

Company: LAMONT DOHERTY EARTH OBSERVATORY

Well: TW #3

Field: WILDCAT

County: ROCKLAND State: NEW YORK

## DRILLERS QUICK LOOK

County:	ROCKLAND	State:	NEW YORK
Well:	TW #3		
Field:	WILDCAT		
Location:	LAT: 41.00398 LONG: -73.91268	Elev.:	K.B. 380.00 ft G.L. 380.00 ft D.F. 380.00 ft
Well:	TW #3		
Company:	LAMONT DOHERTY EARTH OBSERVATORY		
Location:	Permanent Datum: _____ Log Measured From: _____ Drilling Measured From: _____	Ground Level _____ Ground Level _____ Ground Level _____	Elev.: _____ 0.00 ft above Perm. Datum
API Serial No.	31-087-27015-00-00	Section:	1
		Township:	ORANGETOWN
		Quadrangle	NYACK
Logging Date	02-Oct-2013		
Run Number	1B		
Depth Driller	1500.00 ft		
Schlumberger Depth	1500.00 ft		
Bottom Log Interval	1441.00 ft		
Top Log Interval	20.00 ft		
Casing Driller Size @ Depth	7 in @ 23.00 ft		
Casing Schlumberger	20 ft		
Bit Size	6.25 in		
Type Fluid In Hole	Air		
Density	0.1 lbm/gal		
Viscosity			
PH			
Source of Sample	Active Tank		
RM @ Meas Temp	500 ohm.m @ 68 degF		
RMF @ Meas Temp	NAN ohm.m @ 68 degF		
RMC @ Meas Temp			
Source RMC	Calculated	Calculated	
RM @ BHT	553.28 @ 60.8	NAN @ 60.8	
Max Recorded Temperatures	60.8 degF		
Circulation Stopped	Time		
Logger on Bottom	Time		
Unit Number	Location:	377	15:50:27
Recorded By		TIMOTHY ZOTARA	BRADFORD
Witnessed By		NICK MALKIEWICZ / DAN COLLINS	

## Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

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## Borehole Size/Casing/Tubing Record

Bit						
Bit Size ( in )	8.75	6.25				
Top Driller ( ft )	0	23				
Top Logger ( ft )	0	23				
Bottom Driller ( ft )	23	1500				
Bottom Logger ( ft )	23	1500				
Casing						
Size ( in )	7					
Weight ( lbm/ft )	18.01					
Inner Diameter ( in )	6.512					
Top Driller ( ft )	0					
Top Logger ( ft )	0					
Bottom Driller ( ft )	23					
Bottom Logger ( ft )	20					

## Operational Run Summary

Parameter ( unit )	1B					
Date Log Started	02-Oct-2013					
Time Log Started	13:59:40					
Date Log Finished	02-Oct-2013					
Time Log Finished	17:01:39					
Top Log Interval ( ft )	20.00					
Bottom Log Interval ( ft )	1441.00					
Total Depth ( ft )	1500.00					
Max Hole Deviation ( deg )	4.99					
Azimuth of Max Deviation ( deg )	98.73					
Bit Size ( in )	6.250					
Logging Unit Number	377					
Logging Unit Location	BRADFORD					
Recorded By	TIMOTHY ZOTARA					
Witnessed By	NICK MALKEWICZ / DAN COLLINS					
Service Order Number	BXW0-00330					

## Borehole Fluids

Parameter( unit )	1B					
Fluid Type	Zoned					

Max Recorded Temperatures ( degF )	60.8				
Source of Sample	Active Tank				
Salinity ( ppm )	0				
Density ( lbm/gal )	Zoned				
Funnel Viscosity ( s )					
Fluid Loss ( cm3 )					
PH					
Date/Time Circulation Stopped	NaN				
Date Logger on Bottom	02-Oct-2013				
Time Logger on Bottom	15:50:27				
Source RMF	Calculated				
RMC	Calculated				
RM @ Meas Temp ( ohm.m@degF )	N/A				
RMF @ Meas Temp ( ohm.m@degF )	N/A				
RMC @ Meas Temp ( ohm.m@degF )	N/A				
RM @ BHT ( ohm.m@degF )	N/A				
RMF @ BHT ( ohm.m@degF )	N/A				
RMC @ BHT ( ohm.m@degF )	N/A				
Total Solid ( % )					
High Gravity Solids ( % )					

## Zoned Borehole Fluids

1B

Parameter	Value	Start
Fluid Type	Gas - Air	56.52
Fluid Type	Water - Fresh Water	350
Density	0.1	56.52
Density	8.4	350

## Remarks and Equipment Summary

1B: Toolstring				1B: Remarks
Equip name LEH-QT LEH-QT	Length 69.68	MP name	Offset	THANK YOU FOR CHOOSING SCHLUMBERGER
				TOOLS RUN AS PER TOOLSKETCH, W/ILE BOWSPRING
				ALL WELLSITE DATA AS PER SLB CARBON SERVICES REP
EDTC-B:8298 EDTH-B:8288 EDTG-A EDTC-B:8298	66.76			TOOLS ZEROED @ HEAD @ GL
		CTEM	63.26	NO MUD SAMPLE AVAILABLE, FLEV @ 350', 8.4LBS/GAL FRESH WATER. PARAMETERS ZONED @ 350', WATER BEL
		ACCZ	0.00	
		HV	0.00	NO MUD REPORT AVAILABLE, FRESH WATER
		Gamma Ray	61.39	
		TelStatus	60.26	WELL FLUID NOT CIRCULATED. HEADER SHOWS AIR HOLE, DUE TO AIR @ TOP OF WELL, MW HEADER LIMITATION, NO SAMPLE TAKEN OF FLUID
PPC-B:8239 PPC-B:8239	60.26			SSCAN RUN IN STD MODE
		PPC-B Calipers	59.12	VERTICAL CASING CHECK NOT PERFORMED, CD TOO SHALLOW @ 20'
				PPC CENTERING W/POWER LEVEL 2
				2 CMEZ ON MAXS

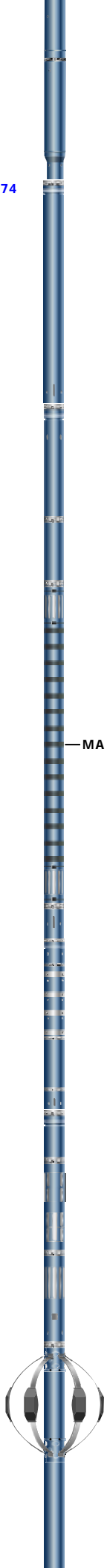
LOGS ON MARKS

GPIT RUN W/ NONMAGS ABOVE/BELOW

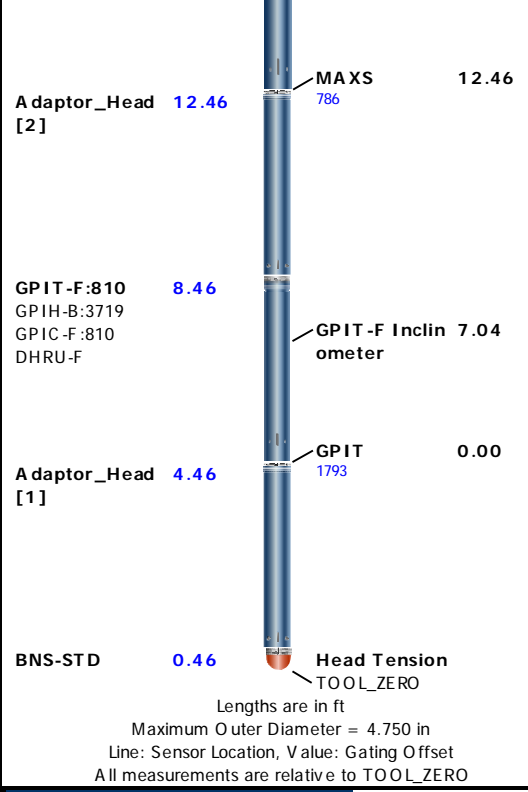
LOGS AQUIRED @ 1400'/HR

PPC HOLE VOLUME COMPUTED FROM  
HD1 / HD2 AREA

**MAST-B:8105** 53.74  
ECH-SF:8101  
MAPC-BA:8101  
MAMS-BA:8105  
MASS-BA:8066  
MAXS-BA:8009



MAMS 38.3



## Depth Summary

<b>Depth Control Parameters</b>	<b>1B</b>		
Conveyance Type	Wireline		
Log Sequence	SUBSEQUENT		
Stretch Correction ( ft )	1.00		
Tool Zero Reference Check at Surface ( ft )	0.50		
Reference Log Date	30-Aug-2010		
Reference Log Name	USGS MFT		
Reference Log Run Number	4		
Rig Type	MAST		
<b>Depth Remark Parameters</b>	<b>1B</b>		
Depth Remark 1	ALL SCHLUMBERGER DEPTH CONTROL POLICIES FOLLOWED		
Depth Remark 2	IDW USED AS PRIMARY DEPTH CONTROL		
Depth Remark 3	DRUM COUNTER USED AS SECONDARY DEPTH CONTROL		
Depth Remark 4	TOOLS ZEROED @ HEAD @ GL		
Depth Remark 5	RUN1 CORRELATED TO REF LOG AS PER CLIENT REQUEST		
<b>Depth Measuring Device</b>	<b>1B</b>		
Type	IDW-B		
Serial Number	6204		
Calibrator Serial Number	33		
Calibration Cable Type	7-39P-LXS		
Wheel Correction 1	1		
Wheel Correction 2	0		
<b>Tension Device</b>	<b>1B</b>		
Type	CMTD-B/A		
Serial Number	2013		
Calibration Date	03-SEP-2013		
Calibrator Serial Number	412906		
Calibration Point	16		

Calibration Points	0		
Calibration RMS	7		
Calibration Peak Error	16		
<b>Logging Cable</b>	<b>1B</b>		
Type	7-39P-LXS		
Serial Number	710017		
Logging Cable Length ( ft )	5500.00		

## Survey Record

<b>Survey Calculation</b>			
Method :	Minimum Radius of Curvature	DLS Method :	Lubinski
North Reference :	True North	Total Correction Formula :	Magnetic Dec

<b>Rig Location</b>			
Latitude :	41.003980 degrees	Longitude :	-73.912680 degrees

<b>Tie In Point</b>					
Measured Depth:	20.00 ft	Inclination:	0.00 deg	Azimuth:	0.00 deg
True Vertical Depth:	20.00 ft	North Displacement:	0.00 ft	East Displacement:	0.00 ft

<b>Survey Quality Index</b>	
9 : Manual	28 : Tie-In Point

<b>Survey Correction Index</b>	
0 : No correction	

<b>Survey Description Index</b>	
0 : Not Flagged Survey	

Seq	MD (ft)	Incl (deg)	Azim (deg)	Course (ft)	TVD (ft)	V Sec (ft)	N/ -S (ft)	E/ -W (ft)	Closure (ft)	at Azim (deg)	DLS deg/100ft	Tool Type	QI	CI	DI
1	20.00	0.00	0.00	----	20.00	0.00	0.00	0.00	0.00	90.00	0.00	TIP	28	0	0
2	64.00	0.17	348.57	44.00	64.00	0.07	0.07	-0.01	0.07	348.57	0.40	GPIT-F	9	0	0
3	94.00	0.09	44.83	30.00	94.00	0.13	0.13	-0.01	0.13	357.50	0.48	GPIT-F	9	0	0
4	124.00	0.34	99.41	30.00	124.00	0.13	0.13	0.10	0.16	37.60	1.00	GPIT-F	9	0	0
5	154.00	0.24	135.02	30.00	154.00	0.07	0.07	0.23	0.23	73.03	0.68	GPIT-F	9	0	0
6	184.00	0.23	88.47	30.00	184.00	0.03	0.03	0.34	0.33	85.15	0.61	GPIT-F	9	0	0
7	214.00	0.16	123.30	30.00	214.00	0.01	0.01	0.43	0.43	89.15	0.44	GPIT-F	9	0	0
8	244.00	0.32	86.41	30.00	244.00	-0.01	-0.01	0.55	0.56	91.24	0.72	GPIT-F	9	0	0
9	274.00	0.51	106.53	30.00	274.00	-0.04	-0.04	0.76	0.75	93.36	0.79	GPIT-F	9	0	0
10	304.00	0.62	107.85	30.00	304.00	-0.13	-0.13	1.05	1.05	97.23	0.37	GPIT-F	9	0	0
11	334.00	0.84	108.18	30.00	333.99	-0.25	-0.25	1.41	1.44	100.11	0.73	GPIT-F	9	0	0
12	364.00	0.78	104.73	30.00	363.99	-0.37	-0.37	1.82	1.87	101.57	0.26	GPIT-F	9	0	0
13	394.00	0.95	105.98	30.00	393.99	-0.49	-0.49	2.26	2.30	102.33	0.55	GPIT-F	9	0	0
14	424.00	1.03	104.83	30.00	423.98	-0.63	-0.63	2.76	2.82	102.88	0.28	GPIT-F	9	0	0
15	454.00	1.19	98.16	30.00	453.98	-0.74	-0.74	3.32	3.41	102.61	0.68	GPIT-F	9	0	0
16	484.00	1.37	98.39	30.00	483.97	-0.84	-0.84	3.99	4.07	101.90	0.61	GPIT-F	9	0	0
17	514.00	1.11	104.62	30.00	513.96	-0.97	-0.97	4.62	4.72	101.80	0.97	GPIT-F	9	0	0
18	544.00	1.61	101.35	30.00	543.95	-1.12	-1.12	5.32	5.45	101.92	1.67	GPIT-F	9	0	0
19	574.00	1.42	98.30	30.00	573.94	-1.26	-1.26	6.10	6.23	101.66	0.67	GPIT-F	9	0	0
20	604.00	1.75	98.56	30.00	603.93	-1.38	-1.38	6.92	7.05	101.28	1.10	GPIT-F	9	0	0
21	634.00	1.79	90.65	30.00	633.92	-1.45	-1.45	7.84	7.97	100.50	0.83	GPIT-F	9	0	0
22	664.00	1.79	98.29	30.00	663.90	-1.53	-1.53	8.78	8.89	99.87	0.79	GPIT-F	9	0	0
23	694.00	1.84	95.04	30.00	693.89	-1.64	-1.64	9.72	9.84	99.56	0.39	GPIT-F	9	0	0
24	724.00	1.72	98.30	30.00	723.87	-1.74	-1.74	10.64	10.79	99.31	0.53	GPIT-F	9	0	0
25	754.00	2.02	102.49	30.00	753.86	-1.92	-1.92	11.61	11.78	99.41	1.09	GPIT-F	9	0	0
26	784.00	2.26	112.58	30.00	783.84	-2.26	-2.26	12.67	12.86	100.14	1.48	GPIT-F	9	0	0
27	814.00	2.43	105.96	30.00	813.81	-2.67	-2.67	13.82	14.07	100.92	1.08	GPIT-F	9	0	0
28	844.00	2.54	97.72	30.00	843.78	-2.93	-2.93	15.10	15.39	100.99	1.24	GPIT-F	9	0	0
29	874.00	2.56	93.22	30.00	873.75	-3.06	-3.06	16.42	16.70	100.55	0.67	GPIT-F	9	0	0
30	904.00	2.70	98.40	30.00	903.72	-3.20	-3.20	17.79	18.08	100.19	0.92	GPIT-F	9	0	0

