

HSM-01A

SonicScope

Quadrupole Shear Processing QC Plot

*A Mark of Schlumberger

Using the following logs: SonicScope, NeoScope

COMPANY: IODP
 WELL: HSM-01A
 FIELD: Joides Resolution
 COUNTRY: New Zealand

Date Logged: 25-Dec-2017 Date Processed: 30-Dec-2017

Surface Location Longitude: 178° 36' 51.24" E Latitude: 38° 43' 38.22" S
 Elevations: DF: 36.09 m GI: -3287.4 m

FOLD HERE: The well name, location and borehole reference data were furnished by the customer.

Any interpretation, research, analysis, data, results, estimates, or recommendation furnished with the services or otherwise communicated by Schlumberger to the customer at any time in connection with the services are opinions based on inferences from measurements, empirical relationships, and/or assumptions; which, inferences, empirical relationships and/or assumptions are not infallible and with respect to which professionals in the industry may differ. Accordingly, Schlumberger cannot and does not warrant the accuracy, correctness, or completeness of any such interpretation, research, analysis, data, results, estimates, or recommendation. The customer acknowledges that it is accepting the services "as is," that Schlumberger makes no representation or warranty, express or implied, of any kind or description in respect thereof, and that such services are delivered with the explicit understanding and agreement that any action taken based on the services received shall be at its own risk and responsibility, and no claim shall be made against Schlumberger as a consequence thereof.

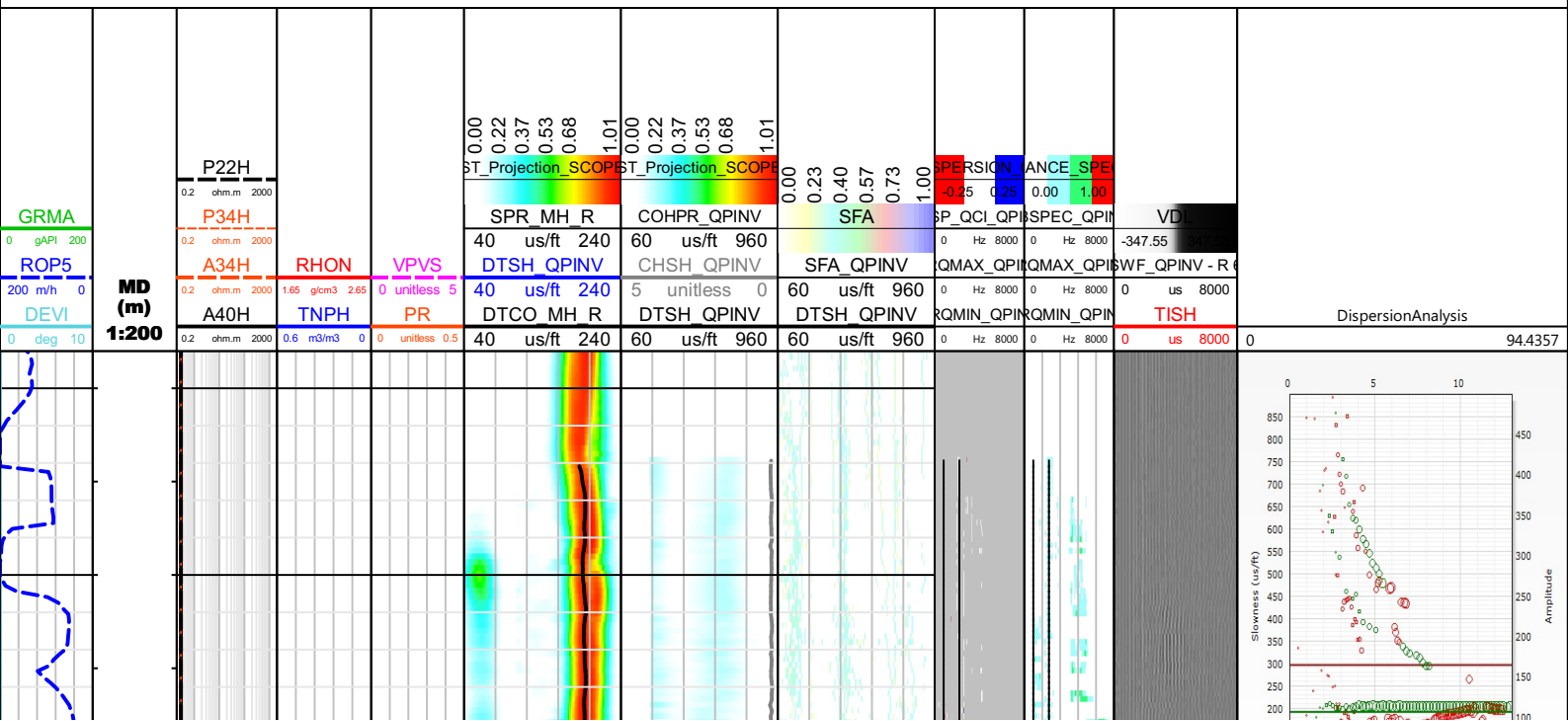
Svc. Order #:	Techlog Vers: 2017.2	Analyst P. Bhuyan	Process Date: 30-Dec-2017
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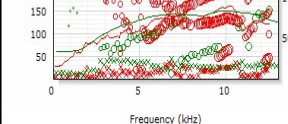
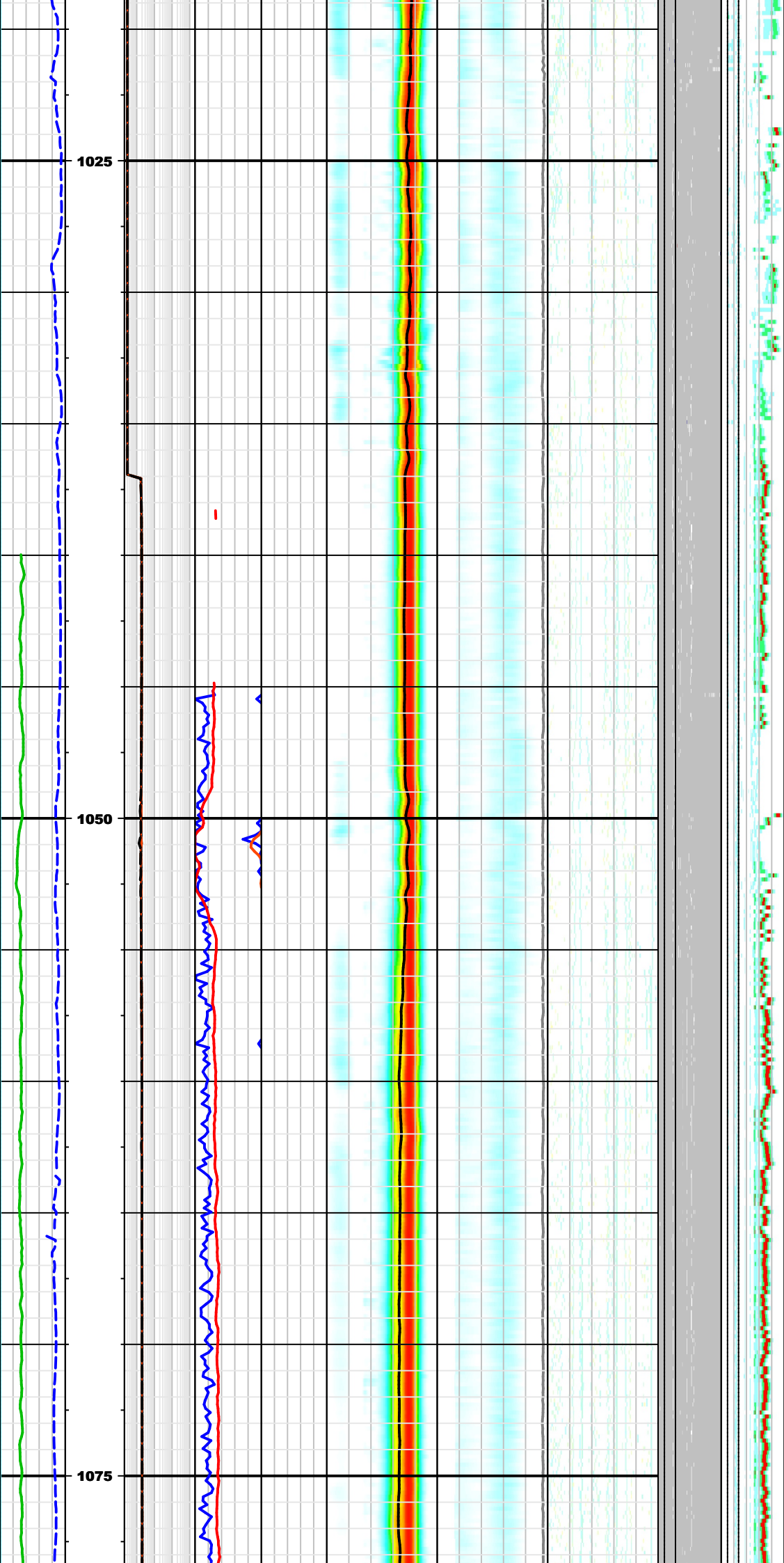
Mud and Borehole Measurements:		
Casing Size:	BHT : 7 degC	Bit Size: 8.5 in
Casing ID:	Type Fluid in Hole: Sea Water	
Casing Weight:	Mud density: 1.03 gm/cc	

Remarks:
 Quadrupole waveform is processed to get formation shear arrival.
 Data might be affected due to borehole condition.

