Schlumberger

Company: IMPERIAL OIL RESOURCES

Well: IMP 06 H57-H19 COLD LK 1-8-66-4

Field: LEMING

Province: AB

MEASURED DEPTH

Province: AB
Field: LEMING
Location: LSD: 6-9-66-4W4
Well: IMP 06 H57-H19 COLD LK 1-8-66-4
Company: IMPERIAL OIL RESOURCES

PRODUCTION ANALYSIS

TEMPERATURE LOG

Location:			
LSD: 6-9-66-4W4		Elev.: K.B.	629.35 m
UWI: 100010806604W400		G.L.	622.23 m
		D.F.	
Permanent Datum:	Ground Level	Elev.:	622.23
Log Measured From:	Kelly Bushing	7.12 m	above Perm.Datum
Drilling Measured From:	Kelly Bushing		

API Serial No.	Section:	Township:	Range:
0365894	01-08	066	04W4

Logging Date		22-Oct-2016			
Run Number		1			
Depth Driller		1301.00 m			
Schlumberger Depth		635.00 m			
Bottom Log Interval		635.00 m			
Top Log Interval		7.10 m			
Casing Fluid Type		Water			
Salinity					
Density		1000 kg/m3			
Fluid Level		-5000.00 m			
BIT/CASING/TUBING STRING					
Bit Size		250.83 mm			
From		7.12 m			
To		635.00 m			
Casing/Tubing Size		139.7 mm			
Weight		25.3 kg/m			
Grade		L80			
From		732.33 m			
To		1301.00 m			
Max Recorded Temperatures		127 degC			
Logger on Bottom	Time	23-Oct-2016	12:17:00		
Unit Number	Location:	222	LLOYD PS		
Recorded By		ROB EVANS			
Witnessed By		RAY STRANG			

Disclaimer

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   8.1 Integration Summary
   8.2 Software Version
   8.3 Composite Summary
   8.4 Log (TEMP DOWN PASS)

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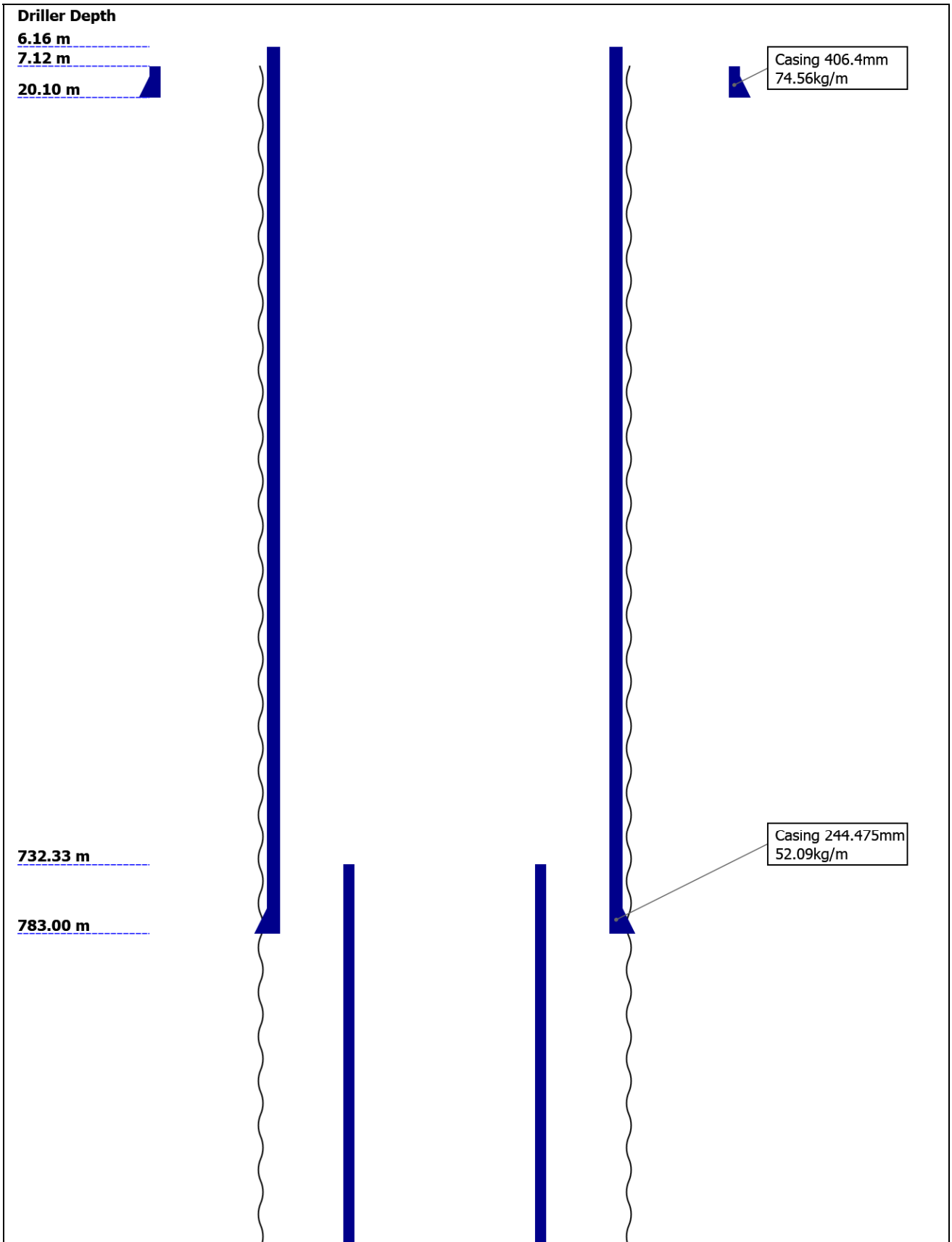
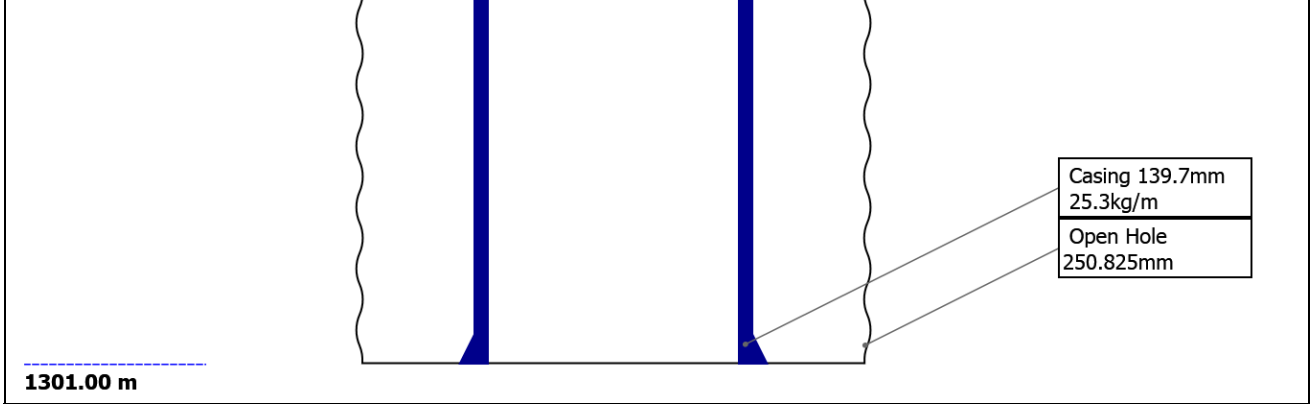
Well Sketch





Borehole Size/Casing/Tubing Record

Bit						
Bit Size (mm)	250.825					
Top Driller (m)	7.12					
Top Logger (m)	7.12					
Bottom Driller (m)	1301					
Bottom Logger (m)	635					
Casing						
Size (mm)	406.4	244.475	139.7			
Weight (kg/m)	74.56	52.09	25.3			
Inner Diameter (mm)	391.566	226.932	124.497			
Grade	C75	L80	L80			
Top Driller (m)	7.12	6.16	732.33			
Top Logger (m)	7.12	6.16	732.33			
Bottom Driller (m)	20.1	783	1301			
Bottom Logger (m)	20.1	783	1301			

Remarks and Equipment Summary

1: Toolstring

Equip name	Length	MP name	Offset
PEH-E	**3.99**		
AH-38	**3.48**		
HBMS-B:2814	**3.39**		
HUDH-A:2814			
PSC-A:2814			
HSTC-A:2814			
HBMC-A:2814			
HTPS-A:2814			
		GR	**1.87**
		CCL	**1.14**
		PSTC	**0.71**
		HSTC Tool String Bottom	**0.00**
		CQG Pressure	**0.28**
		Temperature	**0.28**
		TOOL_ZERO	

Lengths are in m
Maximum Outer Diameter = 52.451 mm
Line: Sensor Location, Value: Gating Offset

1: Remarks

- WELL LOGGED AS PER CLIENT REQUEST
- NO CORRELATION LOG AVAILABLE
- POR @ 525 MKB
- WELL LOGGED FOR TEMPERATURE PROFILE
- CORRELATED TO BURST NIPPLE @ 619.13 - 619.56 MKB
- PSN TOP @ 639.86 MKB

Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

1

MAIN PASS

Software Version

Acquisition System	Version
Maxwell 2016	6.0.53731.3100
Application Patch	Wireline_TestKit-EMIT-C-2016RC3_6.0.54288

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
1	Log[3]:Up	Up	0.91 m	635.16 m	23-Oct-2016 12:17:36 PM	23-Oct-2016 1:45:33 PM	ON	-0.29 m	No