31	934.00	3.30	97.42	30.00	933.68	-3.41	-3.41	19.35	19.65	100.01	2.01	GPIT-F	9	0	0
32	964.00	3.30	97.95	30.00	963.63	-3.65	-3.65	21.07	21.39	99.82	0.10	GPIT-F	9	0	0
33	994.00	3.79	97.67	30.00	993.57	-3.90	-3.90	22.90	23.23	99.66	1.63	GPIT-F	9	0	0
34	1024.00	4.33	95.66	30.00	1023.50	-4.14	-4.14	25.01	25.36	99.40	1.85	GPIT-F	9	0	0
35	1054.00	4.23	96.79	30.00	1053.41	-4.38	-4.38	27.24	27.59	99.14	0.43	GPIT-F	9	0	0
36	1084.00	4.32	100.31	30.00	1083.33	-4.72	-4.72	29.45	29.82	99.10	0.92	GPIT-F	9	0	0
37	1114.00	4.57	99.94	30.00	1113.24	-5.12	-5.12	31.74	32.15	99.17	0.83	GPIT-F	9	0	0
38	1144.00	4.87	98.51	30.00	1143.14	-5.52	-5.52	34.17	34.61	99.18	1.09	GPIT-F	9	0	0
39	1174.00	4.99	98.73	30.00	1173.03	-5.91	-5.91	36.72	37.20	99.14	0.40	GPIT-F	9	0	0
40	1204.00	4.70	101.63	30.00	1202.92	-6.35	-6.35	39.21	39.73	99.20	1.27	GPIT-F	9	0	0
41	1234.00	4.68	103.36	30.00	1232.82	-6.88	-6.88	41.60	42.16	99.39	0.47	GPIT-F	9	0	0
42	1264.00	4.54	103.74	30.00	1262.72	-7.45	-7.45	43.95	44.59	99.62	0.50	GPIT-F	9	0	0
43	1294.00	4.68	106.84	30.00	1292.63	-8.08	-8.08	46.27	46.98	99.91	0.96	GPIT-F	9	0	0
44	1324.00	4.83	108.15	30.00	1322.52	-8.83	-8.83	48.64	49.44	100.29	0.63	GPIT-F	9	0	0
45	1354.00	4.72	109.54	30.00	1352.42	-9.64	-9.64	51.01	51.90	100.70	0.54	GPIT-F	9	0	0
46	1384.00	4.62	111.28	30.00	1382.32	-10.49	-10.49	53.30	54.33	101.13	0.59	GPIT-F	9	0	0
47	1414.00	4.53	114.14	30.00	1412.22	-11.41	-11.41	55.50	56.66	101.62	0.81	GPIT-F	9	0	0
48	1444.00	4.46	113.40	30.00	1442.13	-12.36	-12.36	57.66	58.96	102.10	0.31	GPIT-F	9	0	0
49	1474.00	4.46	114.23	30.00	1472.04	-13.30	-13.30	59.79	61.25	102.54	0.22	GPIT-F	9	0	0
50	1504.00	4.46	114.03	30.00	1501.95	-14.26	-14.26	61.92	63.55	102.96	0.05	GPIT-F	9	0	0

## 1B

## MAIN PASS

### Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
IHV	Integrated Hole Volume	HVAS	300.92	ft3
ICV	Integrated Cement Volume	HVAS, FCD	0	ft3

### Software Version

Acquisition System	Version		
MaxWell	3.1.9755.0		
Application Patch	SP-20130325-3.1.9755.1799		
Computation	Description	Version	
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels	3.1.9755.1799	
Tool Elements	Description	Software Version	Firmware Version
DHRU-F	GPIT DHRU Sensor Block - F	3.1.9755.0	
PPC-B	PPC-B Element is used for usual logging at wellsite and check/diagnostics.	3.1.9755.0	1.0

### Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
1B	Log[3]:Up	Up	57.52 ft	1512.22 ft	02-Oct-2013 4:03:24 PM	02-Oct-2013 4:59:35 PM	1.00 ft	true

All depths are referenced to toolstring zero

### Log

1B: Log[3]:Up

Description: Format: Log ( DEQL ) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 03-Oct-2013 18:55:56

Channel	Source	Sampling
BS	Borehole	6in
FCD	Borehole	6in
HD1	PPC-B:PPC-B:PPC-B	6in
HD2	PPC-B:PPC-B:PPC-B	6in
ICV	Borehole	6in

IHV	Borehole	6in
SDEV	GPIT-F:GPIT-F:DHRU-F	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

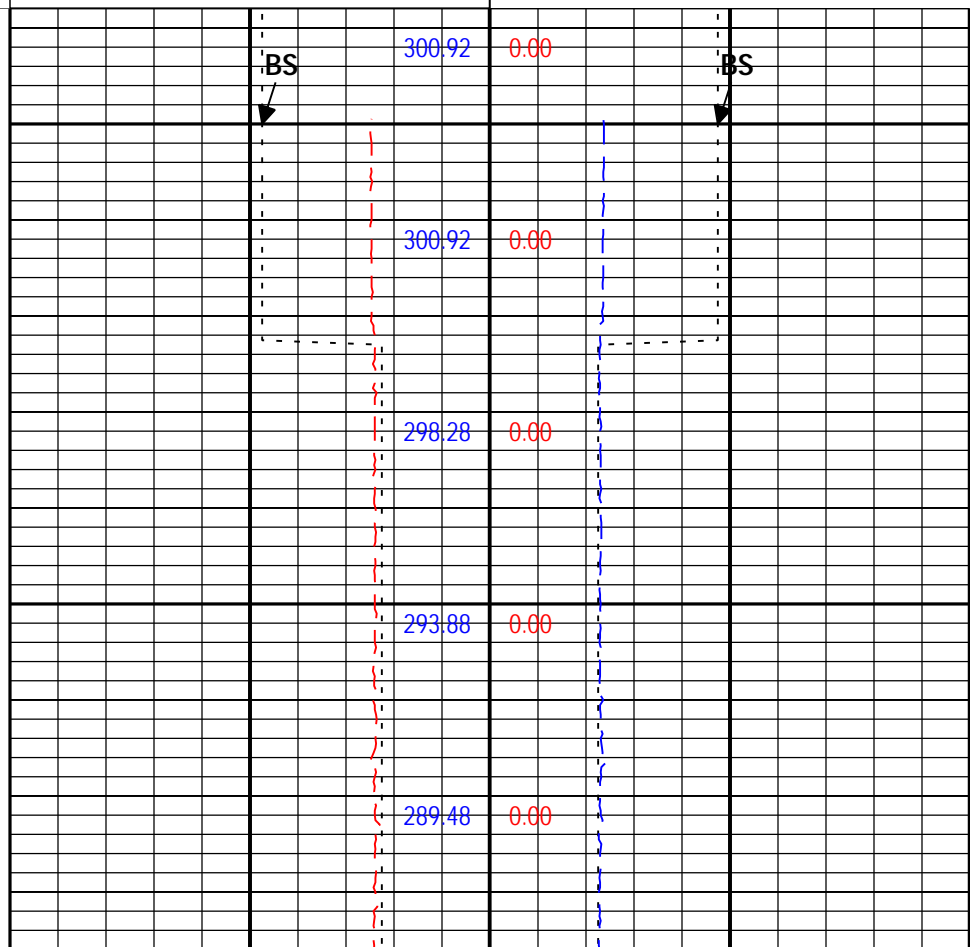
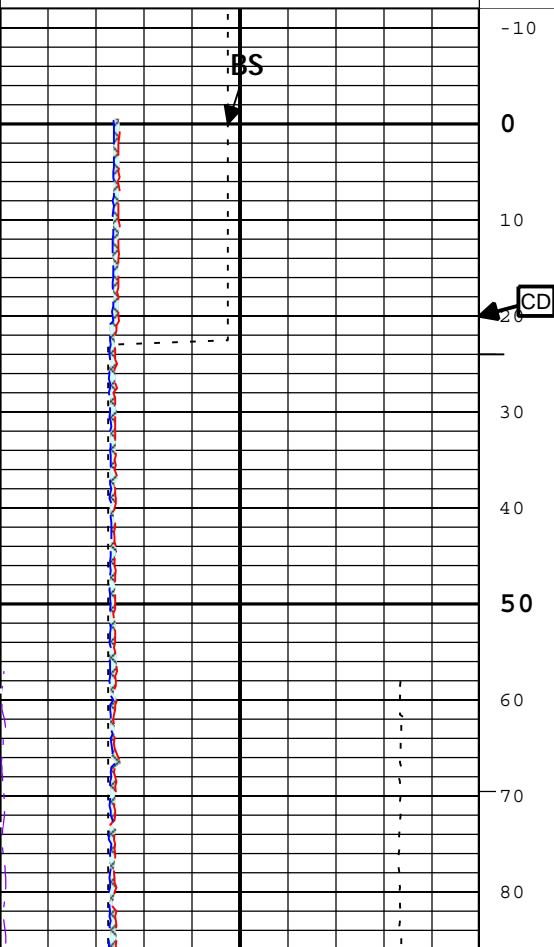
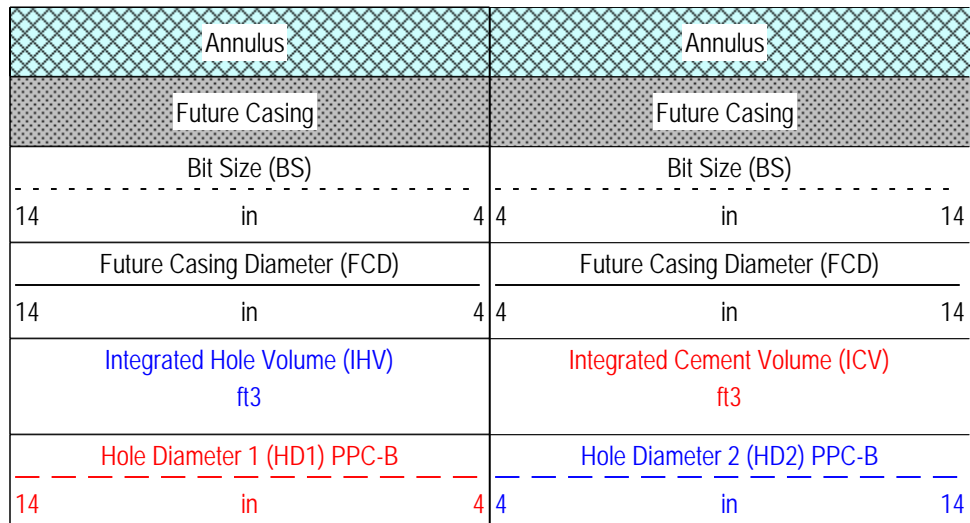
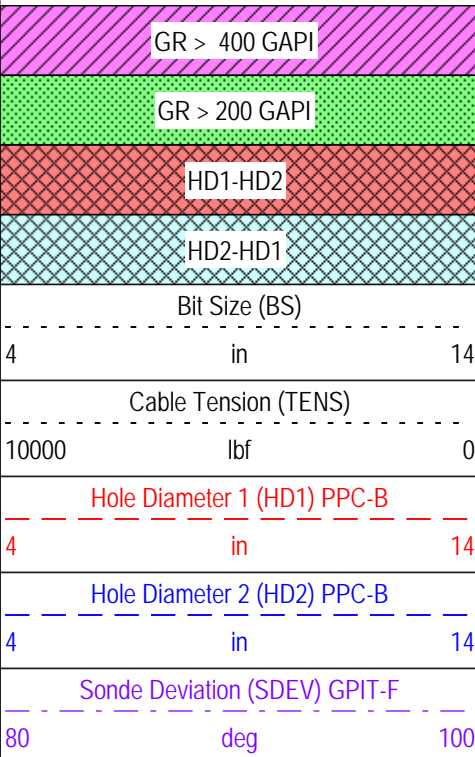
— IHV - Integrated Hole Volume every 10.00 (ft3)

TIME\_1900 - Time Marked every 60.00 (s)

