

Company: IMPERIAL OIL RESOURCES LIMITED

Well: IMP 12 N08-22 COLD LK 9-12-66-3

Field: MARIE

Province: ALBERTA State: **MD**

PRODUCTION ANALYSIS LOG

TEMP. / PRESSURE

Province:	ALBERTA
Field:	MARIE
Location:	100091206603W400
Well:	IMP 12 N08-22 COLD LK 9-12-66-3
Company:	IMPERIAL OIL RESOURCES LIMITED
Location:	
Permanent Datum:	100091206603W400
Log Measured From:	16-12-66-3W4
Drilling Measured From:	
API Serial No.	0456199
Section:	16-12
Township:	066
Range:	03W4
Elev.: K.B. 615.08 m G.L. 609.00 m D.F. 615.08 m	
Ground Level Kelly Bushing Kelly Bushing 6.08 m above Perm.Datum 609.00	

Logging Date	20-Aug-2017
Run Number	1
Depth Driller	640.00 m
Schlumberger Depth	572.00 m
Bottom Log Interval	572.00 m
Top Log Interval	5.00 m
Casing Fluid Type	Water
Salinity	
Density	1198.26 kg/m ³
Fluid Level	572.00 m
BIT/CASING/TUBING STRING	
Bit Size	215.90 mm
From	162.00 m
To	640.00 m
Casing/Tubing Size	73.025 mm
Weight	9.67 kg/m
Grade	J55
From	4.33 m
To	605.00 m
Max Recorded Temperatures	130 degC
Logger on Bottom	20-Aug-2017
Unit Number	3021
Location:	Time 11:00:00
Recorded By	Y.MUNOZ
Witnessed By	BRAD VICKERS