All depths are referenced to toolstring zero

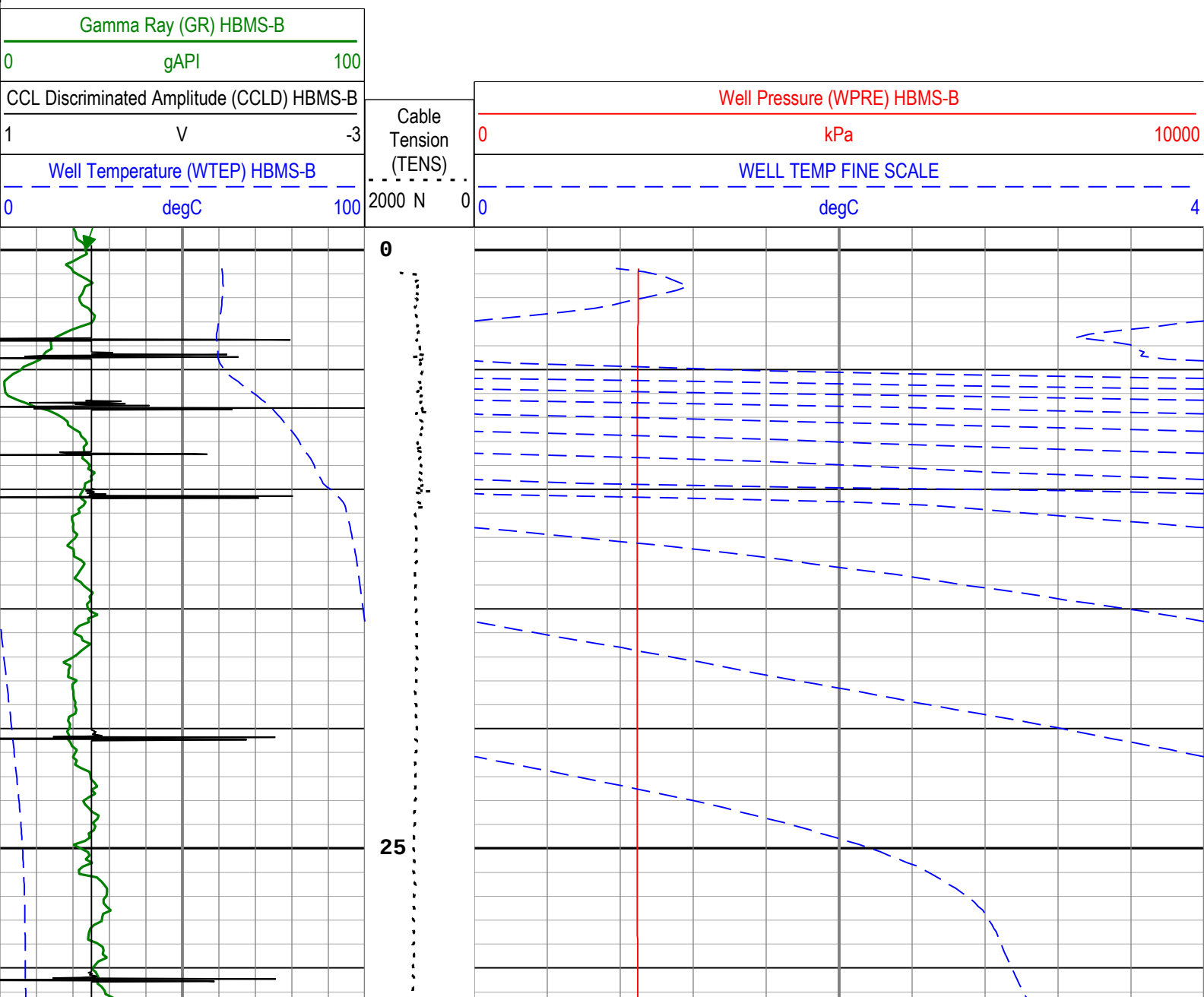
Log

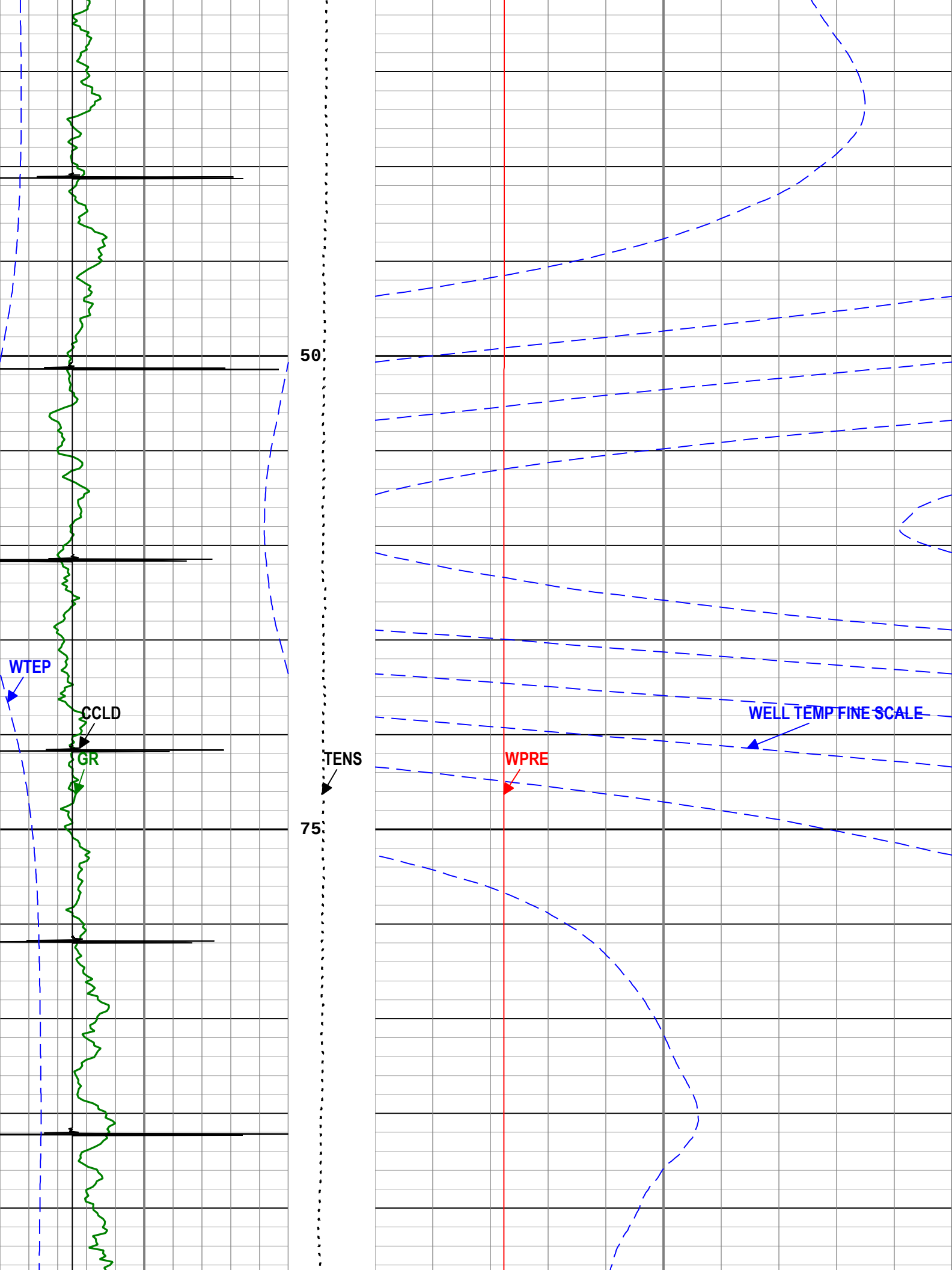
Company:IMPERIAL OIL RESOURCES Well:IMP 06 H57-H19 COLD LK 1-8-66-4

