



Company: **WHITING OIL & GAS CORP.**

Well: **RAZOR 21 SWD #1**

Field: REDTAIL

County: **WELD** State: **COLORADO**

BOREHOLE VOLUME
MEMORY LOG
GAMMA RAY

LOCATION		Elev.:	K.B.	4842.00 ft
2317' FEL & 2595' FSL AT SURFACE.			G.L.	4819.00 ft
			D.F.	4841.00 ft
Permanent Datum:	GROUND LEVEL	Elev.:	4819.00 ft	
Log Measured From:	KELLY BUSHING	23.00 ft	above Perm. Datum	
Drilling Measured From:	KELLY BUSHING			

WELD

REDTAIL

Location: 2317' FEL & 2595' FSL

RAZOR 21 SWD #1

Company: WHITING OIL & GAS CORP.

API Serial No. 05123407770000	Section 21	Township 10N	Range 58W
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	11-Feb-2015								
	1								
	8550 ft								
Depth	8530 ft								
Rail	8490 ft								
	1568 ft								
Size @ Depth	7,000 in @ 1584 ft						@		
Barger	1588 ft								
	8,750 in								
e	WBM								
Viscosity	10.2 lbm/gal			41 s					
PH	9.2 cm3			8					
Flow Line	FLOW LINE								
Temperature	1,799 ohm.m			@ 116 degF			@		
Temperature	1,349 ohm.m			@ 116 degF			@		
Temperature	2,699 ohm.m			@ 116 degF			@		
RMC	CALCULATED					CALCULATED			
RMF @ MRT	0.964 @ 222			0.723 @ 222			@		@
Recorded Temperatures	222 degF								
Time	10-Feb-2015						19:45		
n	10-Feb-2015						22:30		
Location	16			BRIGHTON, CO					
	P. BROOKENS								
	BJ HONNEYCUTT / C. NEUROTH								

[illegible][illegible]

DISCLAIMER

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OTHER SERVICES1
OS1: SONIC
OS2: SGR
OS3: DENSITY
OS4: NEUTRON
OS5: INDUCTION

OTHER SERVICES2
OS1:
OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 1

REMARKS: RUN NUMBER 2

VERTICAL MEMORY LOG BIT DEPTH: 8449' LOGGED TO SURFACE (200').

ALL PRESENTATIONS AND SCALES PER CLIENT REQUEST.

LIMESTONE MATRIX, 2.71 G/CC USED FOR POROSITY MEASUREMENTS.

TOOLSTRING RAN WITH LARGE DECENTRALIZER, SWIVEL, AND KNUCKLES.

IHV REPRESENTS INTEGRATED HOLE VOLUME, FT^3.

ICV REPRESENTS INTEGRATED CEMENT VOLUME, FT^3.

DEPTH REFERENCE: PIPE TALLY.

RIG: PIONEER 54

CREW: T. HATCH, D. HUNTER

TBIRD # 3577

RUN 1

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

D7FE-00005
19C2-270
0 ft

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL

START

STOP

LOGGED INTERVAL

START

STOP

EQUIPMENT	DESCRIPTION

RUN 1

RUN 2

SURFACE EQUIPMENT

WITM (ThruBit)

DOWNHOLE EQUIPMENT

TBT-A
THEAD 2113
CCL 46972
BDOT-B 5
THOT 5
T10_1
TBUJ1
TBAT1 14

CCL

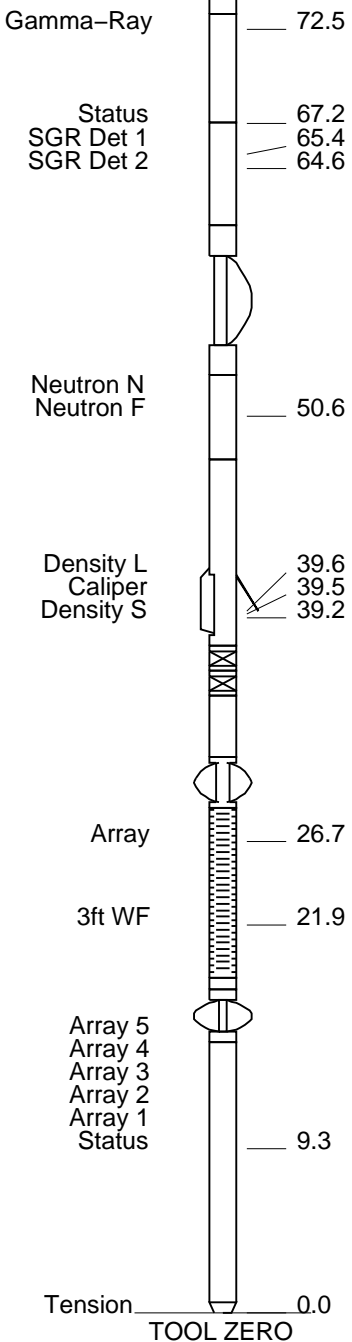
_____ 97.5

100.4

Hang-Off

91.1

TBAT2 21
TMG-A 38
TBSG-A 5
TILE-B 13
TBN-A 5
NNLS-EWA 4481
TBD-A 12
GGLS-FZ 3436
KAH-TB_2 6
KAH-TB_1 13
TBS-A 29
TCME-A
TBI-A 23



MAXIMUM STRING DIAMETER 2.13 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Schlumberger

MAIN PASS

MAXIS Field Log

Company: WHITING OIL & GAS CORP. Well: RAZOR 21 SWD #1

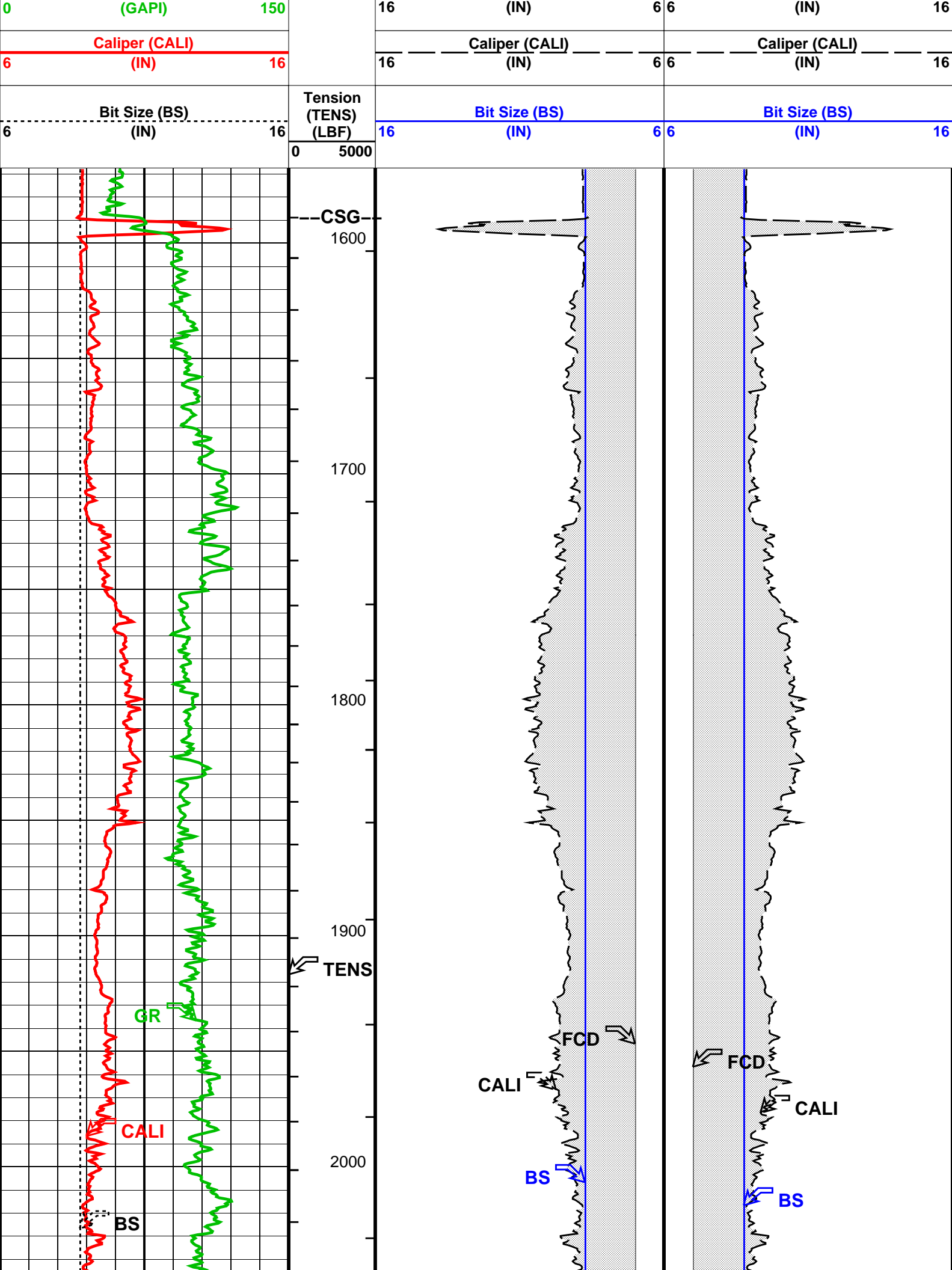
Input DLIS Files						
DEFAULT	ThruBit_016PUP	FN:15	PRODUCER	11-Feb-2015 14:35	8530.2 FT	84.2 FT

