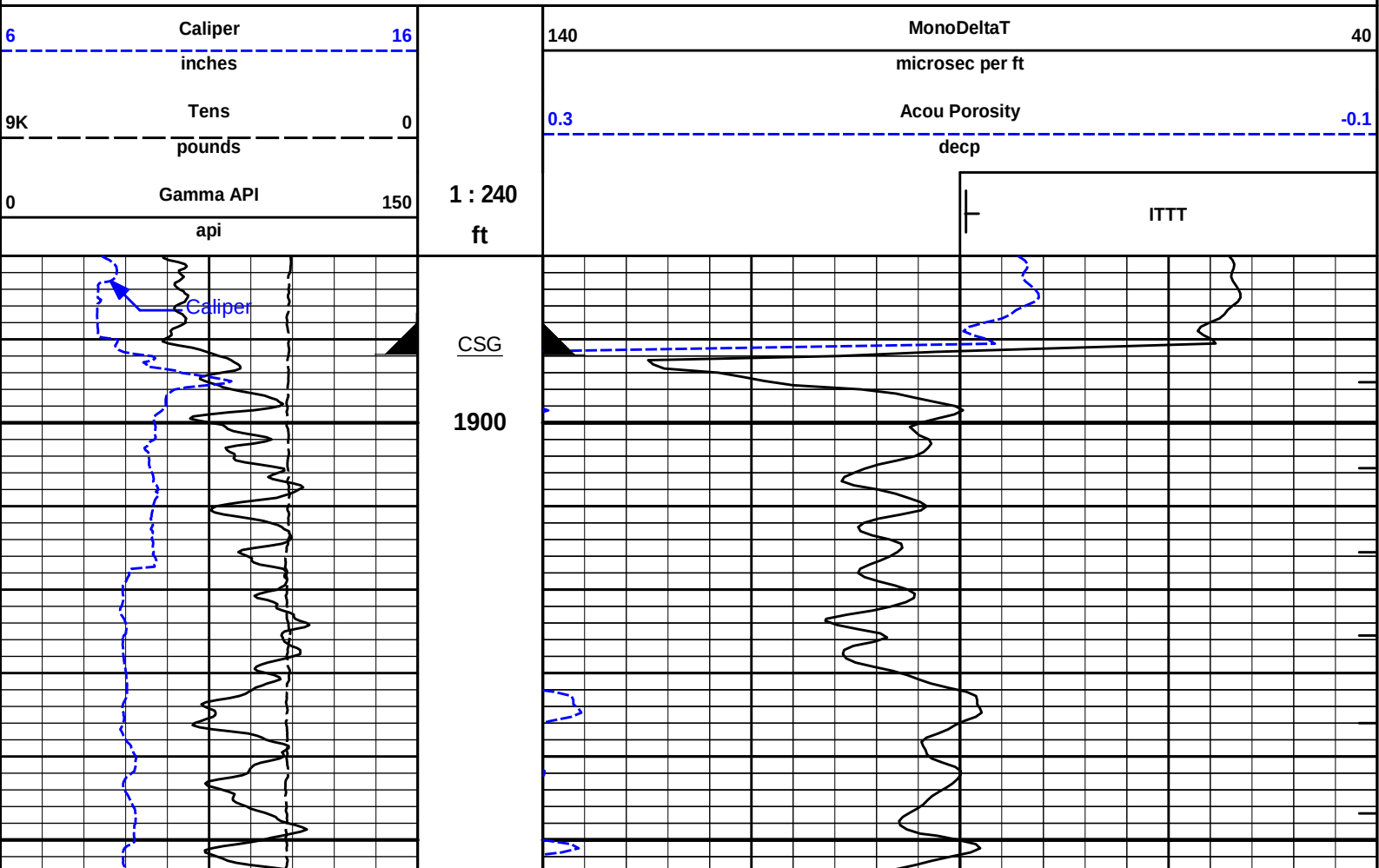
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING