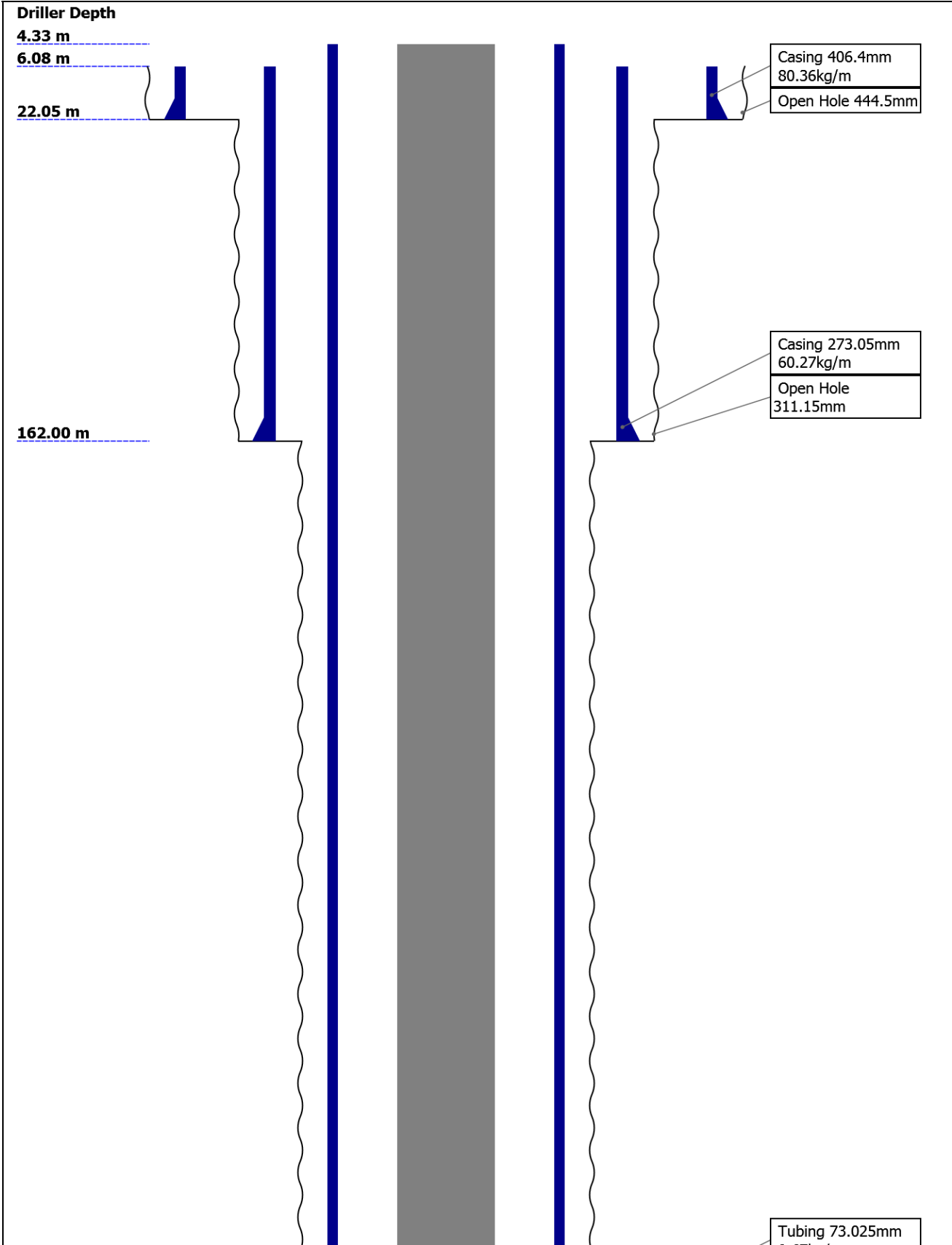
Disclaimer

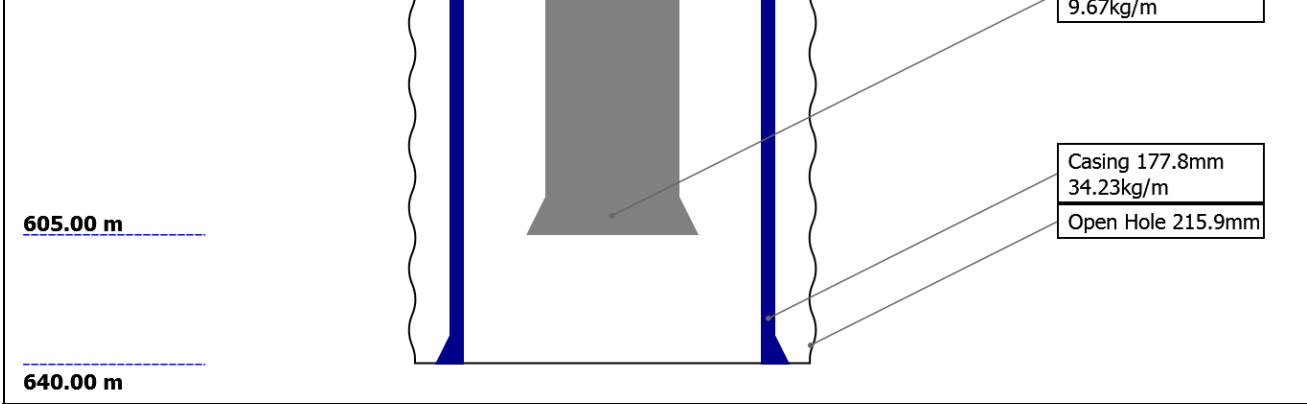
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Well Sketch





Borehole Size/Casing/Tubing Record

Bit						
Bit Size (mm)	444.5	311.15	215.9			
Top Driller (m)	6.08	22.05	162			
Top Logger (m)	6.08	22.05	162			
Bottom Driller (m)	22.05	162	640			
Bottom Logger (m)	22.05	162	640			
Casing						
Size (mm)	406.4	273.05	177.8			
Weight (kg/m)	80.36	60.27	34.23			
Inner Diameter (mm)	390.388	255.27	161.797			
Grade	N/A	N/A	L80			
Top Driller (m)	6.08	6.08	4.33			
Top Logger (m)	6.08	6.08	4.33			
Bottom Driller (m)	22.05	162	640			
Bottom Logger (m)	22.05	162	640			
Tubing						
Size (mm)	73.025					
Weight (kg/m)	9.67					
Inner Diameter (mm)	61.623					
Grade	J55					
Top Driller (m)	4.33					
Top Logger (m)	4.33					
Bottom Driller (m)	605					
Bottom Logger (m)	605					

Operational Run Summary

Parameter (unit)	1					
Date Log Started	20-Aug-2017					
Time Log Started	09:18:07					
Date Log Finished	20-Aug-2017					
Time Log Finished	11:32:14					
Top Log Interval (m)						
Bottom Log Interval (m)						

Total Depth (m)						
Max Hole Deviation (deg)						
Azimuth of Max Deviation (deg)						
Bit Size (mm)	215.900					
Logging Unit Number	3021					
Logging Unit Location	NISKU					
Recorded By	Y.MUNOZ					
Witnessed By	BRAD VICKERS					
Service Order Number	CZ35-00252					