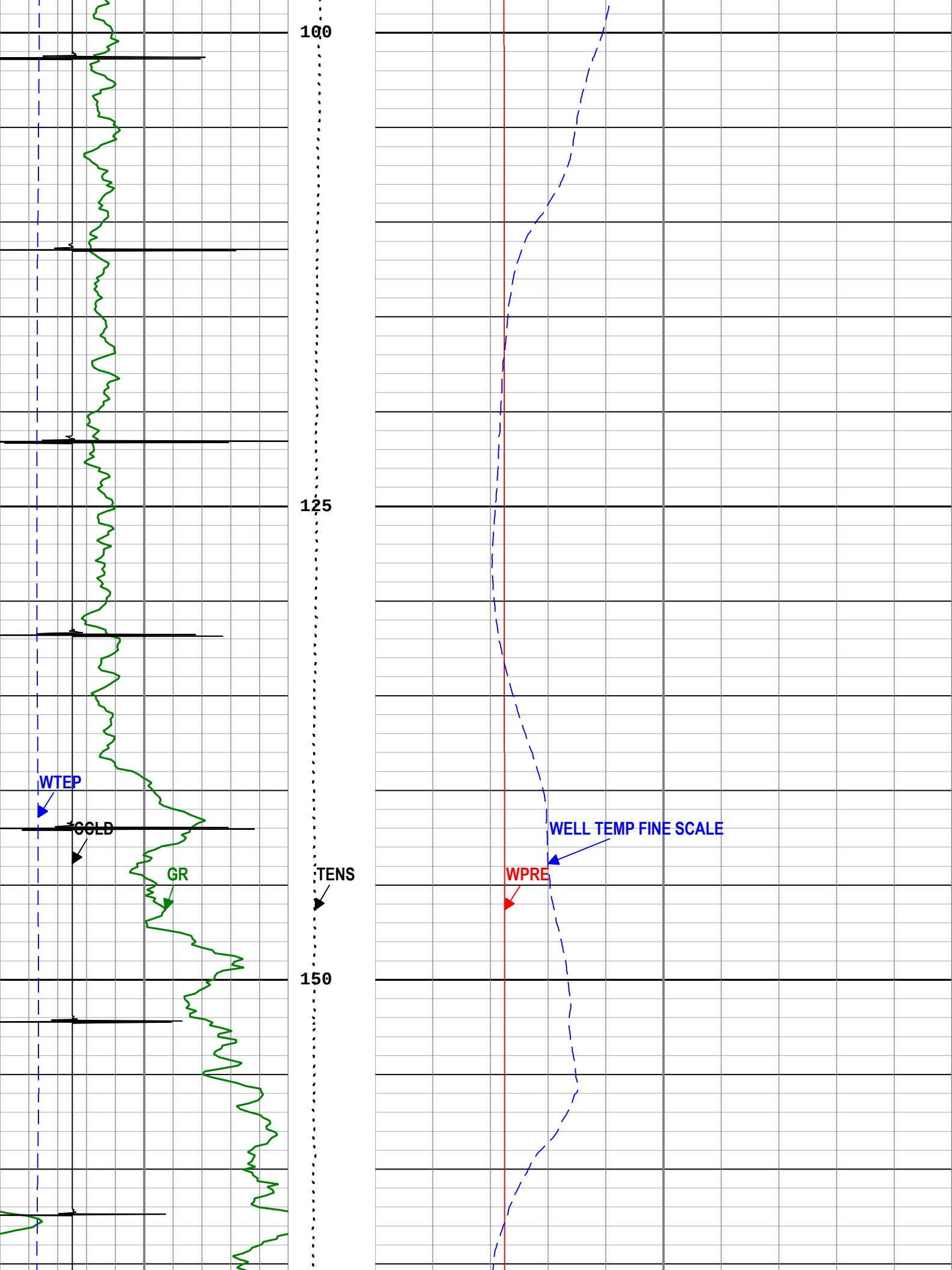
1: Log[3]:Up:S002

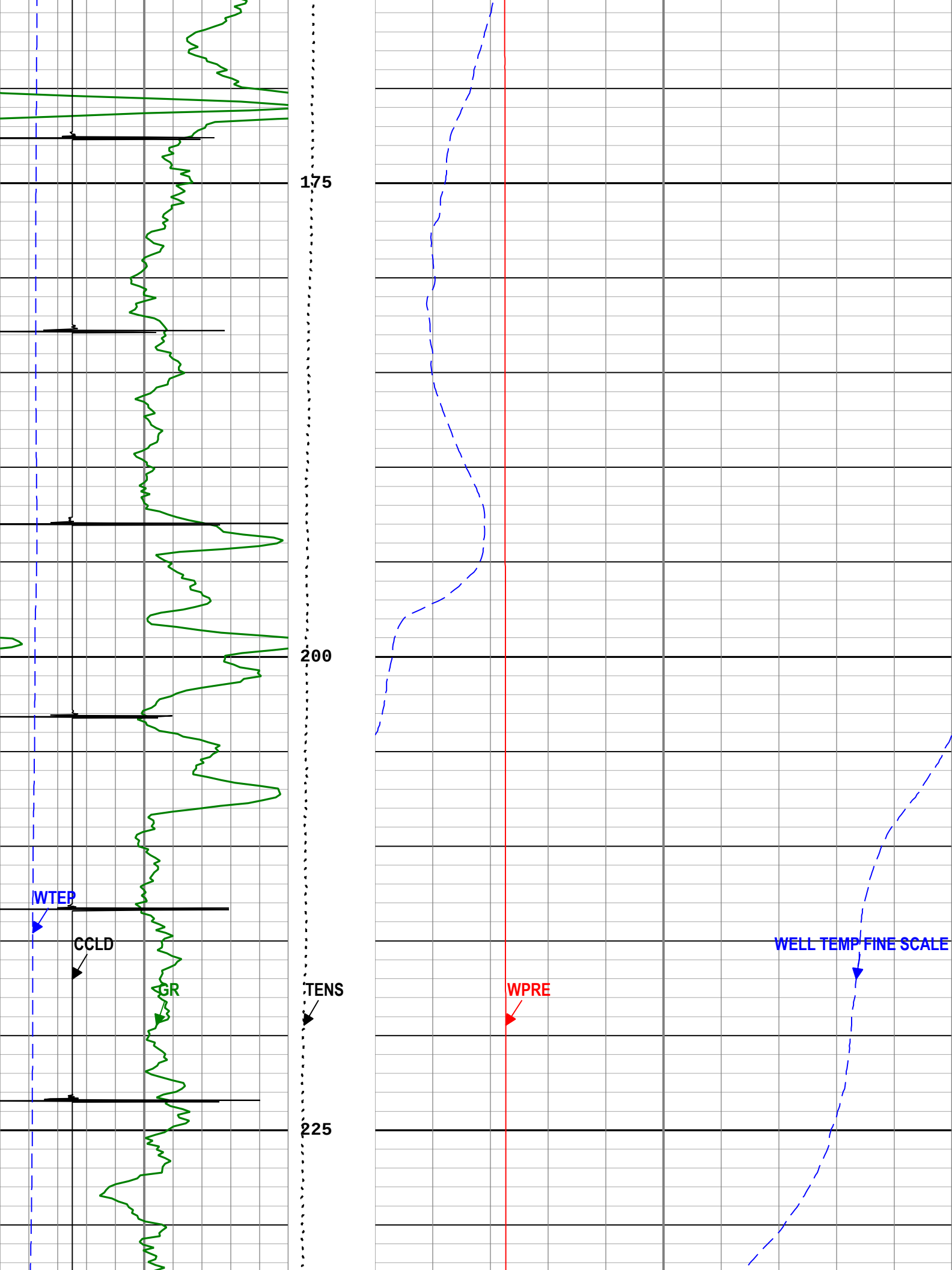
Description: PSP Depth Format: Log (TEMP DOWN PASS) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 23-Oct-2016 13:52:24

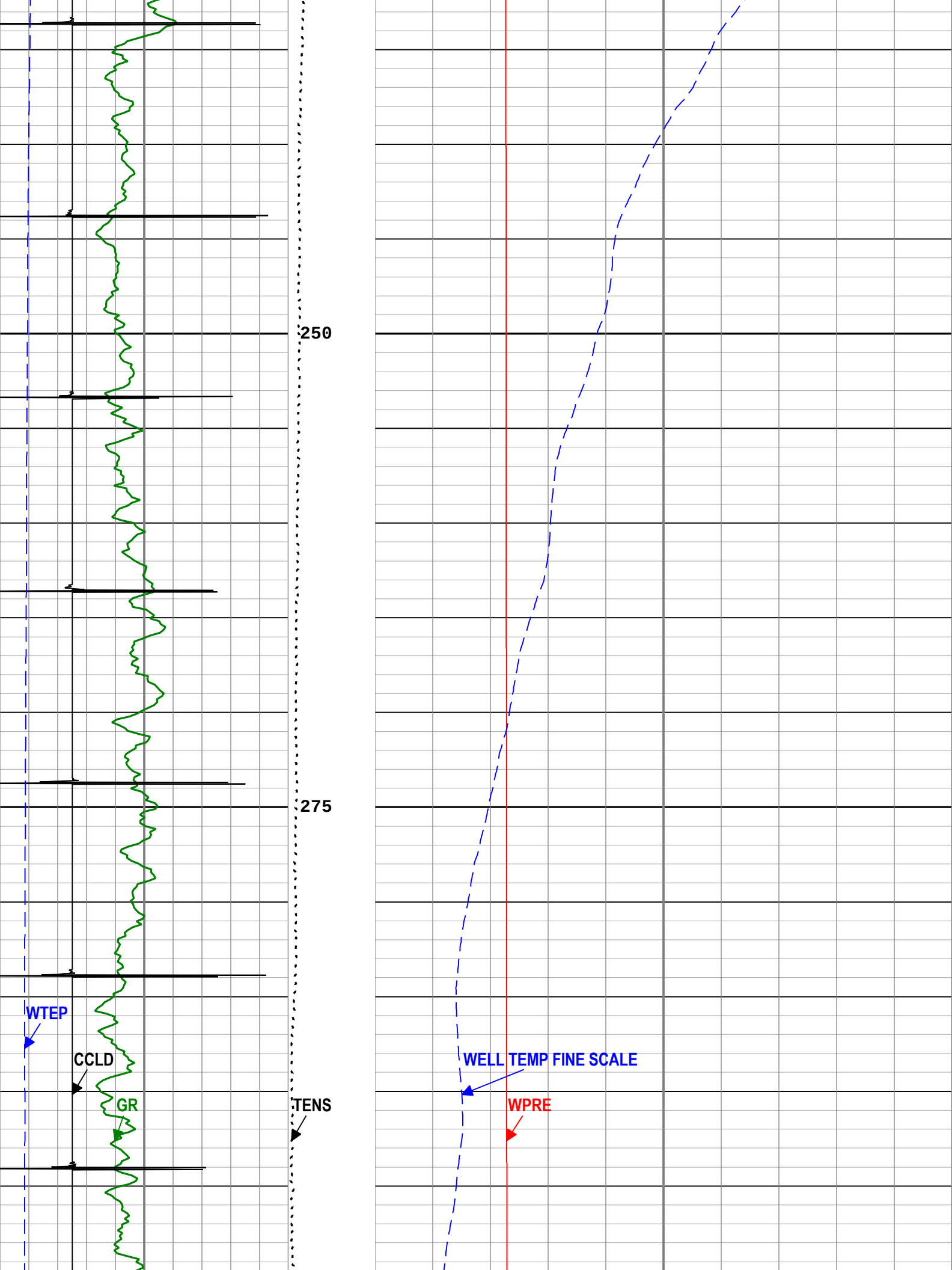
TIME_1900 - Time Marked every 60.00 (s)