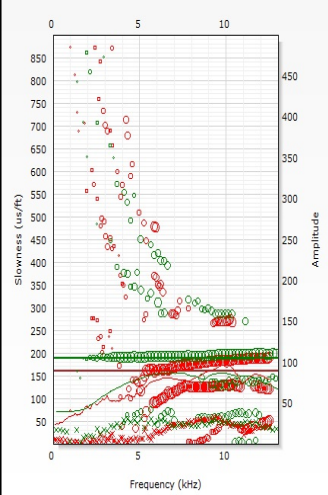
Processing parameters summary

Quadrupole inversion		
Binning option: Yes	Bin width: 1000 Hz	Caliper: 8.5 in
Compressional slowness: DTSH_MH_M57_R_1_RUN2_2 us/ft	Window move out (Shear DT): DTSH_QPND_M57_R_4_RUN3_2 us/ft	Leaky-Q filtering: Yes
Filter band high for inversion: 2200 Hz	Filter band high for filtered waveform: 5000 Hz	Filter band low for inversion: 800 Hz
Filter band low for filtered waveform: 0 Hz	Filter type: Static filter	Formation type: Very slow
Inversion type: 2-Parameters	Monopole high ST Projection: SPR_MH_M57_R_1_RUN2_2 unitless	Mud slowness: 200 us/ft
Mud density: 8.599999 lbm/gal	Mud type: WEM	Multislot NRSAs: 7
Max frequency for SFA: 4000 Hz	Min frequency for SFA: 0 Hz	Slowness lower limit: 60 us/ft
Slowness upper limit: 960 us/ft	Waveform length: 512	Max frequency for TKO: 12000 Hz
Min frequency for TKO: 0 Hz	Model order: 3	Matching tolerance: 50
Waveform: WFA_QPT	Reference receiver: 6	Receiver selection: R1;R2;R3;R4;R5;R6;R7;R8;R9;R10;R11;R12
Processing window start: 0 us	Processing window width: 10000 us	

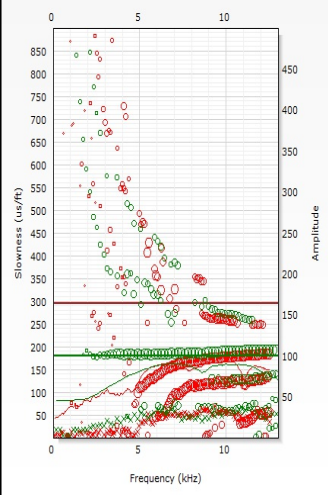




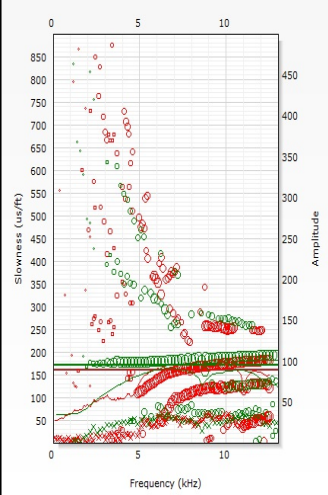
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1030.02 m



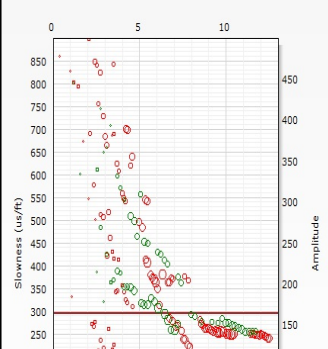
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1045.01 m

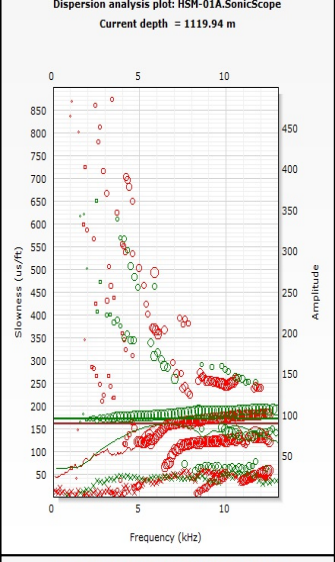
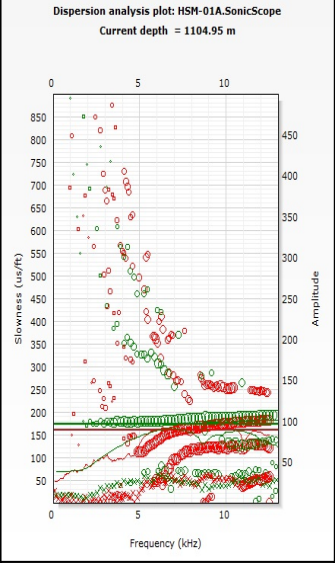
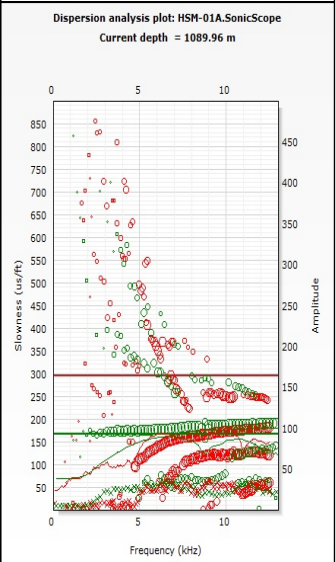
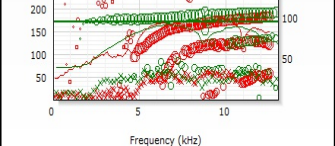
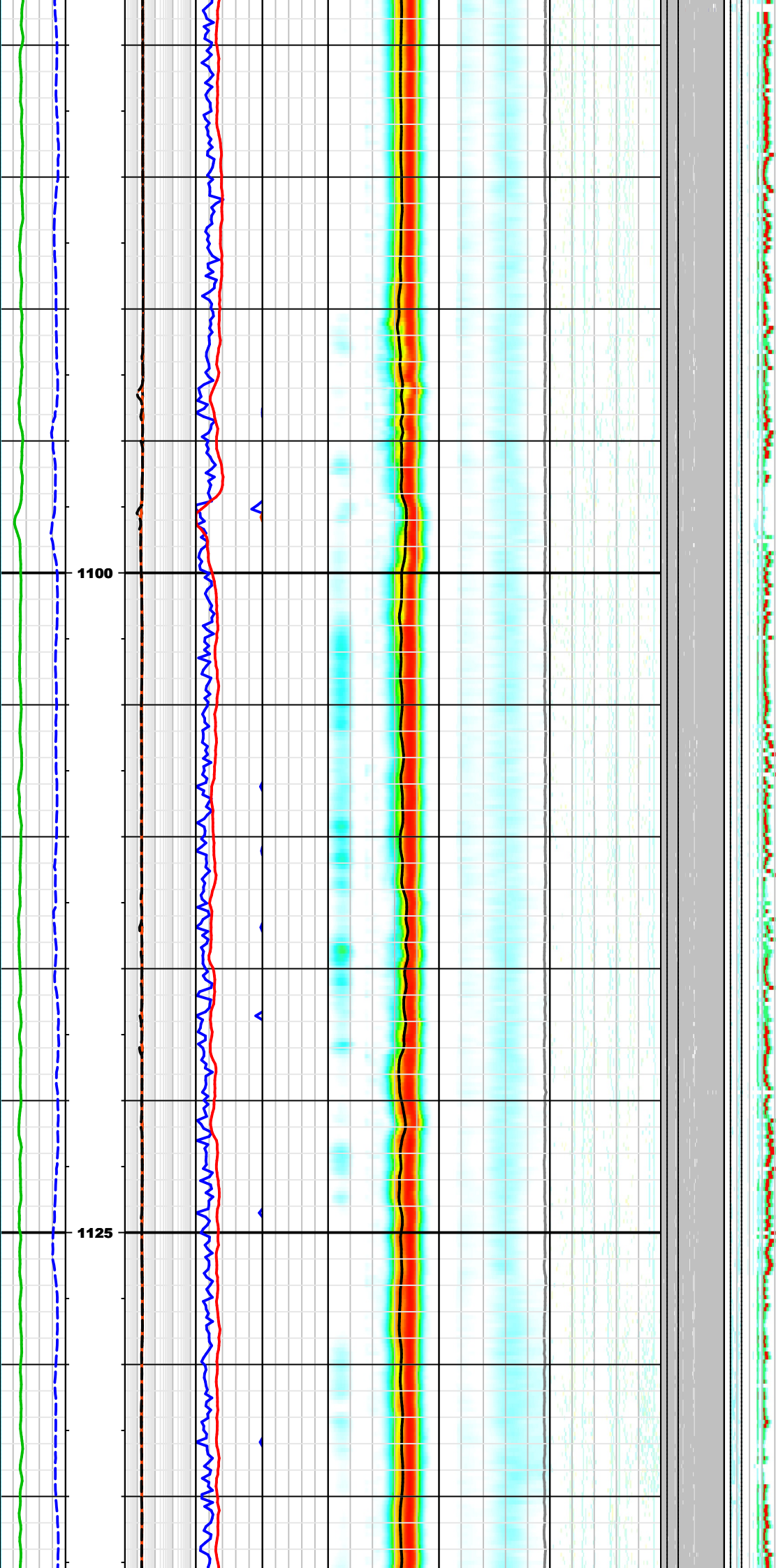