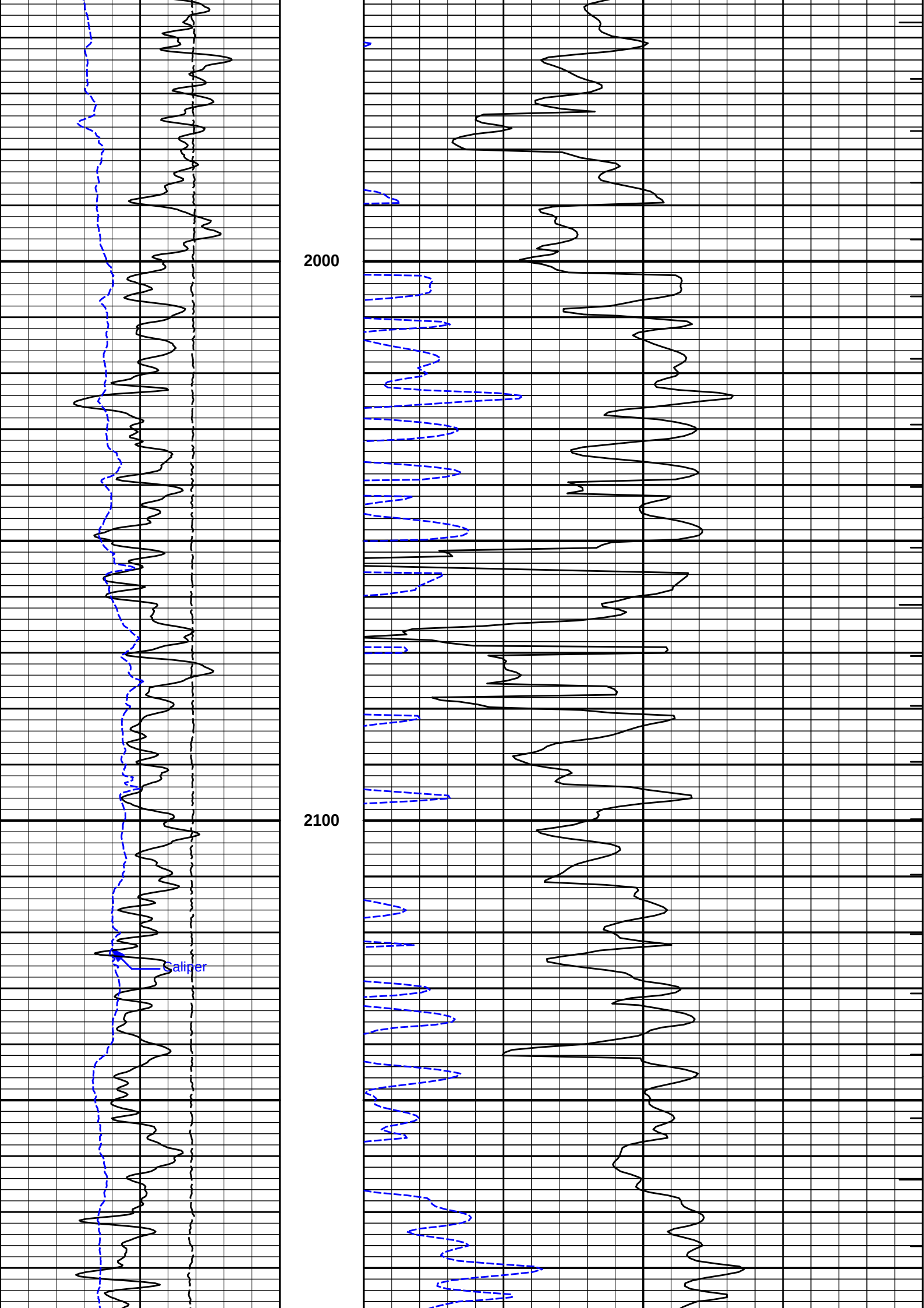
CHLORIDES REPORTED AT 4800 ppm

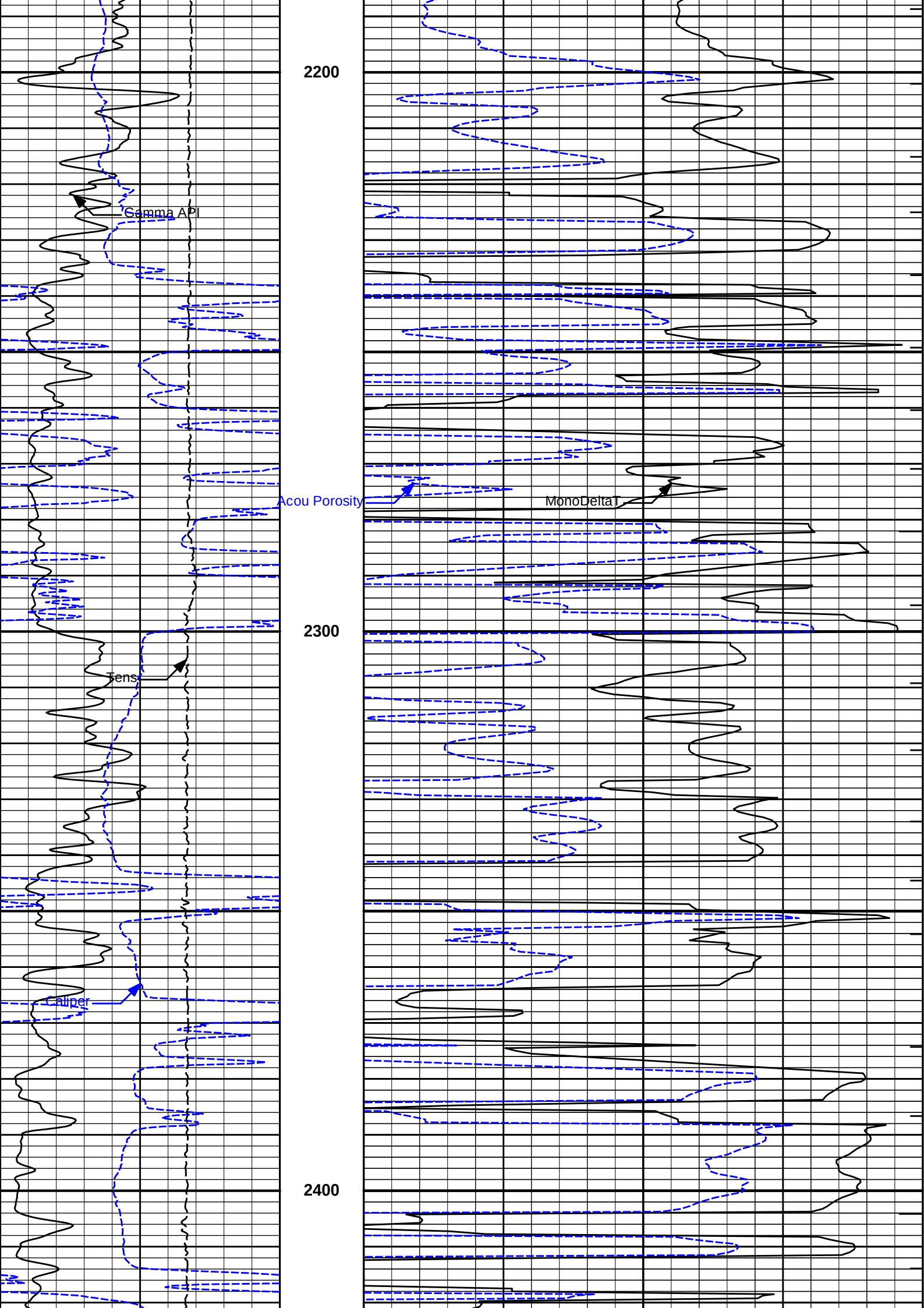
HALLIBURTON

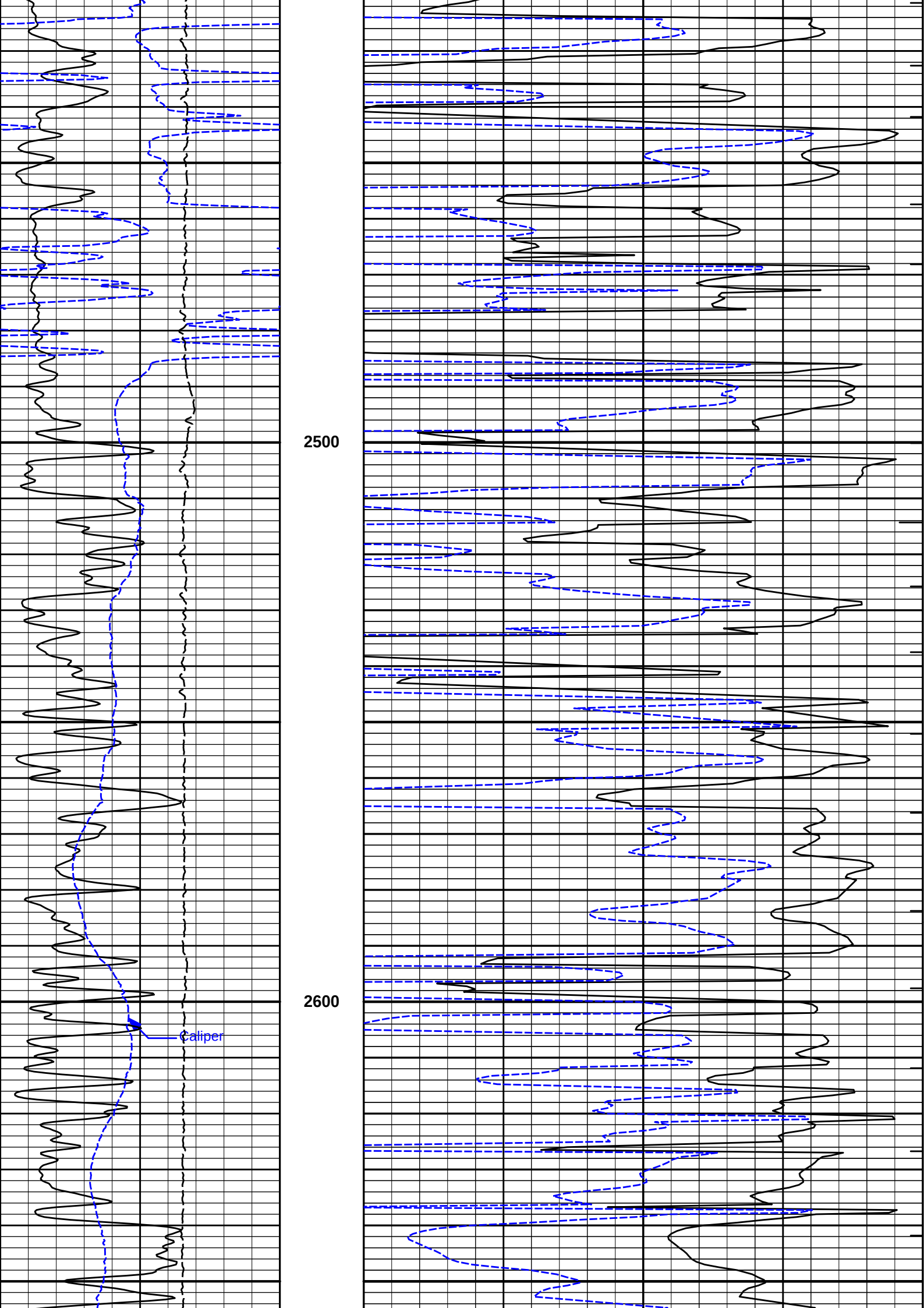
Plot Time: 07-Feb-18 07:44:10
Plot Range: 1880 ft to 5305.08 ft
Data: RILEY-WINKLER\Well Based\MAIN
Plot File: \\WSTT\WSTT_DT_5inch