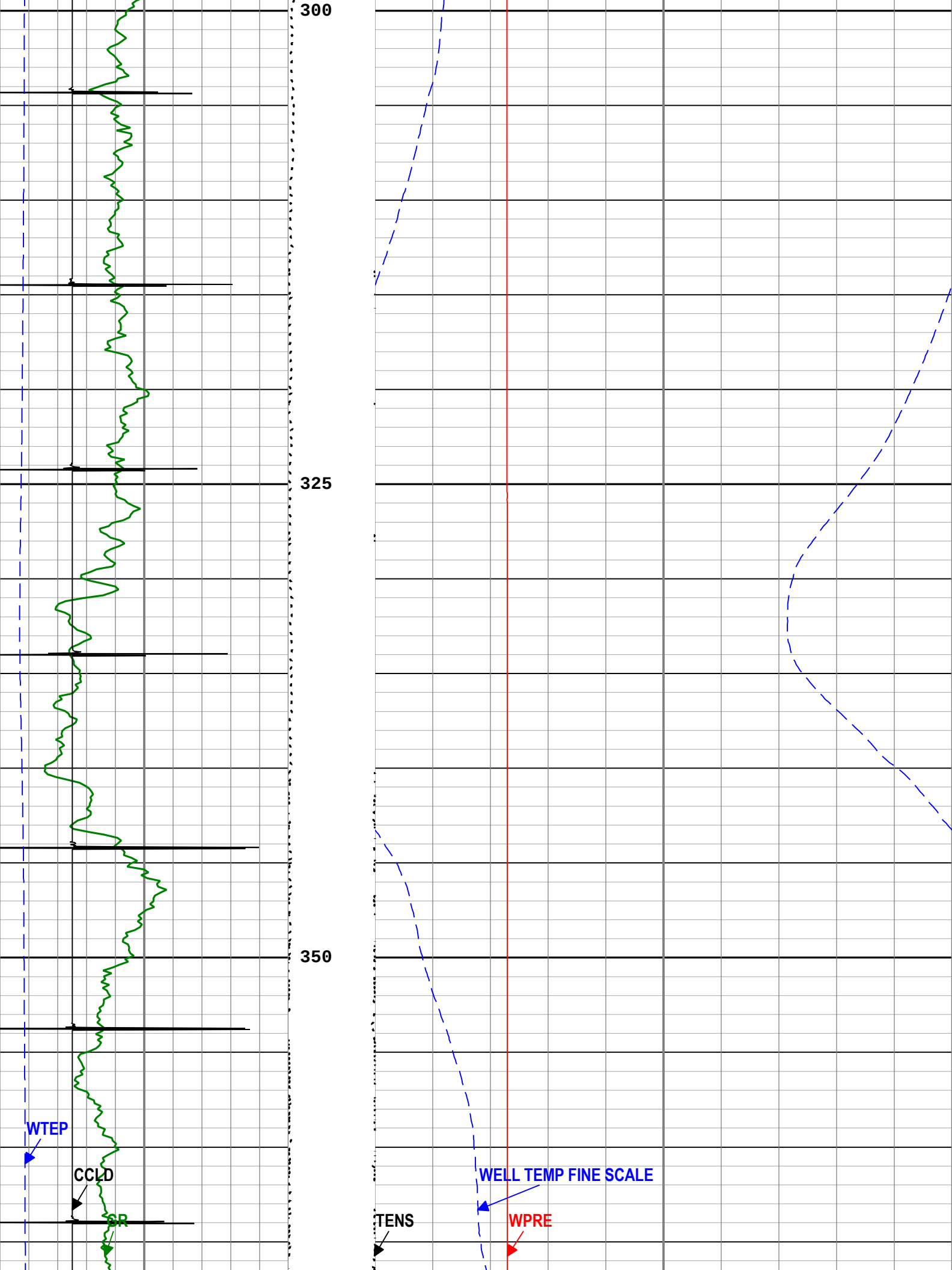


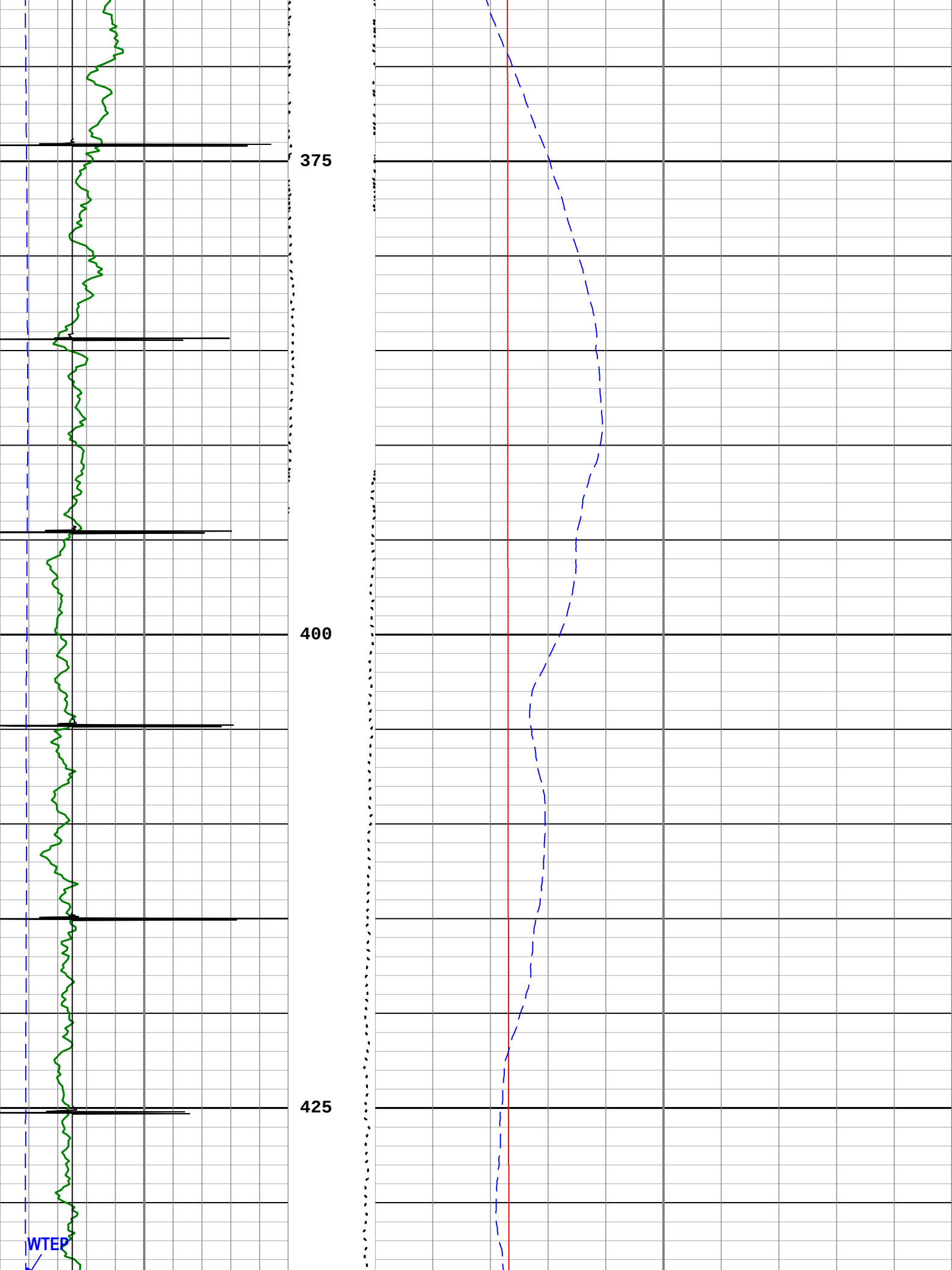

50
75
WTEP
CCLD
GR
TENS
WPRE
WELL TEMP FINE SCALE

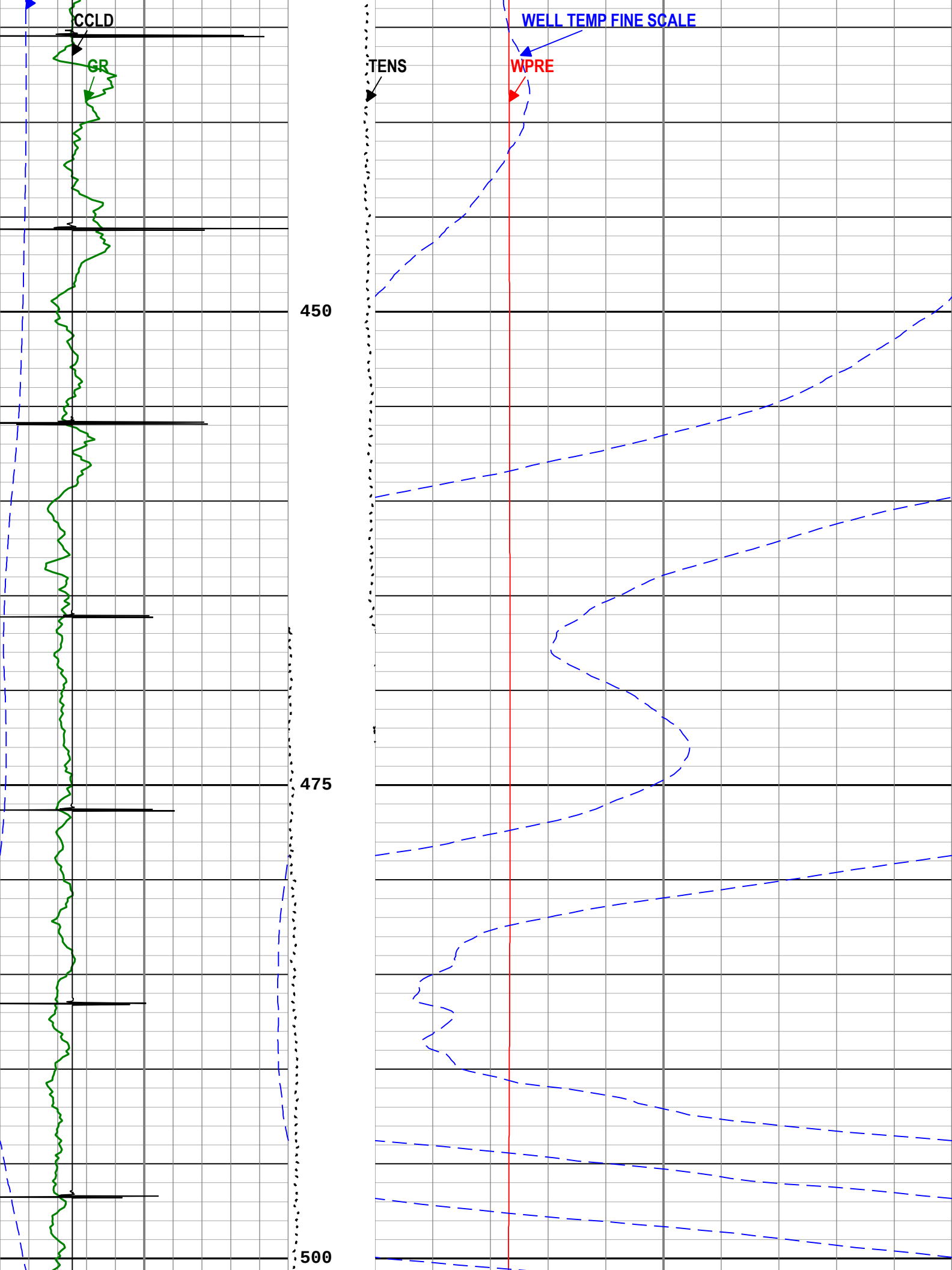

100
125
150
WTEP
CCLD
GR
TENS
WPRE
WELL TEMP FINE SCALE

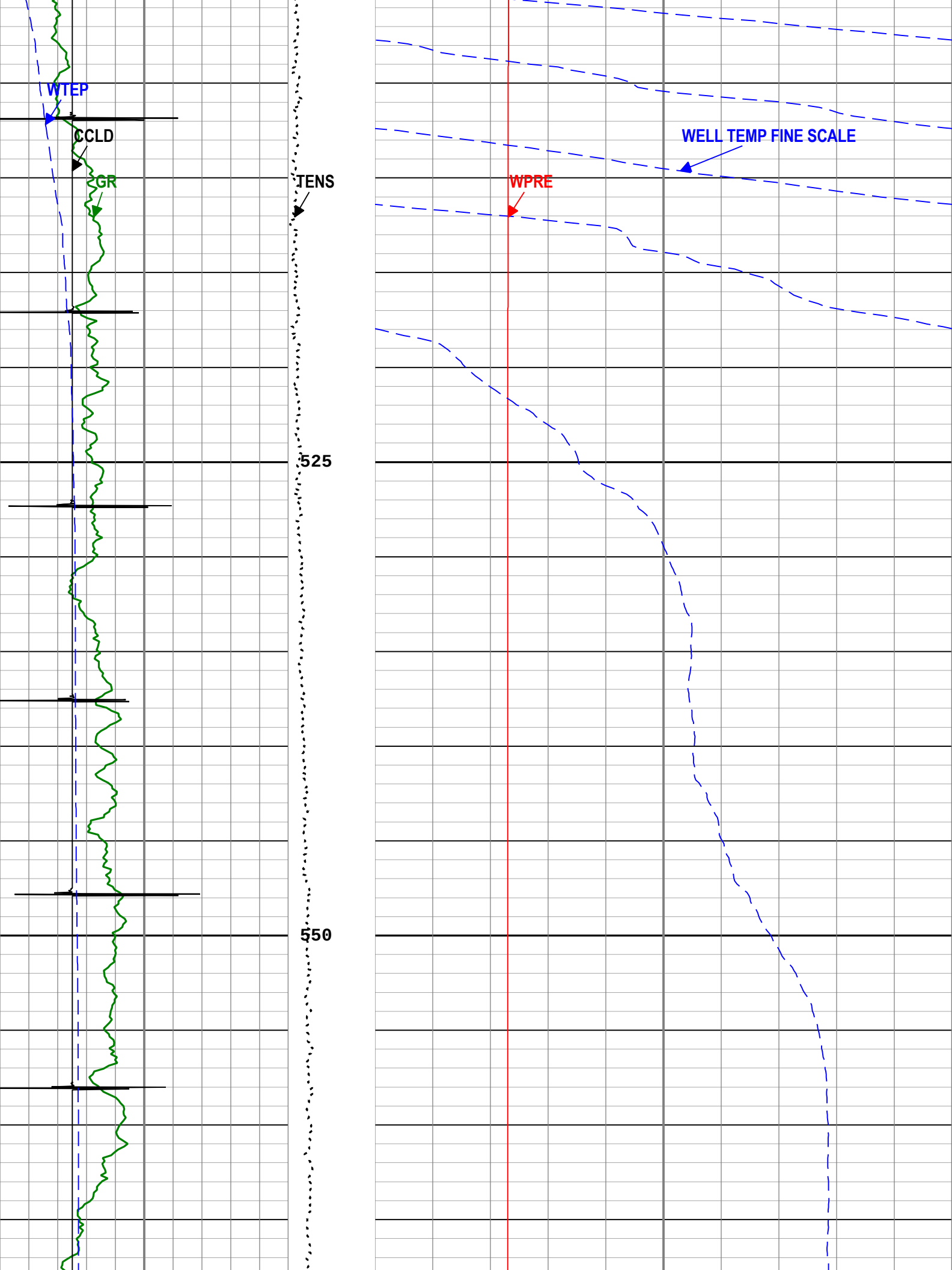

175
200
225
WTEP
CCLD
GR
TENS
WPRE
WELL TEMP FINE SCALE

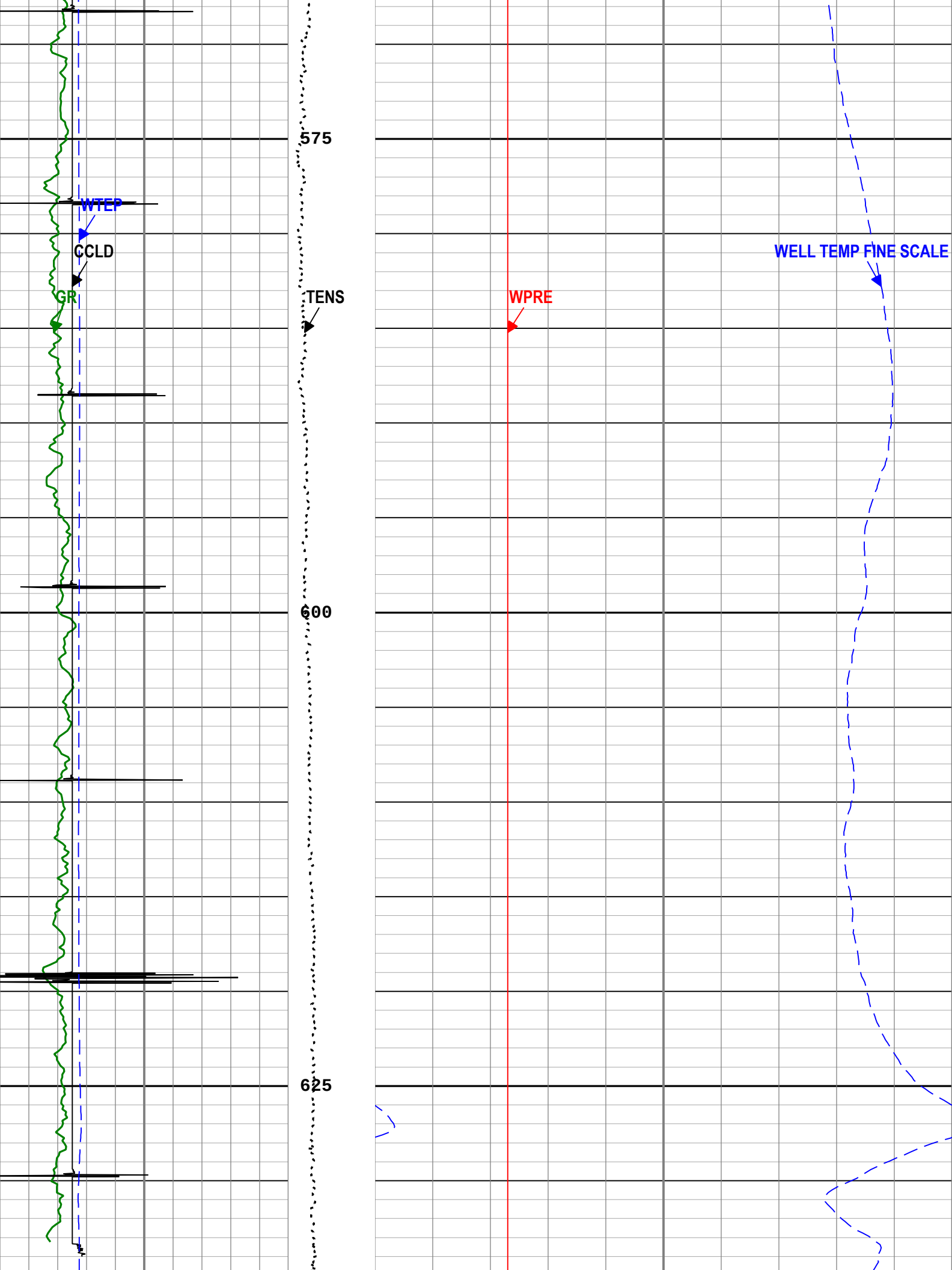

250
275
WTEP
CCLD
GR
TENS
WELL TEMP FINE SCALE
WPRE

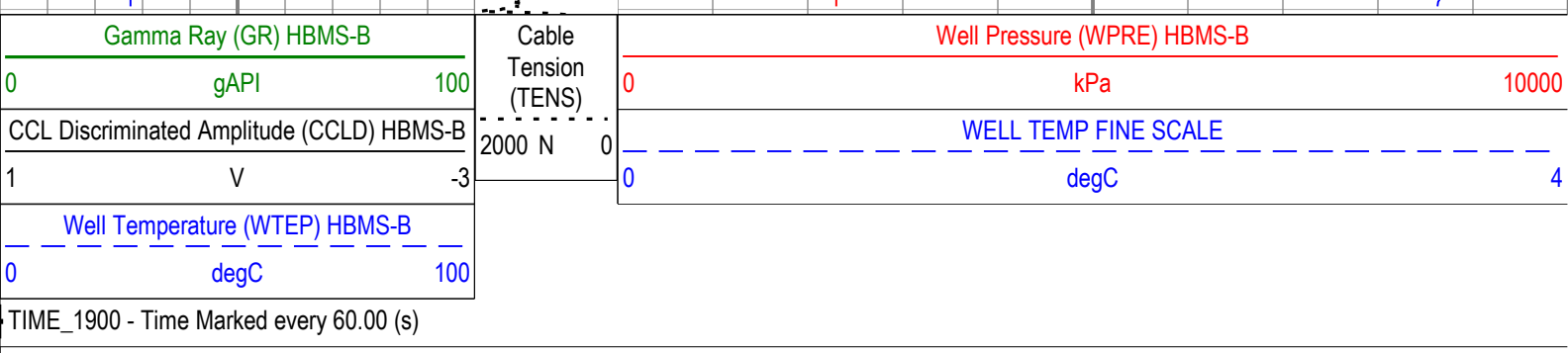

300
325
350
WTEP
CCLD
GR
TENS
WELL TEMP FINE SCALE
WPRE


375
400
425
WTEP


CCLD
GR
TENS
WELL TEMP FINE SCALE
WPRE
450
475
500


WTEP
CCLD
GR
TENS
WPRE
WELL TEMP FINE SCALE
525
550


575
600
625
WTEP
CCLD
GR
TENS
WPRE
WELL TEMP FINE SCALE



TIME_1900 - Time Marked every 60.00 (s)