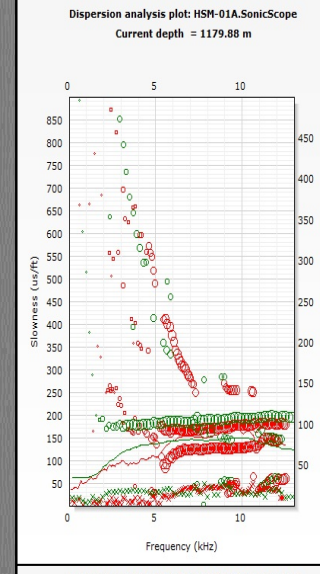
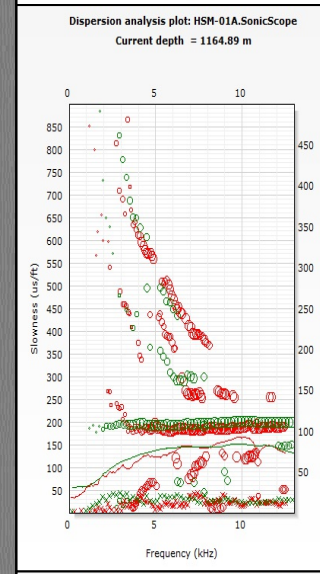
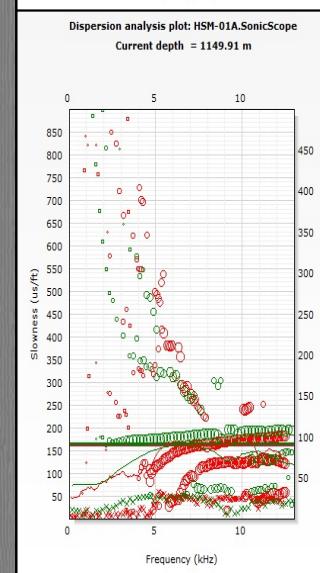
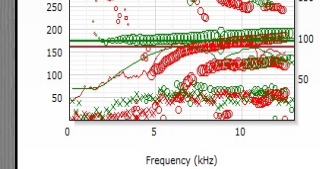
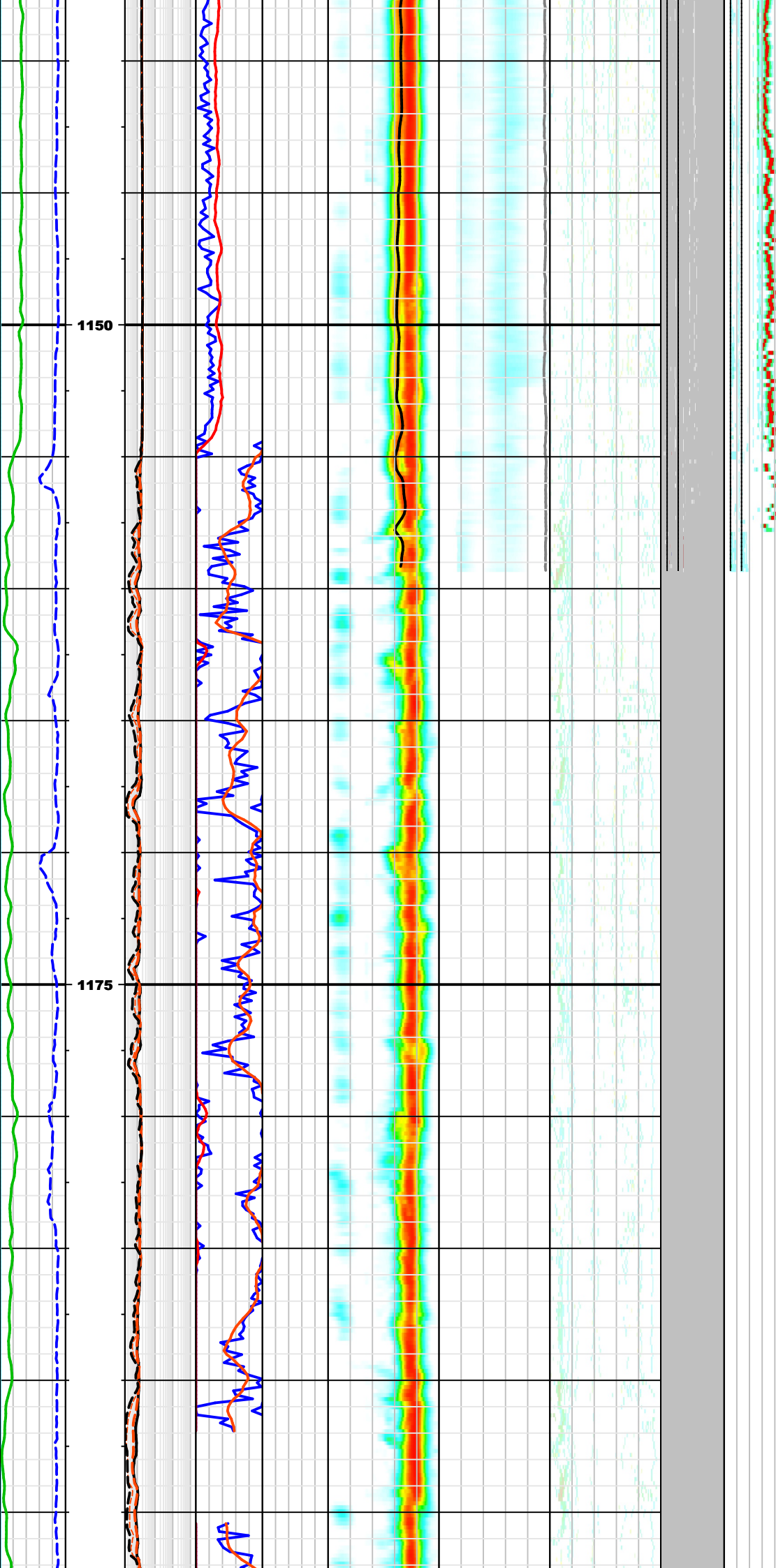
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1059.99 m

