

Schlumberger

Company: CDEX
Well: C0009A
Field: Kumanonada, Offshore Kii peninsula
Rig: Chikyu
Country: JAPAN

EMS Caliper Log 3665.4m – 2785.0m Suite 1, Run 1 (1:200)			LOCATION Nankai Trough NT2-11B			Elev.: K.B. G.L. D.F. 28.30 m		
Permanent Datum: _____ Log Measured From: _____ Drilling Measured From: _____			MEAN SEA LEVEL _____ DRILL FLOOR _____ DRILL FLOOR _____			Elev.: 28.30 m _____ 0.00 m above Perm. Datum		
Rig: Chikyu Field: Kumanonada, Offshore Kii peninsula Location: Nankai Trough Well: C0009A Company: CDEX		Prefecture: Wakayama Max. Well Deviation 0.7 deg		Longitude 136° 32.1489' E		Latitude 33° 27.4704' N		
Logging Date	12-Jul-2009							
Run Number	1							
Depth Driller	3686 m							
Schlumberger Depth	3667 m							
Bottom Log Interval	3665.4 m							
Top Log Interval	2785 m							
Casing Driller Size @ Depth	20,000 in @ 2786.2 m							
Casing Schlumberger	2785 m							
Bit Size	12.250 in							
Type Fluid In Hole	KCl-NaCl Polymer							
Density	1.1 g/cm3		97 s					
Fluid Loss	4.1 cm3		10.6					
Source Of Sample	Flow Line							
RM @ Measured Temperature	0.068 ohm.m @		26 degC					
RMF @ Measured Temperature	0.059 ohm.m @		27 degC					
RMC @ Measured Temperature	0.083 ohm.m @		26 degC					
Source RMF	Press		Press					
RM @ MRT	0.060 @ 32		0.052 @ 32					
Maximum Recorded Temperatures	32 degC		31					
Circulation Stopped	Time 11-Jul-2009		Time 5:30					
Logger On Bottom	Time 11-Jul-2009		Time 4:45					
Unit Number	4308		JPOP					
Recorded By	Payap Thongpracharn							
Witnessed By	T. Honda / K. Takahashi							

			Run 1	Run 2	Run
Logging Date					
Run Number					
Depth Driller					
Schlumberger Depth					
Bottom Log Interval					
Top Log Interval					
Casing Driller Size @ Depth					
Casing Schlumberger					
Bit Size					
Type Fluid In Hole					
Density					
Fluid Loss					
Source Of Sample					
RM @ Measured Temperature					
RMF @ Measured Temperature					
RMC @ Measured Temperature					
Source RMF					
RM @ MRT					
Maximum Recorded Temperatures					
Circulation Stopped					
Logger On Bottom					
Unit Number					
Recorded By					
Witnessed By					

DEPTH SUMMARY LISTING

Date Created: 15-JUL-2009 16:22:03

Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-JA	Type: CMTD-B/A	Type: 7-46A XXS
Serial Number: 6726	Serial Number: 2986	Serial Number: 6019
Calibration Date:	Calibration Date: 16-Apr-09	Length: 9200 M
Calibrator Serial Number: 17	Calibrator Serial Number: 1049	Conveyance Method: Wireline
Calibration Cable Type: 7-46A XXS	Number of Calibration Points: 10	Rig Type: Offshore Floater with WMC
Wheel Correction 1: -6	Calibration RMS: 373	
Wheel Correction 2: -6	Calibration Peak Error: 499	

Depth Control Parameters

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	89.00 M
Rig Up Length At Bottom:	89.00 M
Rig Up Length Correction:	0.00 M
Stretch Correction:	3.20 M
Tool Zero Check At Surface:	0.00 M

Depth Control Remarks

<ol style="list-style-type: none"> 1. Schlumberger Depth Control Policy is followed. 2. IDW used as primary depth control device. 3. Z-Chart used as secondary depth control device. 4. Tide Level = 0 m. 5. 6.

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 OF 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.



















OTHER SERVICES1
OS1: FMI-HNGS-EMS-Sonic Scanner-PPC-GR
OS2: MDT Dual Packer & Sungle Probe
OS3:
OS4:
OS5:
REMARKS: RUN NUMBER 1
This is the first log in the well.
Downlog used as the reference log.
Tool ran as per tool sketch and 2.5 inch standoffs used.
Maximum recorded temperature from logging head thermometers = 32.22 degC.
Maximum deviation = 0.70 deg @ 2749.79mBRT.
Logging speed was 1,800 ft/hr.
Repeat section was taken from 3665.4m-3575.0m as per client request.

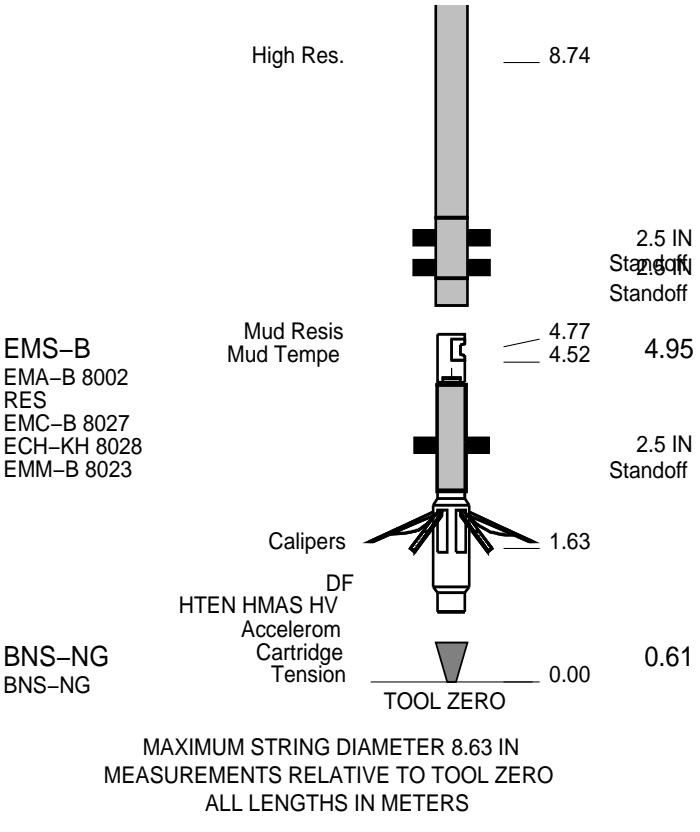
Respect sections that taken from 2008 mtr. section as per client request.

Caliper check in casing = 18.75 inch.
Circulation Started: 11-Jul-2009; 1:45am
Circulation Stopped: 11-Jul-2009; 5:30am
AV=55 cps, PV=35 cps, YV=40 lb/100ft2, Gel=7-8 lb/100ft2, WL=4.1 ml, MC=0.5 mm
pH=10.6 ml, Pf=0.2 ml, Pm=0.3 ml, Mf=0.3 ml, Cl=71,700 mg/l, Ca++Mg++=80/97 mg/l, Sand = 0.2%
O/S/W=0/6/94 %Vol, MBC=0.5 ml/ml mud, K+=26,400 mg/l

RUN 1			RUN 2		
SERVICE ORDER #:	AVDO-0003		SERVICE ORDER #:		
PROGRAM VERSION:	17C0-154		PROGRAM VERSION:		
FLUID LEVEL:	10 m		FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

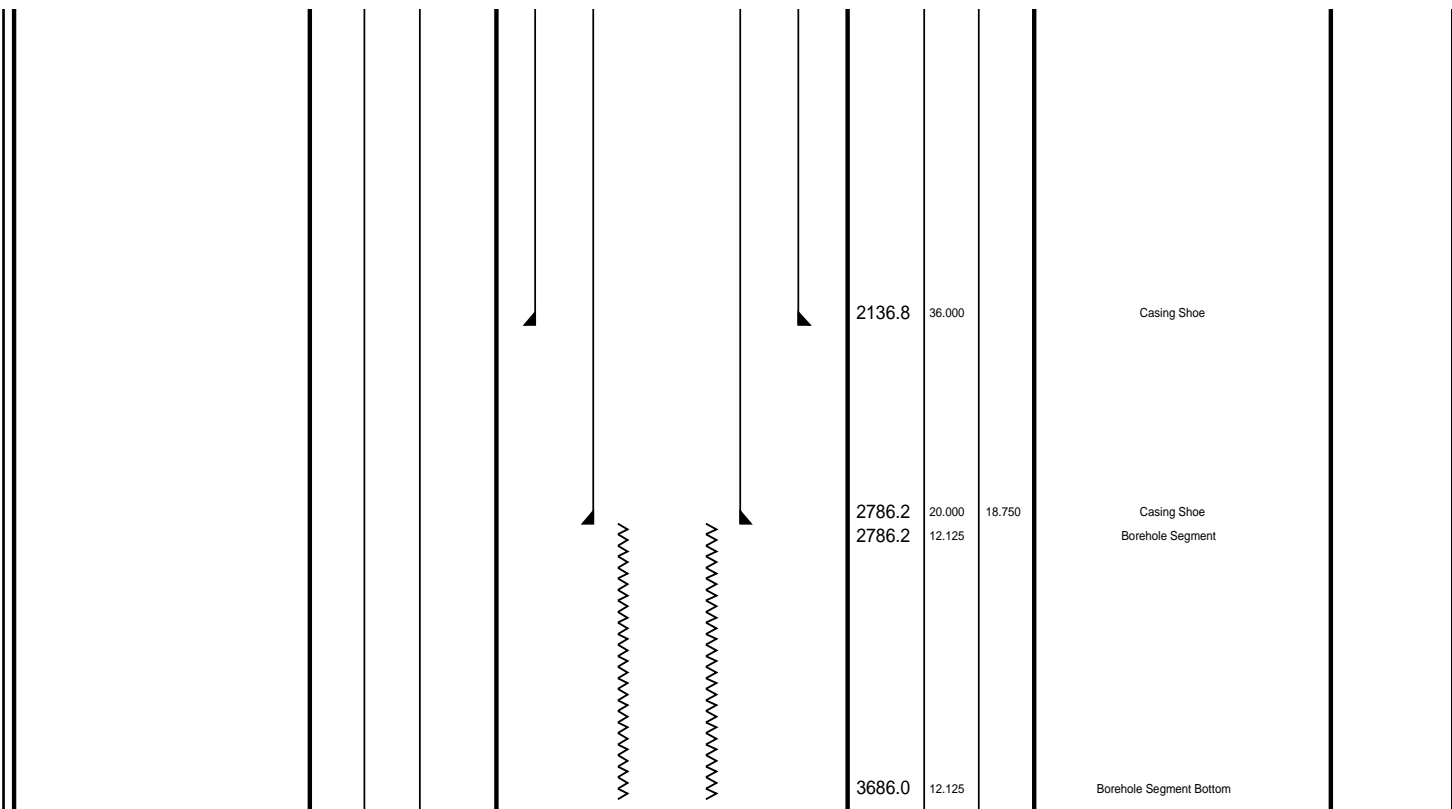
EQUIPMENT DESCRIPTION

RUN 1		RUN 2	
SURFACE EQUIPMENT GSR-Y 1005 NCT-B 2138 CNB-AB NCS-YC 5380 WITM (DTS)-A			
DOWNHOLE EQUIPMENT			
LEH-QT LEH-QT 1794		23.60	
AH-369		22.71	
DTC-H ECH-KC 9799 DTCH0-A	CTEM TelStatus ToolStatu 	22.00 21.36	22.28 0.5 IN Standoff
SPA-A SPA-A 9933	SP SPARC HGNS HTEM HMCA 	20.75 20.14	21.36
HILTH-FTB HGNSD-H 3840 HMCA-H HGNH 2916 NLS-KL 5228 NSR-F 5228 HACCZ-H HCNT-H HGR HRCC-H 3794 HRMS-H 3846 HRGD-H 3824 GLS-VJ 3804 MCFL Device-H HILT Nucl. LS-H HILT Nucl. SS-H HILT Nucl. BS-H BOW-SPR	HGNS Gamm         	19.92 18.14 17.99 17.27 16.06 14.40 14.25 14.13	20.14
AH-184 AH-184 936		13.54	
AH-184 AH-184 917		12.93	
HRLT-B HRUH-B 755 HRUC-B 755 HRLS-B 846 HRLH-B 849 HRLC-B 847 AH-270 846	  	12.32 2.5 IN 2.5 IN	Standoff Standoff



Client: CDEX Drawing Date: 7/11/2009
 Well: C0009A
 Field: Nankai Trough Rig Name: Chikyu
 State: Wakayama Reference Datum: Mean Sea Level
 Country: JAPAN Elevation: 28.3 m

Production String	(m)			Well Schematic	(in)			Casing String
	OD	ID	MD		MD	OD	ID	
Derrick Floor Elevation			28.3					
Mean Sea Level			0.0					
					2082.3	36.000		Casing String



Main Log 1:200

MAXIS Field Log

Company: CDEX

Well: C0009A

Input DLIS Files

DEFAULT	MERGE_EMS_HRLA_TLD_025GUP	FN:1	PRODUCER	13-Aug-2009 12:50	3670.2 M	2755.7 M
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Output DLIS Files

DEFAULT	EMS_HRLA_TLD_MCFL_029PUP	FN:65	PRODUCER	13-Aug-2009 13:36	3670.2 M	2761.3 M
CLIENT	EMS_HRLA_TLD_MCFL_029PUC	FN:66	CUSTOMER	13-Aug-2009 13:36	3670.2 M	2761.3 M

Integrated Hole/Cement Volume Summary

Hole Volume = 0.50 M3

Computed from 3666.9 M to 3658.5 M using data channel(s) RD1 RD2 RD3 RD4 RD5 RD6

OP System Version: 17C0-154

EMS-B	17C0-154	HRLT-B	17C0-154
HILTH-FTB	17C0-154	SPA-A	17C0-154
DTC-H	17C0-154	MAXS-B	SKK-3704-MAST
MAPC-B	SKK-3704-MAST		

PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
 - └ Integrated Cement Volume Minor Pip Every 0.1 M3
 - └ Integrated Cement Volume Major Pip Every 1 M3
- Time Mark Every 60 S

