

Company: CONOCOPHILLIPS CANADA RESOURCES CORP.

Well: COPRC LOON CREEK O-6

Field: LOON CREEK

Province: NORTHWEST TERRITORIES ***VERTICAL WELL***

PLATFORM EXPRESS
COMPENSATED NEUTRON
DUAL LITHOLOGY DENSITY LOG

Province:	NORTHWEST TERRITORIES		
Field:	LOON CREEK		
Location:	UNIT O SECTION 6		
Well:	COPRC LOON CREEK O-6		
Company:	CONOCOPHILLIPS CANADA RESOURCES CO		
Location:		UNIT O SECTION 6	Elev. K.B. 257.60 m
		300O066510127000	G.L. 252.40 m
		NORTHING: 7220618.3 EASTING: 593560.14	D.F. 257.30 m
		Permanent Datum:	Ground Level Elev.: 252.40
Log Measured From:		Kelly Bushing	5.20 m above Perm.Datum
Drilling Measured From:		Kelly Bushing	
API Serial No.	470	Longitude: 127° 0' 30.7" W	Latitude: 65° 5' 51.5" N

Logging Date	30-Jan-2013				
Run Number	1.1				
Depth Driller	600.00 m				
Schlumberger Depth	600.00 m				
Bottom Log Interval	575.78 m				
Top Log Interval	0.00 m				
Casing Driller Size @ Depth	508 mm @ 20.00 m				
Casing Schlumberger	20 m				
Bit Size	311.15 mm				
Type Fluid In Hole	GEL CHEM				
MUD	Density	Viscosity	88 s		
	Fluid Loss	PH			
Source of Sample			Flowline		
RM @ Meas Temp	1.86 ohm.m @ 0 degC				
RMF @ Meas Temp	1.15 ohm.m @ 0 degC				
RMC @ Meas Temp	2.84 ohm.m @ 0 degC				
Source RMF	RMC	Calculated	Calculated		
RM @ BHT	RMF @ BHT	0.76 @ 30.9	0.47 @ 30.9		
Max Recorded Temperatures			30.9 degC 34 38		
Circulation Stopped	Time		30-Jan-2013 02:30:00		
Logger on Bottom	Time		30-Jan-2013 13:05:01		
Unit Number	Location:	2187	JEFFREY TATLOCK	GRANDE PRAIRIE	
Recorded By	DAVID LAWRENCE				
Witnessed By					

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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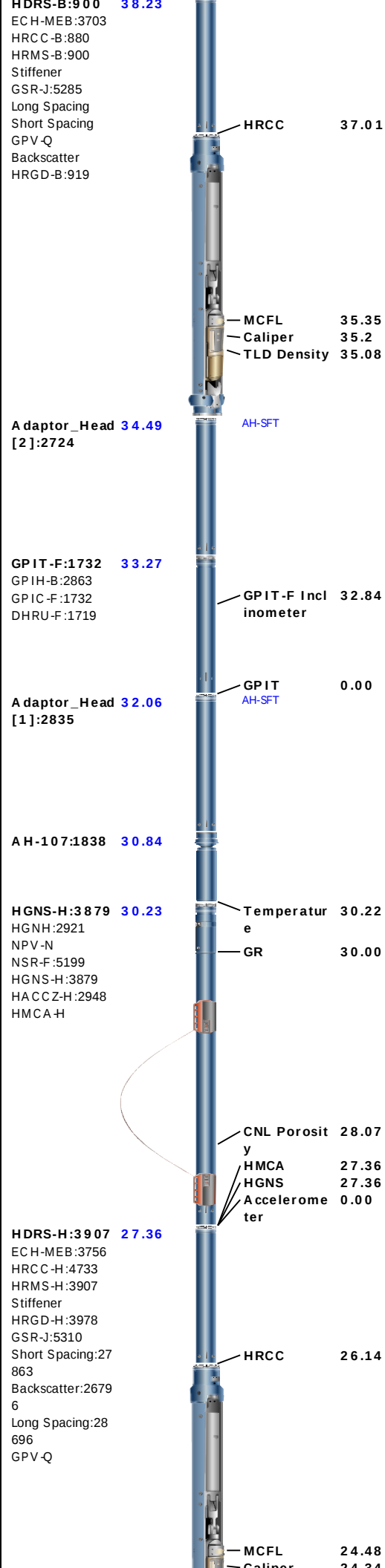
9.5 Parameter Listing

Borehole Fluids

Parameter(unit)	1.1					
Fluid Type	Water					
Fluid Name	GEL CHEM					
Max Recorded Temperatures (degC)	38					
Source of Sample	Flowline					
Salinity (ppm)	5500.91					
Density (kg/m3)	1150					
Funnel Viscosity (s)	88					
Fluid Loss (cm3)						
PH						
Date/Time Circulation Stopped	30-Jan-2013 02:30:00					
Date Logger on Bottom	30-Jan-2013					
Time Logger on Bottom	13:05:01					
Source RMF	Calculated					
RMC	Calculated					
RM @ Meas Temp (ohm.m@degC)	1.86 @ 0					
RMF @ Meas Temp (ohm.m@degC)	1.15 @ 0					
RMC @ Meas Temp (ohm.m@degC)	2.84 @ 0					
RM @ BHT (ohm.m@degC)	0.76 @ 30.9					
RMF @ BHT (ohm.m@degC)	0.47 @ 30.9					
RMC @ BHT (ohm.m@degC)	1.17 @ 30.9					
Total Solid (%)						
High Gravity Solids (%)						

Remarks and Equipment Summary

1.1: Toolstring				1.1: Remarks		
Equip name	Length	MP name	Offset	ALL PRESENTATIONS AND INTERVALS AS PER CLIENT REQUEST		
LEH-QT:2135	41.71			LOGGER REQUESTED AT: 07:15 30-JAN-2013		
LEH-QT:2135				LOGGER ARRIVED AT: 07:00 30-JAN-2013		
EDTC-B:9048	40.82			RIG READY AT: 07:45 30-JAN-2013		
EDTH-B:9060				RIG: BEAVER 2		
EDTG-A:79224				SLB CREW: GREG BOYD, MARK PORTER		
EDTC-B:9048				INDUCTION TOOL RUN WITH 38.1 MM STANDOFFS IN COMPUTE STANDOFF MO		
		CTEM	39.75	DSI RUN IN BCR MODE WITH MONOPOLE AND STONELY ACQUISITION ALSO		
		ACCZ	0.00	DSI RUN WITH CMEZ CENTRALIZERS		
		HV	0.00	PPC RUN WITH 4 ARMS POWERED TO		
		Gamma Ray	39.18			
		TelStatus	38.84			
HTBC-H:3701	38.84					
ECH-TAA:1801		Temperatur	38.23			
HMCA-H:3701		e				
		HMCA	38.23			



LEVEL 2 TO CENTER DSI

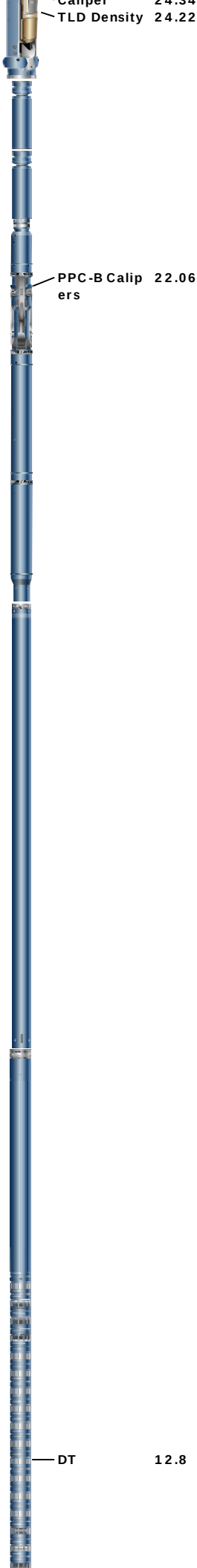
NEUTRON TOOL RUN WITH DUAL AXIS BOWSPRING

TLD2 RUN 90 DEGREES OFFSET FROM TLD

PEX TOOLS DECOUPLED FROM SONIC TOOL USING KNUCKLES

RUGOSE HOLE CREATES ELEVATED DENSITY CORRECTIONS, BOTH DENSITY TOOLS DATA AGREE

PH AND FLUID LOSS VALUES NOT PROVIDED



AH-184[2]:38 23.63
14

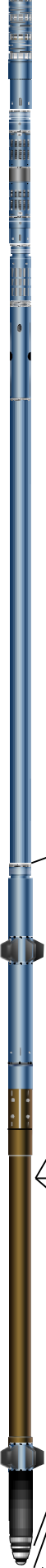
AH-184[1]:38 23.02
03

PPC-B:8221 22.41
PPC-B:8221

PPC-B Calipers 22.06

DSST-B:8234 20.42
ECH-SD:8220
SPAC-B:8234
SMDR-BD:8312
SSIJ-BA:8235
SMDX-AA:8227

DT 12.8



A IT-M:135
AMIS:135
AMRM:135

4.88

PWF

4.88

Power Supply
Induction
Temperature

2.41
2.41
2.41

SP
Mud Resistivity
Head Tension
TOOL_ZERO

0.03
0.00

Lengths are in m
Maximum Outer Diameter = 177.800 mm
Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

Depth Summary

Depth Control Parameters

1.1

Conveyance Type	Wireline		
Log Sequence	FIRST LOG IN THE WELL		
Rig Up Length at Surface (m)	0.00		
Rig Up Length at Bottom (m)	0.00		
Rig Up Length Correction (m)	0.00		
Stretch Correction (m)	0.00		
Tool Zero Reference Check at Surface (m)	0.10		
Depth Remark Parameters	1.1		
Depth Remark 1	SCHLUMBERGER DEPTH CONTROL PROCEDURES FOLLOWED		
Depth Remark 2	IDW USED AS PRIMARY DEPTH CONTROL		
Depth Remark 3	Z-CHART USED AS SECONDARY DEPTH CONTROL		
Depth Remark 4	ALL LOGS CORRELATED TO DOWN LOG OVER BOTTOM 100 M		
Depth Measuring Device	1.1		
Type	IDW-B		
Serial Number	1734		
Calibration Date	13-NOV-2012		
Calibrator Serial Number	4		
Calibration Cable Type	7-46 PXS		
Wheel Correction 1	-5		
Wheel Correction 2	-4		
Tension Device	1.1		
Type	CMTD-B/A		
Serial Number	1223		
Calibration Date	17-JAN-2013		
Calibrator Serial Number	1142		
Calibration Points	10		
Calibration RMS	26		
Calibration Peak Error	45		
Logging Cable	1.1		
Type	7-46P-XS		
Serial Number	6075		
Logging Cable Length (m)	4500.00		

1.1

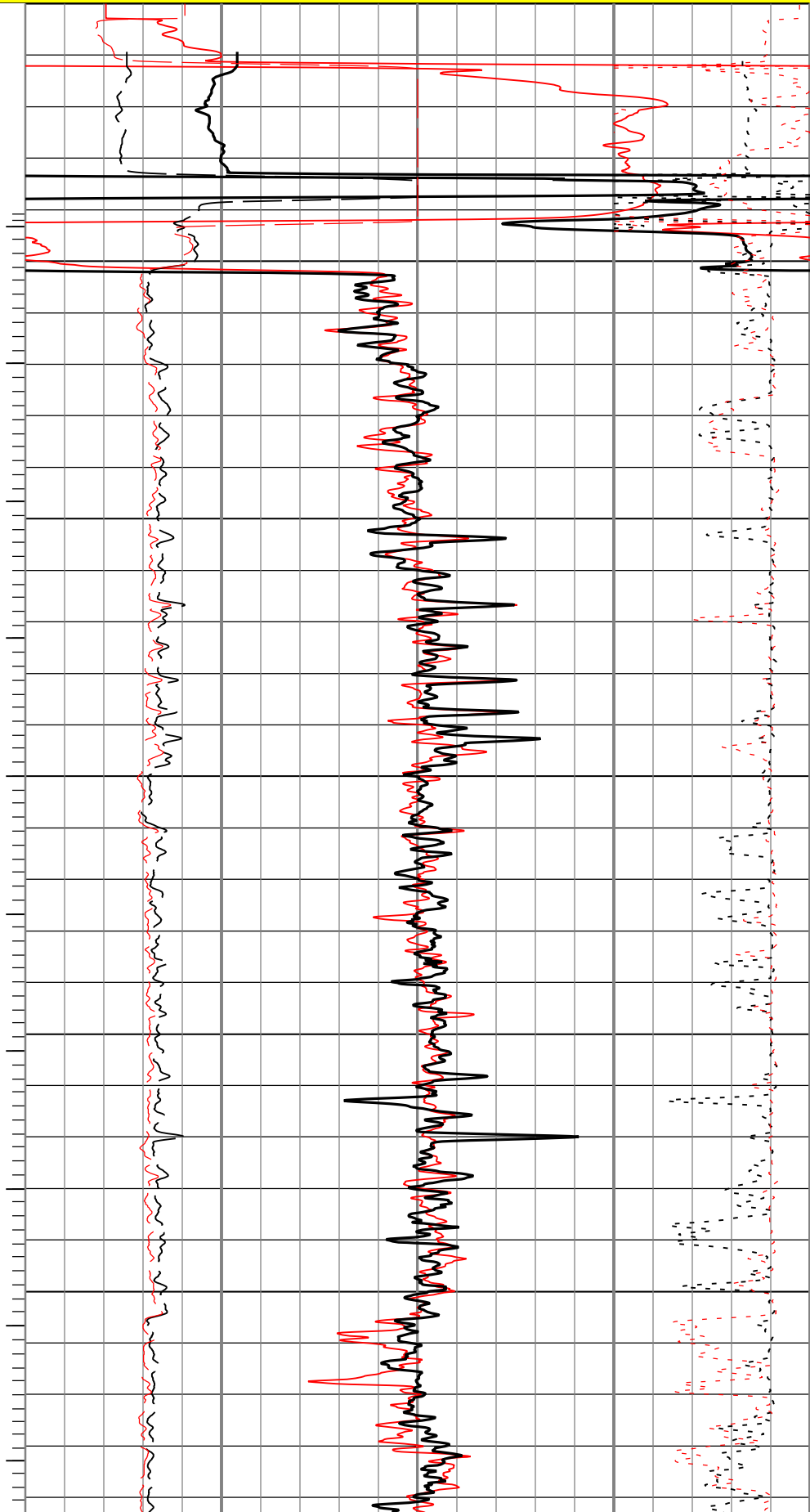
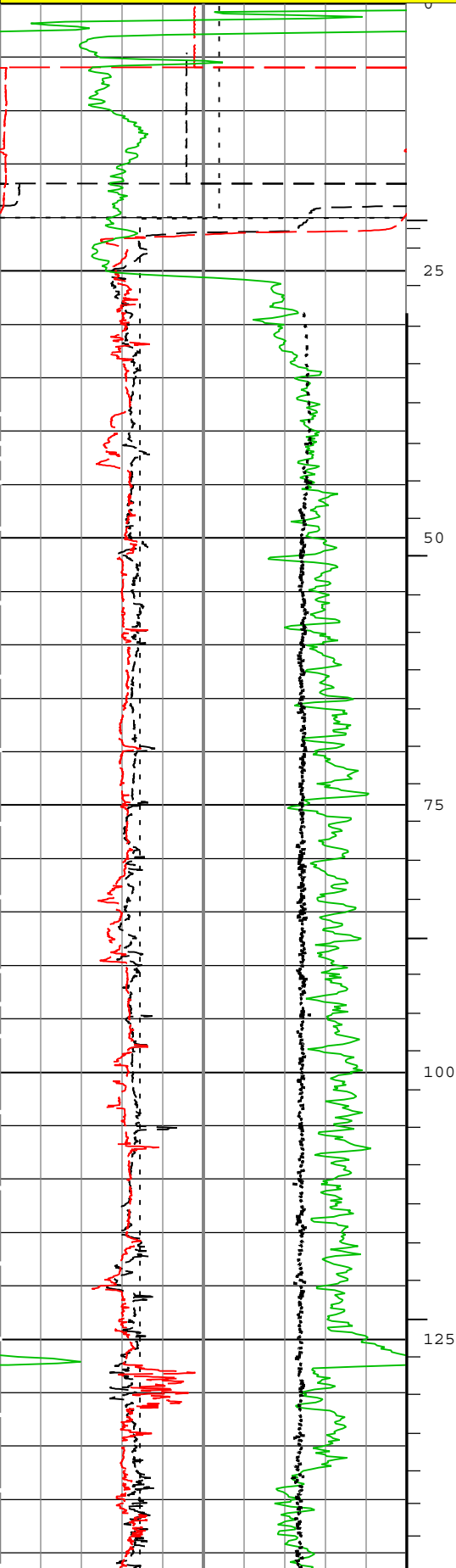
Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
IHV	Integrated Hole Volume	HVAS	43.26	m3
ICV	Integrated Cement Volume	HVAS, FCD	17.03	m3