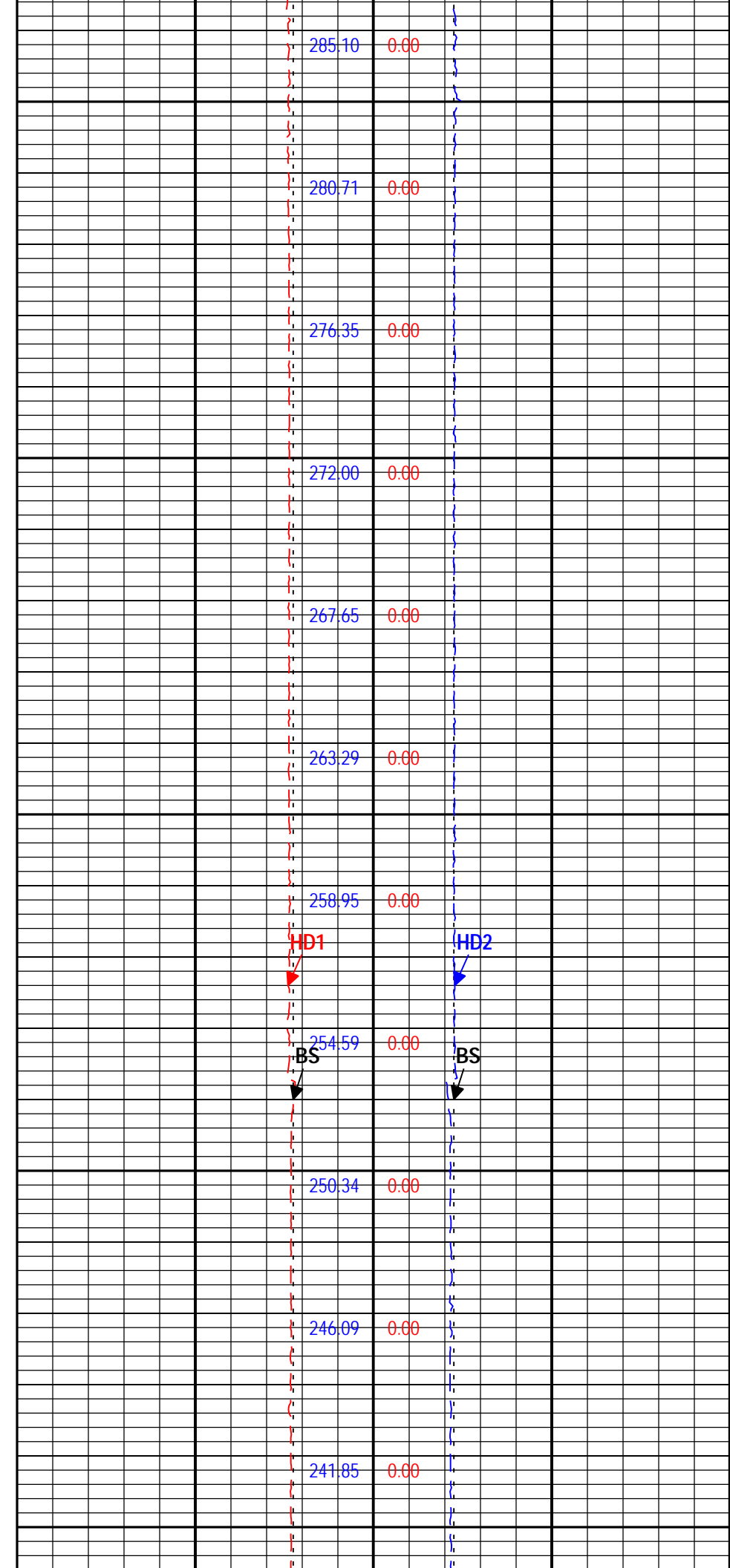
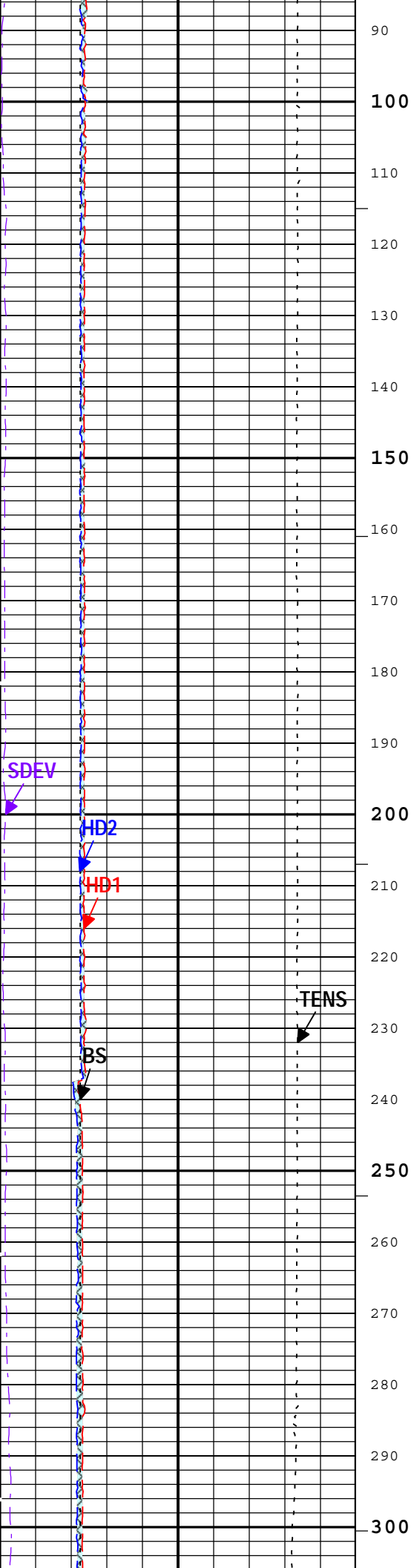
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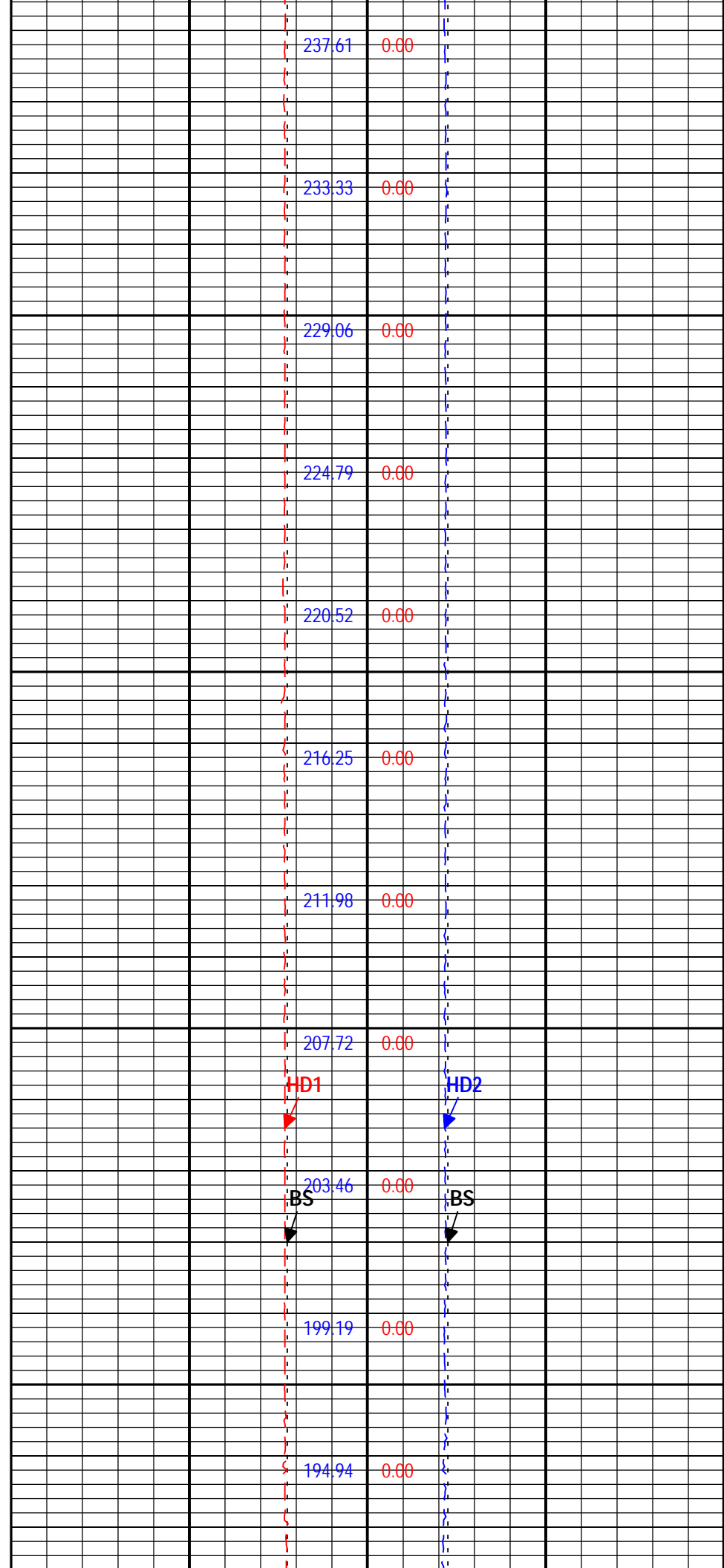
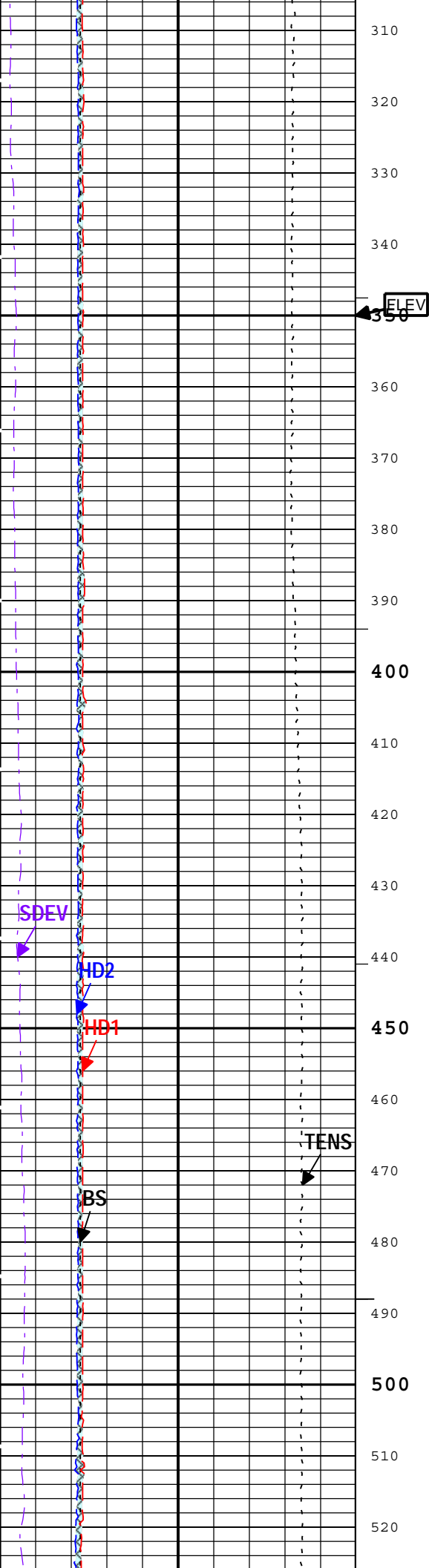
— ICV - Integrated Cement Volume every 100.00 (ft3)

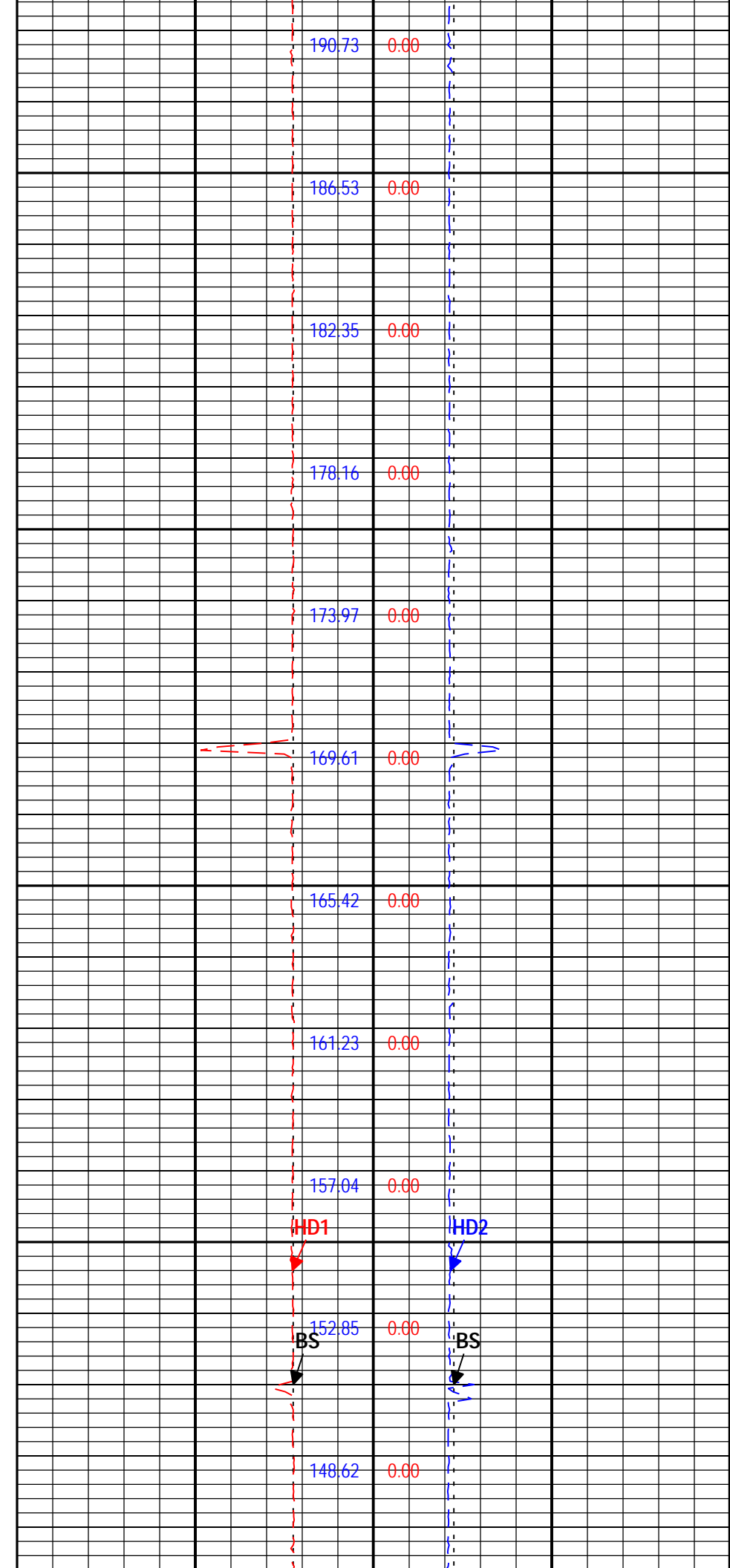
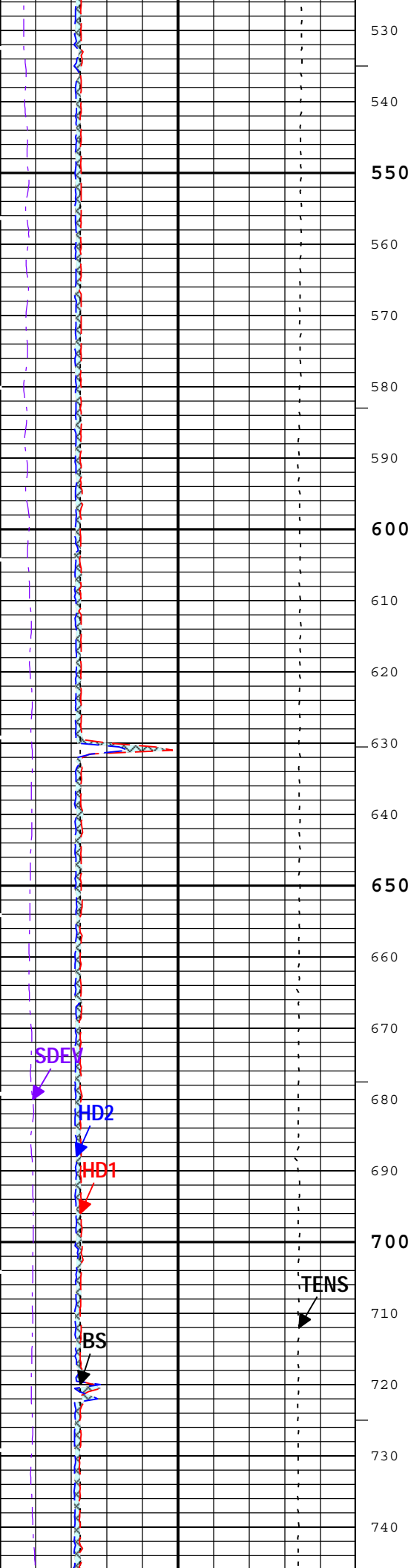
— IHV - Integrated Hole Volume every 100.00 (ft3)