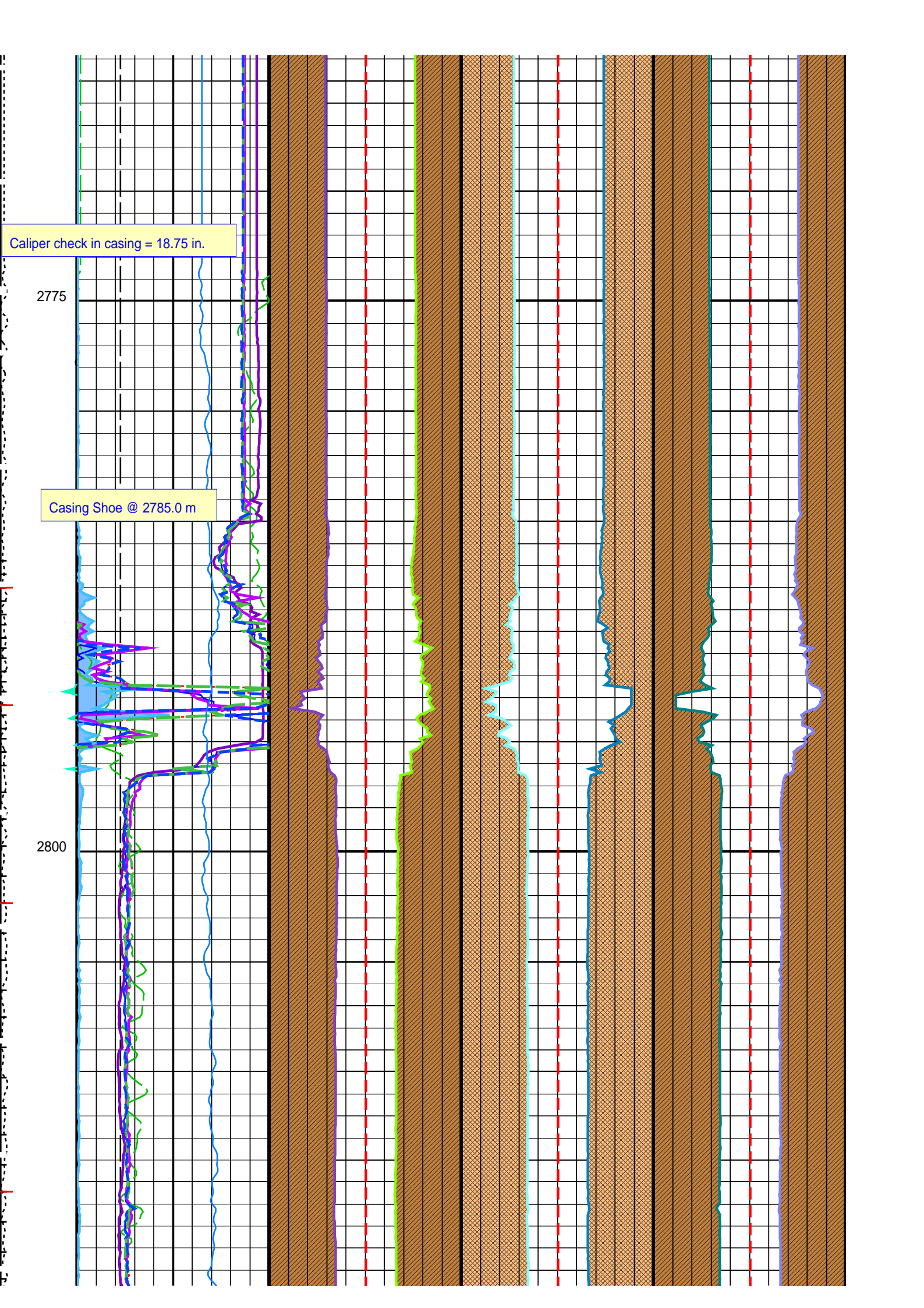
	HD difference From F1 to HDIF			
	Hole Diameter 3 (HD3) 10 (IN) 20			
	Hole Diameter 2 (HD2) 10 (IN) 20			
	SP (SP) -80 (MV) 20			
Standard deviation for HDAR From OSDV to D4T	Hole Diameter 1 (HD1) 10 (IN) 20			
Probability Angle for HDMI (CHAM) (DEG) 90 240	Hole Diameter Difference (HDIF) 0 (IN) 20			
Probability angle for HDMI From D4T to CHAM	Hole Diameter Minimum (HDMI) 10 (IN) 20	Formation From RD4 to F2	Formation From RD5 to F3	Formation From F4 to RD6
Fixed caliper flag From D4T to EFCF	Hole Diameter Maximum (HDMX) 10 (IN) 20	Formation From F2 to RD1	Formation From F3 to RD2	Formation From RD3 to F4
Oval Standard Deviation (OSDV) 23 () 3	Hole Diameter from Area (HDAR) 10 (IN) 20	Radius 4 (RD4) -20 (IN) 20	Radius 5 (RD5) -20 (IN) 20	Radius 6 (RD6) 20 (IN) -20
EMS Fixed Caliper Flag (EFCF) 0 () 20	Gamma Ray (GR) (GAPI) 50 150	Radius 1 (RD1) 20 (IN) -20	Radius 2 (RD2) 20 (IN) -20	Radius 3 (RD3) -20 (IN) 20
Tension (TENS) (LBF) 0 2000	Bit Size (BS) 10 (IN) 20	EMS Tool Center (ETC1) 20 (IN) -20	EMS Tool Center (ETC2) 20 (IN) -20	EMS Tool Center (ETC3) 20 (IN) -20

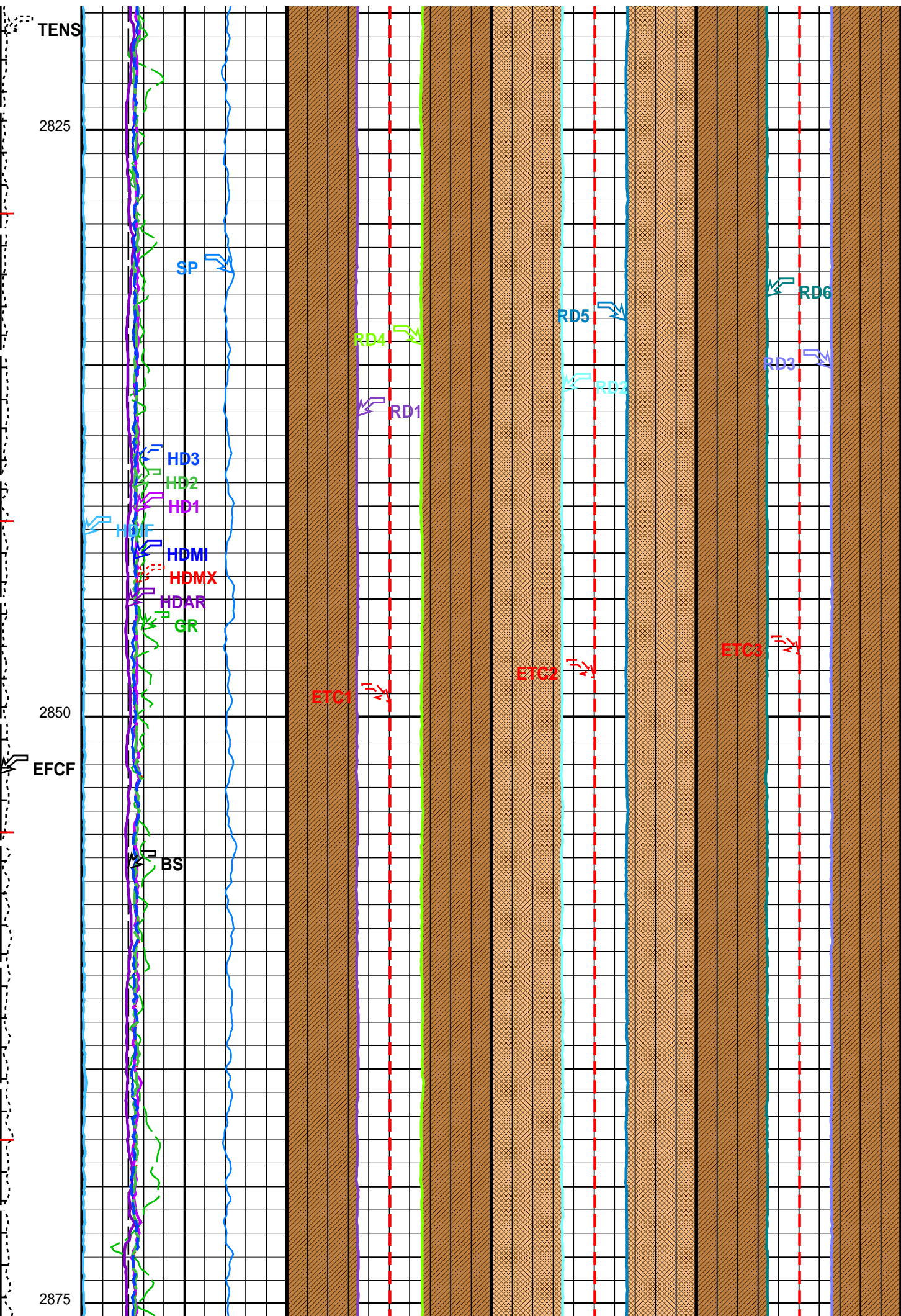
Caliper check in casing = 18.75 in.

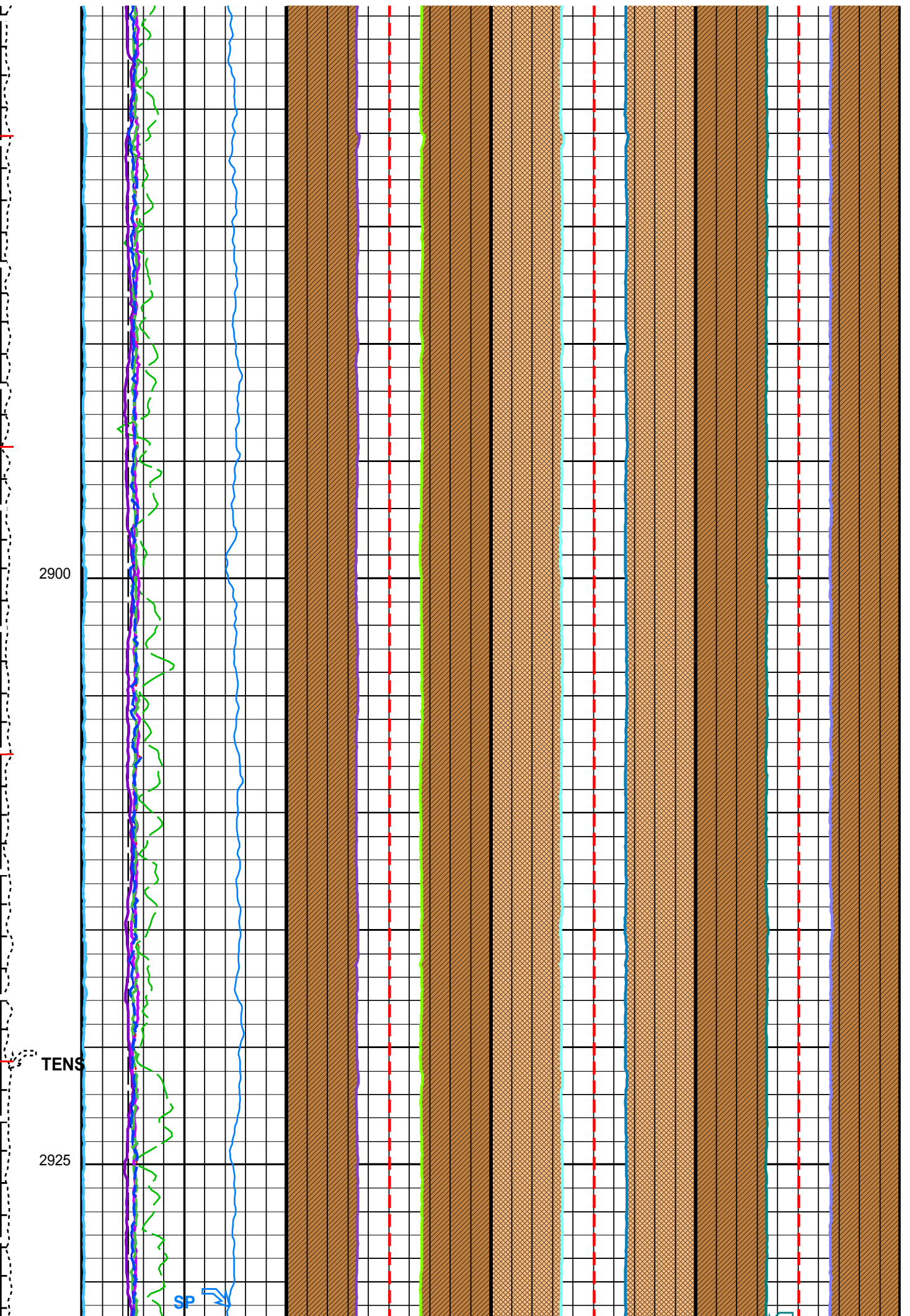
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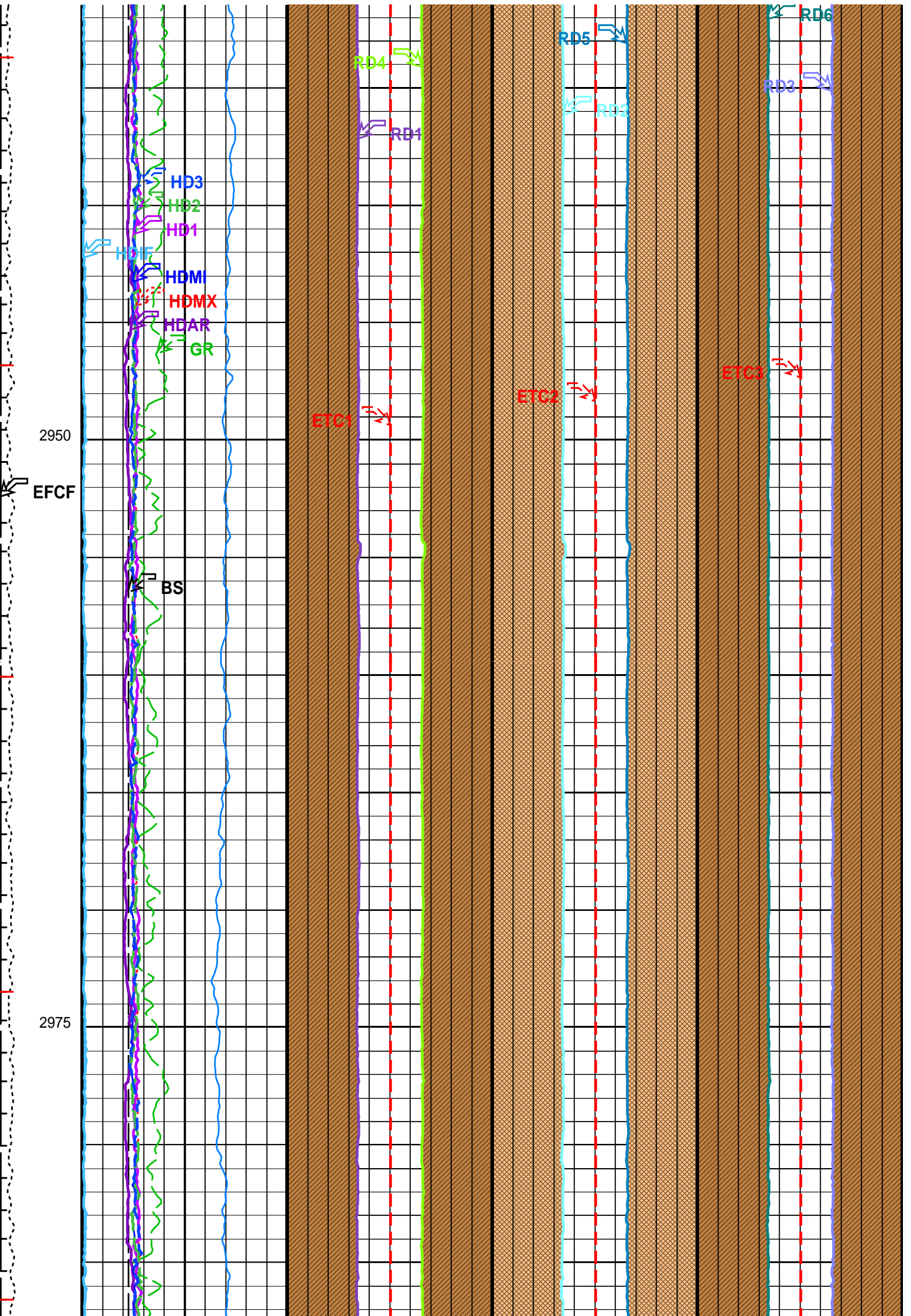
Casing Shoe @ 2785.0 m

