

**Company: HUSKY OIL OPERATIONS LIMITED**  
**Well: HUSKY LITTLE BEAR N-09**  
**Field: SLATER RIVER**  
**Province: NORTHWEST TERRITORIES**

## TEMPERATURE LOG

Province: NORTHWEST TERRITORIES  
 Field: SLATER RIVER  
 Location: SURFACE: 300N96500126300  
 Well: HUSKY LITTLE BEAR N-09  
 Company: HUSKY OIL OPERATIONS LIMITED

LOCATION	
SURFACE: 300N96500126300	Elev.: K.B. 258.80 m
UWID: 300N96500126300	G.L. 253.52 m
	D.F.
Permanent Datum: _____	GROUND LEVEL _____
Log Measured From: KELLY BUSHING	Elev.: 253.52 m
Drilling Measured From: KELLY BUSHING	5.28 m above Perm. Datum
API Serial No. _____	
1204	

Logging Date	29-Jan-2013	
Run Number	TWO	
Depth Driller	1844 m	
Schlumberger Depth	1840 m	
Bottom Log Interval	1840 m	
Top Log Interval	0 m	
Casing Fluid Type	FRAC OIL	
Salinity		
Density	81.0 kg/m <sup>3</sup>	
Fluid Level	0 m	
BIT/CASING/TUBING STRING		
Bit Size	222.000 mm	
From	639 m	
To	1670 m	
Casing/Tubing Size	177.800 mm	
Weight	34.2 kg/m	
Grade	L-80	
From	5.47 m	
To	1868 m	
Maximum Recorded Temperatures	84 degC	
Logger On Bottom	29-Jan-2013	23:00
Unit Number	Location	
Recorded By	TAMIM EZZELDIN	
Witnessed By	WARREN WATSON	

PVT DATA		
Oil Density		Run 1
Water Salinity		
Gas Gravity		
Bo		
Bw		
1/Bg		
Bubble Point Pressure		
Bubble Point Temperature		
Solution GOR		
Maximum Deviation	0 deg	
CEMENTING DATA		
Primary/Squeeze	Primary	
Casing String No		
Lead Cement Type	HI LITE 1400	
Volume	24.1 m <sup>3</sup>	
Density	1400 kg/m <sup>3</sup>	
Water Loss		
Additives		
Tail Cement Type		
Volume		
Density		
Water Loss		
Additives		
Expected Cement Top		
Logging Date		
Run Number		
Depth Driller		
Schlumberger Depth		
Bottom Log Interval		
Top Log Interval		
Casing Fluid Type		
Salinity		
Density		
Fluid Level		
BIT/CASING/TUBING STRING		
Bit Size		
From		
To		
Casing/Tubing Size		
Weight		
Grade		
From		
To		
Maximum Recorded Temperatures		
Logger On Bottom		
Unit Number	Location	
Recorded By		
Witnessed By		

## DEPTH SUMMARY LISTING

Date Created: 29-JAN-2013 20:33:14

### Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-B	Type: CMTD-B/A	Type: 7-39P LXS
Serial Number: 6162	Serial Number:	Serial Number:
Calibration Date:	Calibration Date: 16-AUG-2012	Length: 5600 M
Calibrator Serial Number: 4	Calibrator Serial Number: 0	Conveyance Method: Wireline
Calibration Cable Type: 7-39P LXS	Number of Calibration Points: 10	Rig Type: LAND
Wheel Correction 1: -3	Calibration RMS: 13	
Wheel Correction 2: -1	Calibration Peak Error: 20	

### Depth Control Parameters

Log Sequence: First Log In the Well

Rig Up Length At Surface: 0.00 M

Rig Up Length At Bottom: 0.00 M

Rig Up Length Correction: 0.00 M

Stretch Correction:

Tool Zero Check At Surface:

### Depth Control Remarks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

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#### OTHER SERVICES1

OS1:  
OS2:  
OS3:  
OS4:  
OS5:

#### OTHER SERVICES2

OS1:  
OS2:  
OS3:  
OS4:  
OS5:

REMARKS: RUN NUMBER 1

LOG CORRELATED TO BAKER HUGHES

ALL LOGS ARE DOWN LOGS AT 10 M/MIN

INTERVALS LOGGED:

0 TO 200 MKB

1500 TO 1840 MKB

REMARKS: RUN NUMBER 2

SURFACE CASING: 244.48 KG/M, 53.57 KG/M LANDED AT 639 MKB  
 PRODUCTION CASING: 177.8 KG/M, 34.23 KG/M LANDED AT 1868 MKB

EXPLORATION LICENSE#: EL463 AND NEB OPERATING  
 LICENSE#: 1204

RUN 1  
 SERVICE ORDER #: BW5Q-00313  
 PROGRAM VERSION: 17C0-154  
 FLUID LEVEL: 0 m

RUN 2  
 SERVICE ORDER #:  
 PROGRAM VERSION:  
 FLUID LEVEL:

LOGGED INTERVAL	START	STOP

LOGGED INTERVAL	START	STOP

### EQUIPMENT DESCRIPTION

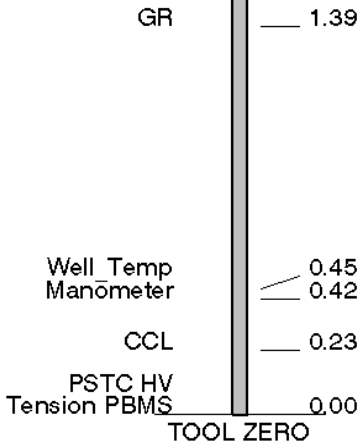
RUN 1

RUN 2

SURFACE EQUIPMENT  
 WITM-A  
 PSC\_16MHZ

DOWNHOLE EQUIPMENT

1000A  
 PSPT-A  
 PSTC  
 PBMS-A  
 10k Sapphire Mano  
 RTD Thermometer  
 GR  
 CCL  
 PBMS



MAXIMUM STRING DIAMETER 43 MM  
 MEASUREMENTS RELATIVE TO TOOL ZERO  
 ALL LENGTHS IN METERS



## SURFACE TO 200 MKB DOWN LOG

MAXIS Field Log

### Input DLIS Files

DEFAULT	FLIP_PSP_043	PRODUCER	30-Jan-2013 00:42	204.4 M	1.1 M
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### Output DLIS Files

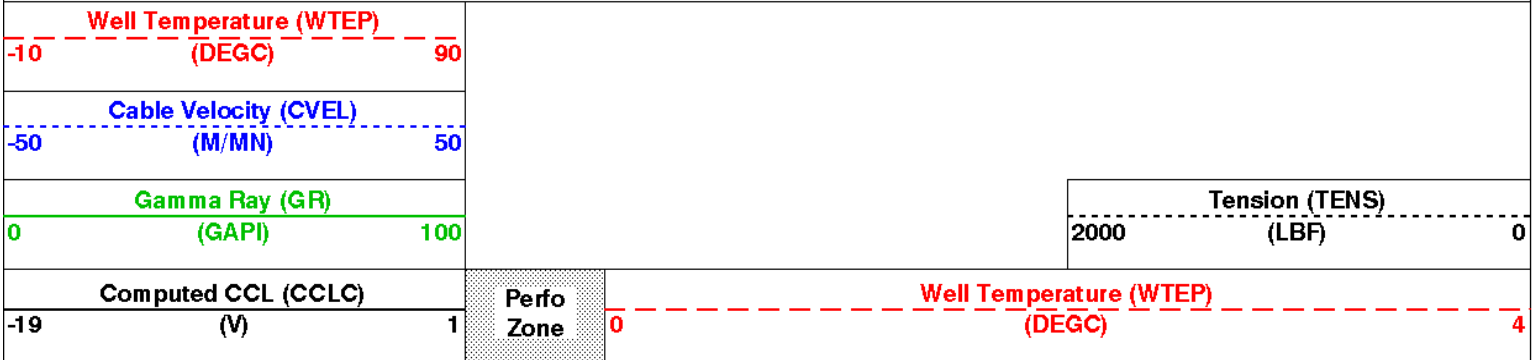
DEFAULT	PSP_044PUP	FN:39	PRODUCER	30-Jan-2013 00:44	205.3 M	2.0 M
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### OP System Version: 17C0-154