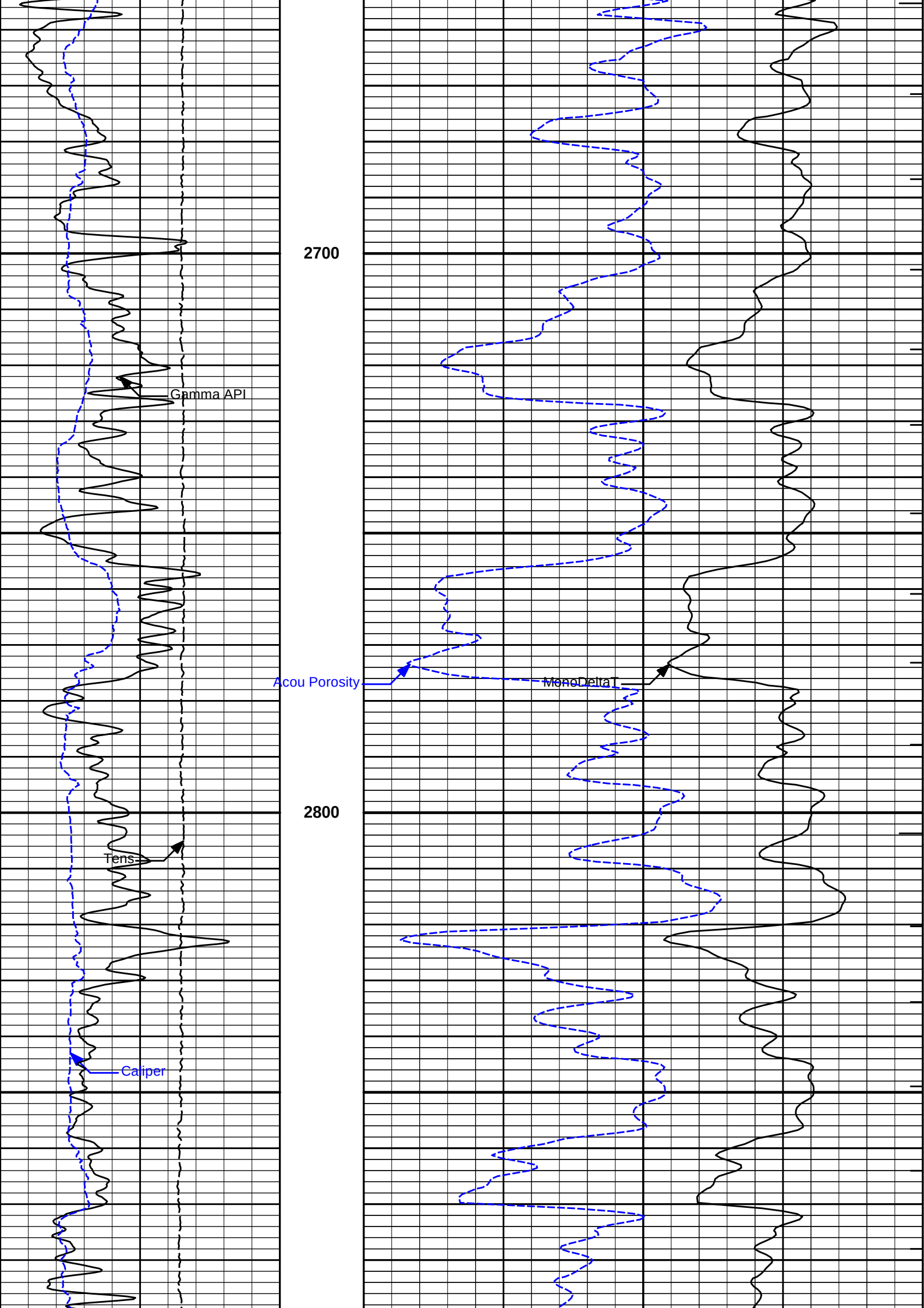
5 INCH MAIN LOG

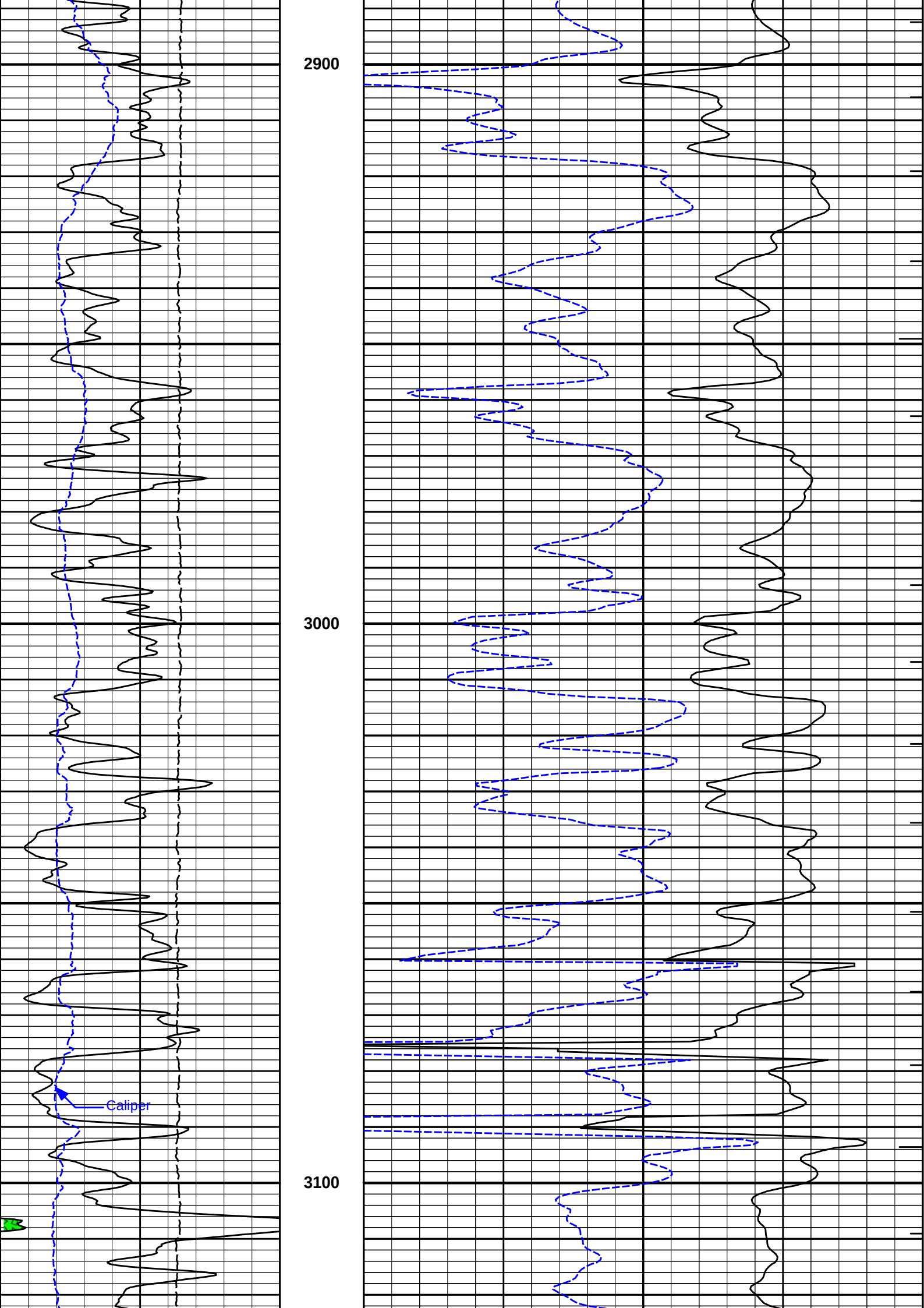


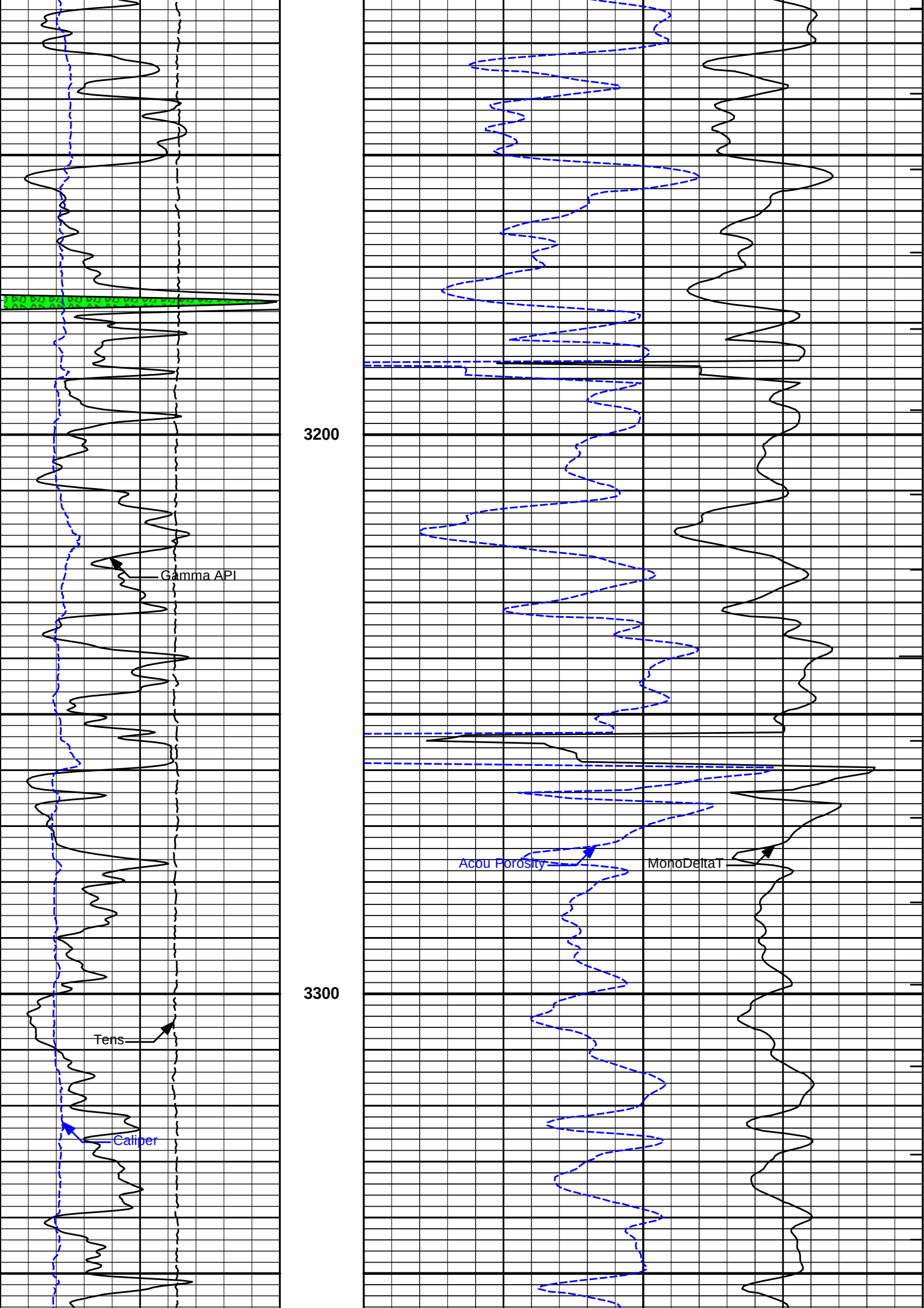

2000
2100
Caliper

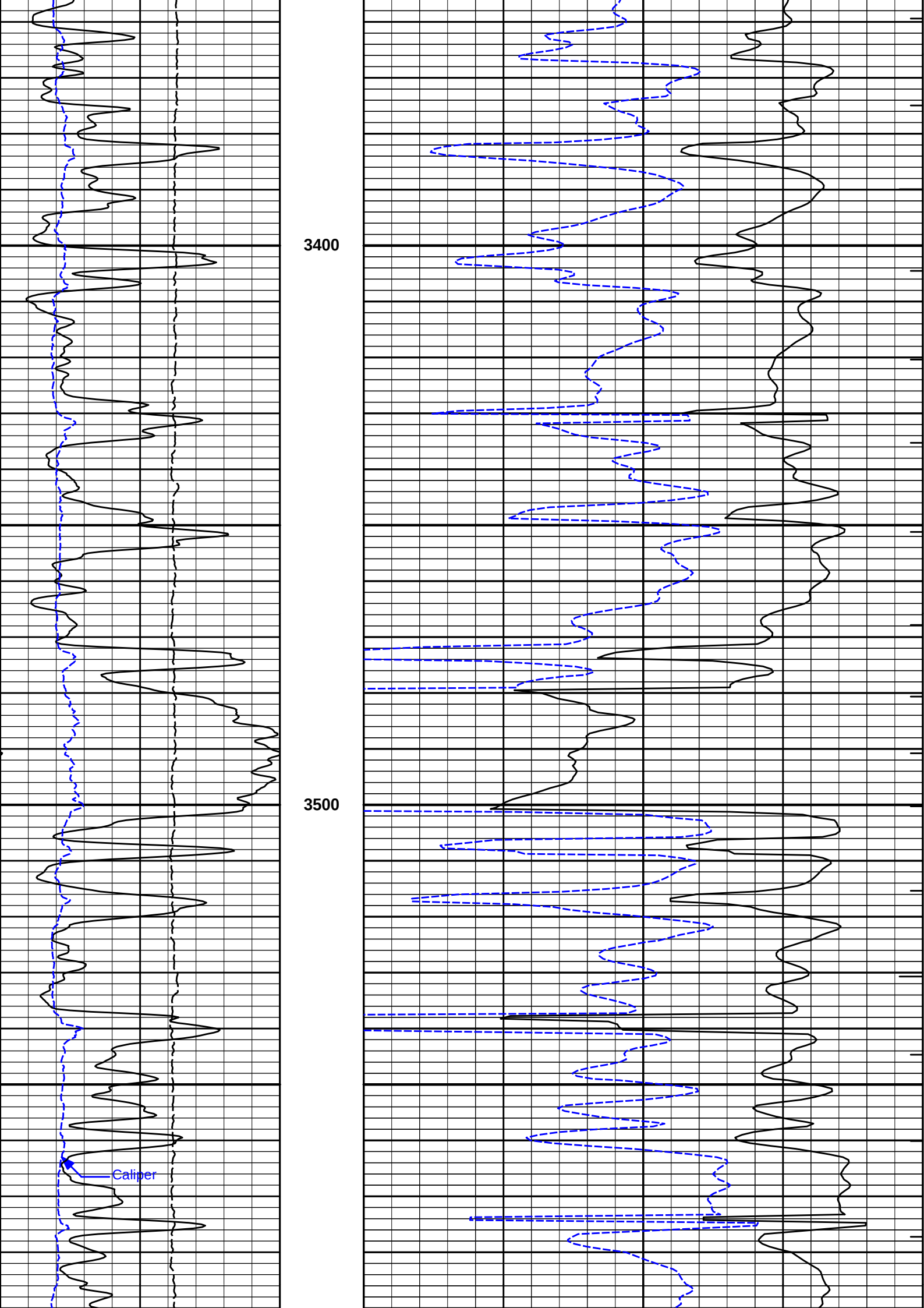

2200
Gamma API
Acou Porosity
MonoDeltaT
2300
Tens
Caliper
2400

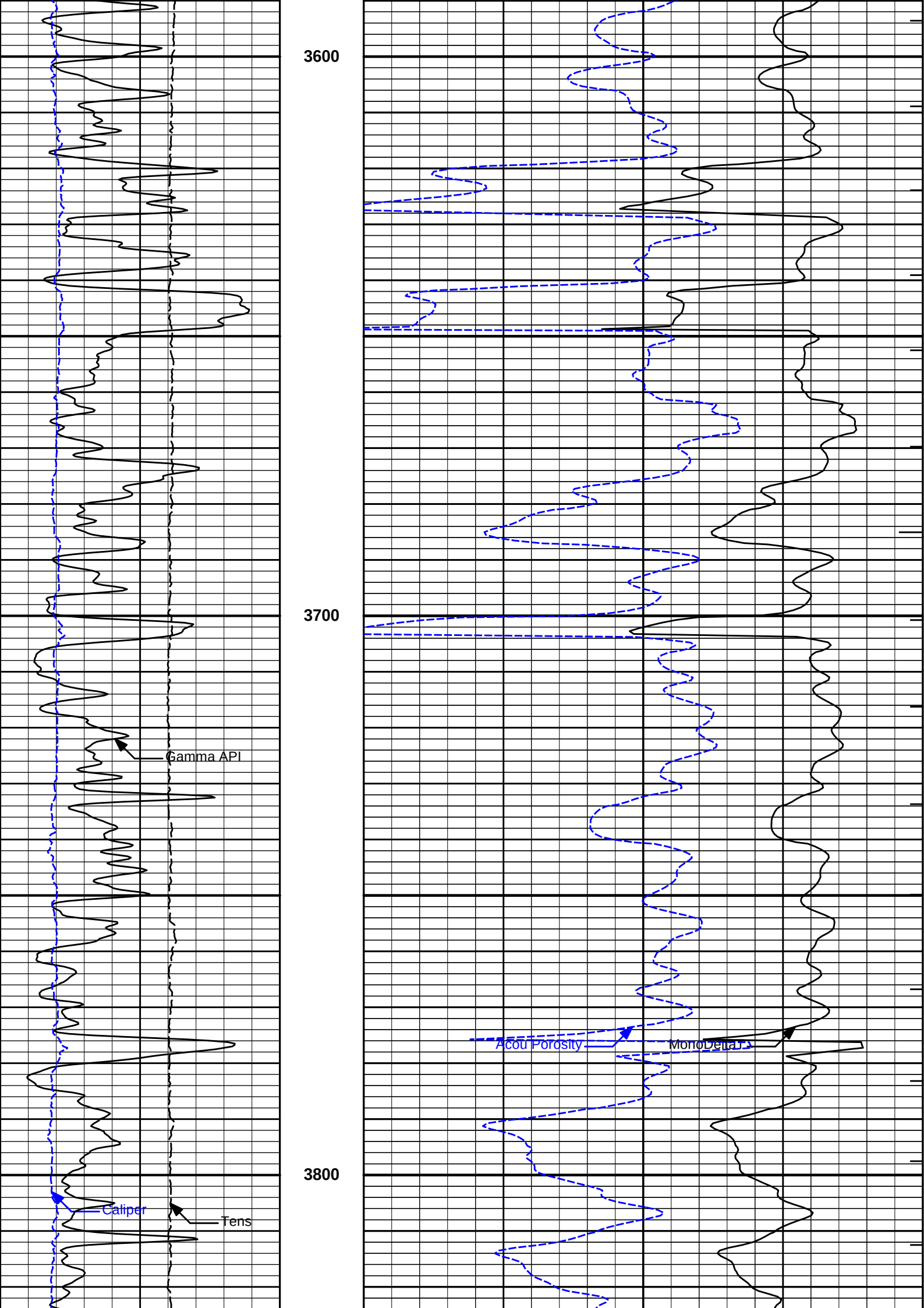

2500
2600
Caliper

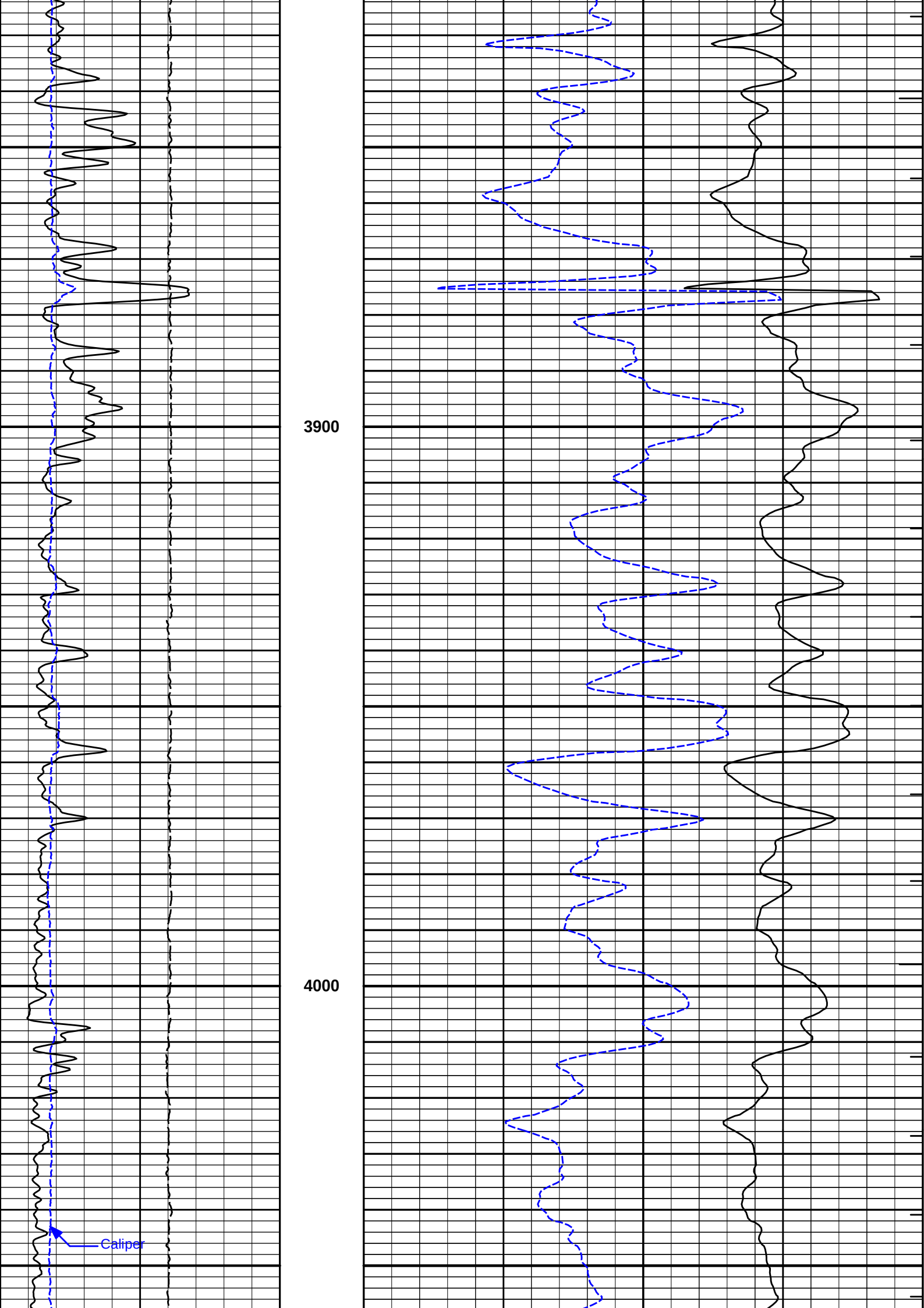

2700
Gamma API
Acou Porosity
MonoDeltaT
2800
Tens
Caliper

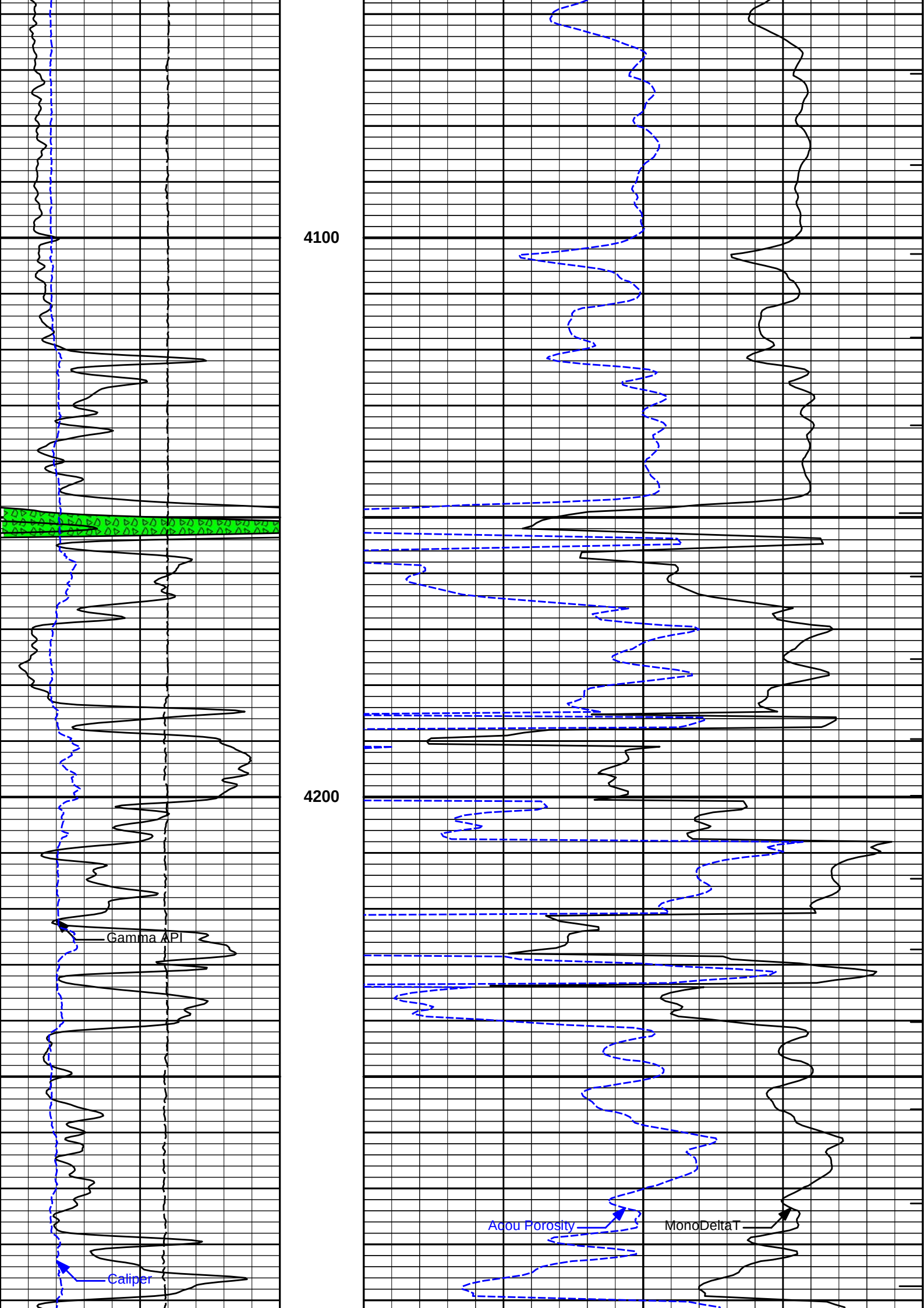