Description: PSP Depth Format: Log (TEMP DOWN PASS) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 23-Oct-2016 13:52:24

Channel Processing Parameters

Tool Control Parameters

1: Parameters

Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	5486.4	m/h
PCCG	PSP Downhole CCL Gain	HBMS-B	24 dB	

1

DOWN PASS

Software Version

Acquisition System	Version
Maxwell 2016	6.0.53731.3100
Application Patch	Wireline_TestKit-EMIT-C-2016RC3_6.0.54288

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
1	Log[2]:Down	Down	0.40 m	525.71 m	23-Oct-2016 10:19:21 AM	23-Oct-2016 11:15:57 AM	ON	-0.95 m	No

All depths are referenced to toolstring zero

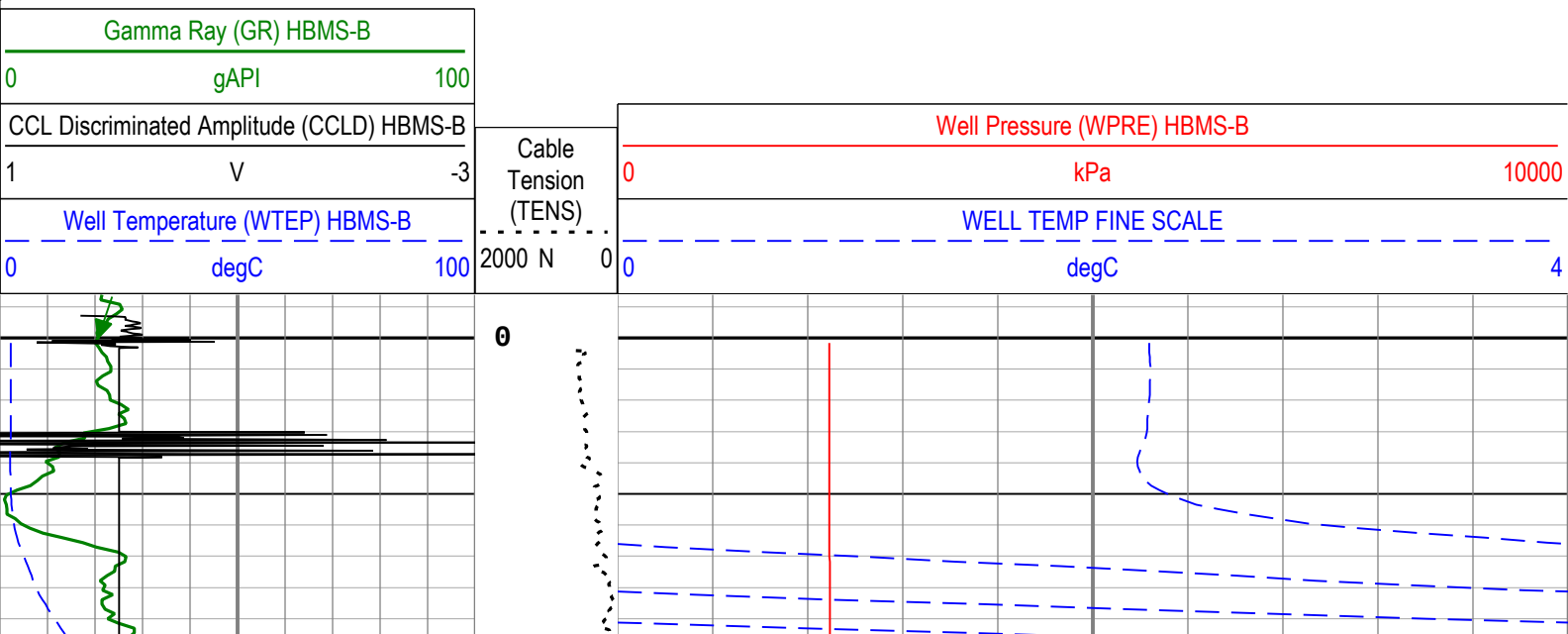
Log

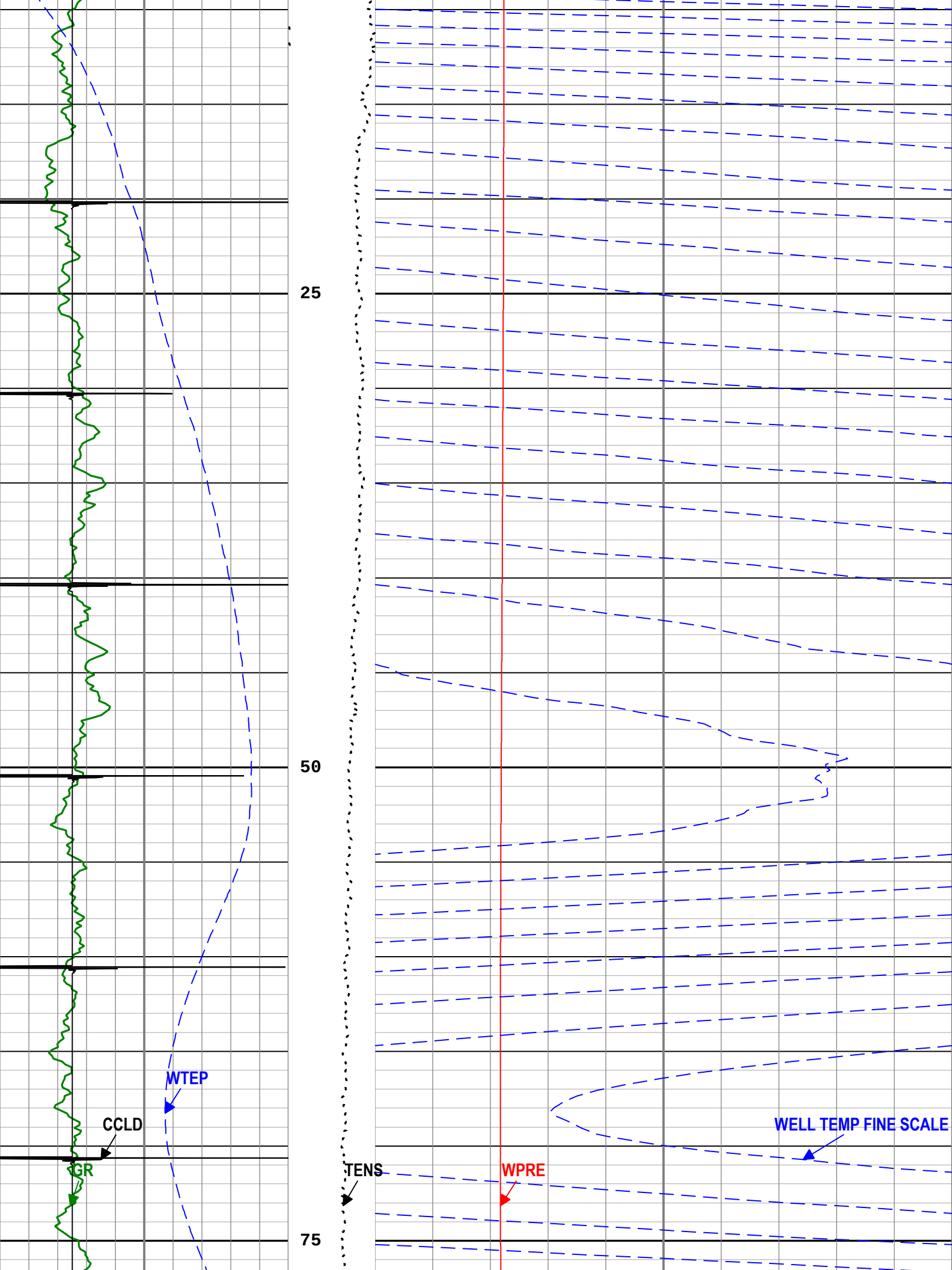
Company:IMPERIAL OIL RESOURCES Well:IMP 06 H57-H19 COLD LK 1-8-66-4