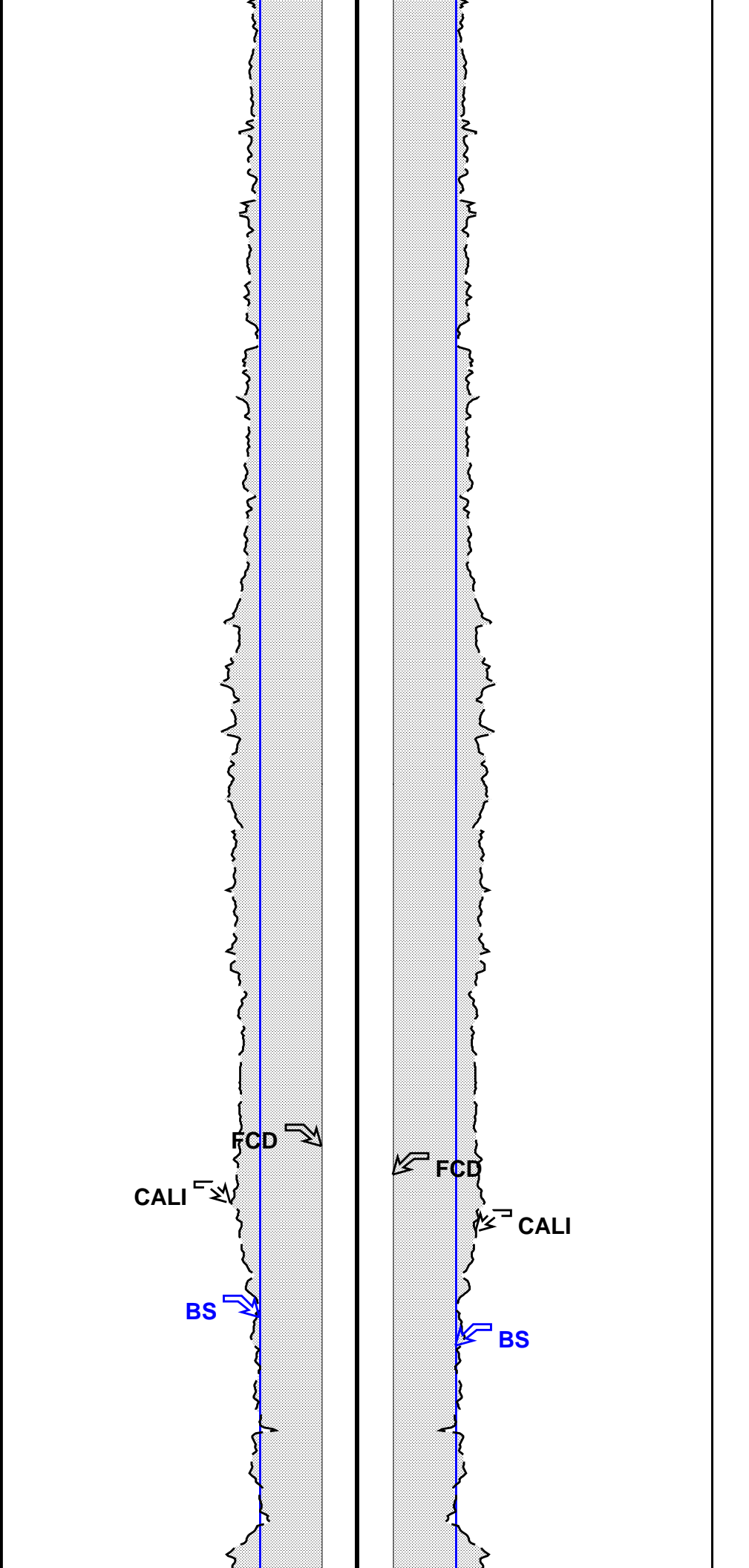
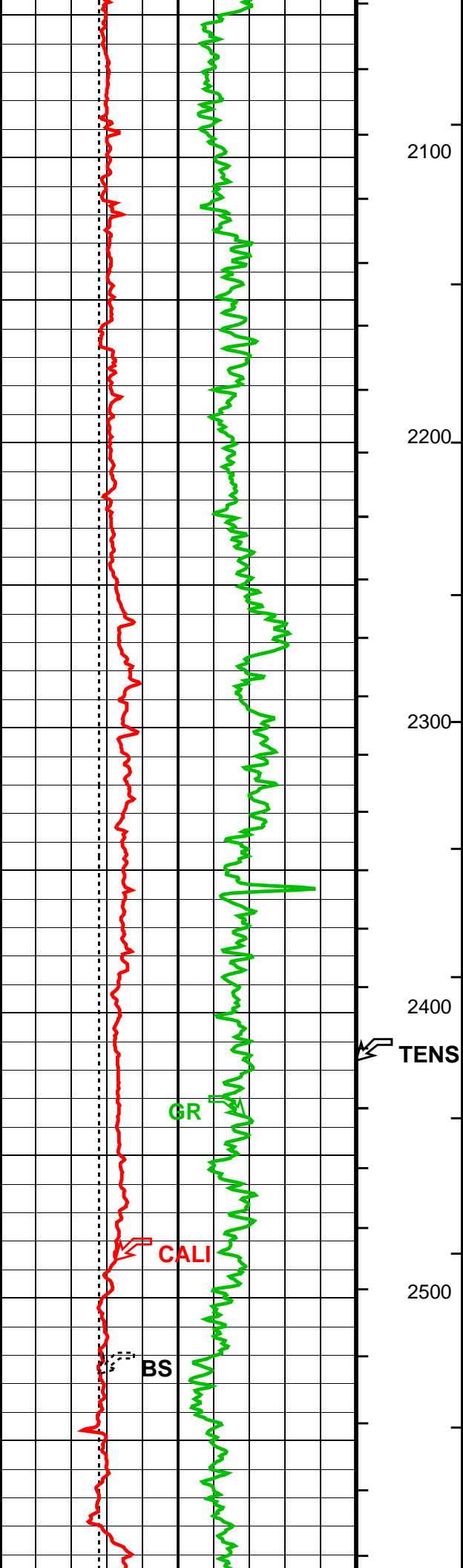
Integrated Hole/Cement Volume Summary	
Hole Volume = 3010.41 ft3	
Cement Volume = 1155.20 ft3 (assuming 7.00 in casing O.D.)	
Computed from 8529.7 ft to 1588.2 ft	

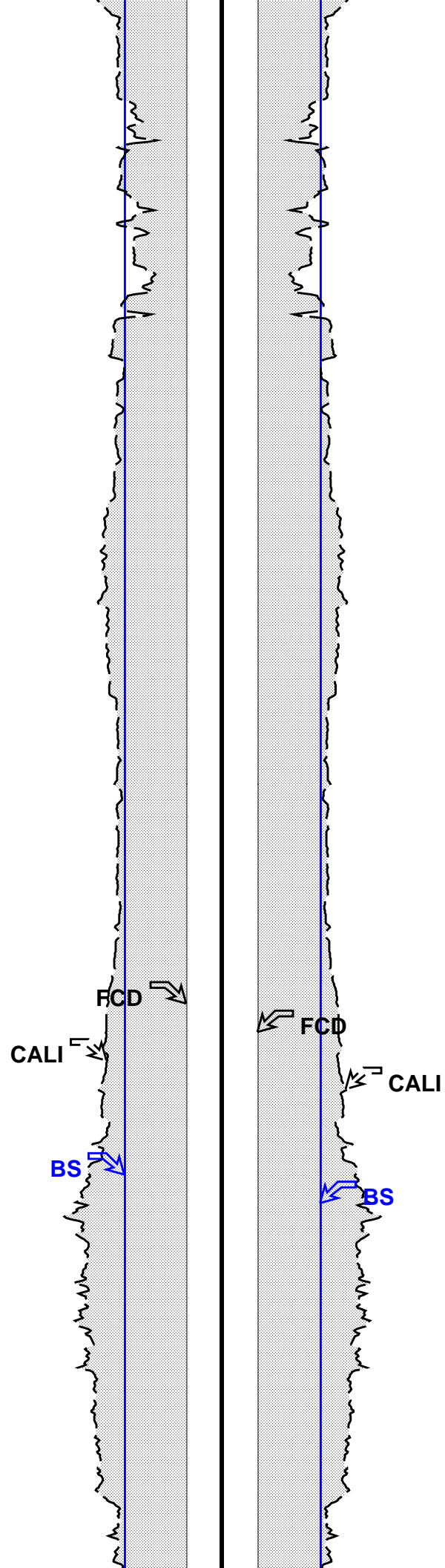
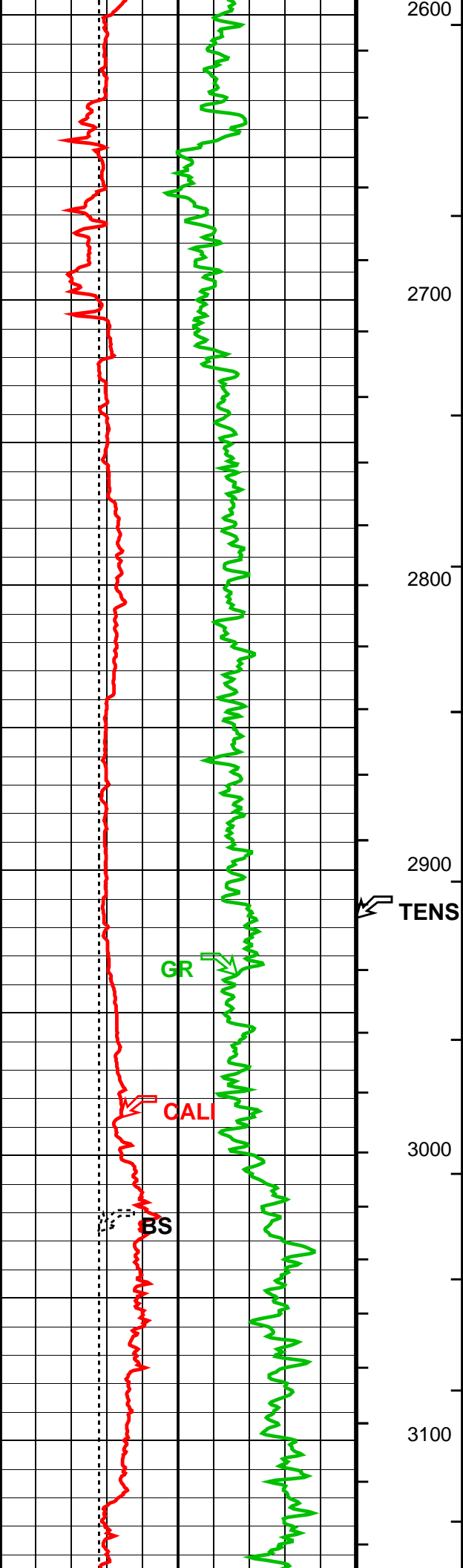
OP System Version: 19C2-270	
TBT	SRPC-5307-ThruBit