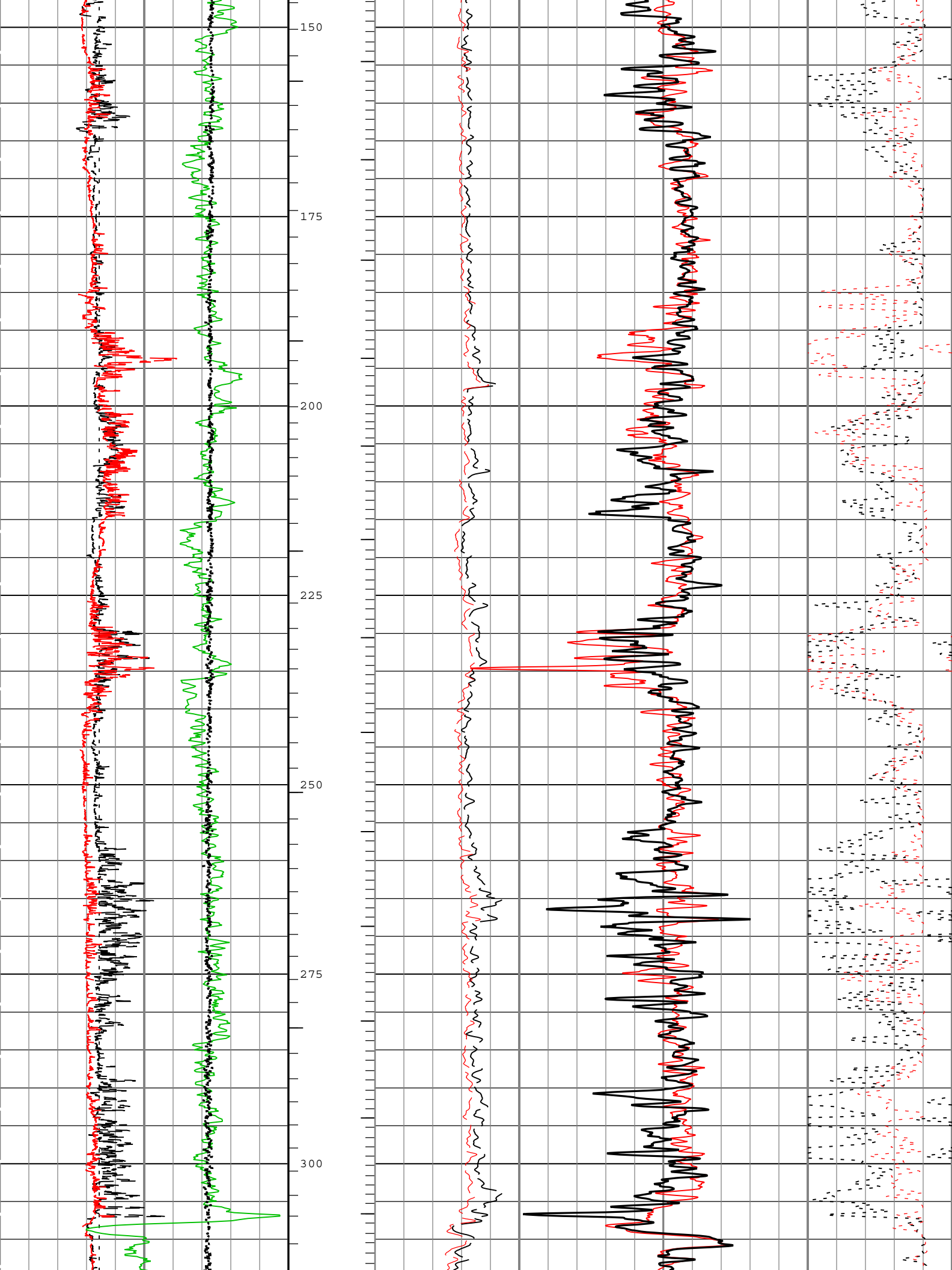
Software Version	
Acquisition System	Version
MaxWell	3.1.9755.0
Application Patch	SP-20120723-3.1.9755.1112
	EXP_APL-MASTAXIS-3.1.9755.1221
	EXP_API-NEXTA-3 1 9755 1340

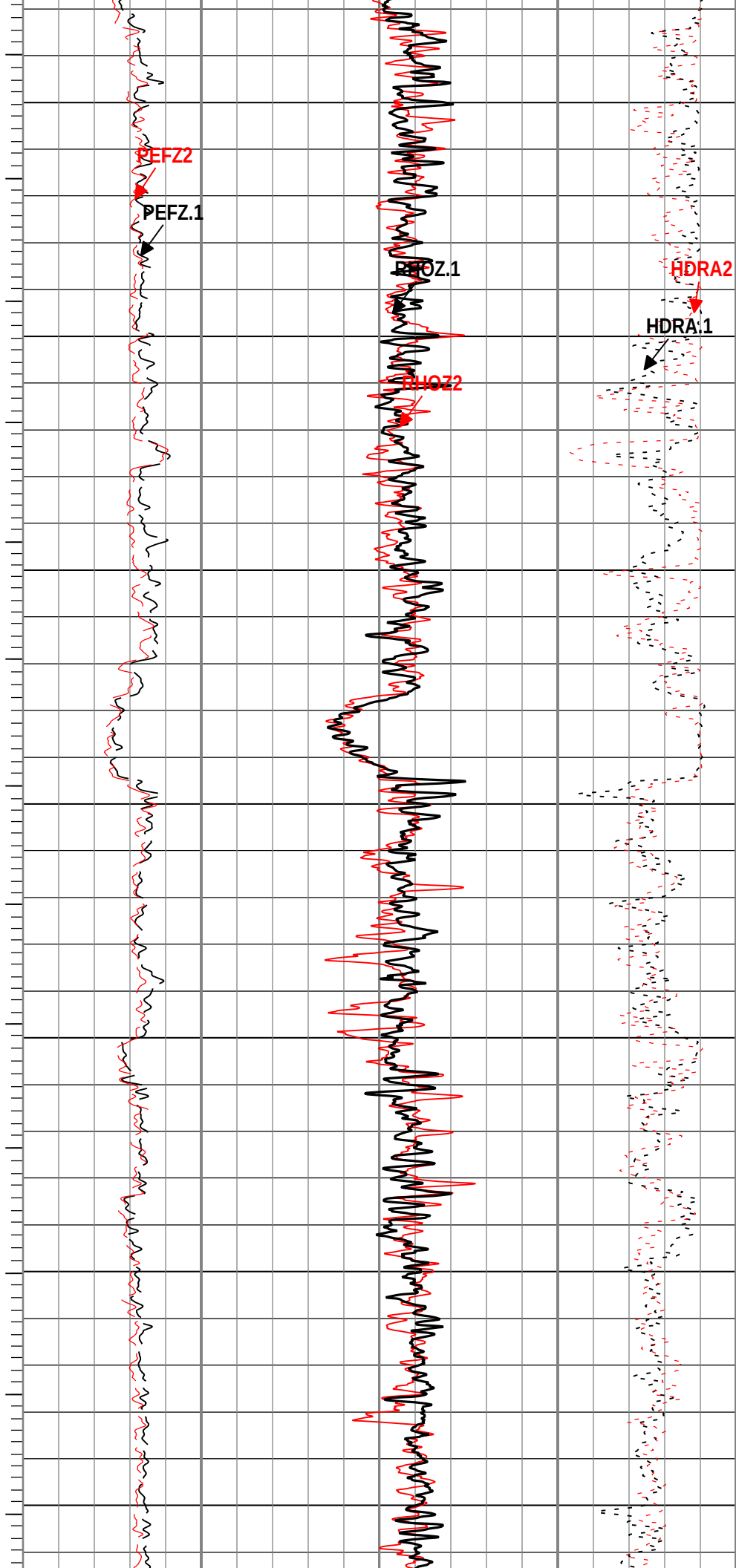
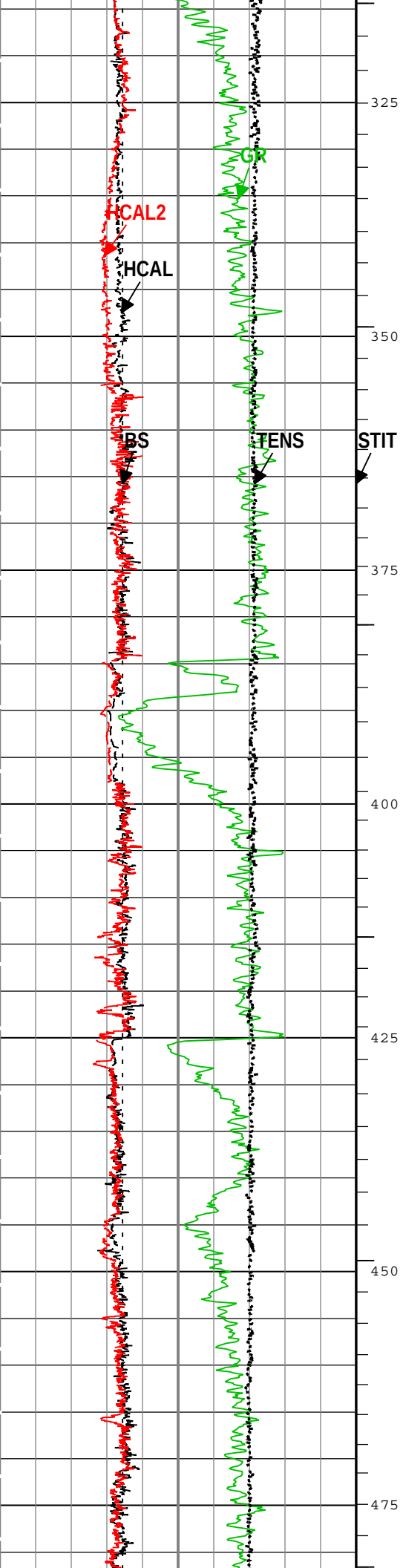
225	mm	475
HCAL2		
GR		
0	gAPI	150

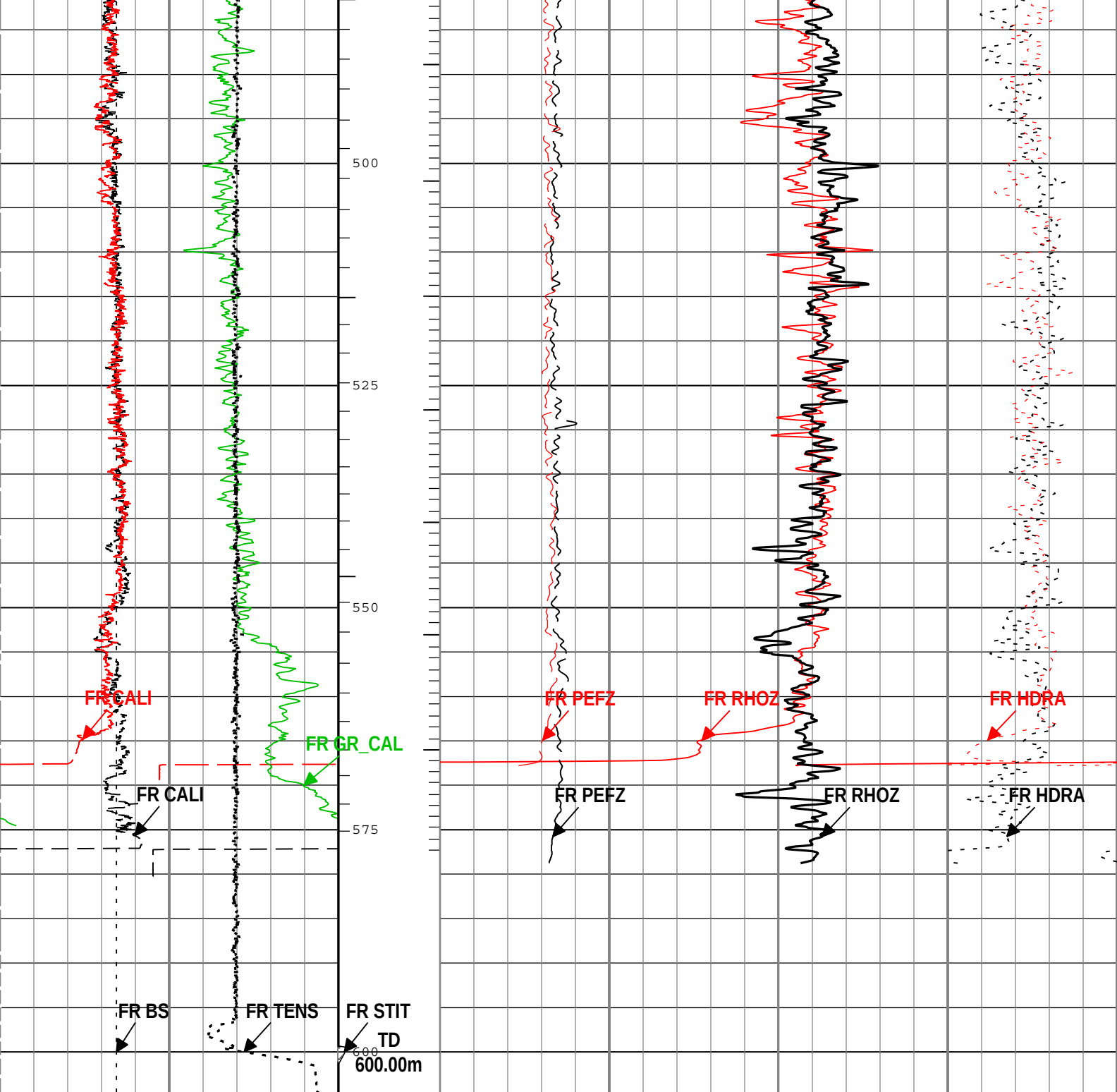
2000	kg/m3	3000
Standard Resolution Formation Photoelectric Factor (PEFZ).1 HDRS-H		
0		20
PEFZ2		
0		20

MAIN PASS: PEX-FORMATION BULK DENSITY LOG









MAIN PASS: PEX-FORMATION BULK DENSITY LOG

Bit Size (BS)		
225	mm	475
HCAL		
225	mm	475
HCAL2		
225	mm	475
GR		
0	gAPI	150
Cable Tension (TENS)		
25000	N	0

RHOZ2		
2000	kg/m3	3000
Standard Resolution Formation Density (RHOZ).1 HDRS-H		
2000	kg/m3	3000
Standard Resolution Formation Photoelectric Factor (PEFZ).1 HDRS-H		
0		20
PEFZ2		
0		20

Density Standoff
Correction (HDRA).1
HDRS-H

200 kg/m3 -50

ICV - Integrated Cement Volume every 1.00 (m3)

IHV - Integrated Hole Volume every 0.10 (m3)

TIME_1900 - Time Marked every 60.00 (s)

IHV - Integrated Hole Volume every 1.00 (m3)

ICV - Integrated Cement Volume every 0.10 (m3)

Description: MCFL processing LQC for Platform Express Format: Log (DENSITY-600) Index Scale: 1:600 Index Unit: m Index Type: Measured Depth

Creation Date: 30-Jan-2013 18:38:21

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BS	Bit Size	WLSESSION	Depth Zoned	mm
CALI_SHIFT.1	CALI Supplementary Offset	HDRS-H	9.6	mm
CALI_SHIFT.2	CALI Supplementary Offset	HDRS-B	7	mm
CBLO	Casing Bottom (Logger)	WLSESSION	20	m
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	508	mm
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	1150	kg/m3
DFT	Drilling Fluid Type	Borehole	Water	
DHC.1	Density Hole Correction	HDRS-H	Bit Size	
DHC.2	Density Hole Correction	HDRS-B	Bit Size	
FCD	Future Casing (Outer) Diameter	WLSESSION	244.5	mm
HVAS	Borehole area measurement selector for hole volume computation	Borehole	AREA	
HVCS	Integrated Hole Volume Caliper Selection	Borehole	Measured Area	
NPRM.1	HRDD Nuclear Processing Mode	HDRS-H	High Resolution	
NPRM.2	HRDD Nuclear Processing Mode	HDRS-B	High Resolution	
TD	Total Measured Depth	Borehole	600	m

Depth Zone Parameters			
Parameter	Value	Start (m)	Stop (m)
BS	609.6	0	20
BS	311.15	20	604.6
All depth are actual.			

