

HALLIBURTON										CEMENT BOND LOG									
										* FIELD COPY*									
COMPANY WELL FIELD COUNTY STATE										AXIA ENERGY LLC BULLDOG 5-14H-789 WILDCAT MOFFAT CO COMPANY AXIA ENERGY LLC WELL BULLDOG 5-14H-789 FIELD WILDCAT COUNTY MOFFAT STATE CO									
Permanent Datum Log measured from Drilling measured from										GL KB KB Elev. 6763.0 ft 22.0 ft above perm. Datum Elev.: K.B. 6785.0 ft D.F. 6785.0 ft G.L. 6763.0 ft									
Date @ Time Logged										23-Jul-13 Type of fluid in hole WATER-BASED MUD									
Run No.										TWO Density of Fluid 8.5000									
Depth - Driller										9939.83 ft Fluid Level 0.0 ft									
Depth - Logger										9913.0 ft Cement Top Est. Location 8088.0 ft									
Bottom - Logged Interval										9910.0 ft Equipment / Location 11871076 / GJ, CO									
Top - Logged Interval										5024.0 ft Recorded by P. DIMPLE									
Max. Rec. Temperature										214.0 degF Witnessed by OB SANCHEZ									
CEMENTING DATA										Surface Protection String Production String Liner									
Date/Time Cemented										String									
Primary/Squeeze																			
Expected Compressive Strength										psi@ hrs psi@ hrs psi@ hrs									
Cement Volume																			
Cement Type / Weight										/ / /									
Formulation																			
MUD type / MUD Wgt.										/ / /									
BOREHOLE RECORD										CASING & TUBING RECORD									
No.										Bit From To Size Wgt. From To									
1										9.875 in 0.00 9939.83 ft 7.625 in 26.40 lbpf 0.0 ft 9939.8 ft									
2																			
3																			
4																			
5																			

Fold here

Service Ticket No.: 900610360										API Serial No.: 05081077370000										PGM Version: WL INSITE R3.6.0 (Build 3)																			
The Well Name, Location, Cementing Data & Borehole Description Furnished By Client																																							
CEMENTING DATA																																							
Cement Pumped bbl/min @ psi															To																								
Preceding Fluid Volume& bbl															Centralizers To																								
Returns (Full,Partial,None)?															To																								
Pipe Rotated / Reciprocated															To																								
During Pumping (Yes,No)?															To																								
After Plug Down (Yes,No)?															To																								
Plug Pumped (Yes,No)?															To																								
Plug Landing Pressure Psi															Scratchers To																								
Pressure Held Psi															To																								
EQUIPMENT DATA																																							
GAMMA										ACOUSTIC										CAST										NEUTRON									
Run No.					ONE					Run No.					ONE					Serial No.										Run No.									
Serial No.					11005602					Serial No.					10939054					Scanner No.										Serial No.									
Model No.					GTET					Model No.					BSAT-I					Head Size										Model No.									
Diameter					3.625"					Diameter					3.625"					Transducer Type										Diameter									
Detector Model No.					GTET					No. of Cent.					2					Slot										Log Type									
Type					SCINT					Spacing					3'															Source Type									
Length					8"																									Serial No.									
Distance to Source					N/A																									Strength									
LOGGING DATA																																							
GENERAL										GAMMA										NEUTRON										ACOUSTIC									
Run		Depth			Well Head			Speed			Scale					Scale					Scale																		
No.		From		to		Pressure		m / Min		L		R			L		R			L		R																	
TWO		9913		5024		N/A		REC		0 API		150 API																											

DIRECTIONAL INFORMATION										
Maximum Deviation @						KOP @				
Remarks: RUN TWO: RWCH/CCL-D/GTET/BSAT-CBL/BN										
EST. TOP OF CEMENT FOUND AT: 8088.0 ft										
BSAT-CBL CALIBRATED IN FREE PIPE AT 4650ft										
LOGGED TO 5024ft PER CUSTOMER REQUEST										
YOU CREW TODAY: B. RIDDEL, J. VIGIL RIG: FRONTIER 14										
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES, GRAND JUNCTION, CO (970) 523-3600										
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.										
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PARAMETERS REPORT

Depth ((ft))	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	9.875	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	8.800	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	72.5	degF
	SHARED	CSD	Logging Interval is Cased?	Yes	
	SHARED	CSOD	Inner Casing OD size	7.625	in
	SHARED	CSWT	Casing Weight	26.40	lbpf
	SHARED	ISOC	Is Outer Casing Present?	No	
	SHARED	CSCM	Casing Cemented	Yes	
	SHARED	CMWT	Cement Weight	12.200	ppg
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	9940.00	ft
	SHARED	BHT	Bottom Hole Temperature	214.0	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	

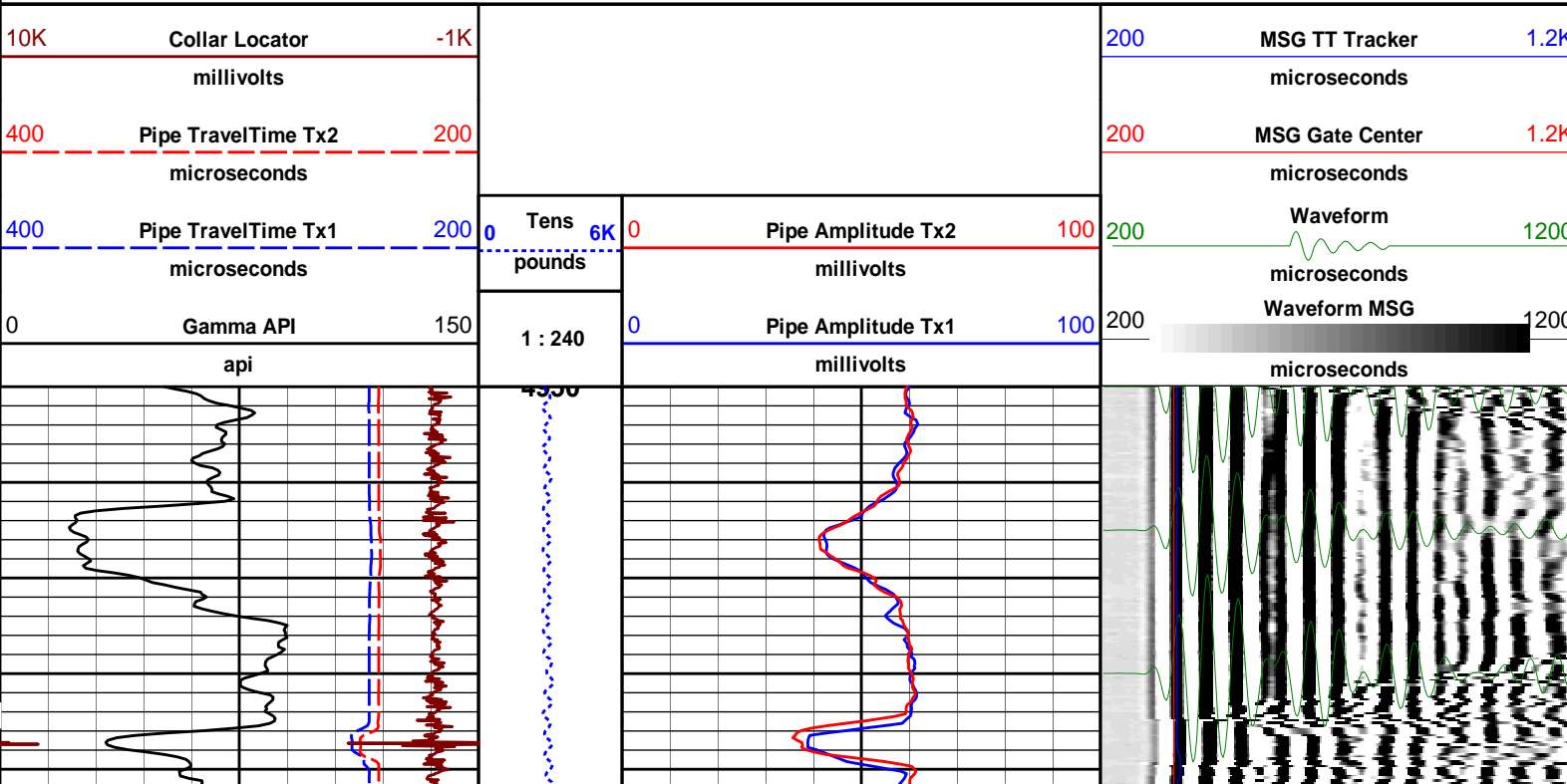
Rwa / CrossPlot	MFAC	Archie M factor	2.1500	
Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm
Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF
Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No	
CCL-D	CLOK	Process CCL?	Yes	
CCL-D	CCLS	CCL Processing Selection	Raw	
GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.250	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
CBL-BSAT	TTLV	Travel Time threshold.	5.0	mV
CBL-BSAT	TTOF	CBL Travel Time Offset from Calibration.	0	us
CBL-BSAT	ISFM	Is foam cement type?	No	
CBL-BSAT	CSTR	Compressive Strength	1000.00	psia
CBL-BSAT	BIOK	Calculate Bond Index?	Yes	
CBL-BSAT	ISMD	Is borehole fluid Mud?	No	