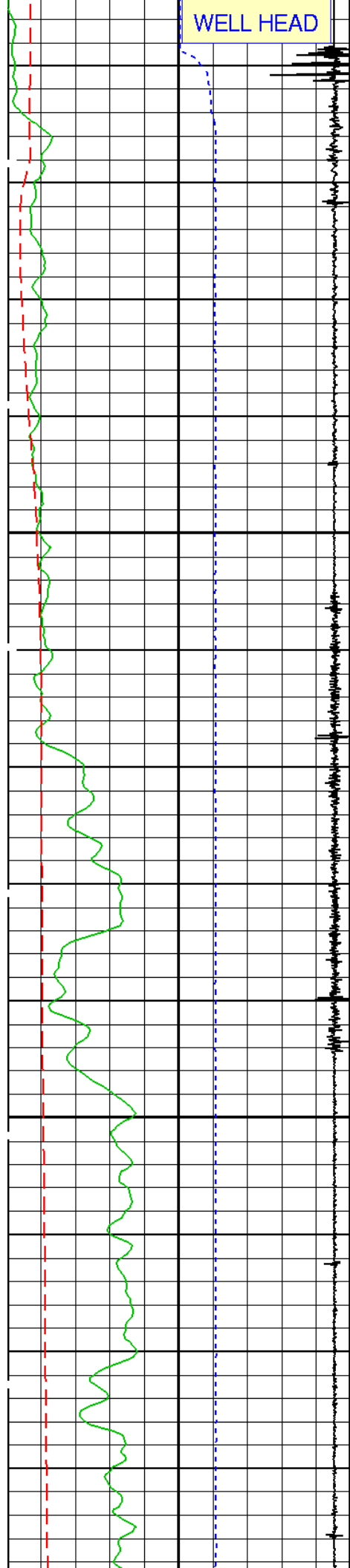
PSPT-A/B 17C0-154

### PIP SUMMARY

Time Mark Every 60 S

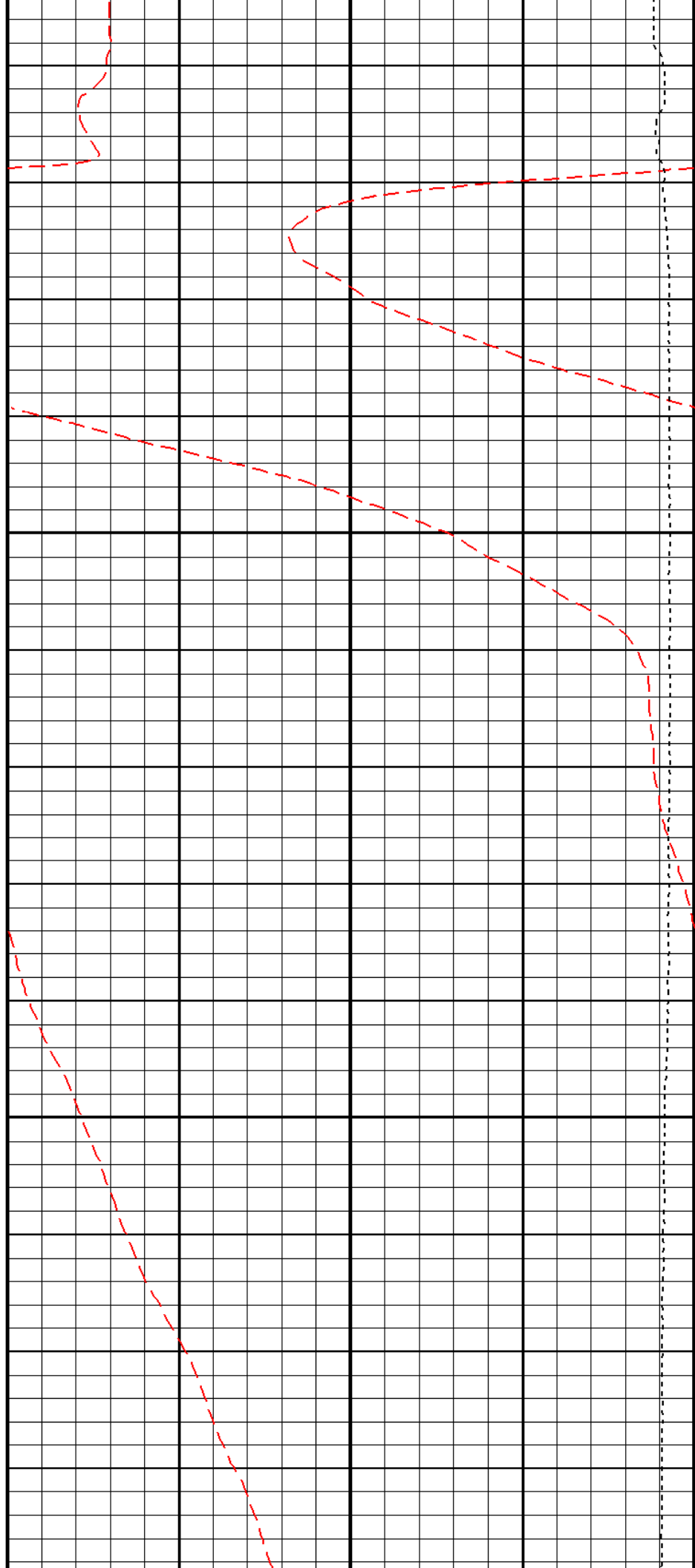


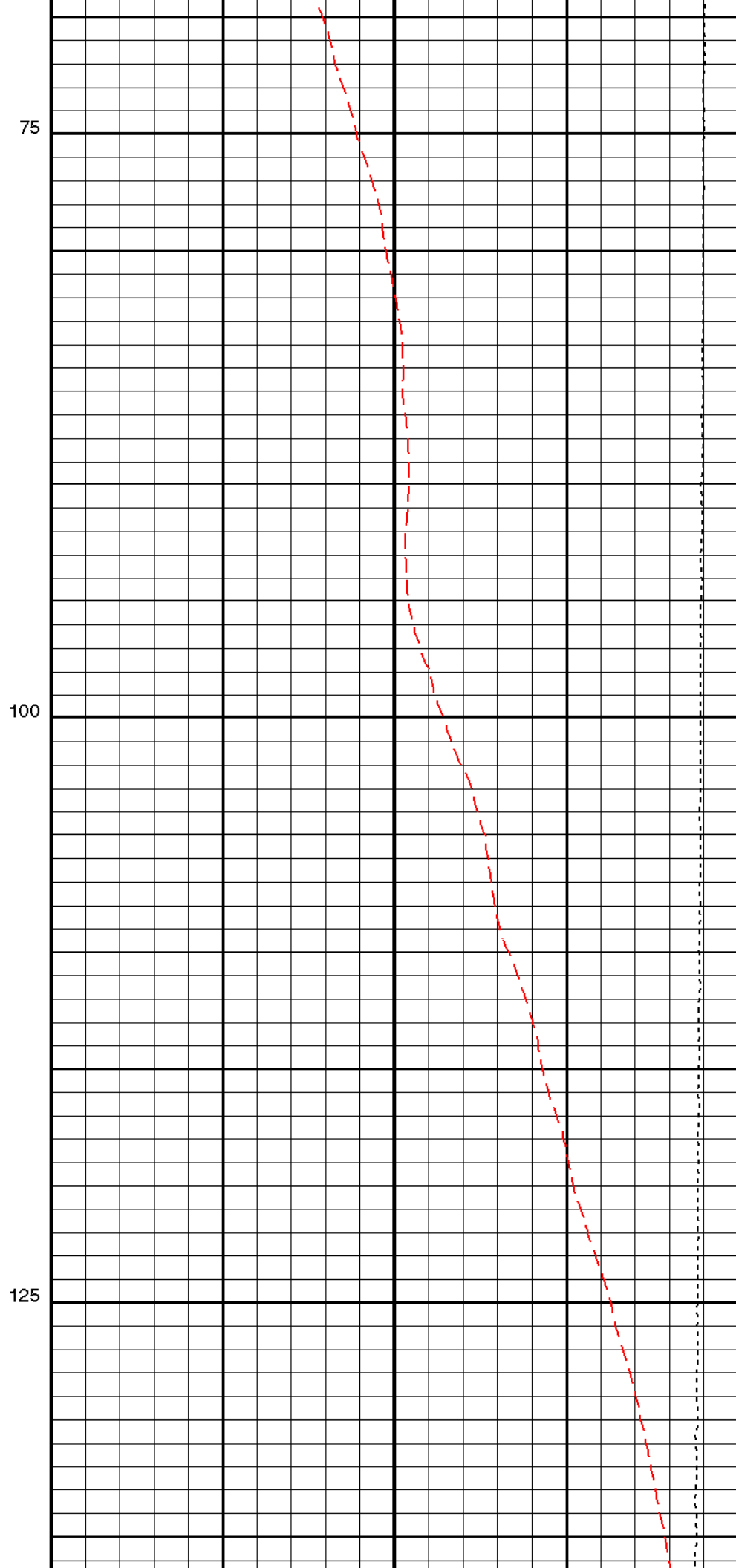
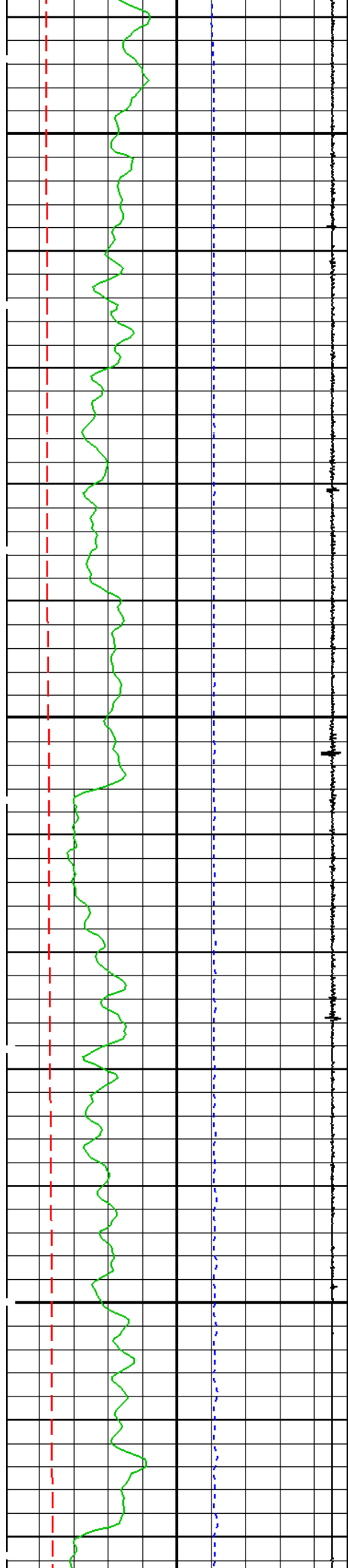
WELL HEAD