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
HRGD_BRD_TYPE.1	HRGD Board Type	HDRS-H	WITH_HET	
HRGD_BRD_TYPE.2	HRGD Board Type	HDRS-B	WITHOUT_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	548.64	m/h
STSO_HRDD.1	Temperature Source for the Density Algorithm	HDRS-B	Decaytime algorithm	

1.1

Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	HVAS, FCD	17.03	m3
IHV	Integrated Hole Volume	HVAS	43.26	m3

Software Version

Acquisition System		Version	
MaxWell		3.1.9755.0	
Application Patch		SP-20120723-3.1.9755.1112	
		EXP_APL-MASTAXIS-3.1.9755.1221	
		EXP_APL-NEXTA-3.1.9755.1340	
Computation	Description	Version	
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels	3.1.9755.0	
HENVIR	Computation Ensemble for the HGNS Neutron environmental corrections	3.1.9755.0	
DepthCorrection	DepthCorrection	3.1.9755.0	
Tool Elements	Description	Software Version	Firmware Version
HRCC-H	HILT High-Resolution Control Cartridge, 150 degC	3.1.9755.0	2.0
HRGD-H	HILT Resistivity Gamma-Ray Density Device, 150 degC	3.1.9755.0	3.0
HRGD-B	HILT Resistivity Gamma-Ray Density Device, 125 degC	3.1.9755.0	3.0
HGNS-H	HILT Gamma-Ray and Neutron Sonde, 150 degC	3.1.9755.0	2.0
HRCC-B	HILT High-Resolution Control Cartridge, 125 degC	3.1.9755.0	2.0

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
1.1	Log[3]:Up	Up	28.86 m	604.59 m	30-Jan-2013 1:43:56 PM	30-Jan-2013 3:25:45 PM	0.00 m	true

All depths are referenced to toolstring zero

Log

1.1: Log[3]:Up

Description: MCFL processing LQC for Platform Express Format: Log (NUC-240) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth
Creation Date: 30-Jan-2013 18:38:27

Channel	Source	Sampling
BS	Borehole	6in
CALI.1	HDRS-H:HRCC-H:HRCC-H	1in
CALI.2	HDRS-B:HRCC-B:HRCC-B	1in
DPHI_SAN.1	HDRS-H:HRMS-H:HRGD-H	6in
DPHI_SAN.2	HDRS-B:HRMS-B:HRGD-B	6in
GR_CAL	HGNS-H:HGNS-H:HGNS-H	6in
HDRA.1	HDRS-H:HRMS-H:HRGD-H	2in
HDRA.2	HDRS-B:HRMS-B:HRGD-B	2in
ICV	Borehole	6in
IHV	Borehole	6in
NPOR_SAN	HGNS-H:HGNS-H:HGNS-H	6in
PEFZ.1	HDRS-H:HRMS-H:HRGD-H	2in
PEFZ.2	HDRS-B:HRMS-B:HRGD-B	2in
STIT	DepthCorrection	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in

- └ ICV - Integrated Cement Volume every 0.10 (m3)
 - └ IHV - Integrated Hole Volume every 1.00 (m3)
 - └ IHV - Integrated Hole Volume every 0.10 (m3)
- └ ICV - Integrated Cement Volume every 1.00 (m3)

TIME 1900 - Time Marked every 60.00 (s)

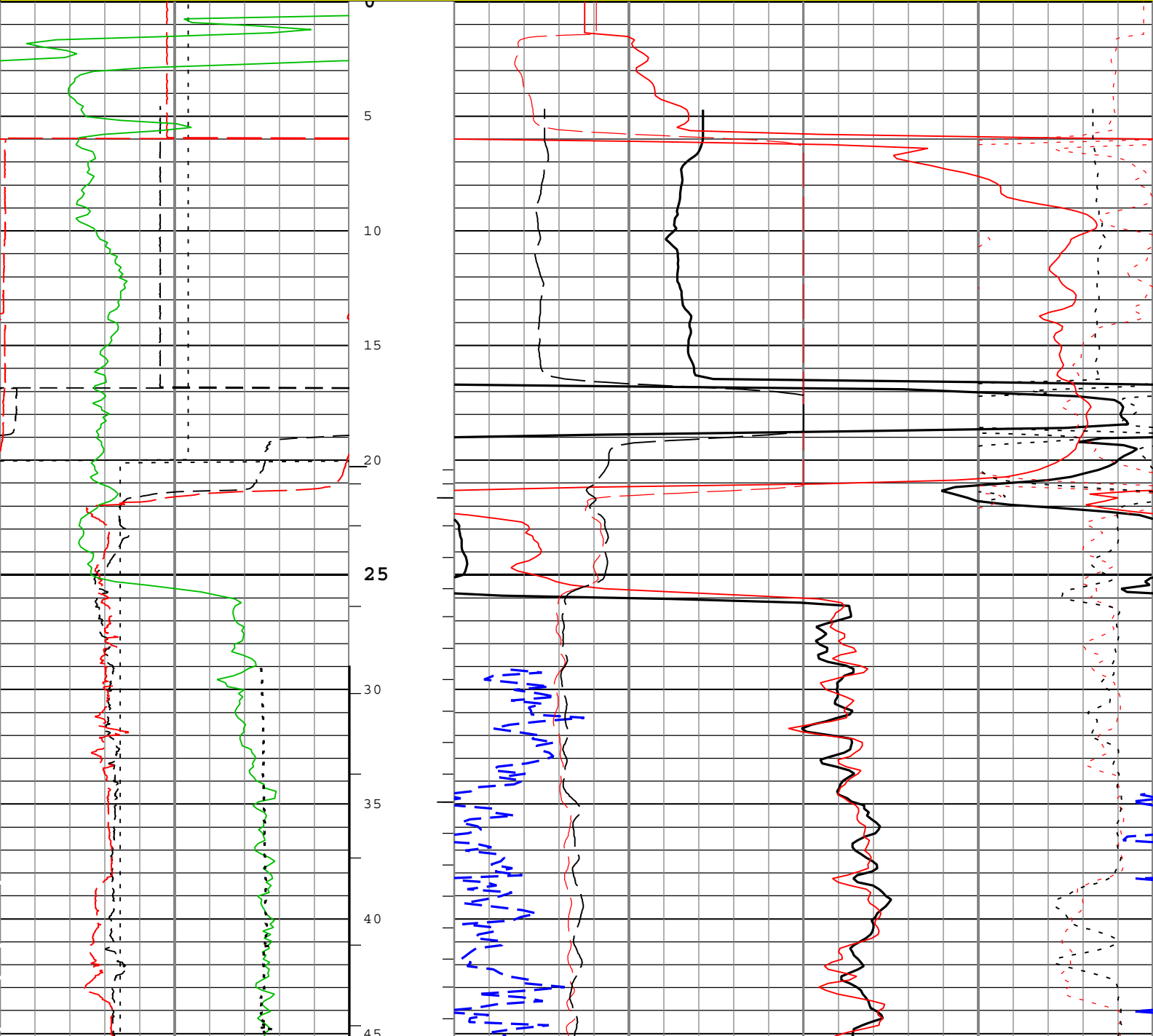
HDRA2		
200	kg/m3	-50

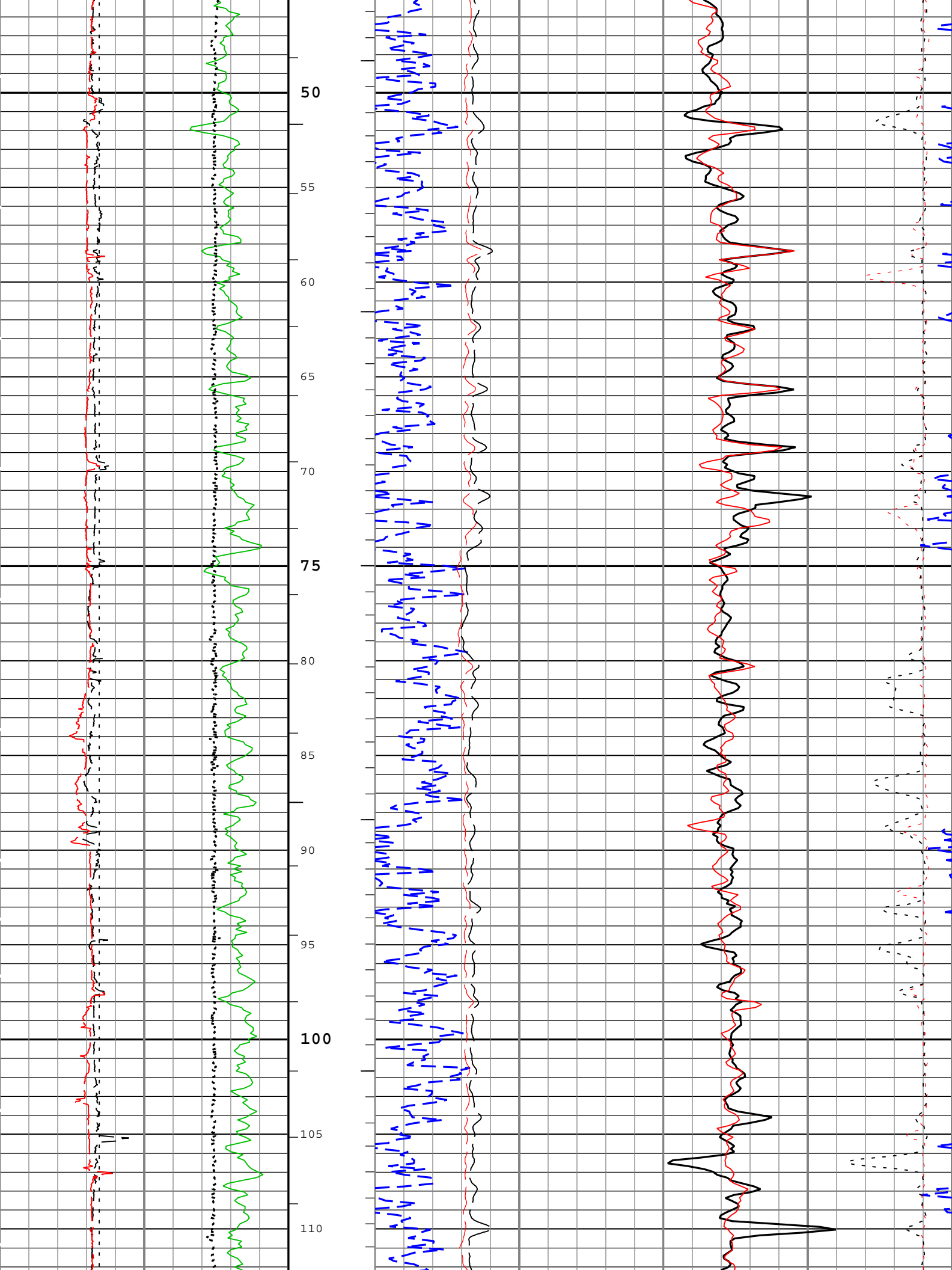
Density Standoff Correction (HDRA).1 HDRS-H		
200	kg/m3	-50

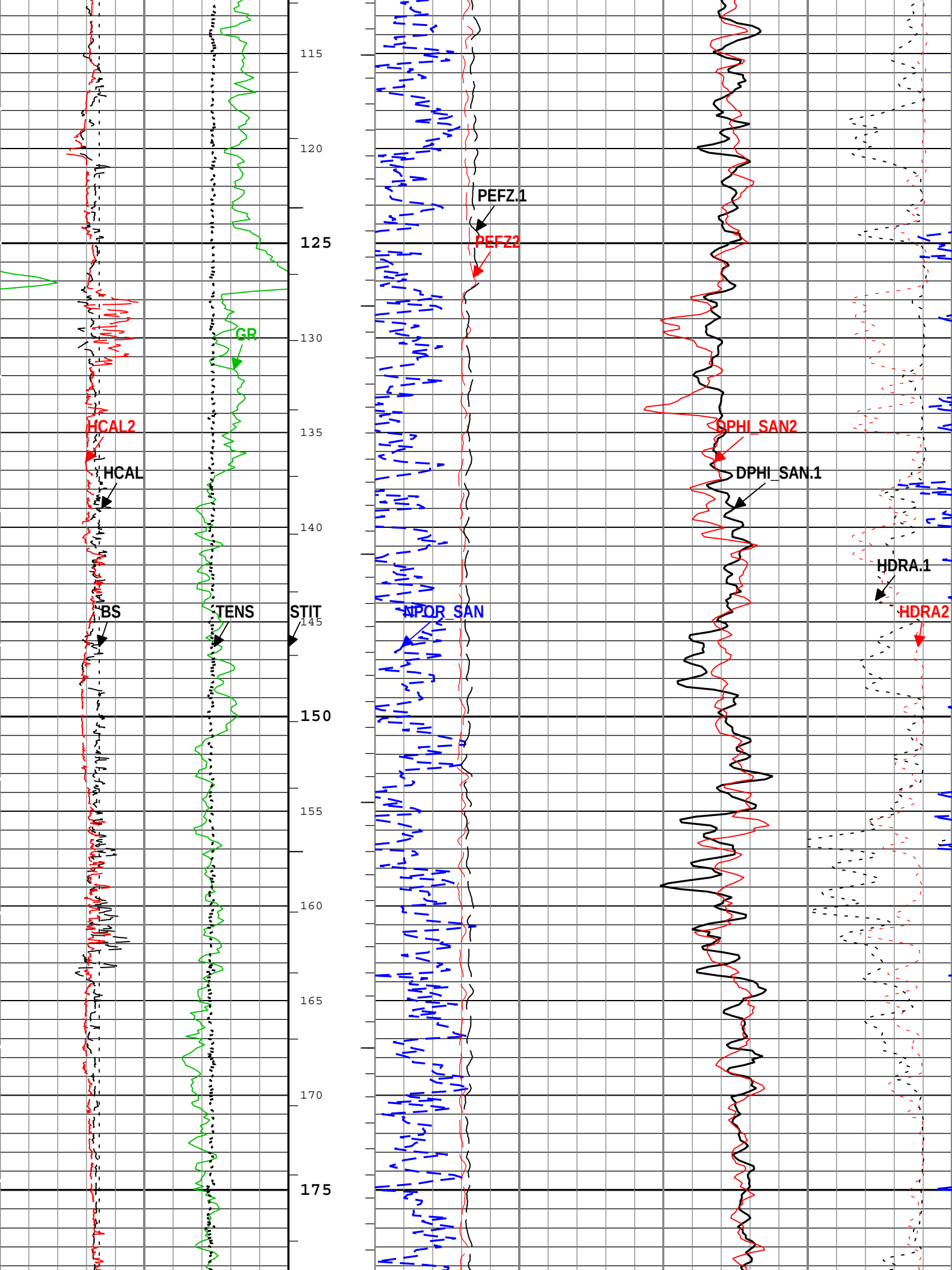
Cable Tension (TENS)		
25000	N	0
Bit Size (BS)		
225	mm	475
HCAL		
225	mm	475
HCAL2		
225	mm	475
GR		
0	gAPI	150

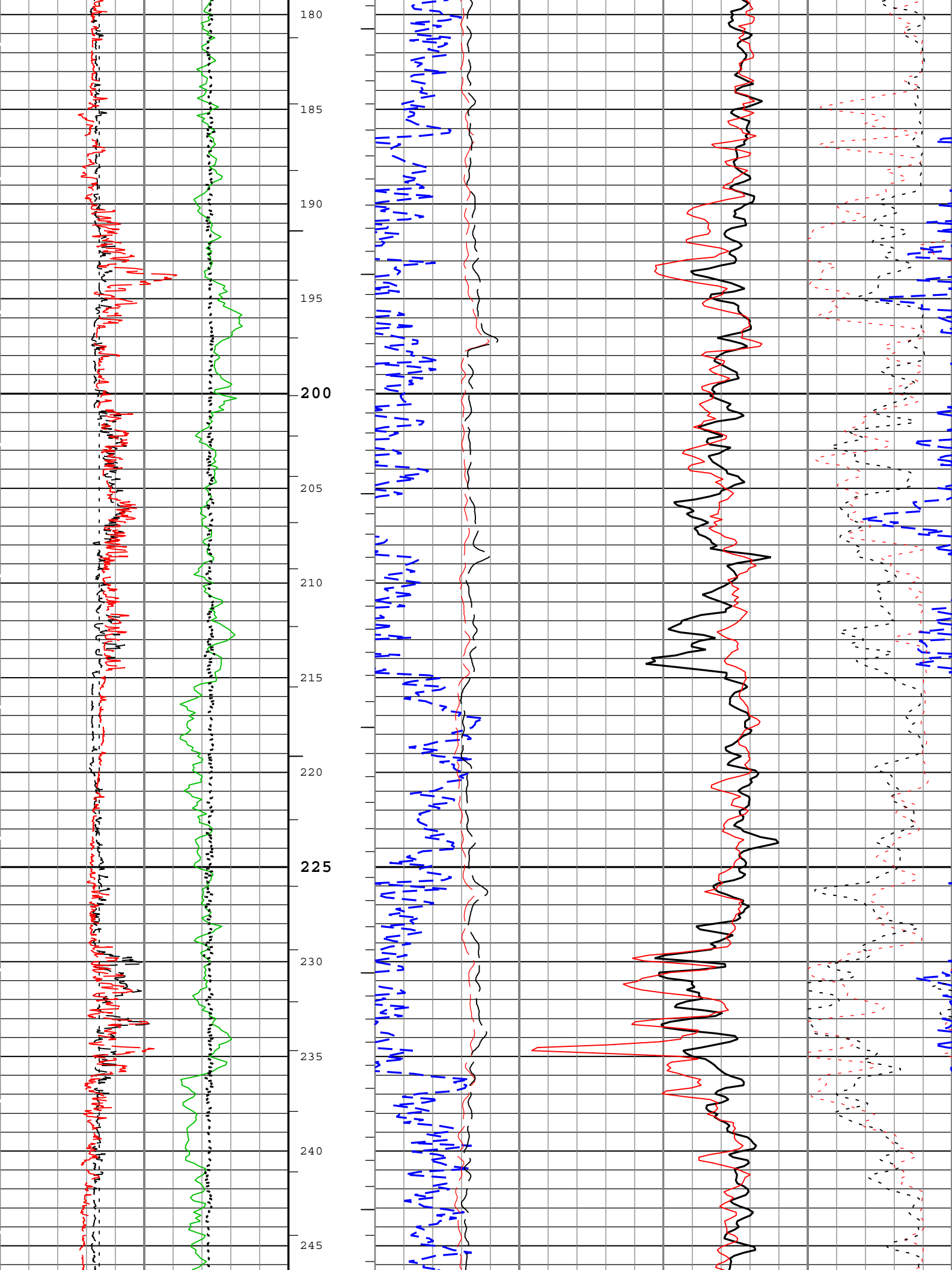
Enhanced Thermal Neutron Porosity (matrix Sandstone) (NPOR_SAN) HGNS-H		
0.45	m3/m3	-0.15
Density Porosity (matrix Sandstone) (DPHI_SAN).1 HDRS-H		
0.45	m3/m3	-0.15
DPHI_SAN2		
0.45	m3/m3	-0.15
PEFZ2		
0		20
Standard Resolution Formation Photoelectric Factor (PEFZ).1 HDRS-H		
0		20