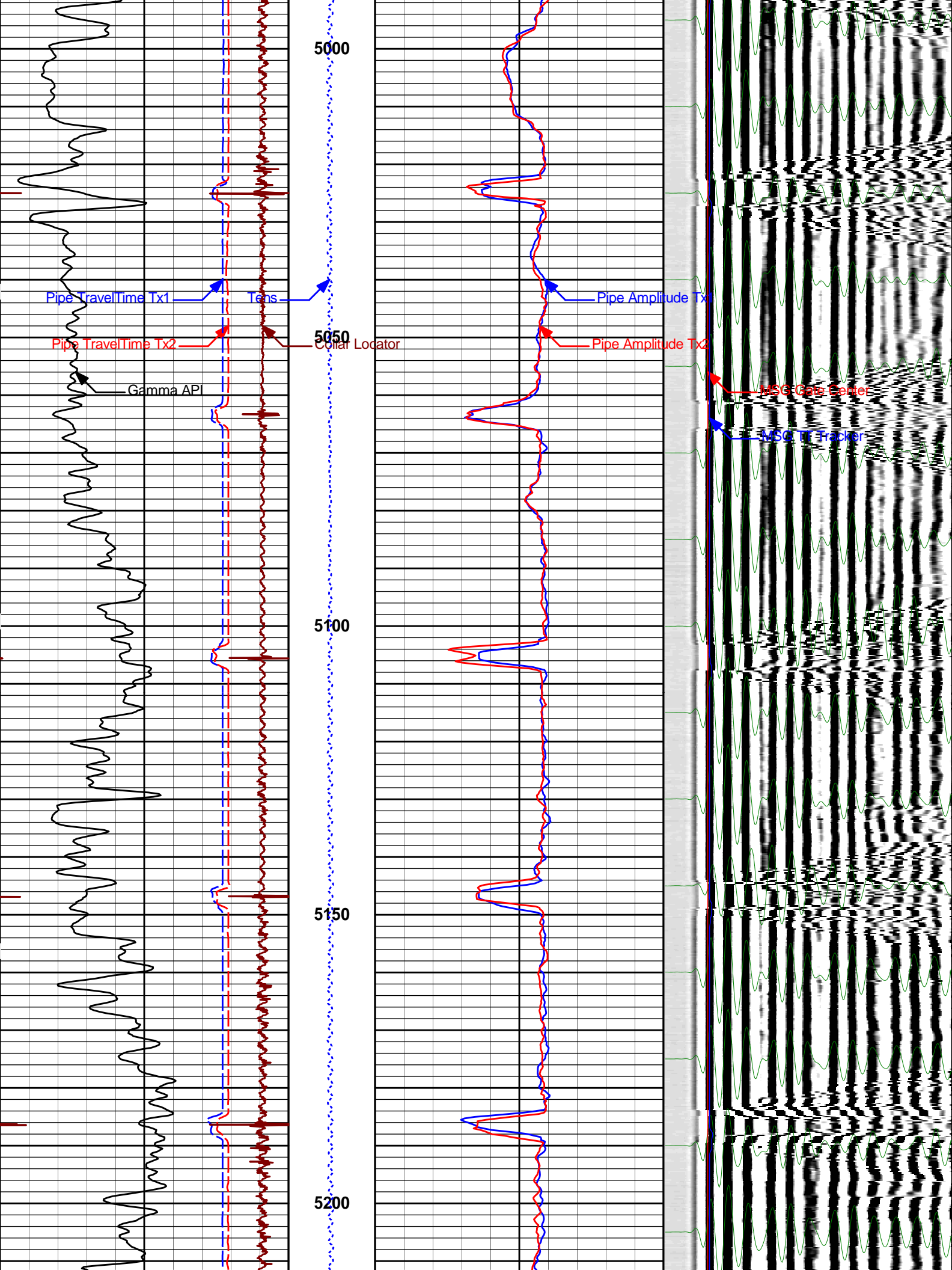
BOTTOM

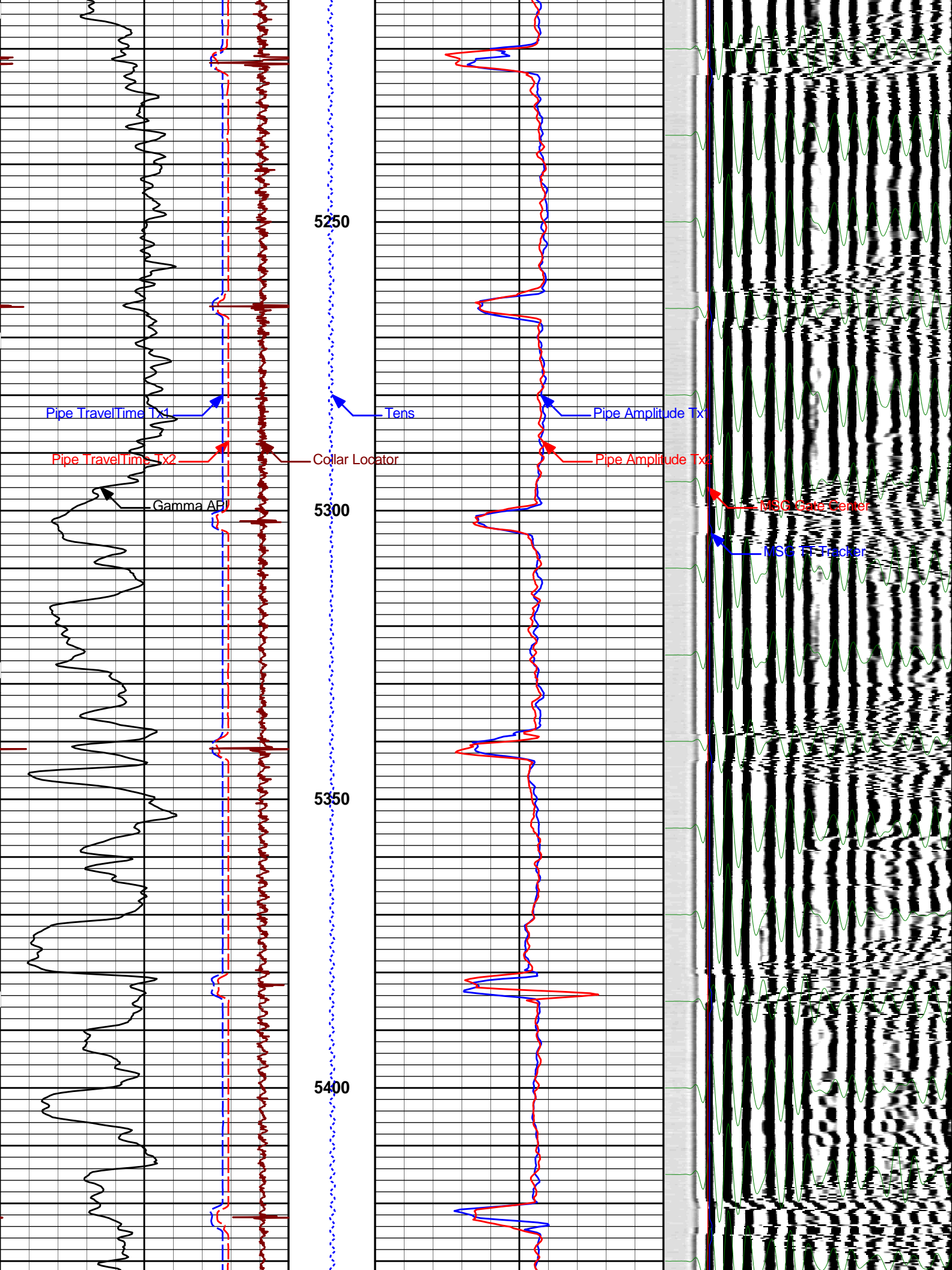


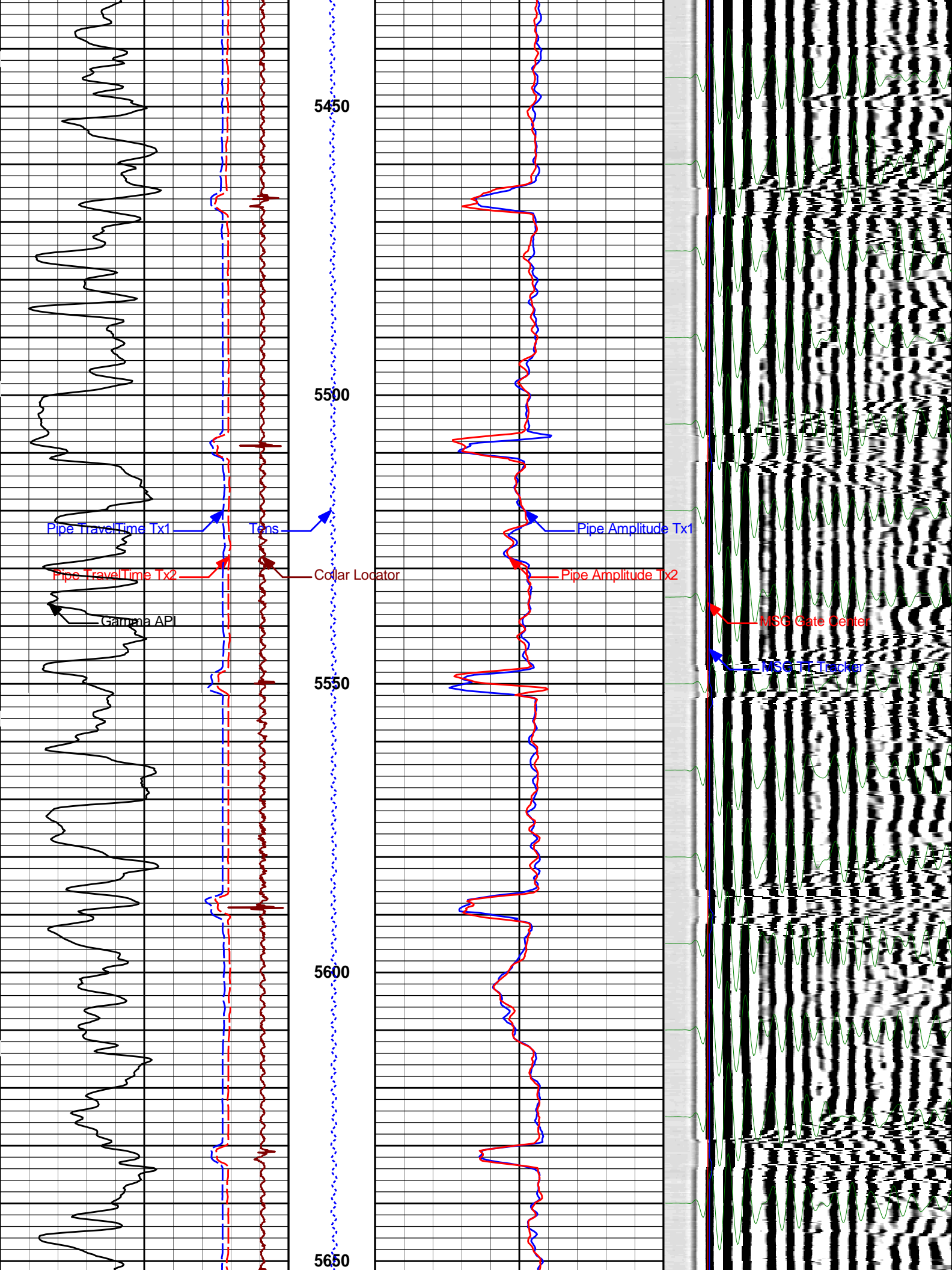
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Data: AXIA_BLDG_5-789\Well Based\MAIN_CBL\
Plot File: \CBL\BSAT CBL 1_240

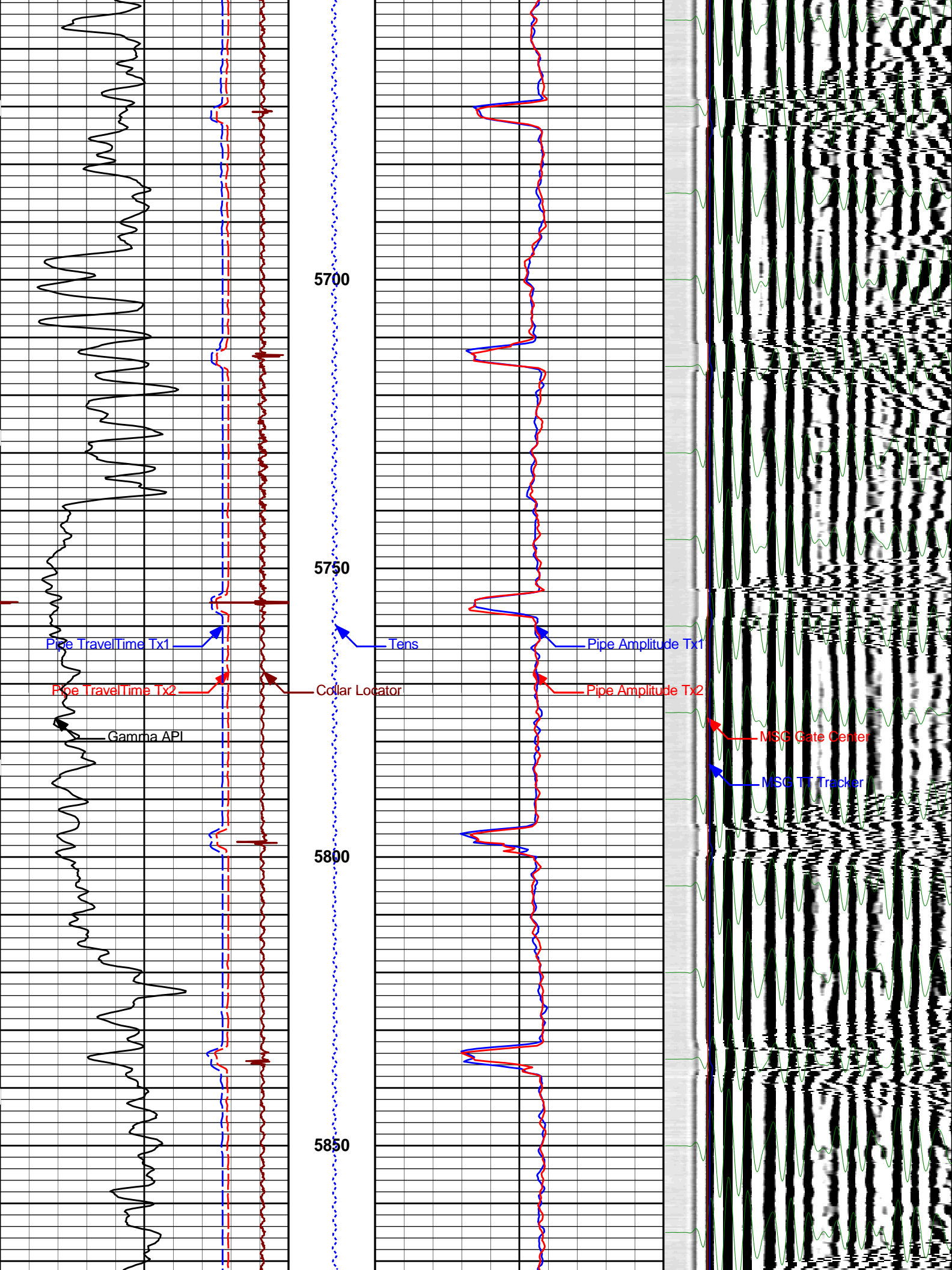
MAIN PASS, 5" = 100'