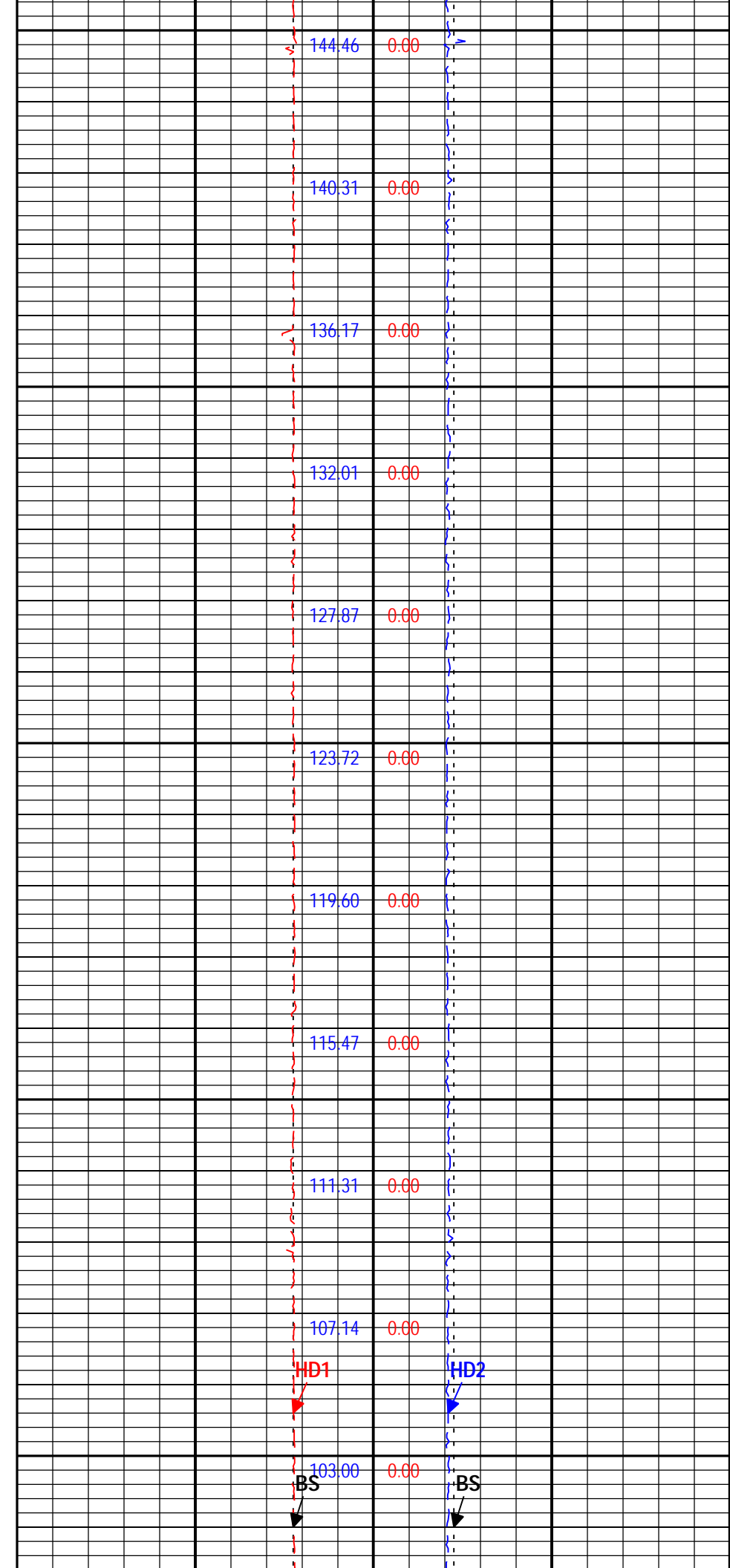
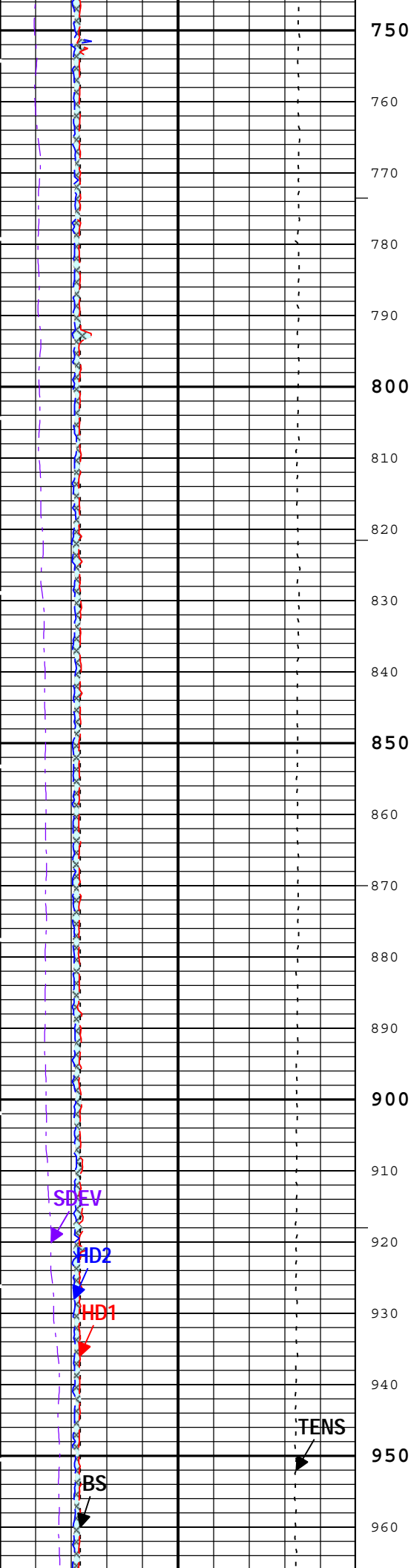


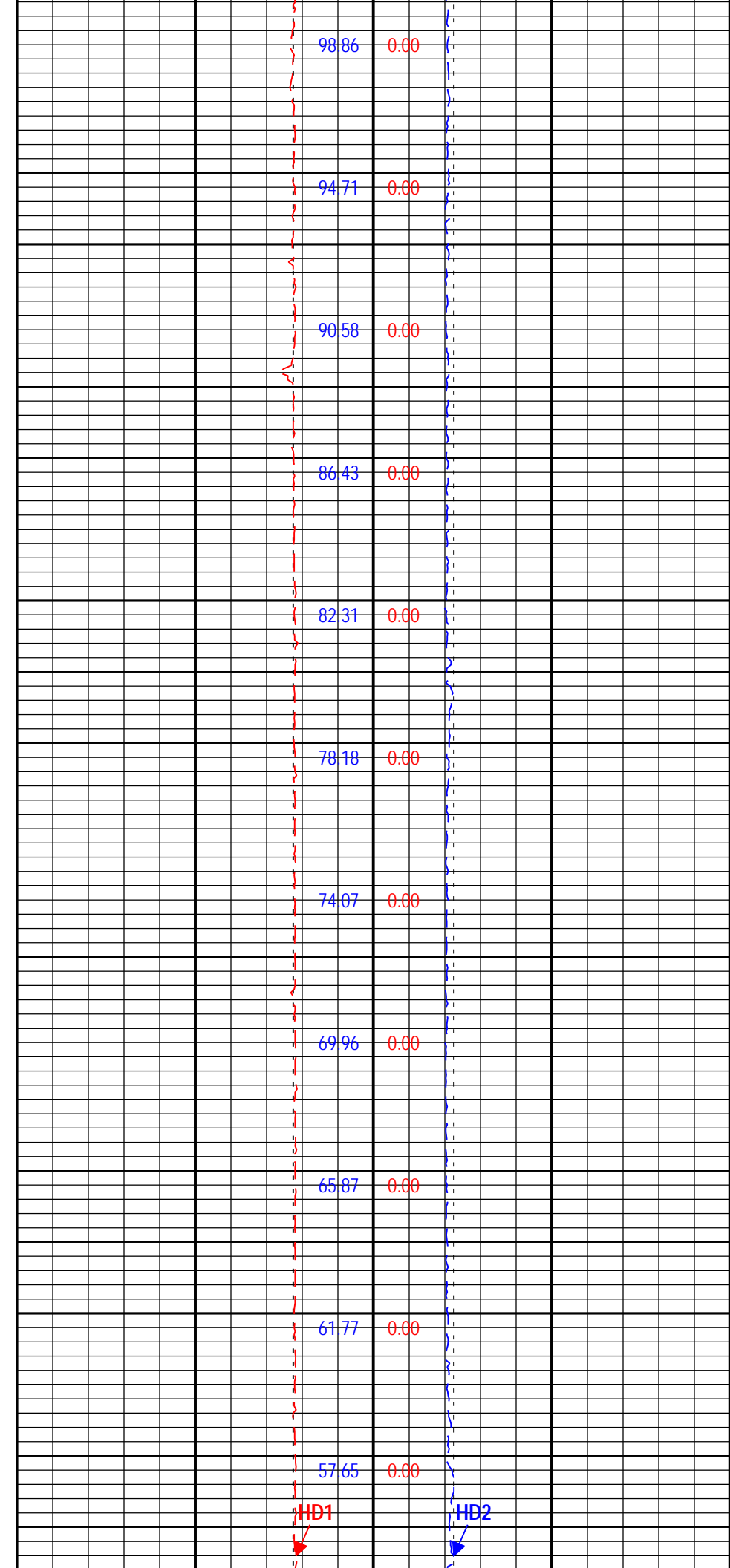
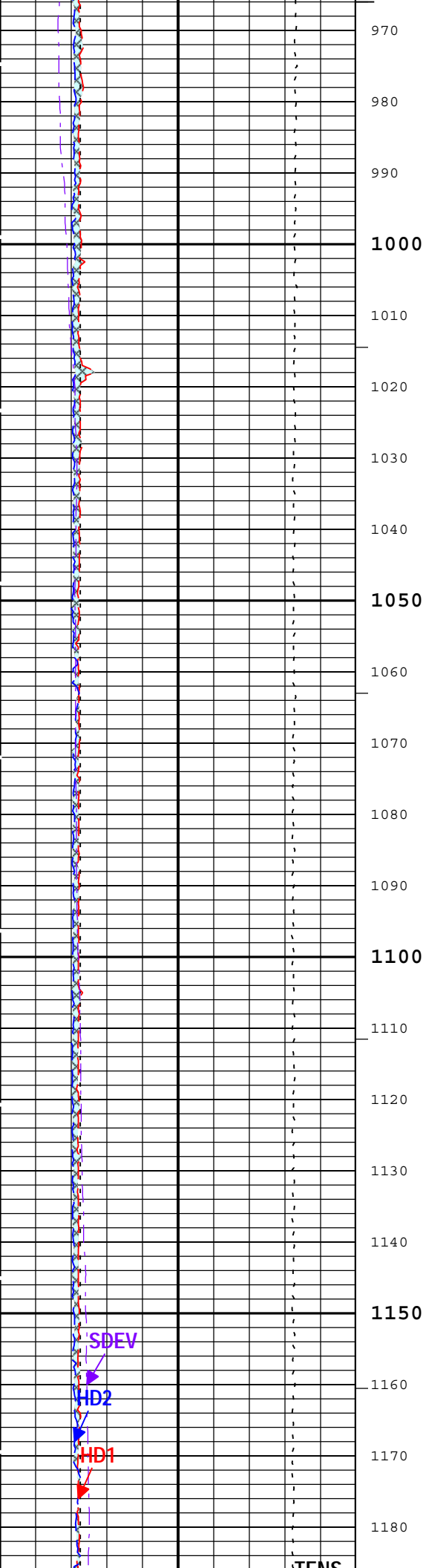