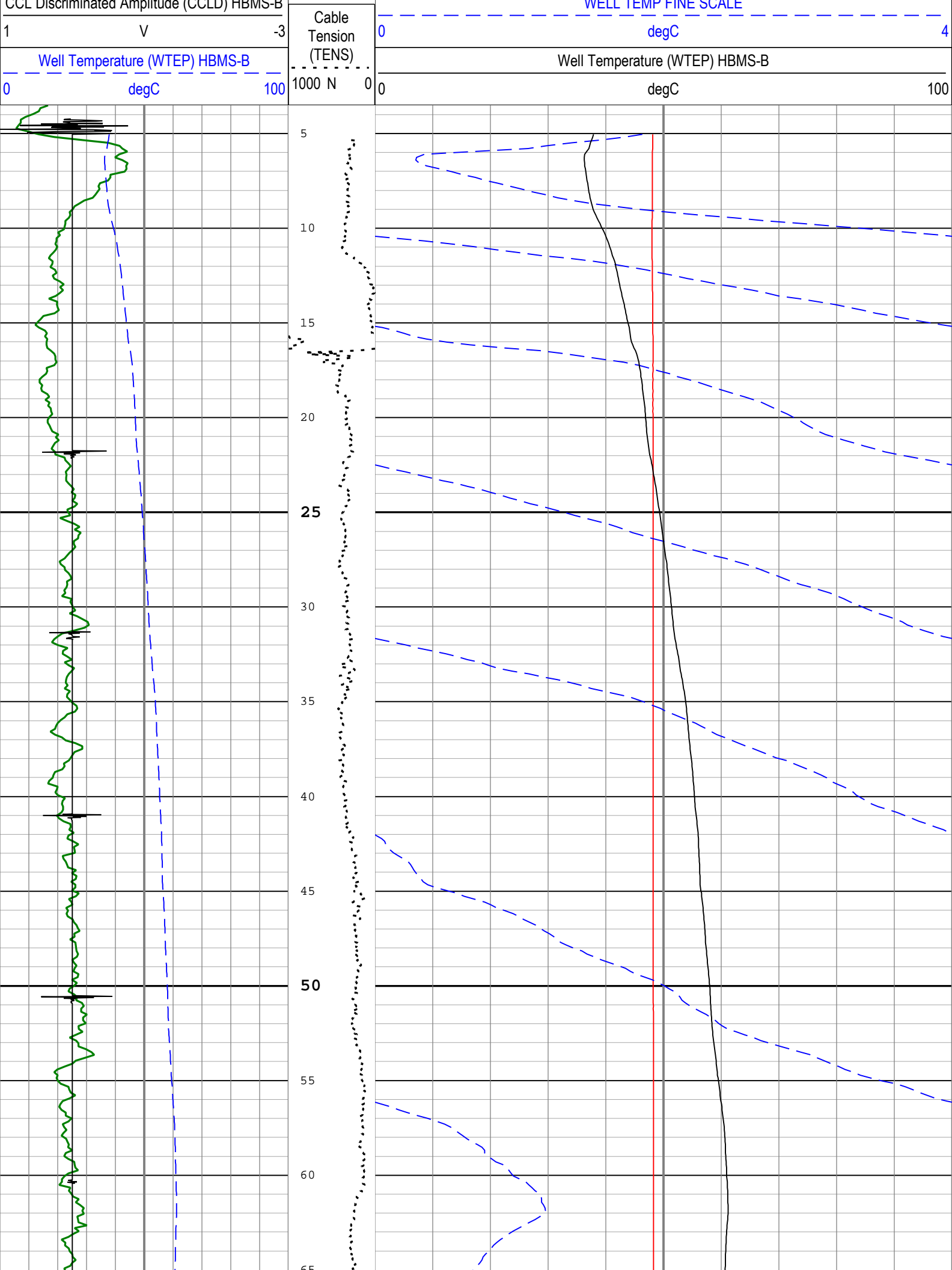
Remarks and Equipment Summary

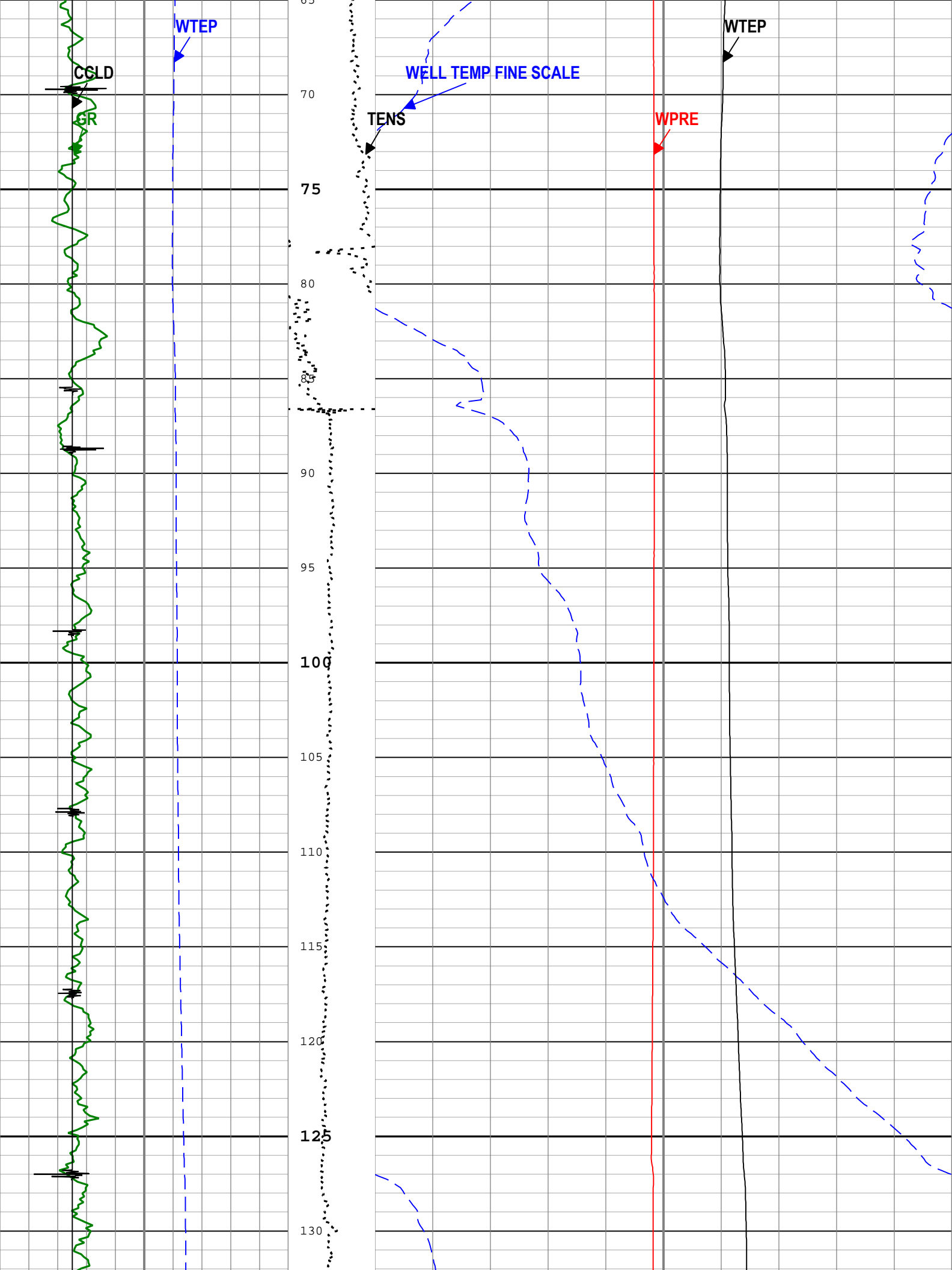
1: Toolstring				1: Remarks
<div> <div> <div>Equip name</div> <div>Length</div> <div>MP name</div> <div>Offset</div> </div> <div> <div>PEH-E</div> <div>6.12</div> <div></div> <div></div> </div> </div> <div> <div> <div>AH-38</div> <div>5.61</div> </div> <div> <div>EQF-43</div> <div>5.52</div> </div> </div> <div> <div>Adaptor_Head</div> <div>3.69</div> <div>Roller</div> </div> <div> <div> <div>HBMS-B:2897</div> <div>3.39</div> </div> <div> <div>HUDH-A:2897</div> <div>PSC-A:2897</div> <div>HSTC-A:2897</div> <div>HBMC-A:2897</div> <div>HTPS-A:2897</div> </div> </div> <div> <div>GR</div> <div>1.87</div> </div> <div> <div> <div>CCL</div> <div>1.14</div> </div> <div> <div>PSTC</div> <div>0.71</div> </div> <div> <div>HSTC Tool String Bottom</div> <div>0.00</div> </div> <div> <div>CQG Pressure</div> <div>0.28</div> </div> <div> <div>Temperature</div> <div>0.28</div> </div> <div> <div>TOOL_ZERO</div> <div></div> </div> </div> <div> <div>Lengths are in m</div> <div>Maximum Outer Diameter = 52.451 mm</div> <div>Line: Sensor Location, Value: Gating Offset</div> <div>All measurements are relative to TOOL_ZERO</div> </div>	<div> <div>FLUID SHOT DATA:</div> <div>SITP 5400 KPA</div> <div>SICP 5400 KPA</div> <div>SITP START OF JOB 4800 KPA</div> <div>SICP START OF JOB 4800 KPA</div> </div> <div> <div>LAST FLUID MOVEMENT: N2 PURGED 18-AUG-2017</div> <div>BURST NIPPLE TOP AT 578.06 MKB</div> <div>PSN TOP AT 597.57 MKB</div> <div>CWT TOPAT 546.7 MKB</div> </div> <div> <div>MAX TEMP RECORDED 130 DEGC AT 572 MKB</div> <div>SITB AFTER LOG 4750 KPA</div> </div>			

