

HALLIBURTON

FILED PRINT
WAVE SONIC

COMPANY		WELL		FIELD/BLOCK		COUNTY		STATE		COMPANY WELL FIELD/BLOCK COUNTY STATE		COACHMAN ENERGY OPERATING, LLC. FEDERAL 14-15-7-21 KOKOPELLI GARFIELD CO	
Permanent Datum		Log measured from		Drilling measured from		Date		Run No.		Depth - Driller		Depth - Logger	
GL		KB		KB		22-Feb-15		TWO		13674.00 ft		13555.0 ft	
Elev. 6932.0 ft		D.F. 6955.0 ft		G.L. 6932.0 ft									
Sect. 21		Twp. 6S		Rge. 91W									
Location		SURFACE HOLE LOCATION: 2345' FNL & 713' FEL, SENE		BOTTOM HOLE LOCATION: 1969' FNL & 670' FEL, SENE									
API No.		050452246000		Other Services:									
Time on Bottom		22-Feb-15 19:22											
Max. Rec. Temperature		340.0 degF @ 13555.0 ft											
Equipment		11335318		VERNAL, UT									
Recorded By		Z. TAYLOR											
Witnessed By		J. SHEPARD											

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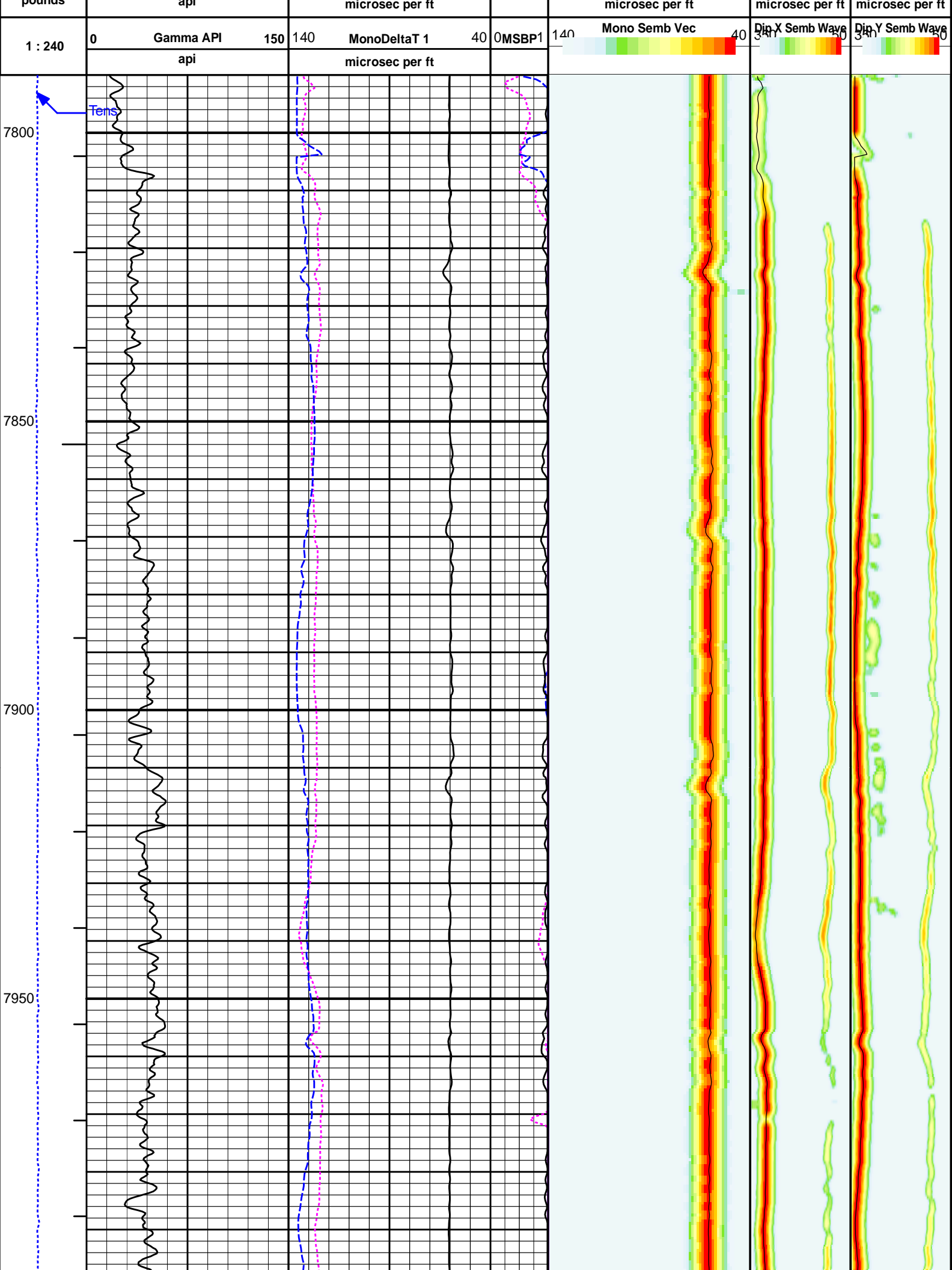
Service Ticket No.: 902145013				API Serial No.: 050452246000				PGM Version: WL INSITE R4.2.0 (Build 2)			
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES					
Date	Sample No.					Type Log	Depth	Scale Up Hole	Scale Down Hole		
Depth-Driller											
Type Fluid in Hole											
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.	@			@							
Rmc @ Meas. Temp.	@			@							
Source Rmf	Rmc										
Rm @ BHT	@			@							
Rmf @ BHT	@			@							
Rmc @ BHT	@			@							
EQUIPMENT DATA											
GAMMA		ACOUSTIC		DENSITY		NEUTRON					
Run No.	TWO	Run No.	TWO	Run No.		Run No.					
Serial No.	11232143	Serial No.	12502860	Serial No.		Serial No.					
Model No.	H4TG	Model No.	HWST	Model No.		Model No.					
Diameter	2.75"	No. of Cent.	TWO	Diameter		Diameter					
Detector Model No.	H4TG	Spacing	0.5'	Log Type		Log Type					
Type	SCINT			Source Type		Source Type					
Length	8"	LSA [Y/N]	YES	Serial No.		Serial No.					
Distance to Source	N/A	FWDA [Y/N]	YES	Strength		Strength					
LOGGING DATA											

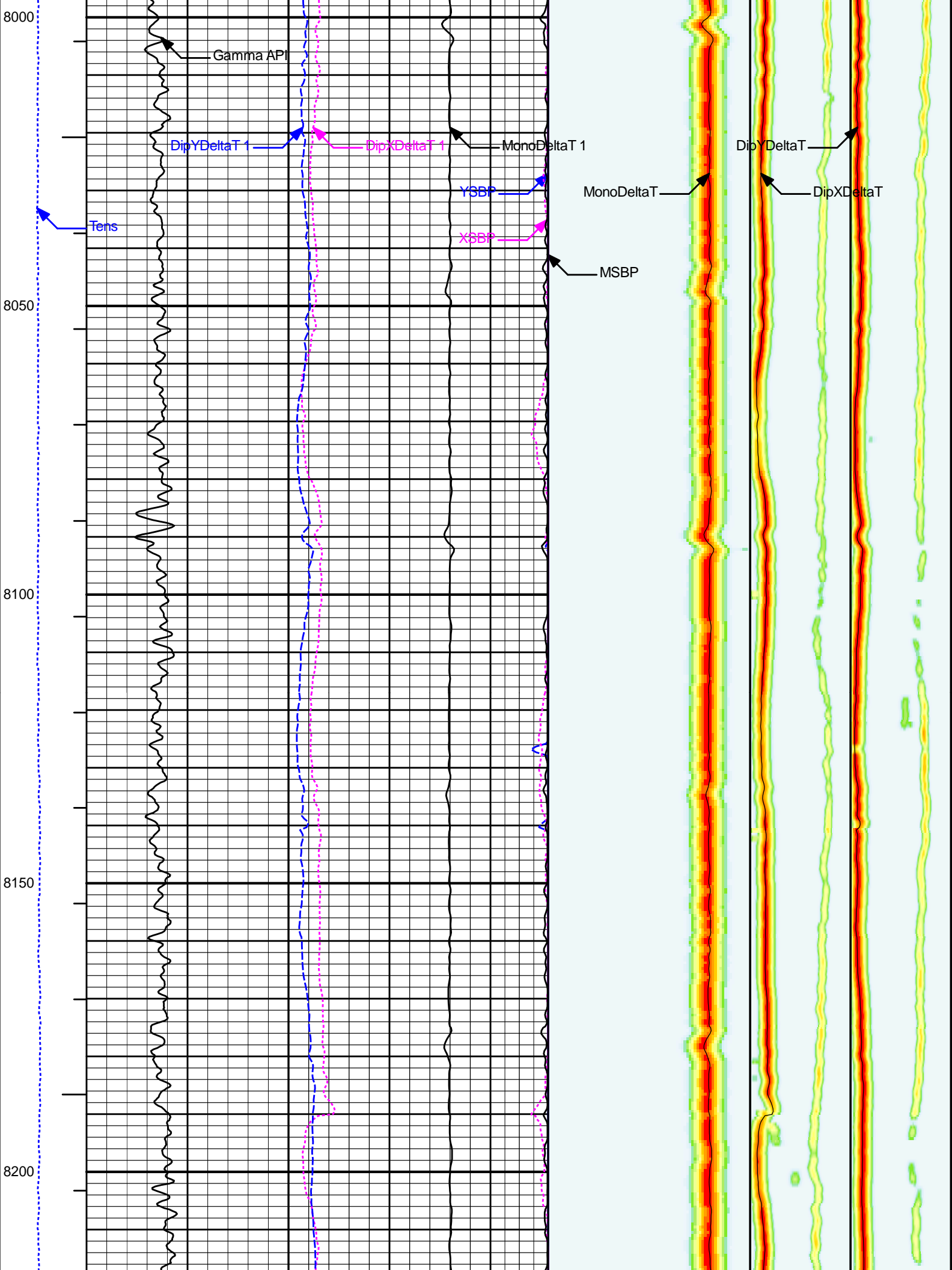
GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
TWO	13555	7800	REC	0	150									
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: TOOL STRING CONFIGURATION: CH_HOS/H4TG/HWST/BN														
MIT: HARD/NARROW														
HWST: UE-12502860, TX-12502862, RX-12502863, LE-12502861														
RECEIVER A CHANNEL 1 SHOWED MUTED RESPONSE. BACK-UP TOOLS WERE NOT AVAILABLE														
WAVE SONIC LOGGED THROUGH CASING														
7" INTERMEDIATE CASING SHOE AT 9010'														
LATITUDE: 39.514404° N														
LONGITUDE: 107.552396° W														
CREW: B. PARRACK, G. BISHOP														
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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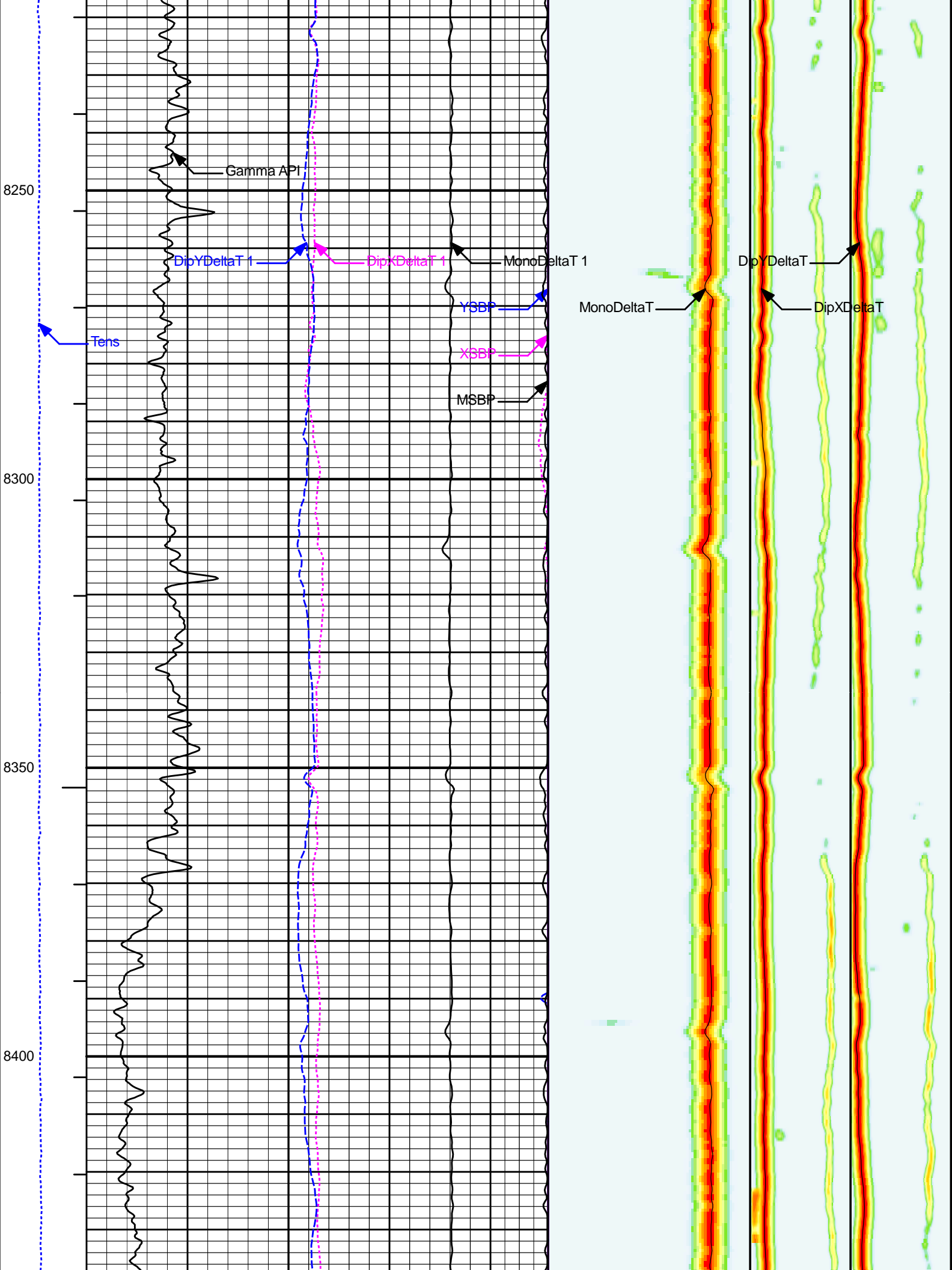
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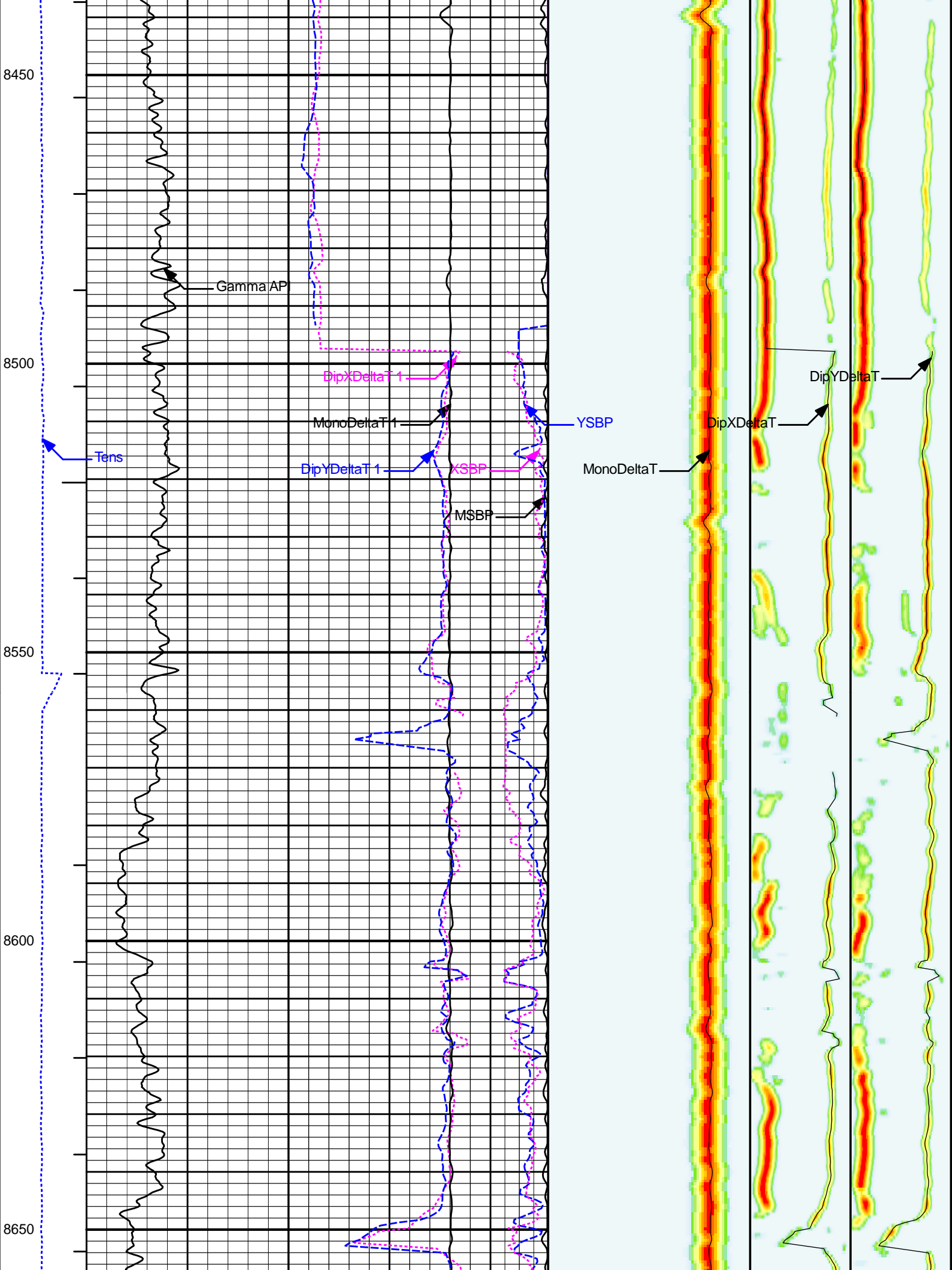
PARAMETERS REPORT