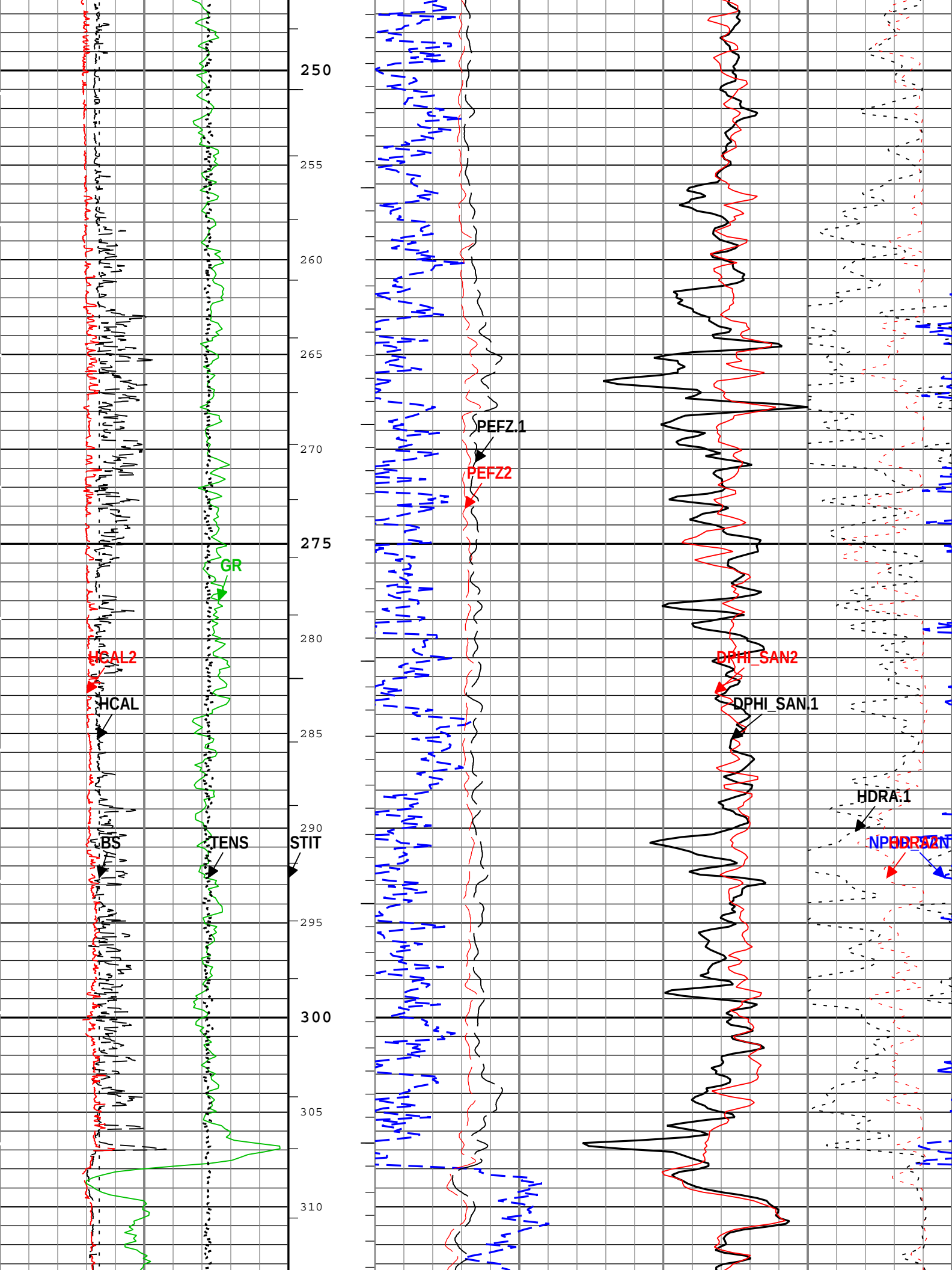
MAIN PASS: PEX-NEUTRON POROSITY LOG - SANDSTONE 2650 KG/M3

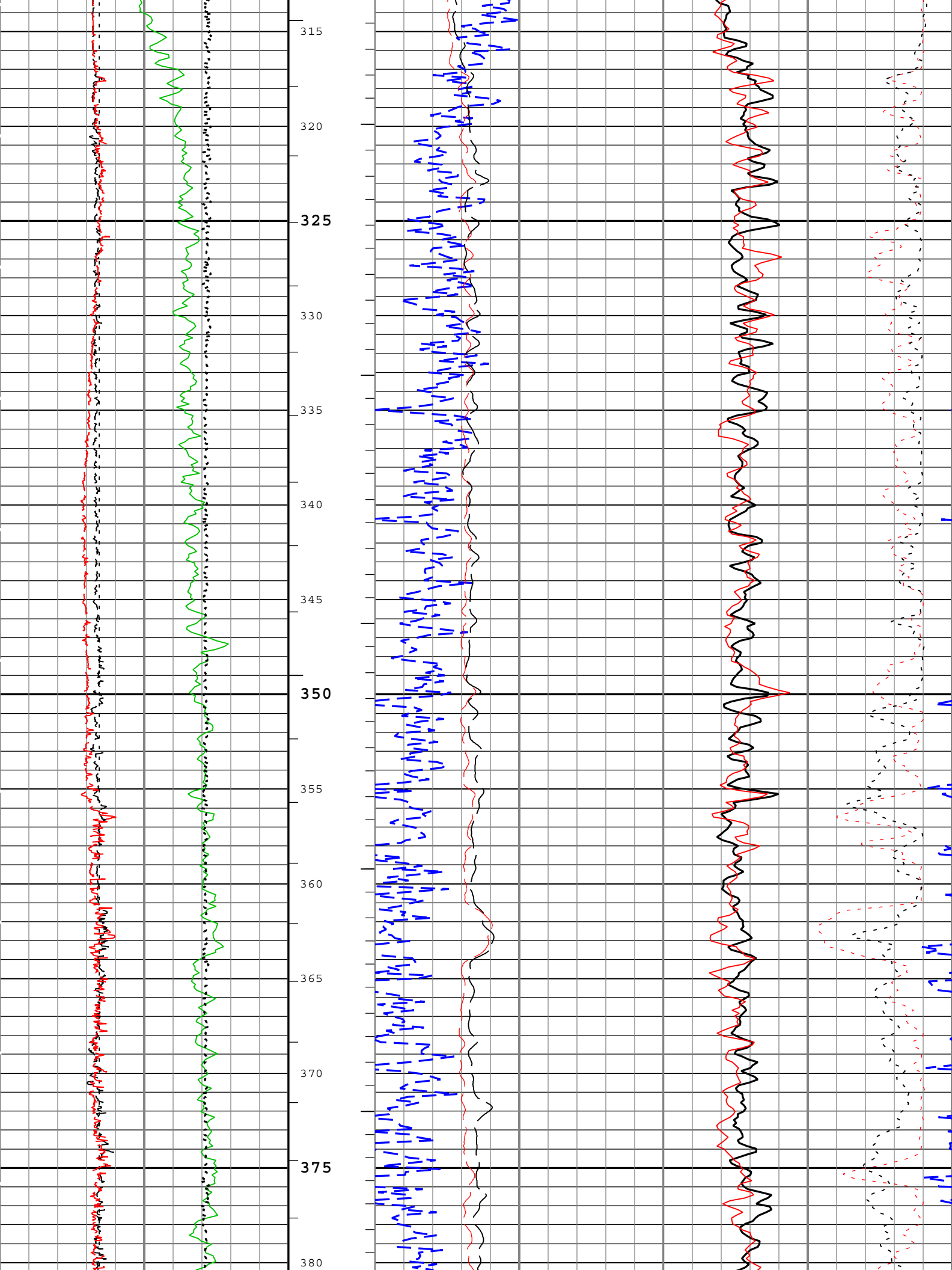


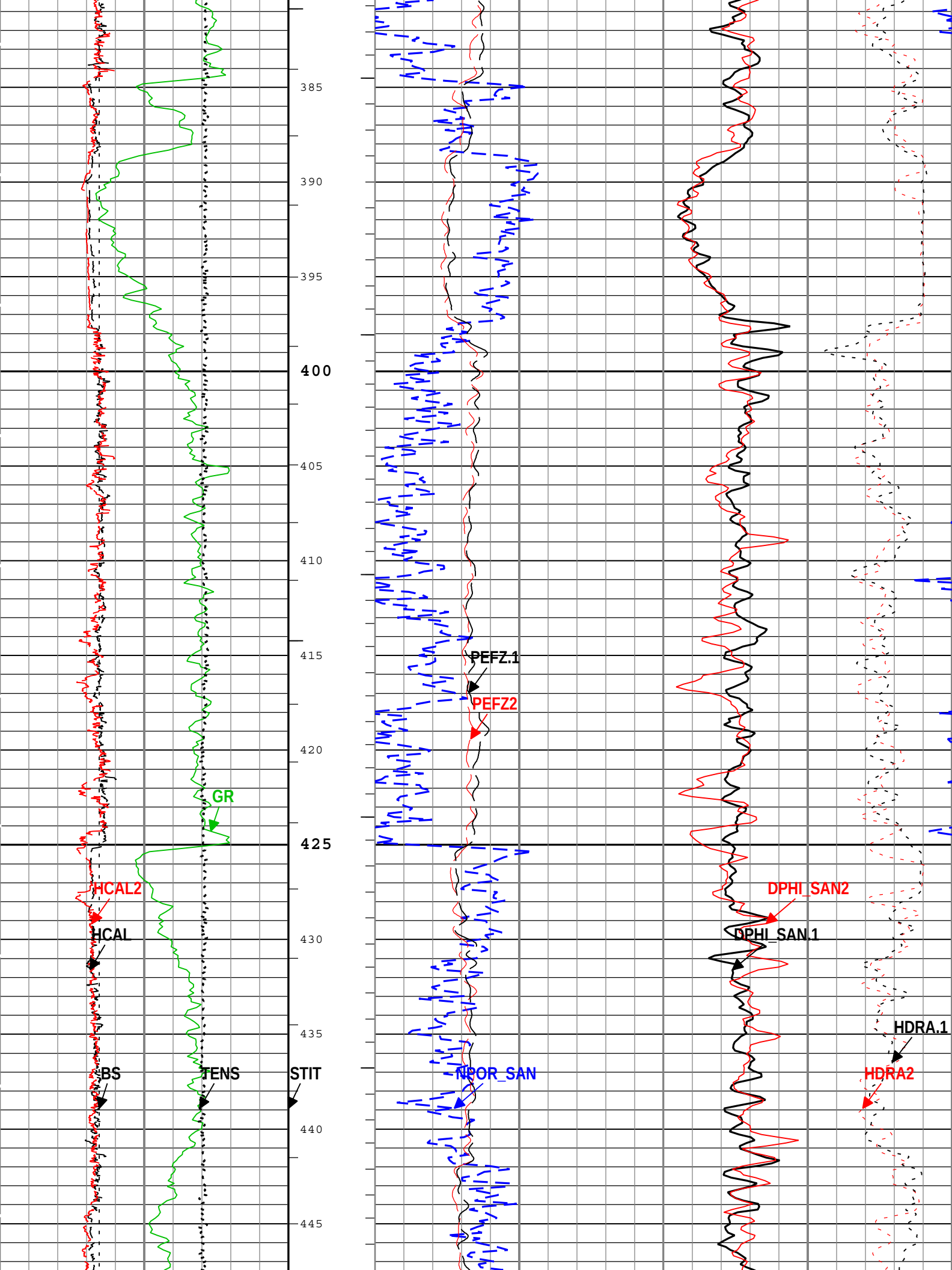


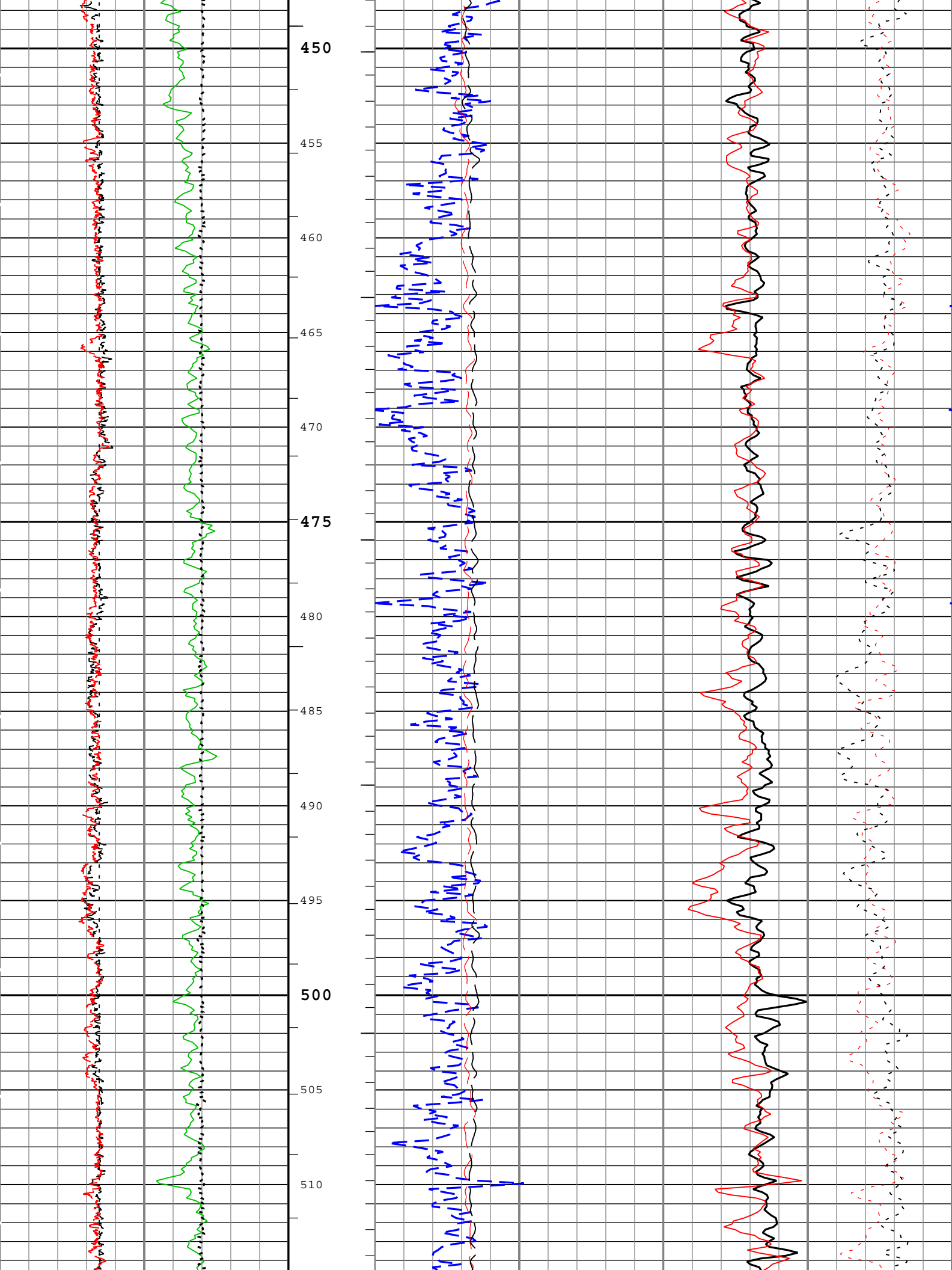


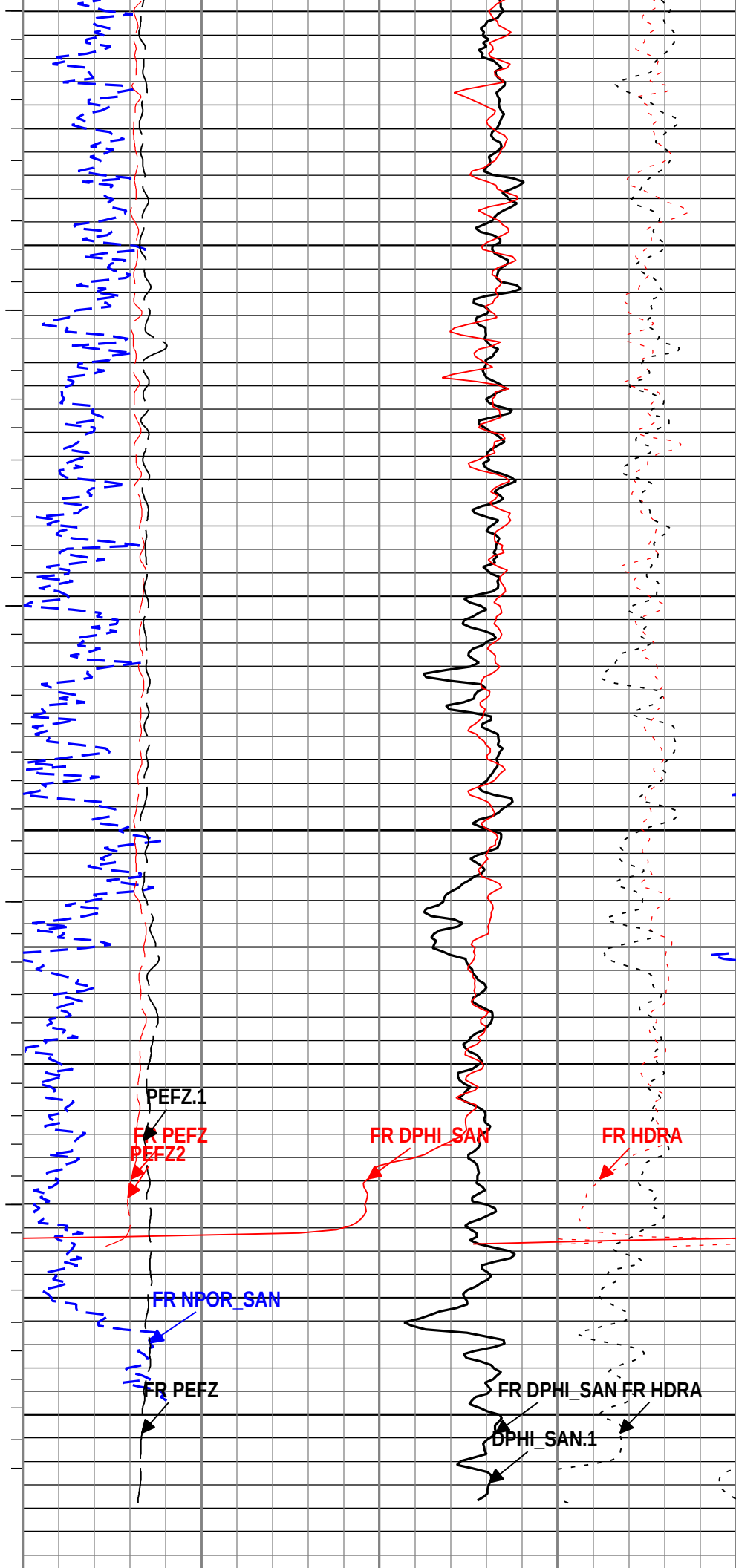
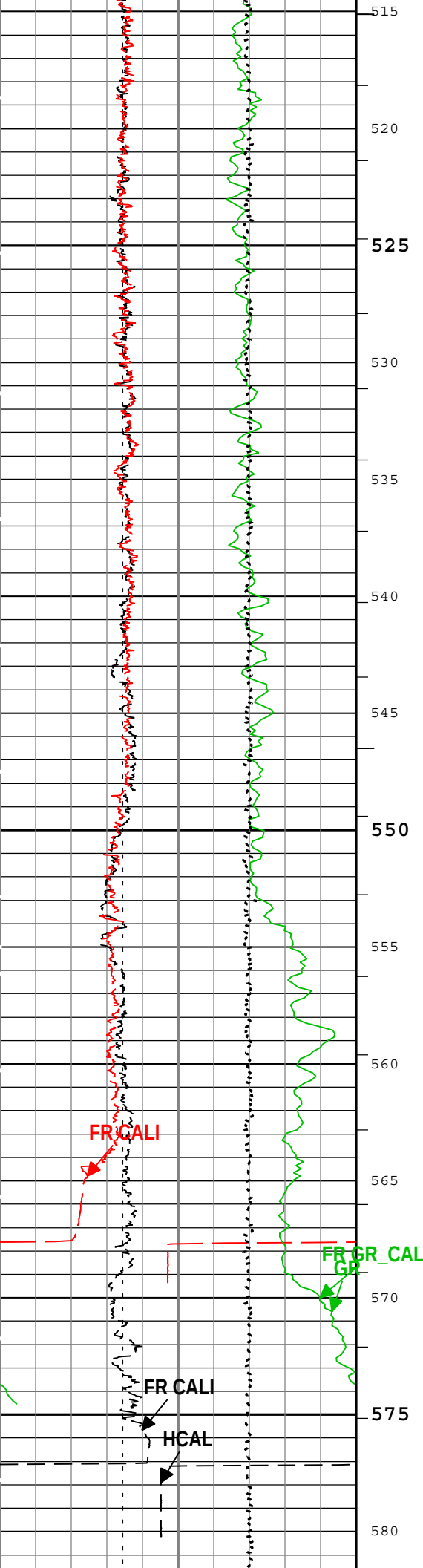


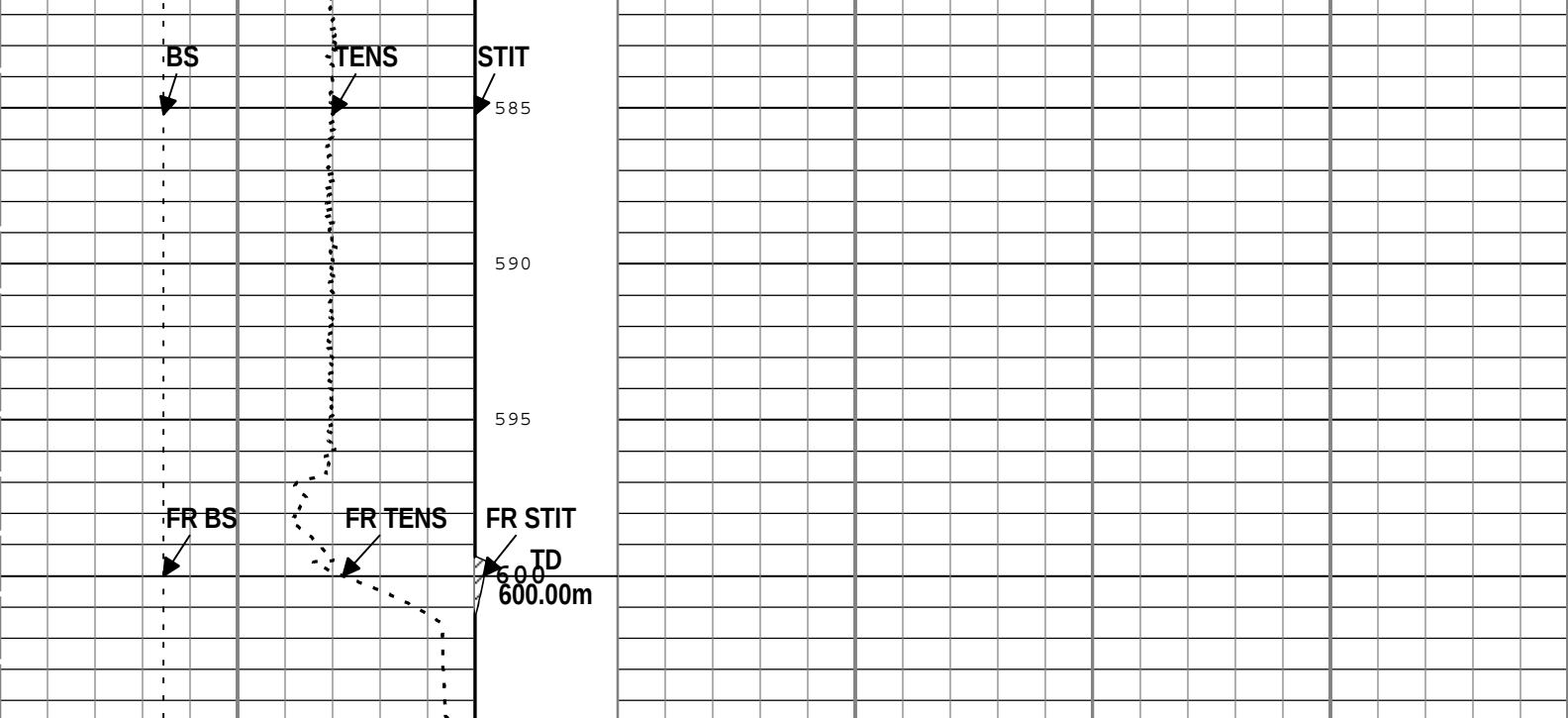












MAIN PASS: PEX-NEUTRON POROSITY LOG - SANDSTONE 2650 KG/M3

Bit Size (BS)		
225	mm	475
HCAL		
225	mm	475
HCAL2		
225	mm	475
GR		
0	gAPI	150
Cable Tension (TENS)		
25000	N	0

Enhanced Thermal Neutron Porosity (matrix Sandstone) (NPOR_SAN) HGNS-H		
0.45	m3/m3	-0.15
Density Porosity (matrix Sandstone) (DPHI_SAN).1 HDRS-H		
0.45	m3/m3	-0.15
DPHI_SAN2		
0.45	m3/m3	-0.15
PEFZ2		
0		20
Standard Resolution Formation Photoelectric Factor (PEFZ).1 HDRS-H		
0		20

HDRA2		
200	kg/m3	-50
Density Standoff Correction (HDRA).1 HDRS-H		
200	kg/m3	-50

TIME_1900 - Time Marked every 60.00 (s)

— ICV - Integrated Cement Volume every 1.00 (m3)

— IHV - Integrated Hole Volume every 0.10 (m3)

— IHV - Integrated Hole Volume every 1.00 (m3)

— ICV - Integrated Cement Volume every 0.10 (m3)

Description: MCFL processing LQC for Platform Express Format: Log (NUC-240) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth
Creation Date: 30-Jan-2013 18:38:27

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
AZ_ENABLE	Z-Axis Acceleration Channel Enabled for Real-Time Depth Correction	DepthCorrection	No	
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Depth Zoned	
BS	Bit Size	WLSESSION	Depth Zoned	mm

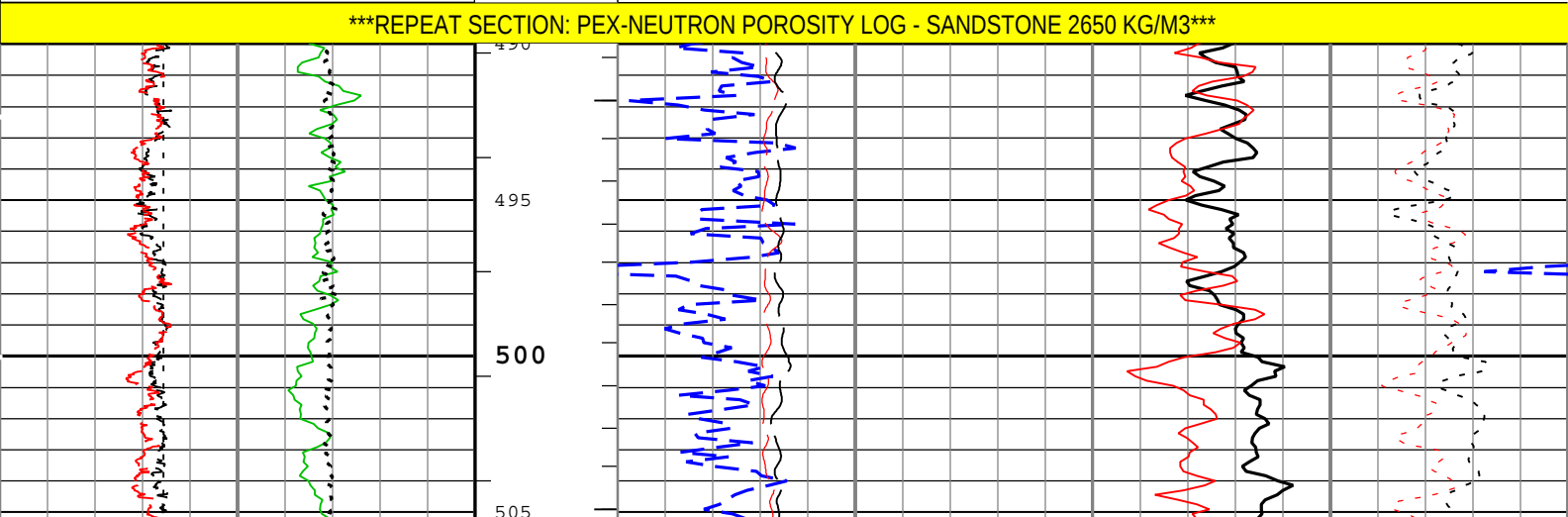
BSAL	Borehole Salinity	Borehole	5500.91	ppm
BSCO	Borehole Salinity Correction Option	HGNS-H	No	
CALI_SHIFT.1	CALI Supplementary Offset	HDRS-H	9.6	mm
CALI_SHIFT.2	CALI Supplementary Offset	HDRS-B	7	mm
CBLO	Casing Bottom (Logger)	WLSESSION	20	m
CCCO	Casing & Cement Thickness Correction Option	HGNS-H	Yes	