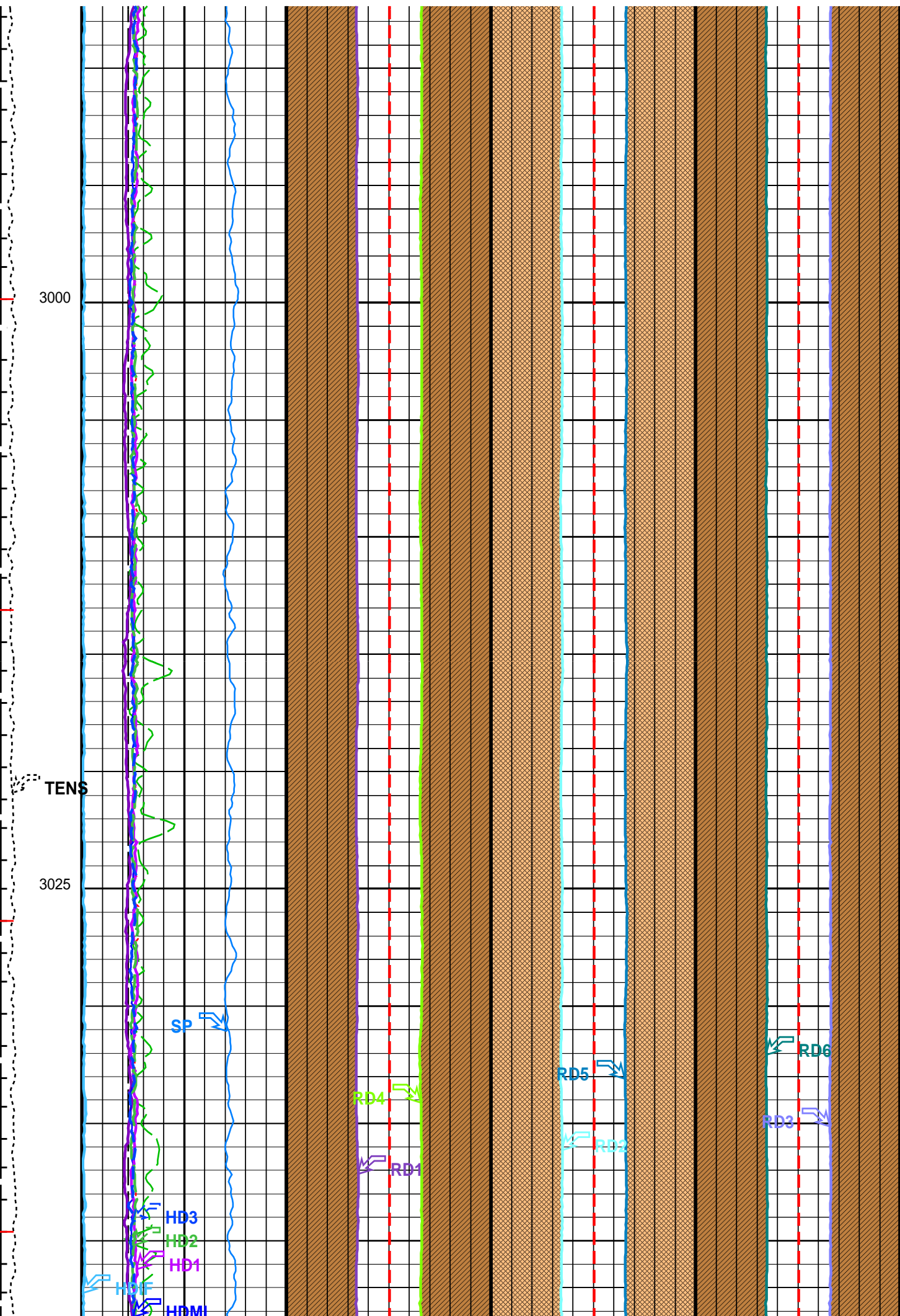
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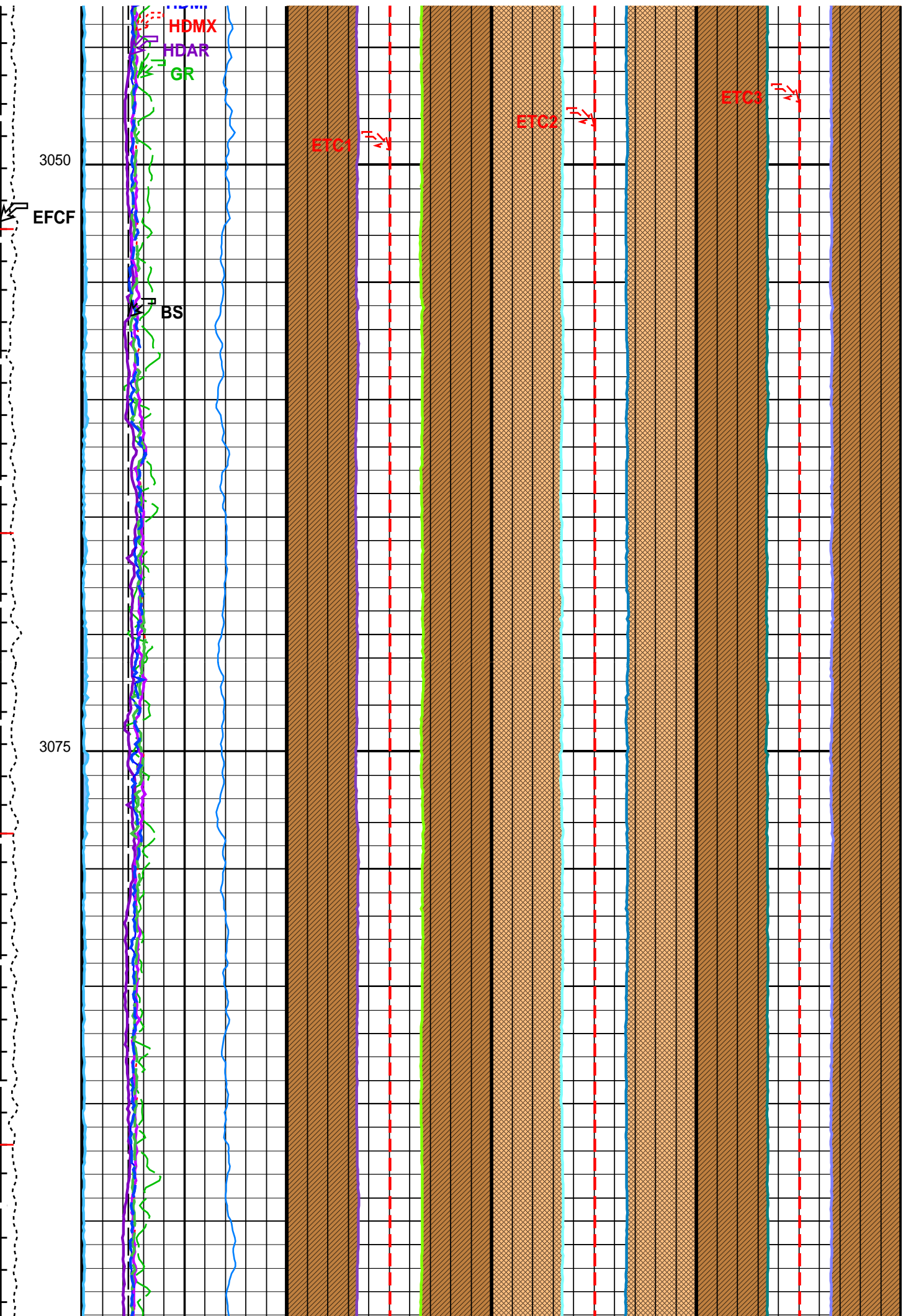