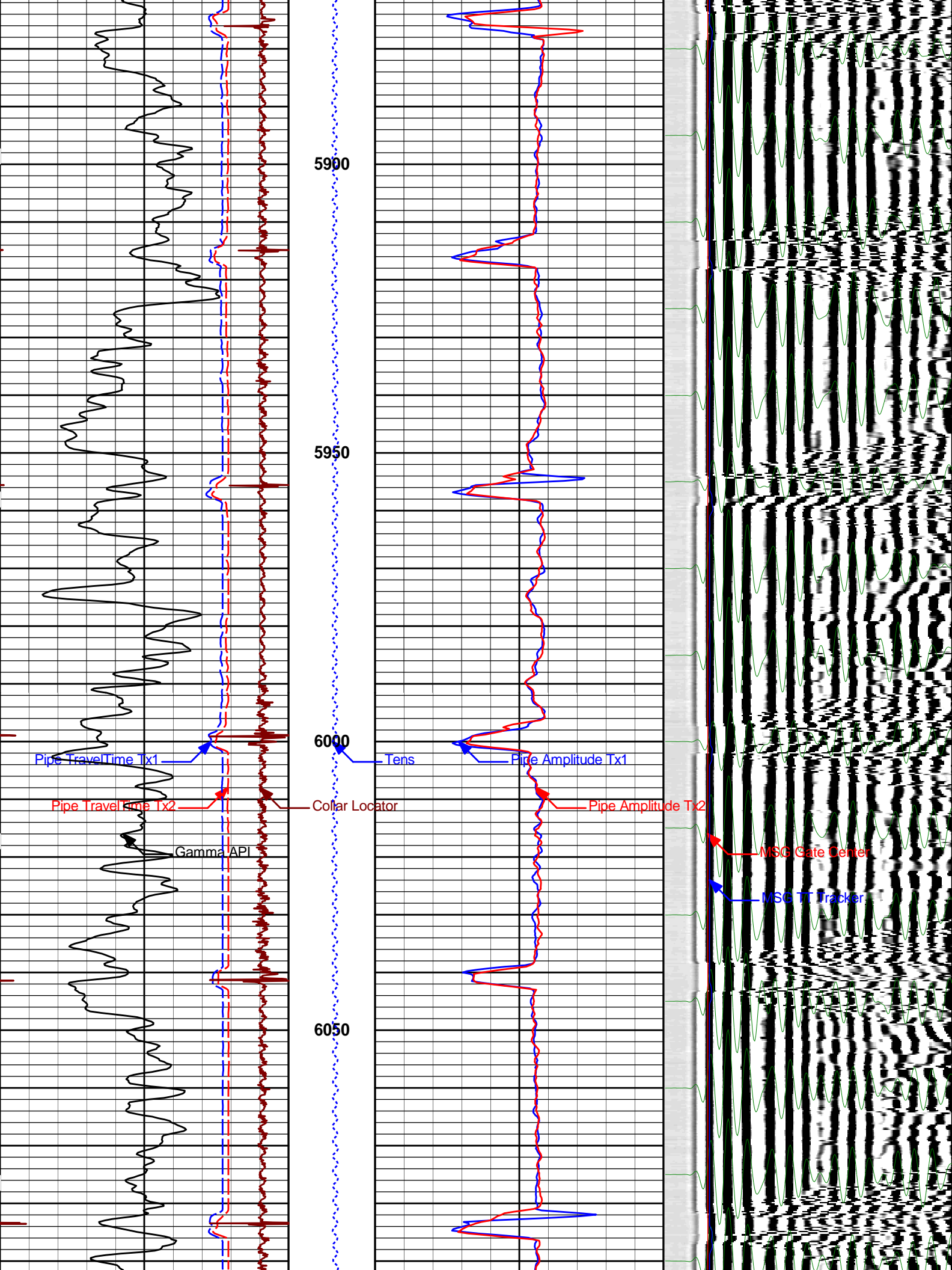


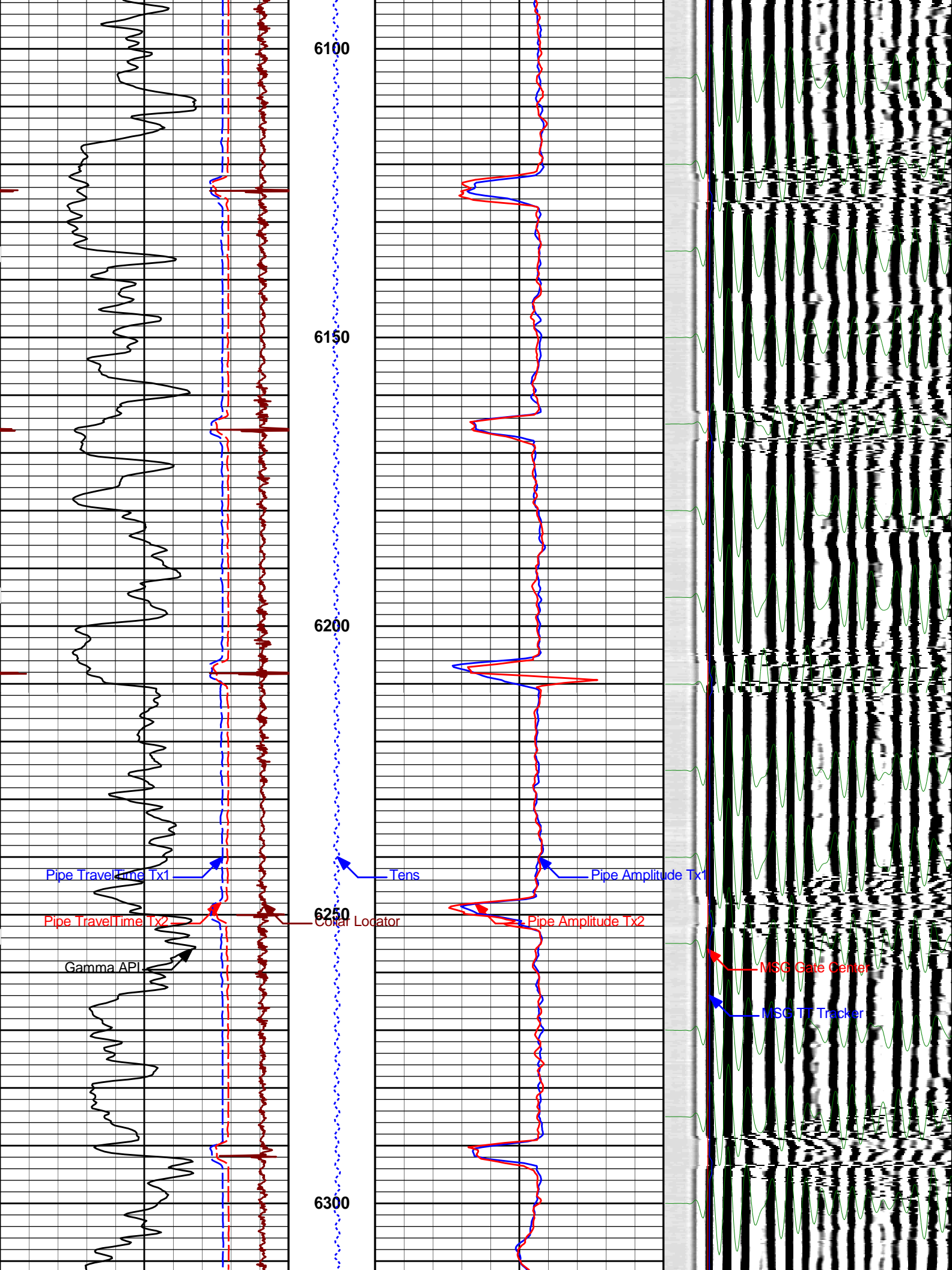


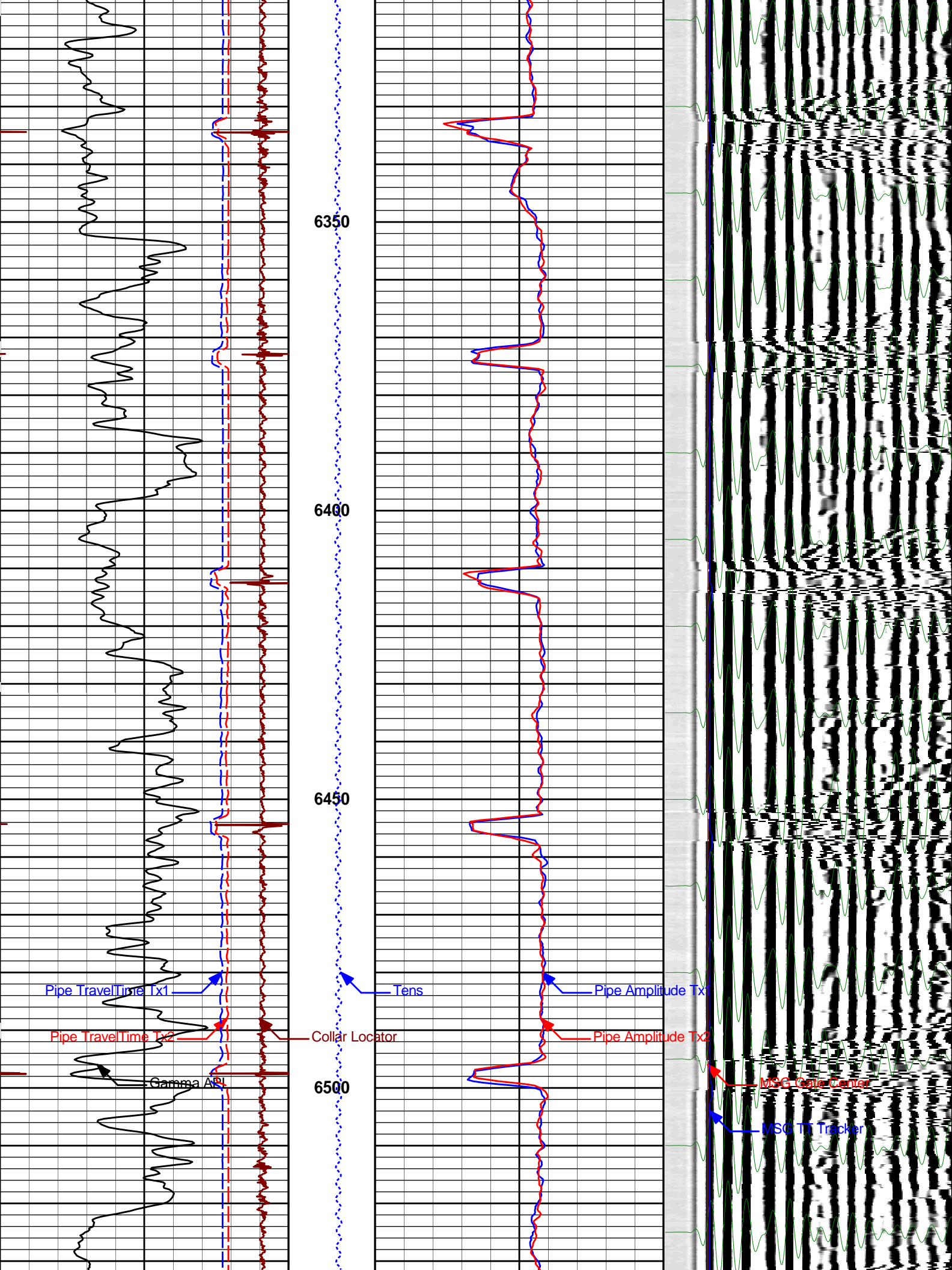


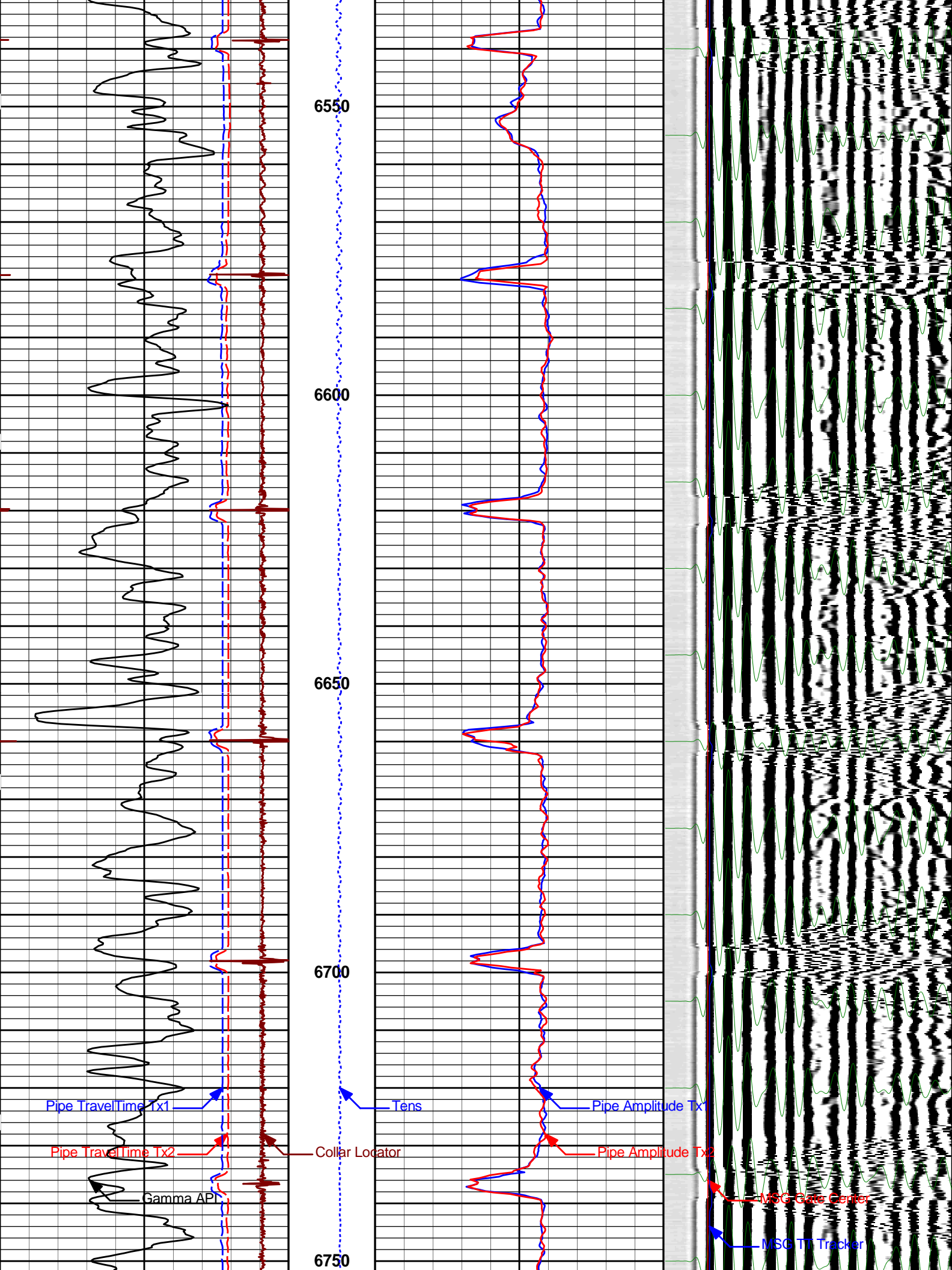


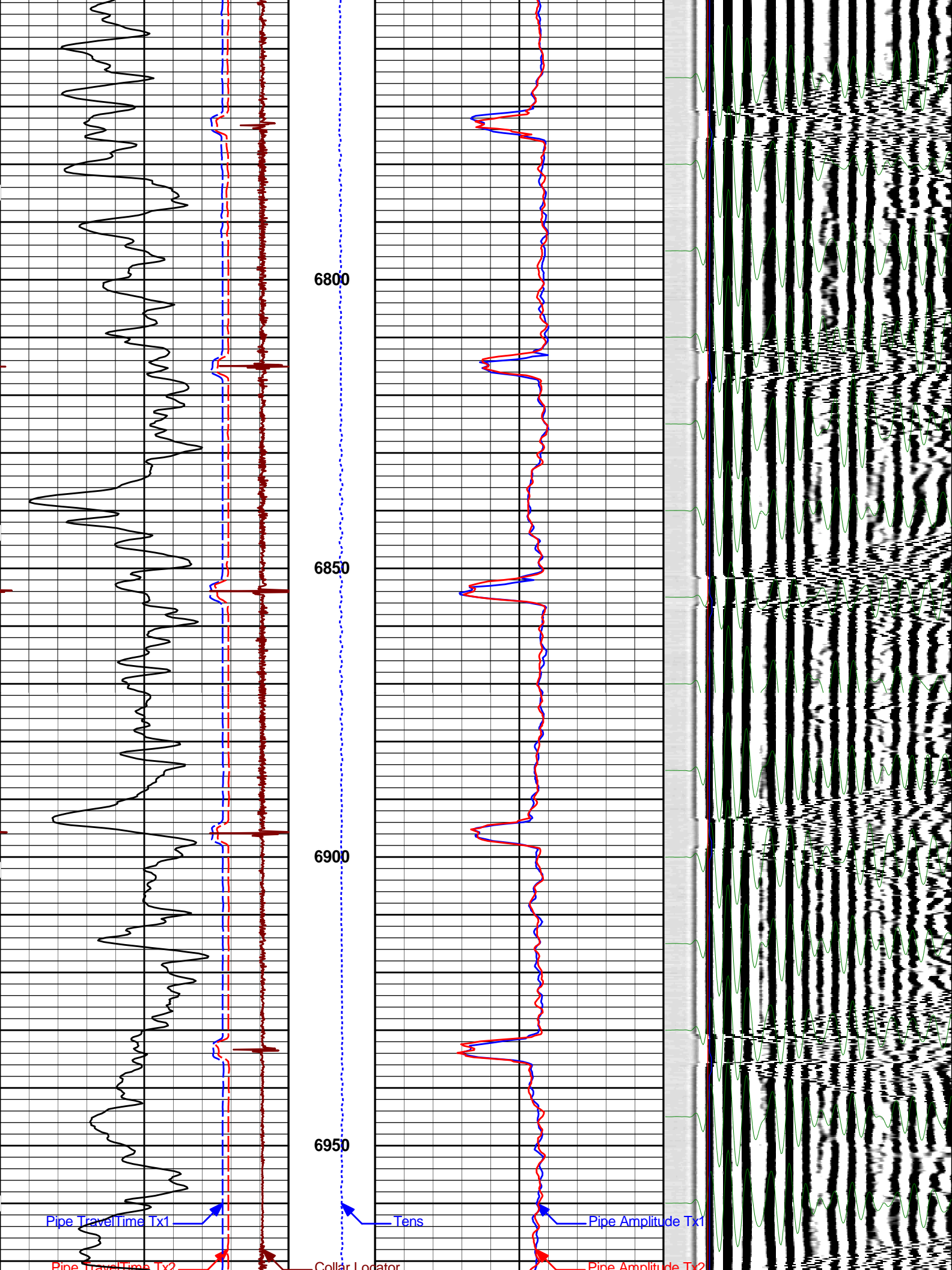


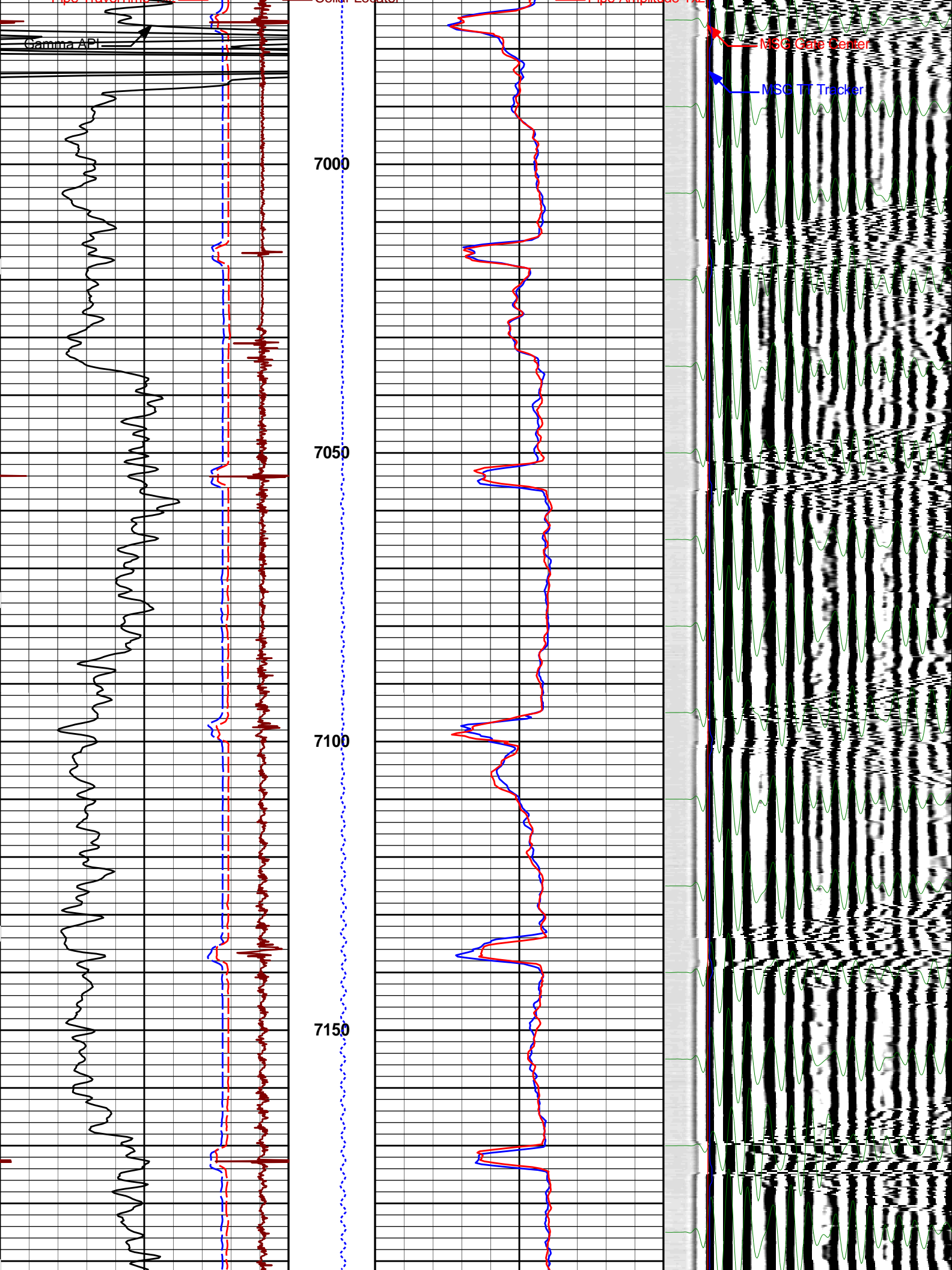


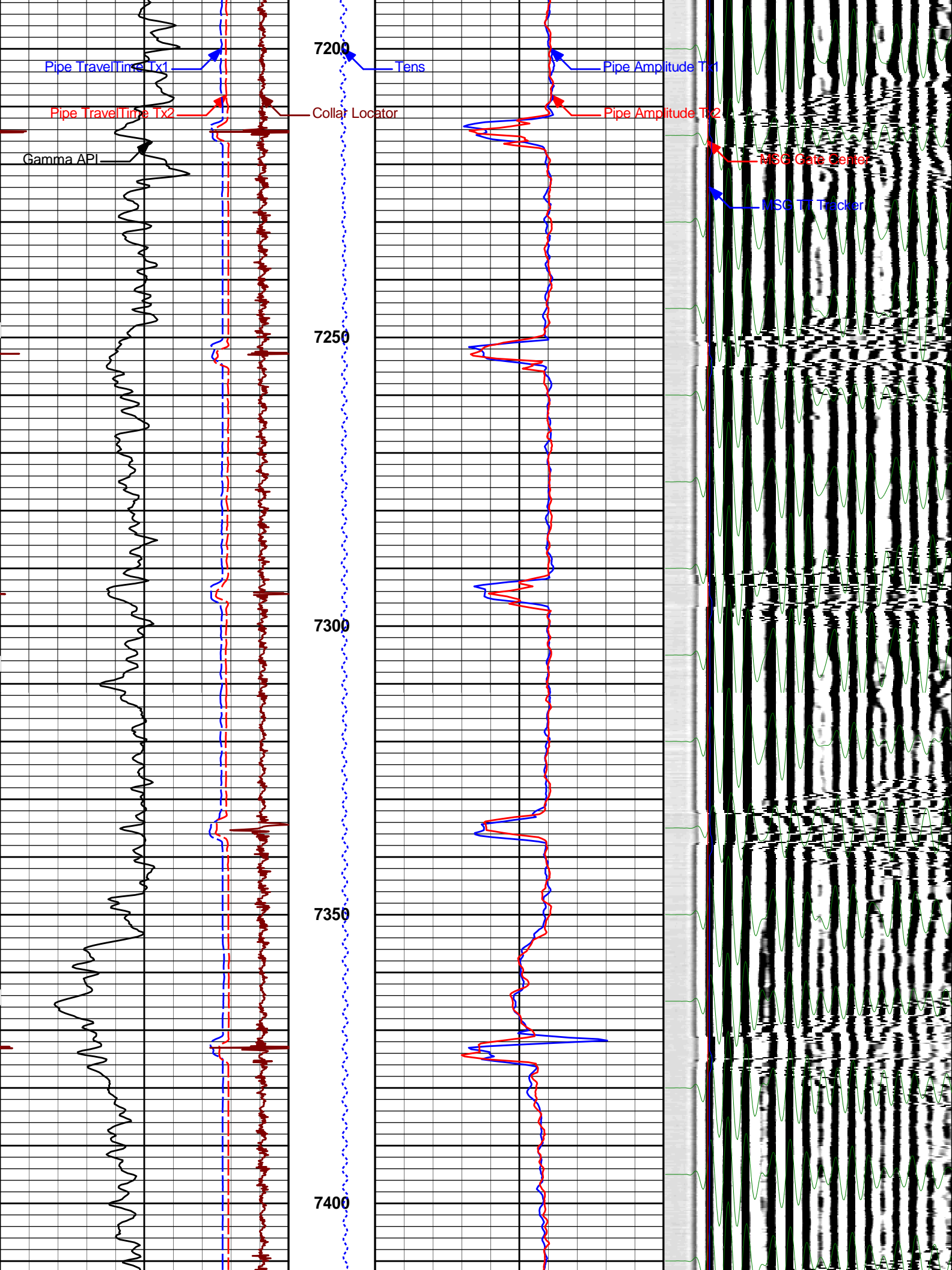


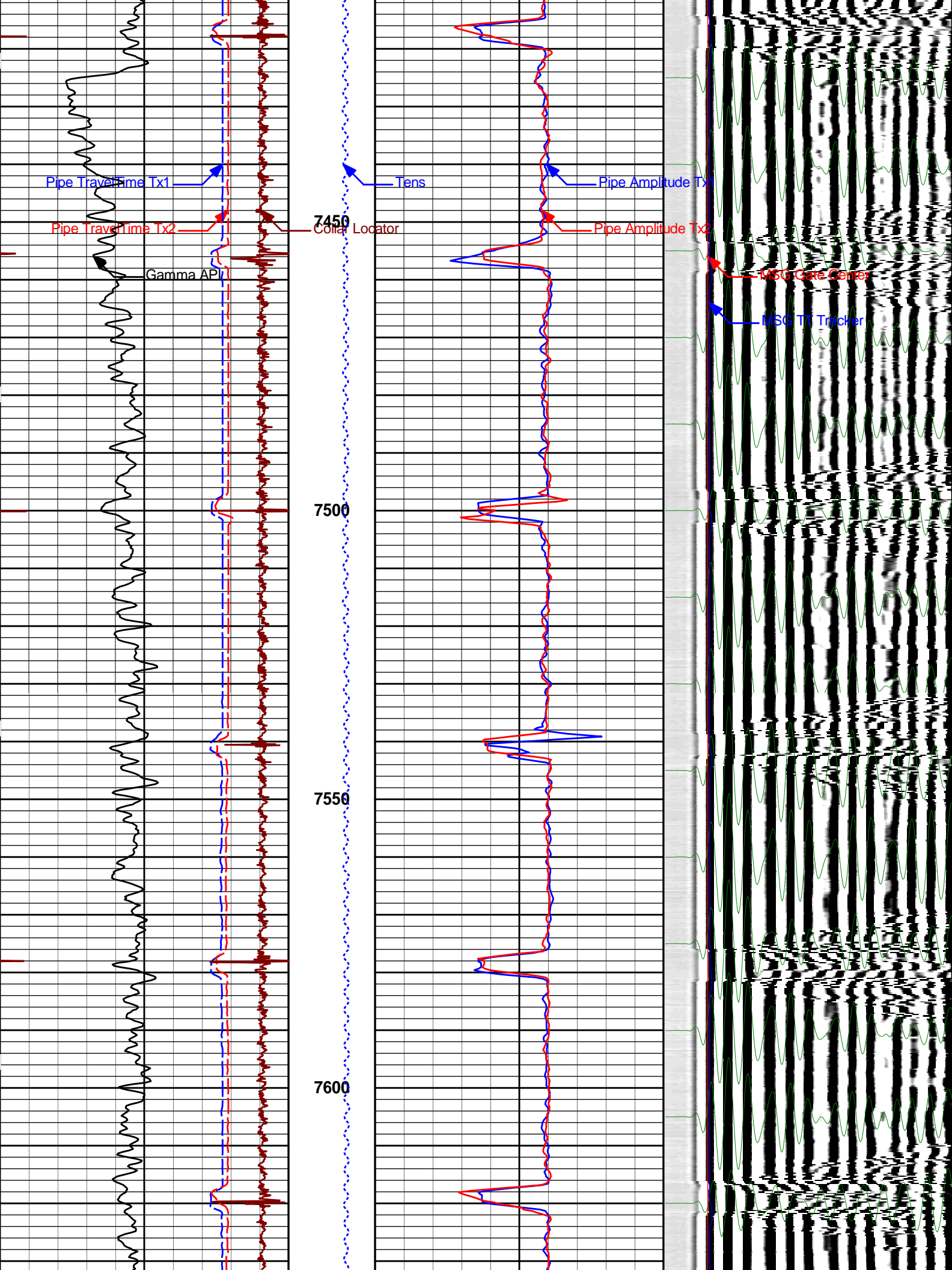


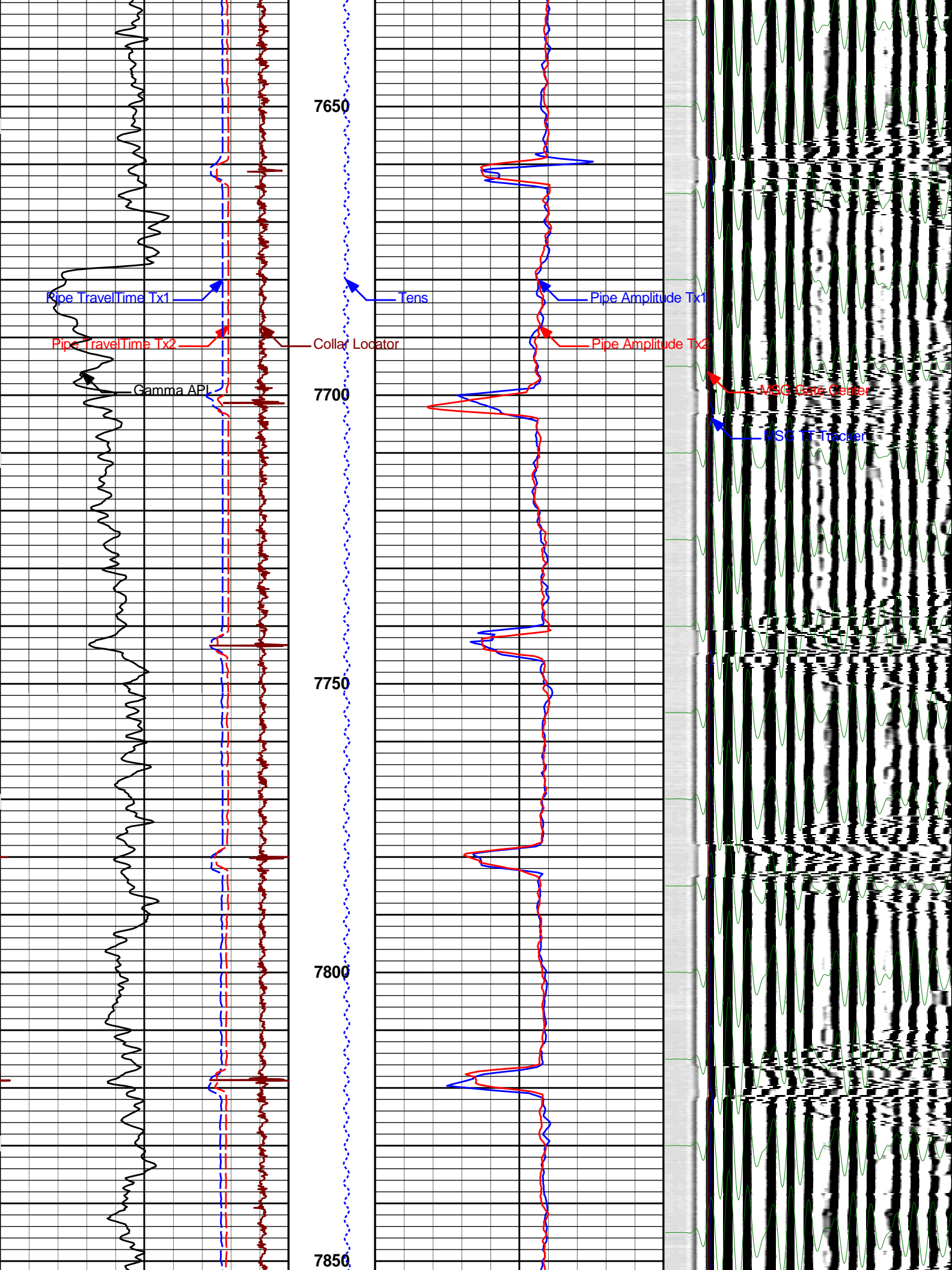