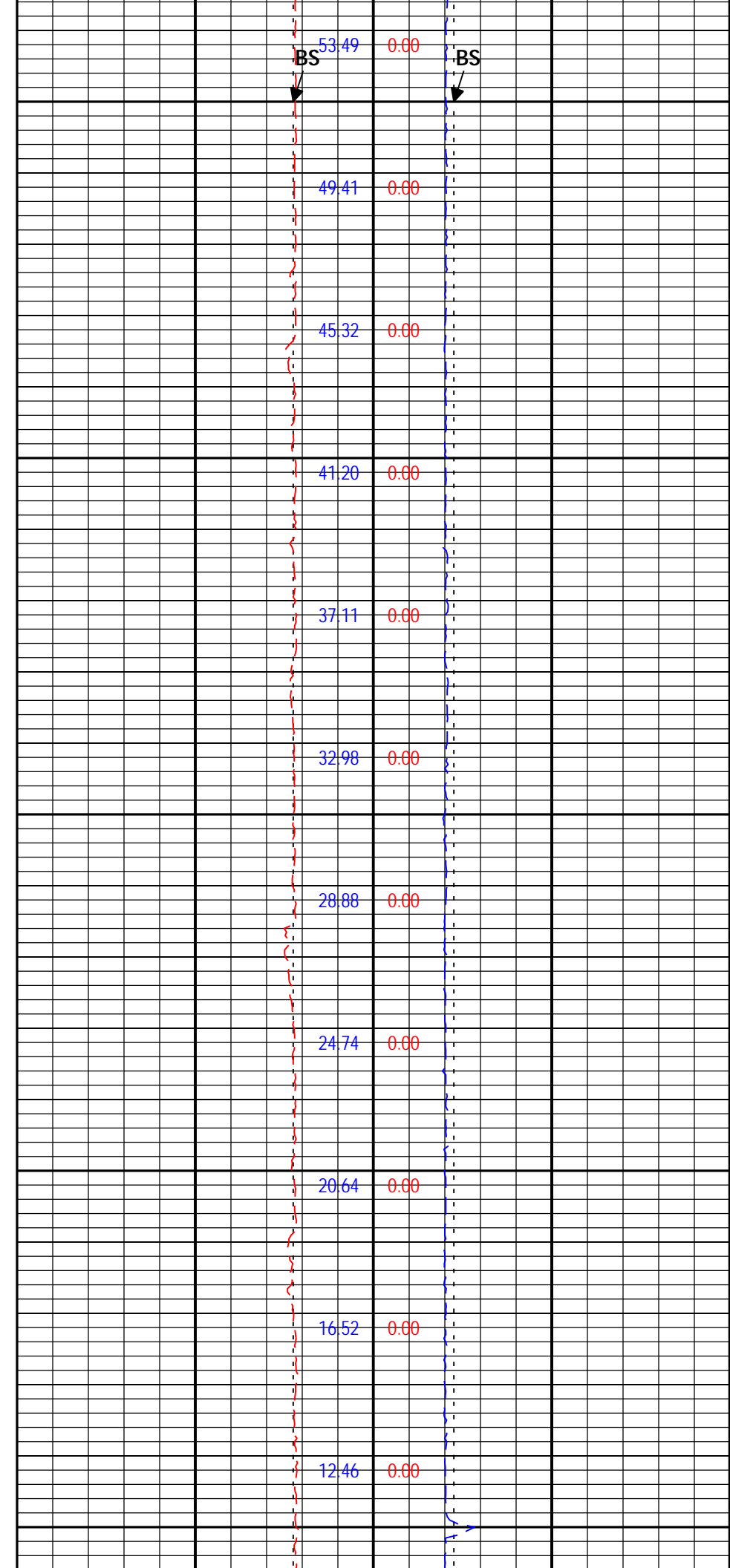
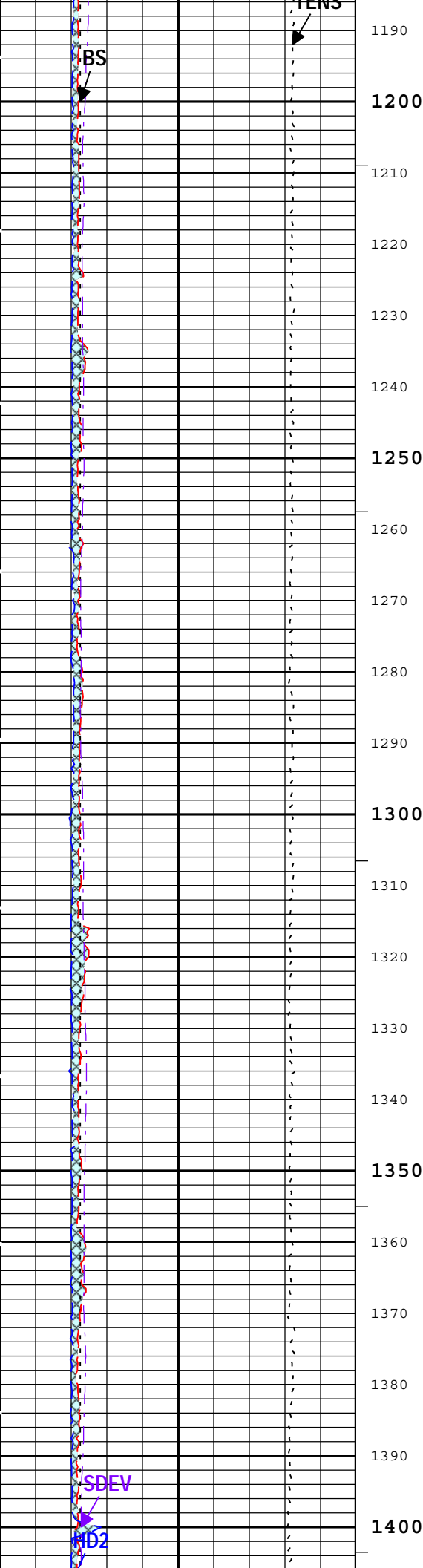


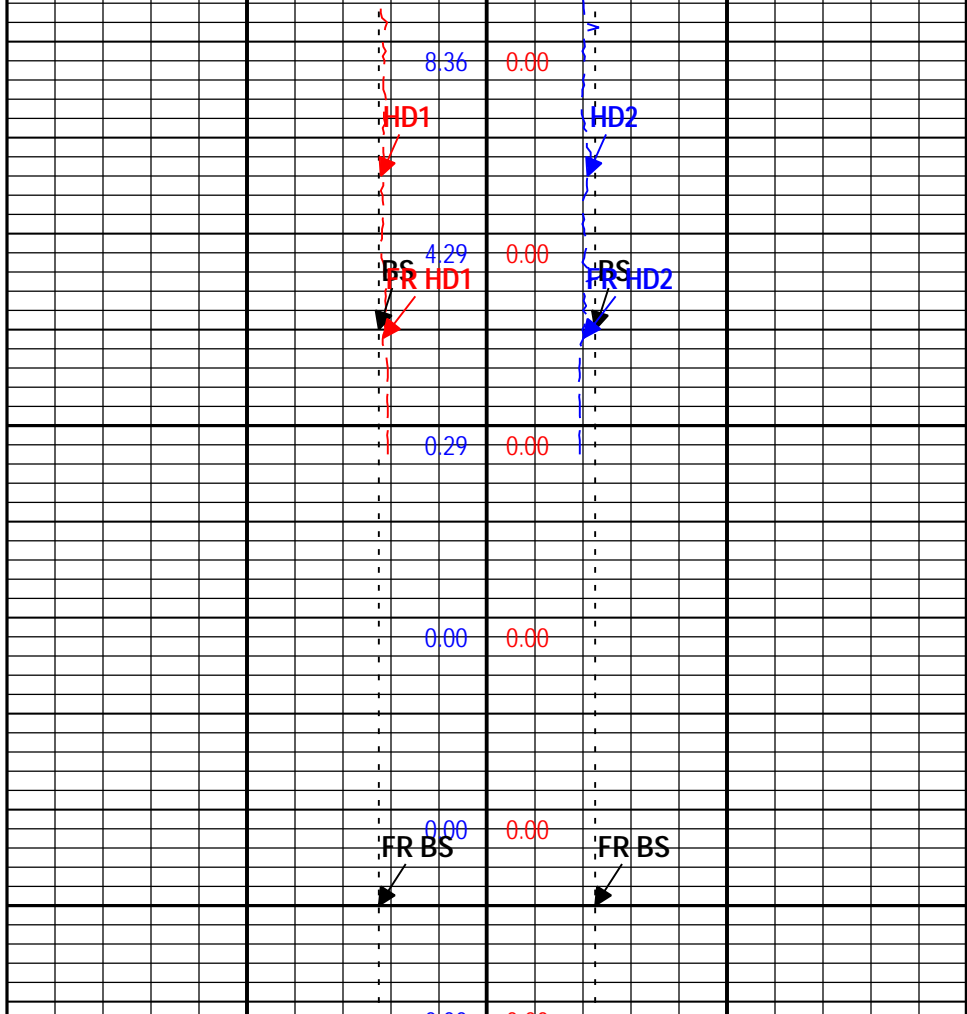
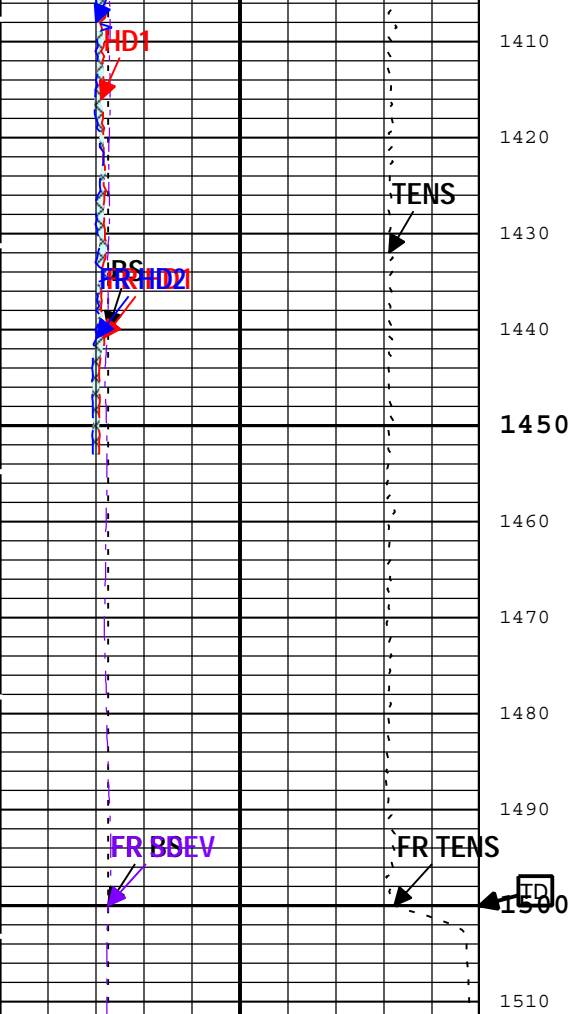












GR > 400 GAPI		
GR > 200 GAPI		
HD1-HD2		
HD2-HD1		
Bit Size (BS)		
4	in	14
Cable Tension (TENS)		
10000	lbf	0
Hole Diameter 1 (HD1) PPC-B		
4	in	14
Hole Diameter 2 (HD2) PPC-B		
4	in	14
Sonde Deviation (SDEV) GPIT-F		
80	deg	100

Annulus			Annulus		
Future Casing			Future Casing		
Bit Size (BS)			Bit Size (BS)		
14	in	4	4	in	14
Future Casing Diameter (FCD)			Future Casing Diameter (FCD)		
14	in	4	4	in	14
Integrated Hole Volume (IHV) ft3			Integrated Cement Volume (ICV) ft3		
Hole Diameter 1 (HD1) PPC-B			Hole Diameter 2 (HD2) PPC-B		
14	in	4	4	in	14

- IHV - Integrated Hole Volume every 100.00 (ft3)
- ICV - Integrated Cement Volume every 100.00 (ft3)
- ICV - Integrated Cement Volume every 10.00 (ft3)
- TIME\_1900 - Time Marked every 60.00 (s)
- IHV - Integrated Hole Volume every 10.00 (ft3)

## Channel Processing Parameters

Parameter	Description	Tool	Value	Unit
AOFFX	X Accelerometer Offset	GPIT-F	0	ft/s2
AOFFY	Y Accelerometer Offset	GPIT-F	0	ft/s2
AOFFZ	Z Accelerometer Offset	GPIT-F	0	ft/s2
BS	Bit Size	WLSESSION	Depth Zoned	in
CBLO	Casing Bottom (Logger)	WLSESSION	20	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	7	in
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
FCD	Future Casing (Outer) Diameter	WLSESSION	0	in
FOFFX	X Magnetometer Offset	GPIT-F	0	mT
FOFFY	Y Magnetometer Offset	GPIT-F	0	mT
FOFFZ	Z Magnetometer Offset	GPIT-F	0	mT
HVAS	Borehole area measurement selector for hole volume computation	Borehole	AREA	
HVCS	Integrated Hole Volume Caliper Selection	Borehole	Measured Area	
ICMO	Inclinometry Computation Mode	GPIT-F	Automatic Selection	
LOG_SPEED_RNG	Logging Speed Range	GPIT-F	Normal (600 ft/h - 3600 ft/h)	
USER_LOCB	User-supplied values for Magnetic Flux Density	WLSESSION	52249.9	nT
USER_MDEC	User-supplied values for Magnetic Declination	WLSESSION	-13.04	deg
USER_MDIP	User-supplied values for Magnetic Dip Angle	WLSESSION	67.08	deg

## Depth Zone Parameters

Parameter	Value	Start ( ft )	Stop ( ft )
BS	8.75	-12	23
BS	6.25	23	1512

All depth are actual.