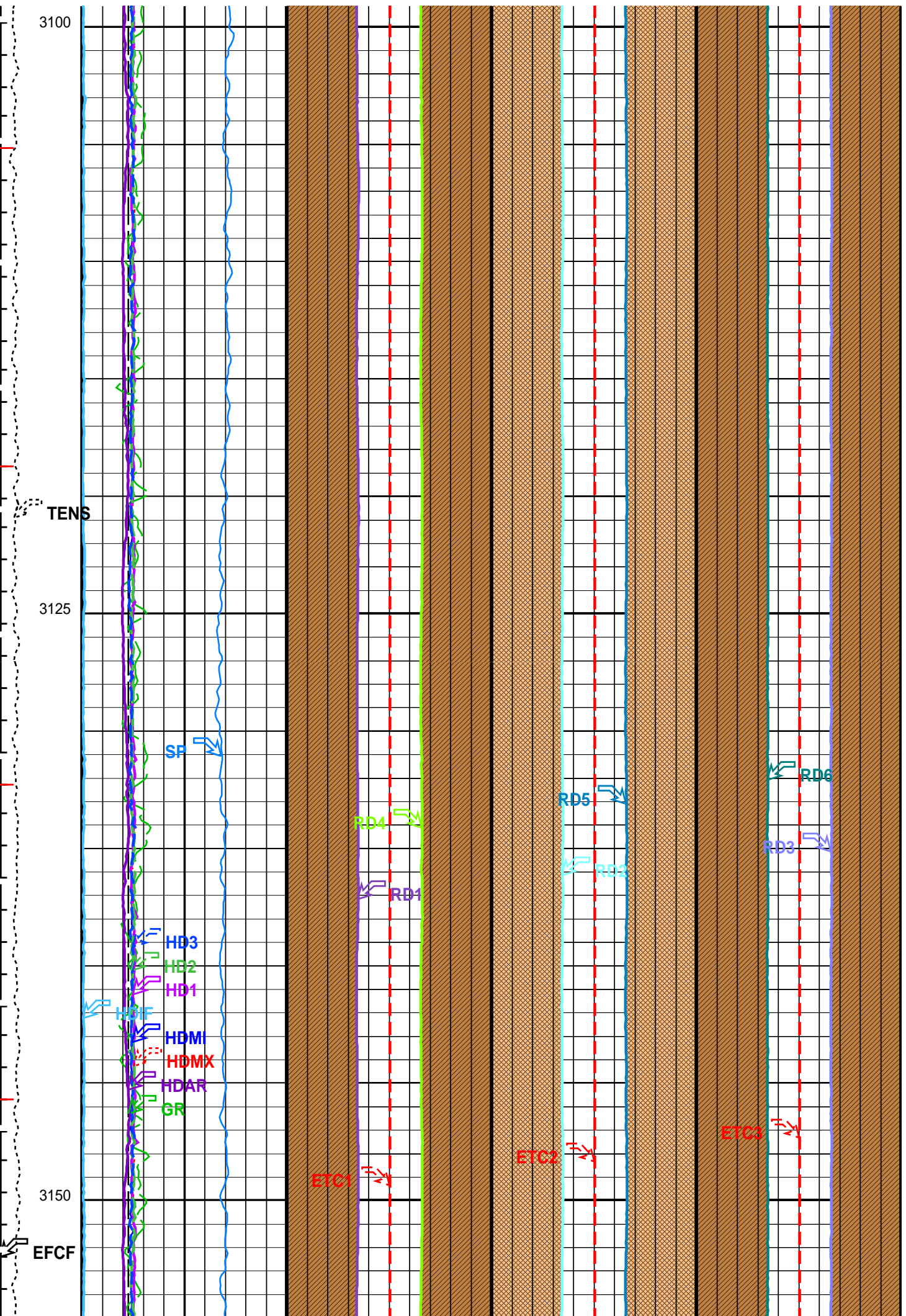


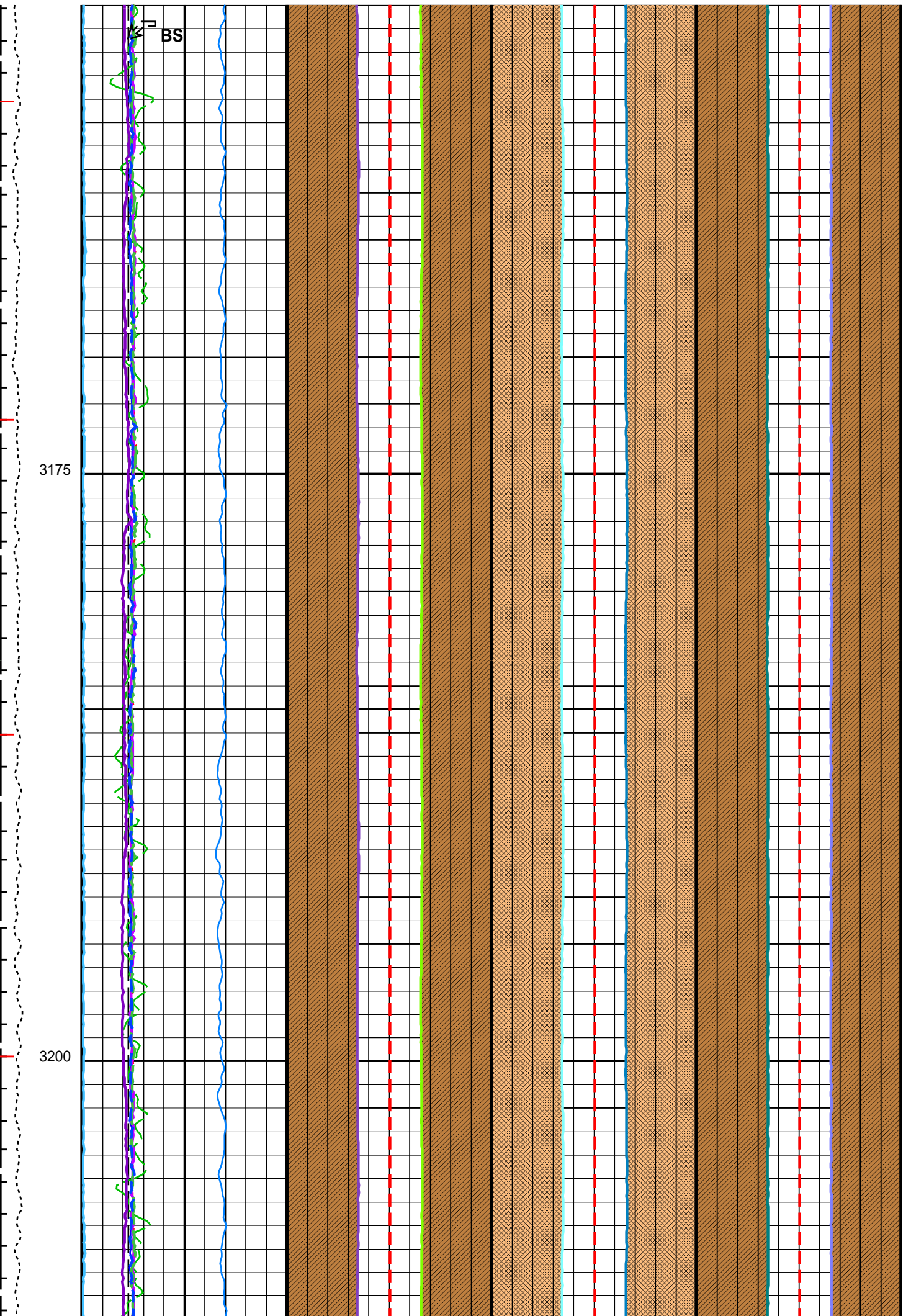


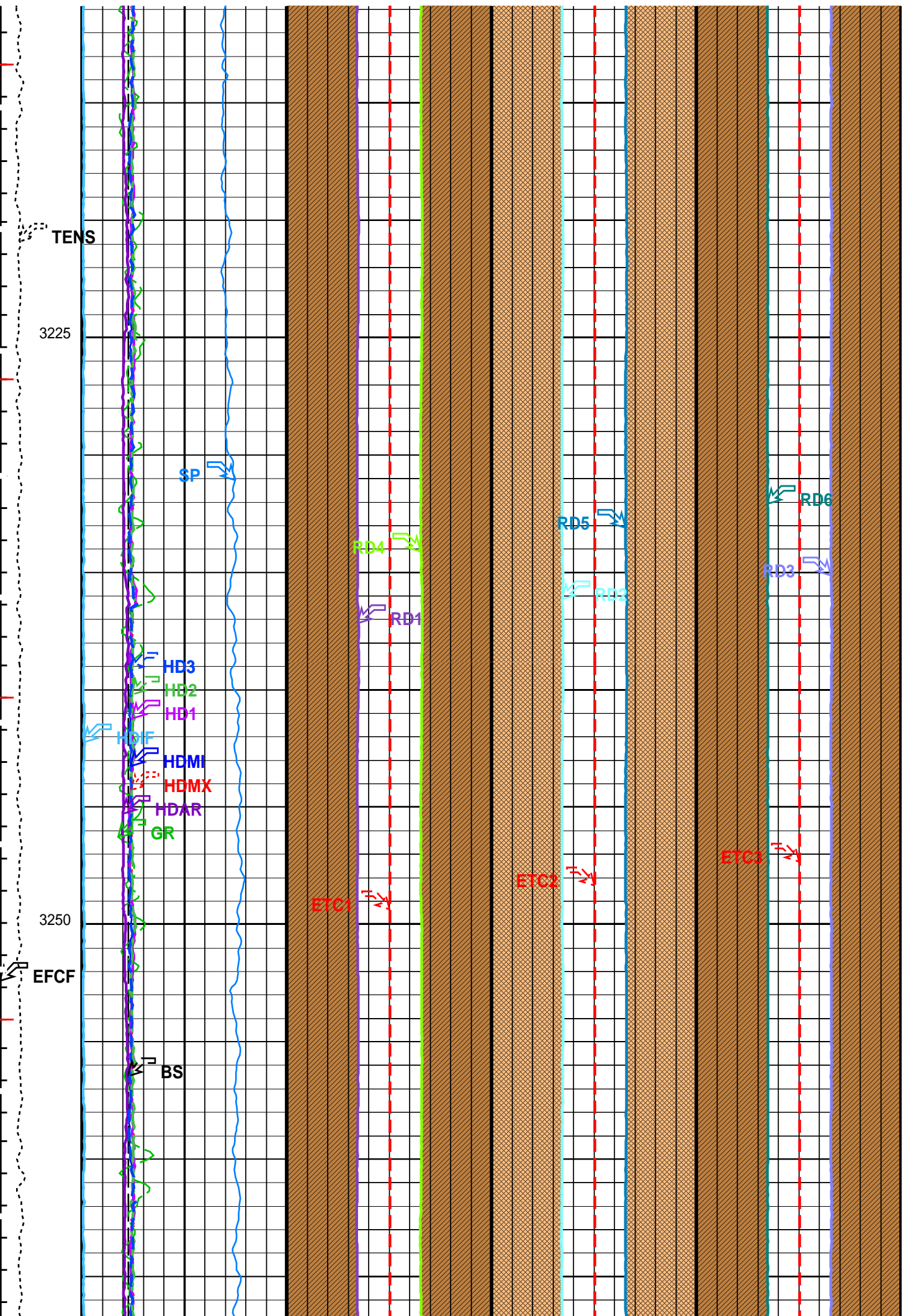


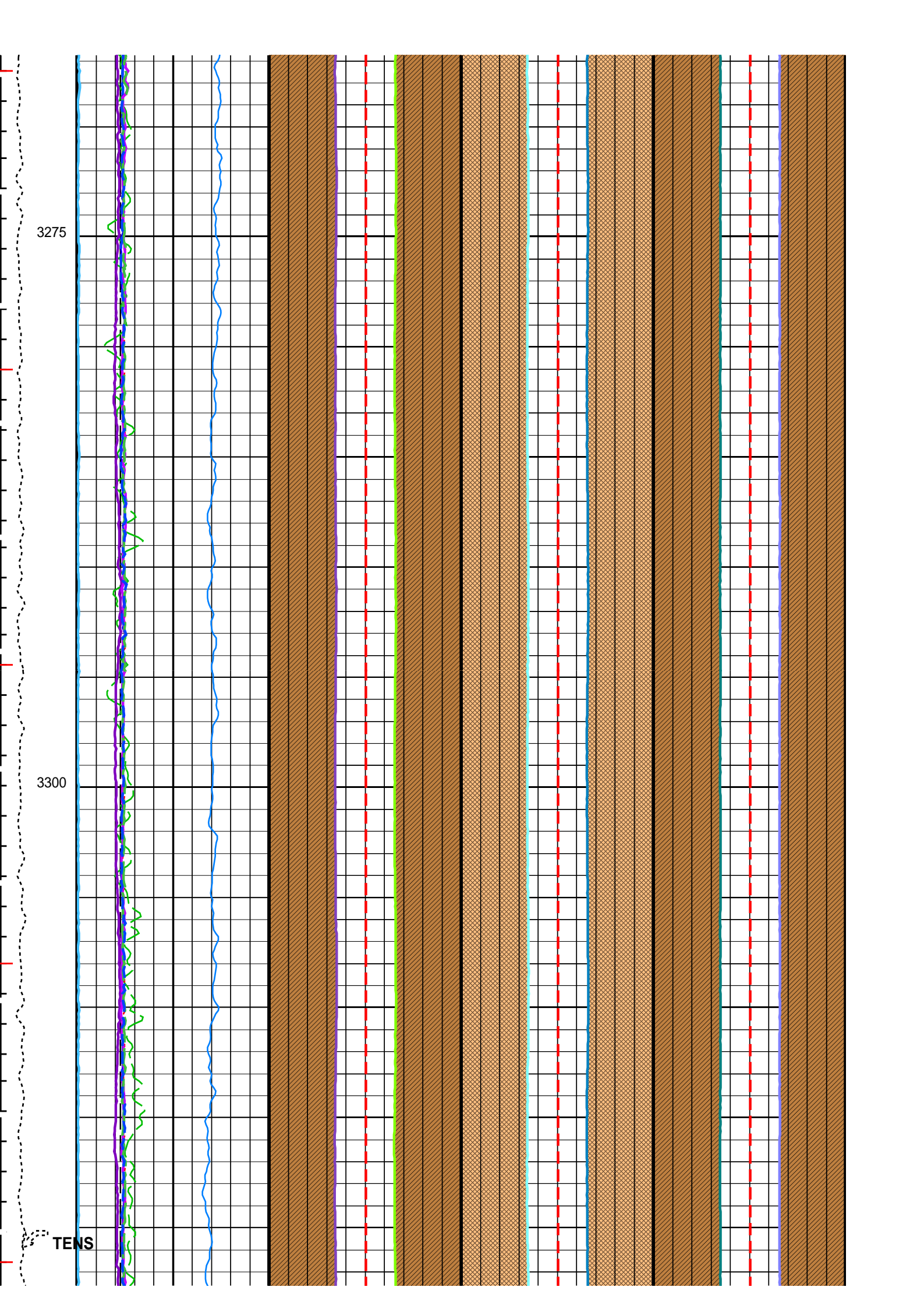








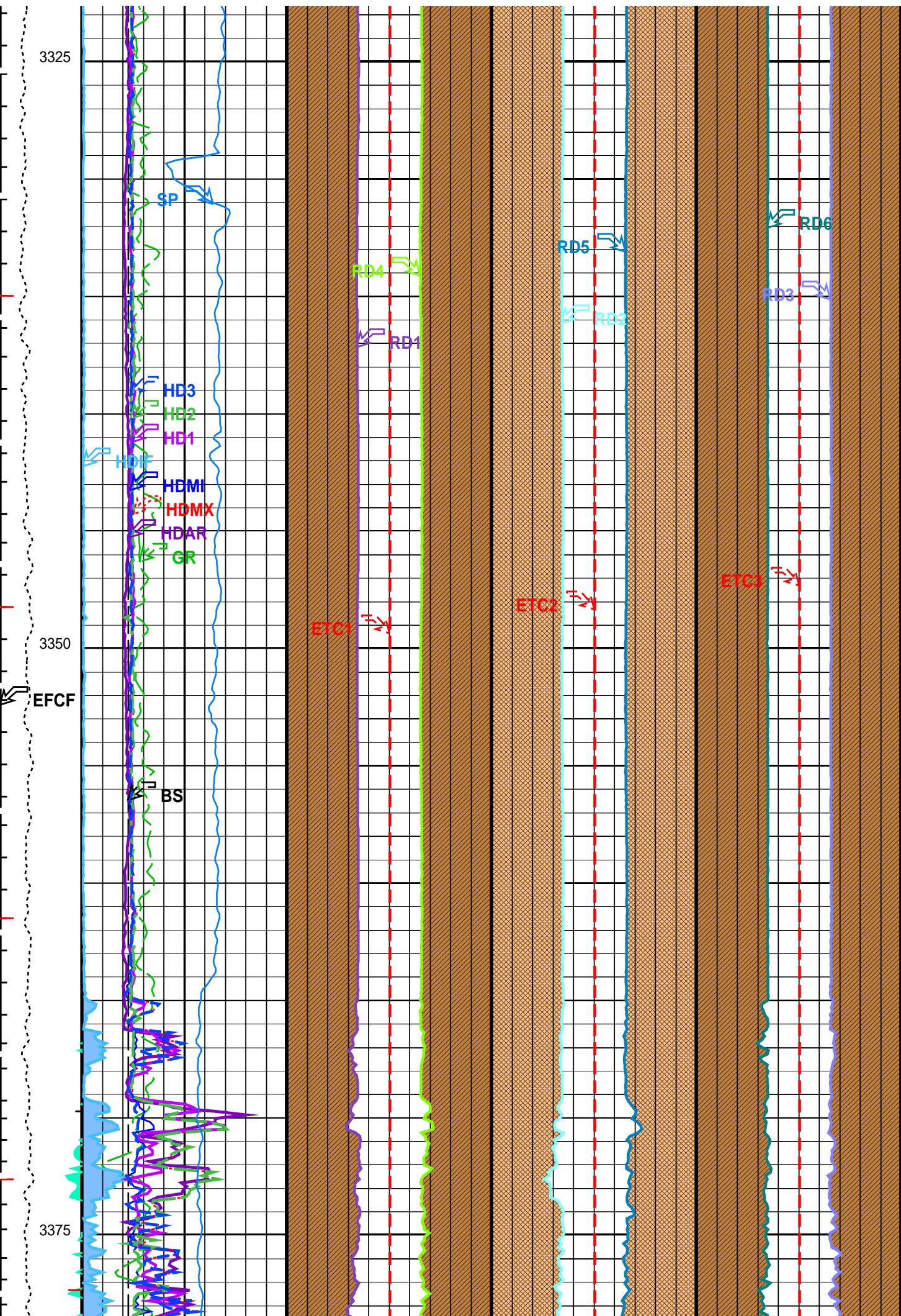


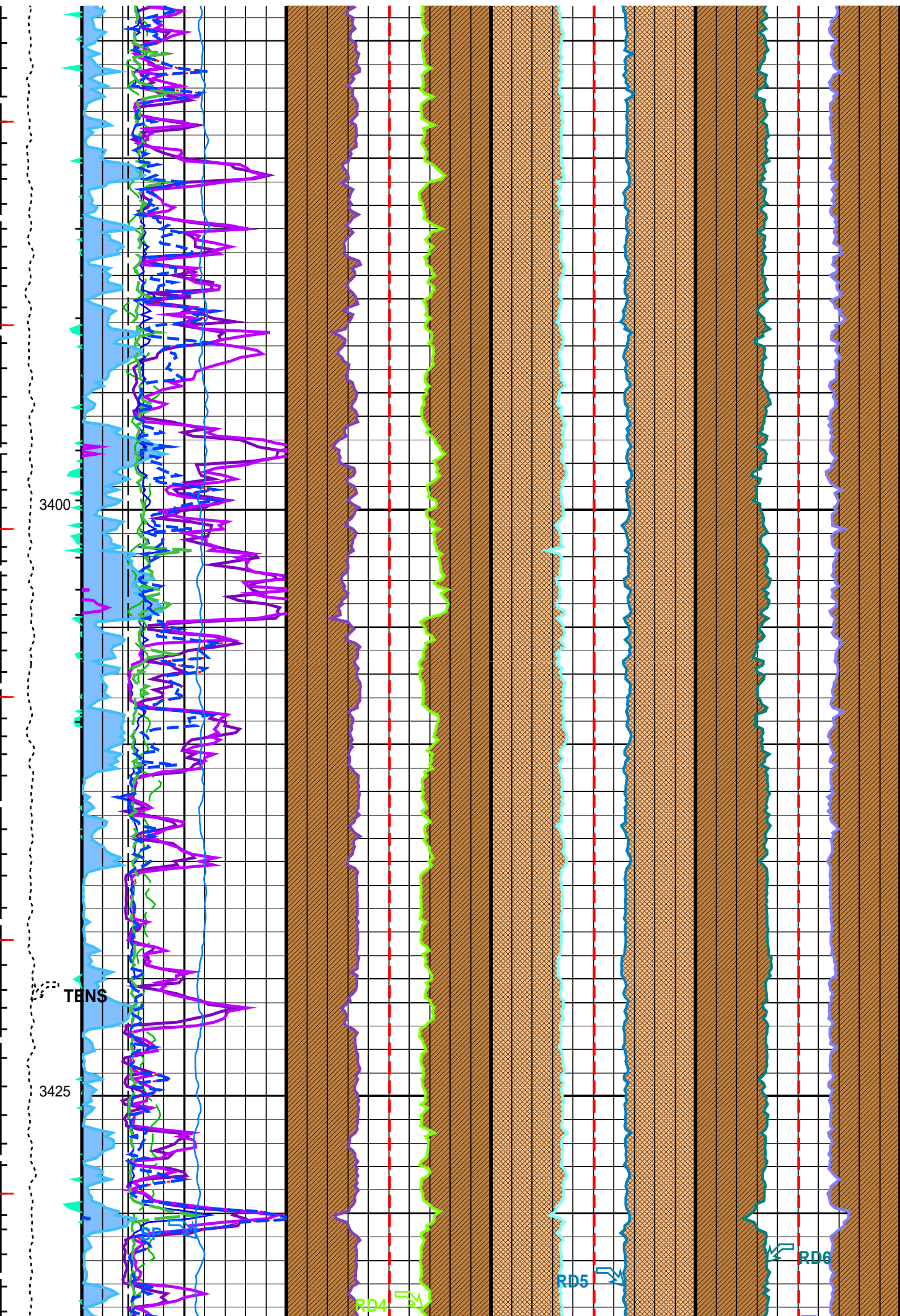