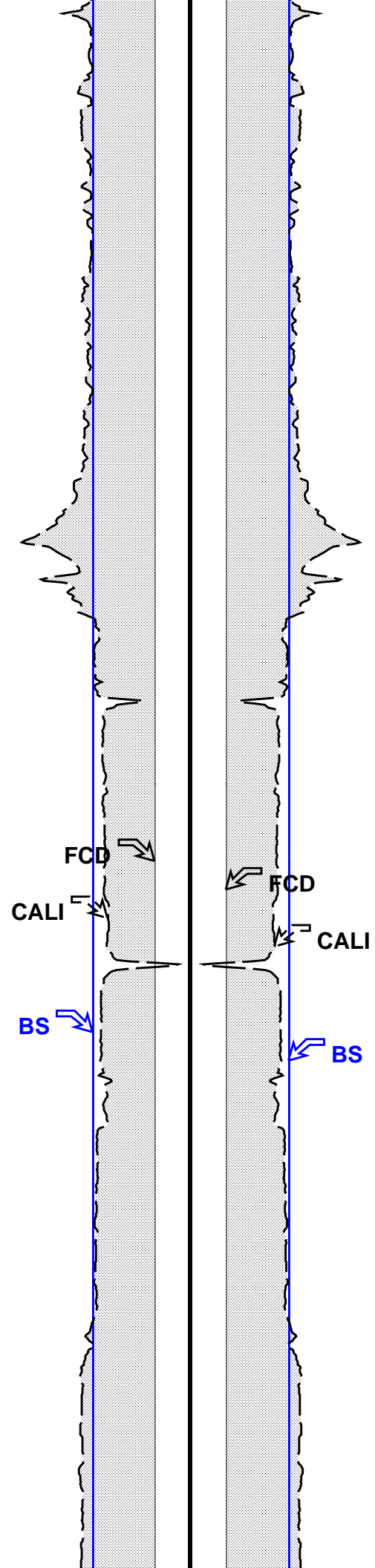
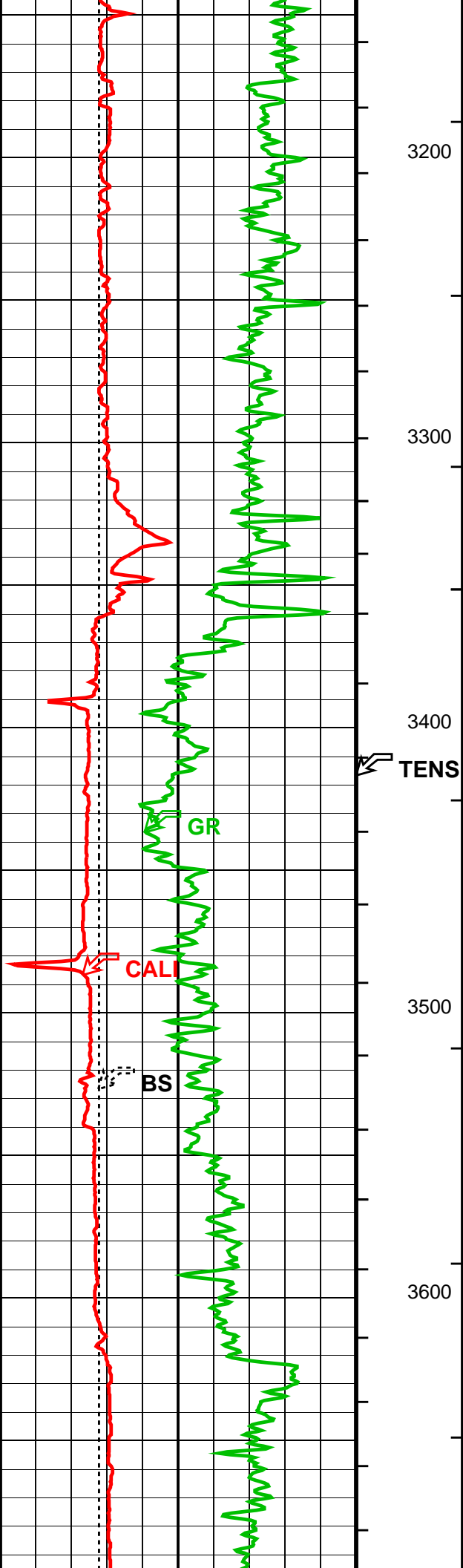
PIP SUMMARY	
└ Integrated Cement Volume Major Pip Every 100 F3	
└ Integrated Cement Volume Minor Pip Every 10 F3	
└ Integrated Hole Volume Major Pip Every 100 F3	
└ Integrated Hole Volume Minor Pip Every 10 F3	

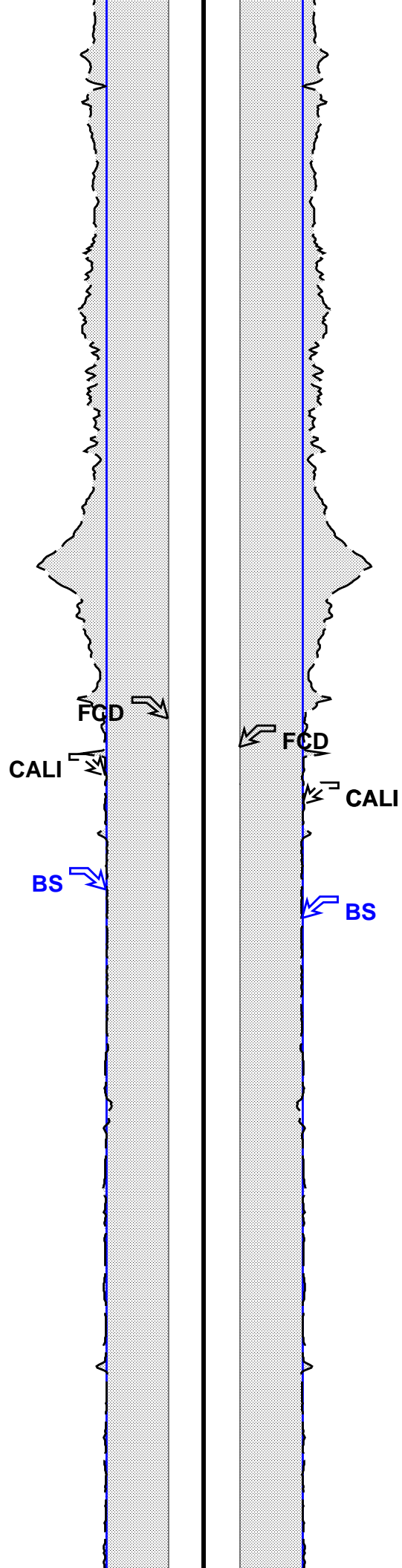
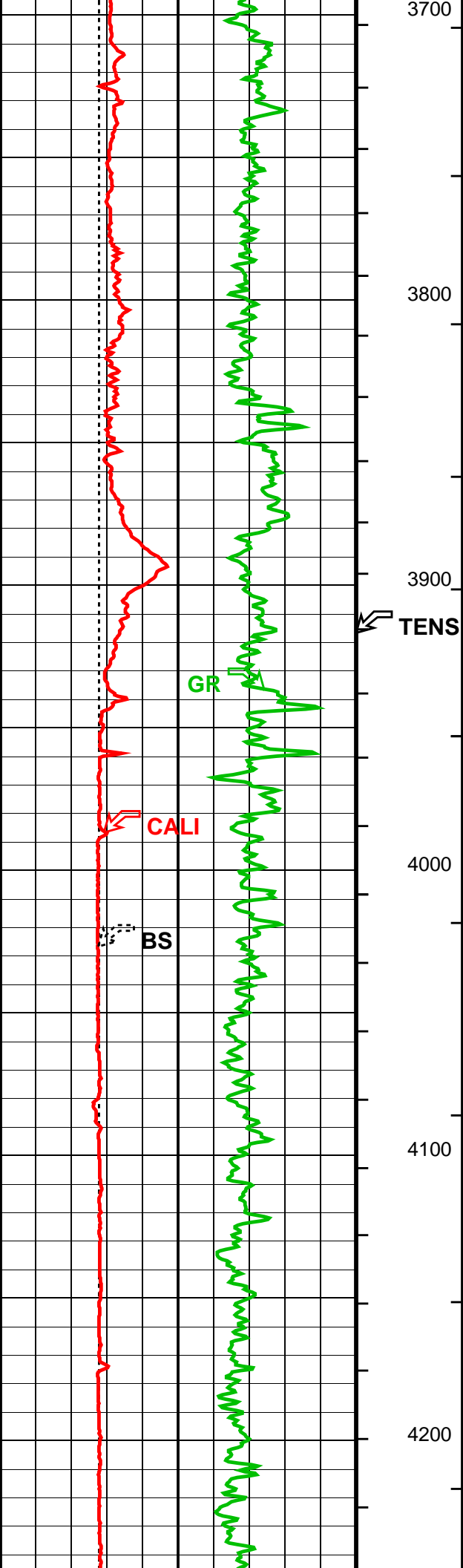
Gamma Ray (GR)	ANNULAR From CALI_1 to FCD_1	ANNULAR From FCD to CALI
	FCD_1 (FCD)	FCD (FCD)