## Tool Control Parameters

Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	Time Zoned	ft/h

## Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth ( ft )	Stop Depth ( ft )
MAX_LOG_SPEED	1612	02-Oct-2013 16:03:24	02-Oct-2013 16:07:25	1512.22	1421.41
MAX_LOG_SPEED	1515	02-Oct-2013 16:07:25	02-Oct-2013 16:27:56	1421.41	927.6
MAX_LOG_SPEED	1607	02-Oct-2013 16:27:56	02-Oct-2013 16:28:58	927.6	902.71
MAX_LOG_SPEED	1498	02-Oct-2013 16:28:58	02-Oct-2013 16:37:11	902.71	699.41
MAX_LOG_SPEED	1417	02-Oct-2013 16:37:11	02-Oct-2013 16:43:20	699.41	548.02
MAX_LOG_SPEED	1499	02-Oct-2013 16:43:20	02-Oct-2013 16:50:31	548.02	377.65
MAX_LOG_SPEED	2149	02-Oct-2013 16:50:31	02-Oct-2013 16:59:35	377.65	57.52

All depth are at tool zero.

## Calibration Report

### GPIT-F (General-Purpose Inclinometer Tool) Calibration - Run 1B

Primary Equipment :

GPIT DHRU Sensor Block - F

DHRU-F

### GPIT-F Accelerometers Master Calibration - Signals and Temperature Correction for Accelerometers

Master (EEPROM): 00:00:00 27-Feb-2007

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Accelero X Model[0,0]		Master	----	----	-0.01215934	----		
GPIT-F Accelero X Model[0,1]		Master	----	----	0.0006714027	----		
GPIT-F Accelero X Model[1,0]		Master	----	----	-0.0004417299	----		
GPIT-F Accelero X Model[1,1]		Master	----	----	-1.019631E-07	----		



GPIT-F Accelero X Model[2,0]		Master	----	----	1.200702E-05	----	
GPIT-F Accelero X Model[2,1]		Master	----	----	8.112073E-10	----	
GPIT-F Accelero X Model[3,0]		Master	----	----	-4.763767E-08	----	
GPIT-F Accelero X Model[3,1]		Master	----	----	-4.183312E-12	----	
GPIT-F Accelero Y Model[0,0]		Master	----	----	-0.001189725	----	
GPIT-F Accelero Y Model[0,1]		Master	----	----	-0.0006641162	----	
GPIT-F Accelero Y Model[1,0]		Master	----	----	-1.763025E-05	----	
GPIT-F Accelero Y Model[1,1]		Master	----	----	1.119691E-07	----	
GPIT-F Accelero Y Model[2,0]		Master	----	----	-5.266633E-06	----	
GPIT-F Accelero Y Model[2,1]		Master	----	----	-8.86384E-10	----	
GPIT-F Accelero Y Model[3,0]		Master	----	----	3.013527E-08	----	
GPIT-F Accelero Y Model[3,1]		Master	----	----	4.225287E-12	----	
GPIT-F Accelero Z Model[0,0]		Master	----	----	-0.01878055	----	
GPIT-F Accelero Z Model[0,1]		Master	----	----	0.0006625591	----	
GPIT-F Accelero Z Model[1,0]		Master	----	----	-0.0003628666	----	
GPIT-F Accelero Z Model[1,1]		Master	----	----	-1.129283E-07	----	
GPIT-F Accelero Z Model[2,0]		Master	----	----	7.598594E-06	----	
GPIT-F Accelero Z Model[2,1]		Master	----	----	8.967209E-10	----	
GPIT-F Accelero Z Model[3,0]		Master	----	----	-2.784502E-08	----	
GPIT-F Accelero Z Model[3,1]		Master	----	----	-4.327554E-12	----	

### GPIT-F Accelerometers Master Calibration - Perpendicular Correction for Accelerometers

Master (EEPROM): 00:00:00 27-Feb-2007

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
GPIT-F Accelero Axis Model[0,0]		Master	----	----	0.001468503	----	
GPIT-F Accelero Axis Model[0,1]		Master	----	----	0.0007086783	----	
GPIT-F Accelero Axis Model[0,2]		Master	----	----	0.0008603798	----	
GPIT-F Accelero Axis Model[0,3]		Master	----	----	6.433531E-05	----	
GPIT-F Accelero Axis Model[0,4]		Master	----	----	-0.0001623442	----	
GPIT-F Accelero Axis Model[0,5]		Master	----	----	-3.363089E-05	----	
GPIT-F Accelero Axis Model[0,6]		Master	----	----	0	----	
GPIT-F Accelero Axis Model[1,0]		Master	----	----	4.295974E-06	----	
GPIT-F Accelero Axis Model[1,1]		Master	----	----	-4.250208E-06	----	
GPIT-F Accelero Axis Model[1,2]		Master	----	----	-4.600836E-06	----	
GPIT-F Accelero Axis Model[1,3]		Master	----	----	4.951463E-07	----	
GPIT-F Accelero Axis Model[1,4]		Master	----	----	2.38704E-06	----	
GPIT-F Accelero Axis Model[1,5]		Master	----	----	-7.386622E-08	----	
GPIT-F Accelero Axis Model[1,6]		Master	----	----	0	----	

### GPIT-F Magnetometers Master Calibration - Signals and Temperature Correction for Magnetometer

Master (EEPROM): 00:00:00 27-Feb-2007

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
GPIT-F Magneto X Model[0,0]		Master	----	----	-27.54471	----	
GPIT-F Magneto X Model[0,1]		Master	----	----	4.868039	----	
GPIT-F Magneto X Model[1,0]		Master	----	----	1.002521	----	
GPIT-F Magneto X Model[1,1]		Master	----	----	-0.0006035295	----	
GPIT-F Magneto X Model[2,0]		Master	----	----	-0.009039386	----	
GPIT-F Magneto X Model[2,1]		Master	----	----	7.765441E-06	----	
GPIT-F Magneto X Model[3,0]		Master	----	----	2.81839E-06	----	
GPIT-F Magneto X Model[3,1]		Master	----	----	-2.919831E-08	----	
GPIT-F Magneto Y Model[0,0]		Master	----	----	-83.41712	----	
GPIT-F Magneto Y Model[0,1]		Master	----	----	-4.929654	----	
GPIT-F Magneto Y Model[1,0]		Master	----	----	2.745293	----	
GPIT-F Magneto Y Model[1,1]		Master	----	----	0.0007309241	----	
GPIT-F Magneto Y Model[2,0]		Master	----	----	-0.04057886	----	
GPIT-F Magneto Y Model[2,1]		Master	----	----	-8.903169E-06	----	
GPIT-F Magneto Y Model[3,0]		Master	----	----	0.0001780532	----	
GPIT-F Magneto Y Model[3,1]		Master	----	----	3.311676E-08	----	
GPIT-F Magneto Z Model[0,0]		Master	----	----	-159.163	----	
GPIT-F Magneto Z Model[0,1]		Master	----	----	4.876642	----	
GPIT-F Magneto Z Model[1,0]		Master	----	----	4.802216	----	
GPIT-F Magneto Z Model[1,1]		Master	----	----	-0.0007067518	----	
GPIT-F Magneto Z Model[2,0]		Master	----	----	-0.05983768	----	
GPIT-F Magneto Z Model[2,1]		Master	----	----	8.678178E-06	----	
GPIT-F Magneto Z Model[3,0]		Master	----	----	0.0002176119	----	
GPIT-F Magneto Z Model[3,1]		Master	----	----	-3.134327E-08	----	

## GPIT-F Magnetometers Master Calibration - Perpendicular Correction for Magnetometer

Master (EEPROM): 00:00:00 27-Feb-2007							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
GPIT-F Magneto Axis Model[0,0]		Master	----	----	0.004401677	----	
GPIT-F Magneto Axis Model[0,1]		Master	----	----	-0.0001281268	----	
GPIT-F Magneto Axis Model[0,2]		Master	----	----	0.003649965	----	
GPIT-F Magneto Axis Model[0,3]		Master	----	----	0.00370262	----	
GPIT-F Magneto Axis Model[0,4]		Master	----	----	0.00384905	----	
GPIT-F Magneto Axis Model[0,5]		Master	----	----	-0.001539347	----	
GPIT-F Magneto Axis Model[0,6]		Master	----	----	0	----	
GPIT-F Magneto Axis Model[1,0]		Master	----	----	-3.40389E-06	----	
GPIT-F Magneto Axis Model[1,1]		Master	----	----	1.151872E-05	----	
GPIT-F Magneto Axis Model[1,2]		Master	----	----	-1.155403E-06	----	
GPIT-F Magneto Axis Model[1,3]		Master	----	----	2.947939E-06	----	
GPIT-F Magneto Axis Model[1,4]		Master	----	----	-2.848171E-06	----	
GPIT-F Magneto Axis Model[1,5]		Master	----	----	1.396234E-06	----	
GPIT-F Magneto Axis Model[1,6]		Master	----	----	0	----	

## GPIT-F DHRU102 Master Calibration -

Master (EEPROM): 00:00:00 26-Feb-2007							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
GPIT-F Electronic Coeff 1[0,0]		Master	----	----	0.2103209	----	
GPIT-F Electronic Coeff 1[0,1]		Master	----	----	249.8629	----	
GPIT-F Electronic Coeff 1[1,0]		Master	----	----	-0.02052607	----	
GPIT-F Electronic Coeff 1[1,1]		Master	----	----	0.03443145	----	
GPIT-F Electronic Coeff 1[2,0]		Master	----	----	0.0005390499	----	
GPIT-F Electronic Coeff 1[2,1]		Master	----	----	-0.0005127604	----	
GPIT-F Electronic Coeff 1[3,0]		Master	----	----	-5.663779E-06	----	
GPIT-F Electronic Coeff 1[3,1]		Master	----	----	3.081511E-06	----	
GPIT-F Electronic Coeff 1[4,0]		Master	----	----	1.916082E-08	----	
GPIT-F Electronic Coeff 1[4,1]		Master	----	----	-7.219608E-09	----	
GPIT-F Electronic Coeff 2[0,0]		Master	----	----	0.2934815	----	
GPIT-F Electronic Coeff 2[0,1]		Master	----	----	250.1966	----	
GPIT-F Electronic Coeff 2[1,0]		Master	----	----	0.0005622077	----	
GPIT-F Electronic Coeff 2[1,1]		Master	----	----	0.01222562	----	
GPIT-F Electronic Coeff 2[2,0]		Master	----	----	0.0001697335	----	
GPIT-F Electronic Coeff 2[2,1]		Master	----	----	-0.0001466679	----	
GPIT-F Electronic Coeff 2[3,0]		Master	----	----	-2.597074E-06	----	
GPIT-F Electronic Coeff 2[3,1]		Master	----	----	8.028966E-07	----	
GPIT-F Electronic Coeff 2[4,0]		Master	----	----	1.004148E-08	----	
GPIT-F Electronic Coeff 2[4,1]		Master	----	----	-2.414145E-09	----	
GPIT-F Electronic Coeff 3[0,0]		Master	----	----	-1.820499	----	
GPIT-F Electronic Coeff 3[0,1]		Master	----	----	250.3474	----	
GPIT-F Electronic Coeff 3[1,0]		Master	----	----	-0.01876183	----	
GPIT-F Electronic Coeff 3[1,1]		Master	----	----	0.009902835	----	
GPIT-F Electronic Coeff 3[2,0]		Master	----	----	0.000515678	----	
GPIT-F Electronic Coeff 3[2,1]		Master	----	----	-0.000194925	----	
GPIT-F Electronic Coeff 3[3,0]		Master	----	----	-5.136801E-06	----	
GPIT-F Electronic Coeff 3[3,1]		Master	----	----	1.671684E-06	----	
GPIT-F Electronic Coeff 3[4,0]		Master	----	----	1.691397E-08	----	
GPIT-F Electronic Coeff 3[4,1]		Master	----	----	-5.427613E-09	----	

## GPIT-F DHRU102 Master Calibration -

Master (EEPROM): 00:00:00 26-Feb-2007							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
GPIT-F Electronic Coeff 4[0,0]		Master	----	----	-0.4937484	----	
GPIT-F Electronic Coeff 4[0,1]		Master	----	----	0.1280767	----	
GPIT-F Electronic Coeff 4[1,0]		Master	----	----	-0.00639528	----	
GPIT-F Electronic Coeff 4[1,1]		Master	----	----	5.040809E-06	----	
GPIT-F Electronic Coeff 4[2,0]		Master	----	----	0.0002286763	----	
GPIT-F Electronic Coeff 4[2,1]		Master	----	----	-1.131637E-07	----	
GPIT-F Electronic Coeff 4[3,0]		Master	----	----	-2.155446E-06	----	
GPIT-F Electronic Coeff 4[3,1]		Master	----	----	9.623765E-10	----	
GPIT-F Electronic Coeff 4[4,0]		Master	----	----	6.795482E-09	----	
GPIT-F Electronic Coeff 4[4,1]		Master	----	----	-2.955224E-12	----	