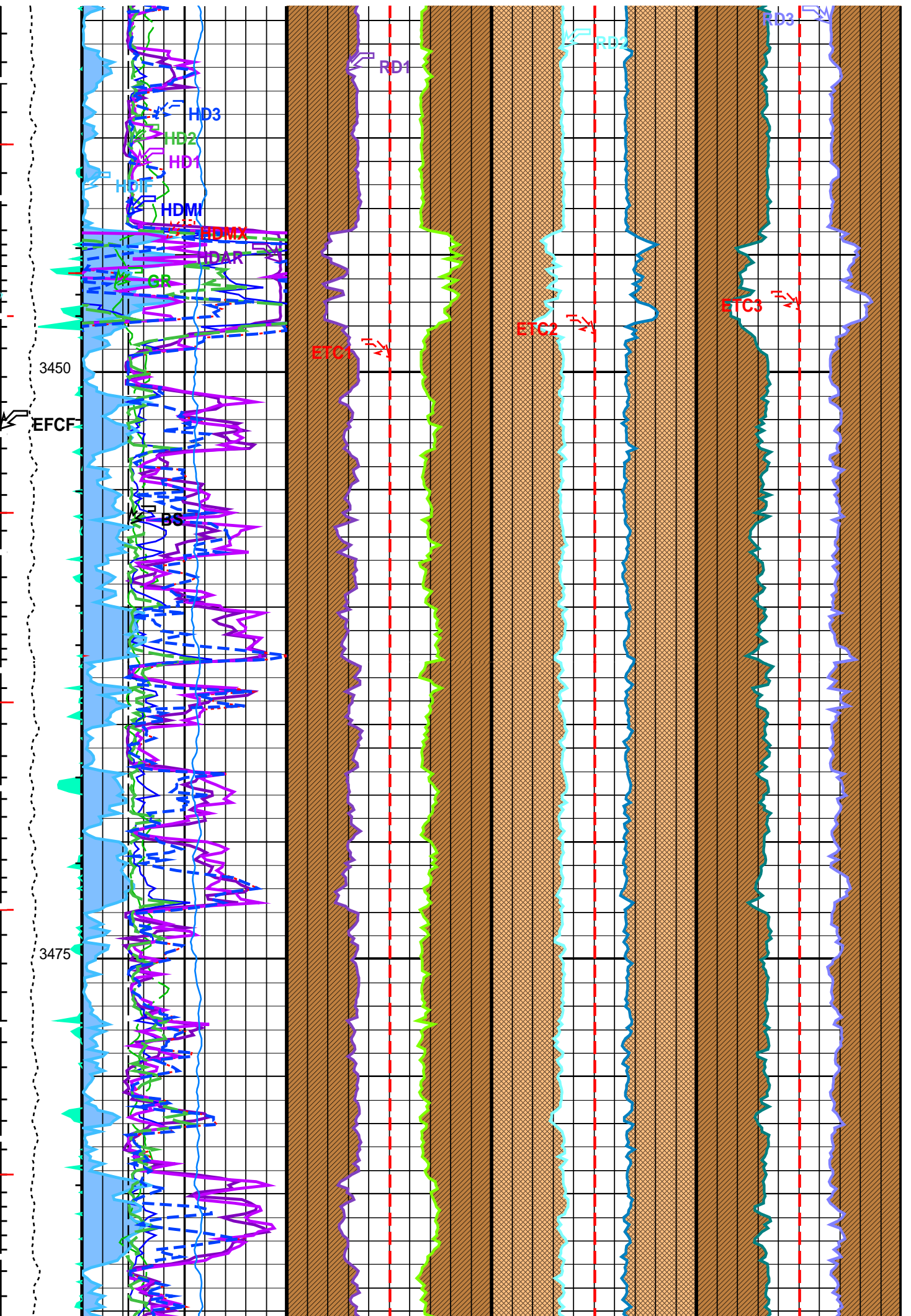
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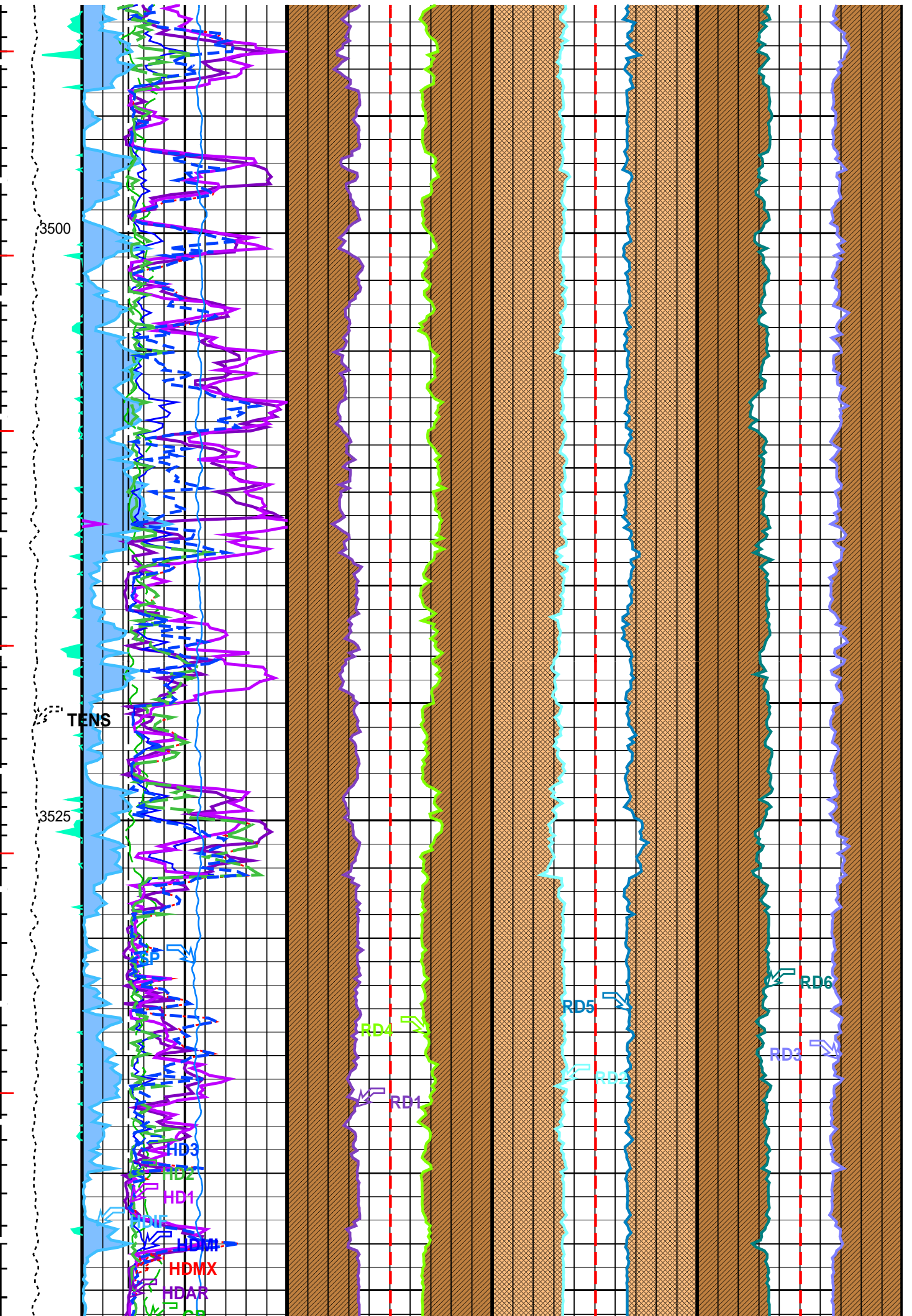
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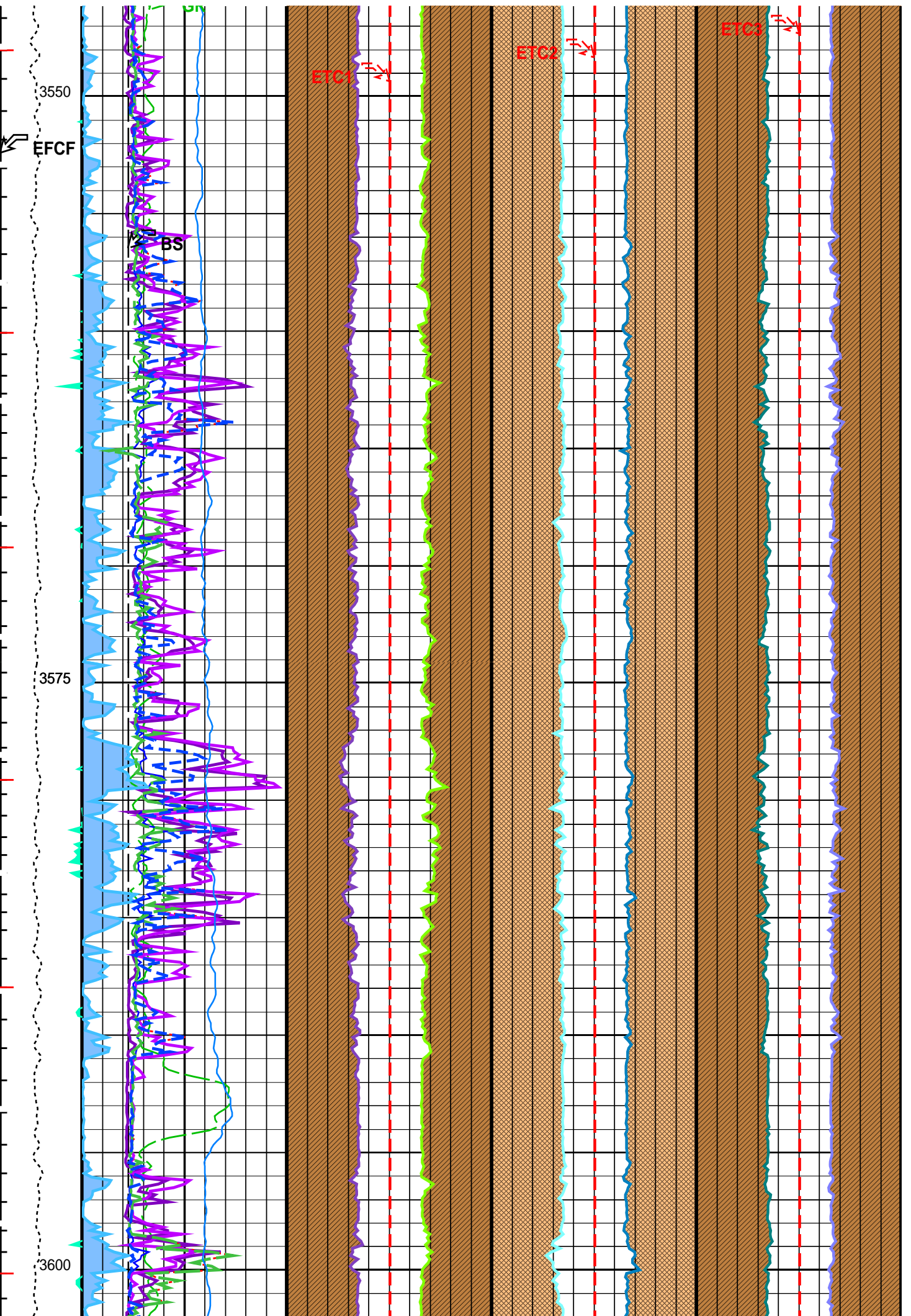
TENS