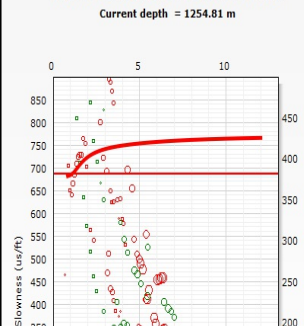
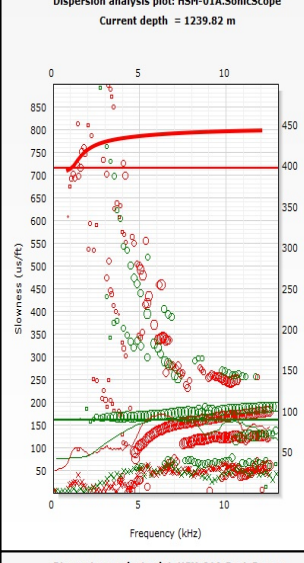
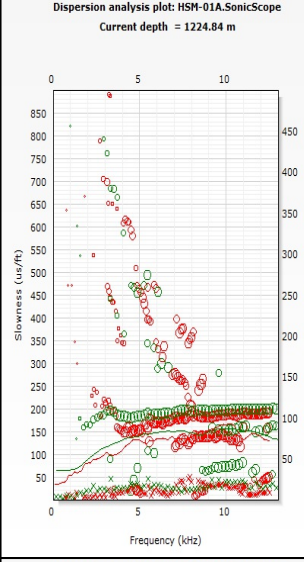
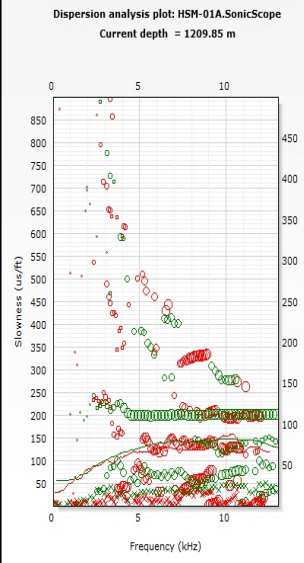
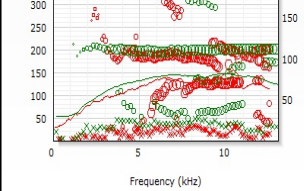
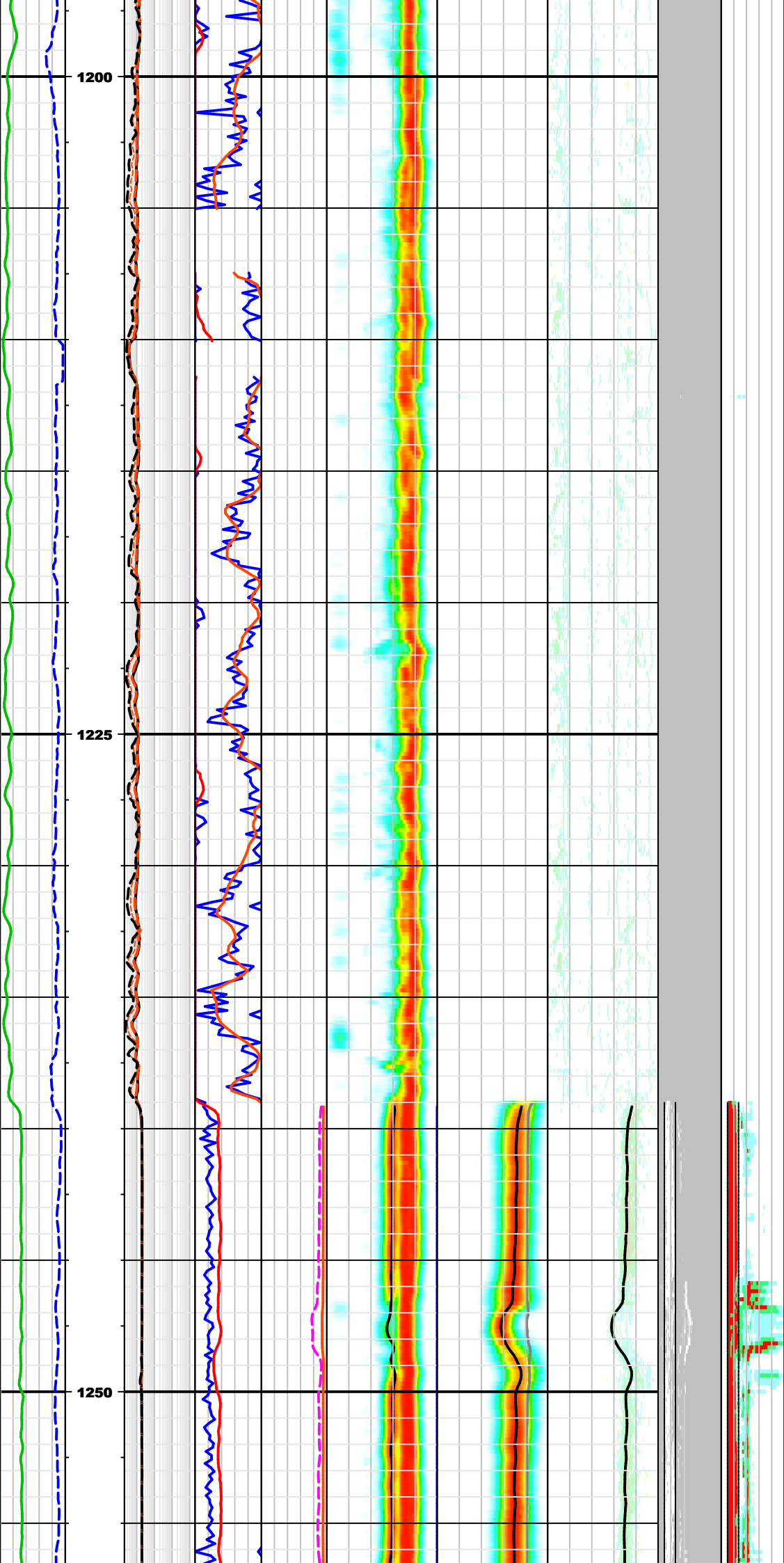


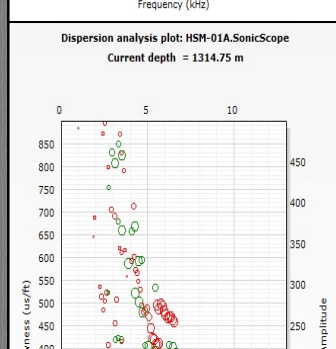
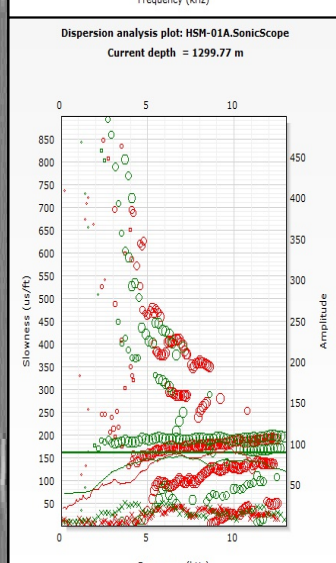
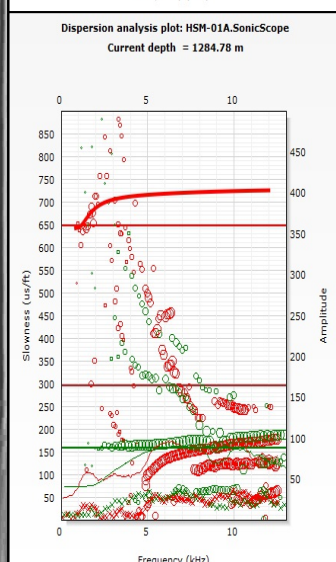
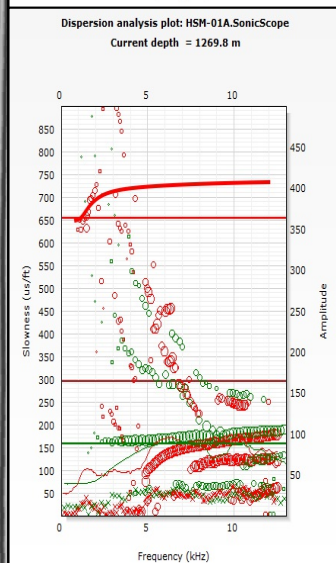
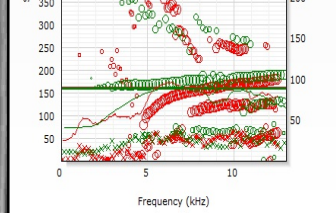
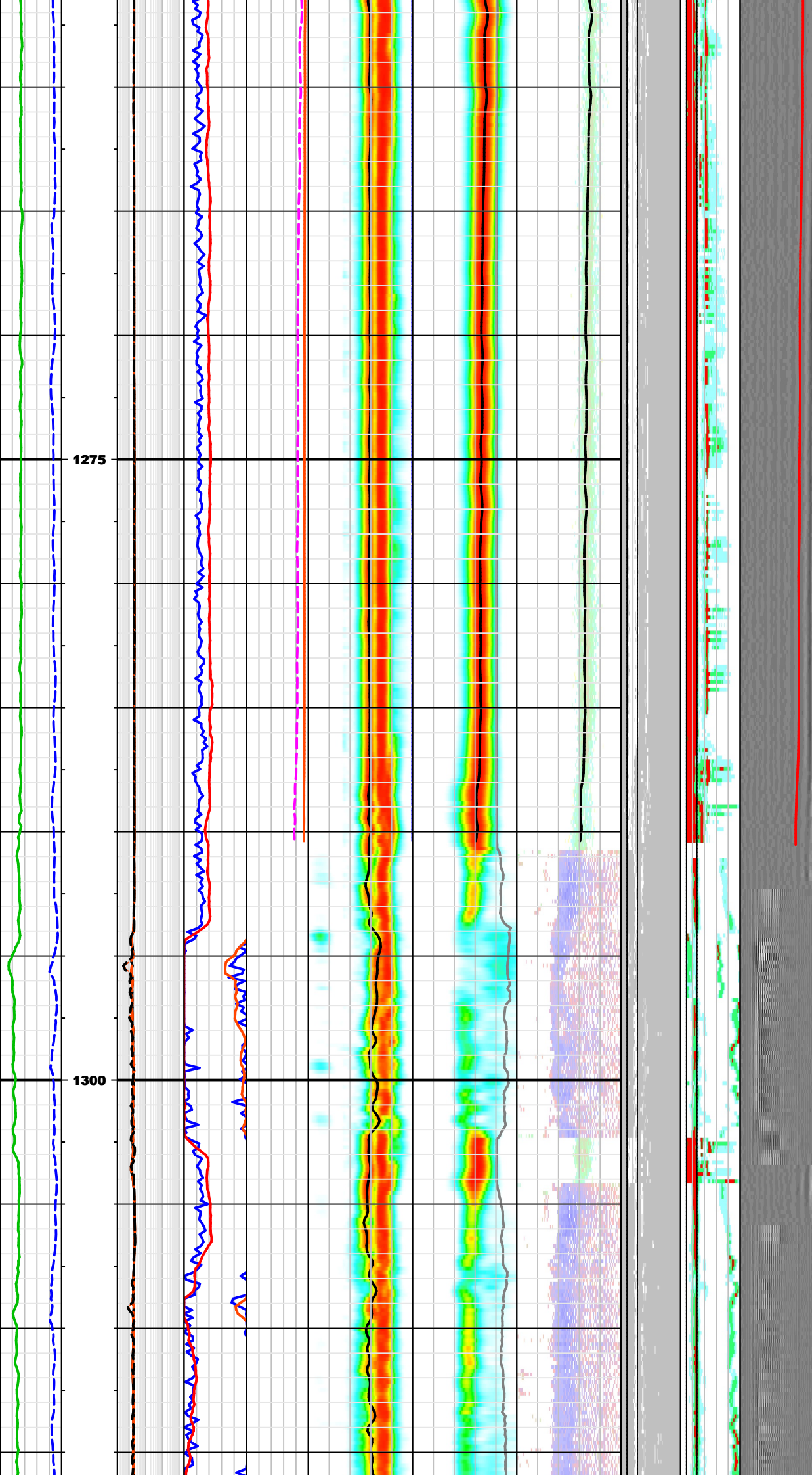
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1074.98 m