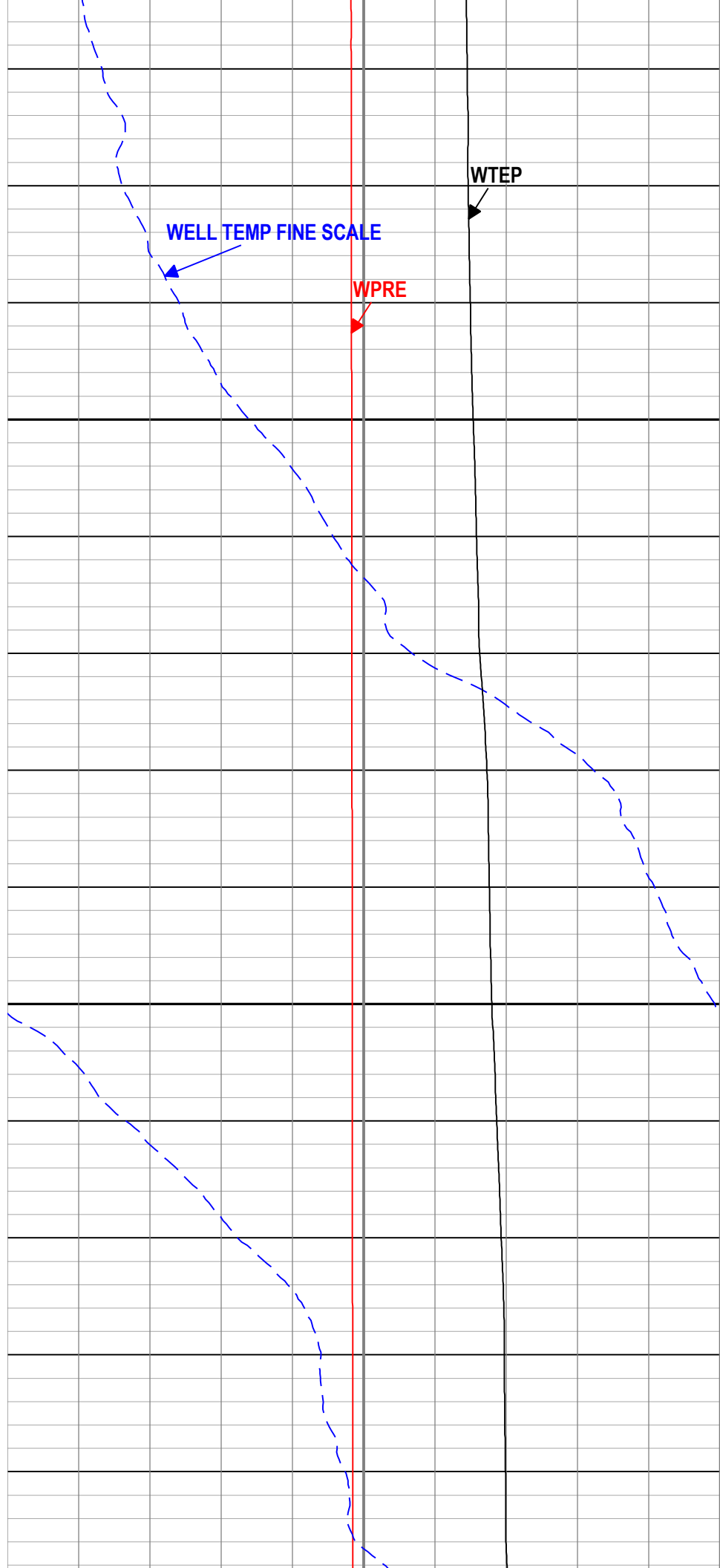
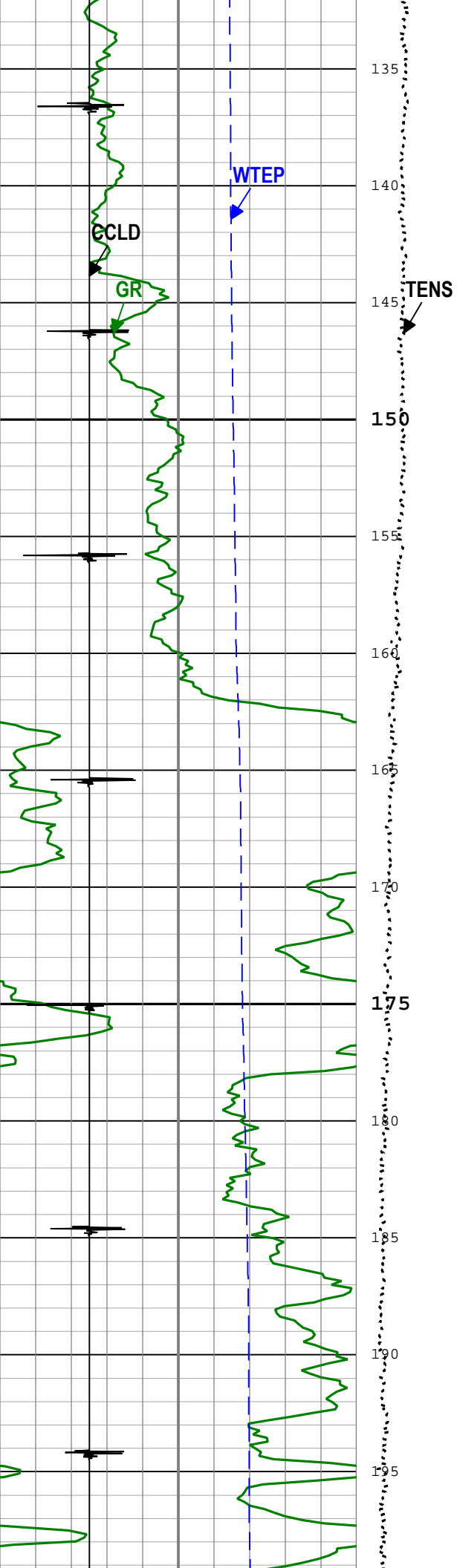
Depth Summary