2900
3000
3100
Caliper

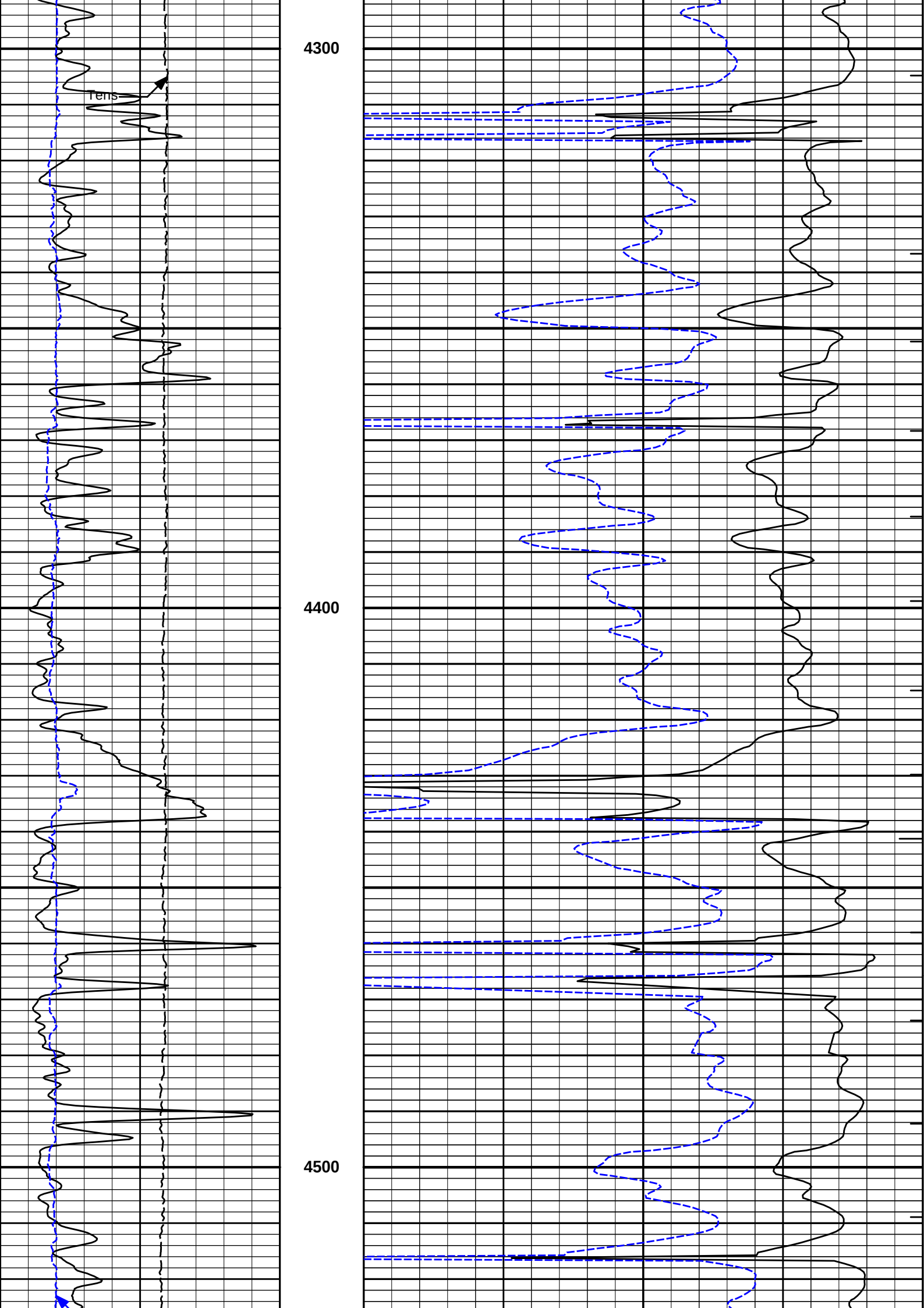

3200
Gamma API
3300
Tens
Caliper
Acou Porosity
MonoDeltaT

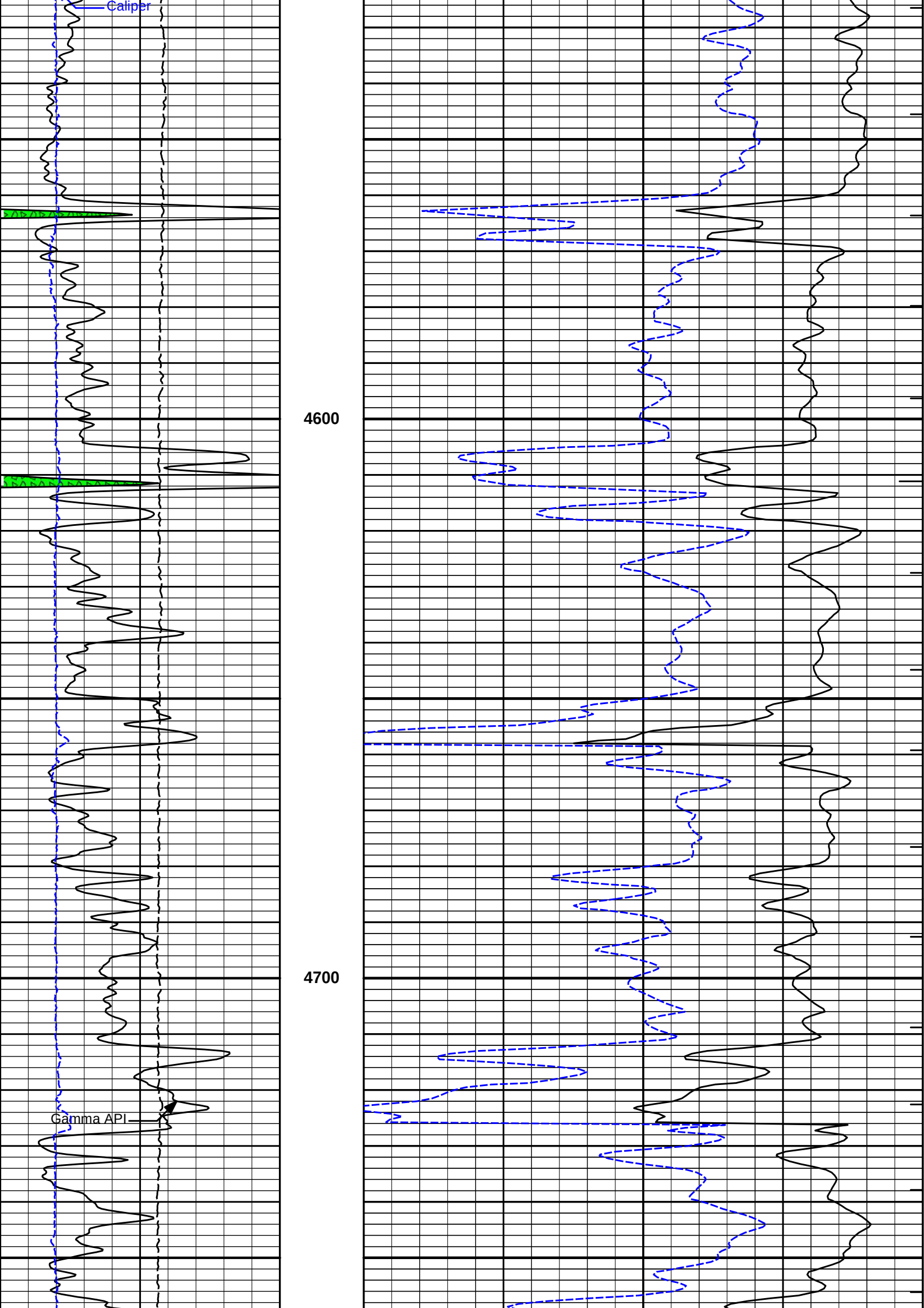

3400
3500
Caliper

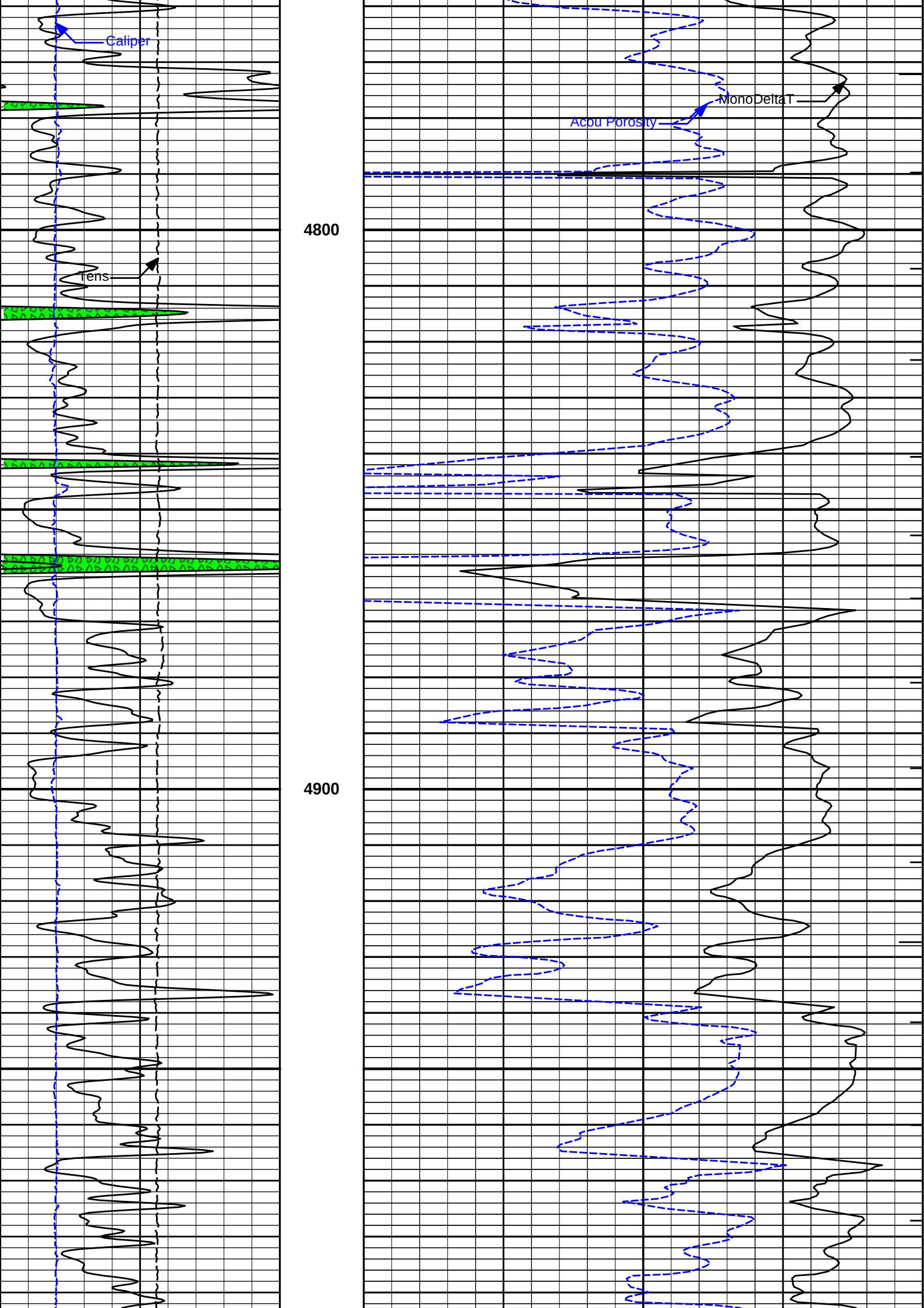

3600
3700
3800
Gamma API
Caliper
Tens
Acou Porosity
MonoDeltaT

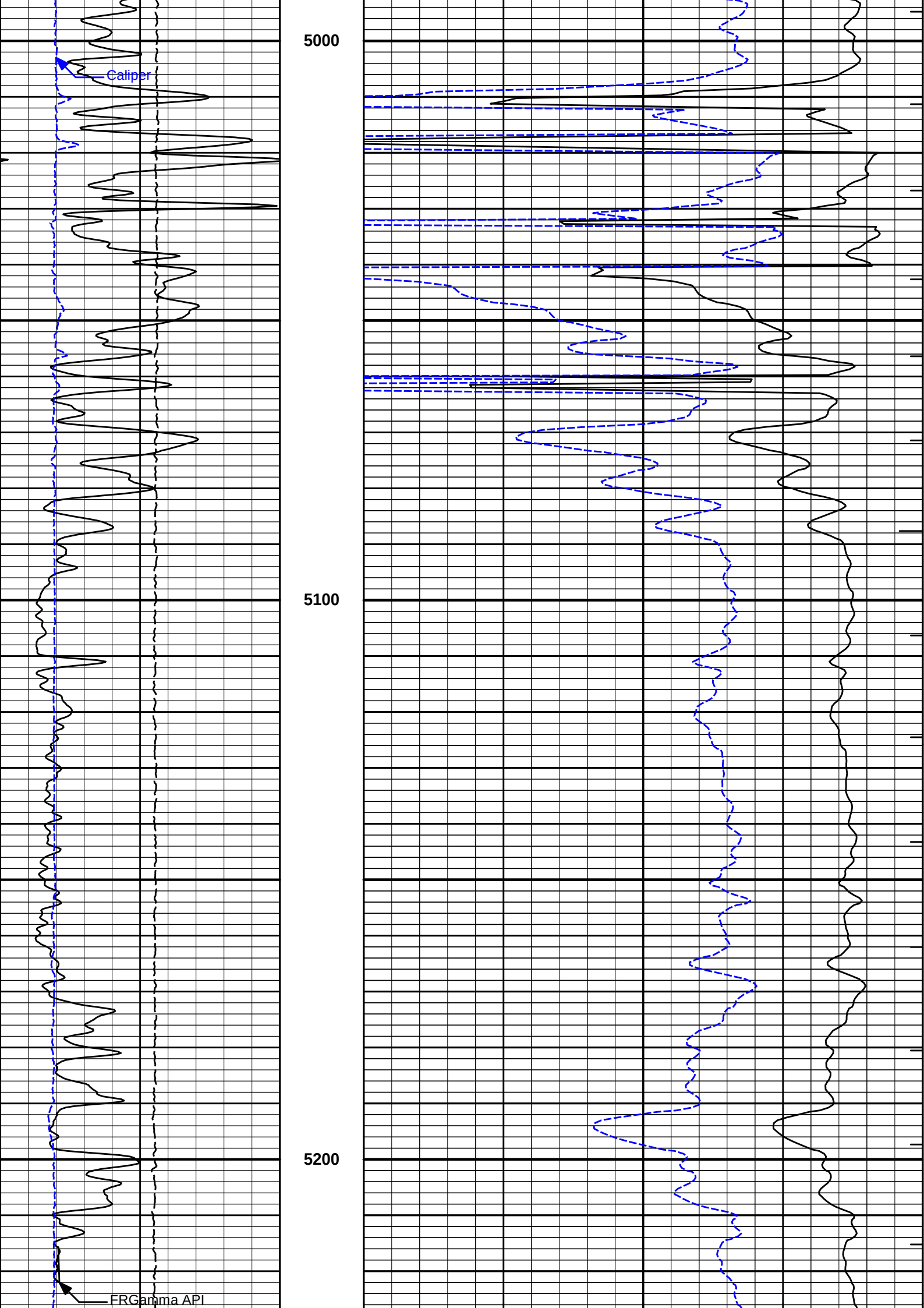

3900
4000
Caliper

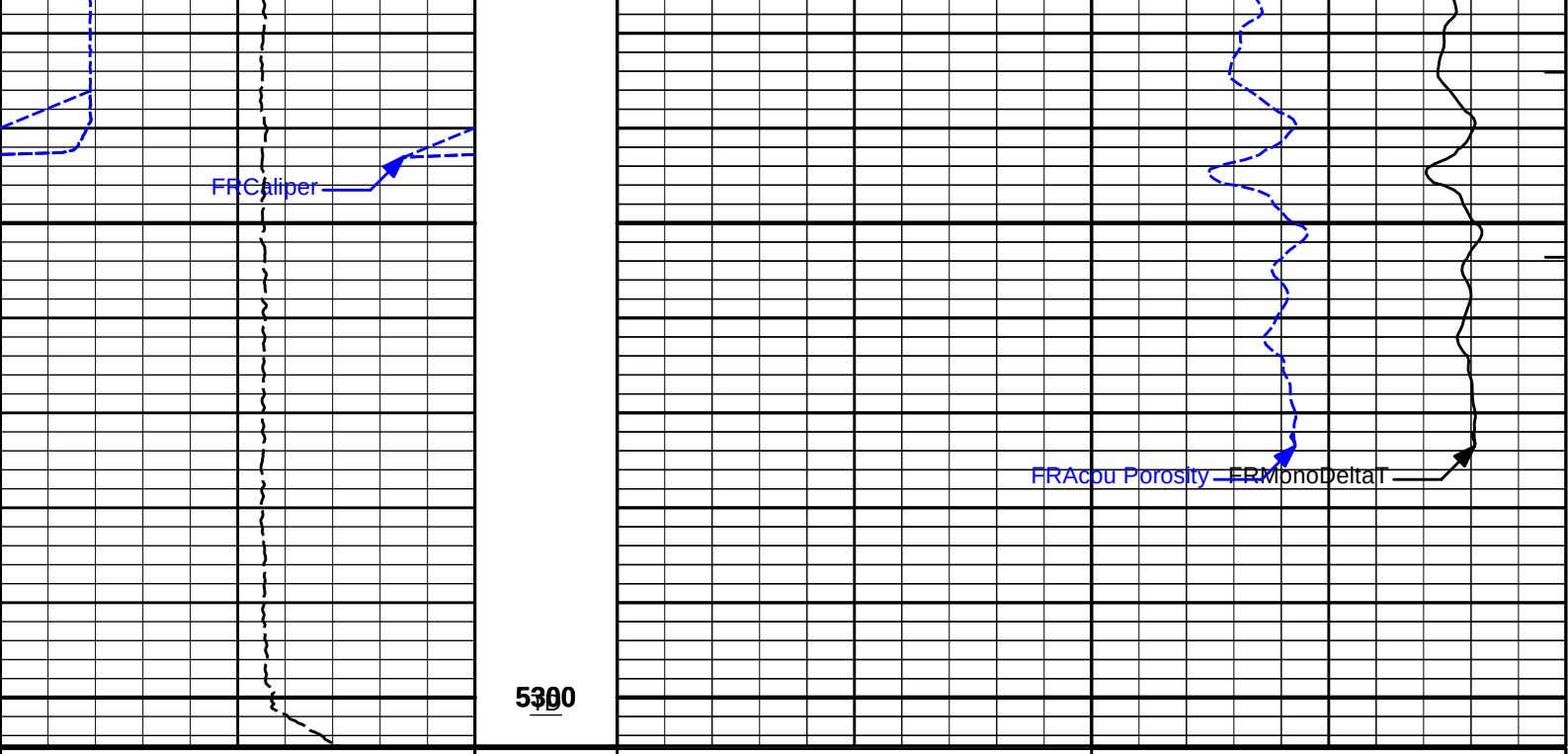

4100
4200
Gamma API
Caliper
Acou Porosity