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	508	mm
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DC_RT_ENABLE	Depth Correction Real-Time Enabled	DepthCorrection	No	
DFD	Drilling Fluid Density	Borehole	1150	kg/m3
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	GEL CHEM	
DHC.1	Density Hole Correction	HDRS-B	Bit Size	
DHC.2	Density Hole Correction	HDRS-H	Bit Size	
FCD	Future Casing (Outer) Diameter	WLSESSION	244.5	mm
FD	Fluid Density	Borehole	1000	kg/m3
FSAL	Formation Salinity	Borehole	0	ppm
FSCO	Formation Salinity Correction Option	HGNS-H	No	
GCLF.1	Coal-Like Formation	HDRS-B	No	
GCLF.2	Coal-Like Formation	HDRS-H	No	
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GR_MULTIPLIER	Gamma Ray Multiplier	HGNS-H	1	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	AMF	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
HSCO	Hole Size Correction Option	HGNS-H	Yes	
HVAS	Borehole area measurement selector for hole volume computation	Borehole	AREA	
HVCS	Integrated Hole Volume Caliper Selection	Borehole	Measured Area	
IHVC	Integrated Hole Volume Control	Borehole	Start	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	SANDSTONE	
MCCO	Mud Cake Correction Option	HGNS-H	No	
MFST	Mud Filtrate Sample Temperature	Borehole	0	degC
MWCO	Mud Weight Correction Option	HGNS-H	No	
NAAC.1	Switch for the correction of formation activation by the APS	HDRS-B	Off	
NAAC.2	Switch for the correction of formation activation by the APS	HDRS-H	Off	
NPRM.1	HRDD Nuclear Processing Mode	HDRS-B	High Resolution	
NPRM.2	HRDD Nuclear Processing Mode	HDRS-H	High Resolution	
NTCO.1	HRDD Nuclear Temperature Correction Option	HDRS-B	On	
NTCO.2	HRDD Nuclear Temperature Correction Option	HDRS-H	On	
PTCO	Pressure Temperature Correction Option	HGNS-H	No	
RMFS	Resistivity of Mud Filtrate Sample	Borehole	1.15	ohm.m
SOCN	Standoff Distance	HGNS-H	3.175	mm
SOCO	Standoff Correction Option	HGNS-H	Yes	
TD	Total Measured Depth	Borehole	600	m