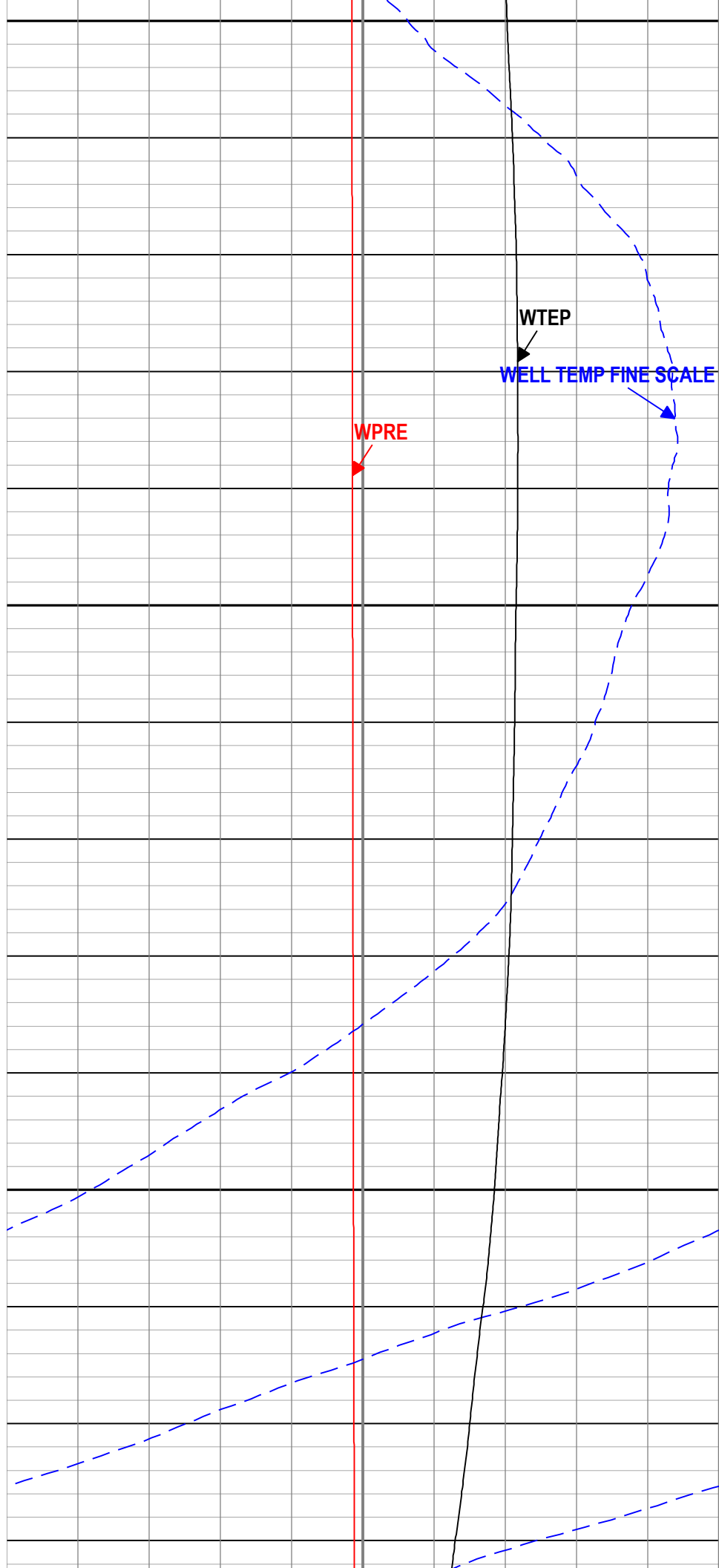
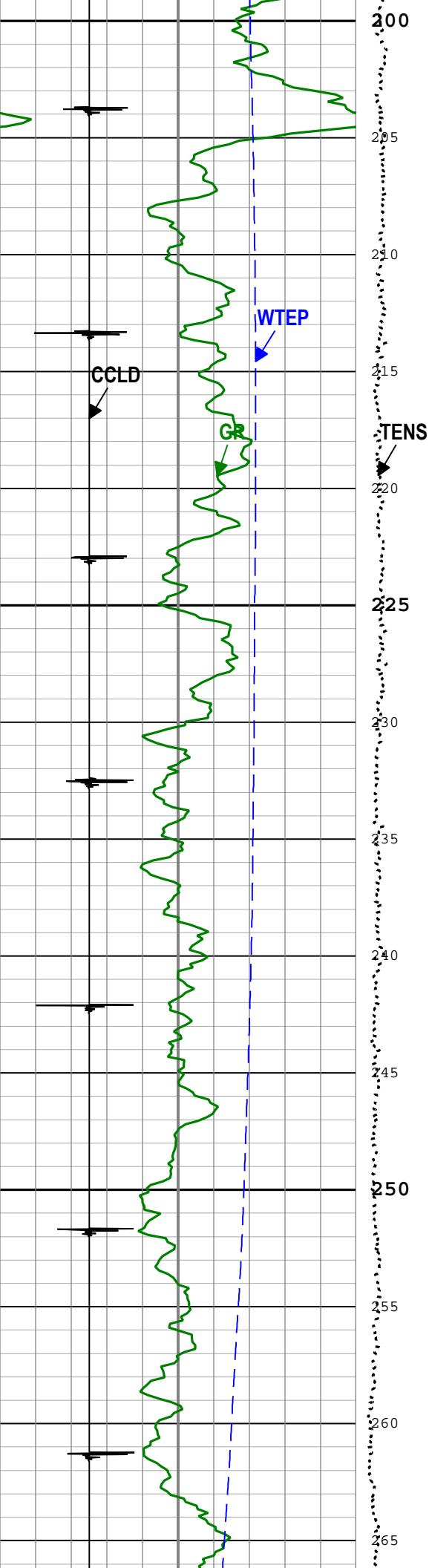
	1		
Depth Measuring Device			
Type	IDW-B		