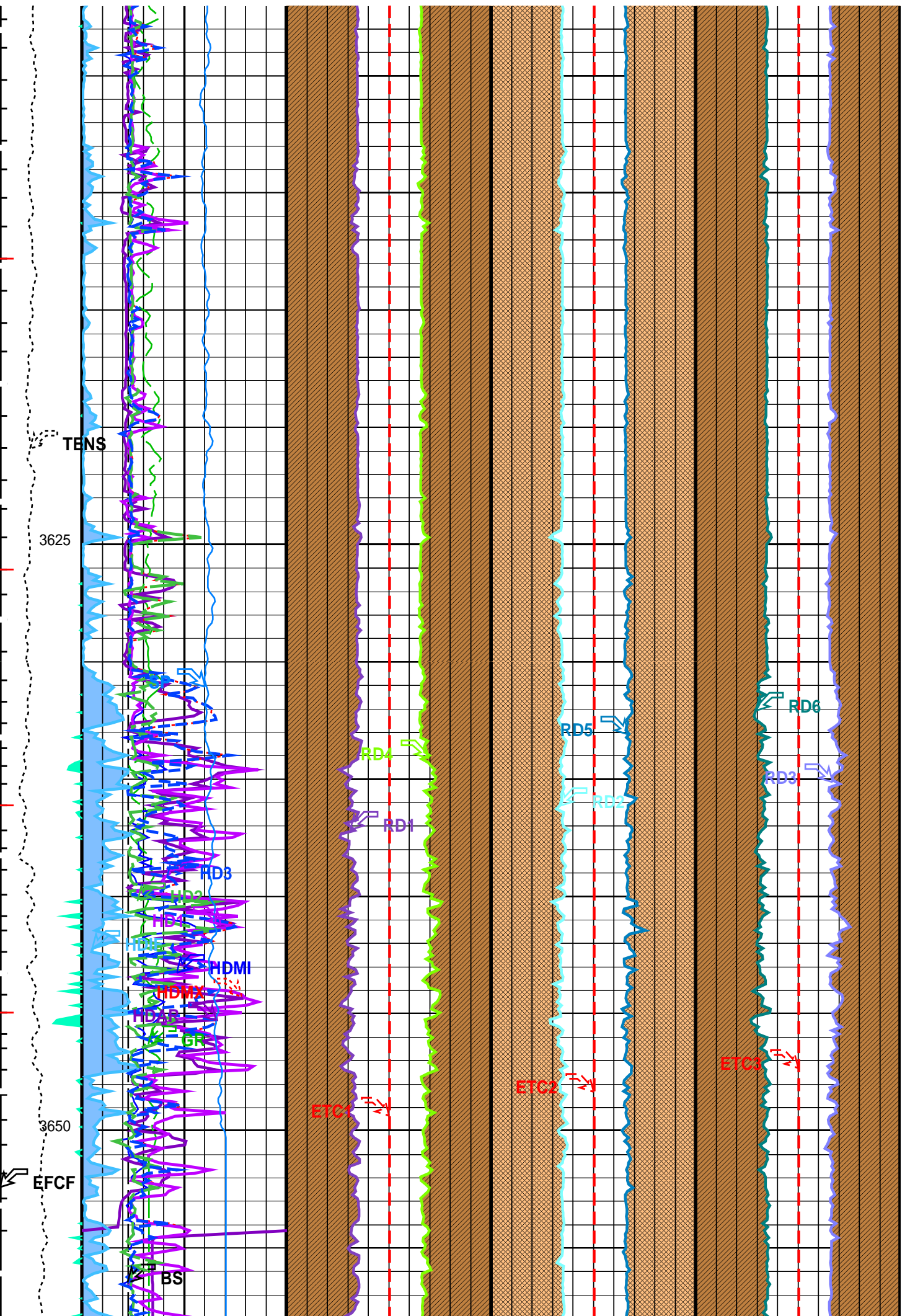


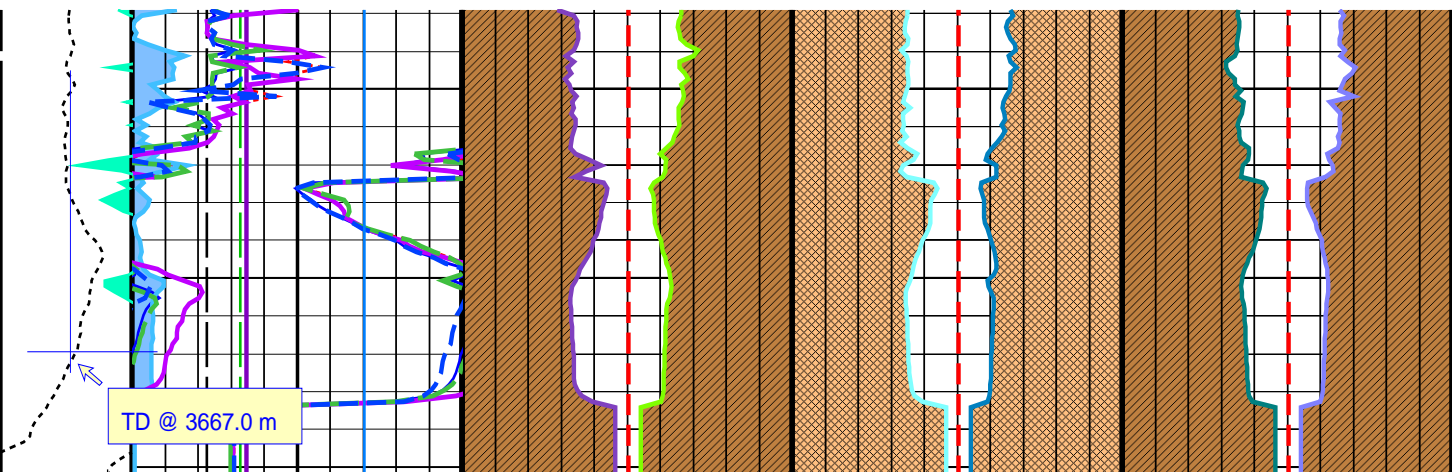












Tension (TENS) (LBF) 0 2000	Bit Size (BS) (IN) 10 20	EMS Tool Center (ETC1) (IN) 20 -20	EMS Tool Center (ETC2) (IN) 20 -20	EMS Tool Center (ETC3) (IN) 20 -20
EMS Fixed Caliper Flag (EFCF) 0 20	Gamma Ray (GR) (GAPI) 50 150	Radius 1 (RD1) (IN) 20 -20	Radius 2 (RD2) (IN) 20 -20	Radius 3 (RD3) (IN) -20 20
Oval Standard Deviation (OSDV) 23 3	Hole Diameter from Area (HDAR) (IN) 10 20	Radius 4 (RD4) (IN) -20 20	Radius 5 (RD5) (IN) -20 20	Radius 6 (RD6) (IN) 20 -20
Fixed caliper flag From D4T to EFCF	Hole Diameter Maximum (HDMX) (IN) 10 20	Formation From F2 to RD1		Formation From RD3 to F4
Probability angle for HDMI From D4T to CHAM	Hole Diameter Minimum (HDMI) (IN) 10 20	Formation From RD4 to F2		Formation From F4 to RD6
Probability Angle for HDMI (CHAM) (DEG) 90 240	Hole Diameter Difference (HDIF) (IN) 0 20			
Standard deviation for HDAR From OSDV to D4T	Hole Diameter 1 (HD1) (IN) 10 20			
	SP (SP) (MV) -80 20			
	Hole Diameter 2 (HD2) (IN) 10 20			
	Hole Diameter 3 (HD3) (IN) 10 20			
	HD difference From F1 to HDIF			

- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
 - └ Integrated Cement Volume Minor Pip Every 0.1 M3
 - └ Integrated Cement Volume Major Pip Every 1 M3
- Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
EMS-B: Environment Measurement Sonde			
ECOF	EMS Caliper Offset	2	IN
EFC	EMS Fixed Caliper Operation	OFF	
ESCL	EMS Synthetic Caliper Log	OFF	
FCD	Future Casing (Outer) Diameter	13.375	IN
HVCS	Integrated Hole Volume Caliper Selection	EMS_Calipers	
SPA-A: SP ADAPTOR			
SPNV	SP Next Value	0	MV
MAPC-B: Multimode Array Sonic Power Cartridge			
BS	Bit Size	12.250	IN
HOLEV: Integrated Hole/Cement Volume			
FCD	Future Casing (Outer) Diameter	13.375	IN
HVCS	Integrated Hole Volume Caliper Selection	EMS_Calipers	
System and Miscellaneous			
DO	Depth Offset for Playback	0.0	M
DORL	Depth Offset for Repeat Analysis	0.0	M
PP	Playback Processing	OFF	
TD	Total Depth	3667	M

Format: EMS_Caliper 200 Vertical Scale: 1:200

Graphics File Created: 13-Aug-2009 13:36

OP System Version: 17C0-154

EMS-B	17C0-154	HRLT-B	17C0-154
HILTH-FTB	17C0-154	SPA-A	17C0-154
DTC-H	17C0-154	MAXS-B	SKK-3704-MAST
MAPC-B	SKK-3704-MAST		

Input DLIS Files

DEFAULT	MERGE_EMS_HRLA_TLD_025GUP	FN:1	PRODUCER	13-Aug-2009 12:50	3670.2 M	2755.7 M
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Output DLIS Files

DEFAULT	EMS_HRLA_TLD_MCFL_029PUP	FN:65	PRODUCER	13-Aug-2009 13:36
CLIENT	EMS_HRLA_TLD_MCFL_029PUC	FN:66	CUSTOMER	13-Aug-2009 13:36



Repeat Analysis
1:200

MAXIS Field Log

Company: CDEX

Well: C0009A

Input DLIS Files

DEFAULT	MERGE_EMS_HRLA_TLD_025GUP	FN:1	PRODUCER	13-Aug-2009 12:50	3670.2 M	2755.7 M
	EMS_HRLA_TLD_MCFL_027PUP	FN:92		13-Jul-2009 17:11	3671.5 M	3570.6 M

Output DLIS Files

DEFAULT	EMS_HRLA_TLD_MCFL_029PUP	FN:65	PRODUCER	13-Aug-2009 13:36
CLIENT	EMS_HRLA_TLD_MCFL_029PUC	FN:66	CUSTOMER	13-Aug-2009 13:36

Integrated Hole/Cement Volume Summary

Hole Volume = 0.50 M3

Computed from 3666.9 M to 3658.5 M using data channel(s) RD1 RD2 RD3 RD4 RD5 RD6

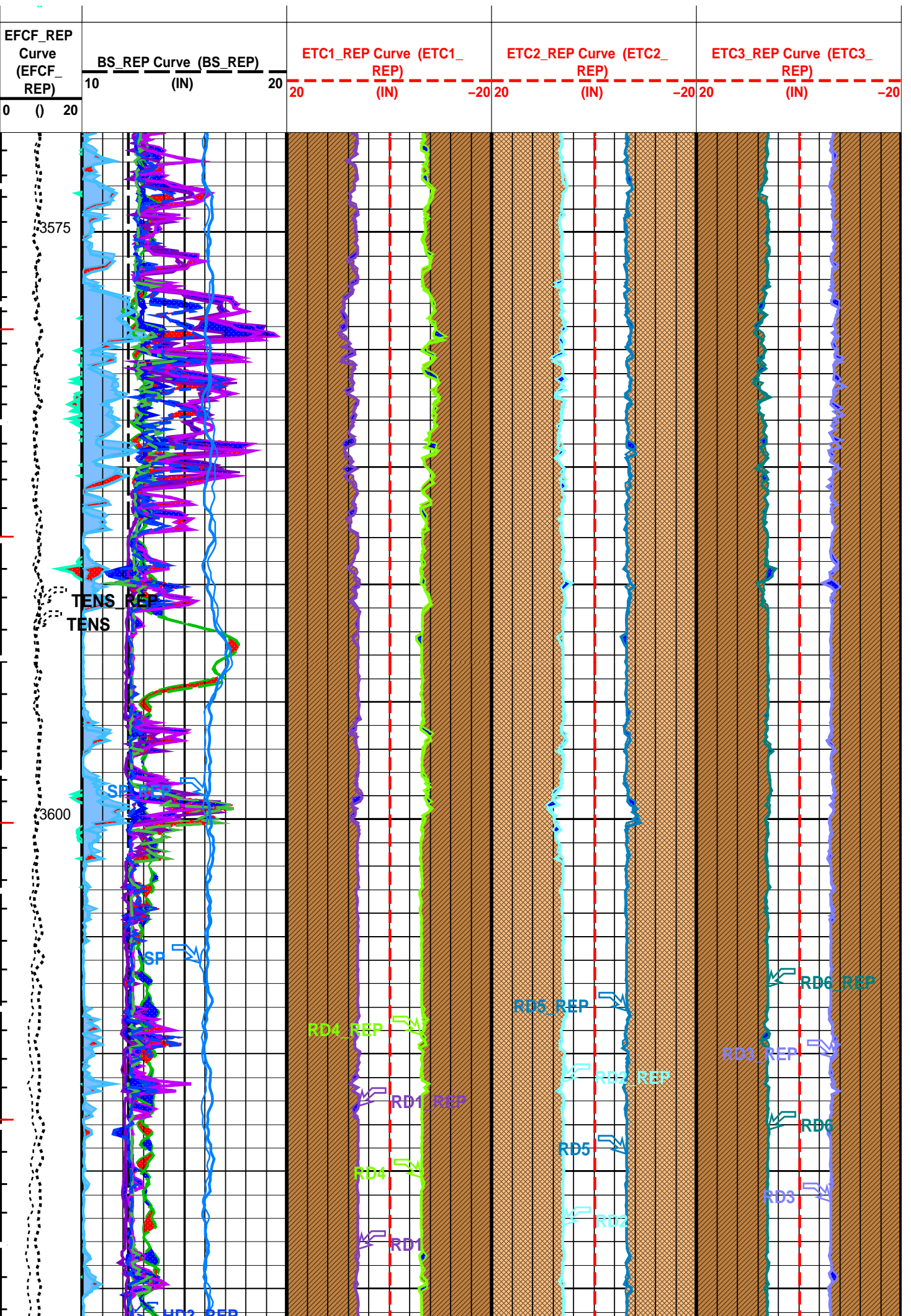
OP System Version: 17C0-154

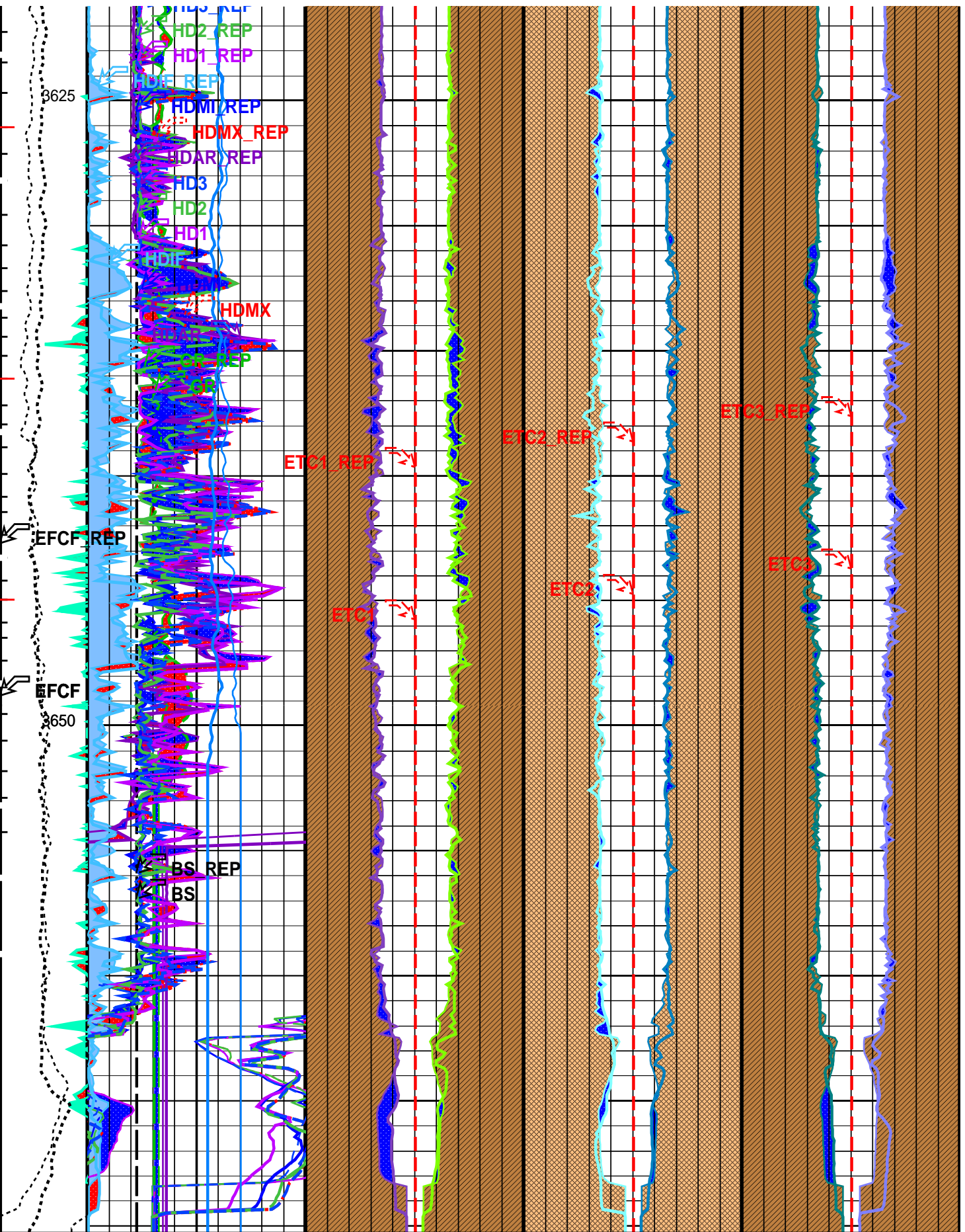
EMS-B	17C0-154	HRLT-B	17C0-154
HILTH-FTB	17C0-154	SPA-A	17C0-154
DTC-H	17C0-154	MAXS-B	SKK-3704-MAST
MAPC-B	SKK-3704-MAST		