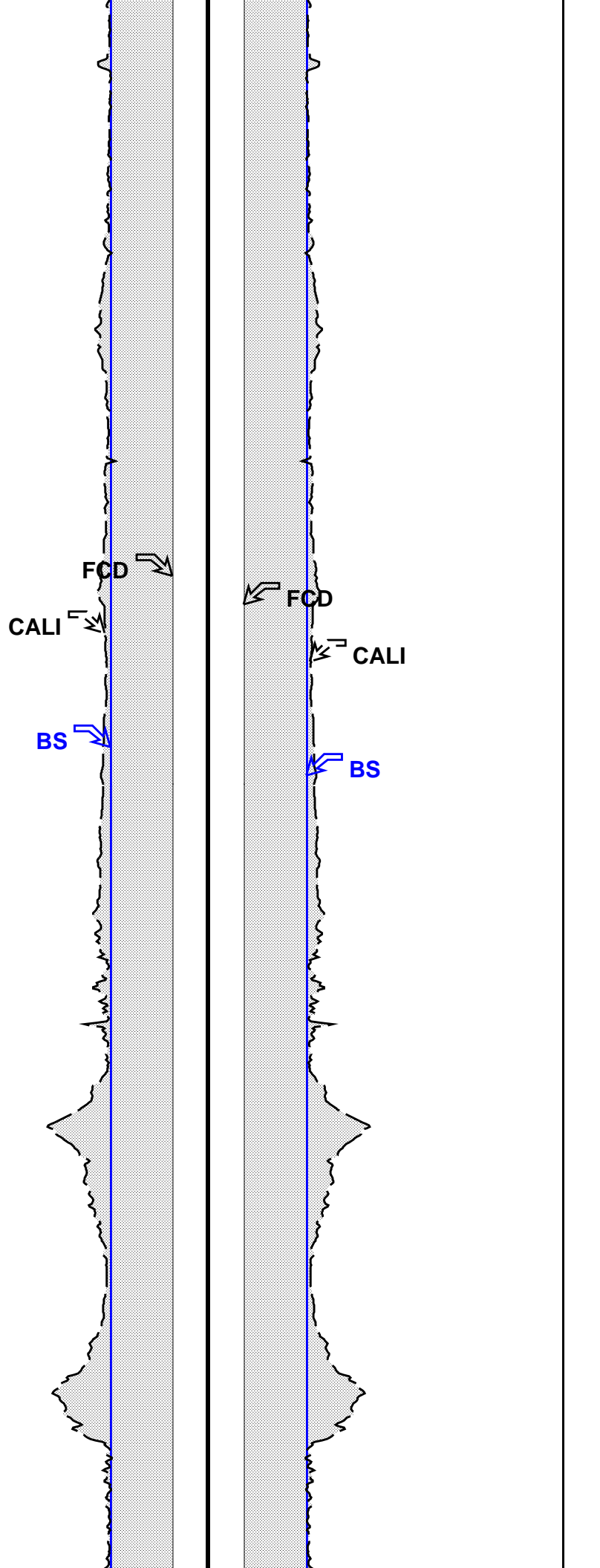
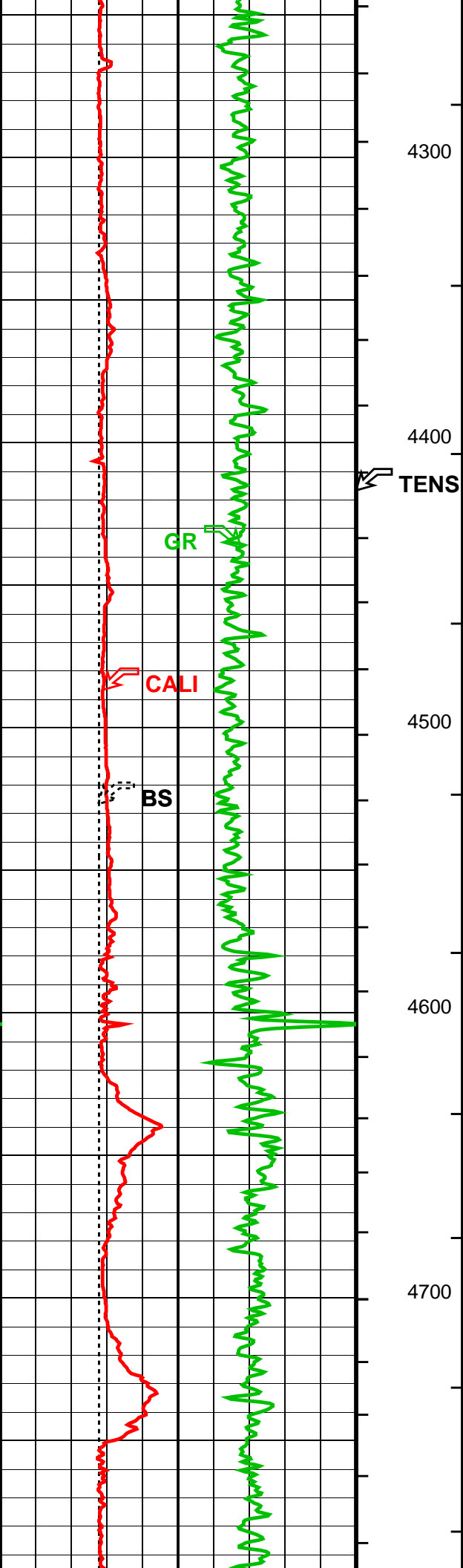


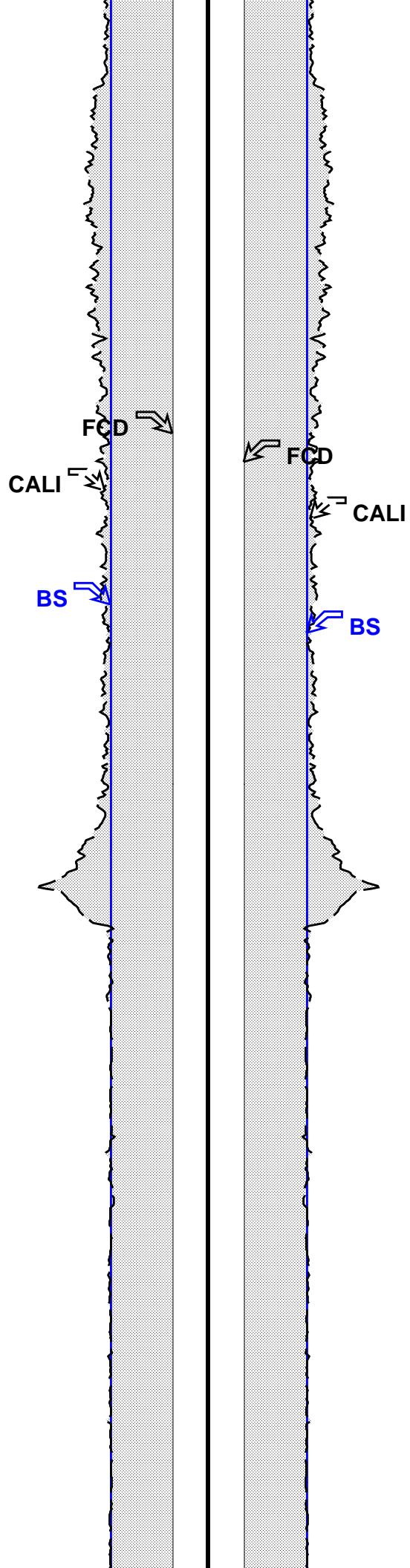
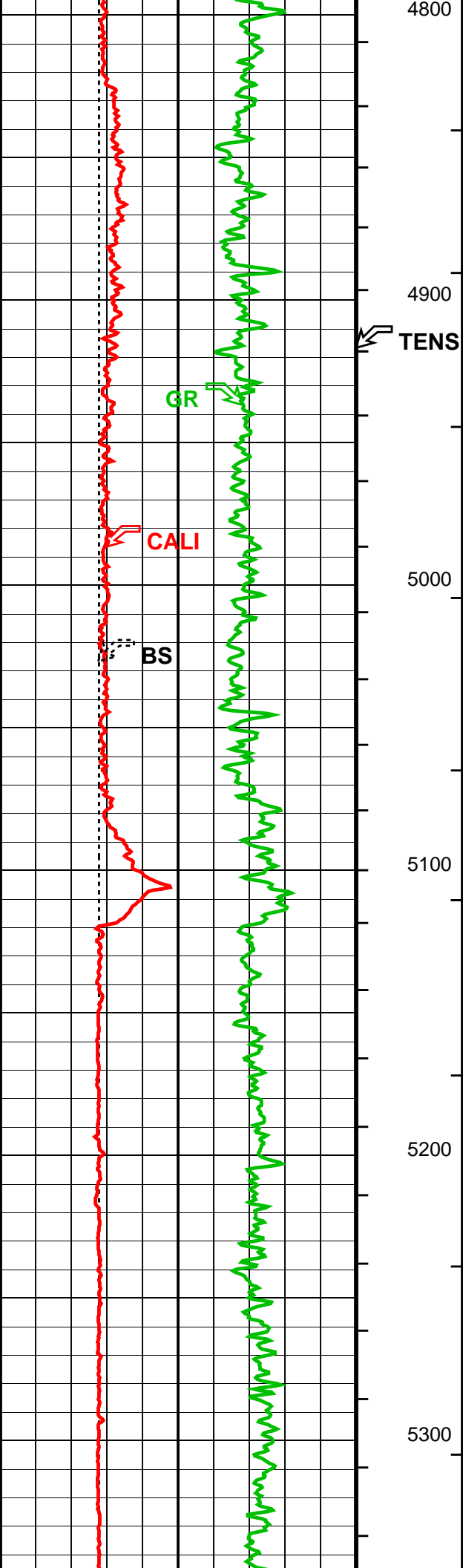


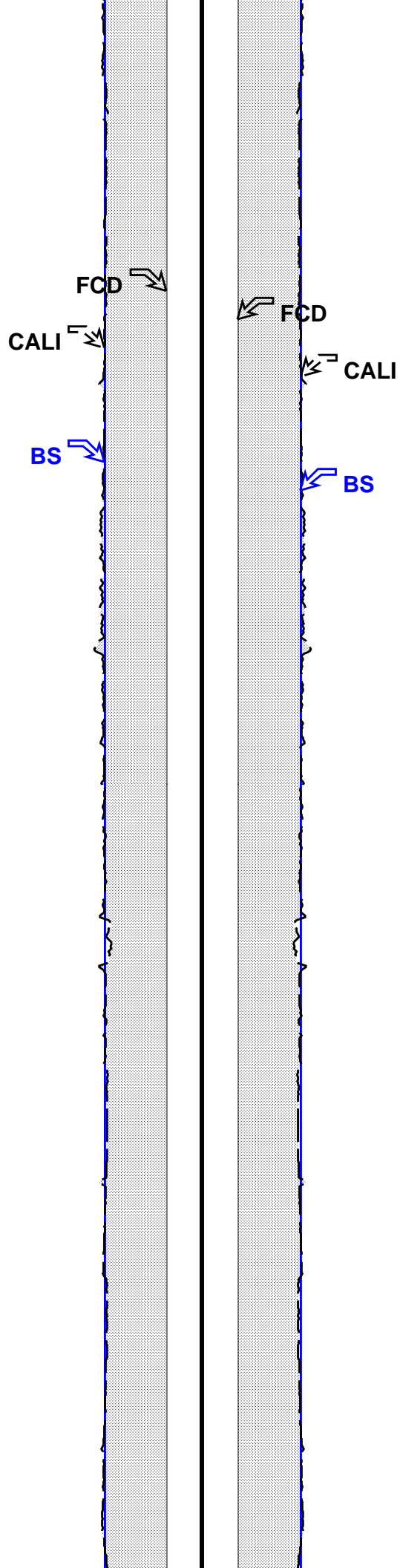
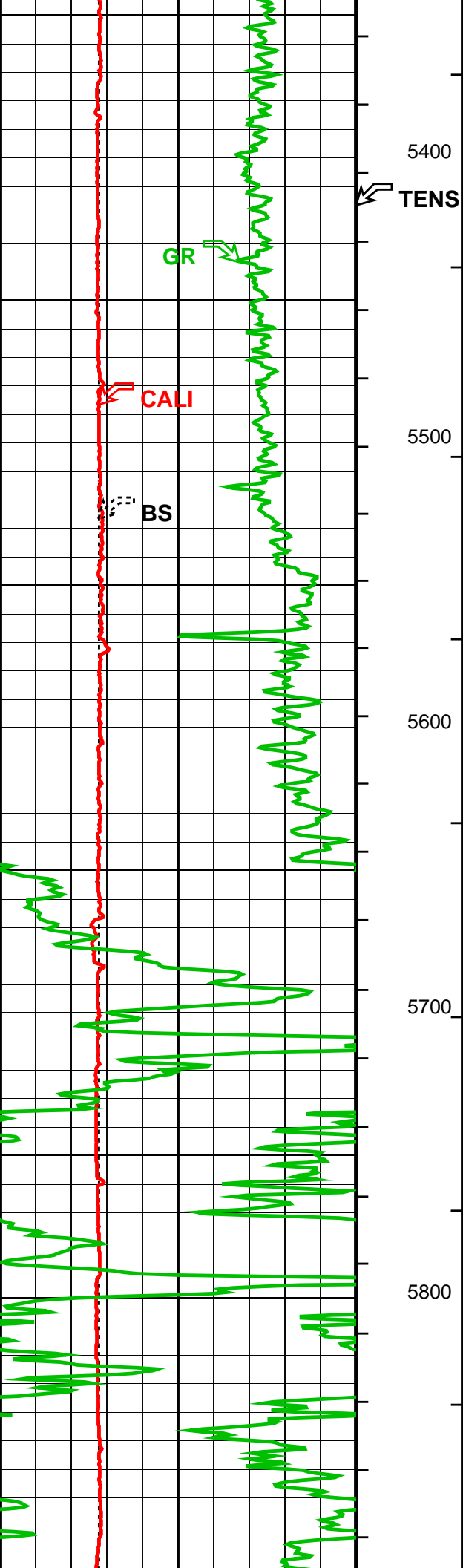