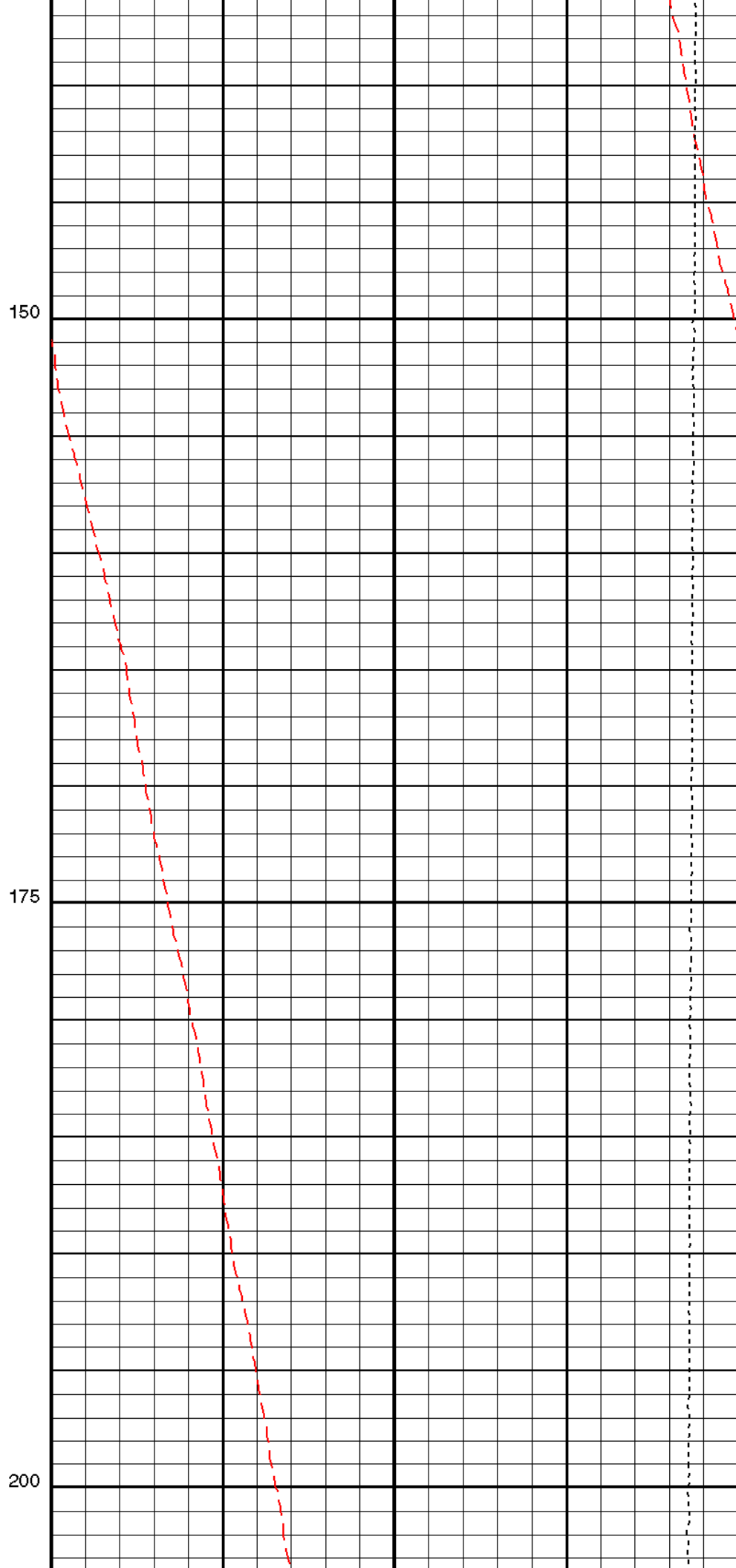
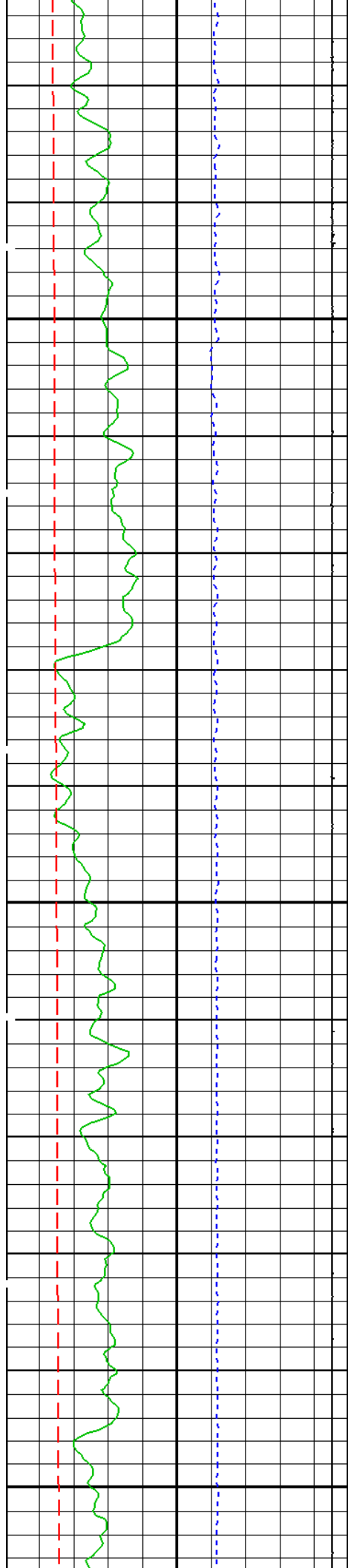


25

50







150

175

200

Computed CCL (CCLC)		Perfo Zone	Well Temperature (WTEP)	
-19	(V)		1	0
Gamma Ray (GR)				Tension (TENS)
0	(GAPI)	100	2000 (LBF)	
Cable Velocity (CVEL)				
-50	(M/MN)	50		
Well Temperature (WTEP)				
-10	(DEGC)	90		

PIP SUMMARY

Time Mark Every 60 S

Format: SINGLE\_PASS\_TEMPERATURE

Vertical Scale: 1:240

Graphics File Created: 30-Jan-2013 00:44

OP System Version: 17C0-154

PSPT-A/B 17C0-154

Parameters

DLIS Name	Description	Value
DO	System and Miscellaneous	
PP	Depth Offset for Playback Processing	0.9 M NORMAL

Input DLIS Files

DEFAULT	FLIP_PSP_043	PRODUCER	30-Jan-2013 00:42	204.4 M	1.1 M
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Output DLIS Files

DEFAULT	PSP_044PUP	FN:39	PRODUCER	30-Jan-2013 00:44
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1500 TO PBTD  
DOWN LOG

MAXIS Field Log

Input DLIS Files

DEFAULT	FLIP_PSP_033	PRODUCER	29-Jan-2013 23:04	1842.2 M	1488.3 M
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Output DLIS Files

DEFAULT	PSP_034PUP	FN:31	PRODUCER	29-Jan-2013 23:05	1841.8 M	1487.9 M
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OP System Version: 17C0-154