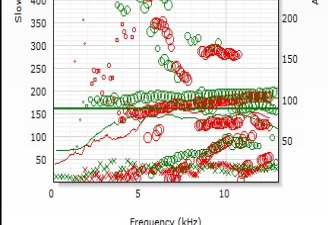
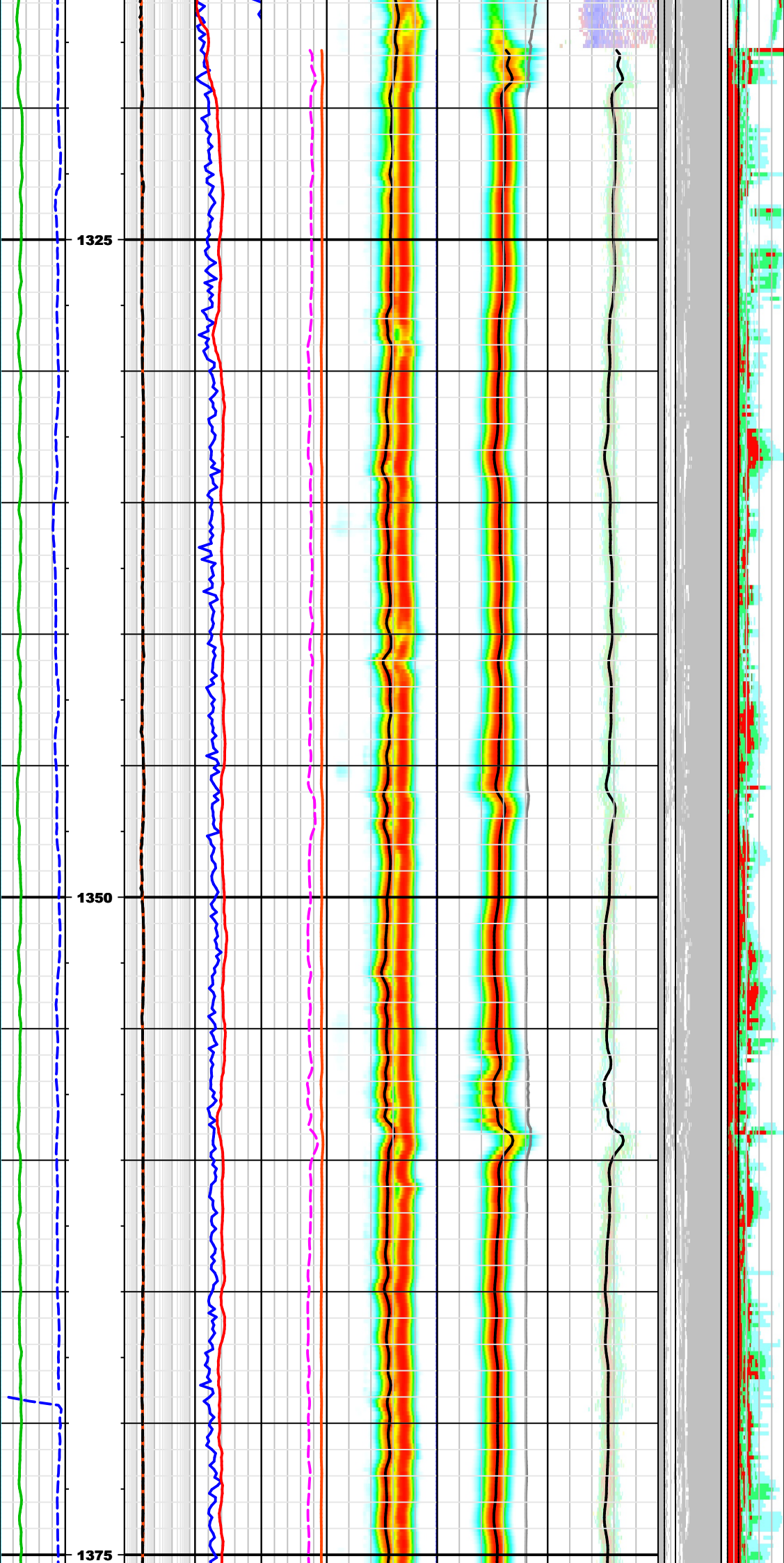




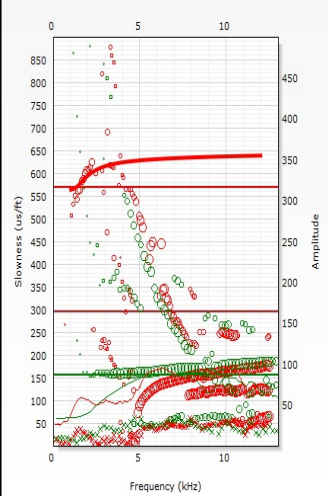




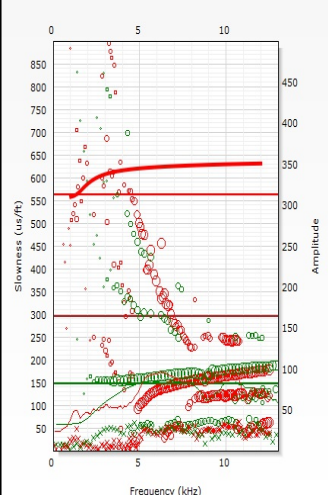




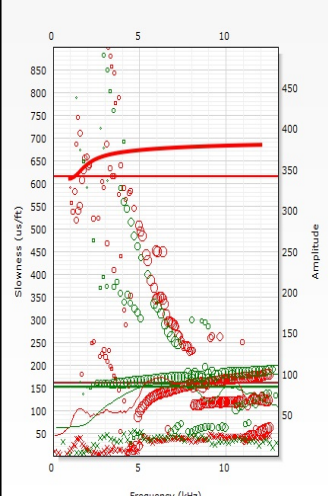
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1329.74 m



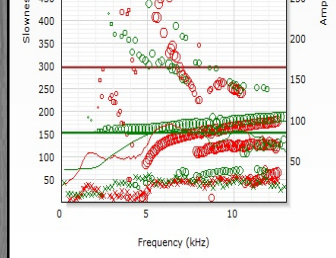
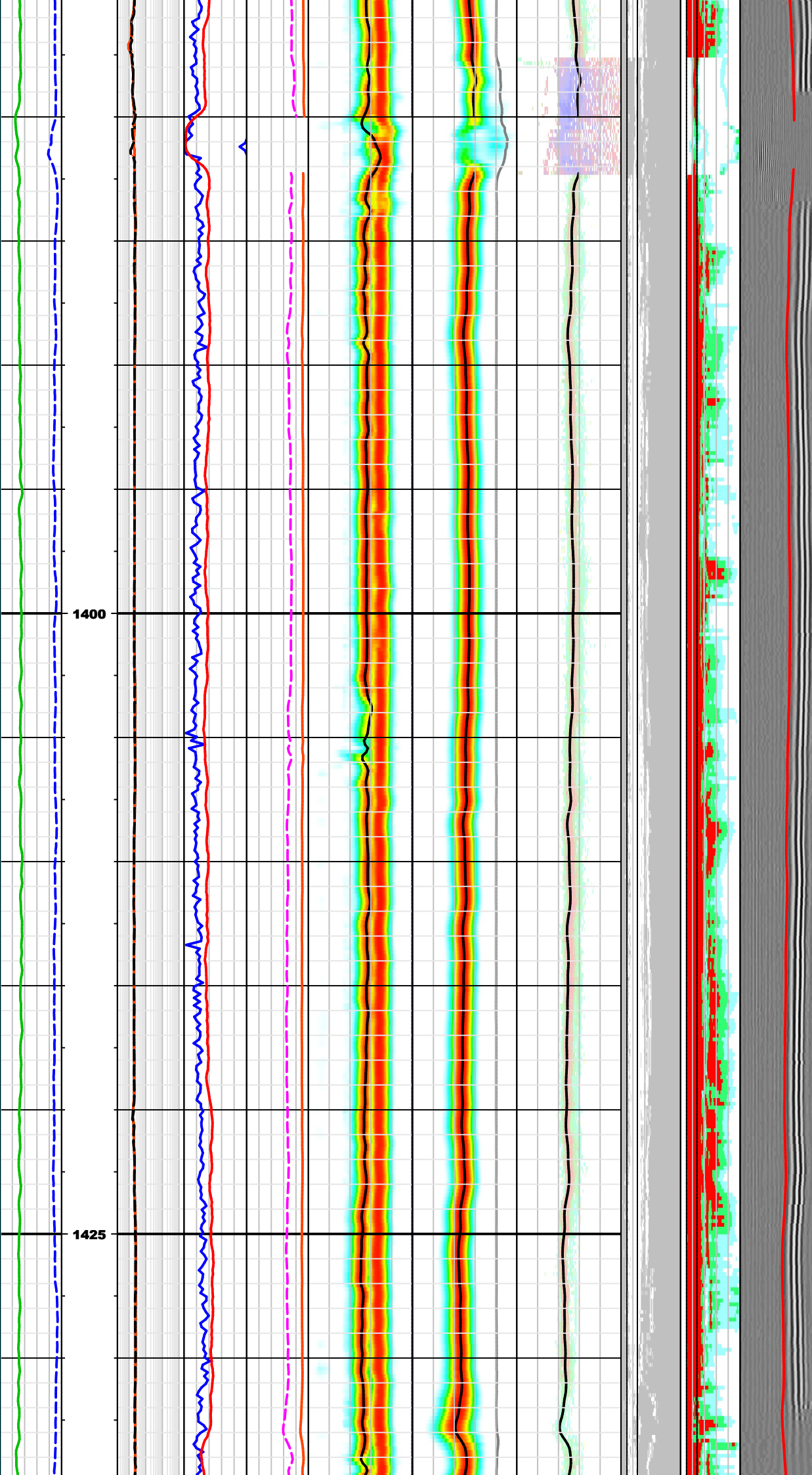
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1344.73 m