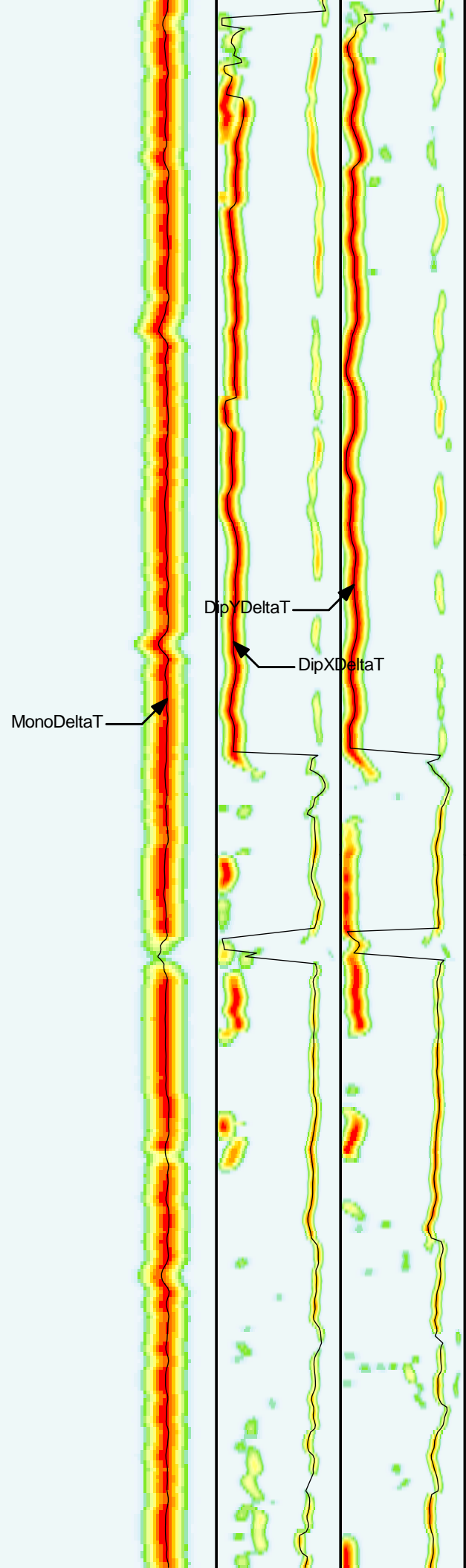
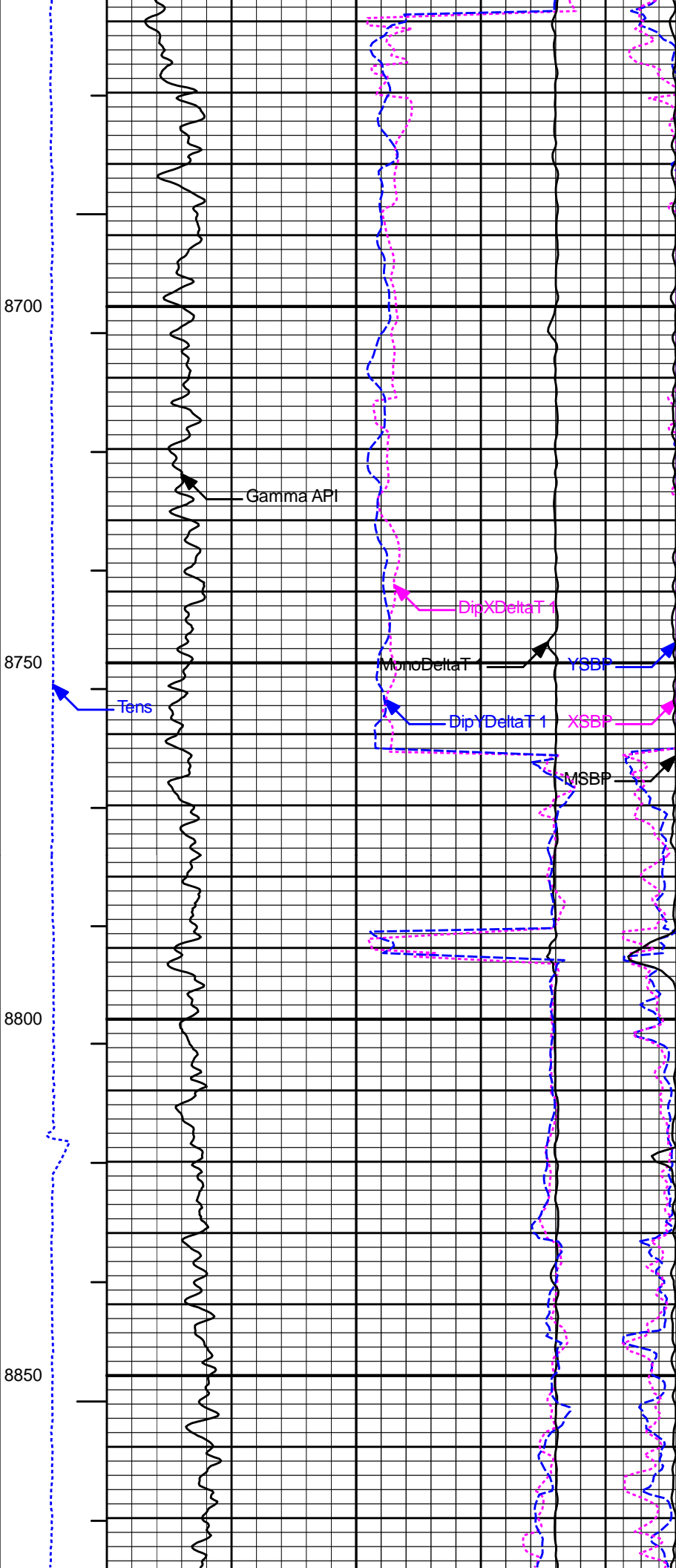
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	6.000	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	Yes	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	8.400	ppg
	SHARED	WAGT	Weighting Agent	Natural	
	SHARED	BSAL	Borehole salinity	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	75.0	degF
	SHARED	CSD	Logging Interval is Cased?	Yes	
	SHARED	CSOD	Inner Casing OD size	4.500	in
	SHARED	CSWT	Casing Weight	13.50	lbpf
	SHARED	ISOC	Is Outer Casing Present?	No	
	SHARED	CSCM	Casing Cemented	Yes	
	SHARED	CMWT	Cement Weight	16.500	ppg
	SHARED	ST	Surface Temperature	20.0	degF
	SHARED	TD	Total Well Depth	13555.00	ft
	SHARED	BHT	Bottom Hole Temperature	340.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	H4TG-A	
	SHARED	TEMM	Temperature Master Tool	NONE	
	H4TG-A	GROK	Process Gamma Ray?	Yes	