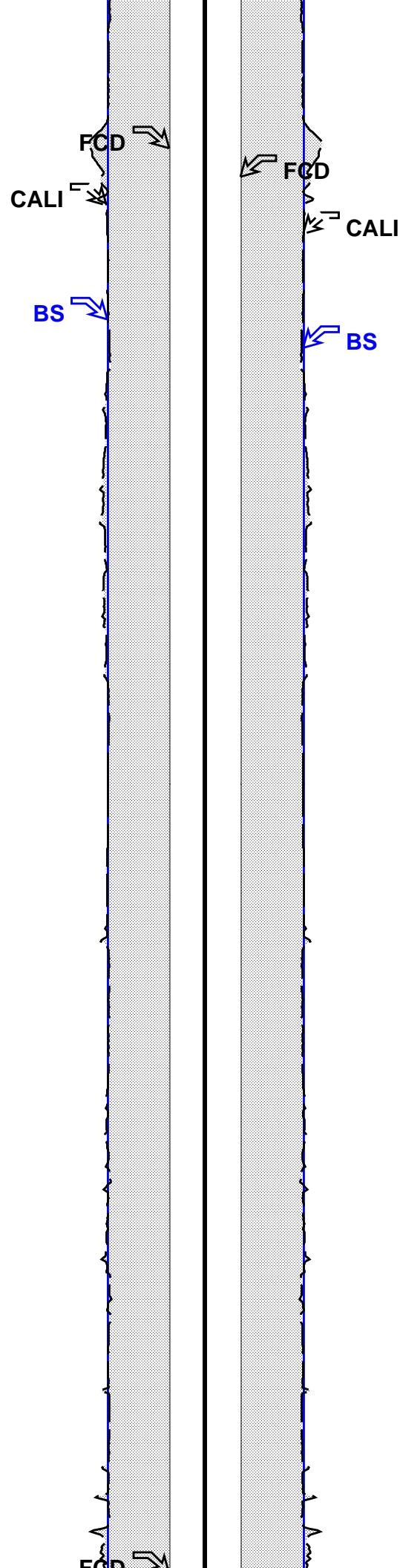
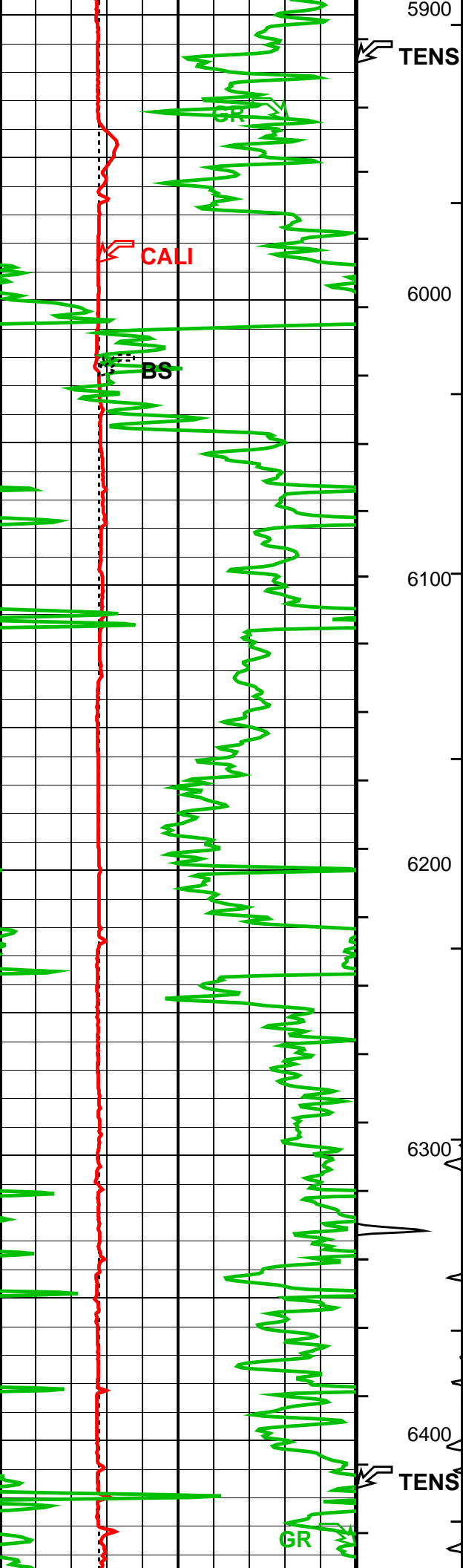


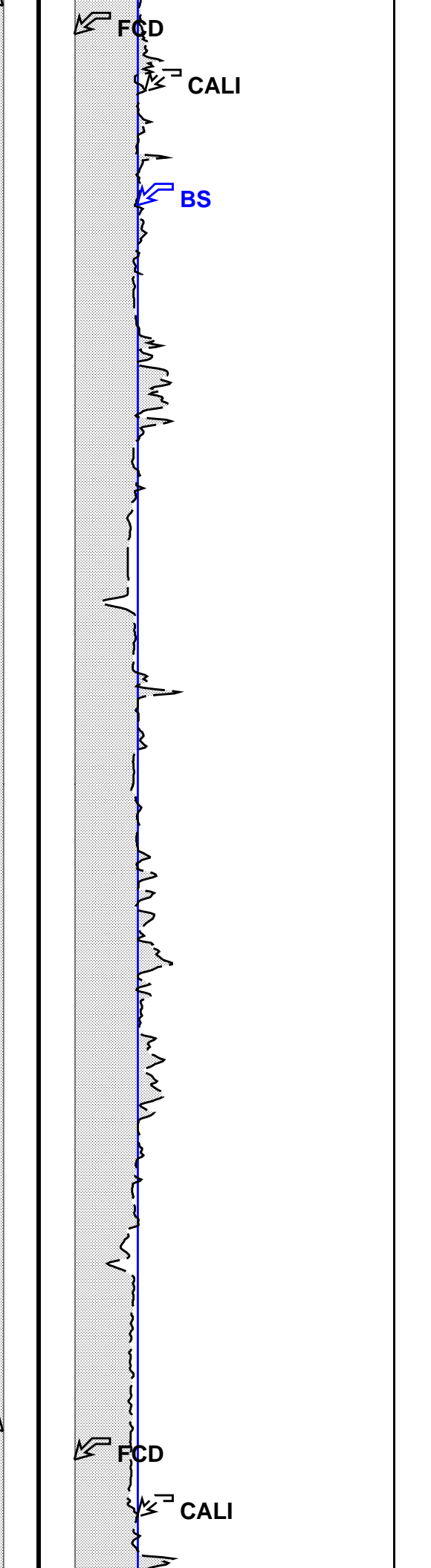
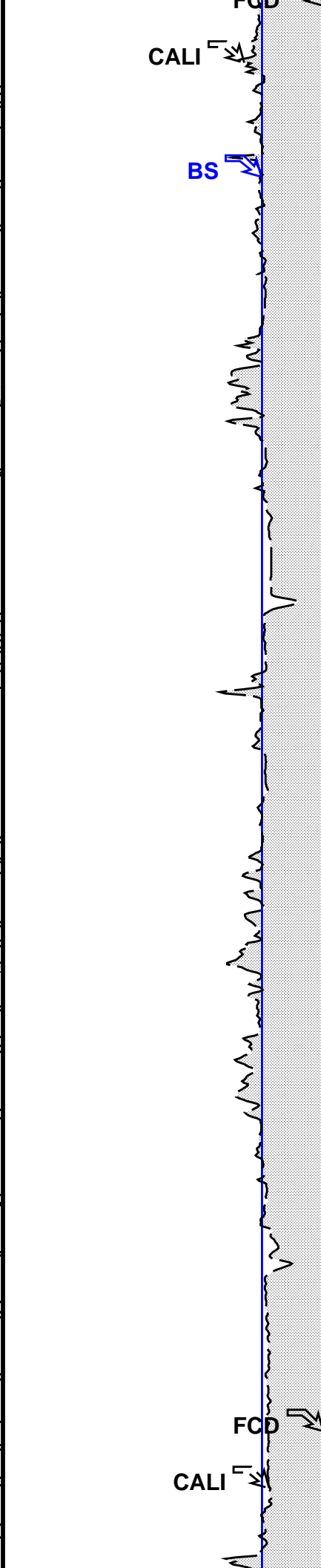
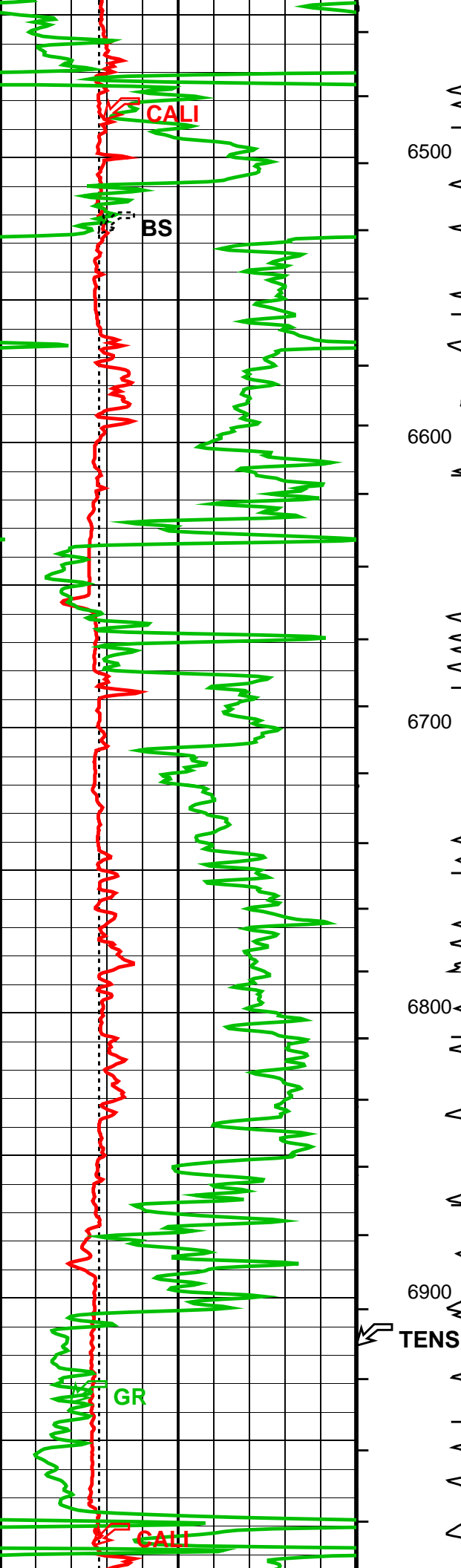