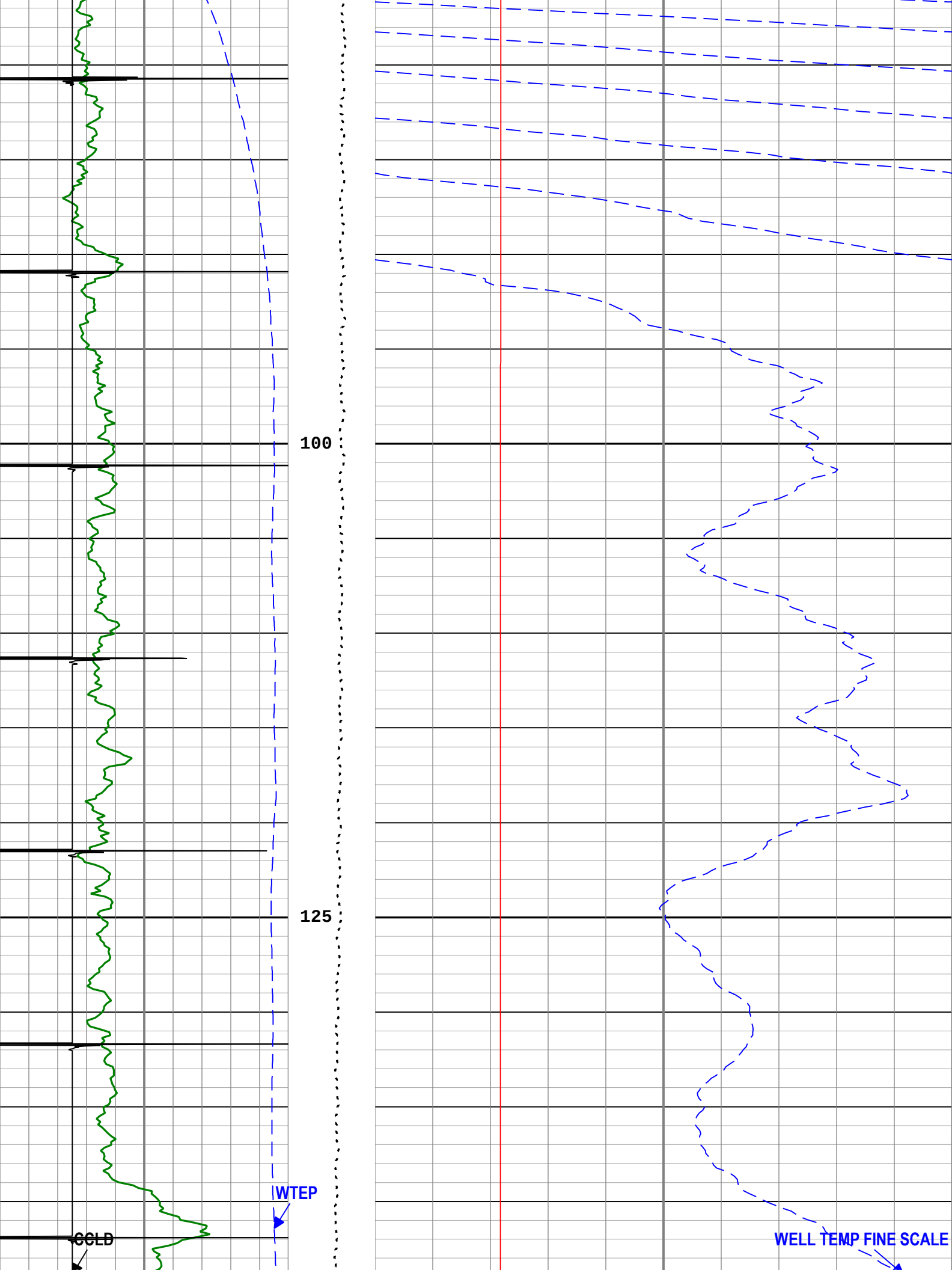
1: Log[2]:Down:S002

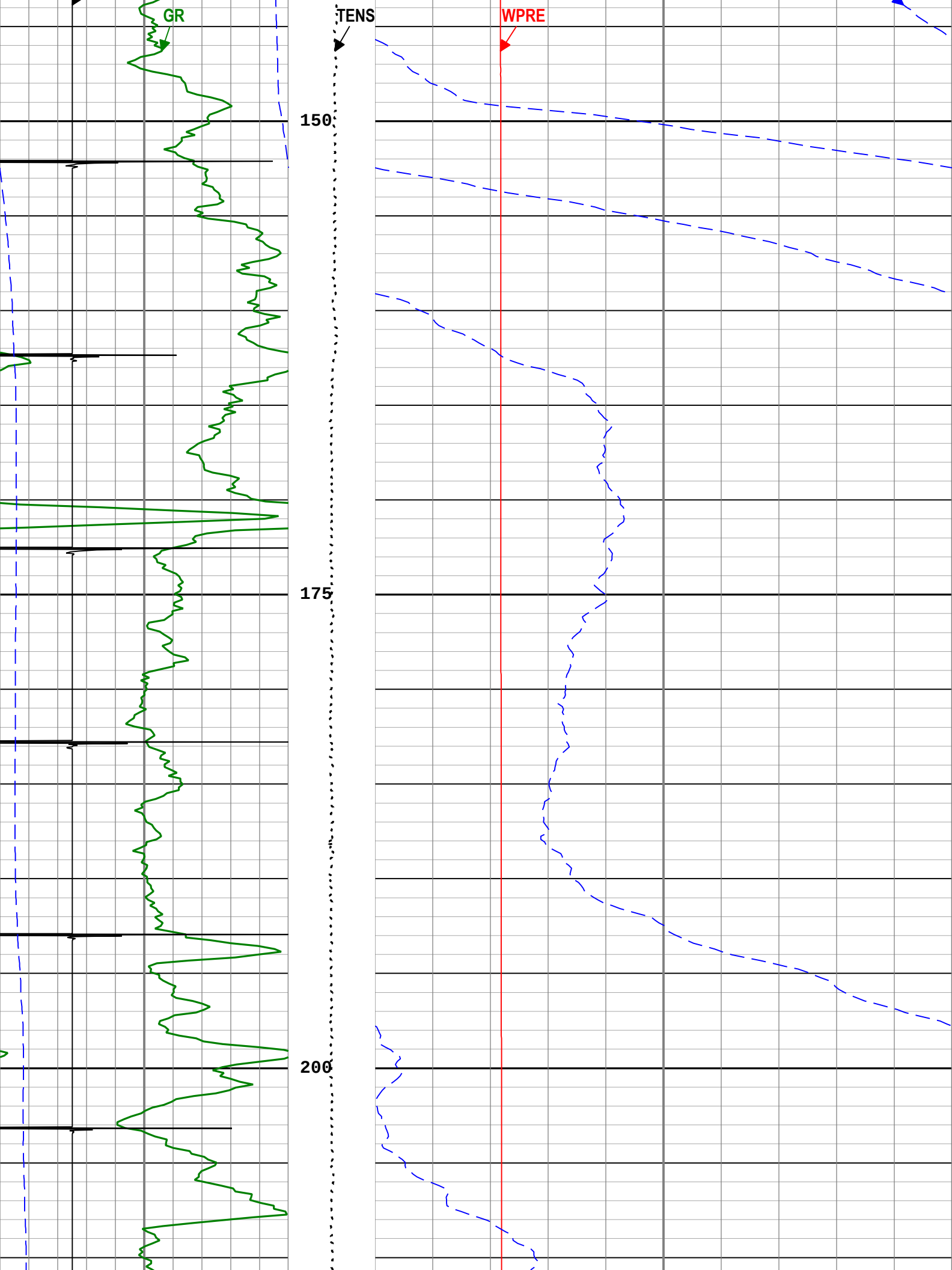
Description: PSP Depth Format: Log (TEMP DOWN PASS) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 23-Oct-2016 13:52:26