Serial Number	6213								
Calibration Date	26-JUN-2017								
Calibrator Serial Number	IDWC-C-57								
Calibration Cable Type									
Wheel Correction 1	-2								
Wheel Correction 2	-2								
Tension Device									
Type	CMTD-B/A								
Serial Number									
Calibration Date									
Calibrator Serial Number									
Number of Calibration Points	0								
Logging Cable									
Type	1-33A-SLC								
Serial Number									
Length	7315.20 m								
Conveyance Type	Wireline								
Rig Type									
1:Depth Control Parameters		Depth Control Remarks							
Log Sequence	Subsequent Trip To the Well	ALL SCH;UMBERGER DEPTH CONTROL PROCEDURES FOLLOWED							
Reference Log Name	SLB PRODUCTION ANALYSIS LOG - DOWN PASS	IDW USED AS PRIMARY DEPTH CONTROL PROCEDURE							
Reference Log Run Number		Z-CHART USED AS PRIMARY DEPTH CONTROL PROCEDURE							
Reference Log Date	20-Aug-2017								
Subsequent Trip Down Log Correction									
1									
Software Version									
Acquisition System		Version							
Maxwell 2017 SP2		7.2.87778.3100							
Application Patch		Wireline_Hotfix-LTZ-CmdHandler-2017SP2_7.2.88121							
		Wireline_NPD-EMIT-C-2017SP2_7.2.90108							
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
1	Log[2]:Down	Down	5.34 m	573.99 m	20-Aug-2017 9:59:07 AM	20-Aug-2017 11:00:34 AM	ON	0.00 m	No
All depths are referenced to toolstring zero									
Log	Company:IMPERIAL OIL RESOURCES LIMITED Well:IMP 12 N08-22 COLD LK 9-12-66-3 1: Log[2]:Down:S003								
Description: PSP Depth Format: Log (TEMP DOWN PASS imperial) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 20-Aug-2017 11:33:38									
TIME_1900 - Time Marked every 60.00 (s)									
Gamma Ray (GR) HBMS-B					Well Pressure (WPRE) HBMS-B				
0 gAPI 100					0 kPa 10000				
GCL Discriminated Amplitude (GCLD) HBMS-B					WELL TEMP FINE SCALE				