MonoDeltaT


Tens
4300
4400
4500


Caliper
4600
4700
Gamma API


Caliper
Tens
MonoDeltaT
Acou Porosity
4800
4900


5000
Caliper
5100
5200
FRGamma API



5300 ft

0 Gamma API 150	1 : 240	ITTT
api	ft	
9K Tens 0		0.3 Acou Porosity -0.1
pounds		decp
6 Caliper 16		140 MonoDeltaT 40
inches		microsec per ft

HALLIBURTON

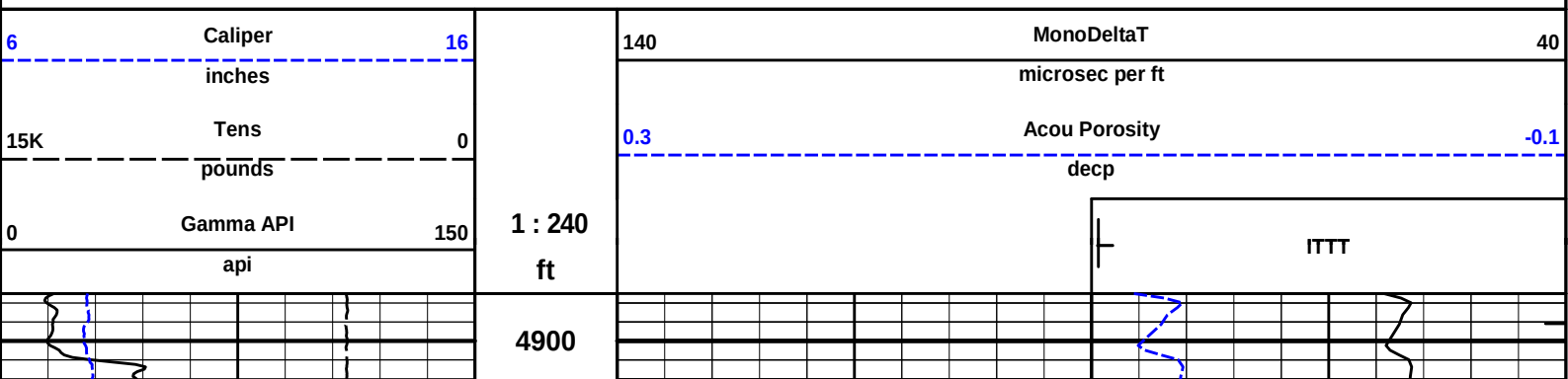
Plot Time: 07-Feb-18 07:44:19
Plot Range: 1880 ft to 5305.08 ft
Data: RILEY-WINKLER\Well Based\MAIN\