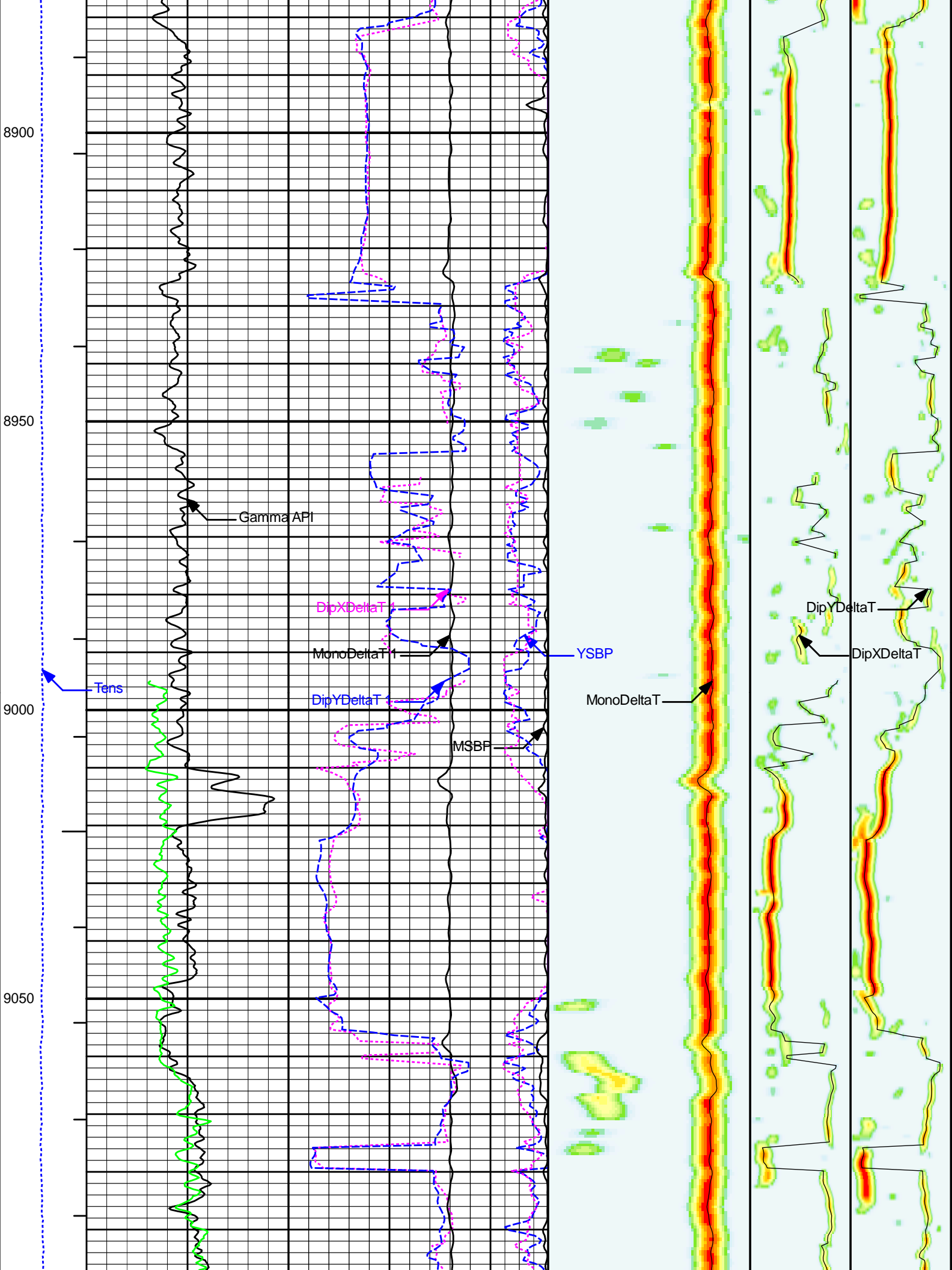


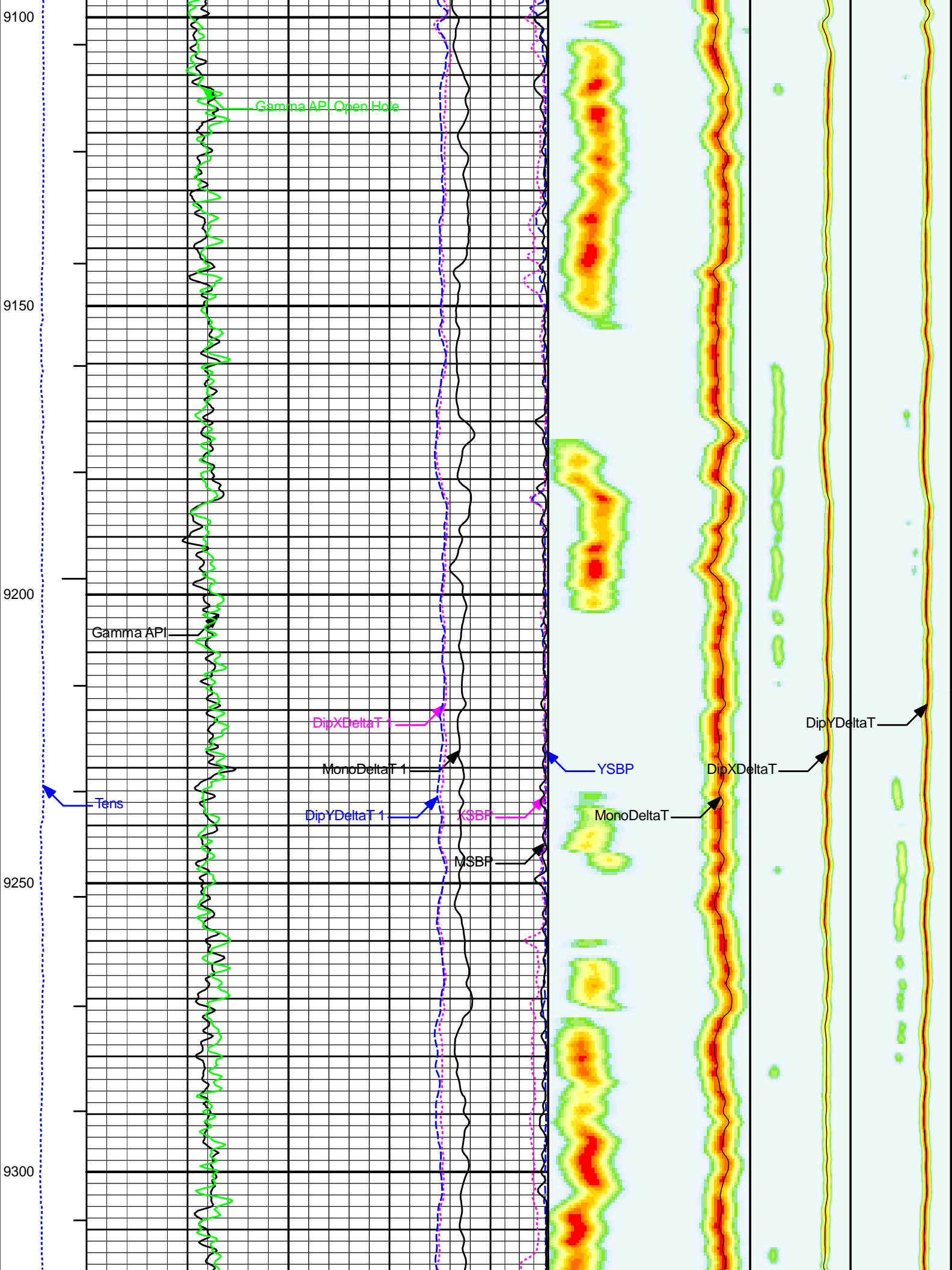


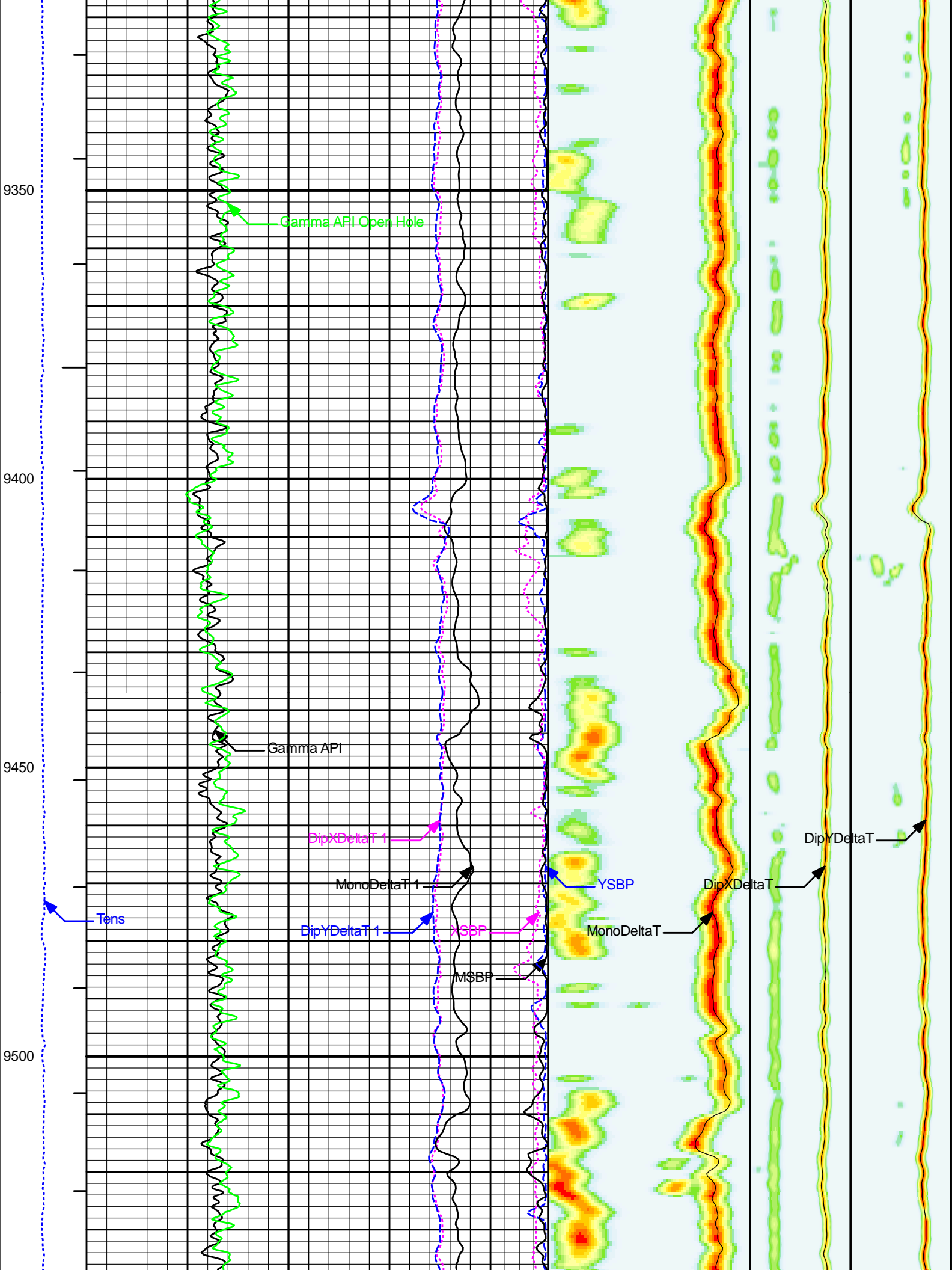


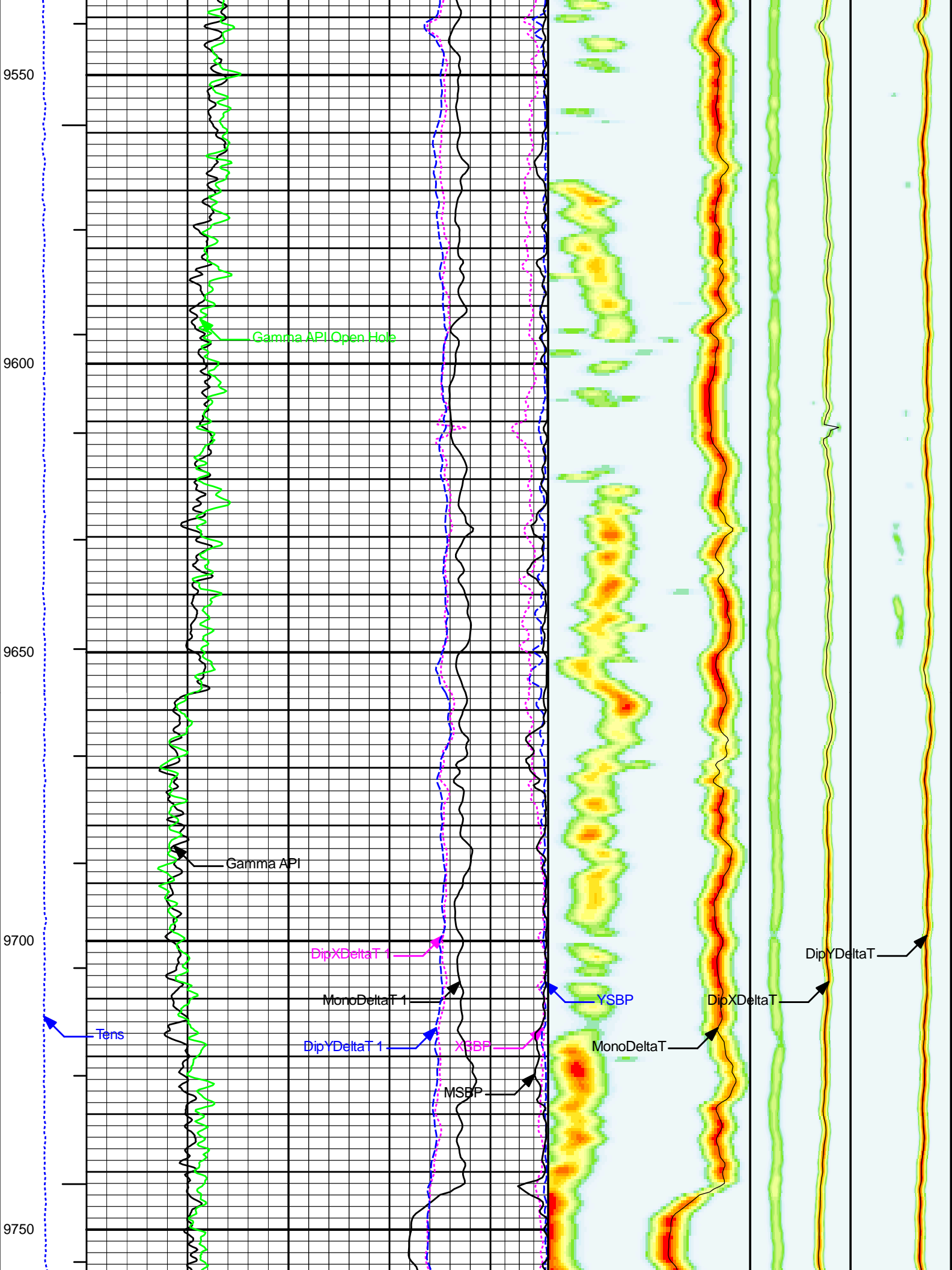


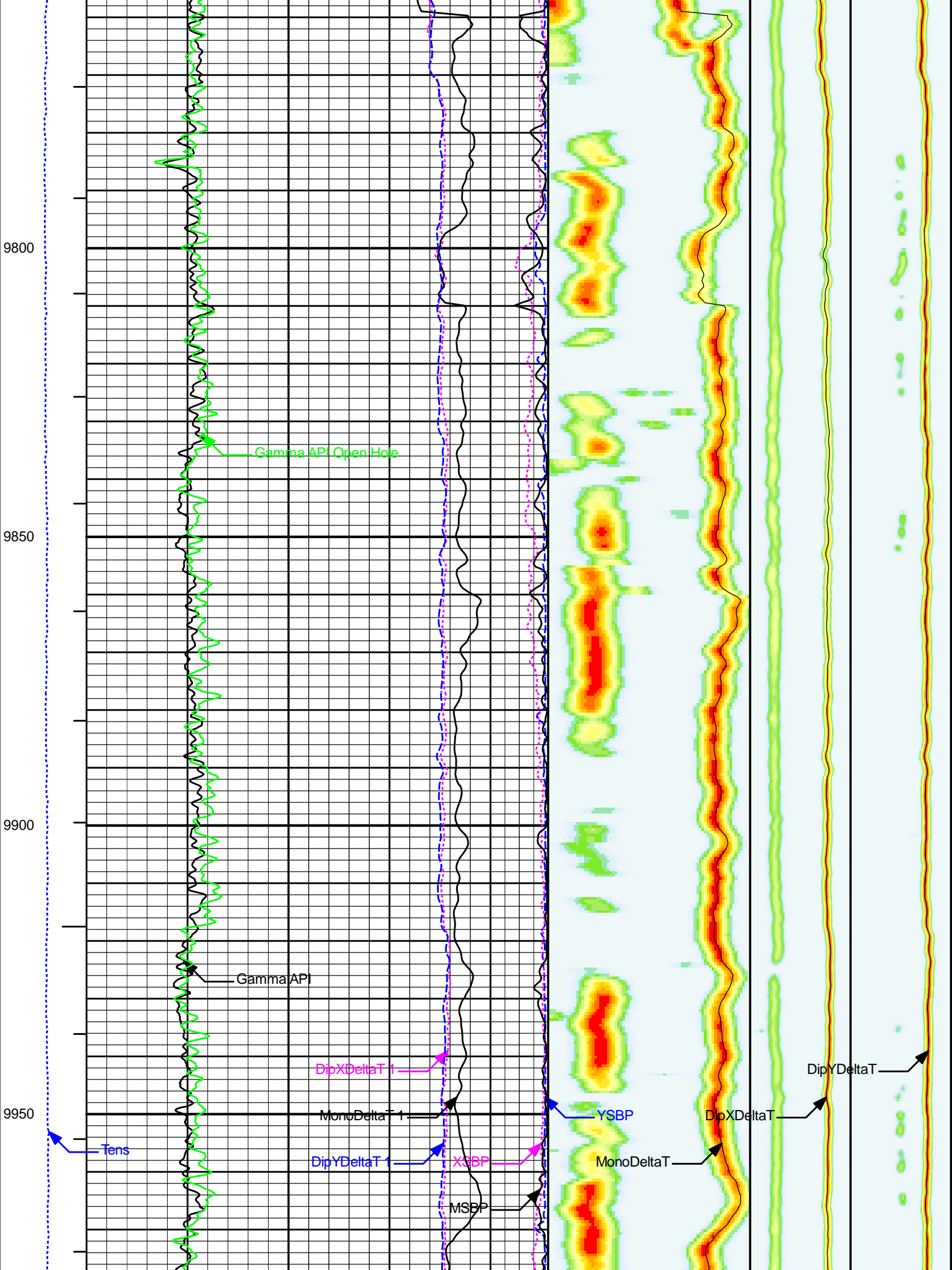


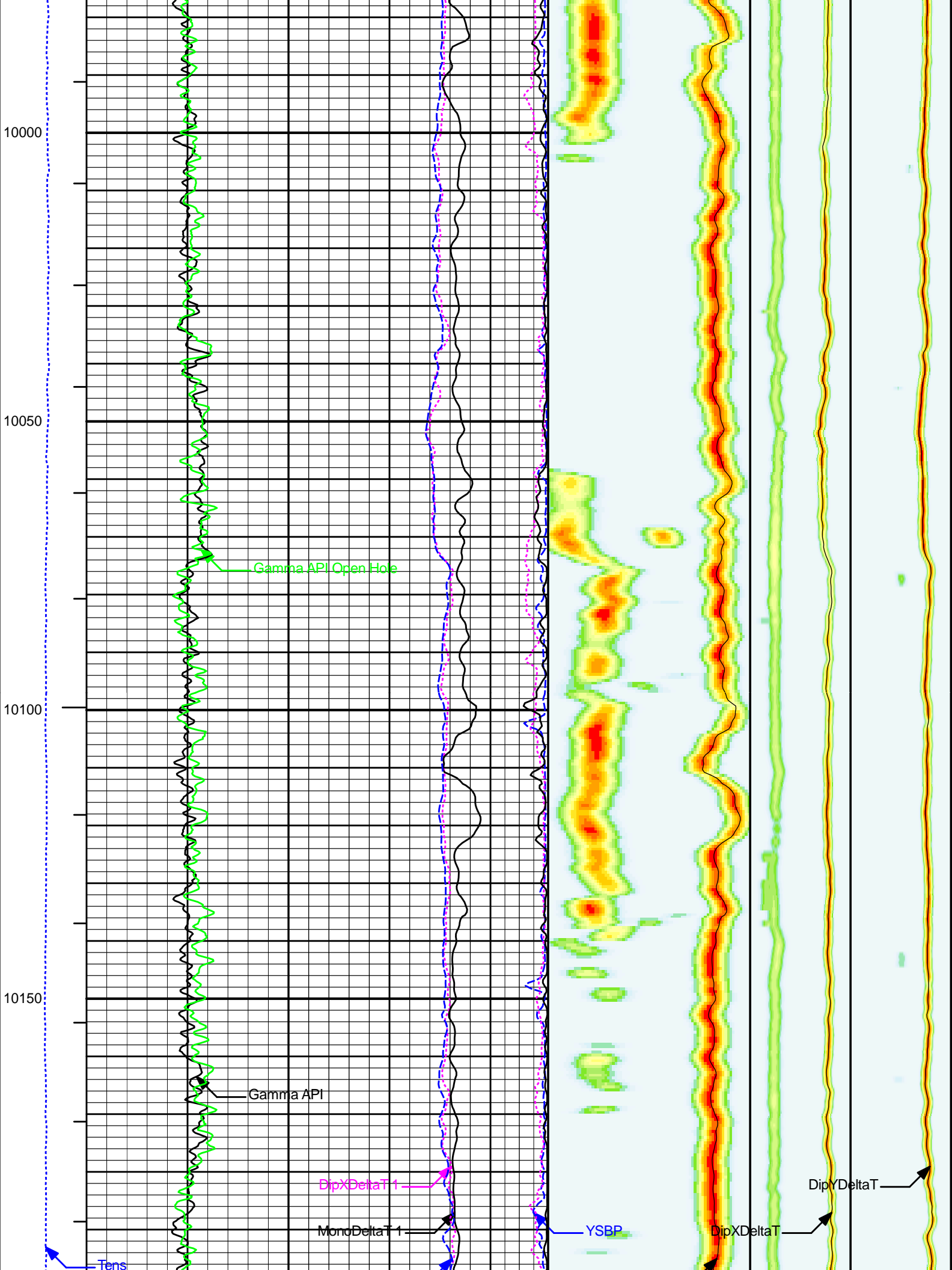


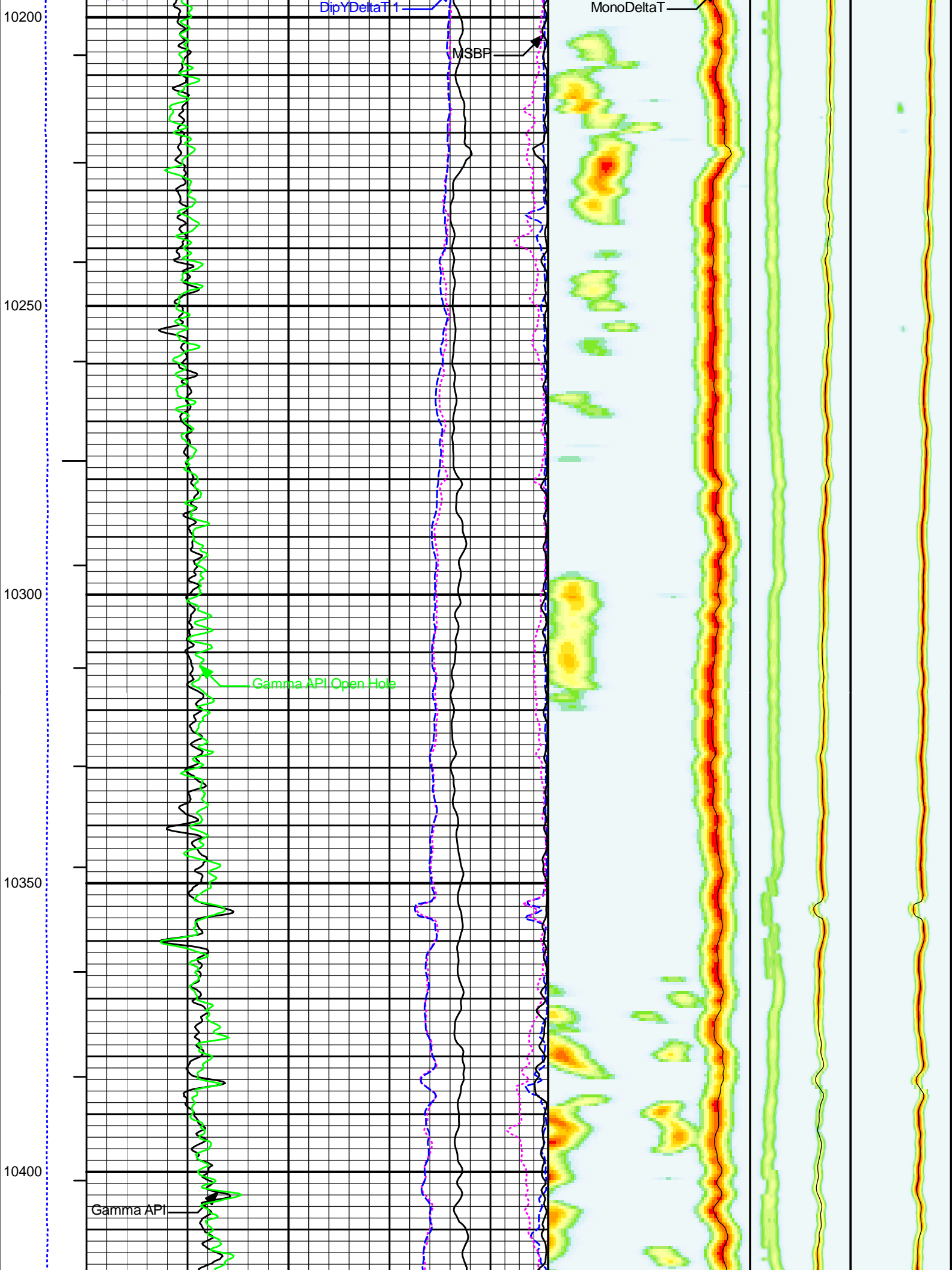


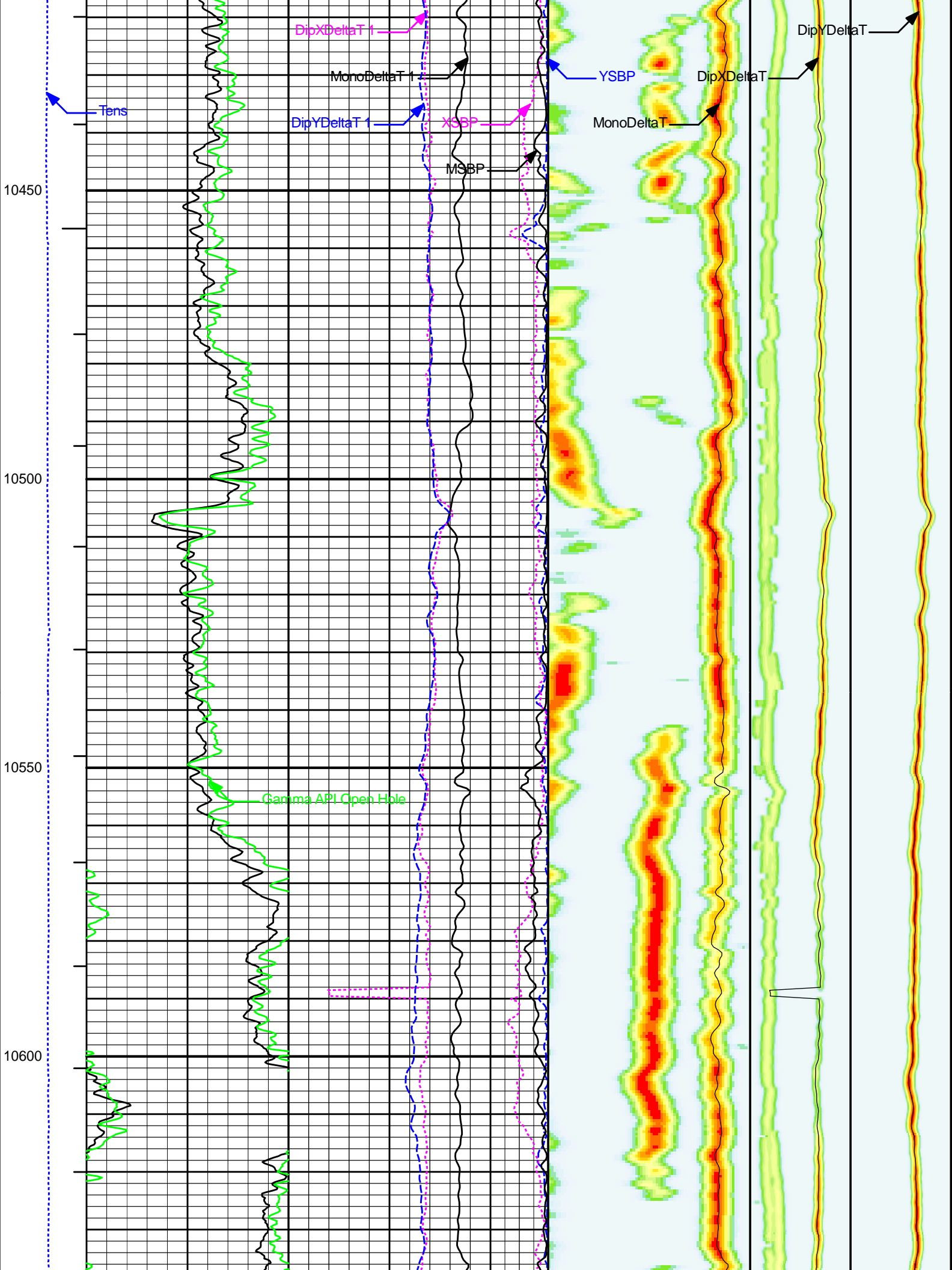


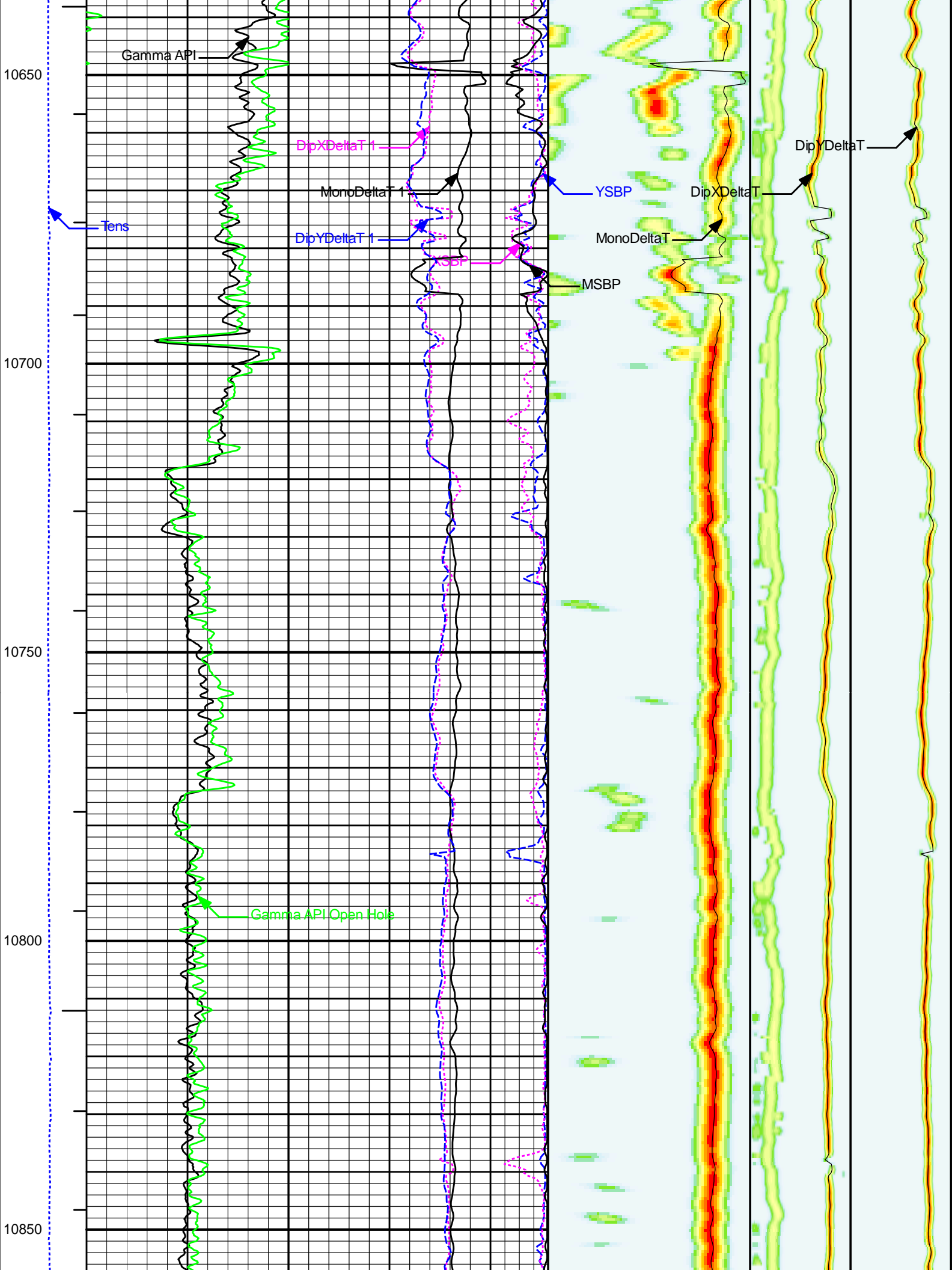


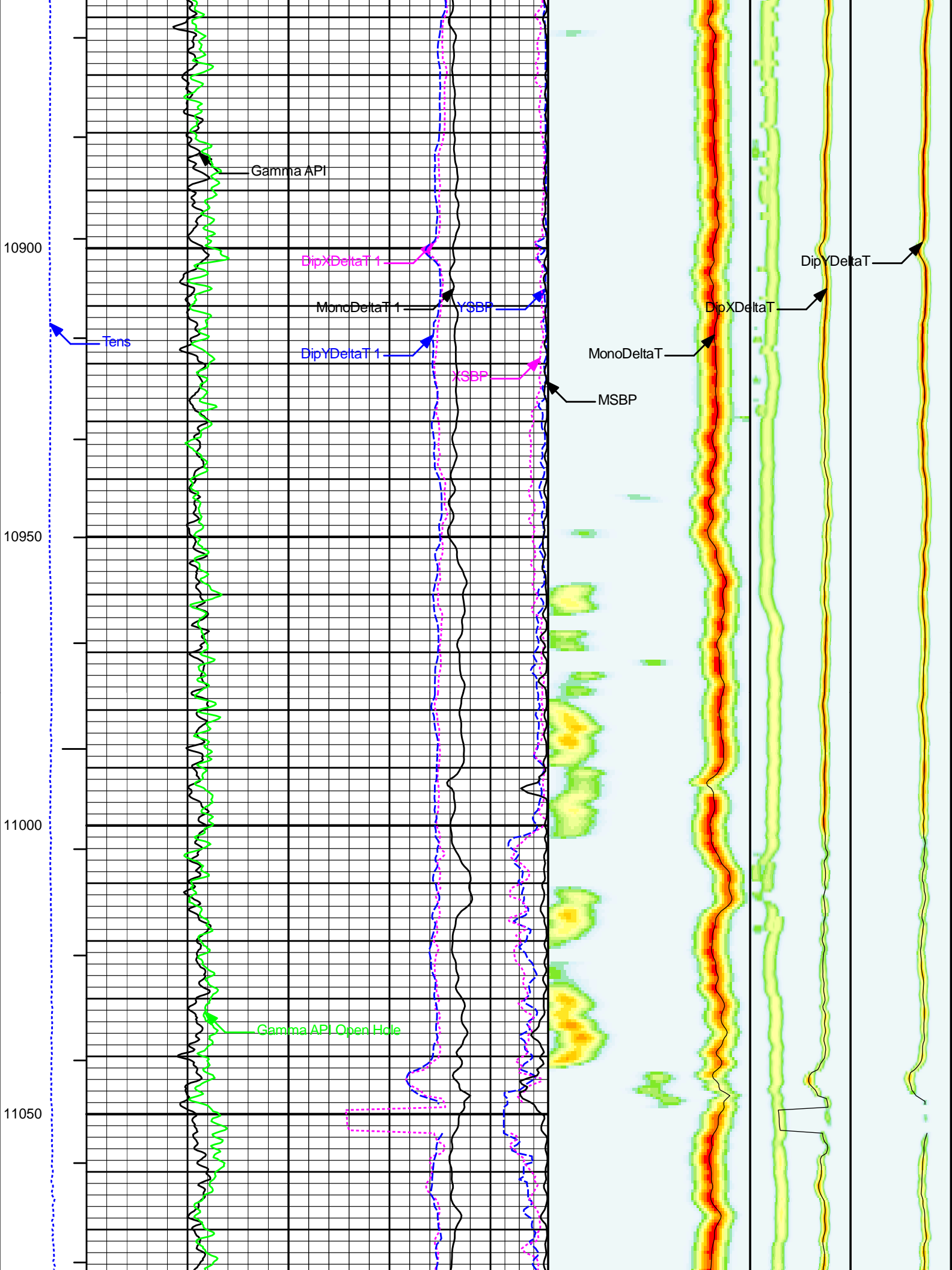