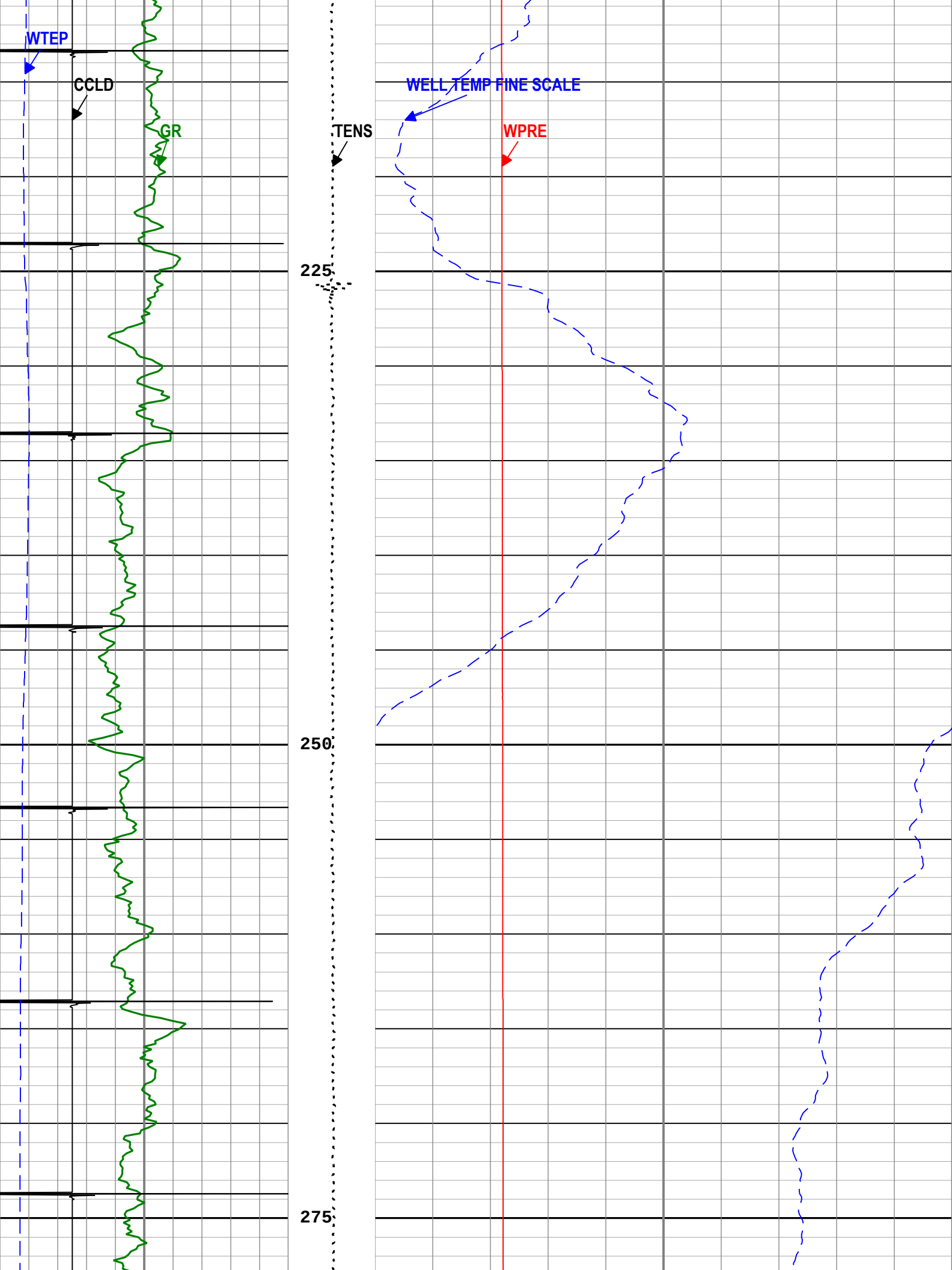
TIME_1900 - Time Marked every 60.00 (s)