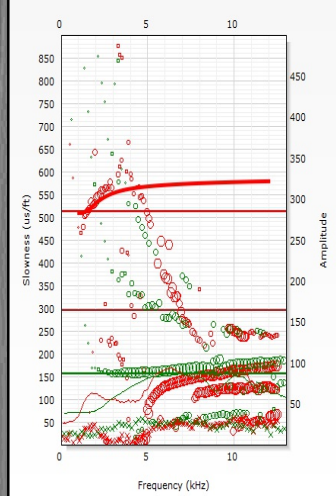
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1359.71 m



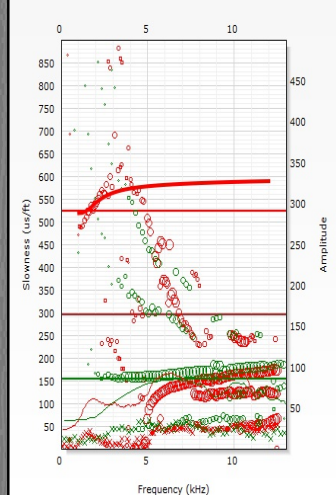
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1374.7 m



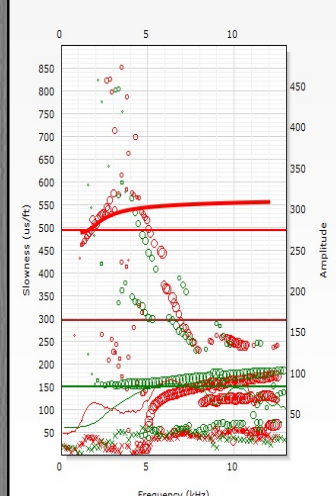
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1389.68 m



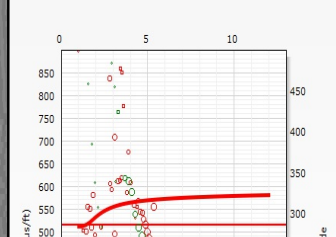
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1404.67 m



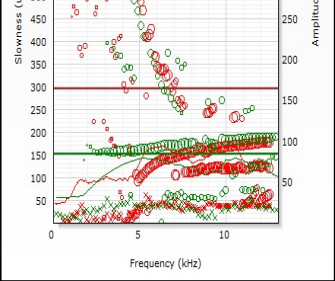
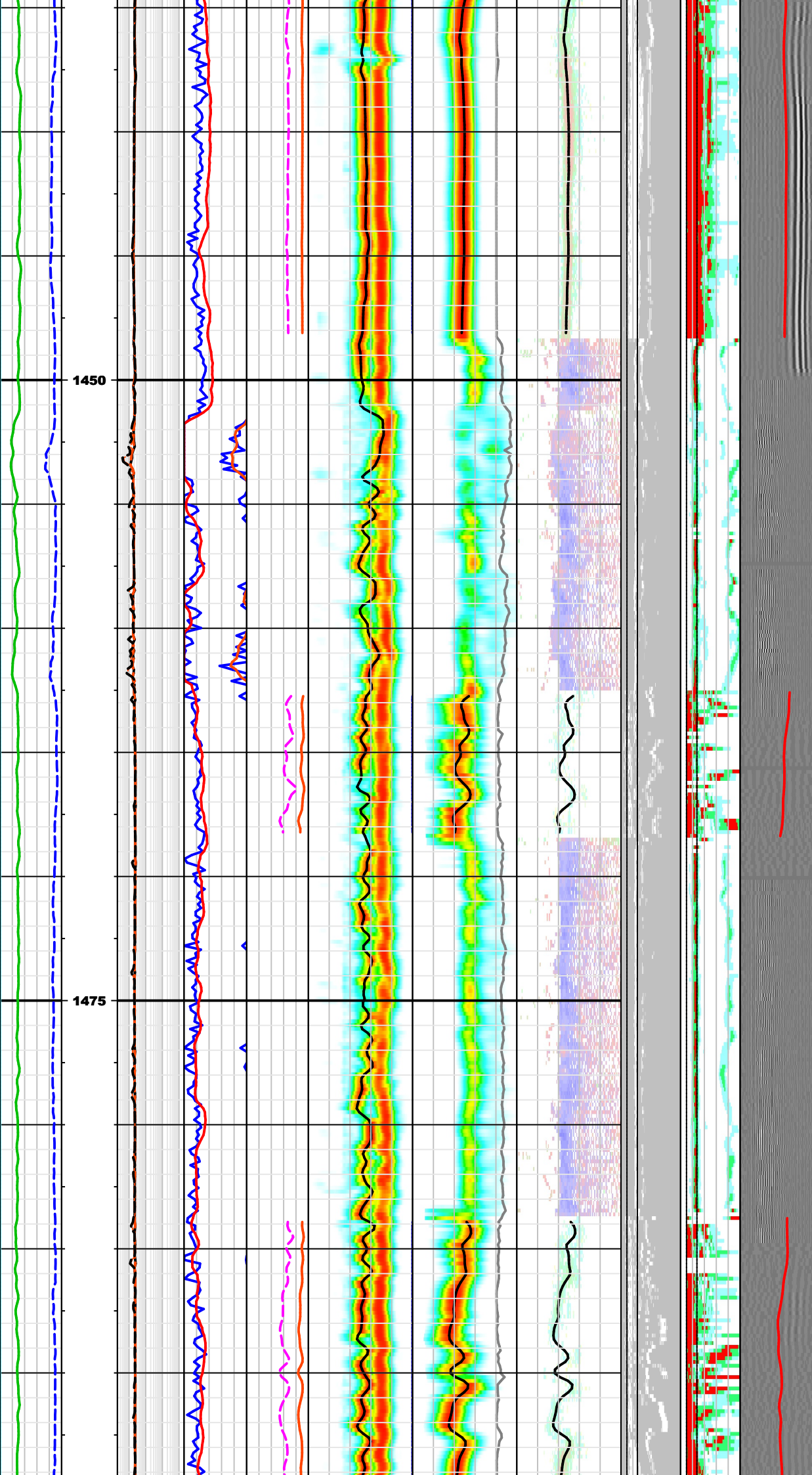
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1419.66 m



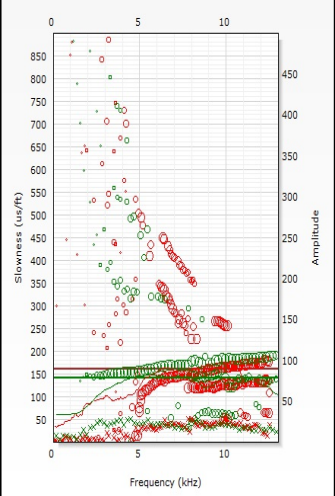
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1434.64 m



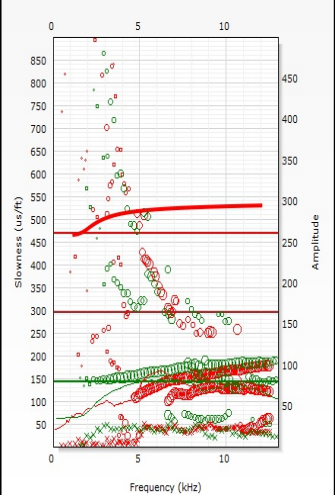
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1434.64 m



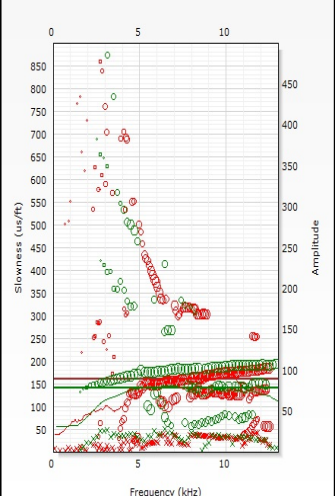
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1449.63 m