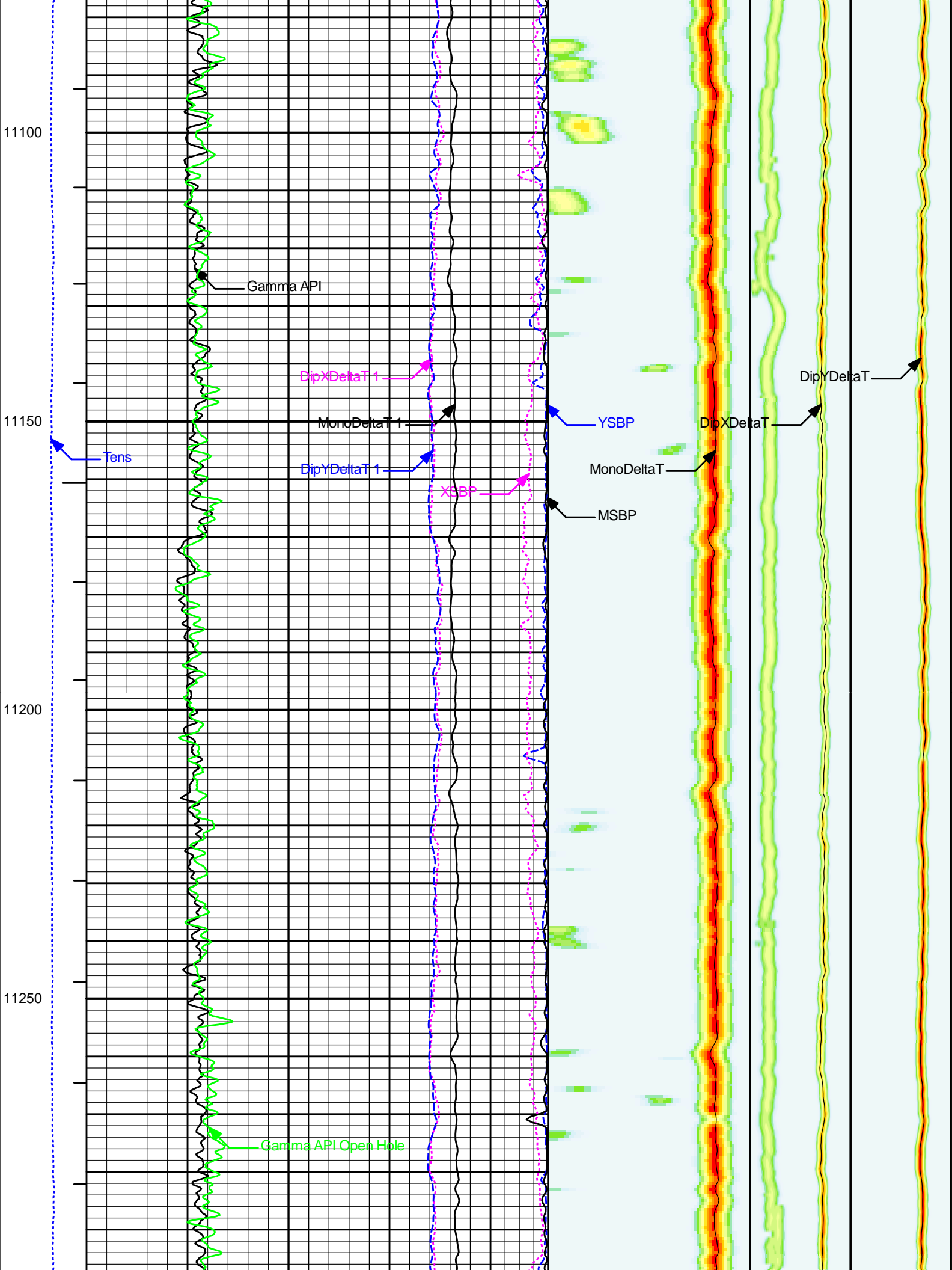


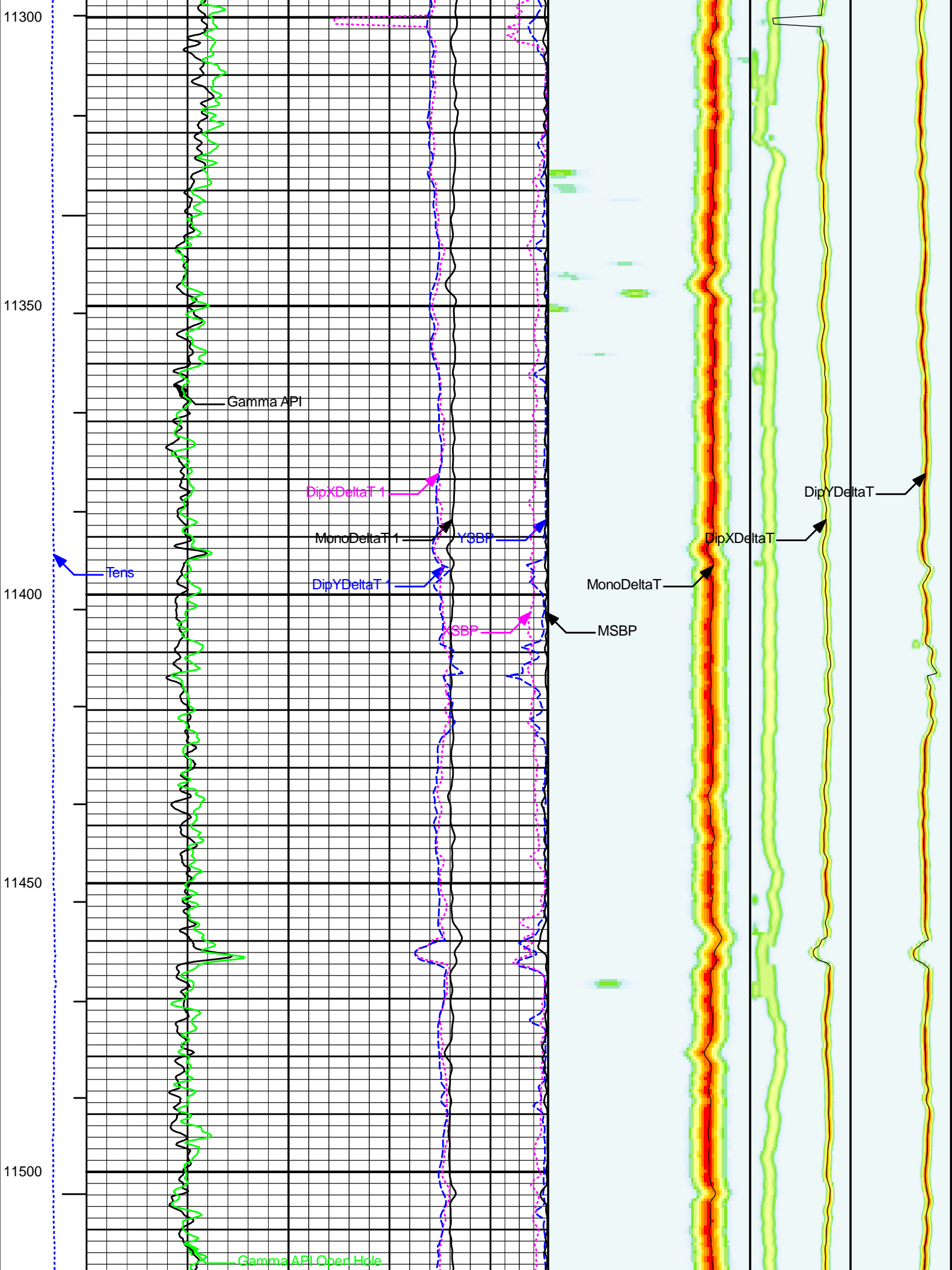


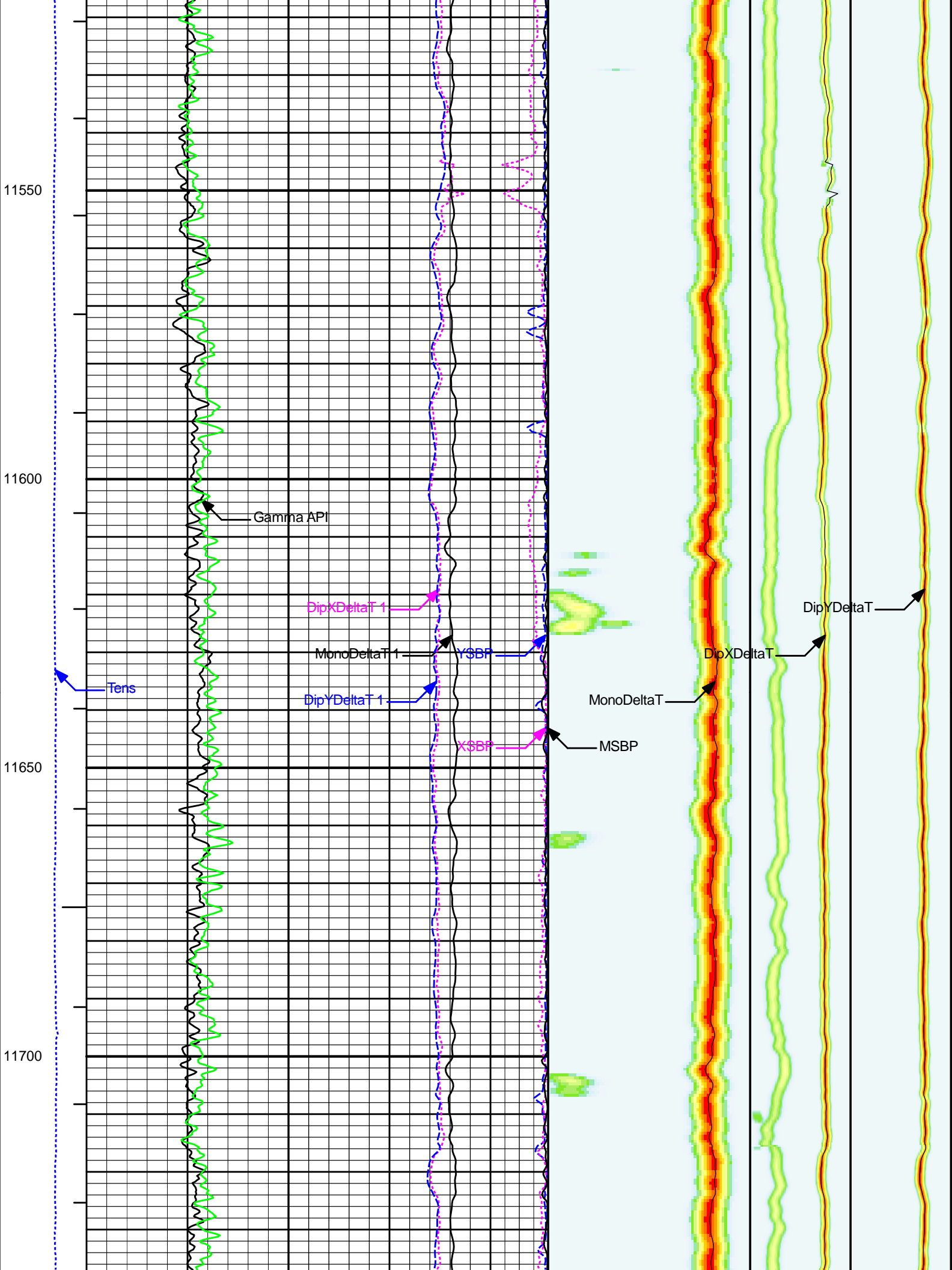


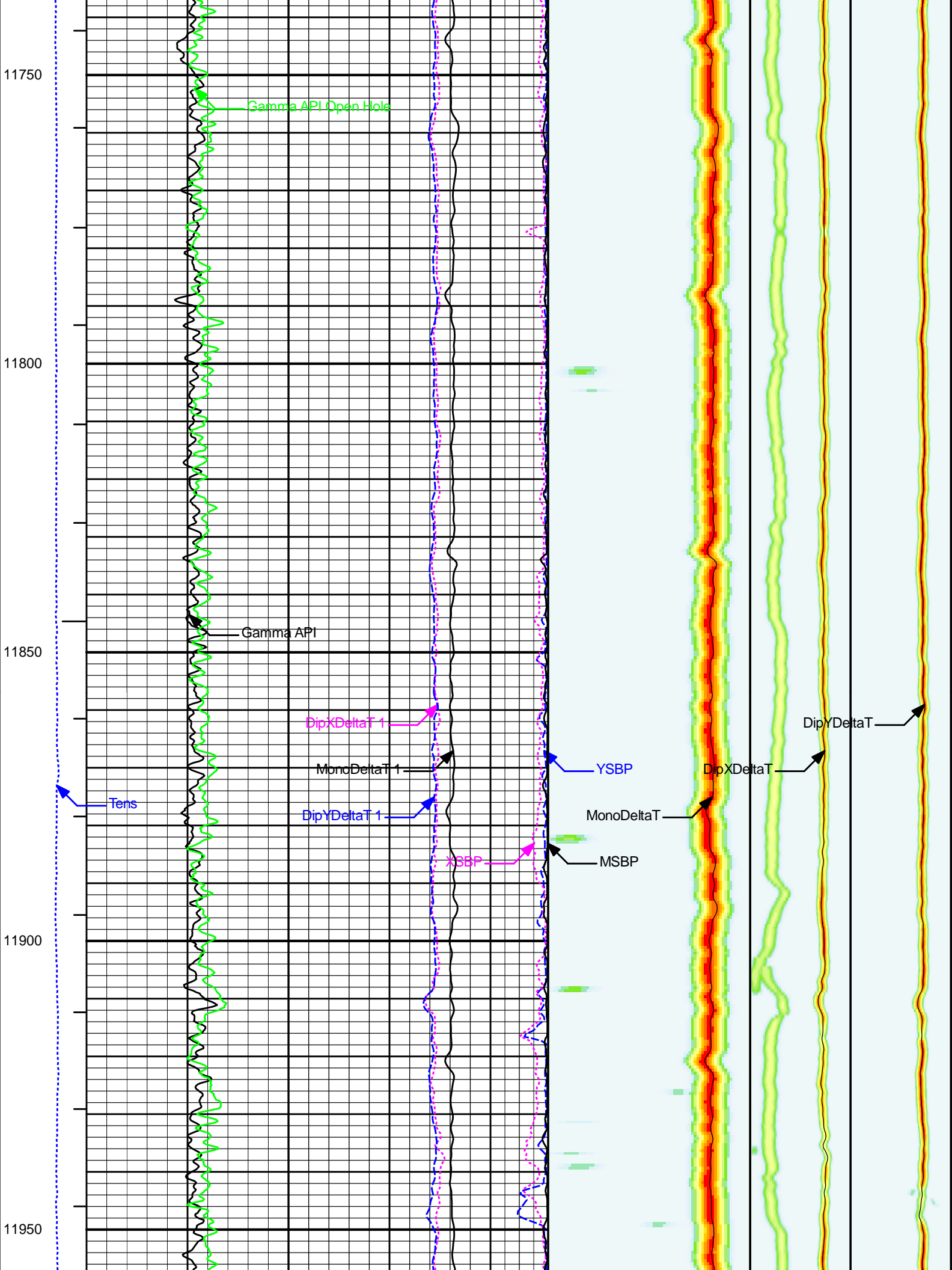


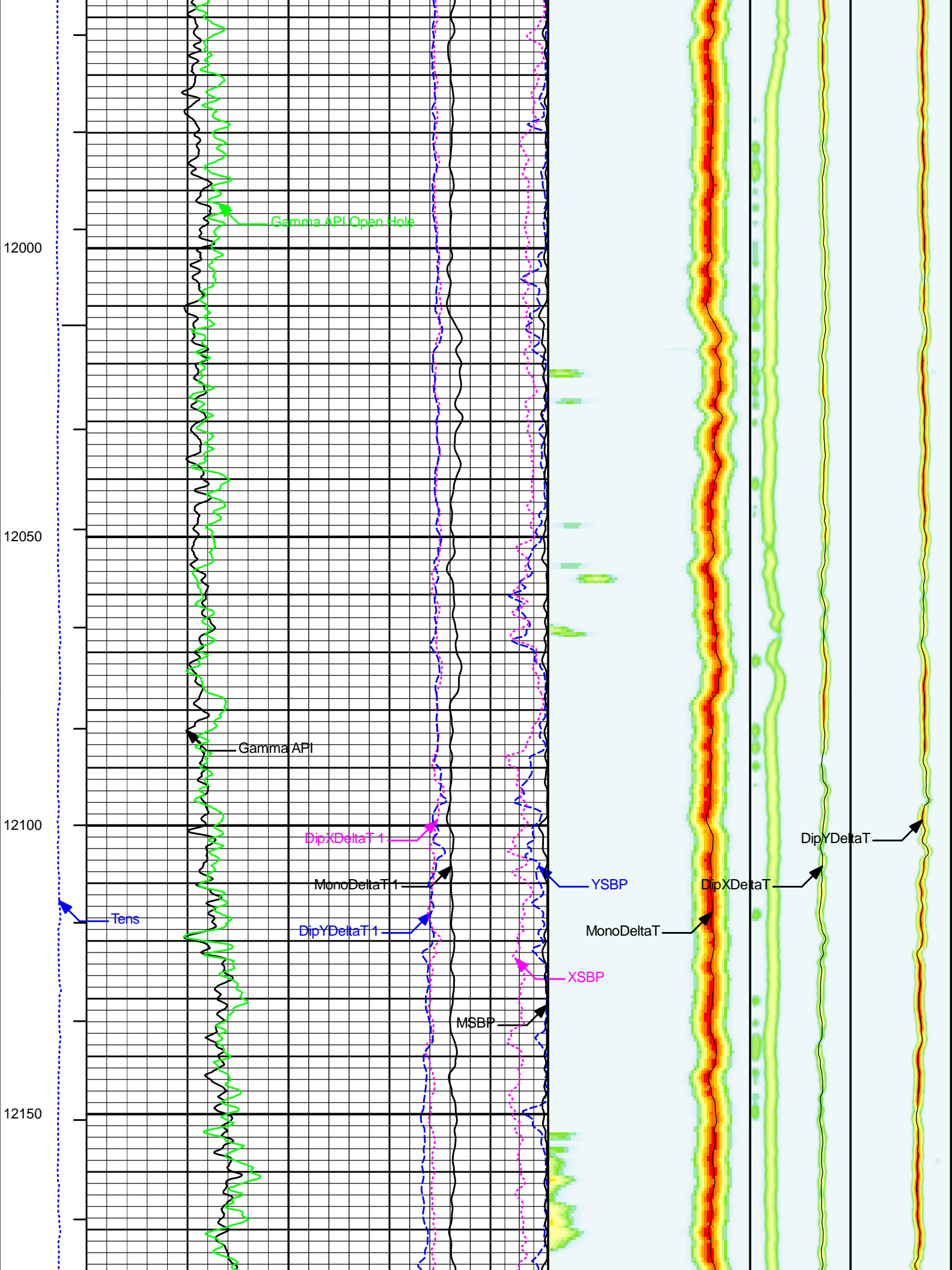


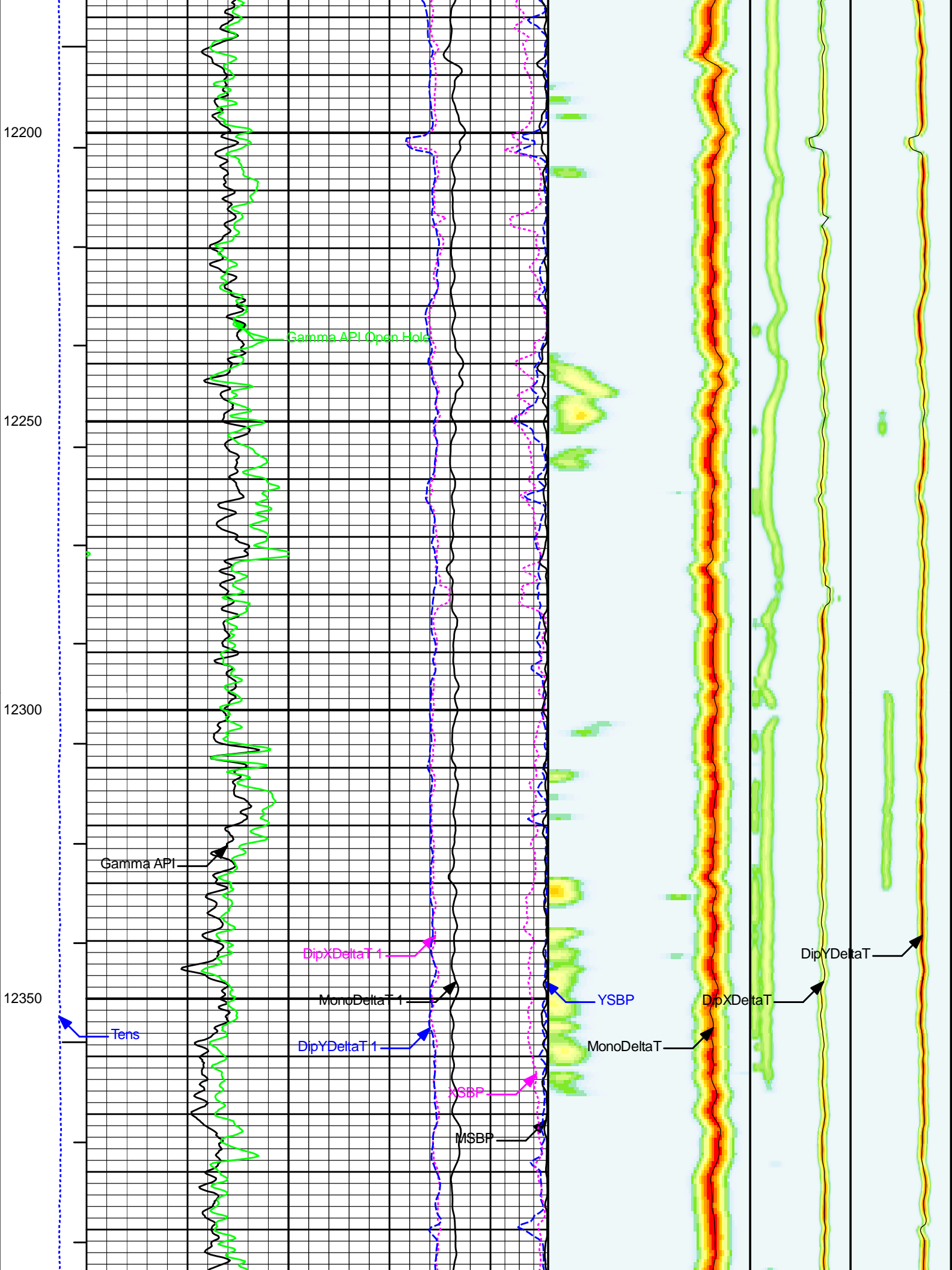


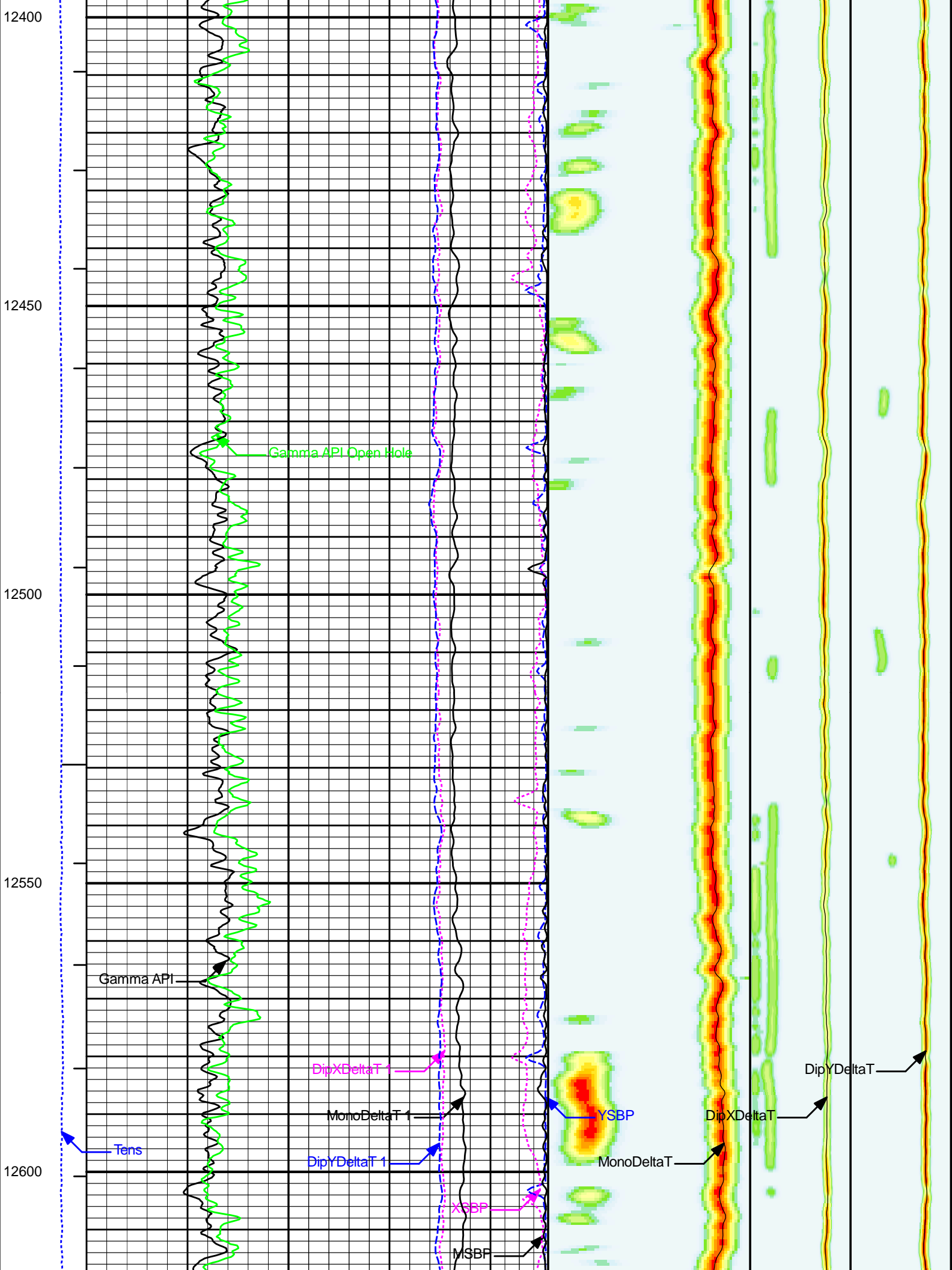


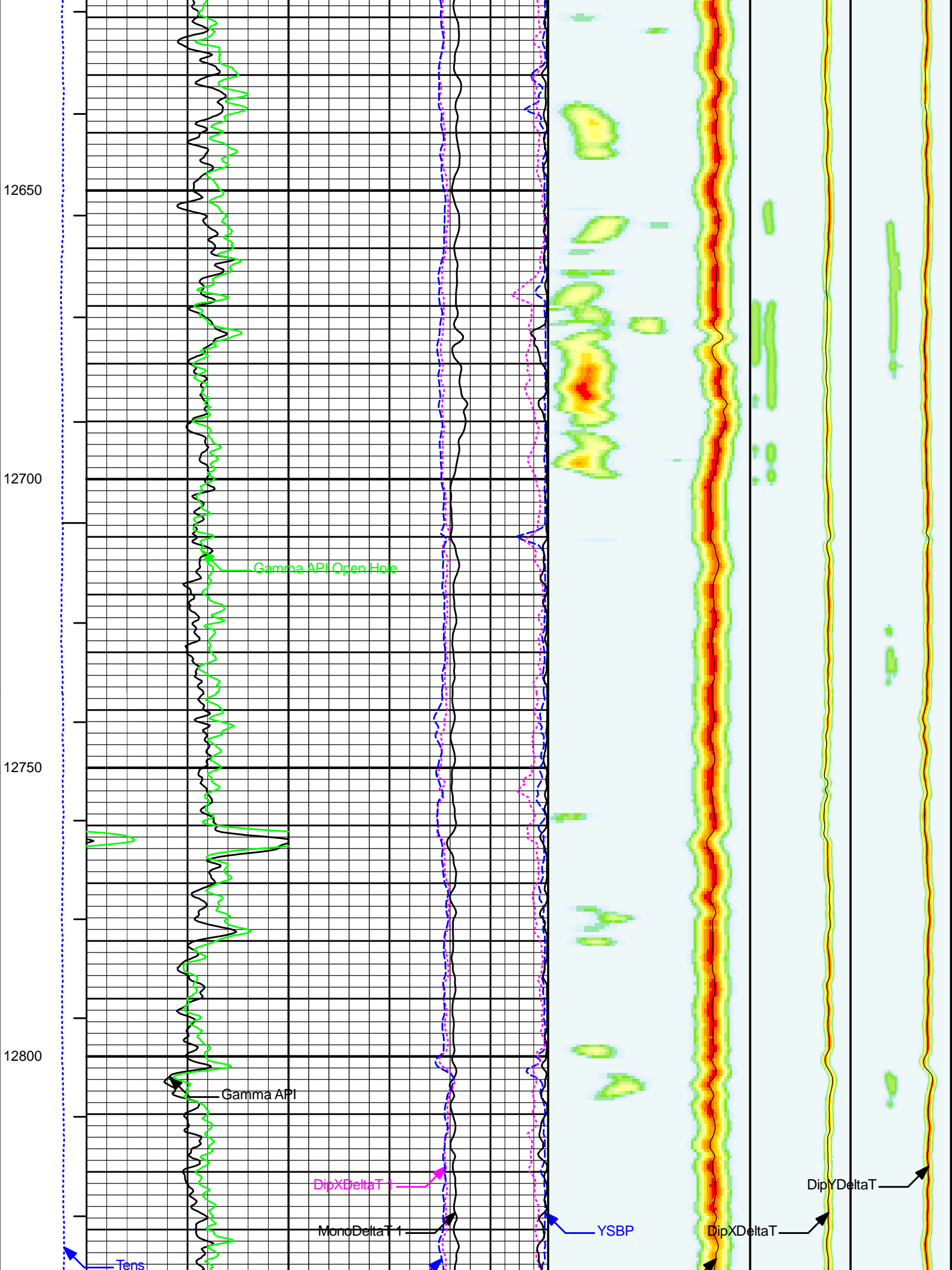


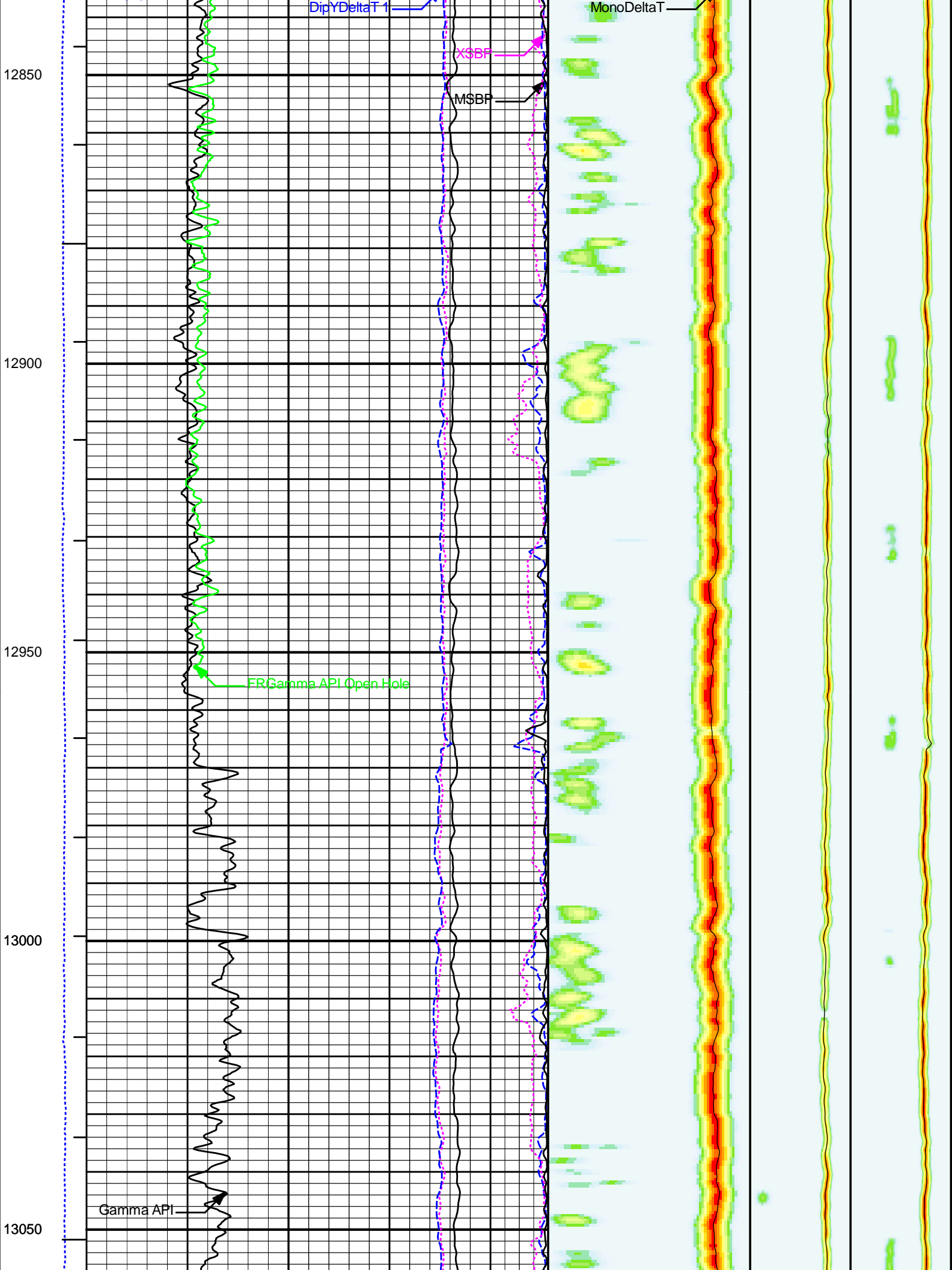


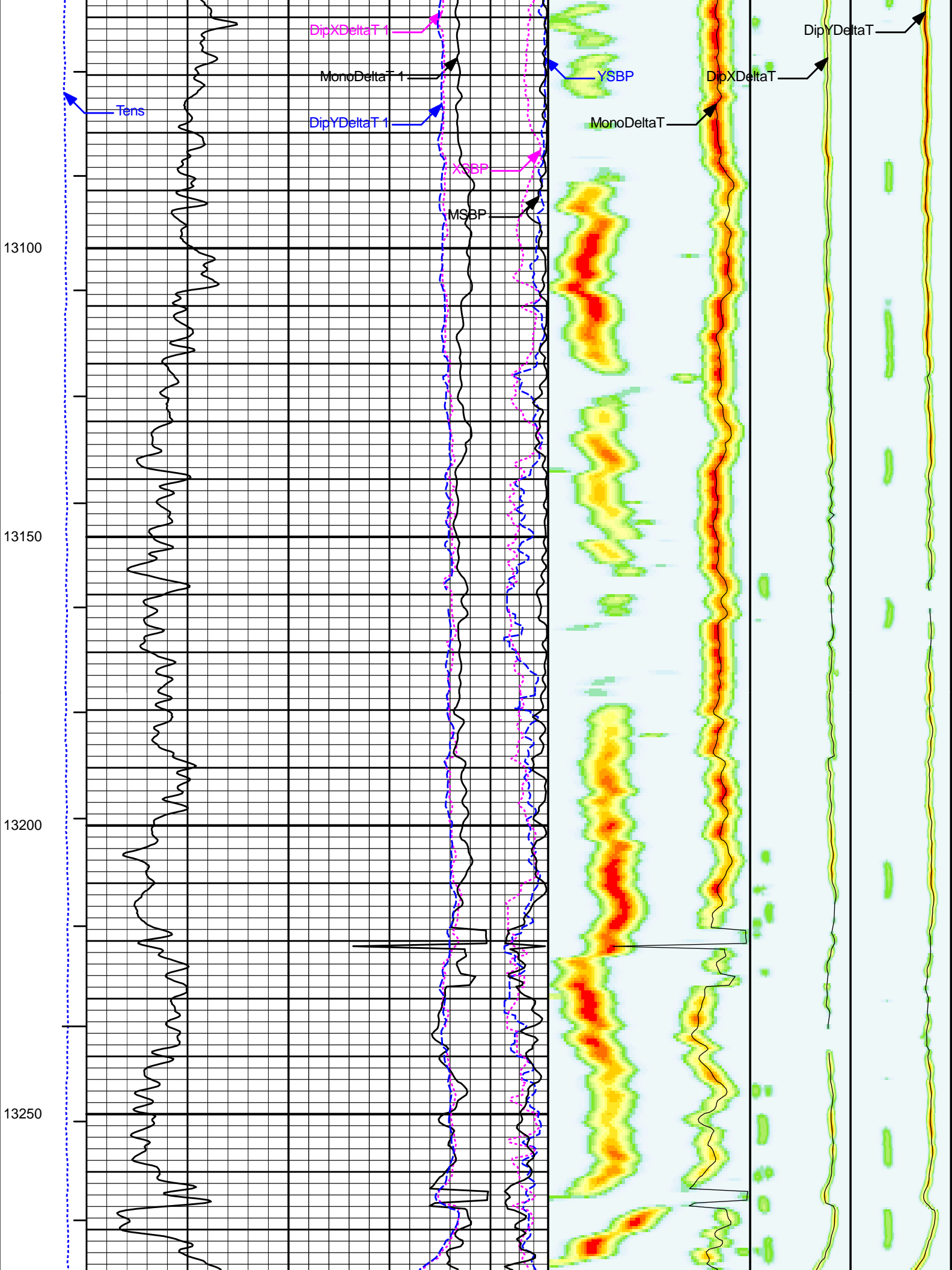