PIP SUMMARY

- ┆ Integrated Hole Volume Minor Pip Every 0.1 M3
- ┆ Integrated Hole Volume Major Pip Every 1 M3
- ┆ Integrated Cement Volume Minor Pip Every 0.1 M3
- ┆ Integrated Cement Volume Major Pip Every 1 M3
- Time Mark Every 60 S

	HD difference From F1 to HDIF			
	SP_REP Curve (SP_REP) -80 (MV) 20			
	HD3_REP Curve (HD3_REP) 10 (IN) 20			
	HD2_REP Curve (HD2_REP) 10 (IN) 20			
Standard deviation for HDAR From OSDV to D4T	HD1_REP Curve (HD1_REP) 10 (IN) 20			
TENS_REP Curve (TENS_REP) (LBF)	HDIF_REP Curve (HDIF_REP) 0 (IN) 20			
CHAM_REP Curve (CHAM_REP) (DEG)	HDMI_REP Curve (HDMI_REP) 10 (IN) 20	Formation From RD4 to F2	Formation From RD5 to F3	Formation From F4 to RD6
Probability angle for HDMI From D4T to CHAM	HDMX_REP Curve (HDMX_REP) 10 (IN) 20	Formation From F2 to RD1	Formation From F3 to RD2	Formation From RD3 to F4
Fixed caliper flag From D4T to EFCF	HDAR_REP Curve (HDAR_REP) 10 (IN) 20	RD4_REP Curve (RD4_REP) -20 (IN) 20	RD5_REP Curve (RD5_REP) -20 (IN) 20	RD6_REP Curve (RD6_REP) 20 (IN) -20
OSDV_REP Curve (OSDV_REP)	GR_REP Curve (GR_REP) 50 (GAPI) 150	RD1_REP Curve (RD1_REP) 20 (IN) -20	RD2_REP Curve (RD2_REP) 20 (IN) -20	RD3_REP Curve (RD3_REP) -20 (IN) 20





EFCF_REP Curve (EFCF_REP)	BS_REP Curve (BS_REP)	ETC1_REP Curve (ETC1_REP)	ETC2_REP Curve (ETC2_REP)	ETC3_REP Curve (ETC3_REP)
0 () 20	10 (IN) 20	20 (IN) -20 20	(IN) -20 20	(IN) -20 20
OSDV_REP Curve (OSDV)	GR_REP Curve (GR_REP)	RD1_REP Curve (RD1_REP)	RD2_REP Curve (RD2_REP)	RD3_REP Curve (RD3_REP)

OSDV_ REP 23 () 3	50 (GAPI) 150 20 (IN) -20 20 (IN) -20 -20 (IN) 20			
Fixed caliper flag From D4T to EFCF	HDAR_REP Curve (HDAR_REP) 10 (IN) 20	RD4_REP Curve (RD4_REP) -20 (IN) 20	RD5_REP Curve (RD5_REP) -20 (IN) 20	RD6_REP Curve (RD6_REP) 20 (IN) -20
Probability angle for HDMI From D4T to CHAM	HDMX_REP Curve (HDMX_REP) 10 (IN) 20	Formation From F2 to RD1	Formation From F3 to RD2	Formation From RD3 to F4
CHAM_REP Curve (CHAM_REP) (DEG) 90 240	HDMI_REP Curve (HDMI_REP) 10 (IN) 20	Formation From RD4 to F2	Formation From RD5 to F3	Formation From F4 to RD6
TENS_REP Curve (TENS_REP) (LBF) 0 2000	HDIF_REP Curve (HDIF_REP) 0 (IN) 20			
Standard deviation for HDAR From OSDV to D4T	HD1_REP Curve (HD1_REP) 10 (IN) 20			
	HD2_REP Curve (HD2_REP) 10 (IN) 20			
	HD3_REP Curve (HD3_REP) 10 (IN) 20			
	SP_REP Curve (SP_REP) -80 (MV) 20			
	HD difference From F1 to HDIF			

PIP SUMMARY

- ┆ Integrated Hole Volume Minor Pip Every 0.1 M3
- ┆ Integrated Hole Volume Major Pip Every 1 M3
 - ┆ Integrated Cement Volume Minor Pip Every 0.1 M3
 - ┆ Integrated Cement Volume Major Pip Every 1 M3
- Time Mark Every 60 S

Format: EMS_Caliper 200_REP Vertical Scale: 1:200

Graphics File Created: 13-Aug-2009 13:36

OP System Version: 17C0-154

EMS-B	17C0-154	HRLT-B	17C0-154
HILTH-FTB	17C0-154	SPA-A	17C0-154
DTC-H	17C0-154	MAXS-B	SKK-3704-MAST
MAPC-B	SKK-3704-MAST		

Input DLIS Files

DEFAULT	MERGE_EMS_HRLA_TLD_025GUP	FN:1	PRODUCER	13-Aug-2009 12:50	3670.2 M	2755.7 M
	EMS_HRLA_TLD_MCFL_027PUP	FN:92		13-Jul-2009 17:11	3671.5 M	3570.6 M

Output DLIS Files

Output DLIS Files

DEFAULT EMS_HRLA_TLD_MCFL_029PUP FN:65 PRODUCER 13-Aug-2009 13:36
 CLIENT EMS_HRLA_TLD_MCFL_029PUC FN:66 CUSTOMER 13-Aug-2009 13:36



Calibrations

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Environment Measurement Sonde Wellsite Calibration – EMS Caliper Calibration							
Before: 11-Jul-2009 23:37							
Radius 1 Short Radius	4.000	N/A	3.627	N/A	N/A	0.2000	IN
Radius 1 Long Radius	8.000	N/A	7.897	N/A	N/A	0.2000	IN
Radius 2 Short Radius	4.000	N/A	3.405	N/A	N/A	0.2000	IN
Radius 2 Long Radius	8.000	N/A	7.651	N/A	N/A	0.2000	IN
Radius 3 Short Radius	4.000	N/A	3.595	N/A	N/A	0.2000	IN
Radius 3 Long Radius	8.000	N/A	7.818	N/A	N/A	0.2000	IN
Radius 4 Short Radius	4.000	N/A	3.824	N/A	N/A	0.2000	IN
Radius 4 Long Radius	8.000	N/A	8.065	N/A	N/A	0.2000	IN
Radius 5 Short Radius	4.000	N/A	3.791	N/A	N/A	0.2000	IN
Radius 5 Long Radius	8.000	N/A	8.051	N/A	N/A	0.2000	IN
Radius 6 Short Radius	4.000	N/A	3.728	N/A	N/A	0.2000	IN
Radius 6 Long Radius	8.000	N/A	7.967	N/A	N/A	0.2000	IN
High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01							
Before: 12-Jul-2009 3:18							
HRLT M0-M1 Voltage Plus – 0	0	N/A	-316.4	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 1	0	N/A	-325.5	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 2	0	N/A	-317.9	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 3	0	N/A	-320.9	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 4	0	N/A	-314.2	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 5	0	N/A	-319.8	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 6	0	N/A	319.2	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 7	0	N/A	-322.7	N/A	N/A	9.681	UV
High Resolution Laterolog Array – B Wellsite Calibration – HRLT M12							
Before: 12-Jul-2009 3:18							
HRLT M1-M2 Voltage Plus – 0	0	N/A	1749	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 1	0	N/A	1800	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 2	0	N/A	1753	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 3	0	N/A	1769	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 4	0	N/A	1733	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 5	0	N/A	1764	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 6	0	N/A	-1773	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus – 7	0	N/A	1781	N/A	N/A	53.42	UV
High Resolution Laterolog Array – B Wellsite Calibration – HRLT M23							
Before: 12-Jul-2009 3:18							
HRLT M2-M3 Voltage Plus – 0	0	N/A	1738	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 1	0	N/A	1793	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 2	0	N/A	1749	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 3	0	N/A	1770	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 4	0	N/A	1730	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 5	0	N/A	1764	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 6	0	N/A	-1754	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus – 7	0	N/A	1781	N/A	N/A	53.42	UV
High Resolution Laterolog Array – B Wellsite Calibration – HRLT V34							
Before: 12-Jul-2009 3:18							
HRLT A3-A4 Voltage Plus – 0	0	N/A	68360	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus – 1	0	N/A	70650	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus – 2	0	N/A	69170	N/A	N/A	2100	UV

HRLT A3-A4 Voltage Plus - 2	0	N/A	69170	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	70140	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	68390	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	69680	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 6	0	N/A	-68180	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V45

Before: 12-Jul-2009 3:18

HRLT A4-A5 Voltage Plus - 0	0	N/A	68340	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	70770	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	69260	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	70190	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	68390	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	69660	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-68320	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V56

Before: 12-Jul-2009 3:18

HRLT A5-A6 Voltage Plus - 0	0	N/A	68600	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	71030	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	69500	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	70440	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	68640	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	69930	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-68520	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VTP

Before: 12-Jul-2009 3:18

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68120	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-70960	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-69440	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-70410	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-68600	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-69880	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	68420	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VBD

Before: 12-Jul-2009 3:18

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68130	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-70950	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-69440	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-70410	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-68610	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-69880	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	68420	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT ISO

Before: 12-Jul-2009 3:18

HRLT Source Current Plus - 0	0	N/A	283.7	N/A	N/A	8.520	UA
HRLT Source Current Plus - 1	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 2	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 3	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 4	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 5	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 6	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 7	0	N/A	281.1	N/A	N/A	8.520	UA

High Resolution Laterolog Array - B Wellsite Calibration - HRLT MV

Before: 12-Jul-2009 3:18

HRLT Vertical Voltage PI - 0	0	N/A	-320.2	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-322.1	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-313.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-314.7	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-305.2	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-325.5	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	328.8	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 7	0	N/A	-322.7	N/A	N/A	9.681	UV

High resolution Integrated Logging Tool-DTS Wellsite Calibration - Stab Measurement Summary

Before: 12-Jul-2009 0:20

BS Window Ratio	0.7445	N/A	0.7439	N/A	N/A	N/A	
BS Window Sum	27090	N/A	27070	N/A	N/A	N/A	CPS
SS Window Ratio	0.4832	N/A	0.4839	N/A	N/A	N/A	
SS Window Sum	11550	N/A	11540	N/A	N/A	N/A	CPS
LS Window Ratio	0.2926	N/A	0.2954	N/A	N/A	N/A	
LS Window Sum	1253	N/A	1251	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo–multiplier High Voltages Calibrations

Before: 12–Jul–2009 0:20

BS PM High Voltage (Command)	1557	N/A	1555	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1608	N/A	1607	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1432	N/A	1438	N/A	N/A	N/A	V

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration

Before: 12–Jul–2009 0:20

BS Crystal Resolution	12.45	N/A	12.29	N/A	N/A	N/A	%
SS Crystal Resolution	9.204	N/A	9.168	N/A	N/A	N/A	%
LS Crystal Resolution	8.148	N/A	8.234	N/A	N/A	N/A	%

High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration

Before: 12–Jul–2009 1:48

Raw B0 Resistivity	3875	N/A	3868	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3812	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3866	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration

Before: 12–Jul–2009 0:30

HILT Caliper Zero Measurement	8.000	N/A	8.514	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.40	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration

Before: 12–Jul–2009 0:21

Gamma Ray Background	30.00	N/A	4.160	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkgd)	160.0	N/A	184.7	N/A	N/A	14.55	GAPI

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement

Master: 29–Jun–2009 23:18 Before: 12–Jul–2009 0:22

CNTC Background	28.54	28.54	27.66	N/A	N/A	4.281	CPS
CFTC Background	30.72	30.72	29.47	N/A	N/A	4.608	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Ratio Measurement

Master: 29–Jun–2009 23:18

Thermal Near Corr. (Tank)	5800	2617	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	1121	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.335	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration

Before: 12–Jul–2009 0:21

Z–Axis Acceleration	9.810	N/A	9.781	N/A	N/A	N/A	M/S2
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High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results

Master: 3–Jul–2009 18:59

Rho Aluminum	2.596	2.597	--	--	--	--	G/C3
Rho Magnesium	1.686	1.688	--	--	--	--	G/C3
Pe Aluminum	2.570	2.516	--	--	--	--	
Pe Magnesium	2.650	2.634	--	--	--	--	

High resolution Integrated Logging Tool–DTS Master Calibration – Deviation Summary

Master: 3–Jul–2009 18:59

BS Average Deviation	0	0.2800	--	--	--	--	%
BS Max Deviation	0	0.6805	--	--	--	--	%
SS Average Deviation	0	0.4310	--	--	--	--	%
SS Max Deviation	0	1.992	--	--	--	--	%
LS Average Deviation	0	0.6905	--	--	--	--	%
LS Max Deviation	0	1.788	--	--	--	--	%









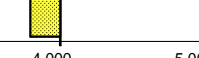
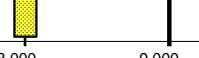


The GLS–VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :

NCT–B Water Temperature 27.0 DEGC.
 Thermal Housing Size 3.375 IN.
 NSR–F serial number 5228

Environment Measurement Sonde / Equipment Identification

Primary Equipment:		
EMS Mechanical	EMM – B	8023
EMS Cartridge	EMC – B	8027
EMS Adaptor	EMA – B	8002
Resistivity Meter	RES –	

Environment Measurement Sonde Wellsite Calibration						
EMS Caliper Calibration						
Phase	Radius 1 Short Radius IN	Value	Phase	Radius 1 Long Radius IN	Value	
Before		3.627	Before		7.897	
	3.000 (Minimum)	4.000 (Nominal)	5.000 (Maximum)	7.000 (Minimum)	8.000 (Nominal)	9.000 (Maximum)
Phase	Radius 2 Short Radius IN	Value	Phase	Radius 2 Long Radius IN	Value	
Before		3.405	Before		7.651	
	3.000 (Minimum)	4.000 (Nominal)	5.000 (Maximum)	7.000 (Minimum)	8.000 (Nominal)	9.000 (Maximum)
Phase	Radius 3 Short Radius IN	Value	Phase	Radius 3 Long Radius IN	Value	
Before		3.595	Before		7.818	
	3.000 (Minimum)	4.000 (Nominal)	5.000 (Maximum)	7.000 (Minimum)	8.000 (Nominal)	9.000 (Maximum)
Phase	Radius 4 Short Radius IN	Value	Phase	Radius 4 Long Radius IN	Value	
Before		3.824	Before		8.065	
	3.000 (Minimum)	4.000 (Nominal)	5.000 (Maximum)	7.000 (Minimum)	8.000 (Nominal)	9.000 (Maximum)
Phase	Radius 5 Short Radius IN	Value	Phase	Radius 5 Long Radius IN	Value	
Before		3.791	Before		8.051	
	3.000 (Minimum)	4.000 (Nominal)	5.000 (Maximum)	7.000 (Minimum)	8.000 (Nominal)	9.000 (Maximum)
Phase	Radius 6 Short Radius IN	Value	Phase	Radius 6 Long Radius IN	Value	
Before		3.728	Before		7.967	
	3.000 (Minimum)	4.000 (Nominal)	5.000 (Maximum)	7.000 (Minimum)	8.000 (Nominal)	9.000 (Maximum)

Before: 11-Jul-2009 23:37

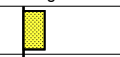


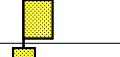


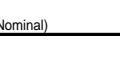
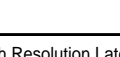
High Resolution Laterolog Array – B / Equipment Identification

Primary Equipment:

HRLT Sonde HRLS – B 846

Auxiliary Equipment:

HRLT lower Housing HRLH – B 849
 HRLT Lower Cartridge HRLC – B 847
 HRLT upper Housing HRUH – B 755
 HRLT Upper Cartridge HRUC – B 755

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M01						
Idx	Phase	HRLT M0-M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-316.4	-322.7	-280.7	-379.7
1	Before		-325.5	-322.7	-280.7	-379.7
2	Before		-317.9	-322.7	-280.7	-379.7
3	Before		-320.9	-322.7	-280.7	-379.7
4	Before		-314.2	-322.7	-280.7	-379.7
5	Before		-319.8	-322.7	-280.7	-379.7
6	Before		319.2	322.7	379.7	280.7
7	Before		-322.7	-322.7	-280.7	-379.7
		(Minimum) (Nominal) (Maximum)				

Before: 12-Jul-2009 3:18

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M12						
Idx	Phase	HRLT M1-M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum

Idx	Phase	Value	Nominal	Maximum	Minimum
0	Before	1749	1781	2095	1549
1	Before	1800	1781	2095	1549
2	Before	1753	1781	2095	1549
3	Before	1769	1781	2095	1549
4	Before	1733	1781	2095	1549
5	Before	1764	1781	2095	1549
6	Before	-1773	-1781	-1549	-2095
7	Before	1781	1781	2095	1549
		(Minimum)	(Nominal)	(Maximum)	

Before: 12-Jul-2009 3:18

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2-M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before	1738	1781	2095	1549	
1	Before	1793	1781	2095	1549	
2	Before	1749	1781	2095	1549	
3	Before	1770	1781	2095	1549	
4	Before	1730	1781	2095	1549	
5	Before	1764	1781	2095	1549	
6	Before	-1754	-1781	-1549	-2095	
7	Before	1781	1781	2095	1549	
		(Minimum)	(Nominal)	(Maximum)		

Before: 12-Jul-2009 3:18

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3-A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before	68360	70000	82360	60900	
1	Before	70650	70000	82360	60900	
2	Before	69170	70000	82360	60900	
3	Before	70140	70000	82360	60900	
4	Before	68390	70000	82360	60900	
5	Before	69680	70000	82360	60900	
6	Before	-68180	-70000	-60900	-82360	
7	Before	70000	70000	82360	60900	
		(Minimum)	(Nominal)	(Maximum)		

Before: 12-Jul-2009 3:18

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4-A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before	68340	70000	82360	60900	
1	Before	70770	70000	82360	60900	
2	Before	69260	70000	82360	60900	
3	Before	70190	70000	82360	60900	
4	Before	68390	70000	82360	60900	
5	Before	69660	70000	82360	60900	
6	Before	-68320	-70000	-60900	-82360	

7	Before		70000	70000	82360	60900
		(Minimum) (Nominal) (Maximum)				

Before: 12-Jul-2009 3:18

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68600	70000	82360	60900
1	Before		71030	70000	82360	60900
2	Before		69500	70000	82360	60900
3	Before		70440	70000	82360	60900
4	Before		68640	70000	82360	60900
5	Before		69930	70000	82360	60900
6	Before		-68520	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
		(Minimum) (Nominal) (Maximum)				

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High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68120	-70000	-60900	-82360
1	Before		-70960	-70000	-60900	-82360
2	Before		-69440	-70000	-60900	-82360
3	Before		-70410	-70000	-60900	-82360
4	Before		-68600	-70000	-60900	-82360
5	Before		-69880	-70000	-60900	-82360
6	Before		68420	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
		(Minimum) (Nominal) (Maximum)				

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High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VBD						
Idx	Phase	HRLT Bridle#9–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68130	-70000	-60900	-82360
1	Before		-70950	-70000	-60900	-82360
2	Before		-69440	-70000	-60900	-82360
3	Before		-70410	-70000	-60900	-82360
4	Before		-68610	-70000	-60900	-82360
5	Before		-69880	-70000	-60900	-82360
6	Before		68420	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
		(Minimum) (Nominal) (Maximum)				

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High Resolution Laterolog Array – B Wellsite Calibration						
HRLT ISO						
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		283.7	284.0	334.1	247.0

1	Before		281.1	281.1	330.7	244.4
2	Before		281.1	281.1	330.7	244.4
3	Before		281.1	281.1	330.7	244.4
4	Before		281.1	281.1	330.7	244.4
5	Before		281.1	281.1	330.7	244.4
6	Before		281.1	281.1	330.7	244.4
7	Before		281.1	281.1	330.7	244.4
		(Minimum) (Nominal) (Maximum)				

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High Resolution Laterolog Array - B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.2	-322.7	-280.7	-379.7
1	Before		-322.1	-322.7	-280.7	-379.7
2	Before		-313.4	-322.7	-280.7	-379.7
3	Before		-314.7	-322.7	-280.7	-379.7
4	Before		-305.2	-322.7	-280.7	-379.7
5	Before		-325.5	-322.7	-280.7	-379.7
6	Before		328.8	322.7	379.7	280.7
7	Before		-322.7	-322.7	-280.7	-379.7
		(Minimum) (Nominal) (Maximum)				

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High resolution Integrated Logging Tool-DTS / Equipment Identification		
Primary Equipment:		
HILT high-Resolution Mechanical Sonde	HRMS - H	3846
HILT Rxo Gamma-ray Device	HRGD - H	3824
HILT Micro Cylindrically Focused Log Dev	MCFL - H	
GR Logging Source	GLS - VJ	3856
HILT High Res. Control Cartridge	HRCC - H	3794
HILT Gamma-Ray Neutron Sonde-DTS	HGNS - H	3840
HGNS Gamma-Ray Device	HGR -	
HGNS Neutron Detector with Alpha Source	HCNT - H	
Auxiliary Equipment:		
Neutron Calibration Tank	NCT - B	2138
Gamma Source Radioactive	GSR - Y	1005
HGNS Housing	HGNH -	2916

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Stab Measurement Summary											
Phase	BS Window Ratio		Value	Phase	SS Window Ratio		Value	Phase	LS Window Ratio		Value
Before			0.7439	Before			0.4839	Before			0.2954
	0.7073 (Minimum)	0.7445 (Nominal)	0.7817 (Maximum)		0.4591 (Minimum)	0.4832 (Nominal)	0.5074 (Maximum)		0.2779 (Minimum)	0.2926 (Nominal)	0.3072 (Maximum)
Phase	BS Window Sum CPS		Value	Phase	SS Window Sum CPS		Value	Phase	LS Window Sum CPS		Value
Before			27070	Before			11540	Before			1251
	25730 (Minimum)	27090 (Nominal)	28440 (Maximum)		10980 (Minimum)	11550 (Nominal)	12130 (Maximum)		1190 (Minimum)	1253 (Nominal)	1315 (Maximum)

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High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Photo-multiplier High Voltages Calibrations							
Phase	BS PM High Voltage (Command) V		Value	Phase	SS PM High Voltage (Command) V		Value
Before			1555	Before			1607
	1457	1557	1657		1508	1608	1708
Phase	LS PM High Voltage (Command) V		Value				
Before			1438				
	1332	1432	1532				

(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 12-Jul-2009 0:20								

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Crystal Quality Resolutions Calibration											
Phase	BS Crystal Resolution %		Value	Phase	SS Crystal Resolution %		Value	Phase	LS Crystal Resolution %		Value
Before			12.29	Before			9.168	Before			8.234
	11.45 (Minimum)	12.45 (Nominal)	13.45 (Maximum)		8.204 (Minimum)	9.204 (Nominal)	10.20 (Maximum)		7.148 (Minimum)	8.148 (Nominal)	9.148 (Maximum)
Before: 12-Jul-2009 0:20											

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
MCFL Calibration											
Phase	Raw B0 Resistivity OHMM		Value	Phase	Raw B1 Resistivity OHMM		Value	Phase	Raw B2 Resistivity OHMM		Value
Before			3868	Before			3812	Before			3866
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)
Before: 12-Jul-2009 1:48											

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
HILT Caliper Calibration							
Phase	HILT Caliper Zero Measurement IN		Value	Phase	HILT Caliper Plus Measurement IN		Value
Before			8.514	Before			12.40
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)		9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)
Before: 12-Jul-2009 0:30							

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Detector Calibration							
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig - Bkgd) GAPI		Value
Before			4.160	Before			184.7
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		152.3 (Minimum)	160.0 (Nominal)	200.0 (Maximum)
Before: 12-Jul-2009 0:21							

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Zero Measurement							
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value
Master			28.54	Master			30.72
Before			27.66	Before			29.47
	5.000 (Minimum)	28.54 (Nominal)	40.00 (Maximum)		5.000 (Minimum)	30.72 (Nominal)	40.00 (Maximum)
Master: 29-Jun-2009 23:18				Before: 12-Jul-2009 0:22			

High resolution Integrated Logging Tool-DTS Wellsite Calibration											
Ratio Measurement											
Phase	Thermal Near Corr. (Tank) CPS		Value	Phase	Thermal Far Corr. (Tank) CPS		Value	Phase	CNTC/CFTC (Tank)		Value
Master			2617	Master			1121	Master			2.335
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)		1900 (Minimum)	2400 (Nominal)	2900 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)
Master: 29-Jun-2009 23:18											

High resolution Integrated Logging Tool-DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration M/S2	Value
Before		9.781
	9.610 (Minimum)	9.810 (Nominal)
Before: 12-Jul-2009 0:21		

High resolution Integrated Logging Tool-DTS Master Calibration					
Inversion results					
Phase	Rho Aluminum G/C3	Value	Phase	Rho Magnesium G/C3	Value
Master		2.597	Master		1.688

2.586 (Minimum)	2.596 (Nominal)	2.606 (Maximum)	1.676 (Minimum)	1.686 (Nominal)	1.696 (Maximum)
Phase	Pe Aluminum		Phase	Pe Magnesium	
Master	Value		Master	Value	
	2.516			2.634	
2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)	2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)

Master: 3-Jul-2009 18:59

High resolution Integrated Logging Tool-DTS Master Calibration														
Deviation Summary														
Phase	BS Average Deviation %			Value	Phase	SS Average Deviation %			Value	Phase	LS Average Deviation %			Value
Master	0.2800				Master	0.4310				Master	0.6905			
-0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)			-1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)			-1.500 (Minimum)	0 (Nominal)	1.500 (Maximum)		
Phase	BS Max Deviation %			Value	Phase	SS Max Deviation %			Value	Phase	LS Max Deviation %			Value
Master	0.6805				Master	1.992				Master	1.788			
-1.600 (Minimum)	0 (Nominal)	1.600 (Maximum)			-2.500 (Minimum)	0 (Nominal)	2.500 (Maximum)			-3.500 (Minimum)	0 (Nominal)	3.500 (Maximum)		

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High resolution Integrated Logging Tool-DTS Master Calibration							
Zero Measurement							
Phase	CNTC Background CPS		Value	Phase	CFTC Background CPS		Value
Master	28.54			Master	30.72		
5.000 (Minimum)	28.54 (Nominal)	40.00 (Maximum)		5.000 (Minimum)	30.72 (Nominal)	40.00 (Maximum)	

Master: 29-Jun-2009 23:18

High resolution Integrated Logging Tool-DTS Master Calibration														
Tank Measurement														
Phase	Thermal Near Corr. (Tank) CPS			Value	Phase	Thermal Far Corr. (Tank) CPS			Value	Phase	CNTC/CFTC (Tank)			Value
Master	EXCEEDS LIMIT			2617	Master	EXCEEDS LIMIT			1121	Master	2.335			
4700 (Minimum)	5800 (Nominal)	6900 (Maximum)			1900 (Minimum)	2400 (Nominal)	2900 (Maximum)			2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)		

Master: 29-Jun-2009 23:18

DTS Telemetry Tool / Equipment Identification			
Primary Equipment:			
DTC-H Auxiliary Cartridge		DTCH - A	
DTC-H Telemetry Cartridge		DTCH - A	
Auxiliary Equipment:			
DTCH Telemetry Cartridge Housing		ECH - KC	9799

Company: **CDEX**

Well: **C0009A**

Field: **Kumanonada, Offshore Kii peninsula**

Rig: **Chikyu**

Country: **JAPAN**

Schlumberger

EMS Caliper Log

0005 1000 0705 0000

3665.4m - 2785.0m
Suite 1, Run 1 (1:200)