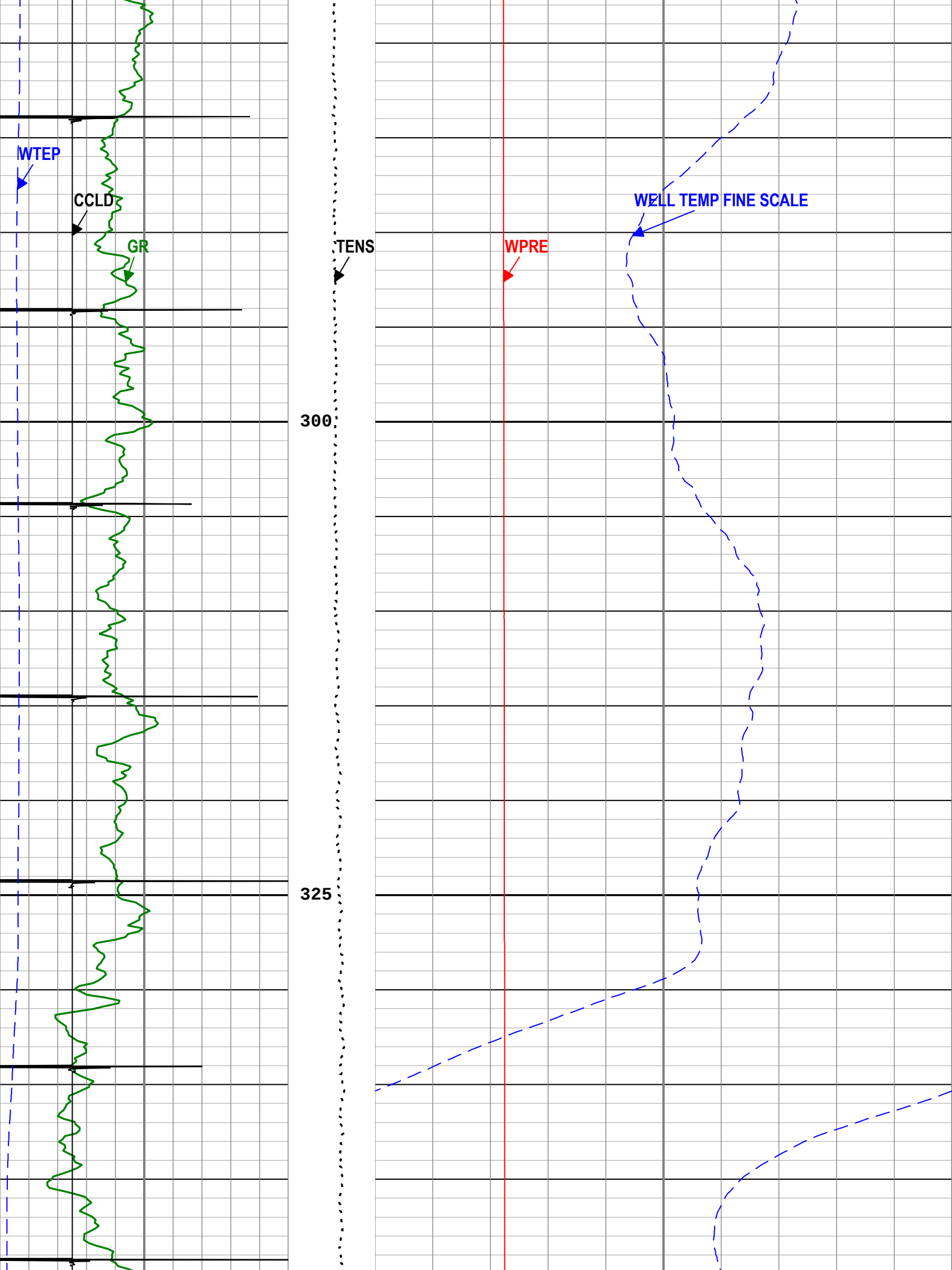


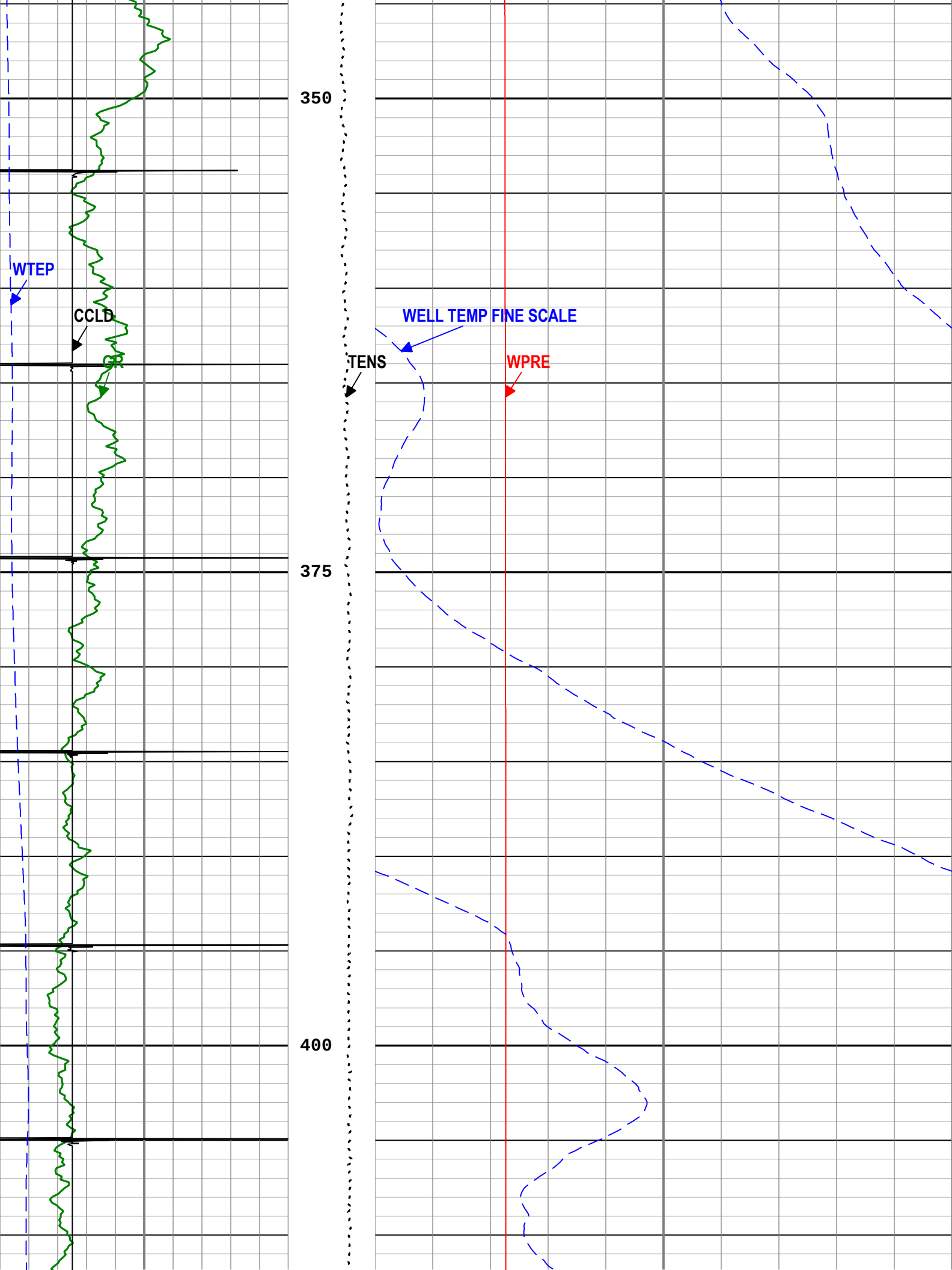

25
50
75
WTEP
CCLD
GR
TENS
WPRE
WELL TEMP FINE SCALE

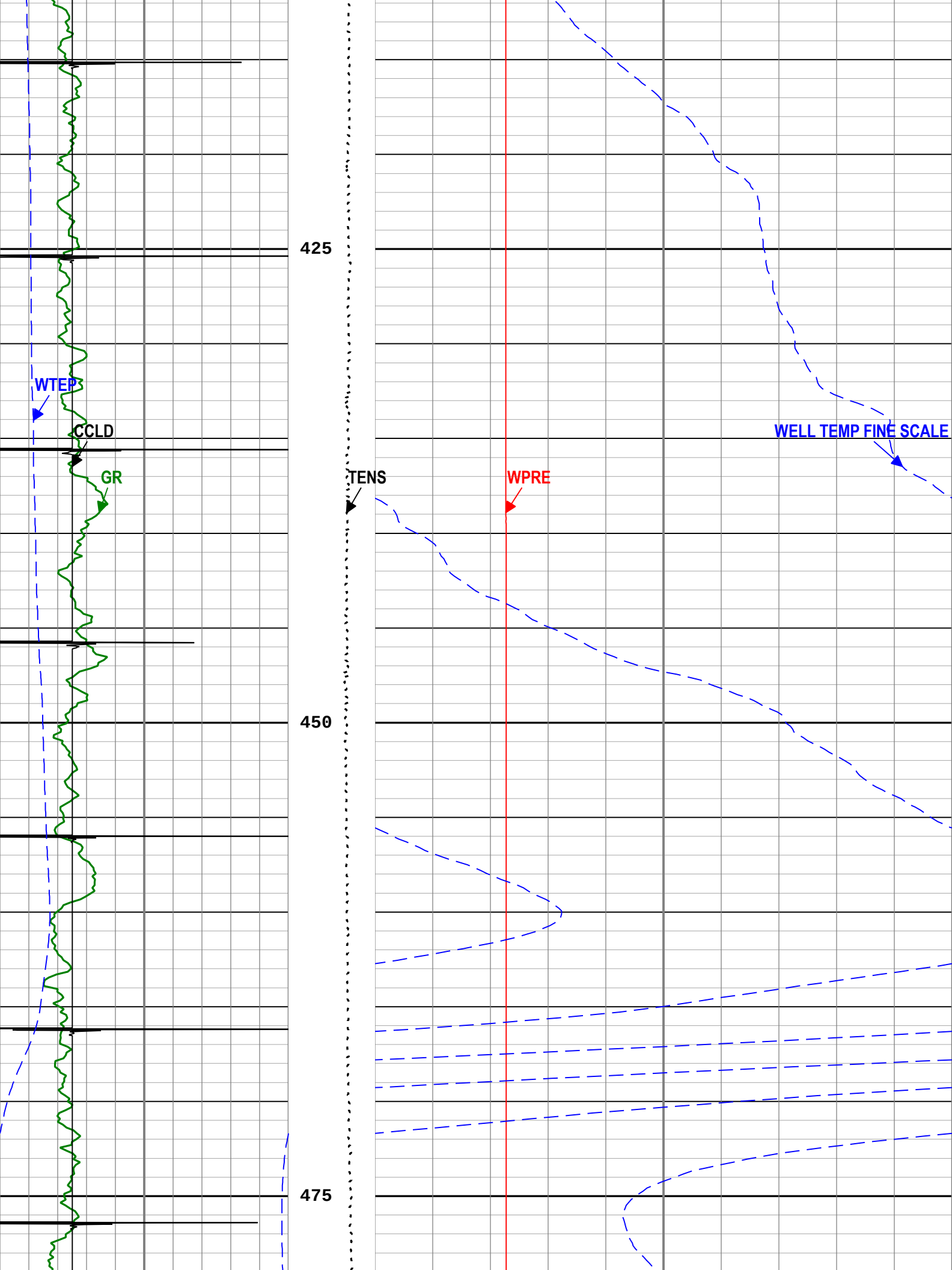

100
125
WTEP
CCLD
WELL TEMP FINE SCALE

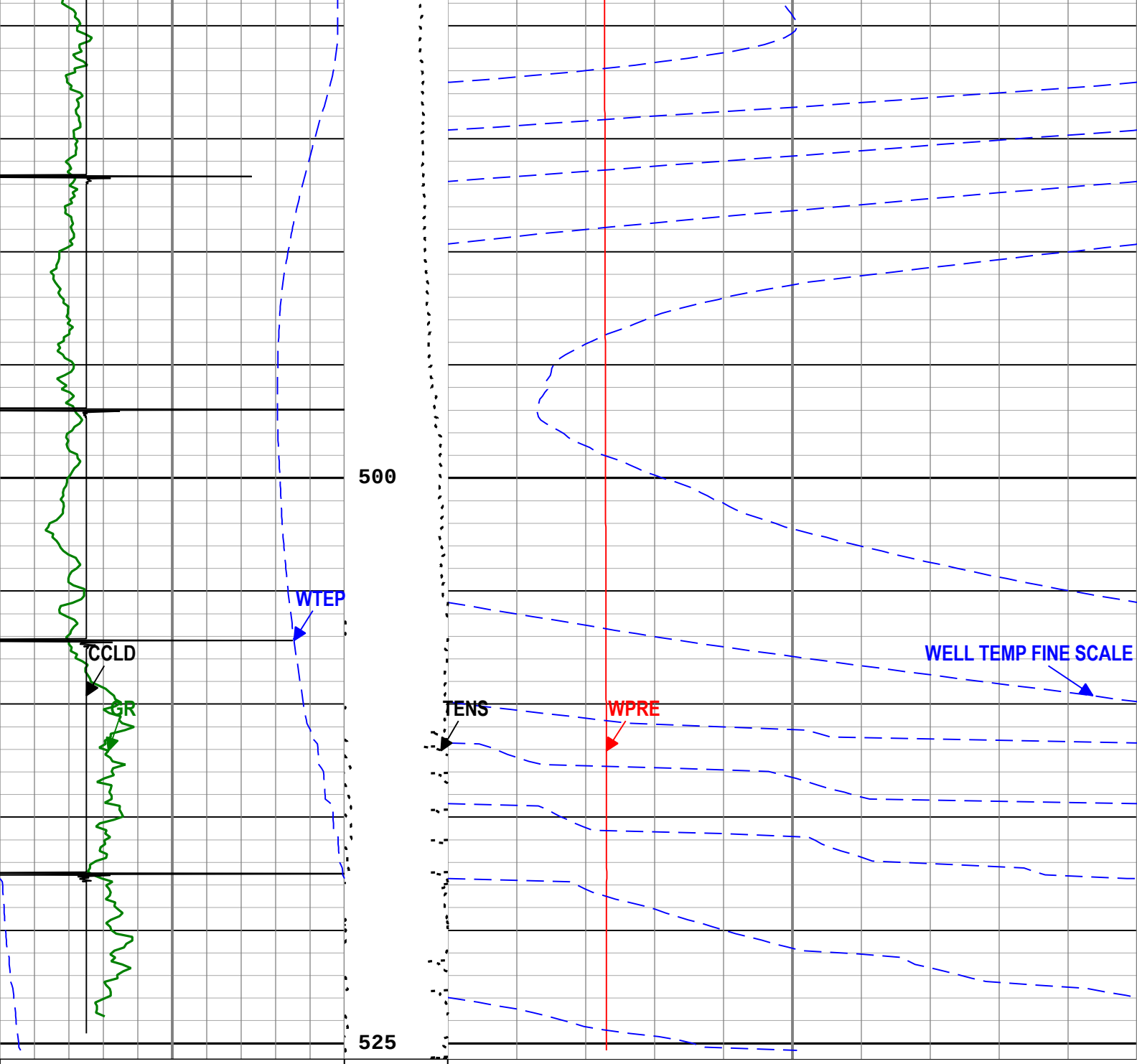

GR
TENS
WPRE
150
175
200


WTEP
CCLD
GR
TENS
WELL TEMP FINE SCALE
WPRE
225
250
275


WTEP
CCLD
GR
TENS
WPRE
WELL TEMP FINE SCALE
300
325


350
375
400
WTEP
CCLD
GR
TENS
WELL TEMP FINE SCALE
WPRE


425
450
475
WTEP
CCLD
GR
TENS
WPRE
WELL TEMP FINE SCALE



TIME_1900 - Time Marked every 60.00 (s)

Description: PSP Depth Format: Log (TEMP DOWN PASS) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 23-Oct-2016 13:52:26

Channel Processing Parameters

Tool Control Parameters

1: Parameters

Parameter	Description	Tool	Value	Unit

MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	5486.4	m/h
PCCG	PSP Downhole CCL Gain	HBMS-B	24 dB	

Calibration Report

HBMS-B (PSP HBMS-B Tool) Calibration - Run 1

Primary Equipment :

HBMC	HBMC-A	2814
HTPS	HTPS-A	2814

Calibration Parameter :

JIG-BKGD

PBMS Gamma Ray Check - HBMS Gamma Ray Accumulations

Before: After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
GR Zero Average - 0	gAPI	Before	-----	-----	-----	-----	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
GR Zero Standard Deviation - 0	gAPI	Before	-----	-----	-----	-----	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
GR Zero Accumulation - 0	gAPI	Before	-----	-----	-----	-----	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
GR Plus Average - 0	gAPI	Before	-----	-----	-----	-----	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
GR Plus Standard Deviation - 0	gAPI	Before	-----	-----	-----	-----	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
GR Plus Max Deviation - 0	gAPI	Before	-----	-----	-----	-----	
		After	-----	-----	-----	-----	
		After-Before	-----	-----	-----	-----	
Jig-Background	gAPI	Before			NOT DONE		
		After			NOT DONE		
		After-Before	-----	-----	-----	-----	

HBMS Gamma Ray Master Calibration

Master (EEPROM): 18:00:00 08-Nov-2004

PBMS_GR_MODEL (Master) GR Coefficients

	Rt**0	Rt**1
Rt**0	2000	2760

HBMS Well Temp Master Calibration

Master (EEPROM): 18:00:00 22-Jan-2009

PBMS_RTD_THERM (Master) RTD Coefficients

	Tt**0	Tt**1	Tt**2	Tt**3	Tt**4	Tt**5
Tt**0	222.6832	-437.029	192.7131	-30.10149	1.765409	0

HBMS CQG Master Calibration

Master (EEPROM): 18:00:00 22-Jan-2009

PBMS_P_GAUGE_PRES (Master) CQG Pressure Model Coefficients

	Fb**0	Fb**1	Fb**2	Fb**3	Fb**4	Fb**5
Fc**0	7609.304	0.02135192	-1.584357E-07	-8.16788E-11	-1.499828E-15	-1.835433E-20

Fc**1	-1.076739	-1.311701E-05	-1.009642E-10	2.135793E-16	1.699682E-20	0
Fc**2	1.233041E-06	5.580883E-11	9.623179E-16	0	0	0
Fc**3	1.687505E-12	2.207179E-16	0	0	0	0
Fc**4	0	0	0	0	0	0
Fc**5	0	0	0	0	0	0

PBMS_P_GAUGE_TEMP (Master) CQG Temperature Model Coefficients

	Fc**0	Fc**1	Fc**2	Fc**3	Fc**4	Fc**5
Fb**0	115.71	-0.0002994552	7.05261E-09	1.099301E-13	-9.285097E-18	-1.101411E-21
Fb**1	-0.005891024	1.74777E-08	2.345432E-13	-3.02633E-18	-7.047549E-22	0
Fb**2	-3.6164E-08	4.172693E-13	1.584701E-18	0	0	0
Fb**3	-2.721567E-13	9.516966E-18	0	0	0	0
Fb**4	0	0	0	0	0	0
Fb**5	0	0	0	0	0	0

PBMS_CQG_FCLK_FREQ (Master) CQG Clock Frequency Model Coefficients

	(Fb'-Fc')**0	(Fb'-Fc')**1	(Fb'-Fc')**2	(Fb'-Fc')**3	(Fb'-Fc')**4	(Fb'-Fc')**5
(Fb'-Fc')**0	31087.12	0.00371583	5.971185E-07	-6.647913E-11	-5.011671E-16	5.965816E-21

PBMS_CQG_FCLK_TEMP (Master) CQG Clock Temperature Model Coefficients

	(Fb'-Fc')**0	(Fb'-Fc')**1	(Fb'-Fc')**2	(Fb'-Fc')**3	(Fb'-Fc')**4	(Fb'-Fc')**5
(Fb'-Fc')**0	112.0599	-0.005594933	-3.930061E-08	4.961088E-13	8.652569E-17	-6.547065E-21

Company: IMPERIAL OIL RESOURCES

Schlumberger

Well: IMP 06 H57-H19 COLD LK 1-8-66-4

Field: LEMING

Province: AB

MEASURED DEPTH

PRODUCTION ANALYSIS

TEMPERATURE LOG