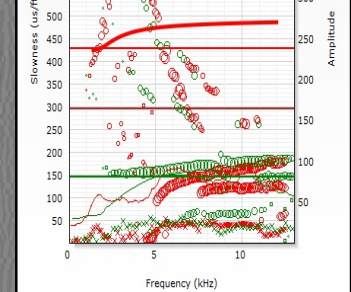
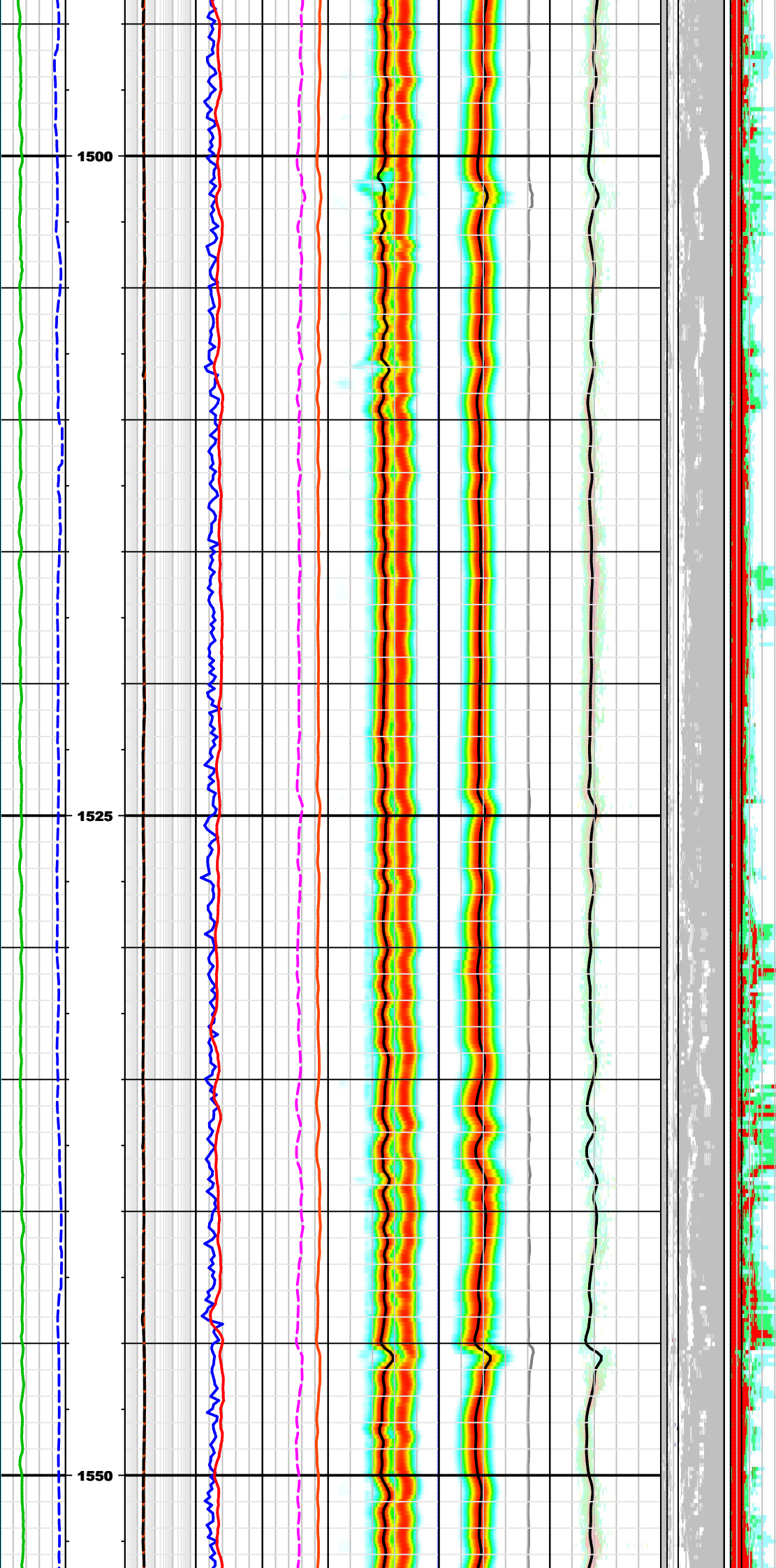
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1464.61 m



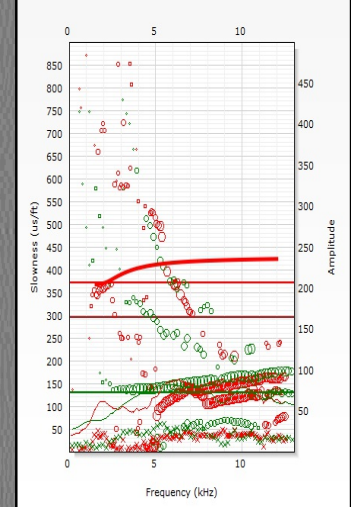
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1479.6 m



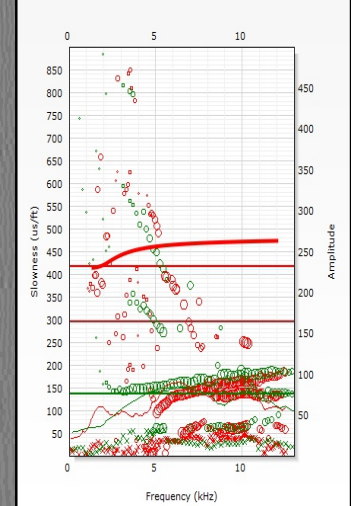
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1494.59 m



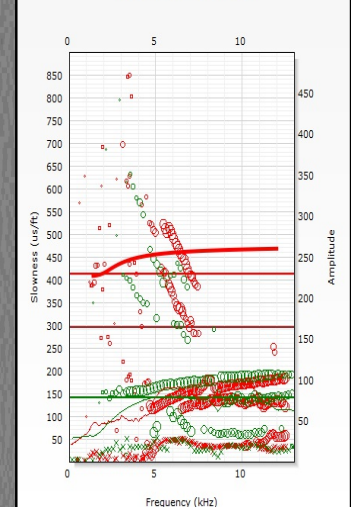
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1509.57 m



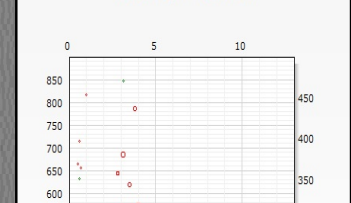
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1524.56 m

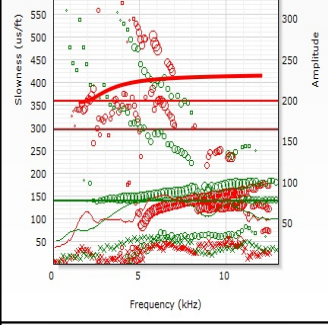
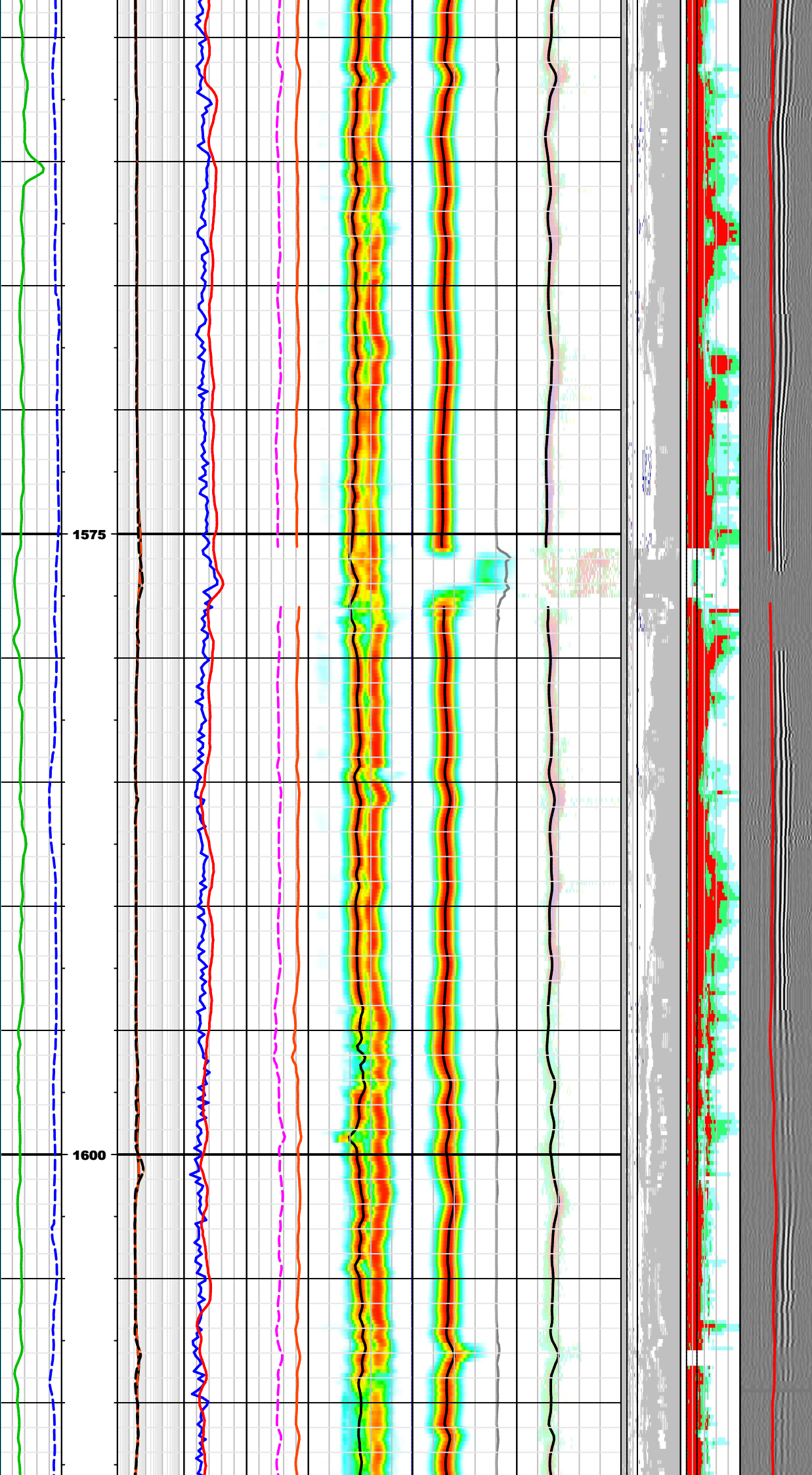


Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1539.54 m

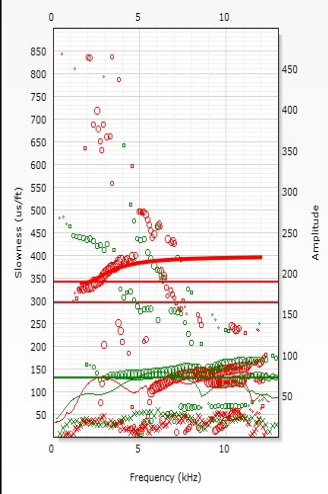


Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1554.53 m

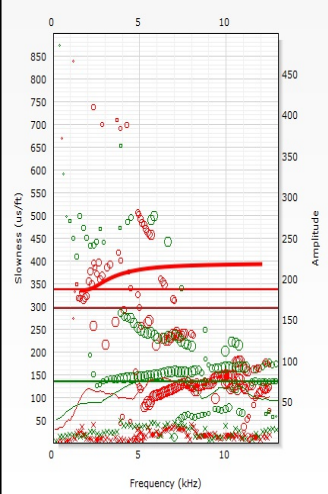




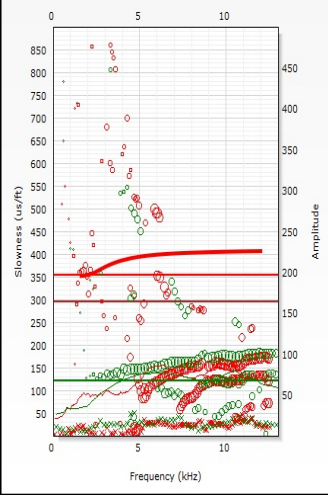
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1569.52 m



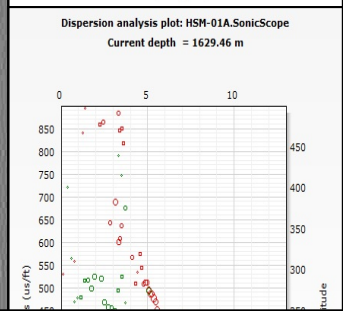
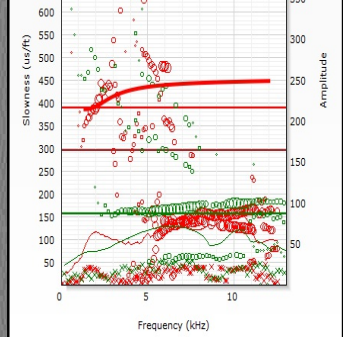
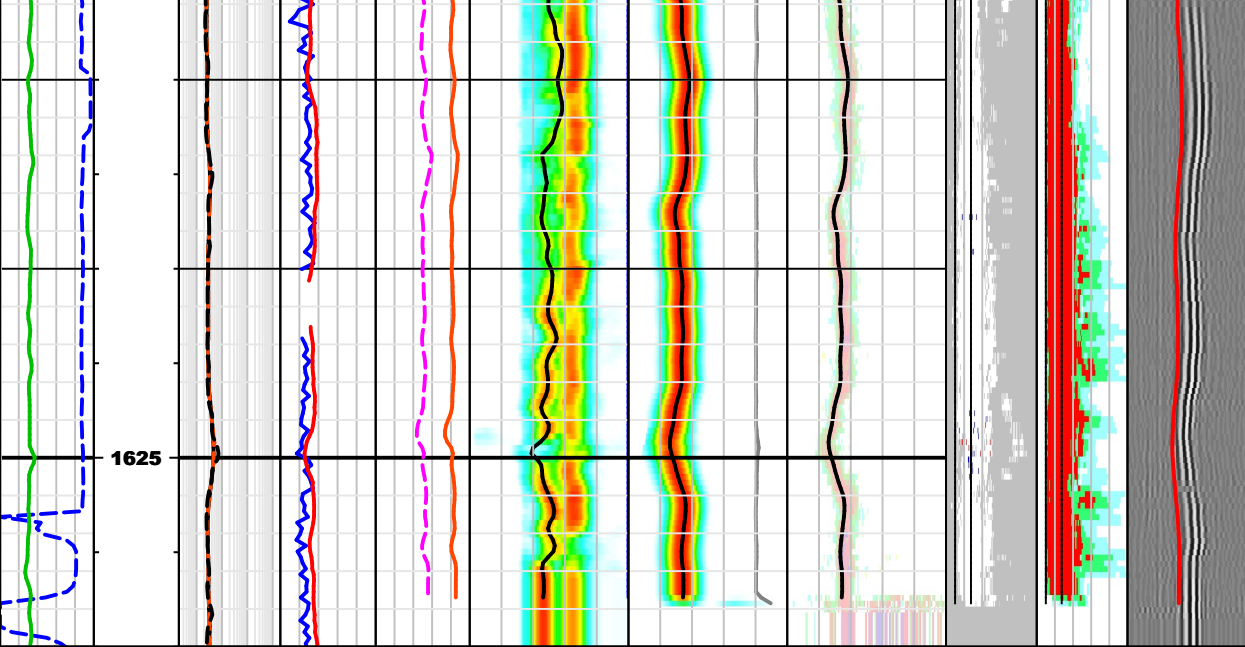
Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1584.5 m



Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1599.49 m



Dispersion analysis plot: HSM-01A.SonicScope
Current depth = 1614.47 m



MD (m) 1:200	P22H <small>0.2 ohm.m 2000</small>	ST_Projection_SCOPE <small>0.00 0.22 0.37 0.53 0.68 1.01</small>	ST_Projection_SCOPE <small>0.00 0.22 0.37 0.53 0.68 1.01</small>	SPR_MH_R <small>40 us/ft 240</small>	COHPR_QPINV <small>60 us/ft 960</small>	SFA <small>0.00 0.23 0.40 0.57 0.73 1.00</small>	SP_QCL_QPINV <small>0 Hz 8000</small>	SPECTIONANCE_SPE <small>0.00 1.00</small>	VD <small>-347.55</small>
	P34H <small>0.2 ohm.m 2000</small>	RHON <small>1.65 g/cm3 2.65</small>	VPVS <small>0 unitless 5</small>	DTSH_QPINV <small>40 us/ft 240</small>	CHSH_QPINV <small>5 unitless 0</small>	SFA_QPINV <small>60 us/ft 960</small>	QMAX_QPINV <small>0 Hz 8000</small>	QMAX_QPINV <small>0 Hz 8000</small>	WF_QPINV - R <small>0 us 8000</small>
	A34H <small>0.2 ohm.m 2000</small>	TNPH <small>0.6 m3/m3 0</small>	PR <small>0 unitless 0.5</small>	DTCO_MH_R <small>40 us/ft 240</small>	DTSH_QPINV <small>60 us/ft 960</small>	DTSH_QPINV <small>60 us/ft 960</small>	RQMIN_QPINV <small>0 Hz 8000</small>	RQMIN_QPINV <small>0 Hz 8000</small>	TISH <small>0 us 8000</small>
	GRMA <small>0 gAPI 200</small>	ROP5 <small>200 m/h 0</small>	DEVI <small>0 deg 10</small>	40 us/ft 240	60 us/ft 960	60 us/ft 960	0 Hz 8000	0 Hz 8000	0 us 8000

DispersionAnalysis 94.4357

Company: IODP
 Well: HSM-01A
 Field: Joides Resolution
 Country: New Zealand

Date Logged: 25-Dec-2017 Date Processed: 30-Dec-2017
 Well Location: Longitude: 178° 36' 51.24" E Latitude: 38° 43' 38.22" S

Elevations: DF: 36.09m GL: -3287.4m