Plot File: \\WSTT\WSTT_DT_5inch

5 INCH MAIN LOG

HALLIBURTON

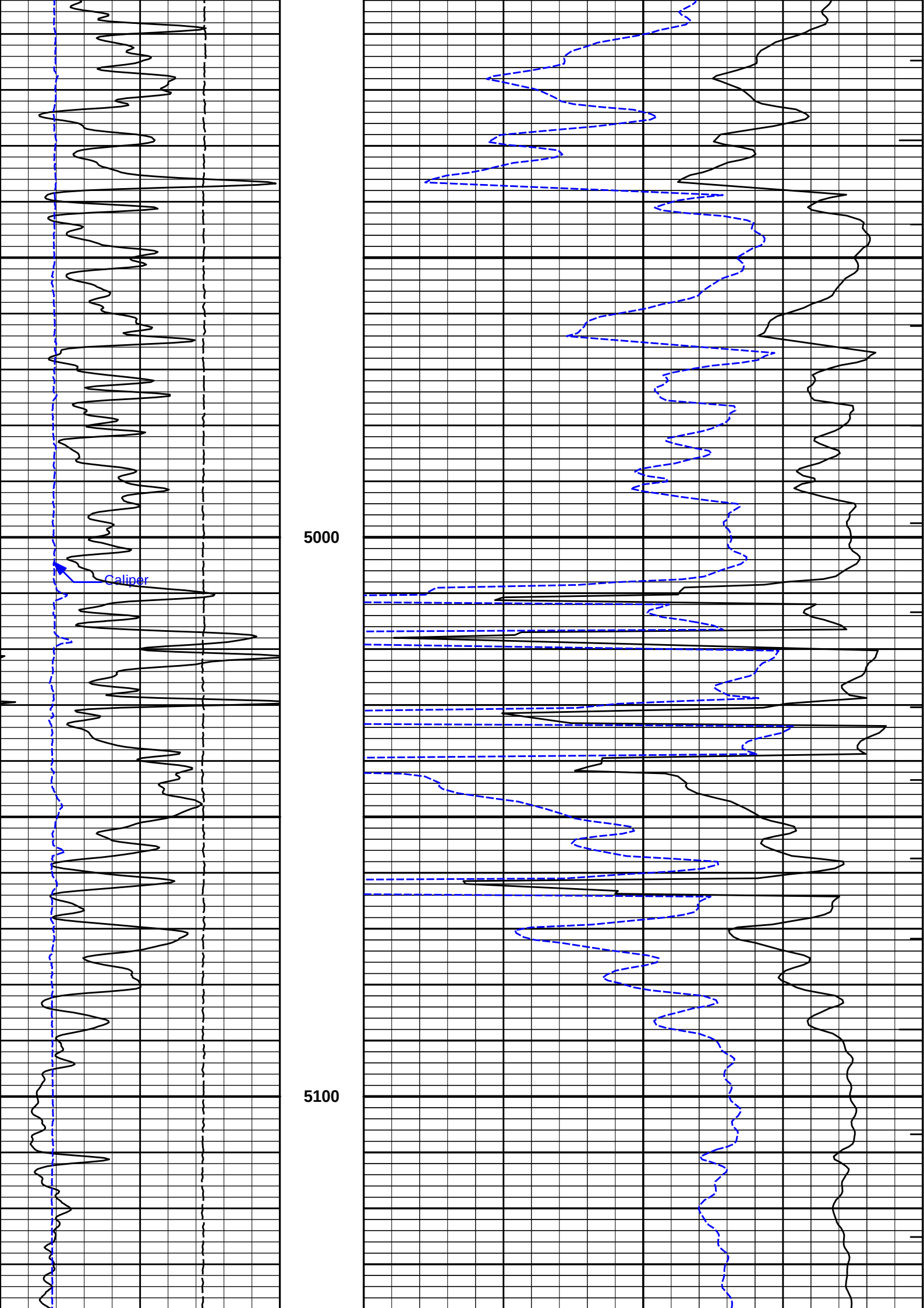
Plot Time: 07-Feb-18 07:44:19
Plot Range: 4895 ft to 5306.17 ft
Data: RILEY-WINKLER\Well Based\REPEAT\
Plot File: \\WSTT\WSTT_DT_5inch

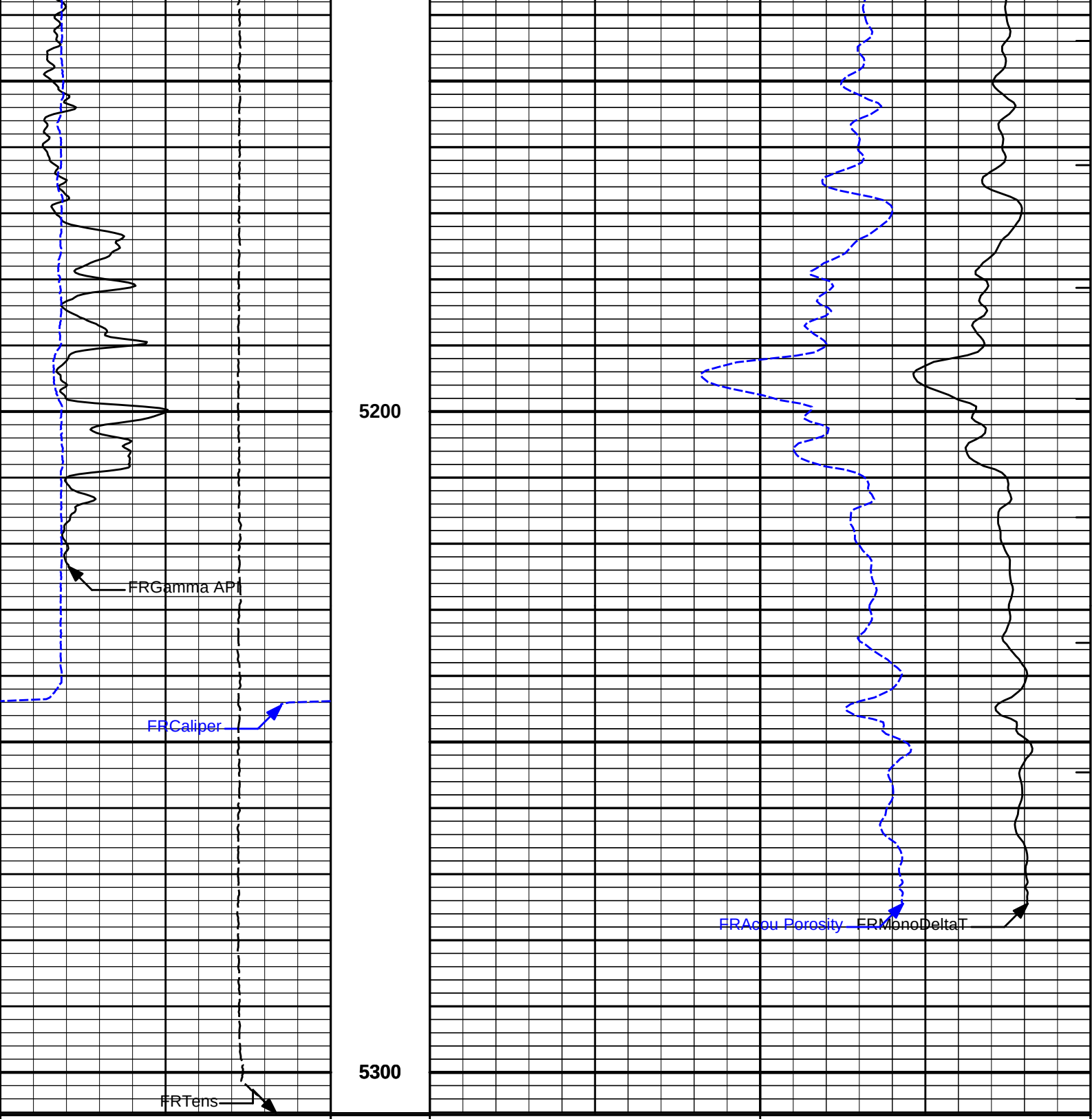
5 INCH REPEAT LOG



6 Caliper 16	1 : 240	140 MonoDeltaT 40
inches	ft	microsec per ft
15K Tens 0		0.3 Acou Porosity -0.1
pounds		decp
0 Gamma API 150		ITTT
api		