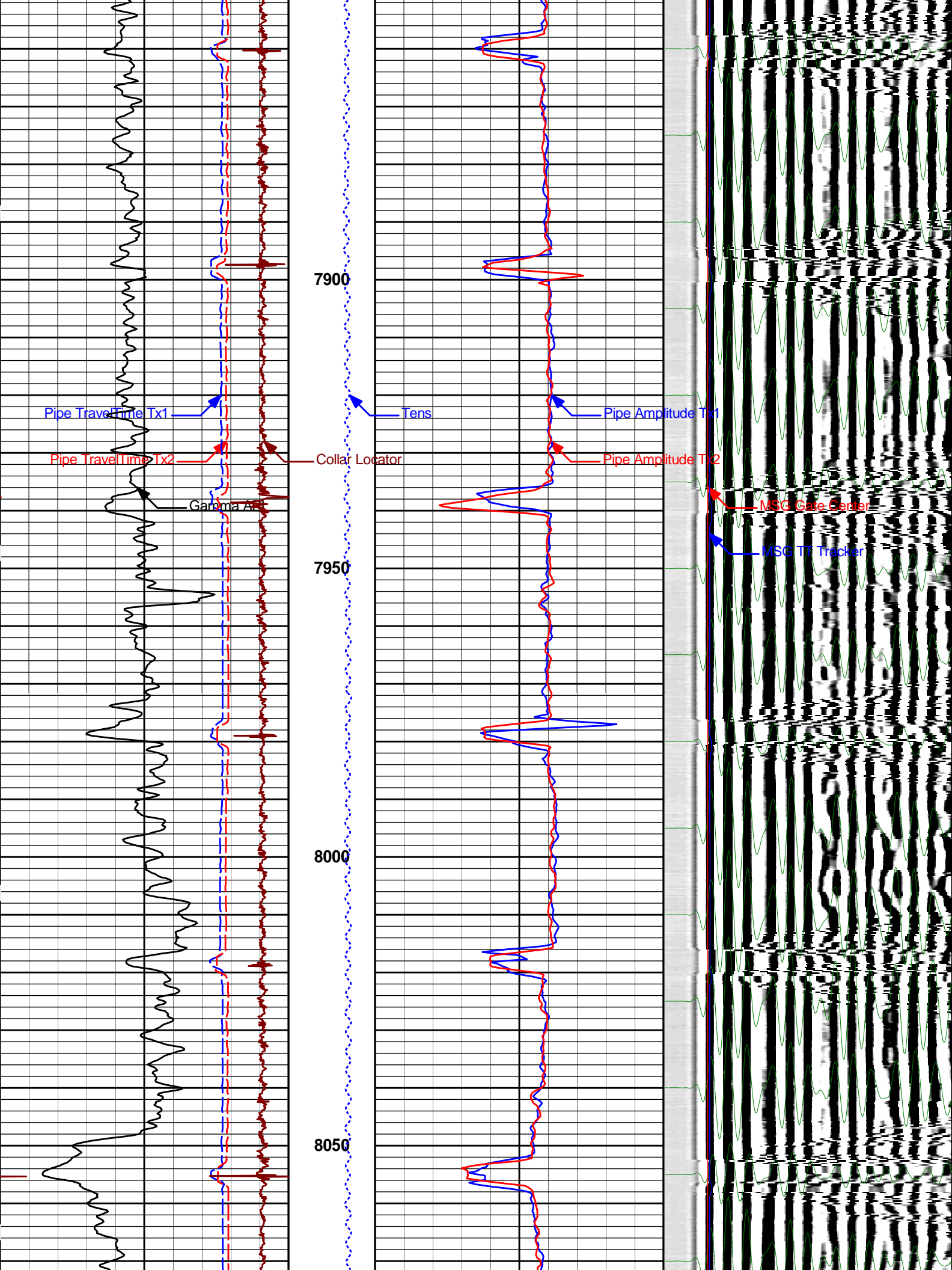


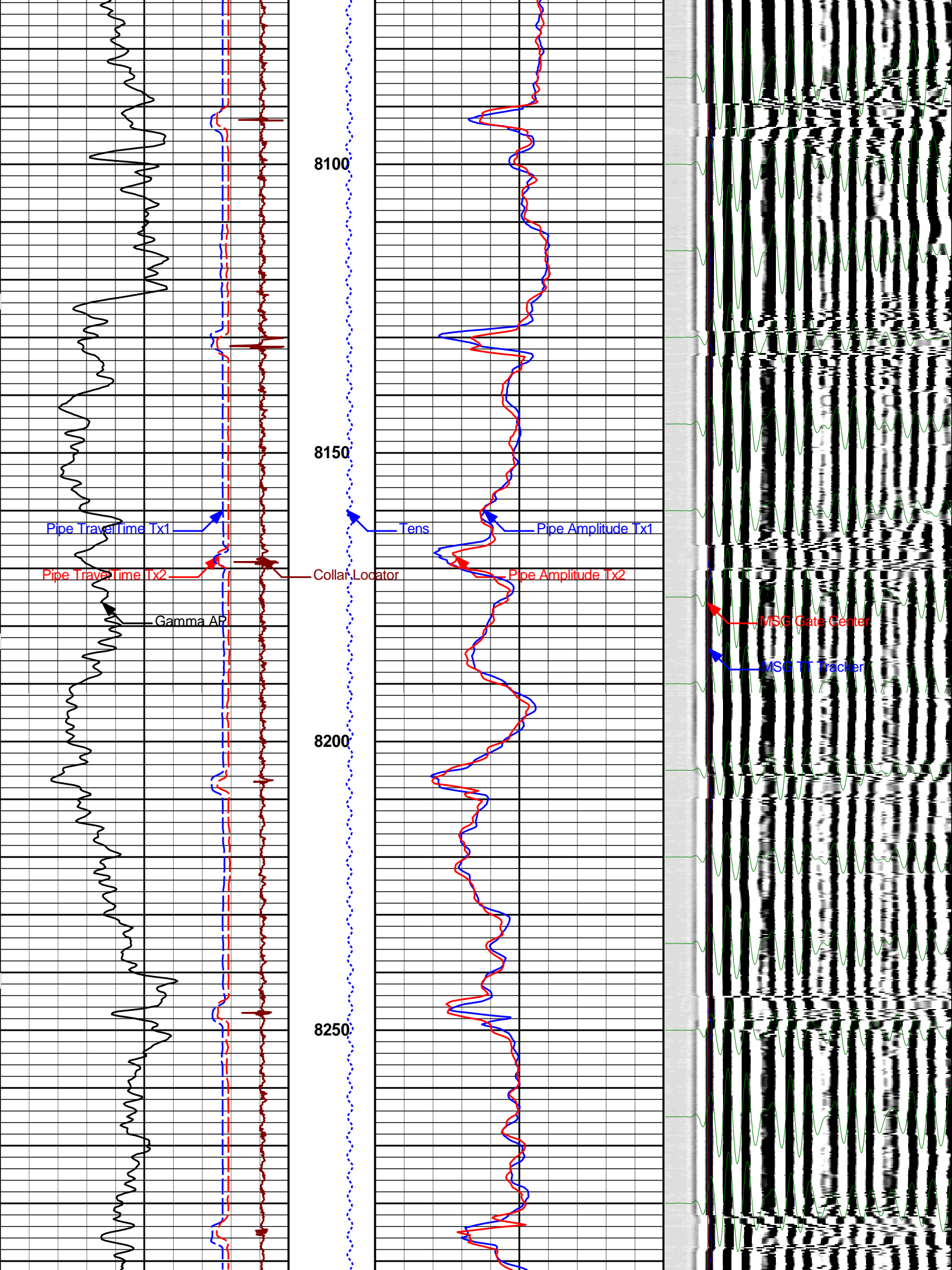


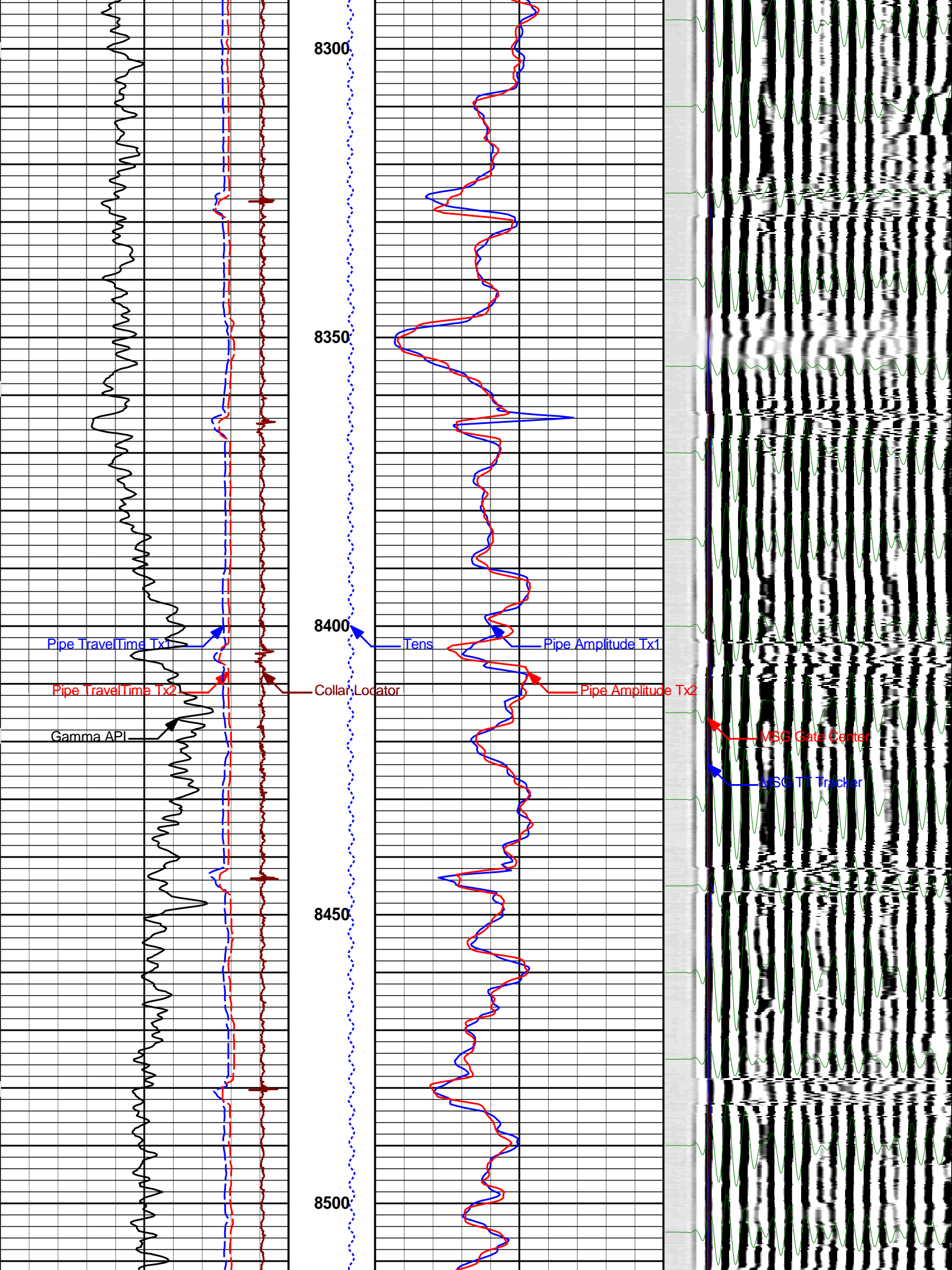


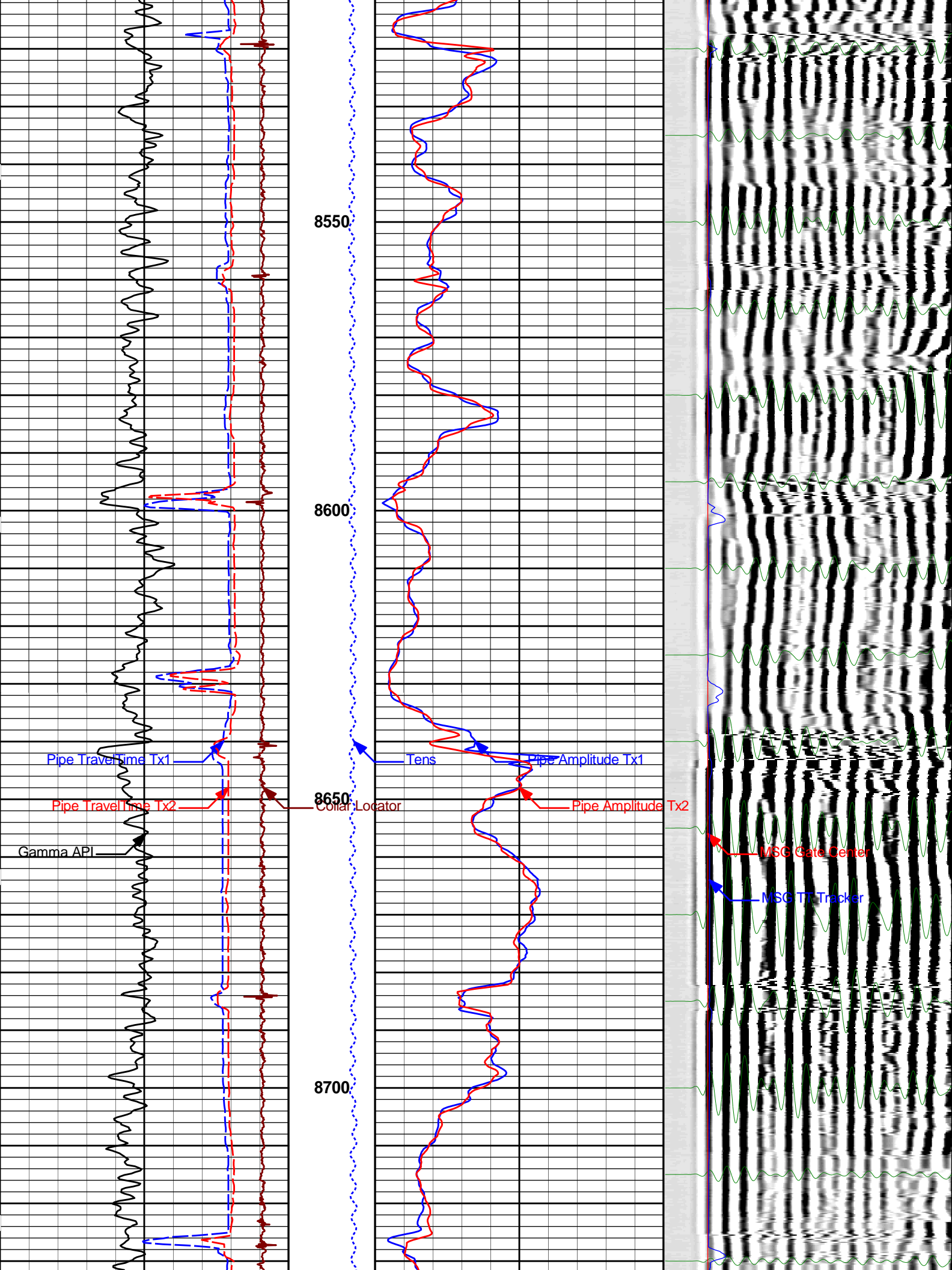


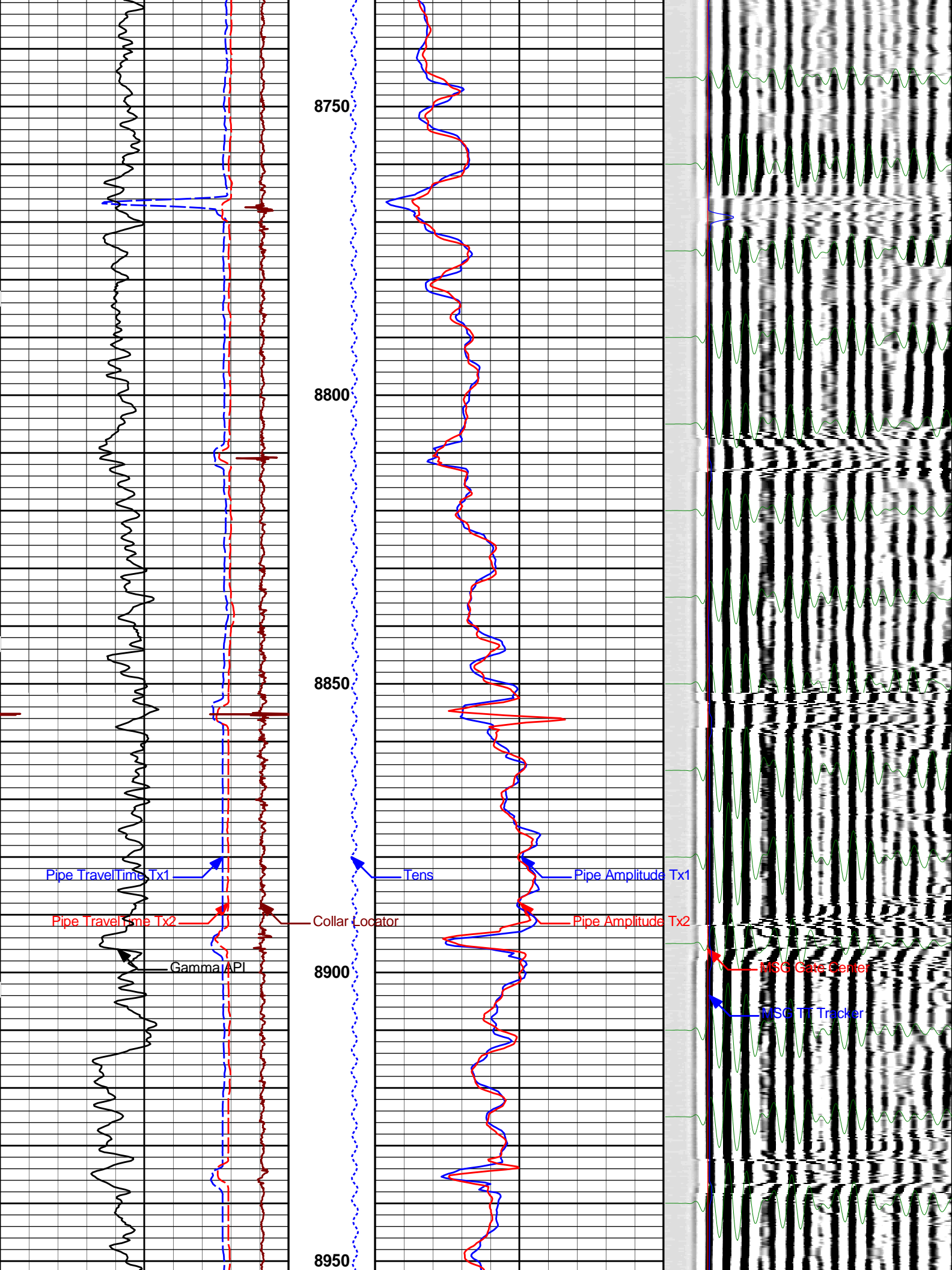


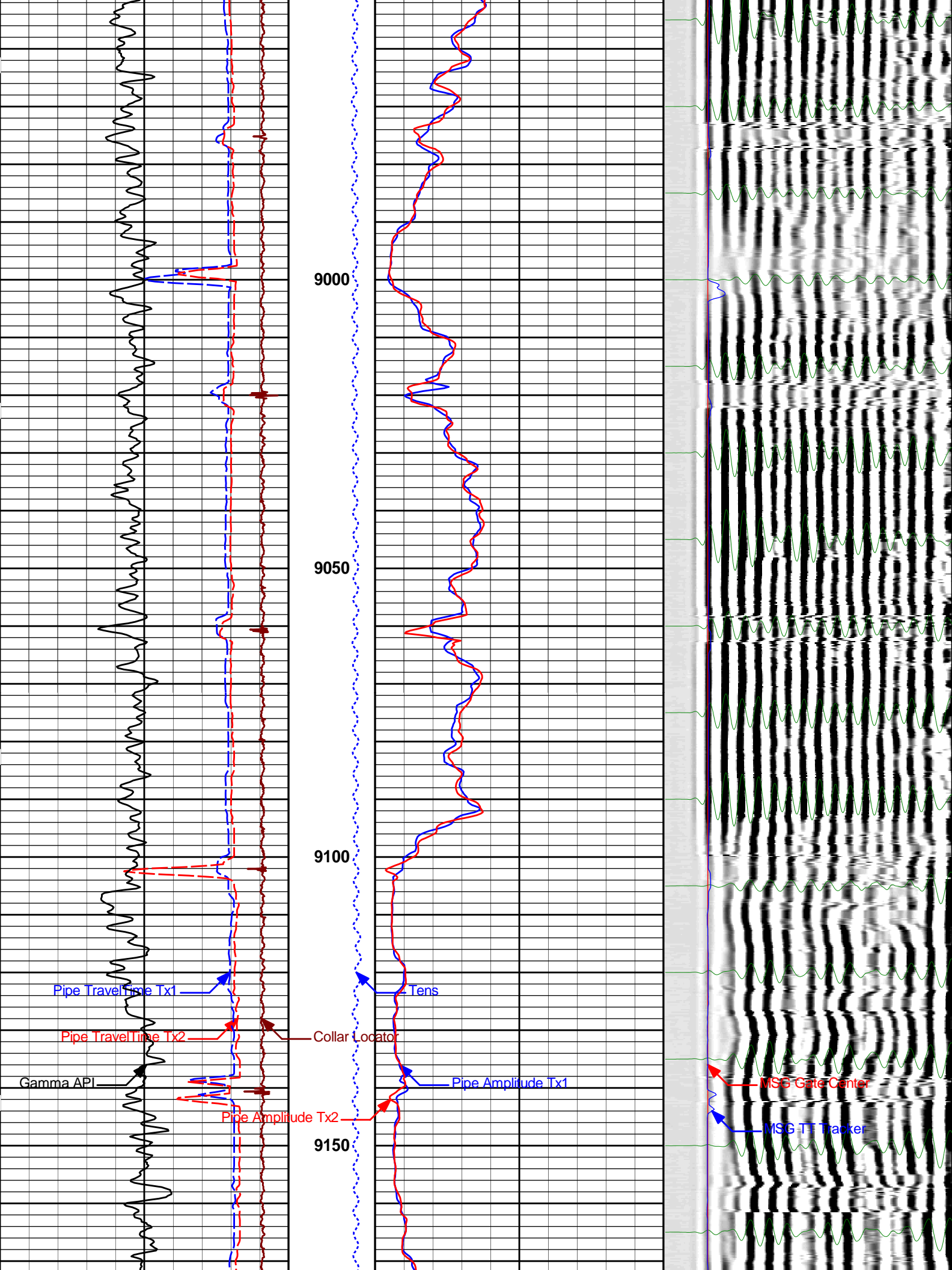


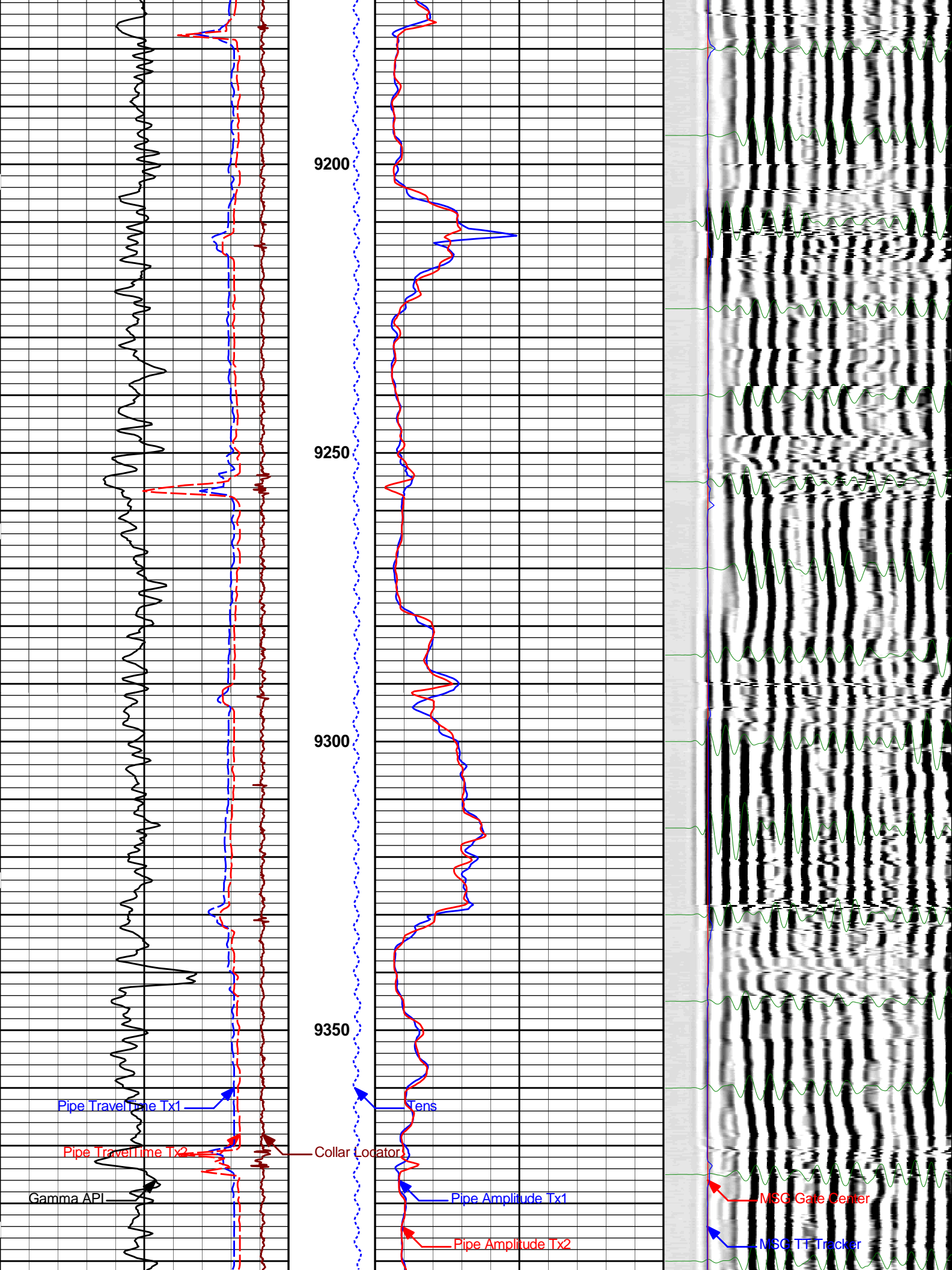


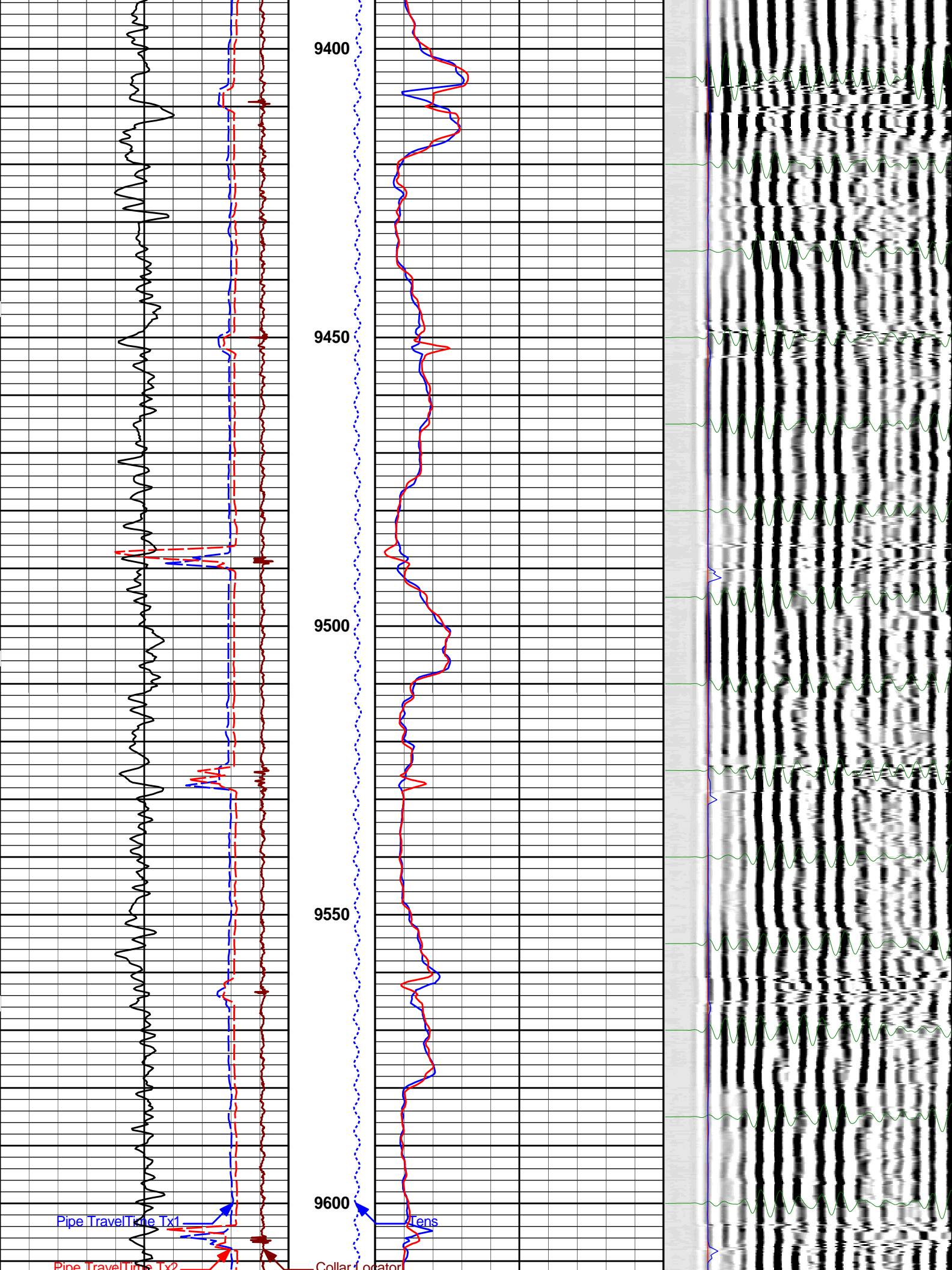


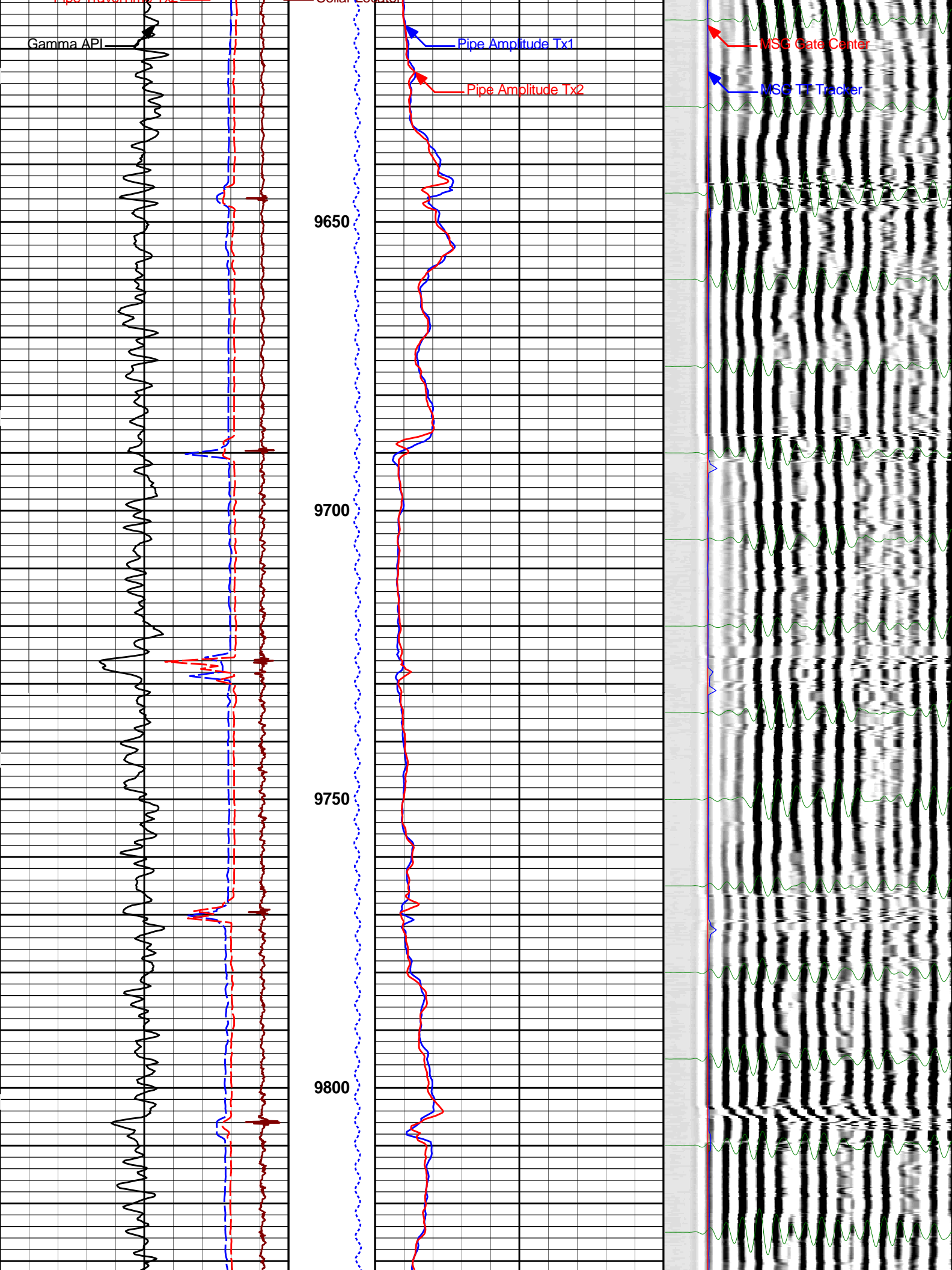