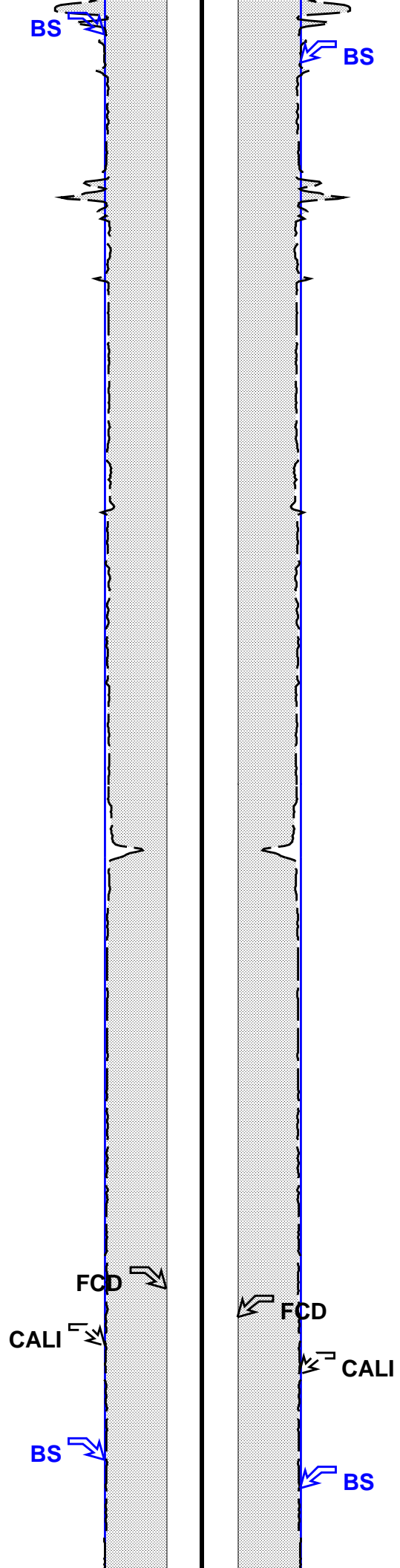
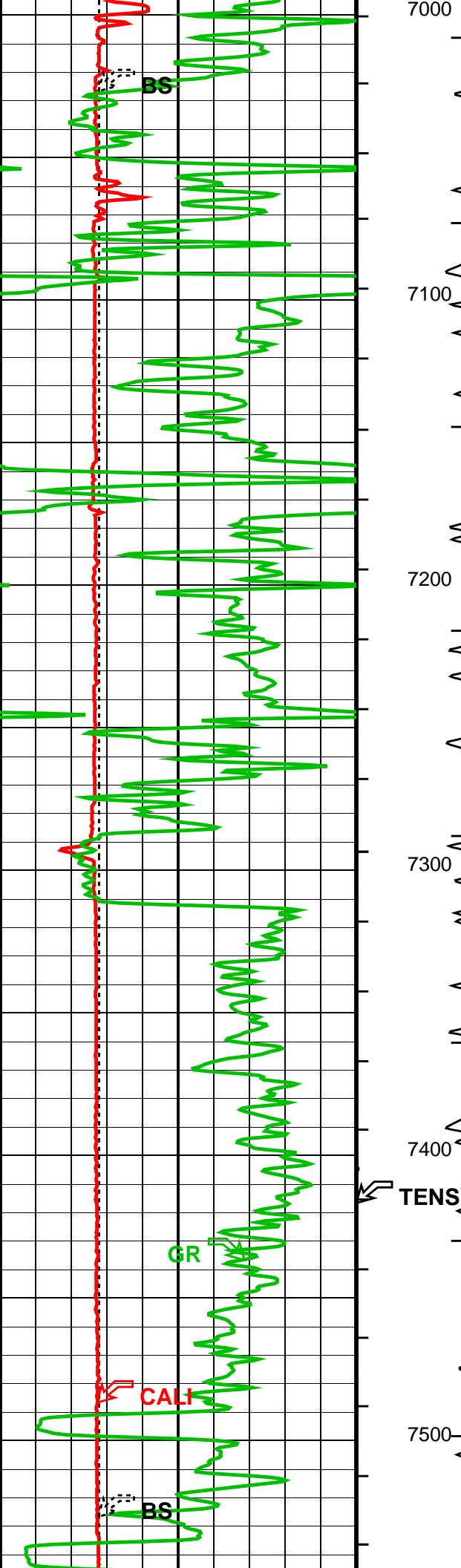


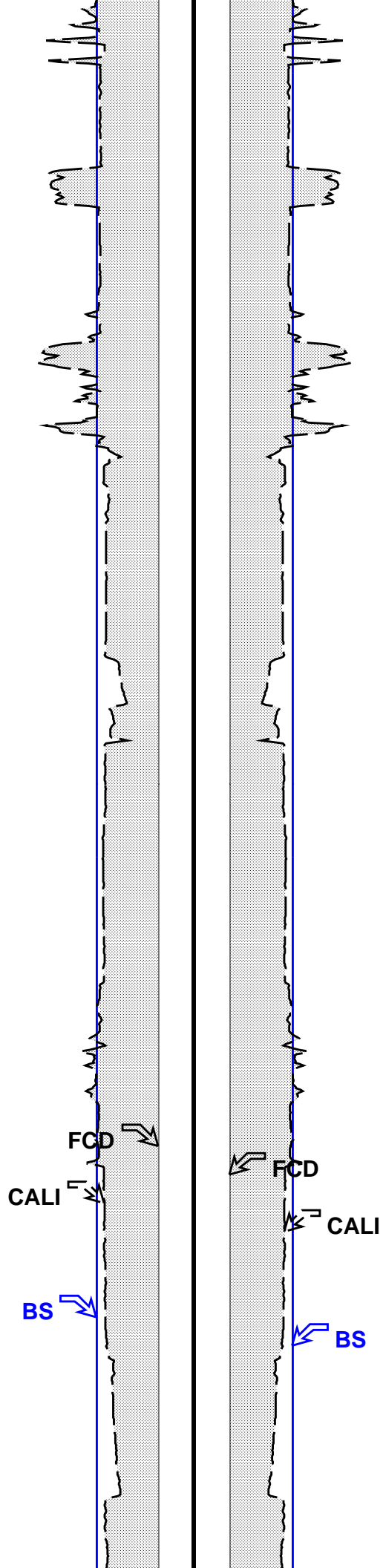
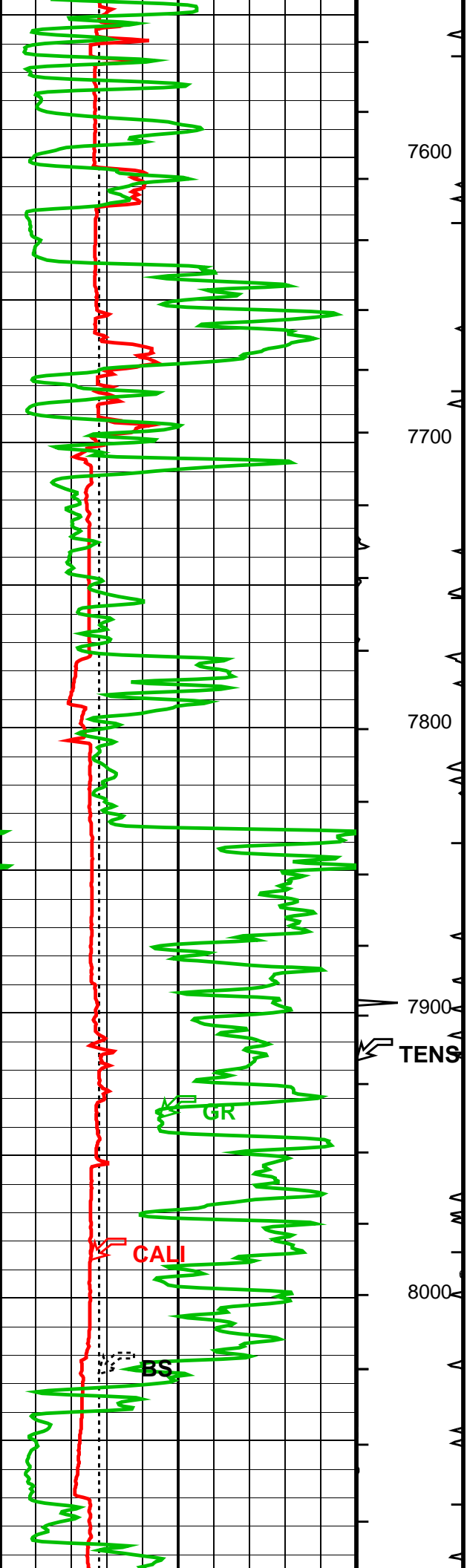