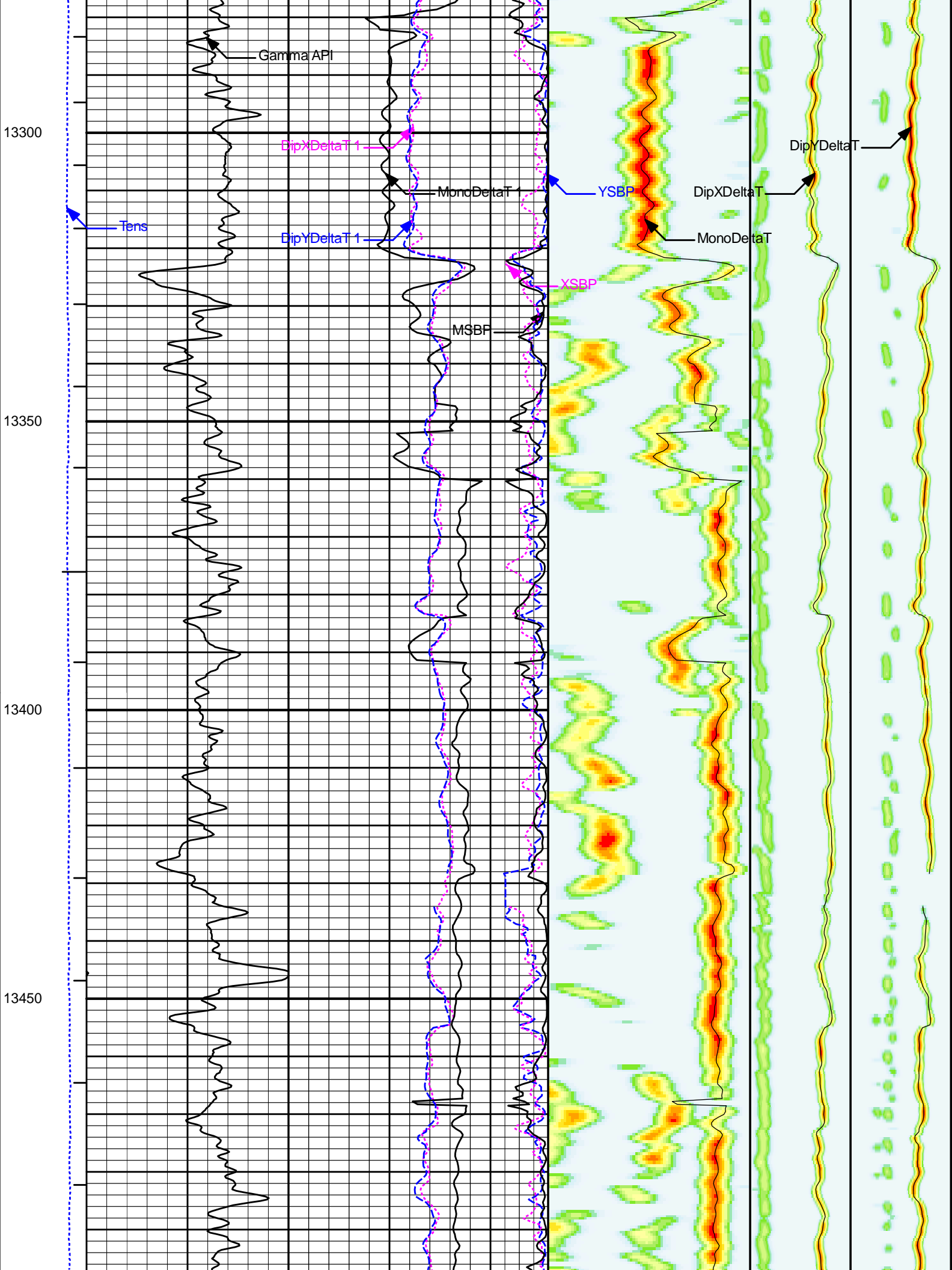


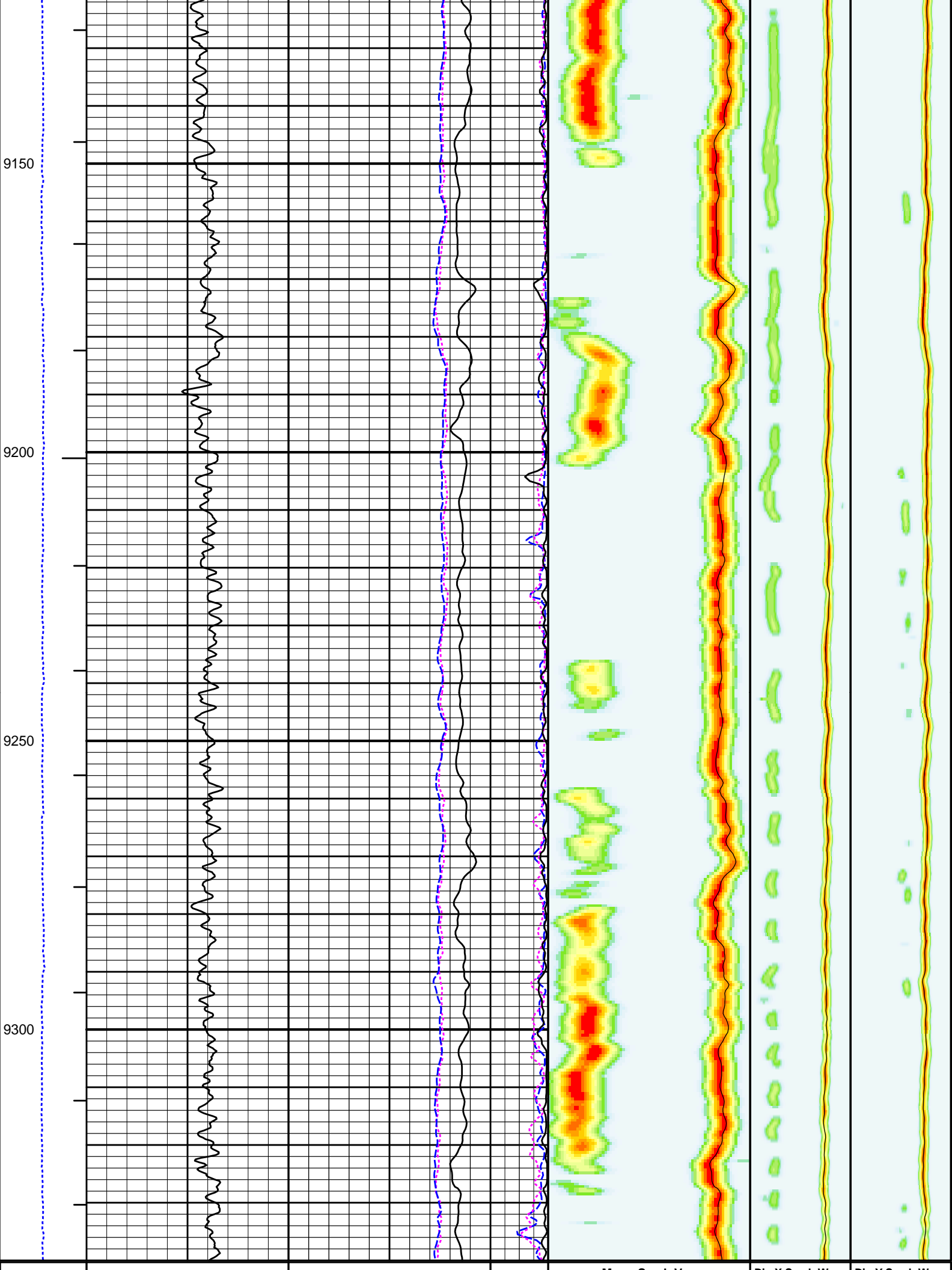












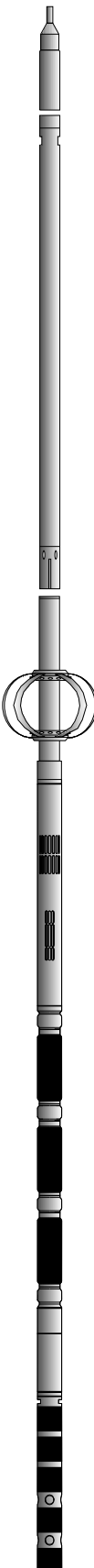
CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
H4TC-A-11232442						

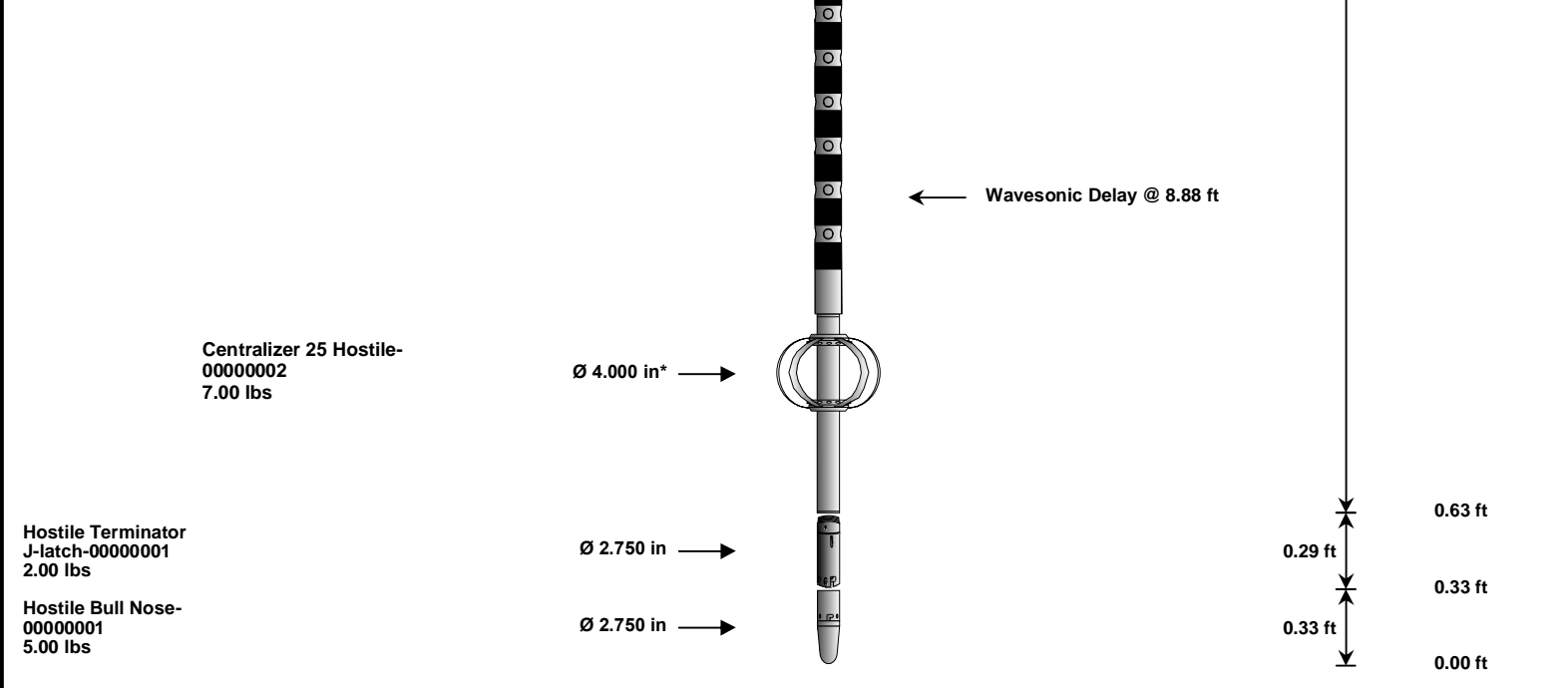
Gamma Ray Calibrator	149.0	153.0	-----	-4.0	+/- 9.00	api
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Data: FEDE_14_15_7_21\0001 H4TG_HWST\IDLE