PSPT-A/B 17C0-154

PIP SUMMARY

Time Mark Every 60 S

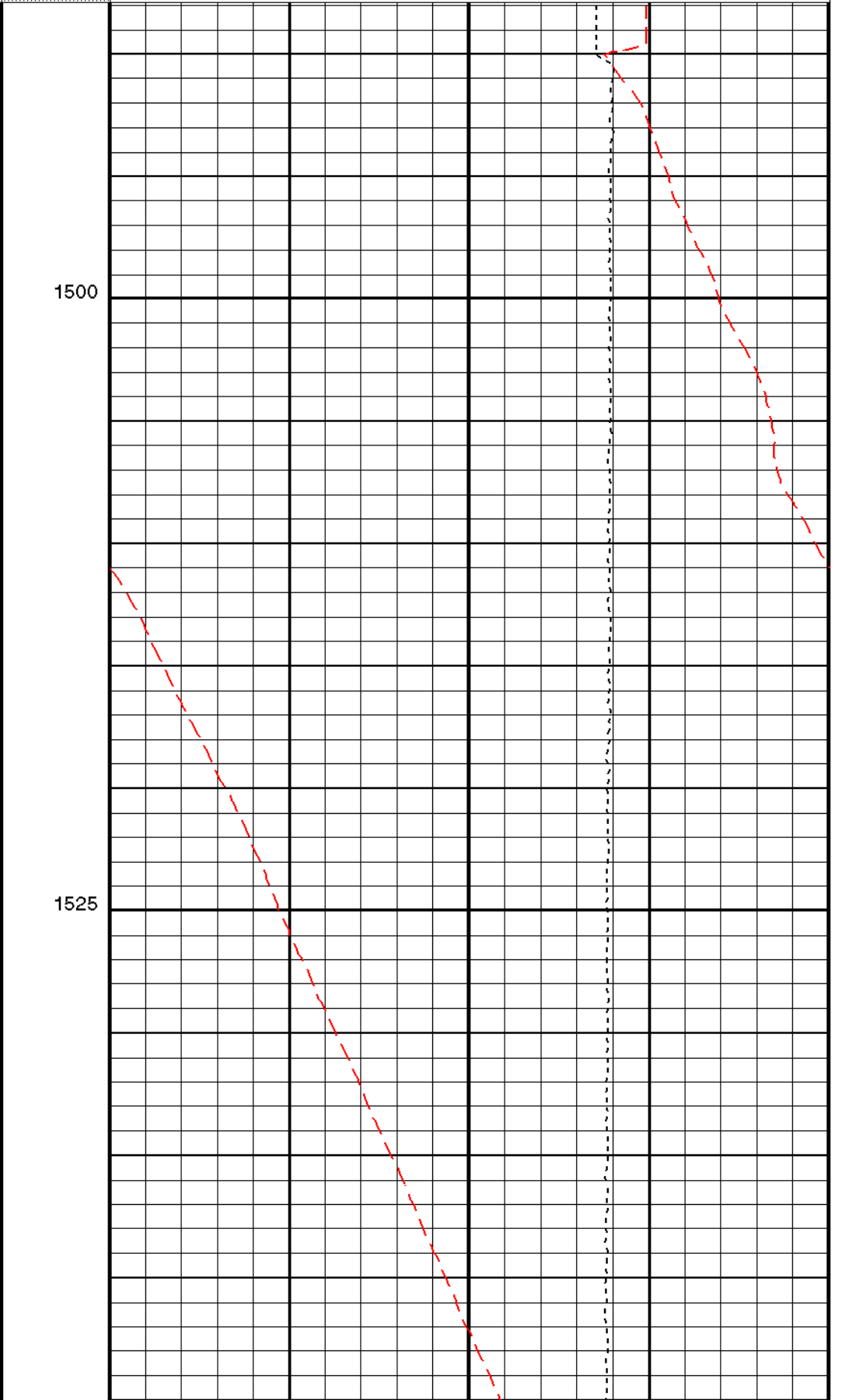
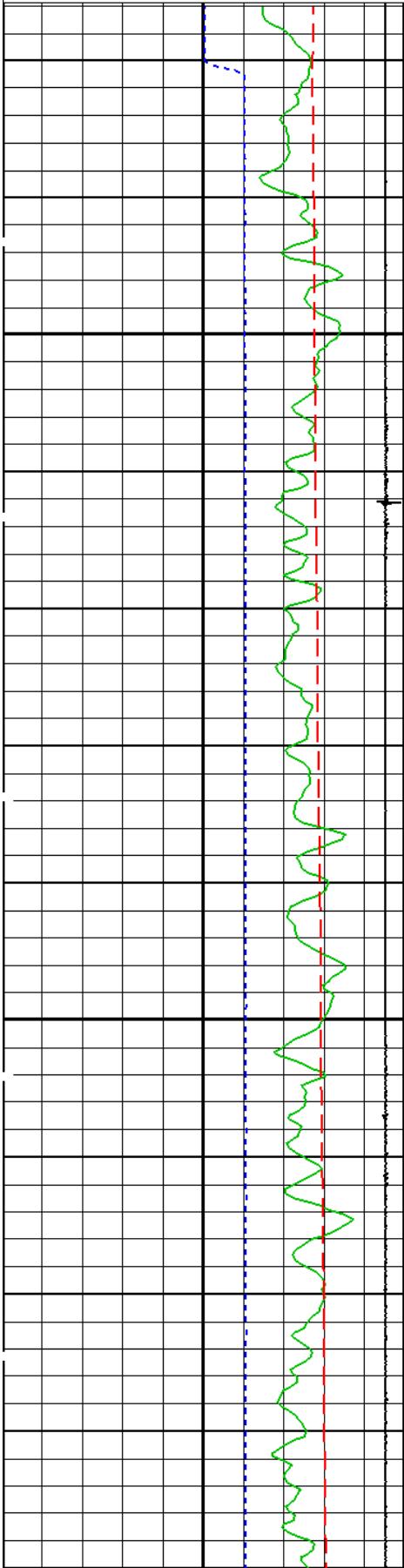
Well Temperature (WTEP)	
-10	(DEGC)

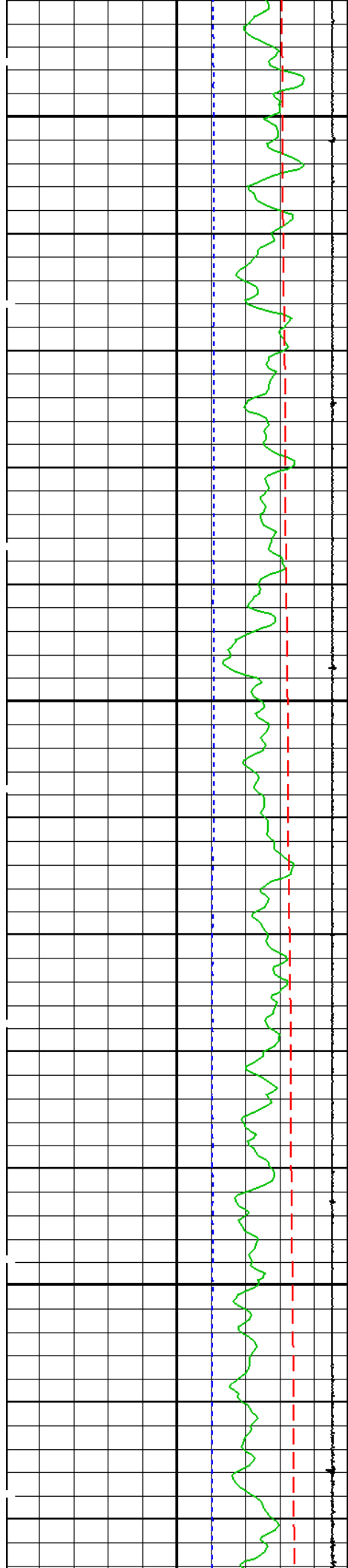
-10 (DEGC) 90  
 Cable Velocity (CVEL)  
 (M/MN) 50  
 Gamma Ray (GR)  
 (GAPI) 0 100