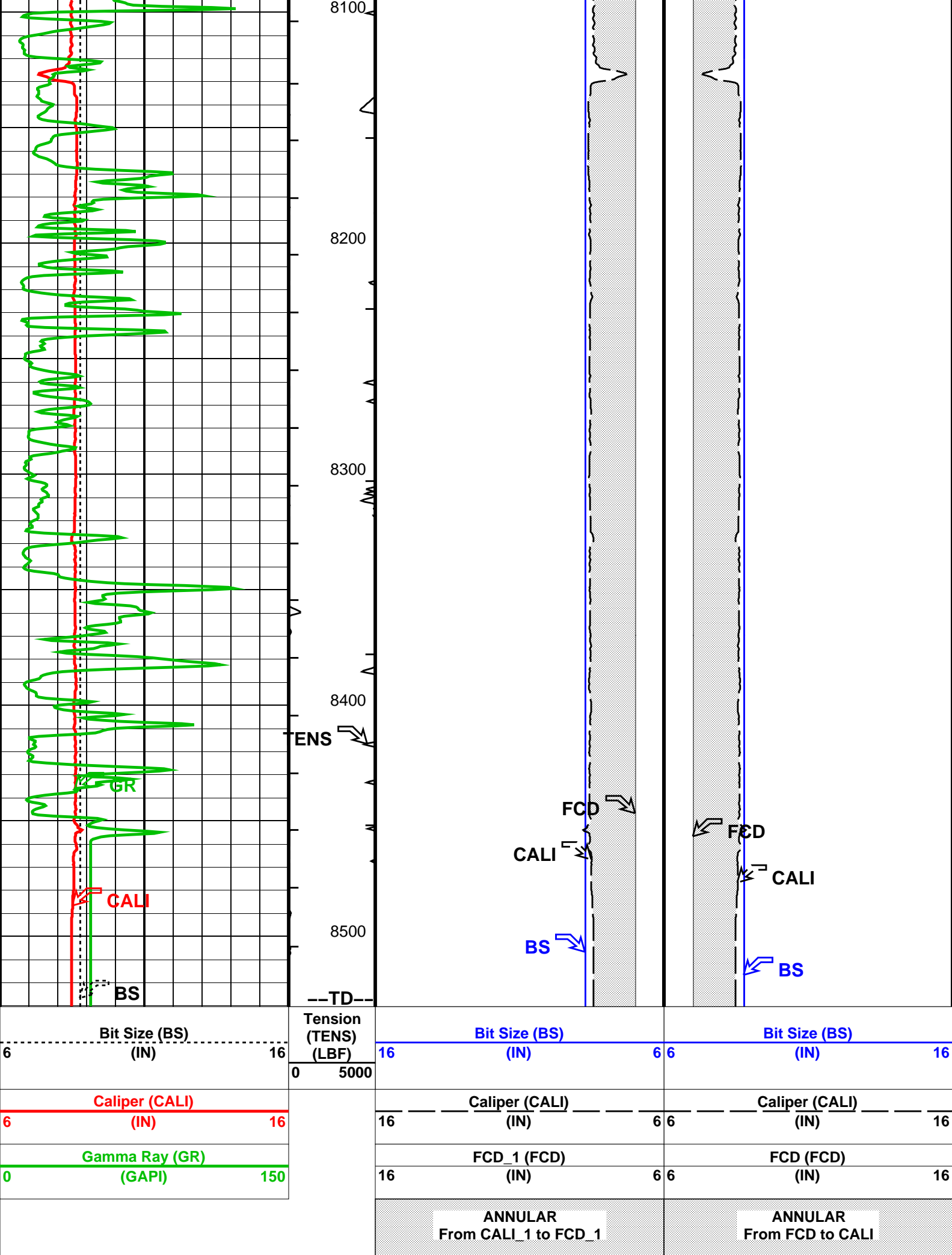












- └ Integrated Cement Volume Major Pip Every 100 F3
 └ Integrated Cement Volume Minor Pip Every 10 F3
 └ Integrated Hole Volume Major Pip Every 100 F3
 └ Integrated Hole Volume Minor Pip Every 10 F3

Parameters

DLIS Name	Description	Value
FCD	HOLEV: Integrated Hole/Cement Volume Future Casing (Outer) Diameter	7.000 in
BS	System and Miscellaneous Bit Size	8.750 in

Format: TB_BOREHOLE Vertical Scale: 2" per 100' Graphics File Created: 11-Feb-2015 15:01

OP System Version: 19C2-270

TBT SRPC-5307-ThruBit

Input DLIS Files

DEFAULT ThruBit_016PUP FN:15 PRODUCER 11-Feb-2015 14:35 8530.2 FT 84.2 FT

Schlumberger

CALIBRATIONS

MAXIS Field Log









ThruBit String / Equipment Identification

Primary Equipment:

Induction Resistivity
 Sonic
 Density
 Gamma-Ray Logging Source
 Thermal Neutron
 Neutron Logging Source
 Spectral GR
 Telemetry Memory GR

TBI - A
 TBS - A
 TBD - A
 GGLS - FZ
 TBN - A
 NNLS - EWA
 TBSG - A
 TMG - A

Auxiliary Equipment:

ThruBit String Master Calibration					
TBI Master Calibration Sonde Errors					
Freq 1, A1, R	Value	Nominal	Freq 1, A1, X	Value	Nominal
	-463.745	-457.000		21.6895	300.000
-556.000 (Minimum)	-387.000 (Maximum)		-500.000 (Minimum)	1100.00 (Maximum)	
(Nominal)			(Nominal)		
Freq 1, A2, R	Value	Nominal	Freq 1, A2, X	Value	Nominal
	-147.974	-141.000		23.8014	320.000
-182.000 (Minimum)	-120.000 (Maximum)		-75.0000 (Minimum)	700.000 (Maximum)	
(Nominal)			(Nominal)		
Freq 1, A3, R	Value	Nominal	Freq 1, A3, X	Value	Nominal
	-30.9365	-28.0000		-60.2282	50.0000
-38.0000 (Minimum)	-18.0000 (Maximum)		-375.000 (Minimum)	475.000 (Maximum)	
(Nominal)			(Nominal)		
Freq 1, A4, R	Value	Nominal	Freq 1, A4, X	Value	Nominal
	-15.7389	-16.0000		246.869	300.000





























-24.0000 (Minimum)	(Nominal)	-8.00000 (Maximum)		25.0000 (Minimum)	(Nominal)	575.000 (Maximum)	
Freq 1, A5, R		Value	Nominal	Freq 1, A5, X		Value	Nominal
		-13.2952	-14.0000			125.977	150.000
-21.0000 (Minimum)	(Nominal)	-7.00000 (Maximum)		25.0000 (Minimum)	(Nominal)	300.000 (Maximum)	
Freq 2, A1, R		Value	Nominal	Freq 2, A1, X		Value	Nominal
		-242.609	-237.000			-15.4109	150.000
-313.000 (Minimum)	(Nominal)	-186.000 (Maximum)		-375.000 (Minimum)	(Nominal)	675.000 (Maximum)	
Freq 2, A2, R		Value	Nominal	Freq 2, A2, X		Value	Nominal
		-95.0302	-92.0000			-13.1811	160.000
-126.000 (Minimum)	(Nominal)	-76.0000 (Maximum)		-100.000 (Minimum)	(Nominal)	425.000 (Maximum)	
Freq 2, A3, R		Value	Nominal	Freq 2, A3, X		Value	Nominal
		-22.5481	-21.0000			-91.7764	-20.0000
-28.0000 (Minimum)	(Nominal)	-13.0000 (Maximum)		-325.000 (Minimum)	(Nominal)	250.000 (Maximum)	
Freq 2, A4, R		Value	Nominal	Freq 2, A4, X		Value	Nominal
		-18.5681	-20.0000			76.9623	100.000
-28.0000 (Minimum)	(Nominal)	-10.0000 (Maximum)		-75.0000 (Minimum)	(Nominal)	275.000 (Maximum)	
Freq 2, A5, R		Value	Nominal	Freq 2, A5, X		Value	Nominal
		-18.1662	-20.0000			-13.6644	-25.0000
-27.0000 (Minimum)	(Nominal)	-10.0000 (Maximum)		-125.000 (Minimum)	(Nominal)	100.000 (Maximum)	
Freq 3, A1, R		Value	Nominal	Freq 3, A1, X		Value	Nominal
		-152.267	-149.000			-79.2011	25.0000
-213.000 (Minimum)	(Nominal)	-108.000 (Maximum)		-375.000 (Minimum)	(Nominal)	425.000 (Maximum)	
Freq 3, A2, R		Value	Nominal	Freq 3, A2, X		Value	Nominal
		-71.7259	-70.0000			-51.9323	70.0000
-101.000 (Minimum)	(Nominal)	-57.0000 (Maximum)		-125.000 (Minimum)	(Nominal)	250.000 (Maximum)	
Freq 3, A3, R		Value	Nominal	Freq 3, A3, X		Value	Nominal
		-18.1412	-17.0000			-126.563	-90.0000
-23.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-300.000 (Minimum)	(Nominal)	125.000 (Maximum)	
Freq 3, A4, R		Value	Nominal	Freq 3, A4, X		Value	Nominal
		-20.0402	-22.0000			-35.7218	-50.0000
-31.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-200.000 (Minimum)	(Nominal)	100.000 (Maximum)	
Freq 3, A5, R		Value	Nominal	Freq 3, A5, X		Value	Nominal
		-20.8150	-22.0000			-115.638	-110.000
-32.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-250.000 (Minimum)	(Nominal)	0 (Maximum)	
Freq 4, A1, R		Value	Nominal	Freq 4, A1, X		Value	Nominal
		-81.0738	-80.0000			-205.881	-190.000
-128.000 (Minimum)	(Nominal)	-54.0000 (Maximum)		-450.000 (Minimum)	(Nominal)	75.0000 (Maximum)	
Freq 4, A2, R		Value	Nominal	Freq 4, A2, X		Value	Nominal
		-51.1084	-50.0000			-119.496	-75.0000
-80.0000 (Minimum)	(Nominal)	-41.0000 (Maximum)		-200.000 (Minimum)	(Nominal)	50.0000 (Maximum)	
Freq 4, A3, R		Value	Nominal	Freq 4, A3, X		Value	Nominal
		-14.3587	-14.0000			-193.330	-190.000
-19.0000 (Minimum)	(Nominal)	-8.00000 (Maximum)		-350.000 (Minimum)	(Nominal)	-25.0000 (Maximum)	
Freq 4, A4, R		Value	Nominal	Freq 4, A4, X		Value	Nominal
		-22.6574	-25.0000			-202.352	-235.000
-37.0000 (Minimum)	(Nominal)	-11.0000 (Maximum)		-400.000 (Minimum)	(Nominal)	-75.0000 (Maximum)	
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		-26.3123	-28.0000			-287.496	-300.000

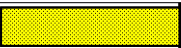
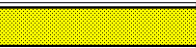
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