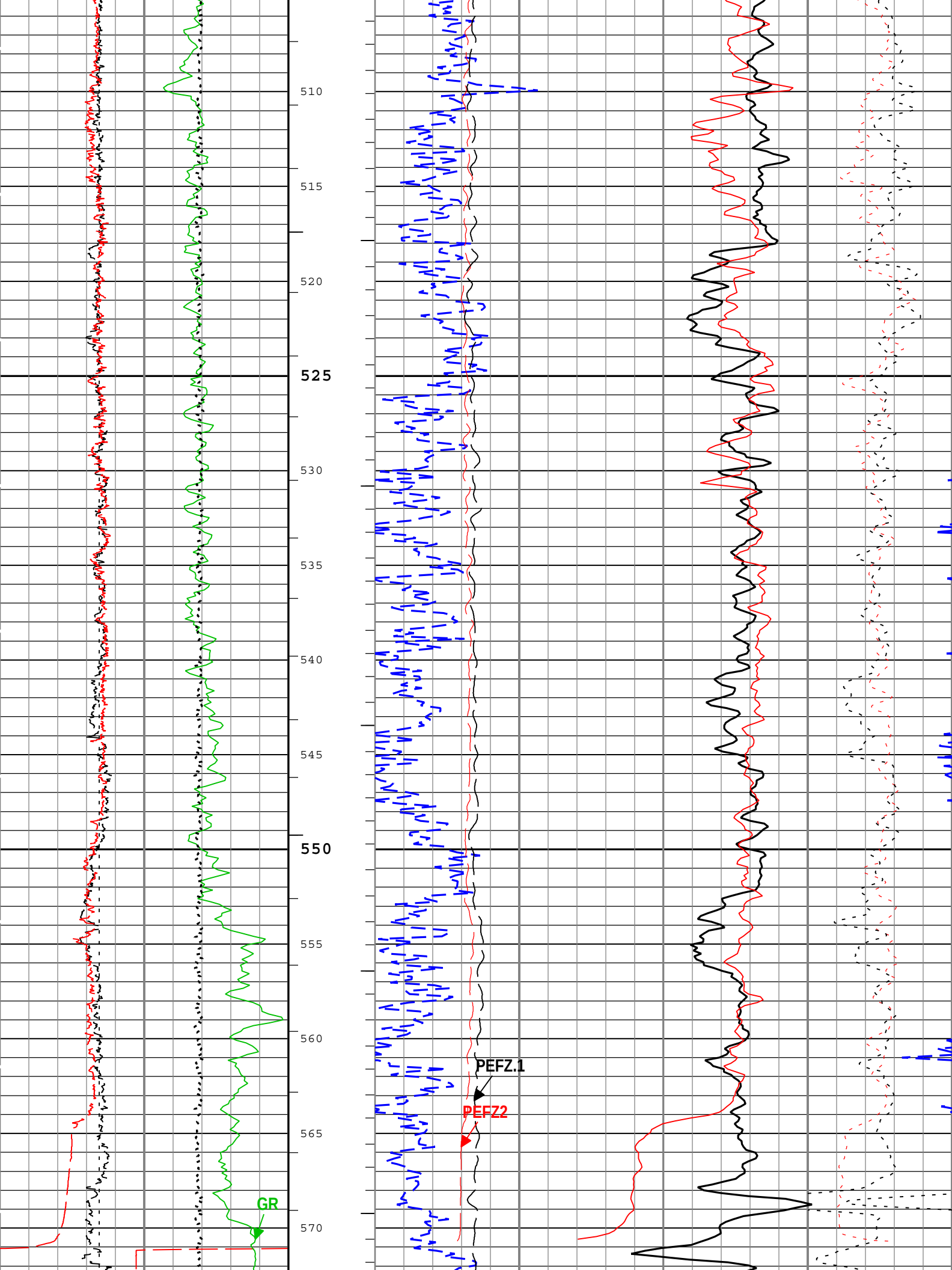
Depth Zone Parameters				
Parameter	Value	Start (m)		Stop (m)
BHS	Cased	0		20
BHS	Open	20		604.6
BS	609.6	0		20

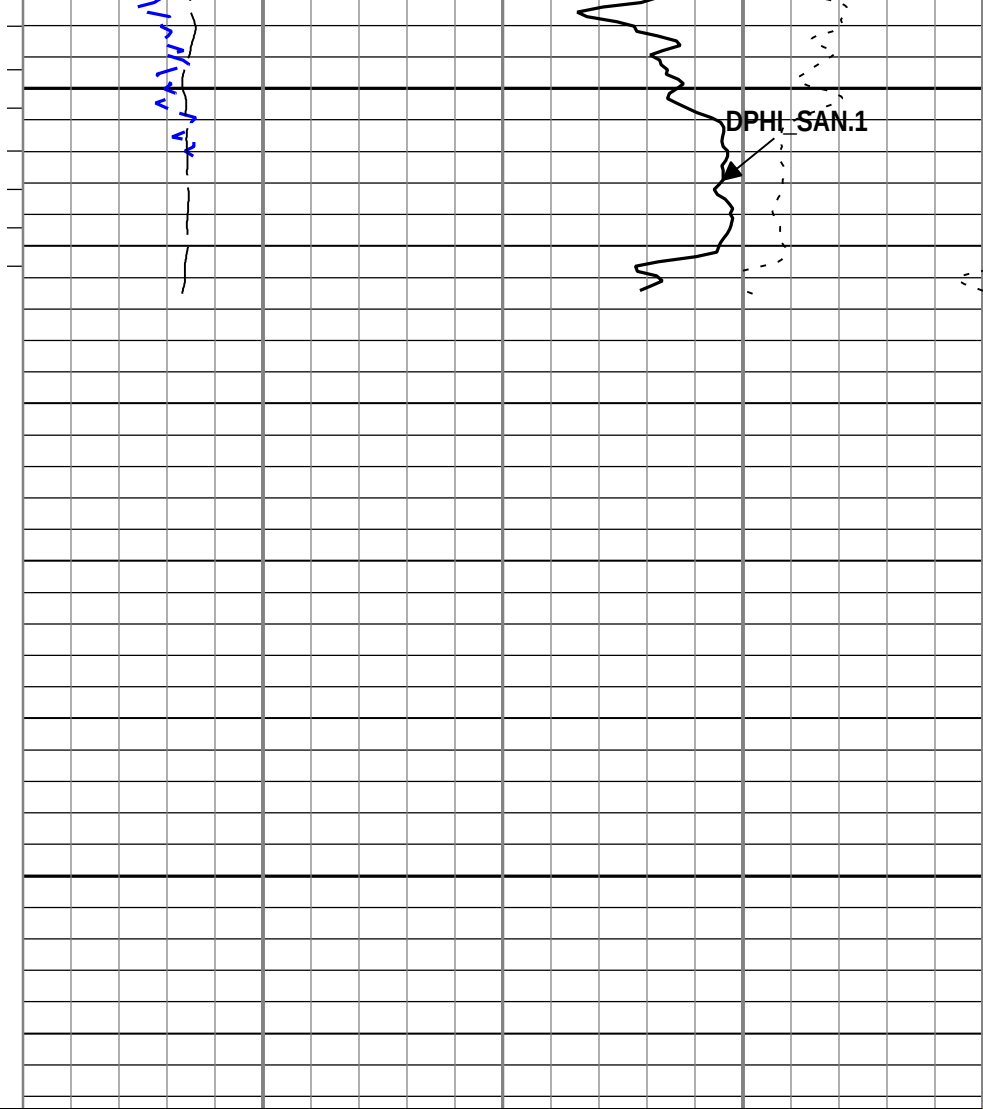
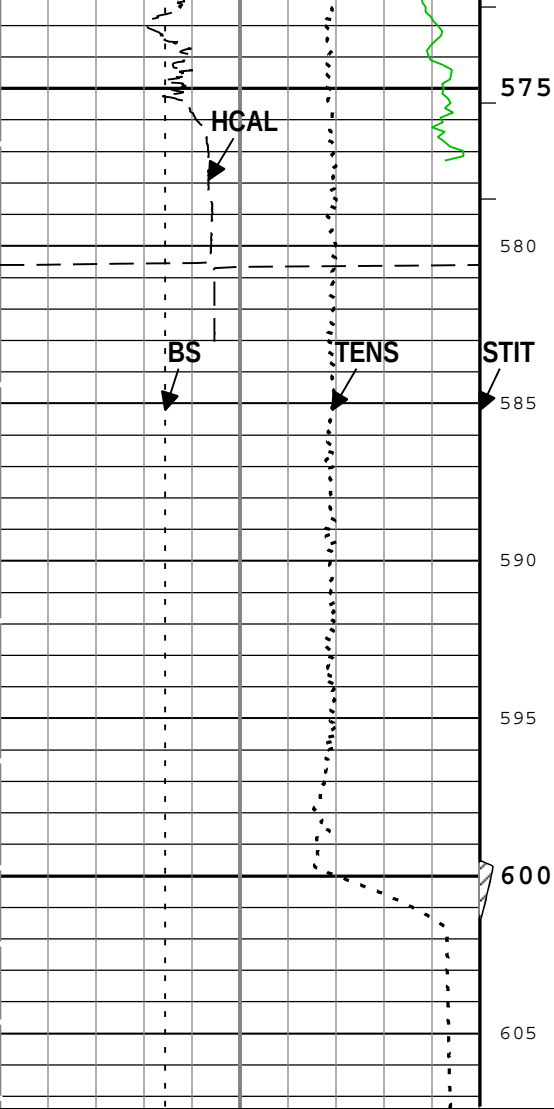
CALL 1	HDBS-H:HPCC-H:HPCC-H	1in
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CALI.1	HDRS-H:HRCC-B:HRCC-B	1in
CALI.2	HDRS-B:HRCC-B:HRCC-B	1in
DPHI_SAN.1	HDRS-H:HRMS-H:HRGD-H	6in
DPHI_SAN.2	HDRS-B:HRMS-B:HRGD-B	6in
GR_CAL	HGNS-H:HGNS-H:HGNS-H	6in
HDRA.1	HDRS-H:HRMS-H:HRGD-H	2in
HDRA.2	HDRS-B:HRMS-B:HRGD-B	2in
ICV	Borehole	6in
IHV	Borehole	6in
NPOR_SAN	HGNS-H:HGNS-H:HGNS-H	6in
PEFZ.1	HDRS-H:HRMS-H:HRGD-H	2in
PEFZ.2	HDRS-B:HRMS-B:HRGD-B	2in
STIT	DepthCorrection	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in

ICV - Integrated Cement Volume every 0.10 (m3) IHV - Integrated Hole Volume every 1.00 (m3) TIME_1900 - Time Marked every 60.00 (s) IHV - Integrated Hole Volume every 0.10 (m3) ICV - Integrated Cement Volume every 1.00 (m3)			HDRA2 200 kg/m3 -50 Density Standoff Correction (HDRA).1 HDRS-H 200 kg/m3 -50
Cable Tension (TENS) 25000 N 0 Bit Size (BS) 225 mm 475 HCAL 225 mm 475 HCAL2 225 mm 475 GR 0 gAPI 150	Enhanced Thermal Neutron Porosity (matrix Sandstone) (NPOR_SAN) HGNS-H 0.45 m3/m3 -0.15 Density Porosity (matrix Sandstone) (DPHI_SAN).1 HDRS-H 0.45 m3/m3 -0.15 DPHI_SAN2 0.45 m3/m3 -0.15 PEFZ2 0 20 Standard Resolution Formation Photoelectric Factor (PEFZ).1 HDRS-H 0 20		







REPEAT SECTION: PEX-NEUTRON POROSITY LOG - SANDSTONE 2650 KG/M3

Bit Size (BS)		
225	mm	475
HCAL		
225	mm	475
HCAL2		
225	mm	475
GR		
0	gAPI	150
Cable Tension (TENS)		
25000	N	0

Enhanced Thermal Neutron Porosity (matrix Sandstone) (NPOR_SAN) HGNS-H		
0.45	m3/m3	-0.15
Density Porosity (matrix Sandstone) (DPHI_SAN).1 HDRS-H		
0.45	m3/m3	-0.15
DPHI_SAN2		
0.45	m3/m3	-0.15
PEFZ2		
0		20
Standard Resolution Formation Photoelectric Factor (PEFZ).1 HDRS-H		
0		20

HDRA2		
200	kg/m3	-50
Density Standoff Correction (HDRA).1 HDRS-H		
200	kg/m3	-50

— ICHV - Integrated Cement Volume every 1.00 (m3)
— IHV - Integrated Hole Volume every 0.10 (m3)
TIME_1900 - Time Marked every 60.00 (s)
— IHV - Integrated Hole Volume every 1.00 (m3)
— ICHV - Integrated Cement Volume every 0.10 (m3)

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	311.15	mm
BSAL	Borehole Salinity	Borehole	5500.91	ppm
CALI_SHIFT.1	CALI Supplementary Offset	HDRS-H	9.6	mm
CALI_SHIFT.2	CALI Supplementary Offset	HDRS-B	7	mm
CBLO	Casing Bottom (Logger)	WLSESSION	20	m
CCCO	Casing & Cement Thickness Correction Option	HGNS-H	Yes	
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	1150	kg/m3
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	GEL CHEM	
DHC.1	Density Hole Correction	HDRS-B	Bit Size	
DHC.2	Density Hole Correction	HDRS-H	Bit Size	
FCD	Future Casing (Outer) Diameter	WLSESSION	244.5	mm
FD	Fluid Density	Borehole	1000	kg/m3
FSAL	Formation Salinity	Borehole	0	ppm
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	AMF	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
HSCO	Hole Size Correction Option	HGNS-H	Yes	
HVAS	Borehole area measurement selector for hole volume computation	Borehole	AREA	
HVCS	Integrated Hole Volume Caliper Selection	Borehole	Measured Area	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	SANDSTONE	
MFST	Mud Filtrate Sample Temperature	Borehole	0	degC
NPRM.1	HRDD Nuclear Processing Mode	HDRS-B	High Resolution	
NPRM.2	HRDD Nuclear Processing Mode	HDRS-H	High Resolution	
RMFS	Resistivity of Mud Filtrate Sample	Borehole	1.15	ohm.m
SOCO	Standoff Correction Option	HGNS-H	Yes	
TD	Total Measured Depth	Borehole	600	m

Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
HMCA_BRD_TYPE	HMCA Board Type	HGNS-H	1	
HRGD_BRD_TYPE.1	HRGD Board Type	HDRS-B	WITHOUT_HET	
HRGD_BRD_TYPE.2	HRGD Board Type	HDRS-H	WITH_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	548.64	m/h
STSO_HRDD.1	Temperature Source for the Density Algorithm	HDRS-B	Decaytime algorithm	

Calibration Report				
AIT-M (Array Induction Tool - M) Calibration - Run 1.1				
Primary Equipment :				
Array Induction Sonde - M		AMIS	135	
Auxiliary Equipment :				
AITM Rm/SP Bottom Nose		AMRM	135	

AIT Sonde Calibration - Test Loop Gain

Master (EEPROM):		00:21:54 17-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Test Loop Gain - 0		Master	1.000	0.950	1.015	1.050	
Test Loop Phase - 0	deg	Master	0	-3.000	-1.075	3.000	
Test Loop Gain - 1		Master	1.000	0.950	1.015	1.050	
Test Loop Phase - 1	deg	Master	0	-3.000	0.018	3.000	
Test Loop Gain - 2		Master	1.000	0.950	1.016	1.050	
Test Loop Phase - 2	deg	Master	0	-3.000	0.136	3.000	
Test Loop Gain - 3		Master	1.000	0.950	1.009	1.050	
Test Loop Phase - 3	deg	Master	0	-3.000	0.187	3.000	
Test Loop Gain - 4		Master	1.000	0.950	0.996	1.050	
Test Loop Phase - 4	deg	Master	0	-3.000	0.106	3.000	
Test Loop Gain - 5		Master	1.000	0.950	0.988	1.050	
Test Loop Phase - 5	deg	Master	0	-3.000	0.125	3.000	
Test Loop Gain - 6		Master	1.000	0.950	0.998	1.050	
Test Loop Phase - 6	deg	Master	0	-3.000	0.326	3.000	
Test Loop Gain - 7		Master	1.000	0.950	1.008	1.050	
Test Loop Phase - 7	deg	Master	0	-3.000	0.031	3.000	

AIT Sonde Calibration - Sonde Error Correction

Master (EEPROM):		00:21:54 17-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-86.077	119.000	
Sonde Error Correction Quad - 0		Master	-----	-2250.000	20.355	2250.000	
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	153.971	204.000	
Sonde Error Correction Quad - 1		Master	-----	-625.000	298.419	625.000	
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	108.886	156.000	
Sonde Error Correction Quad - 2		Master	-----	-350.000	-50.862	350.000	
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	62.871	89.000	
Sonde Error Correction Quad - 3		Master	-----	-250.000	-18.524	250.000	
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	25.191	35.000	
Sonde Error Correction Quad - 4		Master	-----	-63.000	13.633	63.000	
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	12.311	24.000	
Sonde Error Correction Quad - 5		Master	-----	-50.000	-11.737	50.000	
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	9.460	15.000	
Sonde Error Correction Quad - 6		Master	-----	-30.000	-7.528	30.000	
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-2.115	5.000	
Sonde Error Correction Quad - 7		Master	-----	-30.000	-3.935	30.000	

AIT Mud Calibration - Mud Calibration Gain

Master (EEPROM):		00:21:54 17-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Coarse Gain		Master	1.000	0.800	0.958	1.200	
Fine Gain		Master	1.000	0.800	0.959	1.200	

AIT Electronics Check - Thru Calibration Check

Master (EEPROM):		00:21:54 17-Jan-2013	Before (Measured):		11:16:14 30-Jan-2013	After:	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Thru Cal Mag - 0	V	Master	-----	0.366	0.610	0.854	
		Before	-----	0.366	0.609	0.854	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	-0.001	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Phase - 0	deg	Master	-----	137.000	-165.950	-103.000	
		Before	-----	137.000	-158.981	-103.000	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	6.969	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Mag - 1	V	Master	-----	0.762	1.247	1.778	
		Before	-----	0.762	1.246	1.778	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	-0.001	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Phase - 1	deg	Master	-----	136.000	-167.129	-104.000	
		Before	-----	136.000	-160.160	-104.000	
		After	-----	-----	-----	-----	