Date: 22-Feb-15 20:39:26

HALLIBURTON**TOOL STRING DIAGRAM REPORT**

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS-11459015 37.50 lbs		Ø 2.750 in →		← Temperature @ 57.51 ft	3.03 ft	58.54 ft
						55.51 ft
H4TG-A-11232143 221.00 lbs		Ø 2.750 in →			13.77 ft	
				← GammaRay @ 44.77 ft		
						41.74 ft
Centralizer 25 Hostile- 00000001 7.00 lbs		Ø 4.000 in* →				
		Ø 3.120 in →				
HWST-12502860 595.00 lbs		Ø 2.750 in →			41.12 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	11459015	37.50	3.03	55.51	300.00
H4TG	Hostile Quad Telemetry Gamma Sub	11232143	221.00	13.77	41.74	60.00
HWST	Hostile Wave Sonic Dipole Tool - 25K PSI	12502860	595.00	41.12	0.63	30.00
OBCEN	Centralizer - 25 in. Hostile Overbody	00000002	7.00	2.08 *	3.22	300.00
OBCEN	Centralizer - 25 in. Hostile Overbody	00000001	7.00	2.08 *	37.52	300.00
HTJLATCH	Hostile Terminator J-latch	00000001	2.00	0.29	0.33	200.00
BLNS	Bull Nose	00000001	5.00	0.33	0.00	300.00
Total			874.50	58.54		
* Not included in Total Length and Length Accumulation.						
Data: FEDE_14_15_7_21\0001 H4TG_HWST\002 22-Feb-15 19:22 Up 13573.0f					Date: 22-Feb-15 20:37:37	

COMPANY	COACHMAN ENERGY OPERATING, LLC.		
WELL	FEDERAL 14-15-7-21		
FIELD	KOKOPELLI		
COUNTY	GARFIELD	STATE	CO
HALLIBURTON		FILED PRINT WAVE SONIC	