ThruBit String Master Calibration						
TBI Master Calibration COMPLEX GAINS						
Freq 1, R	Value	Nominal	Freq 1, X	Value	Nominal	
	0.9913	1.000		-0.002511	0	
	0.9936	1.000		8.835E-00	0	
	1.001	1.000		-0.007671	0	
	0.9905	1.000		0.001384	0	
	0.9958	1.000		-0.0009894	0	
0.9500 (Minimum)	(Nominal)	1.050 (Maximum)		-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)
Freq 2, R	Value	Nominal	Freq 2, X	Value	Nominal	
	0.9856	1.000		-0.01034	0	
	0.9877	1.000		-0.008304	0	
	0.9895	1.000		-0.008829	0	
	0.9857	1.000		-0.007471	0	
	0.9923	1.000		-0.01101	0	
0.9500 (Minimum)	(Nominal)	1.050 (Maximum)		-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)
Freq 3, R	Value	Nominal	Freq 3, X	Value	Nominal	
	0.9909	1.000		-0.004360	0	
	0.9934	1.000		-0.002591	0	
	0.9949	1.000		-0.003426	0	
	0.9901	1.000		-0.002363	0	
	0.9991	1.000		-0.005548	0	
0.9500 (Minimum)	(Nominal)	1.050 (Maximum)		-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)
Freq 4, R	Value	Nominal	Freq 4, X	Value	Nominal	
	1.002	1.000		-0.009834	0	
	1.004	1.000		-0.008900	0	
	1.008	1.000		-0.01179	0	
	1.001	1.000		-0.009381	0	
	1.021	1.000		-0.01520	0	
0.9300 (Minimum)	(Nominal)	1.070 (Maximum)		-0.05000 (Minimum)	(Nominal)	0.05000 (Maximum)
Master: 17-Dec-2014 12:15						



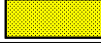




ThruBit String Master Calibration								
TBD Caliper Master Calibration								
Caliper 12in Ring IN	Value	Nominal	Caliper 9in Ring IN	Value	Nominal	Caliper 6in Ring IN	Value	Nominal
	1909.2	1949.8		2070.9	2096.7		2237.1	2285.7
1799.8 (Minimum)	(Nominal)	2099.8 (Maximum)	1946.7 (Minimum)	(Nominal)	2246.7 (Maximum)	2135.7 (Minimum)	(Nominal)	2435.7 (Maximum)
Master: 6-Feb-2015 14:00								


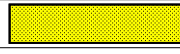
ThruBit String Master Calibration						
TBD Density Master Calibration. Ti Window, ThruBit blocks						
LS1 Background CPS	Value	Nominal	SS1 Background CPS	Value	Nominal	
	129.49	143.00		137.37	143.00	
100.00 (Minimum)	(Nominal)	186.00 (Maximum)	100.00 (Minimum)	(Nominal)	186.00 (Maximum)	
LS2 Background CPS	Value	Nominal	SS2 Background CPS	Value	Nominal	
	32.8639	37.0000		36.4400	38.0000	
26.0000	(Nominal)	48.0000	27.0000	(Nominal)	50.0000	

(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
LS3 Background CPS			Value	Nominal	
		19.7968	22.0000		
15.0000 (Minimum)	(Nominal)	29.0000 (Maximum)			
LS4 Background CPS			Value	Nominal	
		27.07	30.00		
20.00 (Minimum)	(Nominal)	40.00 (Maximum)			
LS1 Aluminium CPS			Value	Nominal	
		1232.4	1210.0		
850.00 (Minimum)	(Nominal)	1570.0 (Maximum)			
LS2 Aluminium CPS			Value	Nominal	
		1131.12	1110.0		
780.000 (Minimum)	(Nominal)	1440.00 (Maximum)			
LS3 Aluminium CPS			Value	Nominal	
		1059.88	1010.0		
710.000 (Minimum)	(Nominal)	1300.00 (Maximum)			
LS4 Aluminium CPS			Value	Nominal	
		771.27	760.00		
530.00 (Minimum)	(Nominal)	990.00 (Maximum)			
LS1 Al + Sleeve CPS			Value	Nominal	
		990.46	970.00		
680.00 (Minimum)	(Nominal)	1260.0 (Maximum)			
LS2 Al + Sleeve CPS			Value	Nominal	
		827.752	830.000		
580.000 (Minimum)	(Nominal)	1080.00 (Maximum)			
LS3 Al + Sleeve CPS			Value	Nominal	
		619.842	650.000		
460.000 (Minimum)	(Nominal)	850.000 (Maximum)			
LS4 Al + Sleeve CPS			Value	Nominal	
		383.30	420.00		
300.00 (Minimum)	(Nominal)	550.00 (Maximum)			
LS1 Magnesium CPS			Value	Nominal	
		8418.67	8100.00		
5670.00 (Minimum)	(Nominal)	10530.0 (Maximum)			
LS2 Magnesium CPS			Value	Nominal	
		7702.34	7650.00		
5360.00 (Minimum)	(Nominal)	9950.00 (Maximum)			
LS3 Magnesium CPS			Value	Nominal	
		6687.05	6800.00		
4760.00 (Minimum)	(Nominal)	8840.00 (Maximum)			
LS4 Magnesium CPS			Value	Nominal	
		4582.80	4850.00		
3400.00 (Minimum)	(Nominal)	6300.00 (Maximum)			
SS3 Background CPS			Value	Nominal	
		22.1248	23.0000		
16.0000 (Minimum)	(Nominal)	30.0000 (Maximum)			
SS4 Background CPS			Value	Nominal	
		30.8240	31.0000		
22.0000 (Minimum)	(Nominal)	40.0000 (Maximum)			
SS1 Aluminium CPS			Value	Nominal	
		7228.16	7850.00		
5500.00 (Minimum)	(Nominal)	10200.0 (Maximum)			
SS2 Aluminium CPS			Value	Nominal	
		3649.52	4000.00		
2800.00 (Minimum)	(Nominal)	5200.00 (Maximum)			
SS3 Aluminium CPS			Value	Nominal	
		3001.41	3350.00		
2350.00 (Minimum)	(Nominal)	4360.00 (Maximum)			
SS4 Aluminium CPS			Value	Nominal	
		2885.1079	3230.0000		
2260.0000 (Minimum)	(Nominal)	4200.0000 (Maximum)			
SS1 Al + Sleeve CPS			Value	Nominal	
		5771.24	6160.00		
4300.00 (Minimum)	(Nominal)	8000.00 (Maximum)			
SS2 Al + Sleeve CPS			Value	Nominal	
		2800.52	3050.00		
2130.00 (Minimum)	(Nominal)	4000.00 (Maximum)			
SS3 Al + Sleeve CPS			Value	Nominal	
		1976.16	2190.00		
1533.00 (Minimum)	(Nominal)	2850.00 (Maximum)			
SS4 Al + Sleeve CPS			Value	Nominal	
		1587.77	1700.00		
1190.00 (Minimum)	(Nominal)	2200.00 (Maximum)			
SS1 Magnesium CPS			Value	Nominal	
		11871.4	12740.0		
8920.00 (Minimum)	(Nominal)	16560.0 (Maximum)			
SS2 Magnesium CPS			Value	Nominal	
		6073.78	6670.00		
4670.00 (Minimum)	(Nominal)	8670.00 (Maximum)			
SS3 Magnesium CPS			Value	Nominal	
		4873.83	5400.00		
3780.00 (Minimum)	(Nominal)	7020.00 (Maximum)			
SS4 Magnesium CPS			Value	Nominal	
		4746.16	5240.00		
3670.00 (Minimum)	(Nominal)	6810.00 (Maximum)			
Master: 6-Feb-2015 13:50					

ThruBit String Master Calibration					
Thermal Neutron Master Calibration					
TNF, Background CPS			Value	Nominal	
		0.11	1.0		
0 (Minimum)	(Nominal)	2.0 (Maximum)			
TNN, Background CPS			Value	Nominal	
		0.0083	1.0		
0 (Minimum)	(Nominal)	2.0 (Maximum)			

TNF, Tank CPS			Value	Nominal	TNN, Tank CPS			Value	Nominal
			79.46	96.00				2351.9	2860.0
25.00 (Minimum)	(Nominal)	200.0 (Maximum)			750.00 (Minimum)	(Nominal)	5700.0 (Maximum)		
TNF, Tank + AI Sleeve CPS			Value	Nominal	TNN, Tank + AI Sleeve CPS			Value	Nominal
			2490.3	3040.0				26619.3	32350.0
727.00 (Minimum)	(Nominal)	6080.0 (Maximum)			8000.00 (Minimum)	(Nominal)	64700.0 (Maximum)		
Tank + AI Sleeve Ratio			Value	Nominal	Tank + AI Sleeve Porosity PU			Value	Nominal
			11.180	10.797				14.46	14.40
10.300 (Minimum)	(Nominal)	11.300 (Maximum)			13.40 (Minimum)	(Nominal)	15.40 (Maximum)		
Tank, Ratio			Value	Nominal	Tank, Temperature DEGF			Value	Nominal
			29.600	30.958				62.0	70.0
28.000 (Minimum)	(Nominal)	34.000 (Maximum)			20.0 (Minimum)	(Nominal)	120 (Maximum)		
Master: 6-Feb-2015 12:46									

ThruBit String Master Calibration							
TMG Accelerometer Calibration							
Minimum Ax, m/s2		Value	Nominal	Maximum Ax, m/s2		Value	Nominal
		-10.10	-9.810			9.709	9.810
-10.81 (Minimum)	(Nominal)	-8.810 (Maximum)		8.810 (Minimum)	(Nominal)	10.81 (Maximum)	
Minimum Ay, m/s2		Value	Nominal	Maximum Ay, m/s2		Value	Nominal
		-10.30	-9.810			9.414	9.810
-10.81 (Minimum)	(Nominal)	-8.810 (Maximum)		8.810 (Minimum)	(Nominal)	10.81 (Maximum)	
Minimum Az, m/s2		Value	Nominal	Maximum Az, m/s2		Value	Nominal
		0.05062	0			10.49	9.810
-1.000 (Minimum)	(Nominal)	1.000 (Maximum)		8.810 (Minimum)	(Nominal)	10.81 (Maximum)	
RB Offset, degrees		Value	Nominal				
		-17.99	0				
-360.0 (Minimum)	(Nominal)	360.0 (Maximum)					
Master: Calibration out of date 8-Jan-2014 3:15							

ThruBit String Master Calibration							
TMG Gamma-Ray Calibration							
GR Background GAPI		Value	Nominal	GR Jig-Background GAPI		Value	Nominal
		29.47	30.00			138.3	167.5
0 (Minimum)	(Nominal)	120.0 (Maximum)		134.0 (Minimum)	(Nominal)	201.0 (Maximum)	
Master: Calibration out of date 8-Jan-2014 9:11							

Company: **WHITING OIL & GAS CORP.**

Well: **RAZOR 21 SWD #1**
Field: **REDTAIL**
County: **WELD**
State: **COLORADO**



BOREHOLE VOLUME
MEMORY LOG
GAMMA RAY