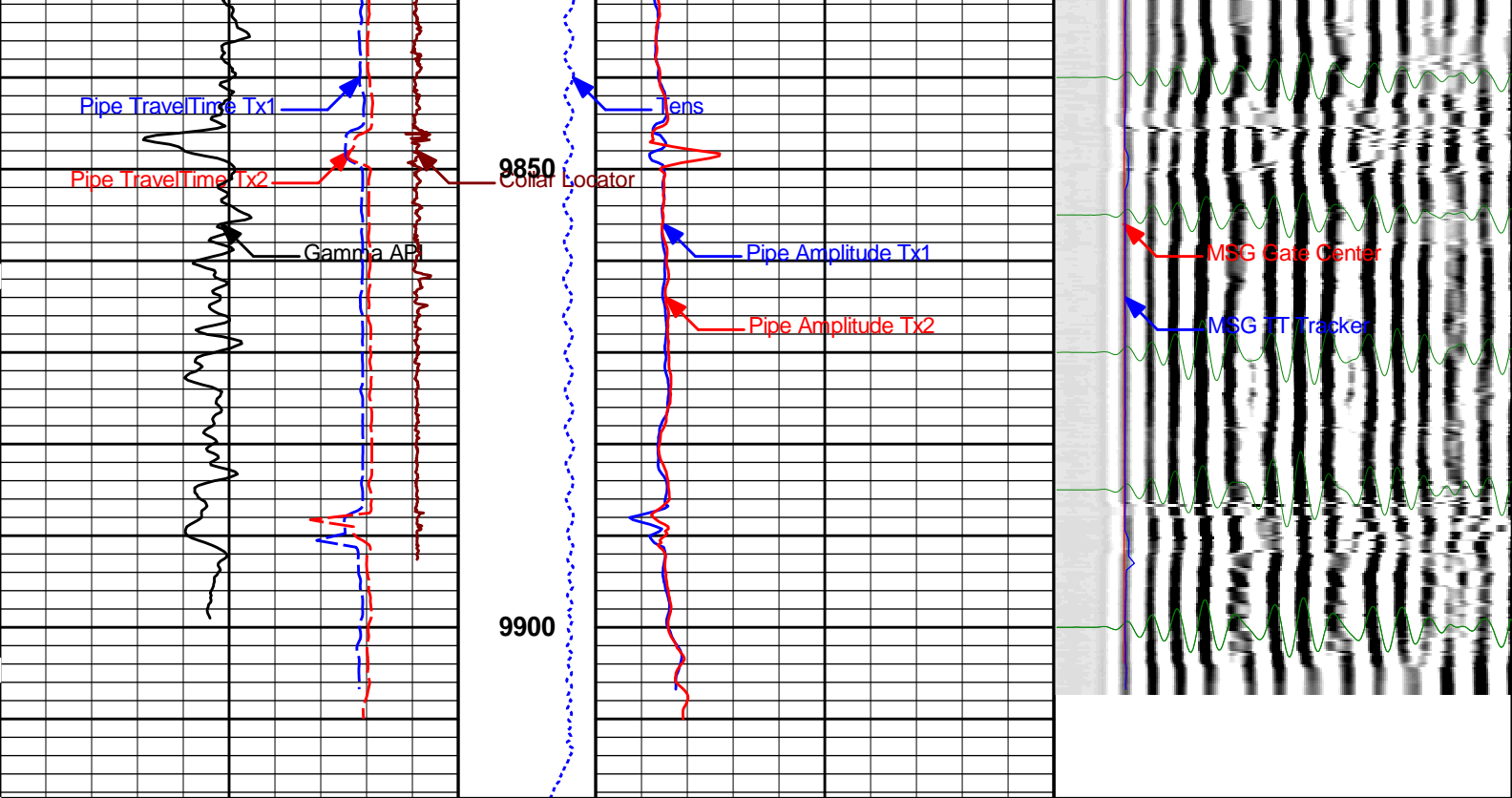












0	Gamma API	150	1 : 240	0	Pipe Amplitude Tx1	100	200	Waveform MSG	1200
	api				millivolts			microseconds	
400	Pipe TravelTime Tx1	200	0	Tens	6K	0	200	Waveform	1200
	microseconds			pounds		millivolts		microseconds	
400	Pipe TravelTime Tx2	200					200	MSG Gate Center	1.2K
	microseconds							microseconds	
10K	Collar Locator	-1K					200	MSG TT Tracker	1.2K