GPIT-F Electronic Coeff 5[0,0]		Master	----	----	-0.4937484	----	
GPIT-F Electronic Coeff 5[0,1]		Master	----	----	0.1280767	----	
GPIT-F Electronic Coeff 5[1,0]		Master	----	----	-0.00639528	----	
GPIT-F Electronic Coeff 5[1,1]		Master	----	----	5.040809E-06	----	
GPIT-F Electronic Coeff 5[2,0]		Master	----	----	0.0002286763	----	
GPIT-F Electronic Coeff 5[2,1]		Master	----	----	-1.131637E-07	----	
GPIT-F Electronic Coeff 5[3,0]		Master	----	----	-2.155446E-06	----	
GPIT-F Electronic Coeff 5[3,1]		Master	----	----	9.623765E-10	----	
GPIT-F Electronic Coeff 5[4,0]		Master	----	----	6.795482E-09	----	
GPIT-F Electronic Coeff 5[4,1]		Master	----	----	-2.955224E-12	----	
GPIT-F Electronic Coeff 6[0,0]		Master	----	----	-0.4937484	----	
GPIT-F Electronic Coeff 6[0,1]		Master	----	----	0.1280767	----	
GPIT-F Electronic Coeff 6[1,0]		Master	----	----	-0.00639528	----	
GPIT-F Electronic Coeff 6[1,1]		Master	----	----	5.040809E-06	----	
GPIT-F Electronic Coeff 6[2,0]		Master	----	----	0.0002286763	----	
GPIT-F Electronic Coeff 6[2,1]		Master	----	----	-1.131637E-07	----	
GPIT-F Electronic Coeff 6[3,0]		Master	----	----	-2.155446E-06	----	
GPIT-F Electronic Coeff 6[3,1]		Master	----	----	9.623765E-10	----	
GPIT-F Electronic Coeff 6[4,0]		Master	----	----	6.795482E-09	----	
GPIT-F Electronic Coeff 6[4,1]		Master	----	----	-2.955224E-12	----	

### MAST-B (Multimode Array Sonic Service Tool) Calibration - Run 1B

Primary Equipment :

MAMS-BA Multimode Array Sonic Minimum Service Sonde

MAMS-BA

8105

### MAST Master Characterization Coefficients - Characterization Coefficients Summary

Master (EEPROM): 17:24:00 30-Jul-2013

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sensor Sensitivity Correction Factor Minimum		Master	1.000	0.500	0.935	1.700	
Sensor Sensitivity Correction Factor Maximum		Master	1.000	0.500	1.084	1.700	
Sensor Time Delay Factor Minimum	us	Master	0	-2.000	-0.839	2.000	
Sensor Time Delay Factor Maximum	us	Master	0	-2.000	0.516	2.000	
Sensor Sensitivity Correction Factor Low Frequency to High Frequency Ratio Minimum		Master	1.000	0.900	0.936	1.700	
Sensor Sensitivity Correction Factor Low Frequency to High Frequency Ratio Maximum		Master	1.000	0.900	1.058	1.700	

### Characterization Coefficients

Master (EEPROM): 17:24:00 30-Jul-2013

CALI\_SSCF (Master) Sensor Sensitivity Correction Factor

Minimum/Nominal/Maximum 0.500/1.000/1.700

Unit

	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	0.998	1.000	0.982	1.046	1.056	0.969	1.039	0.967
SO2	0.967	1.068	1.009	1.034	1.013	1.033	0.979	0.969
SO3	1.029	1.002	1.003	0.949	0.993	1.037	0.935	0.955
SO4	0.986	1.083	0.969	0.997	1.028	1.084	0.973	0.991
SO5	0.999	1.037	0.976	1.031	1.034	1.018	0.994	0.954
SO6	1.043	0.976	0.977	1.047	1.008	0.973	1.032	1.028
SO7	0.993	1.005	0.997	1.021	1.080	1.058	0.980	0.982
SO8	1.003	1.023	0.951	0.999	1.019	1.003	0.982	0.975
SO9	1.028	1.002	0.950	0.962	1.002	1.004	1.012	0.995
SO10	0.985	0.975	1.025	1.007	0.974	1.000	0.962	1.028
SO11	0.986	0.985	1.000	0.964	1.009	0.984	0.993	0.976
SO12	1.049	1.024	0.995	1.003	0.981	1.074	1.007	0.985
SO13	1.017	1.005	1.033	0.992	1.005	0.965	0.949	0.975

CALI\_STDF (Master) Sensor Time Delay Factor

Minimum/Nominal/Maximum -2.000/0/2.000

Unit

us



SO11	0	0	0	0	0	0	0	0
SO12	0	0	0	0	0	0	0	0
SO13	0	0	0	0	0	0	0	0

**CALI\_SSCLF (Master)** Sensor Sensitivity Correction Low Frequency Diagnostic Failure Flag

Minimum/Nominal/Maximum	0/0/0							Unit
-------------------------	-------	--	--	--	--	--	--	------

	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	0	0	0	0	0	0	0	0
SO2	0	0	0	0	0	0	0	0
SO3	0	0	0	0	0	0	0	0
SO4	0	0	0	0	0	0	0	0
SO5	0	0	0	0	0	0	0	0
SO6	0	0	0	0	0	0	0	0
SO7	0	0	0	0	0	0	0	0
SO8	0	0	0	0	0	0	0	0
SO9	0	0	0	0	0	0	0	0
SO10	0	0	0	0	0	0	0	0
SO11	0	0	0	0	0	0	0	0
SO12	0	0	0	0	0	0	0	0
SO13	0	0	0	0	0	0	0	0

**CALI\_SSCHA (Master)** Sensor Sensitivity Correction High Frequency Normalized Amplitudes

Minimum/Nominal/Maximum	----/1.000/----							Unit
-------------------------	-----------------	--	--	--	--	--	--	------

	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	1.001	0.999	1.017	0.955	0.946	1.031	0.962	1.034
SO2	1.045	0.947	1.002	0.977	0.998	0.979	1.033	1.043
SO3	0.970	0.995	0.994	1.051	1.005	0.962	1.067	1.045
SO4	1.009	0.918	1.026	0.998	0.967	0.917	1.021	1.004
SO5	1.009	0.972	1.033	0.978	0.975	0.991	1.014	1.057
SO6	0.976	1.043	1.041	0.972	1.009	1.046	0.986	0.991
SO7	1.008	0.996	1.005	0.981	0.927	0.946	1.021	1.020
SO8	0.996	0.976	1.051	1.000	0.981	0.996	1.017	1.025
SO9	0.975	1.000	1.055	1.041	1.000	0.998	0.989	1.007
SO10	1.008	1.019	0.969	0.986	1.020	0.992	1.032	0.965
SO11	0.999	1.001	0.985	1.022	0.977	1.001	0.992	1.010
SO12	0.958	0.981	1.010	1.002	1.024	0.936	0.998	1.021
SO13	0.982	0.993	0.967	1.006	0.994	1.035	1.052	1.025

**CALI\_SSCLA (Master)** Sensor Sensitivity Correction Low Frequency Normalized Amplitudes

Minimum/Nominal/Maximum	----/1.000/----							Unit
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	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	1.029	1.000	1.019	0.916	0.903	1.000	0.945	1.041
SO2	1.085	0.994	1.006	0.956	0.952	0.983	1.050	1.073
SO3	1.008	1.026	0.992	0.984	0.952	0.947	1.054	1.069
SO4	1.067	0.949	1.028	0.975	0.955	0.943	1.060	1.025
SO5	1.045	0.974	1.005	0.929	0.950	0.995	1.031	1.088
SO6	0.995	1.011	1.001	0.915	0.975	1.057	1.002	0.999
SO7	0.999	1.006	1.021	0.987	0.961	0.974	1.011	1.001
SO8	0.993	0.984	1.061	1.011	0.983	0.995	1.005	1.017
SO9	0.983	1.002	1.060	1.056	1.008	0.997	0.973	0.998
SO10	1.010	1.012	0.968	0.995	1.005	0.976	1.010	0.963

SO11	0.991	1.000	1.002	1.045	0.993	1.014	1.000	0.996
SO12	0.968	0.991	1.048	1.021	1.022	0.948	0.986	1.009
SO13	0.974	0.994	0.976	1.008	0.985	1.020	1.027	1.006

**CALI\_SSTRS (Master)** Sensor Sensitivity Correction Transmitter-Receiver Spacing

Minimum/Nominal/Maximum	----/4.000/----						Unit	ft
Monopole Upper Transmitter	4.000							
Monopole Lower Transmitter	4.000							

**CALI\_TTMUH (Master)** Sensor Sensitivity Transit Time from Monopole Upper Transmitter High Frequency Firing

Minimum/Nominal/Maximum	0/0/5000.000						Unit	us
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	501.513	501.245	501.038	501.531	501.319	501.879	502.153	502.178
SO2	472.504	472.251	472.107	472.194	472.278	472.834	473.230	473.057
SO3	443.617	443.350	443.186	443.582	443.437	443.711	444.094	444.047
SO4	414.937	414.333	414.308	414.462	414.472	414.697	415.297	415.603
SO5	385.771	385.718	385.535	385.594	385.439	385.802	386.206	386.178
SO6	356.907	356.723	356.586	356.600	356.658	357.066	357.020	357.245
SO7	327.823	327.540	327.411	327.746	327.657	327.960	328.146	328.211
SO8	298.541	298.620	298.972	299.051	298.996	299.151	299.235	298.944
SO9	269.517	269.750	269.829	269.996	270.152	270.203	270.128	269.711
SO10	240.673	240.653	240.906	241.249	241.310	241.403	241.310	240.908
SO11	211.566	211.856	212.023	212.418	212.358	212.437	212.451	212.059
SO12	182.715	182.758	182.941	183.166	183.262	183.429	183.188	182.969
SO13	153.516	153.778	153.728	153.612	153.354	153.274	153.568	153.732

**CALI\_TTMLH (Master)** Sensor Sensitivity Transit Time from Monopole Lower Transmitter High Frequency Firing

Minimum/Nominal/Maximum	0/0/5000.000						Unit	us
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	153.496	153.316	153.065	153.347	153.239	153.969	154.063	154.139
SO2	182.885	182.604	182.422	182.598	182.629	183.016	183.289	183.205
SO3	211.429	211.174	211.485	211.849	211.589	211.670	211.717	211.861
SO4	240.081	240.174	240.183	240.245	239.921	240.084	240.476	240.692
SO5	268.497	269.067	268.672	268.976	268.549	268.802	268.964	268.818
SO6	298.618	298.535	298.019	298.421	298.334	298.505	298.624	298.924
SO7	327.420	327.121	327.192	327.320	327.097	327.485	327.702	327.767
SO8	356.114	355.882	356.069	356.128	356.192	356.461	356.286	356.276
SO9	385.171	385.169	385.395	385.637	385.529	385.511	385.501	385.330
SO10	414.182	414.264	414.443	414.600	414.508	414.543	414.723	414.368
SO11	443.125	443.387	443.324	443.499	443.332	443.226	443.174	443.309
SO12	472.129	472.167	472.104	472.378	472.267	472.160	472.149	472.260
SO13	500.935	501.269	501.293	501.347	500.473	500.476	501.028	500.950

**CALI\_AMPMUH (Master)** Sensor Sensitivity First Break Amplitude from Monopole Upper Transmitter High Frequency Firing

Minimum/Nominal/Maximum	-50000.000/0/50000.000						Unit	
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	5146.242	5136.799	5230.729	4908.755	4864.930	5299.755	4946.278	5313.921
SO2	5586.852	5062.637	5355.456	5225.173	5336.198	5233.125	5523.110	5575.491
SO3	5527.936	5674.279	5668.541	5992.107	5726.364	5483.179	6084.946	5956.443
SO4	6073.742	5477.983	6152.631	5998.753	5841.253	5568.900	6155.324	6090.399
SO5	6295.854	6028.679	6449.966	6120.152	6145.677	6176.929	6351.000	6565.101
SO6	6289.616	6672.854	6728.451	6302.656	6536.664	6798.009	6343.225	6392.522

SO7	6963.756	6899.875	6914.005	6795.735	6458.379	6592.724	7126.328	7093.938
SO8	7338.933	7148.649	7755.404	7392.857	7295.526	7408.763	7545.793	7572.928
SO9	7422.956	7686.476	7993.587	7942.768	7717.720	7697.047	7660.148	7766.141
SO10	8127.310	8220.269	7855.471	8022.423	8318.270	8116.378	8372.179	7812.224
SO11	8569.334	8693.708	8523.369	8862.992	8433.320	8512.855	8575.748	8688.086
SO12	8598.036	8770.915	9061.270	8718.142	8565.037	7953.676	8434.041	8949.510
SO13	8654.483	8975.695	8461.624	8093.473	7785.146	7997.998	8499.429	8771.947

**CALI\_AMPMLH (Master)** Sensor Sensitivity First Break Amplitude from Monopole Lower Transmitter High Frequency Firing

Minimum/Nominal/Maximum -50000.000/0/50000.000 Unit

	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	8322.278	7997.593	8084.918	7666.849	7919.925	9108.438	8553.551	8986.291
SO2	8828.262	7909.559	8185.195	8157.400	8339.918	8381.960	8960.701	8961.146
SO3	7962.909	8134.268	8161.377	8465.979	8185.814	7968.433	8709.098	8629.437
SO4	7891.980	7249.491	8062.157	7818.374	7542.164	7120.526	7987.466	7796.312
SO5	7420.581	7192.170	7582.003	7162.541	7088.761	7284.996	7422.454	7806.644
SO6	6820.723	7339.489	7254.805	6753.801	7016.184	7238.863	6902.429	6908.593
SO7	6791.554	6689.849	6795.125	6587.313	6193.010	6321.223	6813.085	6824.595
SO8	6317.951	6233.255	6657.333	6321.904	6168.715	6267.260	6412.653	6485.117
SO9	5958.253	6052.965	6481.475	6353.832	6028.553	6022.030	5949.136	6079.364
SO10	5921.037	5983.189	5664.789	5748.635	5923.247	5752.155	6030.659	5655.906
SO11	5551.285	5559.736	5474.728	5678.235	5426.158	5561.955	5510.827	5610.010
SO12	4961.275	5081.337	5229.697	5189.031	5304.191	4847.763	5170.815	5286.408
SO13	4869.340	4922.813	4793.686	4988.208	4926.077	5129.808	5216.309	5078.806