4900 ft


5000
Caliper
5100



0 Gamma API 150	1 : 240 ft	ITTT
api		
15K Tens 0		0.3 Acou Porosity -0.1
pounds		decp
6 Caliper 16		140 MonoDeltaT 40
inches		microsec per ft

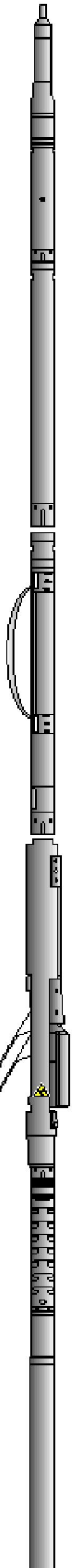
HALLIBURTON

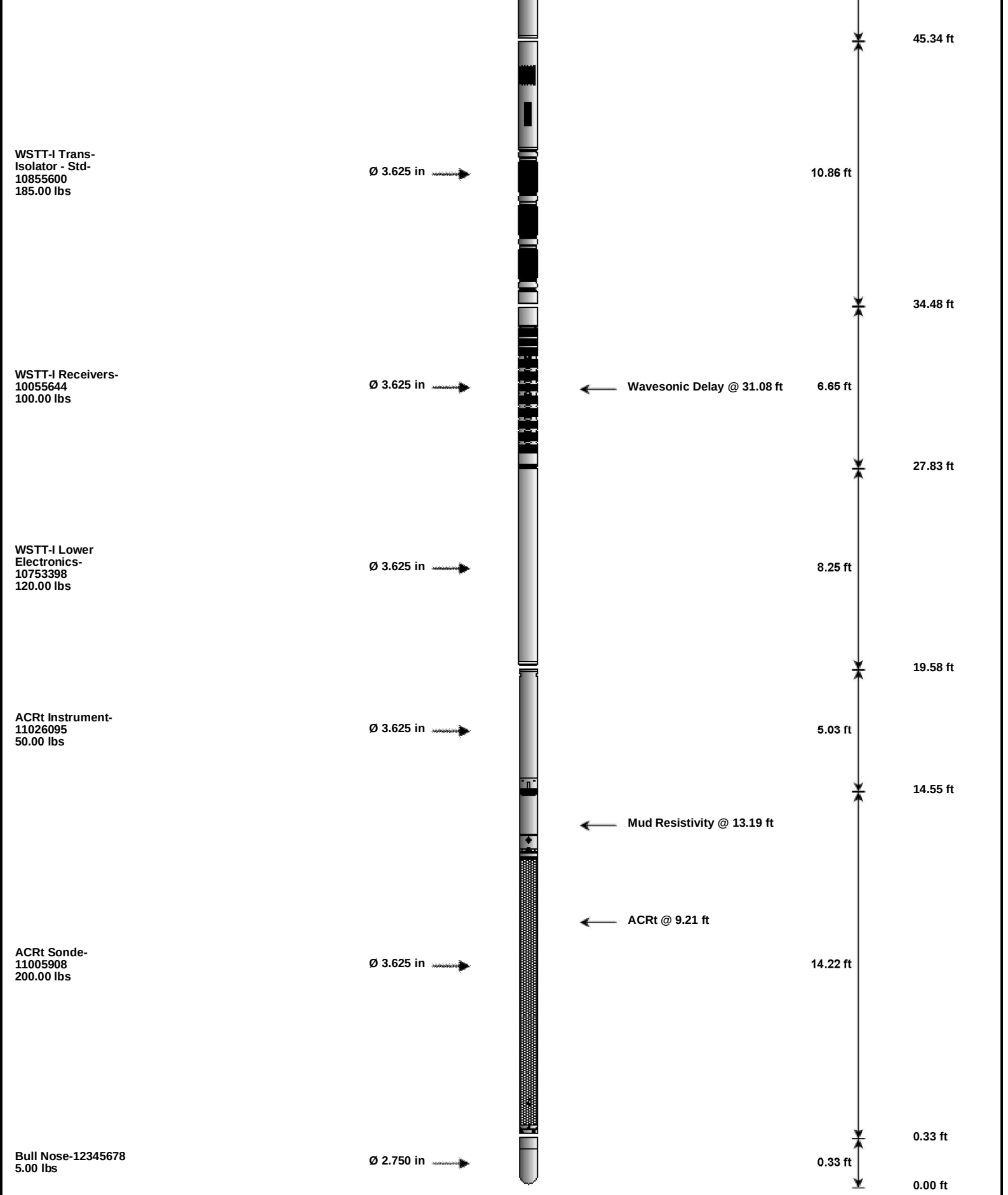
Plot Time: 07-Feb-18 07:44:22
Plot Range: 4895 ft to 5306.17 ft
Data: RILEY-WINKLER\Well Based\REPEAT\
Plot File: \\WSTT\WSTT_DT_5inch

5 INCH REPEAT LOG

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
				Temperature @ 95.03 ft		95.53 ft
CH_HOS-11459024 37.50 lbs	Weak Point 7000 lbs-00000025 0.01 lbs	Ø 2.750 in Ø 0.010 in*			2.50 ft	
XOHD-11569312 20.00 lbs		Ø 2.750 in Ø 3.625 in			0.95 ft	93.03 ft 92.08 ft
SP Sub-11441455 60.00 lbs		Ø 3.625 in		SP @ 90.30 ft	3.74 ft	
				Z-Accelerometer @ 87.89 ft		88.34 ft
GTET-11958947 165.00 lbs		Ø 3.625 in			8.52 ft	
				GammaRay @ 82.28 ft		
						79.82 ft
DSNT-11055304 174.00 lbs	DSN Decentralizer-11055304 6.60 lbs	Ø 5.000 in* Ø 3.625 in			9.69 ft	
				DSN Far @ 72.89 ft DSN Near @ 72.14 ft		
						70.14 ft
SDLT-10960494 360.00 lbs	SDLT Pad-10844781 65.00 lbs Microlog Pad-10960494 8.00 lbs RAM-Cs137-00005168 1.00 lbs	Ø 4.500 in Ø 4.500 in* Ø 4.750 in* Ø 0.800 in*		Microlog @ 62.32 ft SDL Caliper @ 62.14 ft SDL @ 62.13 ft	10.81 ft	
						59.32 ft
IQ Flex-11005585 140.00 lbs		Ø 3.625 in			5.67 ft	
						53.65 ft
WSTT-I Upper Electronics-10894370 115.00 lbs		Ø 3.625 in			8.31 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	11459024	37.50	2.50		93.03	300.00
WP7K	Weak Point 7000 lbs	00000025	0.01	0.01	*	93.83	300.00
XOHD	Hostile to Dits Cross Over	11569312	20.00	0.95		92.08	300.00
SP	SP Sub	11441455	60.00	3.74		88.34	300.00
GTET	Gamma Telemetry Tool	11958947	165.00	8.52		79.82	60.00
DSNT	Dual Spaced Neutron	11055304	174.00	9.69		70.14	60.00
DCNT	DSN Decentralizer	11055304	6.60	5.13	*	73.47	300.00
SDLT	Spectral Density Tool	10960494	360.00	10.81		59.32	60.00
SDLP	Density Insite Pad	10844781	65.00	2.55	*	61.53	60.00

Cs137	Logging Source, SDLT-I, 1.78 Ci - Cs137	00005168	1.00	0.80	*	61.76	300.00
MICP	Microlog Pad	10960494	8.00	1.00	*	61.82	60.00
IQF	IQ Flex tool	11005585	140.00	5.67		53.65	300.00
WSTT	WaveSonic Insite - Upper Electronics	10894370	115.00	8.31		45.34	100.00
WSTT	WaveSonic Insite - Trans-Isolator - Std	10855600	185.00	10.86		34.48	100.00
WSTT	WaveSonic Insite - Receivers	10055644	100.00	6.65		27.83	30.00
WSTT	WaveSonic Insite - Lower Electronics	10753398	120.00	8.25		19.58	100.00
ACRt	Array Compensated True Resistivity Instrument Section	11026095	50.00	5.03		14.55	120.00
ACRt	Array Compensated True Resistivity Sonde Section	11005908	200.00	14.22		0.33	120.00
BLNS	Bull Nose	12345678	5.00	0.33		0.00	300.00
Total			**1,812.11**	**95.53**			

* Not included in Total Length and Length Accumulation.

Data: RILEY-WINKLER\0001 GTET-DSNT-SDLT-WSTT-ACRT\IDLE **Date: 07-Feb-18 02:58:52**

HALLIBURTON

PARAMETERS REPORT

Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	CSD	Logging Interval is Cased?	Yes	
	SHARED	CSOD	Inner Casing OD size	8.625	in
	SHARED	CSWT	Casing Weight	24.00	lbpf
	SHARED	ISOC	Is Outer Casing Present?	No	
	SHARED	CSCM	Casing Cemented	Yes	
	SHARED	CMTY	API Cement Class	H	
	SHARED	CMWT	Cement Weight	16.500	ppg
1893.00					
	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	9.350	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	0.903	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	5300.00	ft
	SHARED	BHT	Bottom Hole Temperature	152.0	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	Automatic	
	Rwa / CrossPlot	AFAC	Archie A factor	0.6200	
	Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
	Rwa / CrossPlot	RMFR	Rmf Reference	0.77	ohmm
	Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
	Rwa /				

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	SDLT	
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	SDLT	
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	DNTT	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	
DSNT	BHSM	Borehole Size Source Tool	SDLT	
SDLT	CLOK	Process Caliper Outputs?	Yes	
Microlog Pad	MLOK	Process MicroLog 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
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
WSTT-I Receivers	WSOK	Process WSTT?	Yes	
WSTT-I Receivers	AFIL	Adaptive Filtering?	No	
WSTT-I Receivers	PINT	Process 1 Sample and Skip	0	
WSTT-I Receivers	PROM	Process Mode: M=1,MX=2,MY=3,MXY=4	4	
WSTT-I Receivers	DTSH	Delta -T Shale	100.00	uspf
WSTT-I Receivers	DTMT	Delta -T Matrix Type	Limestone 47.6	
WSTT-I Receivers	DTMA	Delta -T Matrix	57.00	uspf
WSTT-I Receivers	DTFL	Delta -T Pore Fluid	189.00	uspf
WSTT-I Receivers	RHOM	Matrix Density	2.7100	g/cc
WSTT-I Receivers	RHOF	Fluid Density	1.0000	g/cc
WSTT-I Receivers	SMTH	Semblance Threshold	0.25	
WSTT-I Receivers	VPVS	VPVS Ratio for Porosity	1.40	
WSTT-I Receivers	APEQ	Acoustic Porosity Equation	Wylie	
WSTT-I Receivers	NAVS	Navigation Source Tool	GTET	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Upr	
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	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	SDLT	
ACRt Sonde	MBFL	Apply Corkscrew Effect?	No	

BOTTOM

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 11958947 **Reference Calibration Date:** 08-Dec-17 09:10:57

Engineer: HARRIS **Calibration Date:** 08-Dec-17 09:13:31

Software Version: WL INSITE R5.0.5 (Build 8) **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
Background	33.1	32.7	api
Background + Calibrator	267.5	264.7	api
Calibrator	234.4	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 11958947 **Reference Calibration Date:** 08-Dec-17 09:13:31

Engineer: JORGE ORLANDO PEREZ **Calibration Date:** 06-Feb-18 10:40:47

Software Version: WL INSITE R5.0.5 (Build 8) **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	32.7	22.9	api
Background + Calibrator	264.7	255.8	api
Calibrator	232.0	232.9	api

Shop	Field	Difference	Tolerance
232.0	232.9	-0.9	+/- 9.00

DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - 10960494 **Reference Calibration Date:** 20-Aug-17 12:41:21