	millivolts							microseconds	

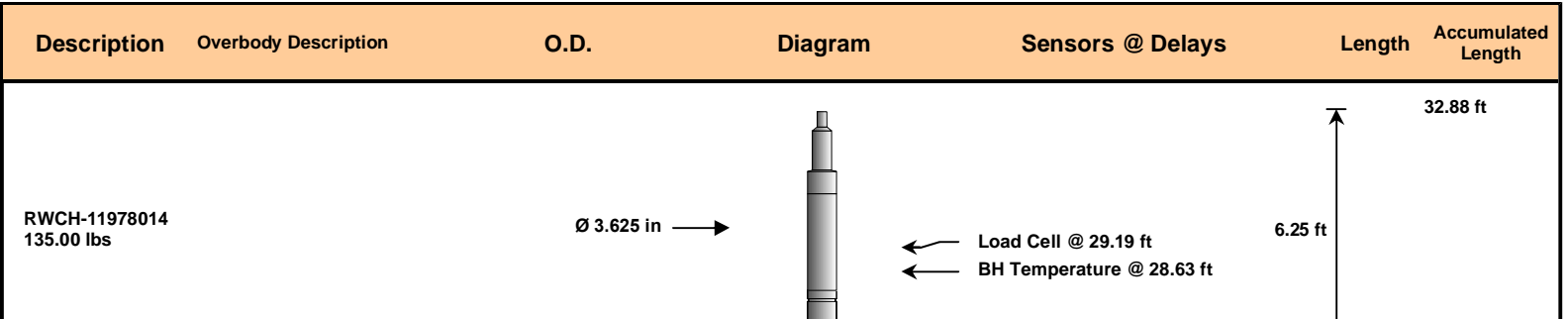
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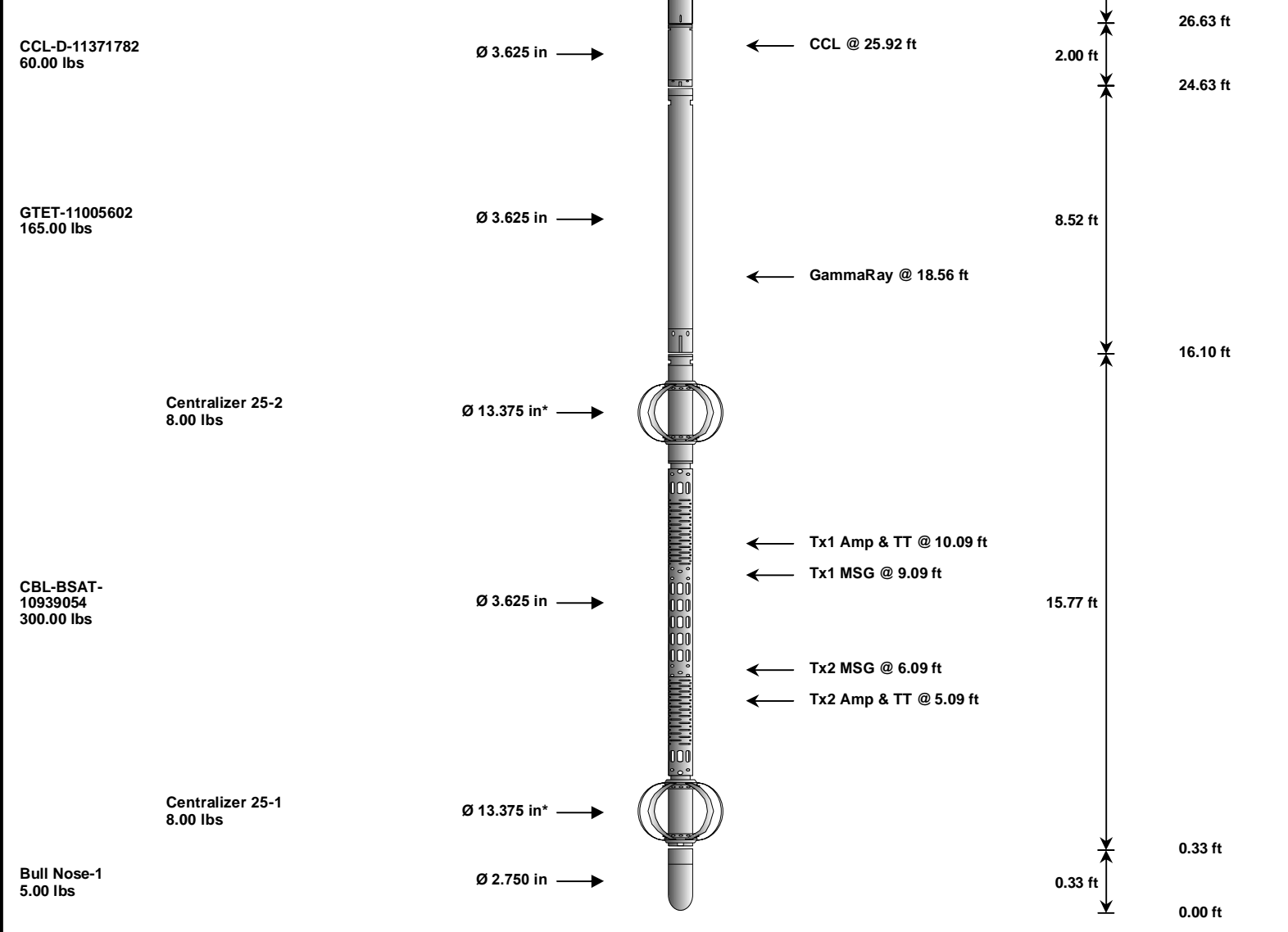
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Data: AXIA_BLDG_5-789\Well Based\MAIN_CBL\
Plot File: \\CBL\BSAT CBL 1_240

MAIN PASS, 5" = 100'

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TOOL STRING DIAGRAM REPORT





Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	11978014	135.00	6.25	26.63	300.00
CCL	Casing Collar Locator - Digital Source	11371782	60.00	2.00	24.63	300.00
GTET	Gamma Telemetry Tool	11005602	165.00	8.52	16.10	60.00
CBL-BSAT	Borehole Sonic Array Tool - CBL	10939054	300.00	15.77	0.33	60.00
OBCEN	Centralizer - 25 in. Overbody	1	8.00	2.08	*	0.48
OBCEN	Centralizer - 25 in. Overbody	2	8.00	2.08	*	13.18
BLNS	Bull Nose	1	5.00	0.33	0.00	300.00
Total			681.00	32.88		
* Not included in Total Length and Length Accumulation.						
Data: AXIA_BLDG_5-789\0004 CBL_BSAT1\007 23-Jul-13 13:38 Up @9918.0f						Date: 23-Jul-13 14:01:08

COMPANY	AXIA ENERGY LLC		
WELL	BULLDOG 5-14H-789		
FIELD	WILDCAT		
COUNTY	MOFFAT	STATE	CO
HALLIBURTON		CEMENT BOND LOG	
		* FIELD COPY*	