Tension (TENS)  
 (LBF) 2000 0

Computed CCL (CCLC)  
 (V) -19 1

Perfo Zone  
 Well Temperature (WTEP)  
 (DEGC) 0 4

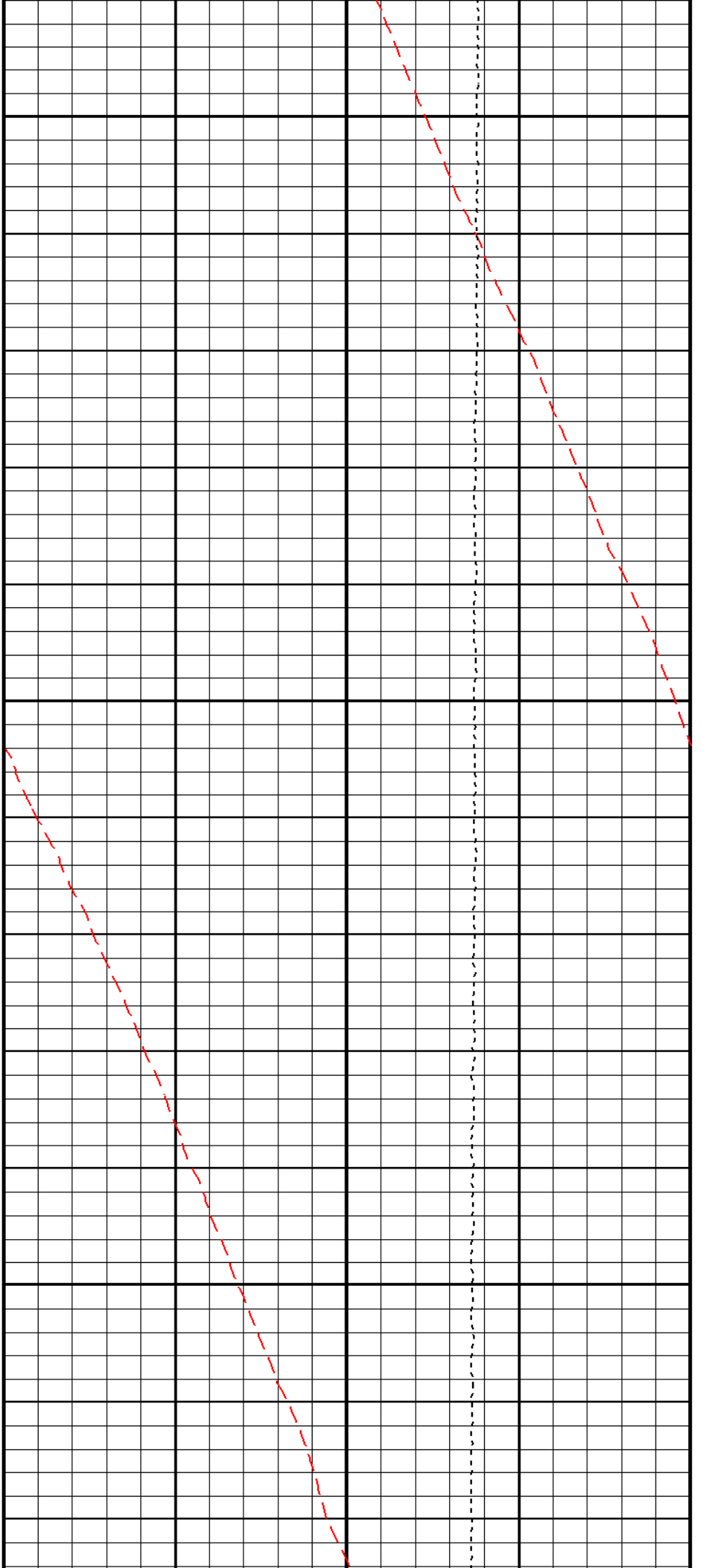


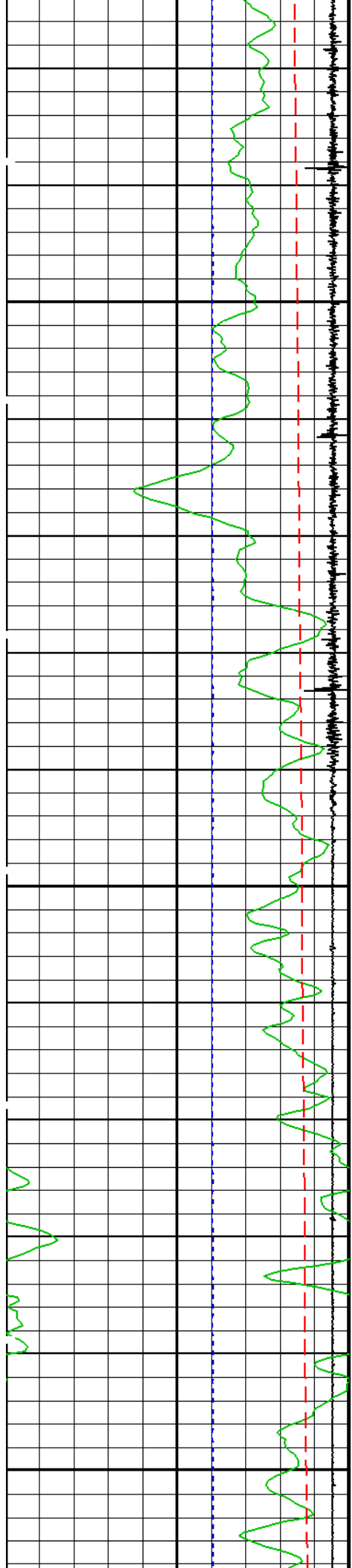


1550

1575

1600

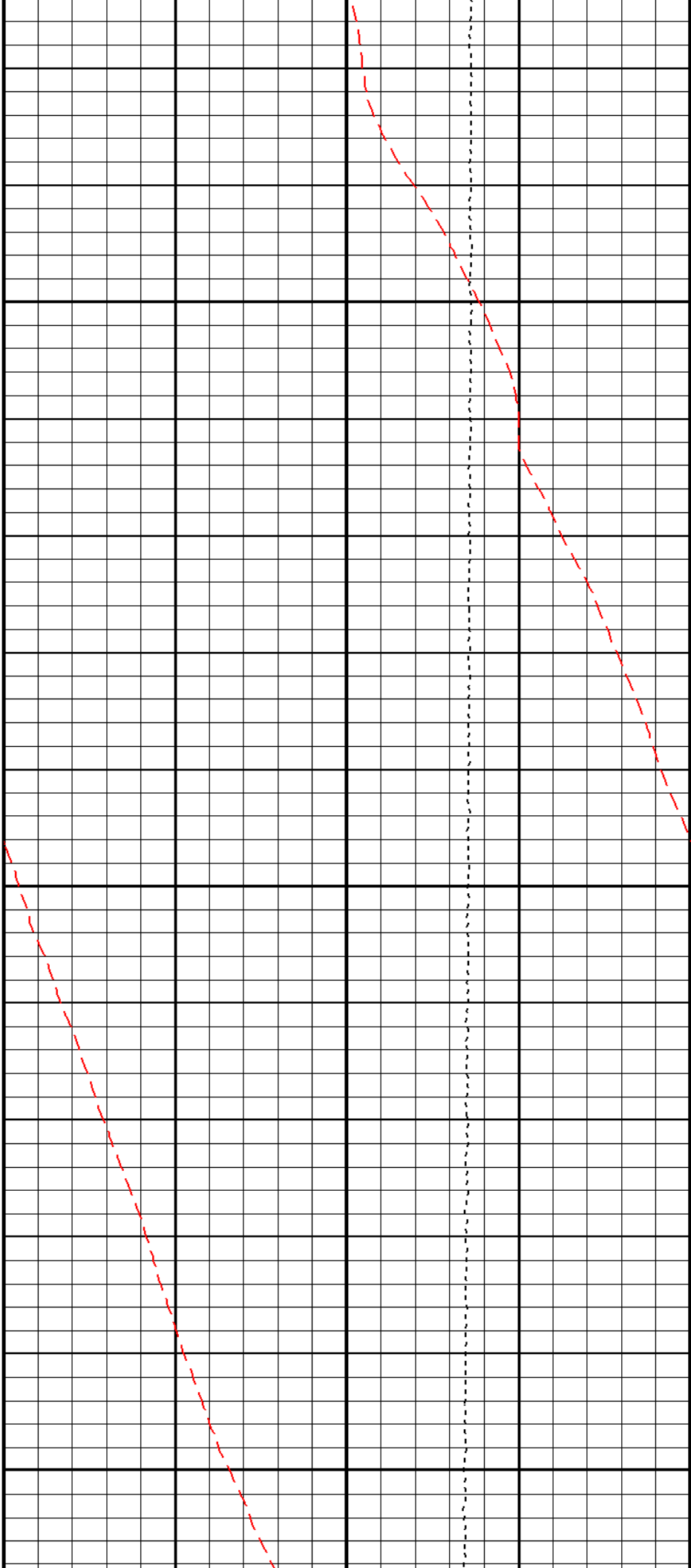


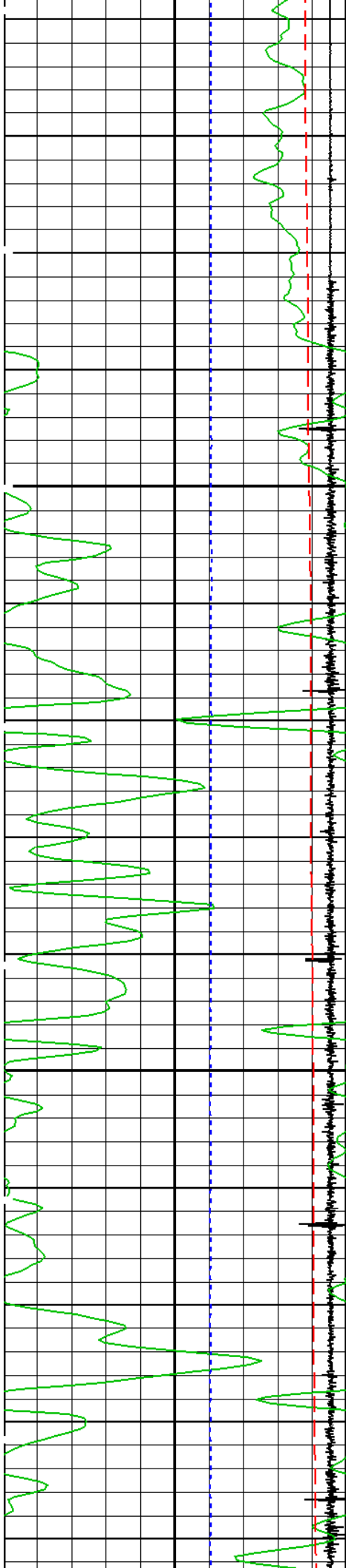


1625

1650

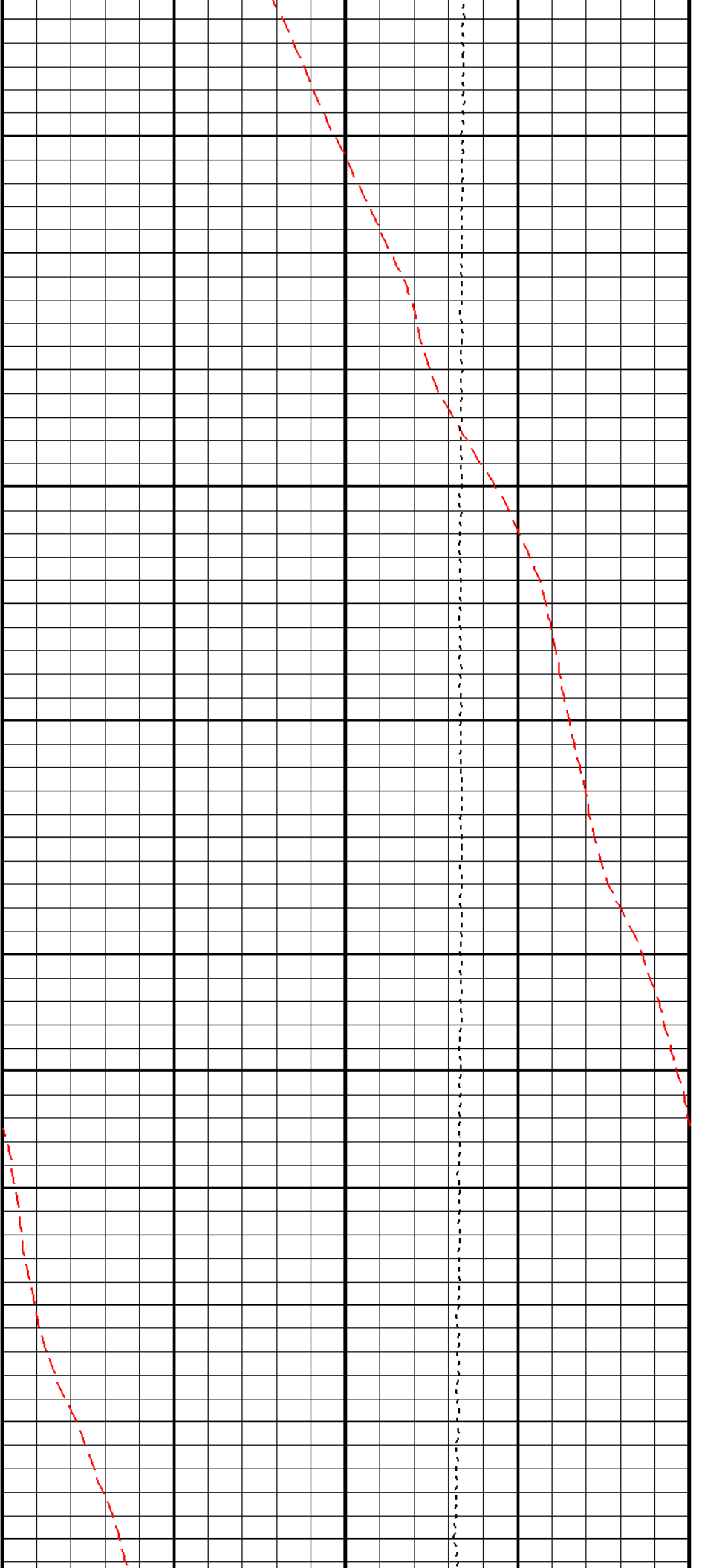
1675

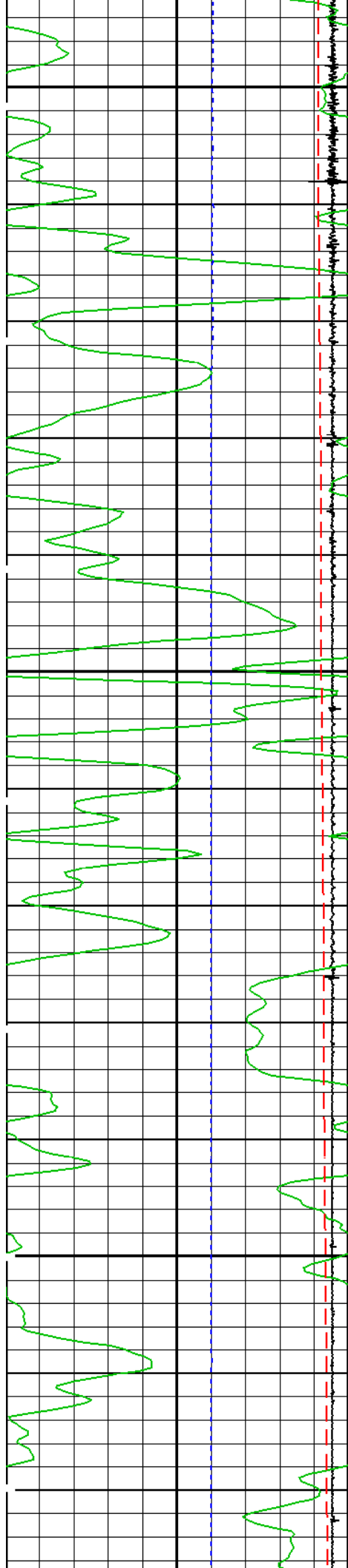




1700

1725

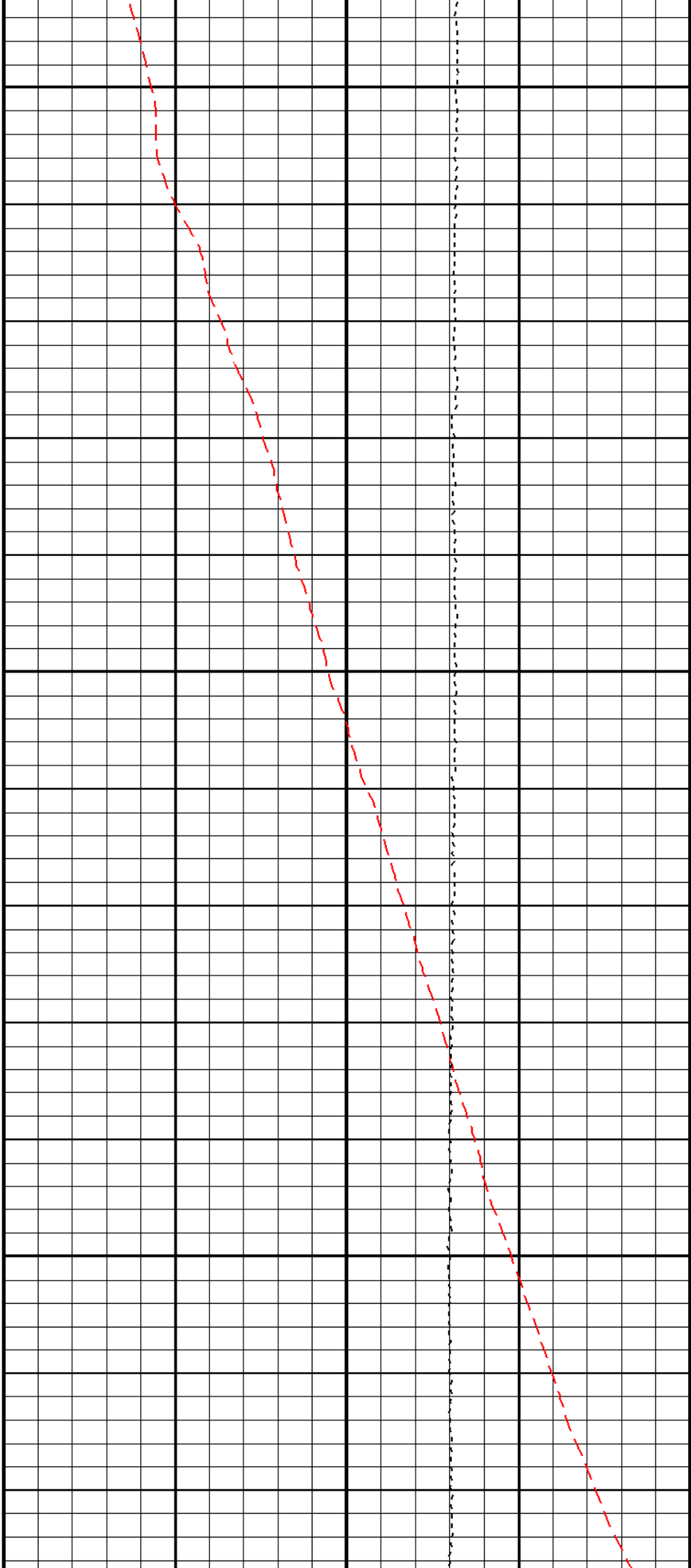


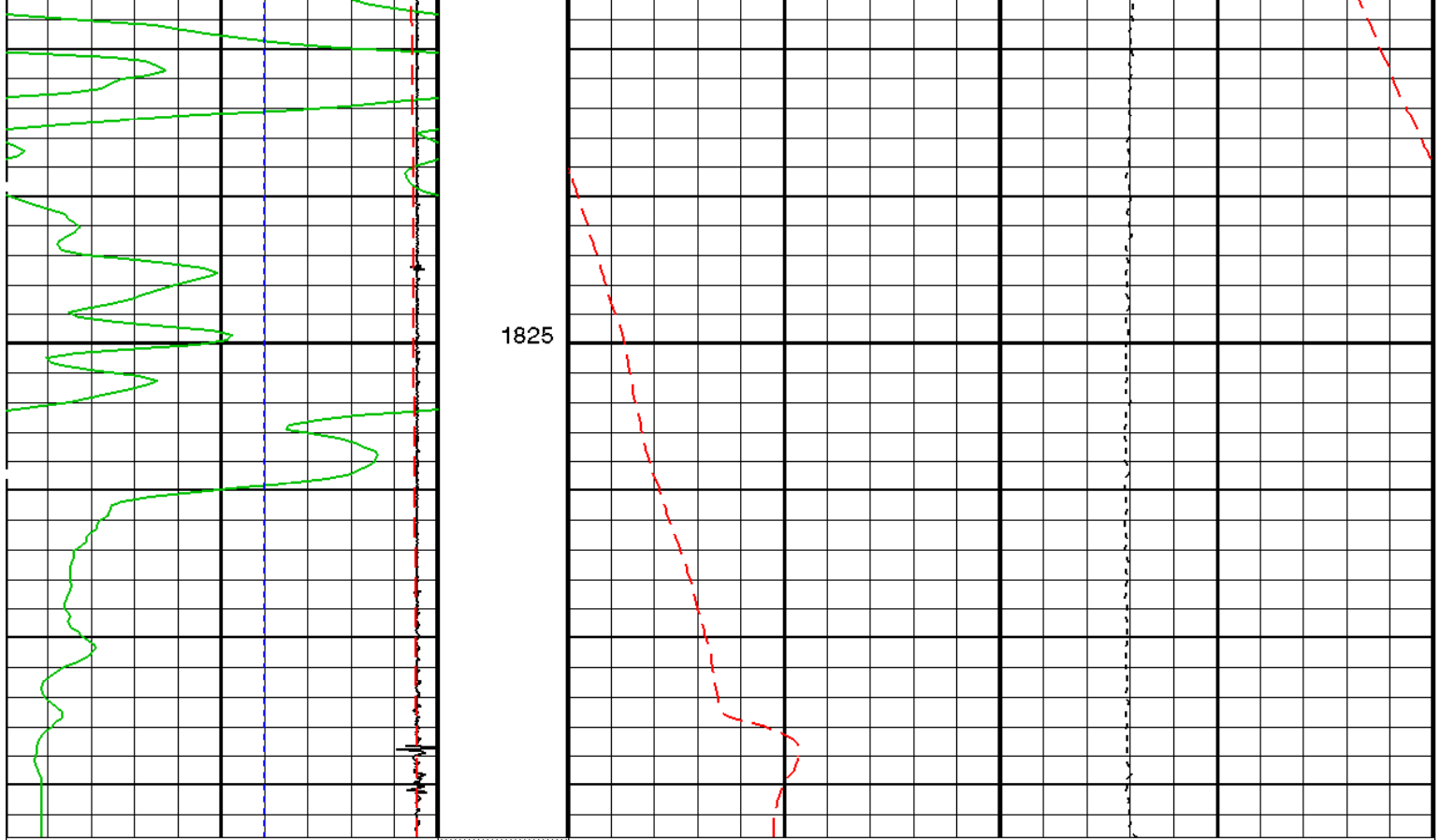


1750

1775

1800