		Before-Master After-Before	----- -----	----- -----	6.969 -----	----- -----	
Thru Cal Mag - 2	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	0.372 0.372 ----- ----- -----	0.618 0.617 ----- -0.001 -----	0.868 0.868 ----- ----- -----	
Thru Cal Phase - 2	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	132.000 132.000 ----- ----- -----	-170.682 -163.702 ----- 6.980 -----	-108.000 -108.000 ----- ----- -----	
Thru Cal Mag - 3	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	0.420 0.420 ----- ----- -----	0.697 0.697 ----- 0.000 -----	0.980 0.980 ----- ----- -----	
Thru Cal Phase - 3	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	131.000 131.000 ----- ----- -----	-171.447 -164.476 ----- 6.971 -----	-109.000 -109.000 ----- ----- -----	
Thru Cal Mag - 4	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	0.804 0.804 ----- ----- -----	1.307 1.306 ----- -0.001 -----	1.876 1.876 ----- ----- -----	
Thru Cal Phase - 4	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	125.000 125.000 ----- ----- -----	-177.673 -170.695 ----- 6.978 -----	-115.000 -115.000 ----- ----- -----	
Thru Cal Mag - 5	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	1.176 1.176 ----- ----- -----	1.901 1.897 ----- -0.004 -----	2.744 2.744 ----- ----- -----	
Thru Cal Phase - 5	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	122.000 122.000 ----- ----- -----	-179.355 -172.362 ----- 6.993 -----	-118.000 -118.000 ----- ----- -----	
Thru Cal Mag - 6	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	1.176 1.176 ----- ----- -----	1.897 1.893 ----- -0.004 -----	2.744 2.744 ----- ----- -----	
Thru Cal Phase - 6	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	121.000 121.000 ----- ----- -----	-179.328 -172.335 ----- 6.993 -----	-119.000 -119.000 ----- ----- -----	
Thru Cal Mag - 7	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	0.846 0.846 ----- ----- -----	1.372 1.370 ----- -0.002 -----	1.974 1.974 ----- ----- -----	
Thru Cal Phase - 7	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	115.000 115.000 ----- ----- -----	-179.977 -172.895 ----- 7.082 -----	-125.000 -125.000 ----- ----- -----	
SPA Zero	mV	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	-50.000 -50.000 ----- ----- -----	0.079 0.088 ----- 0.009 -----	50.000 50.000 ----- ----- -----	
SPA Phase	mV	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	0.11.000 0.11.000 ----- ----- -----	0.00.165 0.00.165 ----- 0.00.000 -----	10.10.000 10.10.000 ----- ----- -----	

SPA Plus	mV	Master		941.000	990.165	1040.000	
		Before		941.000	989.855	1040.000	
		After	----	----	----	----	
		Before-Master	----	----	-0.310	----	
		After-Before	----	----	----	----	
Temperature Zero	V	Master		-0.050	0.000	0.050	
		Before		-0.050	0.000	0.050	
		After	----	----	----	----	
		Before-Master	----	----	0.000	----	
		After-Before	----	----	----	----	
Temperature Plus	V	Master		0.870	0.918	0.960	
		Before		0.870	0.917	0.960	
		After	----	----	----	----	
		Before-Master	----	----	-0.001	----	
		After-Before	----	----	----	----	

Primary Equipment :

Auxiliary Equipment :

Calibration Parameter :

Equipment Properties :

PPC Check - Downhole Electronics Test

BBC Check - Cartridge Temperature

PPC Check - Power Control LVDT Test

PPC Diagnostics - Arm Close Position

PPC Diagnostics - Downhole Electronics Test

Status Word of Analog Digital Converter Onset - 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	degC	Master	----	----	----	----	
PPC Diagnostics - Power Control LVDT Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
LVDT5 Caliper Open Position - 0	cm	Master	----	----	----	----	
LVDT5 Full Power Position - 0	cm	Master	----	----	----	----	
PPC LVDT5 Master Calibration - PPC CaliCoefficients							
Master (EEPROM): 12:32:00 29-Jan-2013							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
CCS	cm	Master	-3.8354		-3.74086		
COP	cm	Master	-3.3274		-3.26895		
CPW	cm	Master	3.5814		3.53033		
PPC Caliper Calibration - PPC CaliCoefficients							
Before (Manual Entry): 15:35:22 30-Jan-2013 After:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RD1_GAIN		Before	1	0.85	1.05243	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD2_GAIN		Before	1	0.85	1.02414	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD3_GAIN		Before	1	0.85	1.04379	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD4_GAIN		Before	1	0.85	1.0192	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD1_OFFSET	mm	Before	0	-55.88	-20.143	66.04	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD2_OFFSET	mm	Before	0	-55.88	-4.5535	66.04	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD3_OFFSET	mm	Before	0	-55.88	-20.763	66.04	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD4_OFFSET	mm	Before	0	-55.88	-4.7633	66.04	
		After	----	----	----	----	
		After-Before	----	----	----	----	
PPC Caliper Calibration - PPC Accumulations							
Before (Manual Entry): 15:35:22 30-Jan-2013 After:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Caliper 1 Zero Radius - 0	mm	Before	----	----	----	----	
		After	----	----	----	----	
		After-Before	----	----	----	----	
Caliper 2 Zero Radius - 0	mm	Before	----	----	----	----	
		After	----	----	----	----	
		After-Before	----	----	----	----	
Caliper 3 Zero Radius - 0	mm	Before	----	----	----	----	
		After	----	----	----	----	
		After-Before	----	----	----	----	
Caliper 4 Zero Radius - 0	mm	Before	----	----	----	----	
		After	----	----	----	----	
		After-Before	----	----	----	----	

Caliper 1 Plus Radius - 0	mm	Before After After-Before	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	
Caliper 2 Plus Radius - 0	mm	Before After After-Before	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	
Caliper 3 Plus Radius - 0	mm	Before After After-Before	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	
Caliper 4 Plus Radius - 0	mm	Before After After-Before	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	

HDRS-H (HILT Density and Rxo Sonde, 150 degC) Calibration - Run 1.1

Primary Equipment :							
	HILT High-Resolution Control Cartridge, 150 degC	HRCC-H			4733		
	HILT Resistivity Gamma-Ray Density Device, 150 degC	HRGD-H			3978		
Auxiliary Equipment :							
	HRDD Backscatter Detector	Backscatter			26796		
	HRDD Long Spacing Detector	Long Spacing			28696		
	HRDD Short Spacing Detector	Short Spacing			27863		
	Cesium 137 Gamma-Ray Logging Source	GSR-J			5310		
	HILT High-Resolution Control Cartridge, 150 degC	HRCC-H			4733		
	HILT High-Resolution Mechanical Sonde, 150 degC	HRMS-H			3907		
Calibration Parameter :							
	Small Ring Size (Caliper Calibration Small Ring)	203.2					
	Large Ring Size (Caliper Calibration Large Ring)	304.8					

HDRS Caliper Calibration - Caliper Accumulations

Before (Measured):		12:28:34 29-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring	mm	Before	203.2	152.4	217.3	254.0	
Large Ring	mm	Before	304.8	228.6	318.6	381.0	

HDRS Density Calibration - Inversion Results

Master (EEPROM):		11:33:48 18-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Rho Aluminum	kg/m3	Master	2596	2586	2594	2606	
Rho Magnesium	kg/m3	Master	1686	1676	1692	1696	
Pe Aluminum		Master	2.570	2.470	2.542	2.670	
Pe Magnesium		Master	2.650	2.550	2.629	2.750	

HDRS Density Calibration - Deviation Summary

Master (EEPROM):		11:33:48 18-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Average Deviation	%	Master	0	-0.6000	0.3037	0.6000	
BS Max Deviation	%	Master	0	-1.6000	0.7345	1.6000	
SS Average Deviation	%	Master	0	-1.0000	0.6792	1.0000	
SS Max Deviation	%	Master	0	-2.5000	1.3298	2.5000	
LS Average Deviation	%	Master	0	-1.5000	0.7956	1.5000	
LS Max Deviation	%	Master	0	-3.5000	2.2154	3.5000	

HDRS Density Calibration - Background Summary

Master (EEPROM):		11:33:48 18-Jan-2013		Before (Measured):		15:44:19 29-Jan-2013	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Window Ratio		Master	1.0000		0.7526		
		Before	0.7526	0.7150	0.7578	0.7902	
		Before-Master	-----	-----	0.0052	-----	
BS Window Sum	1/s	Master	1		24474		
		Before	24474	23250	24526	25698	
		Before-Master	-----	-----	52	-----	
SS Window Ratio		Master	1.0000		0.4905		

		Before Before-Master	0.4905 -----	0.4660 -----	0.4861 -0.0044	0.5150 -----	
SS Window Sum	1/s	Master Before Before-Master	1 11403 -----	10833 -----	11403 11366 -37	11973 -----	
LS Window Ratio		Master Before Before-Master	1.0000 0.3012 -----	0.2862 -----	0.3012 0.3029 0.0017	0.3163 -----	
LS Window Sum	1/s	Master Before Before-Master	1 1229 -----	1168 -----	1229 1219 -10	1291 -----	

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM): 11:33:48 18-Jan-2013		Before (Measured): 15:44:19 29-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS PM High Voltage	V	Master		1000	1737	2400	
		Before		1000	1685	2400	
		Before-Master	-----	-100	-52	100	
SS PM High Voltage	V	Master		1000	1791	2400	
		Before		1000	1833	2400	
		Before-Master	-----	-100	42	100	
LS PM High Voltage	V	Master		1000	1434	2400	
		Before		1000	1455	2400	
		Before-Master	-----	-100	21	100	

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM): 11:33:48 18-Jan-2013		Before (Measured): 15:44:19 29-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Crystal Resolution	%	Master		5.00	10.47	25.00	
		Before		5.00	10.40	25.00	
		Before-Master	-----	-1.00	-0.07	1.00	
SS Crystal Resolution	%	Master		5.00	9.75	20.00	
		Before		5.00	10.64	20.00	
		Before-Master	-----	-1.00	0.89	1.00	
LS Crystal Resolution	%	Master		5.00	8.27	20.00	
		Before		5.00	8.15	20.00	
		Before-Master	-----	-1.00	-0.12	1.00	

HDRS MCFL Calibration - MCFL Accumulations

Before (Measured): 12:17:44 29-Jan-2013							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Main Resistivity	ohm.m	Before	3875	3565	3824	4185	
Deep Resistivity	ohm.m	Before	3830	3524	3801	4136	
Shallow Resistivity	ohm.m	Before	3830	3524	3797	4136	

HGNS-H (HILT Gamma-Ray and Neutron Sonde, 150 degC) Calibration - Run 1.1

Primary Equipment :			
HILT Gamma-Ray and Neutron Sonde, 150 degC		HGNS-H	3879
Auxiliary Equipment :			
HGNS Accelerometer, 150 degC		HACCZ-H	2948
AmBe Neutron Logging Source		NSR-F	5199
Calibration Parameter :			
Water Temperature			
Housing Size			
JIG-BKG (Jig minus background reference)		166	

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured): 11:17:29 30-Jan-2013							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	m/s2	Before	9.81	9.61	9.80	10.01	

HGNS Accelerometer EEPROM - Accelerometer EEPROM Read

Master (EEPROM): 00:00:00 15-Apr-2004							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	

Accelerometer Manufacturer		Master			QAT_160		
Accelerometer Reference Temperature	degC	Master		-1.0	25.0	50.0	
Accelerometer Coefficients - 0		Master	----	----	-1234.400	----	
Accelerometer Coefficients - 1		Master	----	----	26.320	----	
Accelerometer Coefficients - 2		Master	----	----	-0.007	----	
Accelerometer Coefficients - 3		Master	----	----	0.000	----	
Accelerometer Coefficients - 4		Master	----	----	2.747	----	
Accelerometer Coefficients - 5		Master	----	----	0.000	----	
Accelerometer Coefficients - 6		Master	----	----	0.000	----	
Accelerometer Coefficients - 7		Master	----	----	0.000	----	
Accelerometer Coefficients - 8		Master	----	----	298.800	----	
Accelerometer Coefficients - 9		Master	----	----	1.003	----	

HGNS Neutron Calibration - HGNS Neutron Accumulations

Master (EEPROM): 21:51:08 10-Jan-2013		Before (Measured): 15:42:37 29-Jan-2013		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Near Zero Measurement	1/s	Master	0	5.0	27.2	40.0	
		Before	0	5.0	28.1	40.0	
		After	----	----	----	----	
		Before-Master	----	-4.1	0.9	4.1	
		After-Before	----	----	----	----	
Far Zero Measurement	1/s	Master	0	5.0	27.1	40.0	
		Before	0	5.0	27.6	40.0	
		After	----	----	----	----	
		Before-Master	----	-4.1	0.5	4.1	
		After-Before	----	----	----	----	
Near Plus Measurement - 0	1/s	Master	6031.0	4700.0	5360.0	6900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Far Plus Measurement - 0	1/s	Master	2793.0	1900.0	2360.0	2900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Near Corrected Plus Measurement - 0	1/s	Master		4700.0	5338.0	6900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Far Corrected Plus Measurement - 0	1/s	Master		1900.0	2333.0	2900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	

HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations

Before (Measured): 15:44:06 29-Jan-2013		After:					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before	30.0	0	32.9	120.0	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RGR Plus Measurement	gAPI	Before	186.5	158.1	160.5	207.5	
		After	----	----	NOT DONE	----	
		After-Before	----	----	----	----	
GR Calibration Gain		Before	0.89	0.80	1.03	1.05	
		After	----	----	----	----	
		After-Before	----	----	----	----	

GPIT-F (General-Purpose Inclinomometer Tool) Calibration - Run 1.1

Primary Equipment :			GPIT DHRU Sensor Block - F		DHRU-F		1719
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GPIT-F Accelerometers Master Calibration - Signals and Temperature Correction for Accelerometers

Master (EEPROM):	00:00:00 26-Aug-2008
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Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Accelero X Model[0,0]		Master	----	----	0.02083545	----		
GPIT-F Accelero X Model[0,1]		Master	----	----	0.0006718004	----		
GPIT-F Accelero X Model[1,0]		Master	----	----	9.363444E-05	----		
GPIT-F Accelero X Model[1,1]		Master	----	----	-1.419544E-07	----		
GPIT-F Accelero X Model[2,0]		Master	----	----	2.685801E-06	----		
GPIT-F Accelero X Model[2,1]		Master	----	----	1.640218E-09	----		
GPIT-F Accelero X Model[3,0]		Master	----	----	-1.750351E-08	----		
GPIT-F Accelero X Model[3,1]		Master	----	----	-7.283021E-12	----		
GPIT-F Accelero Y Model[0,0]		Master	----	----	0.03108478	----		
GPIT-F Accelero Y Model[0,1]		Master	----	----	-0.0006634712	----		
GPIT-F Accelero Y Model[1,0]		Master	----	----	-0.0004138362	----		
GPIT-F Accelero Y Model[1,1]		Master	----	----	1.383469E-07	----		
GPIT-F Accelero Y Model[2,0]		Master	----	----	-1.224624E-06	----		
GPIT-F Accelero Y Model[2,1]		Master	----	----	-1.51153E-09	----		
GPIT-F Accelero Y Model[3,0]		Master	----	----	1.025784E-08	----		
GPIT-F Accelero Y Model[3,1]		Master	----	----	6.754733E-12	----		
GPIT-F Accelero Z Model[0,0]		Master	----	----	0.02316506	----		
GPIT-F Accelero Z Model[0,1]		Master	----	----	0.0006561076	----		
GPIT-F Accelero Z Model[1,0]		Master	----	----	0.0004232987	----		
GPIT-F Accelero Z Model[1,1]		Master	----	----	-1.412186E-07	----		
GPIT-F Accelero Z Model[2,0]		Master	----	----	-1.26776E-06	----		
GPIT-F Accelero Z Model[2,1]		Master	----	----	1.641676E-09	----		
GPIT-F Accelero Z Model[3,0]		Master	----	----	-5.217573E-09	----		
GPIT-F Accelero Z Model[3,1]		Master	----	----	-7.394943E-12	----		

GPIT-F Accelerometers Master Calibration - Perpendicular Correction for Accelerometers

Master (EEPROM):		00:00:00 26-Aug-2008						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Accelero Axis Model[0,0]		Master	----	----	-0.0001966913	----		
GPIT-F Accelero Axis Model[0,1]		Master	----	----	0.0006901673	----		
GPIT-F Accelero Axis Model[0,2]		Master	----	----	-0.0001628145	----		
GPIT-F Accelero Axis Model[0,3]		Master	----	----	-5.680317E-05	----		
GPIT-F Accelero Axis Model[0,4]		Master	----	----	4.07189E-05	----		
GPIT-F Accelero Axis Model[0,5]		Master	----	----	8.292276E-05	----		
GPIT-F Accelero Axis Model[0,6]		Master	----	----	0	----		
GPIT-F Accelero Axis Model[1,0]		Master	----	----	-3.326675E-07	----		
GPIT-F Accelero Axis Model[1,1]		Master	----	----	-4.654971E-06	----		
GPIT-F Accelero Axis Model[1,2]		Master	----	----	-3.099905E-06	----		
GPIT-F Accelero Axis Model[1,3]		Master	----	----	-1.677593E-06	----		
GPIT-F Accelero Axis Model[1,4]		Master	----	----	1.571826E-06	----		
GPIT-F Accelero Axis Model[1,5]		Master	----	----	1.489649E-06	----		
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 26-Aug-2008						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Magneto X Model[0,0]		Master	----	----	198.1605	----		
GPIT-F Magneto X Model[0,1]		Master	----	----	4.89094	----		
GPIT-F Magneto X Model[1,0]		Master	----	----	-7.675484	----		
GPIT-F Magneto X Model[1,1]		Master	----	----	-0.0007672089	----		
GPIT-F Magneto X Model[2,0]		Master	----	----	0.06957046	----		
GPIT-F Magneto X Model[2,1]		Master	----	----	1.237954E-05	----		
GPIT-F Magneto X Model[3,0]		Master	----	----	-0.0003306787	----		
GPIT-F Magneto X Model[3,1]		Master	----	----	-4.880398E-08	----		
GPIT-F Magneto Y Model[0,0]		Master	----	----	165.94	----		
GPIT-F Magneto Y Model[0,1]		Master	----	----	-4.940951	----		
GPIT-F Magneto Y Model[1,0]		Master	----	----	-5.017055	----		
GPIT-F Magneto Y Model[1,1]		Master	----	----	0.0008111733	----		
GPIT-F Magneto Y Model[2,0]		Master	----	----	0.07478225	----		
GPIT-F Magneto Y Model[2,1]		Master	----	----	-1.230758E-05	----		
GPIT-F Magneto Y Model[3,0]		Master	----	----	-0.0002725917	----		
GPIT-F Magneto Y Model[3,1]		Master	----	----	4.779239E-08	----		
GPIT-F Magneto Z Model[0,0]		Master	----	----	-3.884398	----		
GPIT-F Magneto Z Model[0,1]		Master	----	----	4.883152	----		
GPIT-F Magneto Z Model[1,0]		Master	----	----	-3.829239	----		