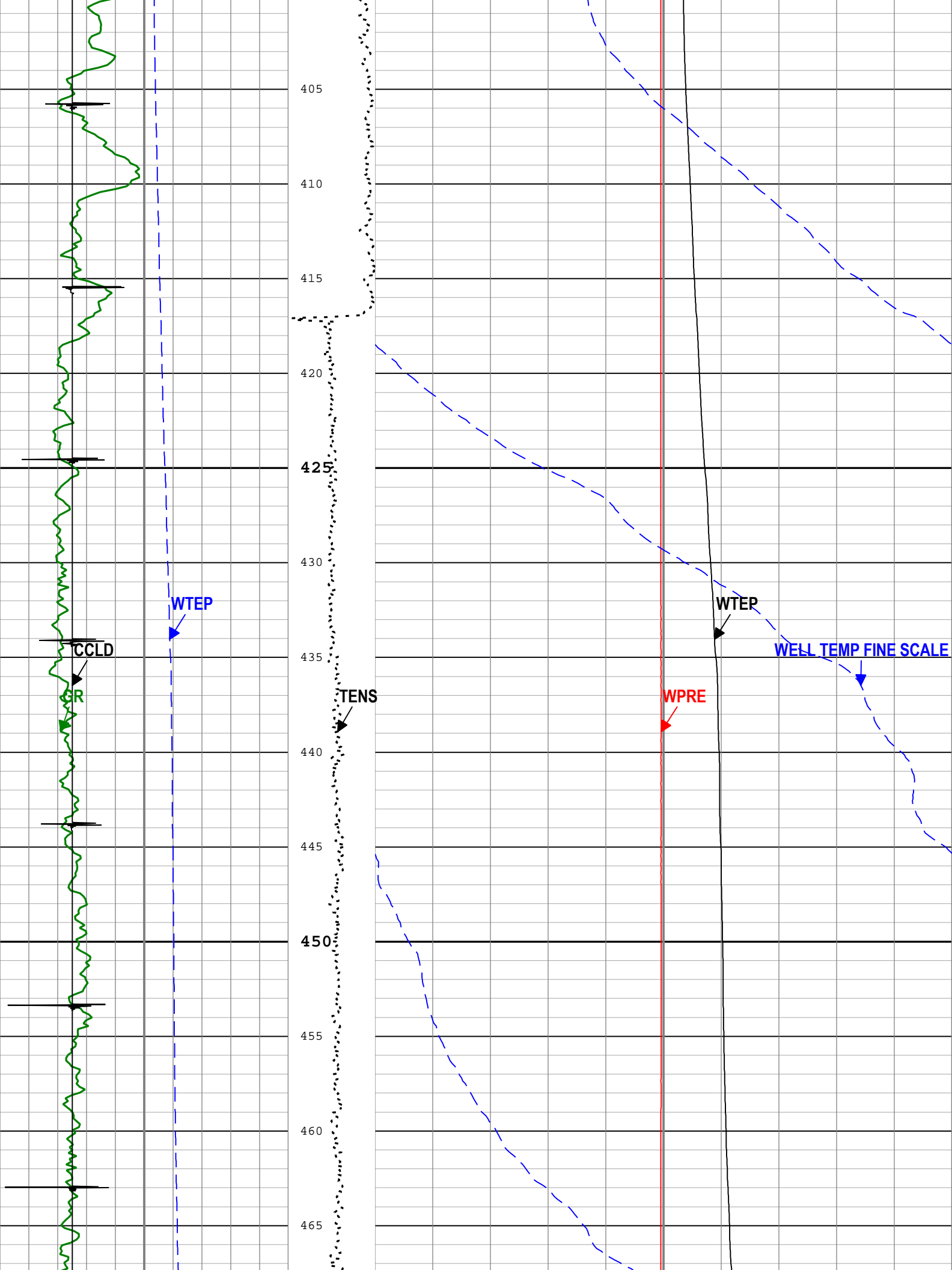


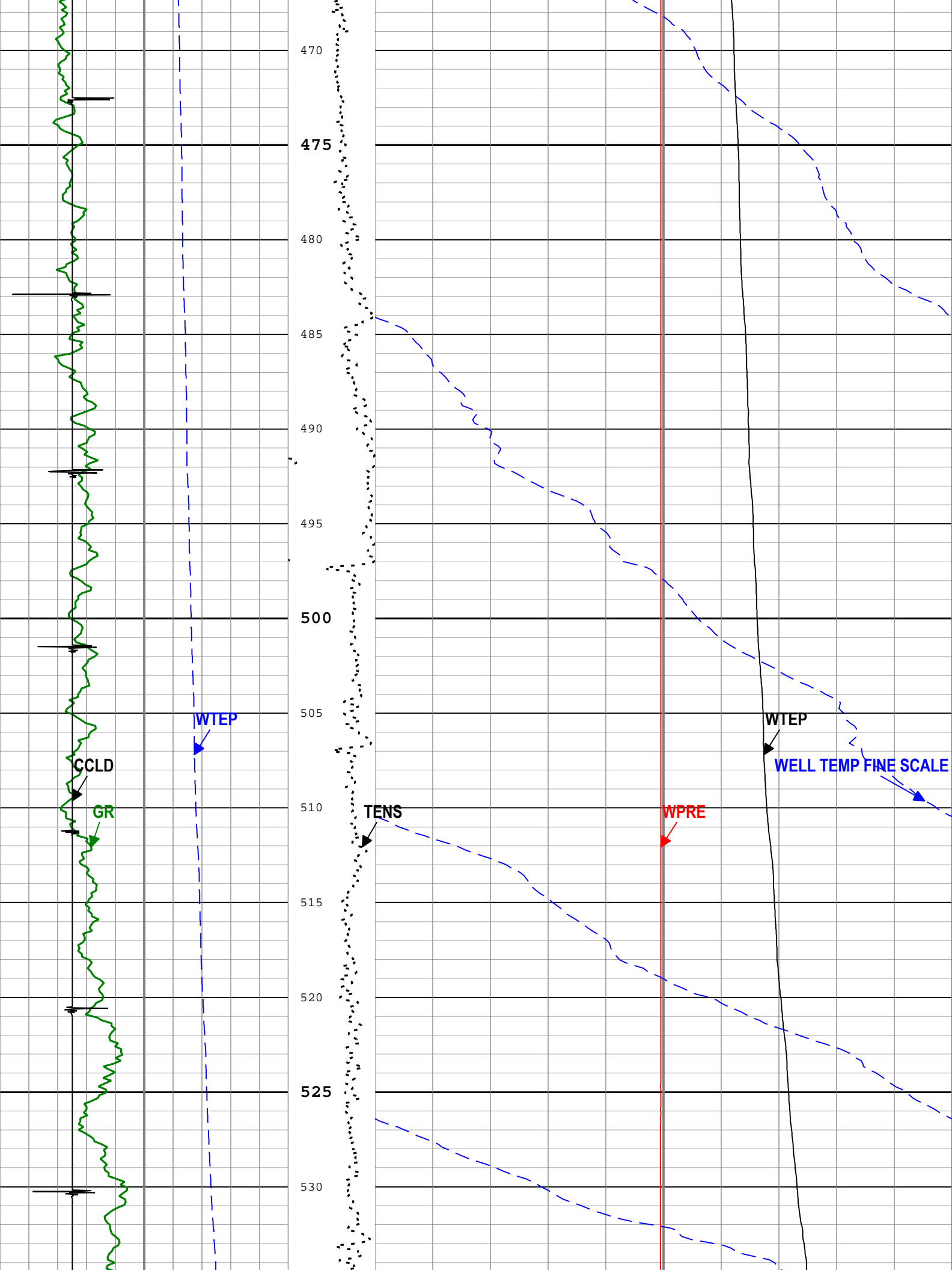


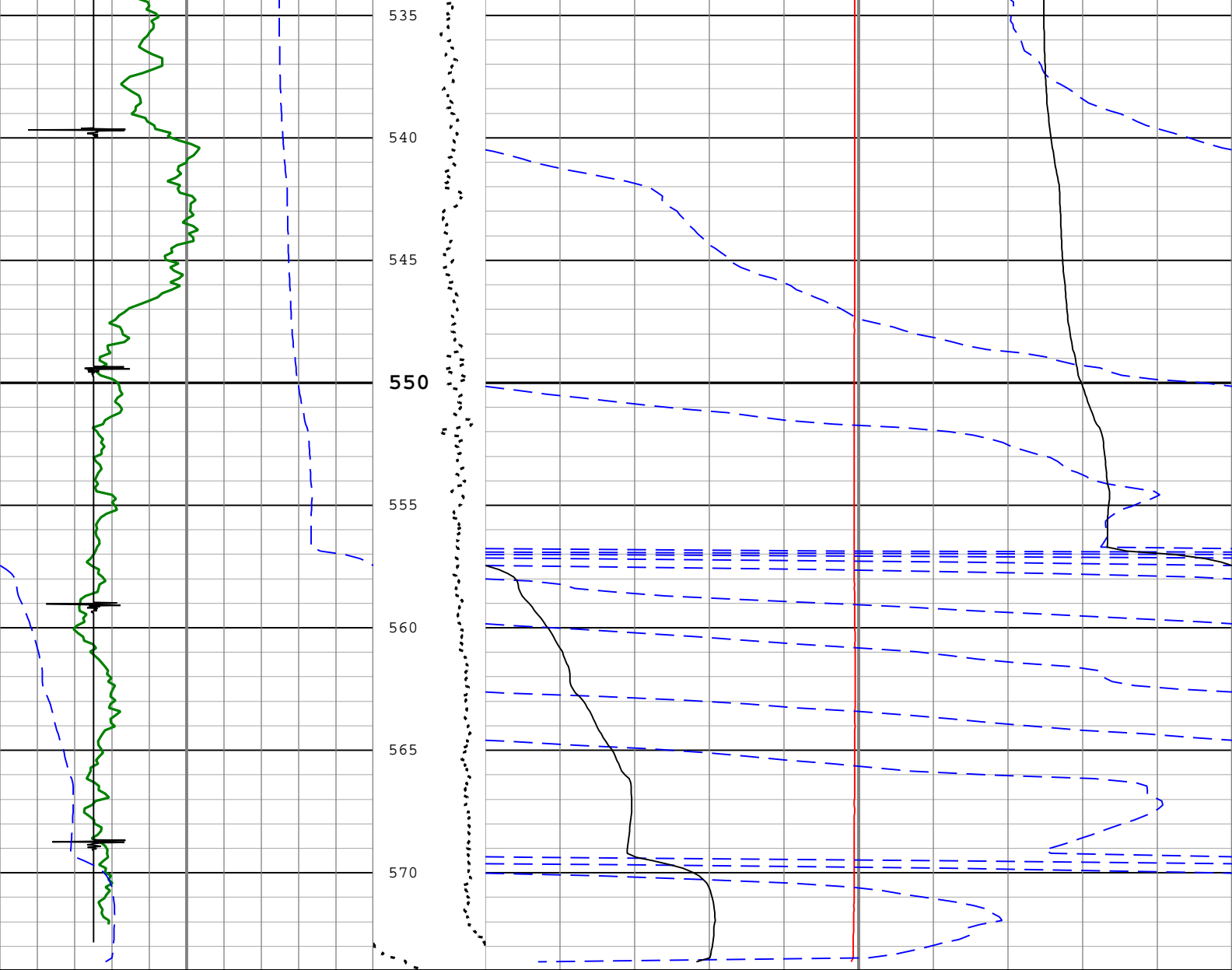












Gamma Ray (GR) HBMS-B	Cable Tension (TENS)	Well Pressure (WPRE) HBMS-B
0 gAPI 100	1000 N 0	0 kPa 10000
CCL Discriminated Amplitude (CCLD) HBMS-B		WELL TEMP FINE SCALE
1 V -3		0 degC 4
Well Temperature (WTEP) HBMS-B		Well Temperature (WTEP) HBMS-B
0 degC 100		0 degC 100

TIME_1900 - Time Marked every 60.00 (s)

Description: PSP Depth Format: Log (TEMP DOWN PASS imperial) Index Scale: 1:240 Index Unit: m Index Type: Measured Depth Creation Date: 20-Aug-2017 11:33:38

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	0 dB	

Company:	IMPERIAL OIL RESOURCES LIMITED	Schlumberger
Well:	IMP 12 N08-22 COLD LK 9-12-66-3	
Field:	MARIE	
Province:	ALBERTA	
State:	**MD**	

PRODUCTION ANALYSIS LOG
TEMP. / PRESSURE