Computed CCL (CCLC) (V)	1	Perfo Zone	Well Temperature (WTEP) (DEGC)	0	4
Gamma Ray (GR) (GAPI)	0		Tension (TENS) (LBF)	2000	0
Cable Velocity (CVEL) (M/MN)	-50		Well Temperature (WTEP) (DEGC)	-10	90

PIP SUMMARY

Time Mark Every 60 S

Format: SINGLE\_PASS\_TEMPERATURE    Vertical Scale: 1:240    Graphics File Created: 29-Jan-2013 23:05

OP System Version: 17C0-154

PSPT-A/B    17C0-154

Parameters

DLIS Name	Description	Value
DO	System and Miscellaneous Depth Offset for Playback	-0.4 M
PP	Playback Processing	NORMAL

Input DLIS Files

DEFAULT	FLIP_PSP_033	PRODUCER	29-Jan-2013 23:04	1842.2 M	1488.3 M
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Output DLIS Files

DEFAULT	PSP_034PUP	FN:31	PRODUCER	29-Jan-2013 23:05
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MAXIS Field Log

Input DLIS Files

DEFAULT FLIP\_PSP\_036 PRODUCER 29-Jan-2013 23:19 1679.4 M 1597.5 M

Output DLIS Files

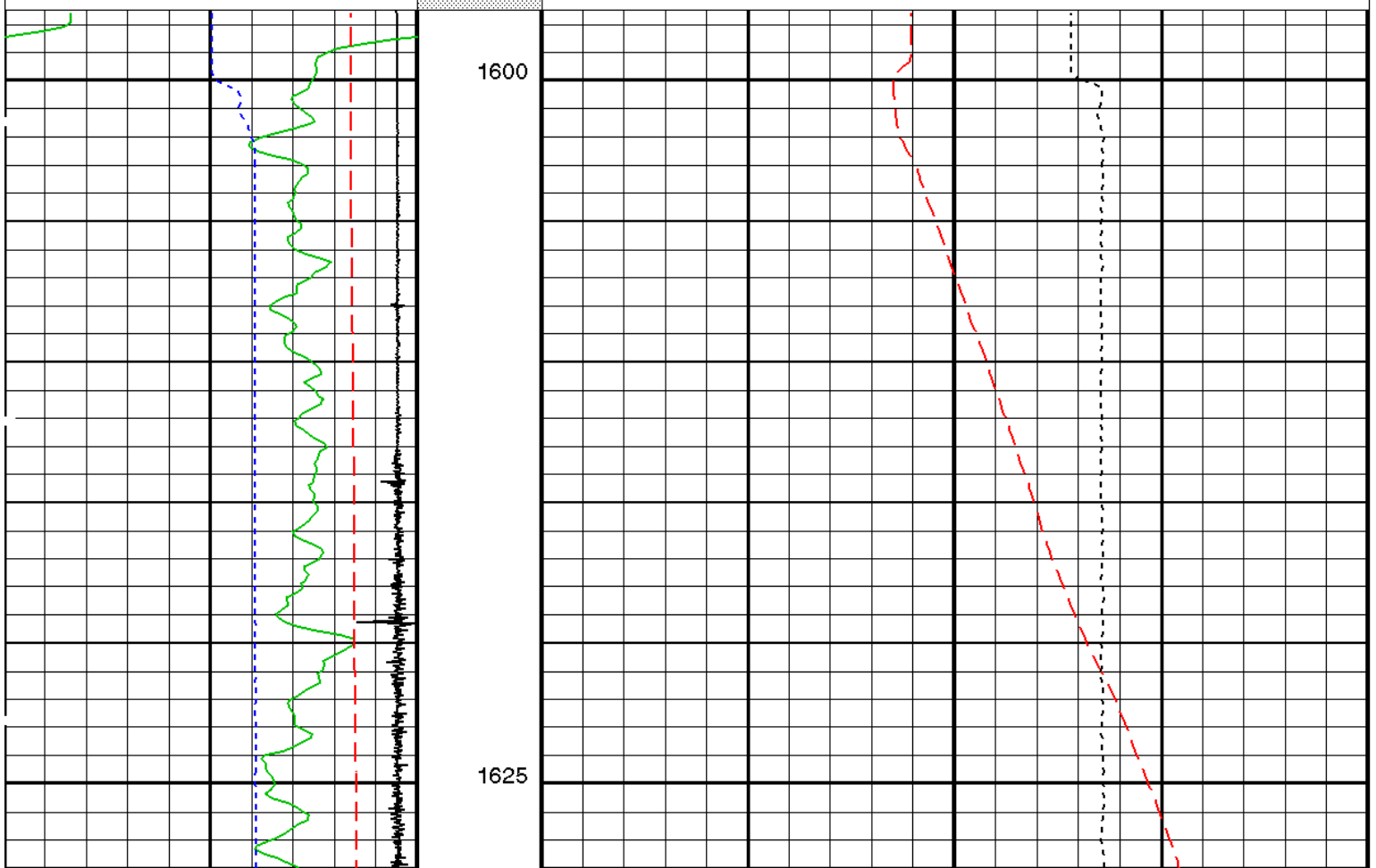
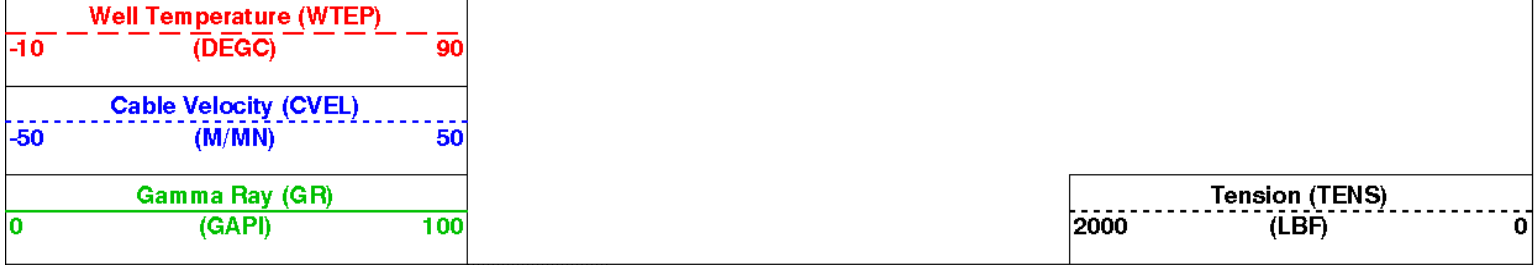
DEFAULT PSP\_038PUP FN:34 PRODUCER 29-Jan-2013 23:21 1679.4 M 1597.5 M