GPIT-F Magneto Z Model[1,1]		Master	----	----	-0.0009558625	----		
GPIT-F Magneto Z Model[2,0]		Master	----	----	0.02639634	----		
GPIT-F Magneto Z Model[2,1]		Master	----	----	1.401763E-05	----		
GPIT-F Magneto Z Model[3,0]		Master	----	----	-0.0001204358	----		
GPIT-F Magneto Z Model[3,1]		Master	----	----	-5.318234E-08	----		

GPIT-F Magnetometers Master Calibration - Perpendicular Correction for Magnetometer

Master (EEPROM):		00:00:00 26-Aug-2008						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Magneto Axis Model[0,0]		Master	----	----	-0.0001320723	----		
GPIT-F Magneto Axis Model[0,1]		Master	----	----	0.002519899	----		
GPIT-F Magneto Axis Model[0,2]		Master	----	----	-0.002410411	----		
GPIT-F Magneto Axis Model[0,3]		Master	----	----	0.00206358	----		
GPIT-F Magneto Axis Model[0,4]		Master	----	----	0.002383545	----		
GPIT-F Magneto Axis Model[0,5]		Master	----	----	-0.002601481	----		
GPIT-F Magneto Axis Model[0,6]		Master	----	----	0	----		
GPIT-F Magneto Axis Model[1,0]		Master	----	----	2.377108E-06	----		
GPIT-F Magneto Axis Model[1,1]		Master	----	----	-9.225543E-06	----		
GPIT-F Magneto Axis Model[1,2]		Master	----	----	-5.170158E-06	----		
GPIT-F Magneto Axis Model[1,3]		Master	----	----	4.893004E-06	----		
GPIT-F Magneto Axis Model[1,4]		Master	----	----	-2.741137E-06	----		
GPIT-F Magneto Axis Model[1,5]		Master	----	----	1.069634E-06	----		
GPIT-F Magneto Axis Model[1,6]		Master	----	----	0	----		

GPIT-F DHRU102 Master Calibration -

Master (EEPROM):		00:00:00 22-Aug-2008						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Electronic Coeff 1[0,0]		Master	----	----	-0.1425928	----		
GPIT-F Electronic Coeff 1[0,1]		Master	----	----	249.7813	----		
GPIT-F Electronic Coeff 1[1,0]		Master	----	----	-0.00934667	----		
GPIT-F Electronic Coeff 1[1,1]		Master	----	----	0.01745275	----		
GPIT-F Electronic Coeff 1[2,0]		Master	----	----	0.0002608125	----		
GPIT-F Electronic Coeff 1[2,1]		Master	----	----	-0.0003361361	----		
GPIT-F Electronic Coeff 1[3,0]		Master	----	----	-3.340233E-06	----		
GPIT-F Electronic Coeff 1[3,1]		Master	----	----	2.570753E-06	----		
GPIT-F Electronic Coeff 1[4,0]		Master	----	----	1.294355E-08	----		
GPIT-F Electronic Coeff 1[4,1]		Master	----	----	-7.670941E-09	----		
GPIT-F Electronic Coeff 2[0,0]		Master	----	----	0.5081379	----		
GPIT-F Electronic Coeff 2[0,1]		Master	----	----	249.7232	----		
GPIT-F Electronic Coeff 2[1,0]		Master	----	----	-0.004489578	----		
GPIT-F Electronic Coeff 2[1,1]		Master	----	----	0.01932923	----		
GPIT-F Electronic Coeff 2[2,0]		Master	----	----	0.000176937	----		
GPIT-F Electronic Coeff 2[2,1]		Master	----	----	-0.0003608702	----		
GPIT-F Electronic Coeff 2[3,0]		Master	----	----	-2.281621E-06	----		
GPIT-F Electronic Coeff 2[3,1]		Master	----	----	2.730957E-06	----		
GPIT-F Electronic Coeff 2[4,0]		Master	----	----	8.618913E-09	----		
GPIT-F Electronic Coeff 2[4,1]		Master	----	----	-8.099707E-09	----		
GPIT-F Electronic Coeff 3[0,0]		Master	----	----	-2.017343	----		
GPIT-F Electronic Coeff 3[0,1]		Master	----	----	249.8453	----		
GPIT-F Electronic Coeff 3[1,0]		Master	----	----	-0.007388029	----		
GPIT-F Electronic Coeff 3[1,1]		Master	----	----	0.01663022	----		
GPIT-F Electronic Coeff 3[2,0]		Master	----	----	0.000213988	----		
GPIT-F Electronic Coeff 3[2,1]		Master	----	----	-0.0003028827	----		
GPIT-F Electronic Coeff 3[3,0]		Master	----	----	-2.250001E-06	----		
GPIT-F Electronic Coeff 3[3,1]		Master	----	----	2.292859E-06	----		
GPIT-F Electronic Coeff 3[4,0]		Master	----	----	7.906366E-09	----		
GPIT-F Electronic Coeff 3[4,1]		Master	----	----	-6.965986E-09	----		

GPIT-F DHRU102 Master Calibration -

Master (EEPROM):		00:00:00 22-Aug-2008						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Electronic Coeff 4[0,0]		Master	----	----	-0.4362828	----		
GPIT-F Electronic Coeff 4[0,1]		Master	----	----	0.127975	----		
GPIT-F Electronic Coeff 4[1,0]		Master	----	----	0.02081654	----		
GPIT-F Electronic Coeff 4[1,1]		Master	----	----	4.840483E-06	----		
GPIT-F Electronic Coeff 4[2,0]		Master	----	----	-0.0001969435	----		

GPIT-F Electronic Coeff 4[2,1]		Master	-----	-----	-1.086873E-07	-----		
GPIT-F Electronic Coeff 4[3,0]		Master	-----	-----	1.667087E-06	-----		
GPIT-F Electronic Coeff 4[3,1]		Master	-----	-----	9.594155E-10	-----		
GPIT-F Electronic Coeff 4[4,0]		Master	-----	-----	-3.872378E-09	-----		
GPIT-F Electronic Coeff 4[4,1]		Master	-----	-----	-3.135457E-12	-----		
GPIT-F Electronic Coeff 5[0,0]		Master	-----	-----	-0.4362828	-----		
GPIT-F Electronic Coeff 5[0,1]		Master	-----	-----	0.127975	-----		
GPIT-F Electronic Coeff 5[1,0]		Master	-----	-----	0.02081654	-----		
GPIT-F Electronic Coeff 5[1,1]		Master	-----	-----	4.840483E-06	-----		
GPIT-F Electronic Coeff 5[2,0]		Master	-----	-----	-0.0001969435	-----		
GPIT-F Electronic Coeff 5[2,1]		Master	-----	-----	-1.086873E-07	-----		
GPIT-F Electronic Coeff 5[3,0]		Master	-----	-----	1.667087E-06	-----		
GPIT-F Electronic Coeff 5[3,1]		Master	-----	-----	9.594155E-10	-----		
GPIT-F Electronic Coeff 5[4,0]		Master	-----	-----	-3.872378E-09	-----		
GPIT-F Electronic Coeff 5[4,1]		Master	-----	-----	-3.135457E-12	-----		
GPIT-F Electronic Coeff 6[0,0]		Master	-----	-----	-0.4362828	-----		
GPIT-F Electronic Coeff 6[0,1]		Master	-----	-----	0.127975	-----		
GPIT-F Electronic Coeff 6[1,0]		Master	-----	-----	0.02081654	-----		
GPIT-F Electronic Coeff 6[1,1]		Master	-----	-----	4.840483E-06	-----		
GPIT-F Electronic Coeff 6[2,0]		Master	-----	-----	-0.0001969435	-----		
GPIT-F Electronic Coeff 6[2,1]		Master	-----	-----	-1.086873E-07	-----		
GPIT-F Electronic Coeff 6[3,0]		Master	-----	-----	1.667087E-06	-----		
GPIT-F Electronic Coeff 6[3,1]		Master	-----	-----	9.594155E-10	-----		
GPIT-F Electronic Coeff 6[4,0]		Master	-----	-----	-3.872378E-09	-----		
GPIT-F Electronic Coeff 6[4,1]		Master	-----	-----	-3.135457E-12	-----		

HDRS-B (HILT Density and Rxo Sonde, 125 degC) Calibration - Run 1.1							
Primary Equipment :							
	HILT High-Resolution Control Cartridge, 125 degC		HRCC-B		880		
	HILT Resistivity Gamma-Ray Density Device, 125 degC		HRGD-B		919		
Auxiliary Equipment :							
	HRDD Backscatter Detector		Backscatter				
	HRDD Long Spacing Detector		Long Spacing				
	HRDD Short Spacing Detector		Short Spacing				
	Cesium 137 Gamma-Ray Logging Source		GSR-J		5285		
	HILT High-Resolution Control Cartridge, 125 degC		HRCC-B		880		
	HILT High-Resolution Mechanical Sonde, 125 degC		HRMS-B		900		
Calibration Parameter :							
	Small Ring Size (Caliper Calibration Small Ring)		203.2				
	Large Ring Size (Caliper Calibration Large Ring)		304.8				

HDRS Caliper Calibration - Caliper Accumulations							
Before (Measured):		12:30:17 29-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring	mm	Before	203.2	152.4	228.7	254.0	
Large Ring	mm	Before	304.8	228.6	332.7	381.0	

HDRS Density Calibration - Inversion Results							
Master (EEPROM):		15:30:56 28-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Rho Aluminum	kg/m3	Master	2596	2586	2599	2606	
Rho Magnesium	kg/m3	Master	1686	1676	1688	1696	
Pe Aluminum		Master	2.570	2.470	2.578	2.670	
Pe Magnesium		Master	2.650	2.550	2.622	2.750	

HDRS Density Calibration - Deviation Summary							
Master (EEPROM):		15:30:56 28-Jan-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Average Deviation	%	Master	0	-0.6000	0.2529	0.6000	
BS Max Deviation	%	Master	0	-1.6000	0.6566	1.6000	
SS Average Deviation	%	Master	0	-1.0000	0.3478	1.0000	

SS Max Deviation	%	Master	0	-2.5000	1.5398	2.5000	
LS Average Deviation	%	Master	0	-1.5000	0.6316	1.5000	
LS Max Deviation	%	Master	0	-3.5000	1.4401	3.5000	

HDRS Density Calibration - Background Summary

Master (EEPROM):		15:30:56 28-Jan-2013		Before (Measured):		15:44:24 29-Jan-2013	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Window Ratio		Master	1.0000		0.7679		
		Before	0.7679	0.7295	0.7639	0.8063	
		Before-Master	-----	-----	-0.0040	-----	
BS Window Sum	1/s	Master	1		8506		
		Before	8506	8081	8503	8932	
		Before-Master	-----	-----	-3	-----	
SS Window Ratio		Master	1.0000		0.4881		
		Before	0.4881	0.4637	0.4871	0.5125	
		Before-Master	-----	-----	-0.0010	-----	
SS Window Sum	1/s	Master	1		8884		
		Before	8884	8440	8908	9329	
		Before-Master	-----	-----	24	-----	
LS Window Ratio		Master	1.0000		0.3024		
		Before	0.3024	0.2873	0.2998	0.3175	
		Before-Master	-----	-----	-0.0026	-----	
LS Window Sum	1/s	Master	1		1056		
		Before	1056	1003	1052	1109	
		Before-Master	-----	-----	-4	-----	

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM):		15:30:56 28-Jan-2013		Before (Measured):		15:44:24 29-Jan-2013	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS PM High Voltage	V	Master		1000	1211	2400	
		Before		1000	1222	2400	
		Before-Master	-----	-100	11	100	
SS PM High Voltage	V	Master		1000	1730	2400	
		Before		1000	1744	2400	
		Before-Master	-----	-100	14	100	
LS PM High Voltage	V	Master		1000	1542	2400	
		Before		1000	1549	2400	
		Before-Master	-----	-100	7	100	

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM):		15:30:56 28-Jan-2013		Before (Measured):		15:44:24 29-Jan-2013	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Crystal Resolution	%	Master		5.00	9.91	25.00	
		Before		5.00	9.76	25.00	
		Before-Master	-----	-1.00	-0.15	1.00	
SS Crystal Resolution	%	Master		5.00	10.23	20.00	
		Before		5.00	10.40	20.00	
		Before-Master	-----	-1.00	0.17	1.00	
LS Crystal Resolution	%	Master		5.00	9.55	20.00	
		Before		5.00	9.83	20.00	
		Before-Master	-----	-1.00	0.28	1.00	

HDRS MCFL Calibration - MCFL Accumulations

Before:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Main Resistivity - 0	ohm.m	Before	-----	-----	-----	-----	
Deep Resistivity - 0	ohm.m	Before	-----	-----	-----	-----	
Shallow Resistivity - 0	ohm.m	Before	-----	-----	-----	-----	

EDTC-B (Enhanced Digital Telemetry Cartridge - Version B) Calibration - Run 1.1

Primary Equipment :			
Enhanced Digital Telemetry Cartridge - B		EDTC-B	9048
Calibration Parameter :			
Plus Reference (Jig minus background reference)		164	

EDTC-B Accelerometer Calibration - EDTC-B Accelerometer Calibration

Before (Measured):	11:13:47 30-Jan-2013
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Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	m/s2	Before	9.810	9.610	9.803	10.010	

EDTC-B Memory Data - EDTC-B Memory Data

Master (EEPROM): 11:13:02 30-Jan-2013

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Initial PMT HV	V	Master			1612.000		
Accelerometer Serial Number		Master			1203		
Accelerometer Coefficients - 0		Master	----	----	3.003	----	
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	----	----	-0.003	----	
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			79224		

EDTC-B Gamma-Ray Calibration - Gamma Ray Coefficients

Before (Measured): 15:51:10 29-Jan-2013

After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Gamma Ray Gain		Before	1.000	0.900	1.082	1.100	
		After	----	----	----	----	
		After-Before	----	----	----	----	

EDTC-B Gamma-Ray Calibration - Gamma Ray Accumulations

Before (Measured): 15:51:10 29-Jan-2013

After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before		0	30.235	120.000	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RGR Plus Measurement	gAPI	Before	164.000	149.000	151.615	179.000	
		After			NOT DONE		
		After-Before	----	----	----	----	

LEH-QT (Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor) Calibration - Run 1.1

Primary Equipment :

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

LEH-QT

2135

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	-4448.222	NOT DONE	4448.222	

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	----	----	----	----	

Survey Record

Survey Calculation

Method : Minimum Radius of Curvature

DLS Method :

Lubinski

North Reference : True North

Total Correction Formula :

Magnetic Dec

Rig Location

Latitude : 65° 51' 51.5" N

Longitude :

127° 0' 20.7" W

Latitude : 65 5 51.5 N Longitude : 127 0 30.7 W

Tie In Point

Measured Depth:	0.00 m	Inclination:	0.00 deg	Azimuth:	0.00 deg
True Vertical Depth:	0.00 m	North Displacement:	0.00 m	East Displacement:	0.00 m

Survey Quality Index

28 : Tie-In Point

Survey Correction Index

0 : No correction

Survey Description Index

0 : Not Flagged Survey

Seq	MD (m)	Incl (deg)	Azim (deg)	Course (m)	TVD (m)	V Sec (m)	N/ -S (m)	E/ -W (m)	Closure (m)	at Azim (deg)	DLS deg/30m	Tool Type	QI	CI	DI
1	0.00	0.00	0.00	----	0.00	0.00	0.00	0.00	0.00	90.00	0.00	TIP	28	0	0

Company: CONOCOPHILLIPS CANADA RESOURCES CORP

Schlumberger

Well: COPRC LOON CREEK O-6

Field: LOON CREEK

Province: NORTHWEST TERRITORIES

VERTICAL WELL

PLATFORM EXPRESS

COMPENSATED NEUTRON

DUAL LITHOLOGY DENSITY LOG