Engineer: JORGE ORLANDO PEREZ **Calibration Date:** 09-Dec-17 12:48:22

Software Version: WL INSITE R5.0.5 (Build 8) **Calibration Version:** 1

Host Tool Name: DSNT - 11055304

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2993.12	-3003.48	-7000.00 - -1000.00
Pad Gain	0.0003799	0.0003806	0.0002000 - 0.0006000
Arm Offset	-746.82	-1647.28	-5000.00 - 3000.00
Arm Gain	0.0004486	0.0005279	0.000300 - 0.000700
Arm Power	-0.000001023	-0.000005848	-0.000010000 - 0.000010000

The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER

Tool Diameter: 4.50 in

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)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.75	3.75	0.00	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.64	6.50	-0.14	+/- 0.20
Medium Ring (in)	8.21	8.25	0.04	+/- 0.20
Large Ring (in)	14.95	15.00	0.05	+/- 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

Tool Name: SDLT - 10960494 **Reference Calibration Date:** 09-Dec-17 12:48:22

Engineer: JORGE ORLANDO PEREZ **Calibration Date:** 06-Feb-18 09:50:40

Software Version: WL INSITE R5.0.5 (Build 8) **Calibration Version:** 1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.75	-0.00	+/- 0.10
Ring Diameter	8.25	8.25	0.00	+/- 0.15

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

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11958947						
Gamma Ray Calibrator	232.0	232.9	----------	-0.9	+/- 9.00	api
SDLT-10960494						
Pad Extension	3.75	3.75	----------	0.00	+/-0.10	in
Ring Diameter	8.25	8.25	----------	0.00	+/-0.15	in

Data: RILEY-WINKLER\0001 GTET-DSNT-SDLT-WSTT-ACRT\IDLE **Date: 07-Feb-18 03:01:35**

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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	
Rwa / CrossPlot				
TPUL	Tension Pull	95.53	NO	
BS	Bit Size	95.53	NO	
HDIA	Measured Hole Diameter	0.00	NO	
CH_HOS				
DHTN	DownholeTension	0.00	BLK	0.000

SP Sub				
PLTC	Plot Control Mask	90.30	NO	
SP	Spontaneous Potential	90.30	BLK	1.250
SPR	Raw Spontaneous Potential	90.30	NO	
SPO	Spontaneous Potential Offset	90.30	NO	
GTET				
TPUL	Tension Pull	82.28	NO	
GR	Natural Gamma Ray API	82.28	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	82.28	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	82.28	W	1.416 , 0.750
HDIA	Measured Hole Diameter	0.00	NO	
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	72.04	NO	
RNDS	Near Detector Telemetry Counts	72.14	BLK	1.417
RFDS	Far Detector Telemetry Counts	72.89	TRI	0.583
DNTT	DSN Tool Temperature	72.14	NO	
DSNS	DSN Tool Status	72.04	NO	
ERND	Near Detector Telemetry Counts EVR	72.14	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	72.89	BLK	0.000
ENTM	DSN Tool Temperature EVR	72.14	NO	
HDIA	Measured Hole Diameter	0.00	NO	
SDLT				
TPUL	Tension Pull	62.14	NO	
PCAL	Pad Caliper	62.14	TRI	0.250
ACAL	Arm Caliper	62.14	TRI	0.250
WSTT-I Receivers				
TPUL	Tension Pull	31.08	NO	
DPSX	Dipole Source X Structurel	27.83	NO	
DPSY	Dipole Source Y Structurel	27.83	NO	
DPSM	Monopole Source Structure	27.83	NO	
WVST	Wavesonic Compressed Data	31.08	NO	
TPUL	Tension Pull	31.08	NO	
XMS1	Wave Sonic Status Word 1	27.83	NO	
XMS2	Wave Sonic Status Word 2	27.83	NO	
XTS1	Wave Sonic XMITStatus Word 1	27.83	NO	
XTS2	Wave Sonic XMITStatus Word 2	27.83	NO	
F1HA	Dipole 1 HV After	27.83	NO	
F1HB	Dipole 1 HV Before	27.83	NO	
F2HA	Dipole 2 HV After	27.83	NO	
F2HB	Dipole 2 HV Before	27.83	NO	
F3HA	Monopole HV After	27.83	NO	
F3HB	Monopole HV Before	27.83	NO	
INVT	Input Voltage	27.83	NO	
5VOL	5 Volts	27.83	NO	
MI5A	Minus 5 Volts Analog	27.83	NO	
ITMP	Instrument Temperature	27.83	NO	
PL5A	Plus 5 Volts Analog	27.83	NO	
5VD	Plus 5 Volts Digital	27.83	NO	
TCUR	Tool Current	27.83	NO	
SUPV	Supply Voltage	27.83	NO	
PRVT	Preregulated voltage	27.83	NO	
PRVT	Pre-regulated voltage Xmter	27.83	NO	
TEMP	Temperature	27.83	NO	

ACQN	Acquisition Number	27.83	NO
XDP	Delay Reference	31.08	NO
MITM	MIT Mode	31.08	NO
VERS	Version	27.83	NO
D1CT	Dipole 1 Compressed Word Count	31.08	NO
D2CT	Dipole 2 Compressed Word Count	31.08	NO
MCNT	Monopole Compressed Word Count	31.08	NO
SEQN	Sequence Number	27.83	NO
FREV	Firmware Revision	27.83	NO
MSMP	Monopole Sample Rate	27.83	NO
DSMP	Dipole Sample Rate	27.83	NO
MFWF	Monopole Firing Waveform	27.83	NO
MFRQ	Monopole Frequency	27.83	NO
MDLY	Monopole Delay	27.83	NO
DXWF	Dipole X Firing Waveform	27.83	NO
XFRQ	Dipole X Frequency	27.83	NO
XDLY	Dipole X Delay	27.83	NO
DYWF	Dipole Y Firing Waveform	27.83	NO
YFRQ	Dipole Y Frequency	27.83	NO
YDLY	Dipole Y Delay	27.83	NO
DPSX	Dipole Source X Structurel	27.83	NO
DPSY	Dipole Source Y Structurel	27.83	NO
DPSM	Monopole Source Structure	27.83	NO
WVST	Wavesonic Compressed Data	31.08	NO
AUTM	Auto Mode	27.83	NO
SONM	tool mode for sonic - 0 for normal or 3 for calibration	27.83	NO
MSL	Monopole Lower Travel Time	31.08	NO
MSH	Monopole Upper Travel Time	31.08	NO
MLFC	Monopole-1 Lower Filter Bandpass Frequency Cut-off	27.83	NO
MUFC	Monopole-1 Upper Filter Bandpass Frequency Cut-off	27.83	NO
DLTT	Dipole Lower Travel Time	27.83	NO
DUTT	Dipole Upper Travel Time	27.83	NO
DLFC	Dipole Lower Filter Bandpass Frequency Cut-off	27.83	NO
DUFC	Dipole Upper Filter Bandpass Frequency Cut-off	27.83	NO
MUTE	WaveSonic Mute/Enable Channels and Sides map	27.83	NO
MUTS	Mute/Enable Sides	27.83	NO
WSRB	Relative Bearing	31.08	NO
WSAZ	WSX Azimuth Pad 1	31.08	NO
TPUL	Tension Pull	31.08	NO
WMP	Summed array of Monopole for SIDES - A,B,C,D	31.08	NO
WXX	Dipole X for SIDES - A-C	31.08	NO
WYY	Dipole Y for SIDES - B-D	31.08	NO
WXY	Dipole X for SIDES - B-D	31.08	NO
WYX	Dipole Y for SIDES - A-C	31.08	NO
TPUL	Tension Pull	31.08	NO
WMA	Monopole Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO
WMB	Monopole Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO
WMC	Monopole Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO
WMD	Monopole Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO
WXA	Dipole X Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO
WXB	Dipole X Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO
WXC	Dipole X Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO
WXD	Dipole X Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO
WYA	Dipole Y Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO
WYB	Dipole Y Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO
WYC	Dipole Y Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO
WYD	Dipole Y Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO
GAR1	Gain Side A Receiver 1	27.83	NO

GAR2	Gain Side A Receiver 2	27.83	NO	
GAR3	Gain Side A Receiver 3	27.83	NO	
GAR4	Gain Side A Receiver 4	27.83	NO	
GAR5	Gain Side A Receiver 5	27.83	NO	
GAR6	Gain Side A Receiver 6	27.83	NO	
GAR7	Gain Side A Receiver 7	27.83	NO	
GAR8	Gain Side A Receiver 8	27.83	NO	
GBR1	Gain Side B Receiver 1	27.83	NO	
GBR2	Gain Side B Receiver 2	27.83	NO	
GBR3	Gain Side B Receiver 3	27.83	NO	
GBR4	Gain Side B Receiver 4	27.83	NO	
GBR5	Gain Side B Receiver 5	27.83	NO	
GBR6	Gain Side B Receiver 6	27.83	NO	
GBR7	Gain Side B Receiver 7	27.83	NO	
GBR8	Gain Side B Receiver 8	27.83	NO	
GCR1	Gain Side C Receiver 1	27.83	NO	
GCR2	Gain Side C Receiver 2	27.83	NO	
GCR3	Gain Side C Receiver 3	27.83	NO	
GCR4	Gain Side C Receiver 4	27.83	NO	
GCR5	Gain Side C Receiver 5	27.83	NO	
GCR6	Gain Side C Receiver 6	27.83	NO	
GCR7	Gain Side C Receiver 7	27.83	NO	
GCR8	Gain Side C Receiver 8	27.83	NO	
GDR1	Gain Side D Receiver 1	27.83	NO	
GDR2	Gain Side D Receiver 2	27.83	NO	
GDR3	Gain Side D Receiver 3	27.83	NO	
GDR4	Gain Side D Receiver 4	27.83	NO	
GDR5	Gain Side D Receiver 5	27.83	NO	
GDR6	Gain Side D Receiver 6	27.83	NO	
GDR7	Gain Side D Receiver 7	27.83	NO	
GDR8	Gain Side D Receiver 8	27.83	NO	
	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 Reference 12 KHz Real Signal	2.73	BLK	0.000
F1XT	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	
HDIA	Measured Hole Diameter	0.00	NO	
	Microlog Pad			
TPUL	Tension Pull	62.32	NO	
MINV	Microlog Lateral	62.32	BLK	0.750
MNOR	Microlog Normal	62.32	BLK	0.750
	SDLT Pad			
TPUL	Tension Pull	62.13	NO	
NAB	Near Above	61.95	BLK	0.920
NHI	Near Cesium High	61.95	BLK	0.920
NLO	Near Cesium Low	61.95	BLK	0.920
NVA	Near Valley	61.95	BLK	0.920
NBA	Near Barite	61.95	BLK	0.920
NDE	Near Density	61.95	BLK	0.920
NPK	Near Peak	61.95	BLK	0.920
NLI	Near Lithology	61.95	BLK	0.920
NBAU	Near Barite Unfiltered	61.95	BLK	0.250
NLIU	Near Lithology Unfiltered	61.95	BLK	0.250
FAB	Far Above	62.30	BLK	0.250
FHI	Far Cesium High	62.30	BLK	0.250
FLO	Far Cesium Low	62.30	BLK	0.250
FVA	Far Valley	62.30	BLK	0.250
FBA	Far Barite	62.30	BLK	0.250
FDE	Far Density	62.30	BLK	0.250
FPK	Far Peak	62.30	BLK	0.250
FLI	Far Lithology	62.30	BLK	0.250
PTMP	Pad Temperature	62.14	BLK	0.920
NHV	Near Detector High Voltage	61.53	NO	
FHV	Far Detector High Voltage	61.53	NO	
ITMP	Instrument Temperature	61.53	NO	
DDHV	Detector High Voltage	61.53	NO	
HDIA	Measured Hole Diameter	0.00	NO	

COMPANY	**FALCON EXPLORATION, INC**		
WELL	**RILEY WINKLER 1-6(SW)**		
FIELD	**WILDCAT**		
COUNTY	**GRAY**	STATE	**KANSAS**

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