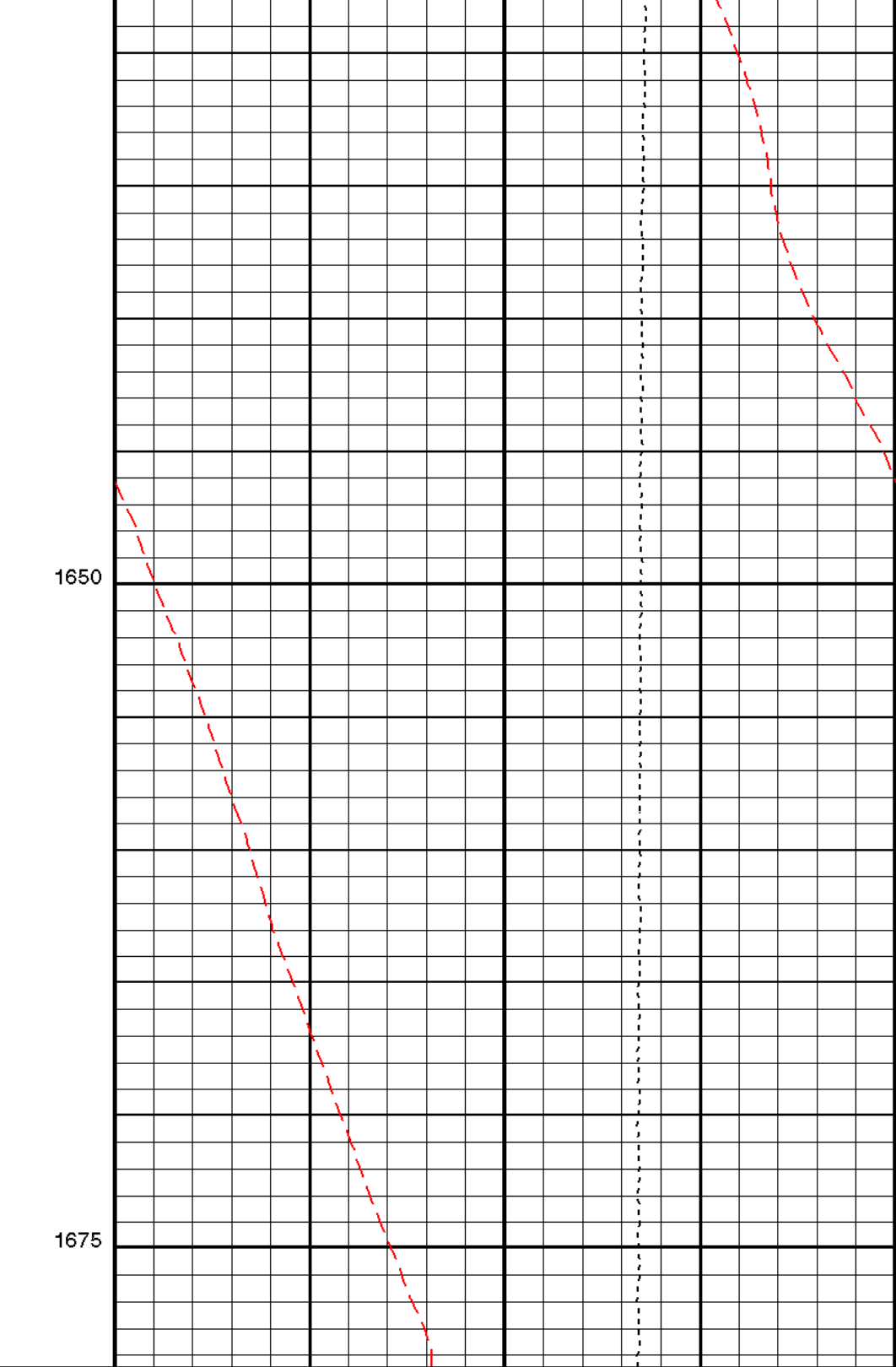
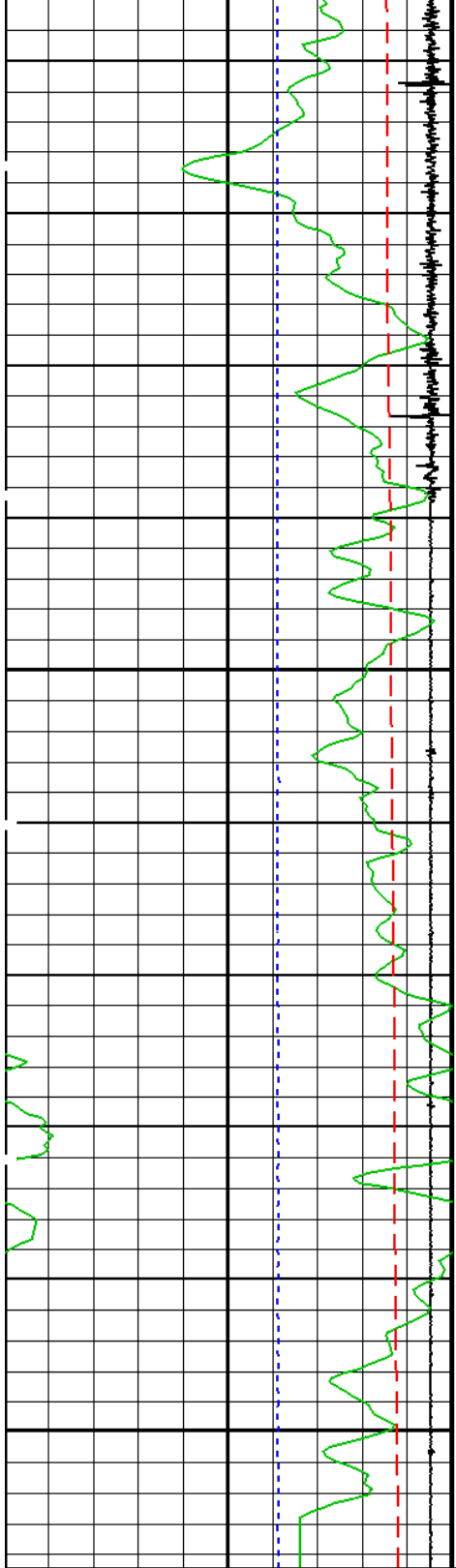
OP System Version: 17C0-154

PSPT-A/B 17C0-154

PIP SUMMARY

Time Mark Every 60 S





Computed CCL (CCLC)	(V)	1
Gamma Ray (GR)	(GAPI)	100
Cable Velocity (CVEL)	(M/MN)	50
Well Temperature (WTEP)	(DEGC)	90

Perfo Zone	Well Temperature (WTEP)	(DEGC)	4
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Tension (TENS)	(LBF)	0
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PIP SUMMARY

Time Mark Every 60 S

Format: SINGLE\_PASS\_TEMPERATURE

Vertical Scale: 1:240

Graphics File Created: 29-Jan-2013 23:21

PSPT-A/B 17C0-154

Parameters

DLIS Name	Description	Value
System and Miscellaneous		
DO PP	Depth Offset for Playback Playback Processing	0.0 M NORMAL

Input DLIS Files

DEFAULT	FLIP_PSP_036	PRODUCER	29-Jan-2013 23:19	1679.4 M	1597.5 M
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Output DLIS Files

DEFAULT	PSP_038PUP	FN:34	PRODUCER	29-Jan-2013 23:21
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Company: HUSKY OIL OPERATIONS LIMITED

**Schlumberger**

Well: HUSKY LITTLE BEAR N-09

Field: SLATER RIVER

Province: NORTHWEST TERRITORIES

TEMPERATURE LOG



W011313506639000