**CALI\_AMPML (Master)** Sensor Sensitivity First Break Amplitude from Monopole Upper Transmitter Low Frequency Firing

Minimum/Nominal/Maximum -50000.000/0/50000.000 Unit

	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	-8119.010	-7773.179	-7649.829	-6993.304	-7164.570	-8077.578	-7787.497	-8380.044
SO2	-8447.972	-7414.062	-7383.489	-7183.690	-7542.121	-7799.215	-8186.128	-8244.643
SO3	-8492.315	-8316.295	-8216.079	-8430.741	-8297.771	-8254.679	-9135.998	-9046.379
SO4	-10539.640	-9431.392	-10486.740	-10149.590	-9887.094	-9562.116	-10832.140	-10453.090
SO5	-12566.990	-11927.130	-12845.800	-12133.260	-11958.290	-12346.230	-12689.430	-13283.680
SO6	-13906.680	-14819.400	-15080.090	-13989.510	-14502.740	-15208.580	-14102.140	-13991.810
SO7	-16075.170	-16175.110	-16431.100	-15879.550	-15459.900	-15666.670	-16262.320	-16097.180
SO8	-21204.750	-21022.850	-22654.960	-21585.340	-20998.590	-21241.970	-21467.070	-21711.230
SO9	-18658.640	-19016.100	-20116.790	-20055.580	-19144.360	-18923.360	-18471.520	-18950.940
SO10	-20867.720	-20909.090	-20004.560	-20570.590	-20766.540	-20175.780	-20879.650	-19901.390
SO11	-22710.660	-22928.920	-22962.710	-23957.630	-22749.310	-23234.450	-22912.660	-22826.890
SO12	-23789.290	-24337.460	-25753.890	-25082.220	-25101.100	-23296.130	-24216.780	-24799.350
SO13	-26957.050	-27497.900	-27014.580	-27892.850	-27264.950	-28239.670	-28433.970	-27851.490

**CALI\_AMPMLL (Master)** Sensor Sensitivity First Break Amplitude from Monopole Lower Transmitter Low Frequency Firing

Minimum/Nominal/Maximum -50000.000/0/50000.000 Unit

	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	-25442.960	-24735.160	-25209.240	-22664.130	-22323.680	-24733.720	-23376.510	-25739.050
SO2	-23558.210	-21595.150	-21838.810	-20771.640	-20666.320	-21346.130	-22801.460	-23304.620
SO3	-19333.490	-19682.390	-19024.500	-18880.160	-18256.830	-18155.390	-20222.400	-20499.110
SO4	-18347.130	-16318.530	-17672.920	-16771.100	-16423.950	-16222.890	-18235.260	-17620.980
SO5	-16883.380	-15734.240	-16227.740	-14999.050	-15345.150	-16077.140	-16654.710	-17571.420
SO6	-13970.160	-14196.050	-14056.590	-12847.810	-13686.760	-14840.610	-14076.010	-14029.200

SO7	-15309.060	-15122.000	-14759.040	-14410.130	-13931.020	-14384.500	-16113.930	-16060.690
SO8	-10483.290	-10111.580	-10495.070	-9954.338	-10584.480	-11168.520	-10969.900	-10756.660
SO9	-9590.472	-9383.746	-9746.552	-9772.129	-9912.813	-10046.010	-10055.900	-10080.270
SO10	-10031.880	-9654.435	-9418.357	-10074.790	-10526.160	-10485.440	-10831.560	-10011.140
SO11	-7653.657	-7597.293	-8111.223	-9085.440	-8856.790	-8974.865	-8771.314	-8153.298
SO12	-7008.213	-7104.097	-7860.061	-8175.452	-8625.854	-7836.529	-7861.252	-7616.085
SO13	-6672.962	-6859.264	-7422.948	-8181.672	-8398.325	-8452.218	-8018.949	-7243.709

### Vertical Casing Check Coefficients

Before (Measured): 13:32:29 27-Sep-2013 After:

CALI_SVCNA (Before)		Sensor Vertical Casing Check Normalized Amplitudes (Before/After/BACChange)							
Minimum/Nominal/Maximum		0.900/1.000/1.100							Unit
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8	
SO1	1.010	0.984	0.972	0.958	1.001	1.000	1.008	1.000	
SO2	1.018	1.026	0.989	0.984	0.998	1.014	1.002	0.992	
SO3	1.057	1.045	1.009	0.962	0.991	0.986	0.980	1.014	
SO4	1.050	1.063	1.013	0.993	1.007	0.985	0.973	0.983	
SO5	1.041	1.027	0.991	0.979	1.009	0.989	0.977	1.011	
SO6	1.031	1.005	0.989	0.980	1.002	0.998	0.997	1.008	
SO7	1.009	1.038	0.997	1.003	1.017	0.985	0.996	0.995	
SO8	1.017	1.021	0.980	0.975	1.015	1.003	0.995	0.997	
SO9	1.025	1.002	0.976	0.978	1.020	0.999	0.997	1.001	
SO10	1.047	1.010	0.966	0.965	0.977	1.002	0.998	1.029	
SO11	1.034	1.006	0.964	0.955	0.974	0.994	1.027	1.017	
SO12	1.050	1.013	0.999	0.963	0.976	0.994	1.001	1.025	
SO13	1.045	1.023	0.995	0.972	0.992	0.989	1.005	1.044	

CALI_SVCNA (After)		Sensor Vertical Casing Check Normalized Amplitudes (Before/After/BACChange)							
Minimum/Nominal/Maximum		0.900/1.000/1.100							Unit
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8	
SO1	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO2	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO3	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO4	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO5	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO6	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO7	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO8	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO9	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO10	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO11	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO12	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	
SO13	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	

CALI_SVCTDF (Before)		Sensor Vertical Casing Check Time (Before/After/BACChange)							
Minimum/Nominal/Maximum		-15/0/15							Unit
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8	
SO1	-2	0	1	0	0	2	3	-1	
SO2	-4	-3	0	0	0	4	3	-2	
SO3	4	4	1	0	2	7	7	0	





SO3	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO4	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO5	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO6	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO7	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO8	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO9	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO10	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO11	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO12	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO13	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE

### PPC-B (Powered Positioning device and Caliper.) Calibration - Run 1B

#### Primary Equipment :

PPC-B Element is used for usual logging at wellsite and check/diagnostics. PPC-B 8239

#### Auxiliary Equipment :

PPC-B Element is used for usual logging at wellsite and check/diagnostics. PPC-B 8239

#### Calibration Parameter :

ZERO\_REF (Small Size Ring) 3.500

PLUS\_REF (Large Size Ring) 8.000

#### Equipment Properties :

Caliper Arm Equipment Type for PPC PPC\_CAL\_STD

### PPC Check - Downhole Electronics Test

Before (Measured): 21:03:59 02-Oct-2013

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Positive Analog Voltage	V	Before		7	8.73516	9	
Minus Analog Voltage	V	Before		-9	-8.76475	-7	
Digital Voltage	V	Before		3.15	3.37538	3.45	
Digital Voltage for Analog Digital Converter	V	Before		4.5	5.02441	5.5	
Status Word of Analog Digital Converter Offset		Before		-8	1	8	

### PPC Check - Cartridge Temperature Test

Before (Measured): 21:03:59 02-Oct-2013

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Cartridge Temperature	degF	Before		-58	69.8466	482	

### PPC Check - Power Control LVDT Test

Before (Measured): 21:03:59 02-Oct-2013

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
LVDT5 Caliper Open Position	in	Before			-1.27979		
LVDT5 Full Power Position	in	Before			1.36316		

### PPC Diagnostics - Arm Close Position Test

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Caliper-arm 1, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 2, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 3, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 4, radius raw - 0	in	Master	----	----	----	----	
Power Control LVDT - 0	in	Master	----	----	----	----	
LVDT excitation - 0	V	Master	----	----	----	----	

### PPC Diagnostics - Downhole Electronics Test

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Positive Analog Voltage - 0	V	Master	----	----	----	----	
Minus Analog Voltage - 0	V	Master	----	----	----	----	

Digital Voltage - 0	V	Master	----	----	----	----	
Digital Voltage for Analog Digital Converter - 0	V	Master	----	----	----	----	
Status Word of Analog Digital Converter Offset - 0		Master	----	----	----	----	

### PPC Diagnostics - RBS Test

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Relative Bearing - 0	deg	Master	----	----	----	----	
Potentiometer Excitation - 0	V	Master	----	----	----	----	

### PPC Diagnostics - Cartridge Temperature Test

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Cartridge Temperature - 0	degF	Master	----	----	----	----	

### PPC Diagnostics - Power Control LVDT Test

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
LVDT5 Caliper Open Position - 0	in	Master	----	----	----	----	
LVDT5 Full Power Position - 0	in	Master	----	----	----	----	

### PPC LVDT5 Master Calibration - PPC CaliCoefficients

Master (EEPROM): 13:04:00 18-Sep-2013

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
CCS	in	Master	-1.51		-1.46399		
COP	in	Master	-1.31		-1.27979		
CPW	in	Master	1.41		1.36316		

### PPC Caliper Calibration - PPC CaliCoefficients

Before (Measured): 14:56:55 25-Sep-2013      After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RD1_GAIN		Before	1	0.85	1.02194	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD2_GAIN		Before	1	0.85	1.04236	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD3_GAIN		Before	1	0.85	1.04763	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD4_GAIN		Before	1	0.85	1.02226	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD1_OFFSET	in	Before	0	-2.2	-0.795066	2.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD2_OFFSET	in	Before	0	-2.2	-0.689726	2.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD3_OFFSET	in	Before	0	-2.2	-0.999738	2.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD4_OFFSET	in	Before	0	-2.2	-0.522726	2.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	

### PPC Caliper Calibration - PPC Accumulations

Before (Measured): 14:56:55 25-Sep-2013      After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Caliper 1 Zero Radius	in	Before	3.5	1.2	4.20284	5.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	
Caliper 2 Zero Radius	in	Before	3.5	1.2	4.01946	5.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	
Caliper 3 Zero Radius	in	Before	3.5	1.2	4.29515	5.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	

Caliper 4 Zero Radius	in	Before After After-Before	3.5 ---- ----	1.2 ---- ----	3.93515 ---- ----	5.6 ---- ----	
Caliper 1 Plus Radius	in	Before After After-Before	8 ---- ----	6.1 ---- ----	8.60621 ---- ----	9.7 ---- ----	
Caliper 2 Plus Radius	in	Before After After-Before	8 ---- ----	6.1 ---- ----	8.33659 ---- ----	9.7 ---- ----	
Caliper 3 Plus Radius	in	Before After After-Before	8 ---- ----	6.1 ---- ----	8.59056 ---- ----	9.7 ---- ----	
Caliper 4 Plus Radius	in	Before After After-Before	8 ---- ----	6.1 ---- ----	8.33718 ---- ----	9.7 ---- ----	

### EDTC-B (Enhanced Digital Telemetry Cartridge - Version B) Calibration - Run 1B

Primary Equipment :			
Enhanced Digital Telemetry Cartridge - B	EDTC-B	8298	
Calibration Parameter :			
Plus Reference (Jig minus background reference)	165		

### EDTC-B Accelerometer Calibration - EDTC-B Accelerometer Calibration

Before (Measured):	13:24:33 27-Sep-2013	Expired by 4 days					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.19	31.53	32.04	32.84	

### EDTC-B Memory Data - EDTC-B Memory Data

Master (EEPROM):	15:00:12 02-Oct-2013						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Initial PMT HV	V	Master			1388.000		
Accelerometer Serial Number		Master			358		
Accelerometer Coefficients - 0		Master	----	----	2.918	----	
Accelerometer Coefficients - 1		Master	----	----	0.000	----	
Accelerometer Coefficients - 2		Master	----	----	0.000	----	
Accelerometer Coefficients - 3		Master	----	----	0.000	----	
Accelerometer Coefficients - 4		Master	----	----	0.000	----	
Accelerometer Coefficients - 5		Master	----	----	0.000	----	
Accelerometer Coefficients - 6		Master	----	----	0.000	----	
Accelerometer Coefficients - 7		Master	----	----	-0.006	----	
Accelerometer Coefficients - 8		Master	----	----	0.000	----	
Accelerometer Coefficients - 9		Master	----	----	0.000	----	
Accelerometer Coefficients - 10		Master	----	----	0.000	----	
Accelerometer Coefficients - 11		Master	----	----	0.000	----	
Gamma-Ray Detector Serial Number		Master			7184		

### EDTC-B Gamma-Ray Calibration - Gamma Ray Coefficients

Before (Measured):	15:29:19 25-Sep-2013	After:					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Gamma Ray Gain		Before After After-Before	1.000 ---- ----	0.900 ---- ----	1.039 ---- ----	1.100 ---- ----	

### EDTC-B Gamma-Ray Calibration - Gamma Ray Accumulations

Before (Measured):	15:29:19 25-Sep-2013	After:					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before After After-Before	 ---- ----	0 ---- ----	37.179 ---- ----	120.000 ---- ----	
RGR Plus Measurement	gAPI	Before After After-Before	165.000 ---- ----	150.000 ---- ----	158.866 NOT DONE ----	180.000 ---- ----	

### LEH-QT (Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor) Calibration - Run 1B

**Primary Equipment :**

Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor LEH-QT

**HTEN Master Calibration - HTEN Master Calibration**

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HTEN Shop Gain		Master	1.000	0.800	NOT DONE	4.500	
HTEN Shop Offset	lbf	Master	0	-1000.000	NOT DONE	1000.000	

**HTEN Before Calibration - HTEN Before Calibration**

Before:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RHTE Zero Measurement - 0	lbf	Before	----	----	----	----	
RHTE Plus Measurement - 0	lbf	Before	----	----	----	----	
HTEN Gain - 0		Before	----	----	----	----	
HTEN Offset - 0	lbf	Before	----	----	----	----	

**Company:** LAMONT DOHERTY EARTH OBSERVATORY



**Well:** TW #3

**Field:** WILDCAT

**County:** ROCKLAND

**State:** NEW YORK

**DRILLERS QUICK LOOK**