

Schlumberger

Company: **LAMONT DOHERTY EARTH OBSERVATORY**

Well: **TW #4**
 Field: **WILDCAT**
 County: **ROCKLAND** State: **NEW YORK**

MAXIS EXPRESS
DENSITY / NEUTRON
GAMMA RAY / CALIPER

County: **ROCKLAND**
 Field: **WILDCAT**
 Location: **41.002920 LAT**
 Well: **TW #4**
 Company: **LAMONT DOHERTY EARTH OBS**

LOCATION		41.002920 LAT	Elev.: K.B.
		-73.910610 LONG	G.L. 389.00 ft
			D.F.
Permanent Datum:	GROUND LEVEL	Elev.: 389.00 ft	
Log Measured From:	GROUND LEVEL	0.00 ft	above Perm. Datum
Drilling Measured From:	GROUND LEVEL		
API Serial No.	Section	Township	QUAD:
31-087-30000-00-01	1	ORANGETOWN	NYACK

Logging Date	Run 1	Run 2	Run
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			

Logging Date	3-Oct-2013
Run Number	1
Depth Driller	1802 ft
Schlumberger Depth	1706 ft
Bottom Log Interval	1693 ft
Top Log Interval	0 ft
Casing Driller Size @ Depth	4.500 in @ 750 ft
Casing Schlumberger	750 ft
Bit Size	3.780 in
Type Fluid In Hole	FRESH WATER
Density	8.3 lbm/gal
Fluid Loss	
Source Of Sample	
RM @ Measured Temperature	@
RMF @ Measured Temperature	@
RMC @ Measured Temperature	@
Source RMF	
RM @ MRT	@ 71 @ 71 @
Maximum Recorded Temperatures	71 degF
Circulation Stopped	25-Sep-2013
Logger On Bottom	3-Oct-2013 8:00
Unit Number	377 BRADFORD
Recorded By	FUNKHOUSER
Witnessed By	NICK MALKEWICZ / DAN COLLINS

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	@ 71 @ 71 @
Maximum Recorded Temperatures	
Circulation Stopped	
Logger On Bottom	
Unit Number	
Recorded By	
Witnessed By	

DEPTH SUMMARY LISTING

Date Created: 4-OCT-2013 20:33:04

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	7-39P-LXS
Serial Number:	6399	Serial Number:	2013	Serial Number:	711079
Calibration Date:	03-JUL-2013	Calibration Date:	03-SEP-2013	Length:	5500 FT
Calibrator Serial Number:	33	Calibrator Serial Number:	412906	Conveyance Method: Wireline	
Calibration Cable Type:	7-39P-LXS	Number of Calibration Points:	10	Rig Type: Rigless	
Wheel Correction 1:	1	Calibration RMS:	7		
Wheel Correction 2:	0	Calibration Peak Error:	16		

Depth Control Parameters

Log Sequence:	Subsequent Log In the Well
Reference Log Name:	BHC SONIC 1(A)
Reference Log Run Number:	1(A)
Reference Log Date:	03-OCT-2013

Depth Control Remarks

1. SLB DEPTH PROCEDURES FOLLOWED
2. IDW USED AS PRIMARY DEPTH
3. DRUM COUNTER AS SECONDARY DEPTH
4. LOG CORRELATED TO BHC RUN 1(A)
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: DENSITY OS2: NEUTRON OS3: INDUCTION OS4: SONIC OS5:	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2

THANK YOU FOR USING SCHLUMBERGER	
CEMENT 60 SACKS CLASS A CEMENT 13.8# / GAL	
YIELD 1.5 CU FT / SACK WATER 7.5 GAL / SACK	

CREW: BOWEN /THIMLAR / ZOTARA

RUN 1
 SERVICE ORDER #: BXW0-00331
 PROGRAM VERSION: 19C1-222
 FLUID LEVEL:

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

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

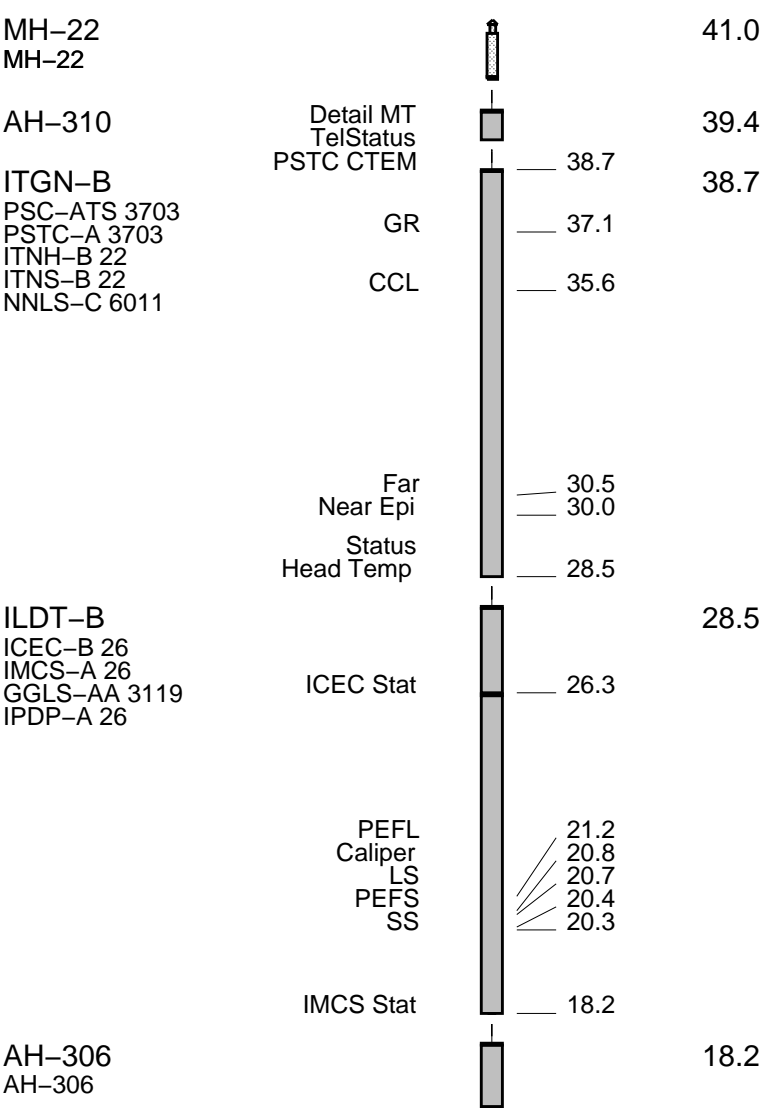
RUN 1

RUN 2

SURFACE EQUIPMENT

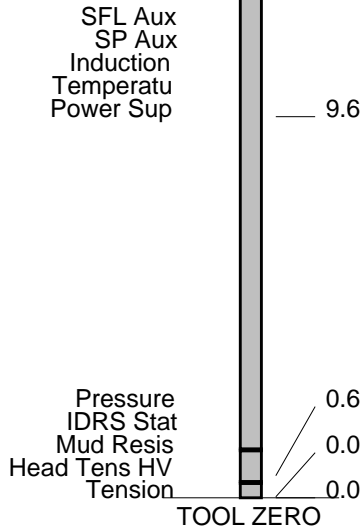
WITM-A
 PSC_16MHZ

DOWNHOLE EQUIPMENT



IDFR-E
IDRS-E 29
PSUB-A 125
IRMS-A 105

16.6



MAXIMUM STRING DIAMETER 2.25 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Company: LAMONT DOHERTY EARTH OBSERVATORY

Well: TW #4

Input DLIS Files

IDL_LDL_CNL_017LUP	FN:16	03-Oct-2013 10:41	1710.0 FT	-13.0 FT
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Output DLIS Files

DEFAULT	IDL_LDL_CNL_014PUP	FN:19	PRODUCER	04-Oct-2013 20:09	1710.0 FT	-13.5 FT
CUSTOMER	IDL_LDL_CNL_014PUC	FN:20	CUSTOMER	04-Oct-2013 20:09	1710.0 FT	-13.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 21.37 F3
Cement Volume = 21.37 F3 (assuming 0.00 IN casing O.D.)
Computed from 1710.0 FT to 1441.0 FT using data channel(s) CALI

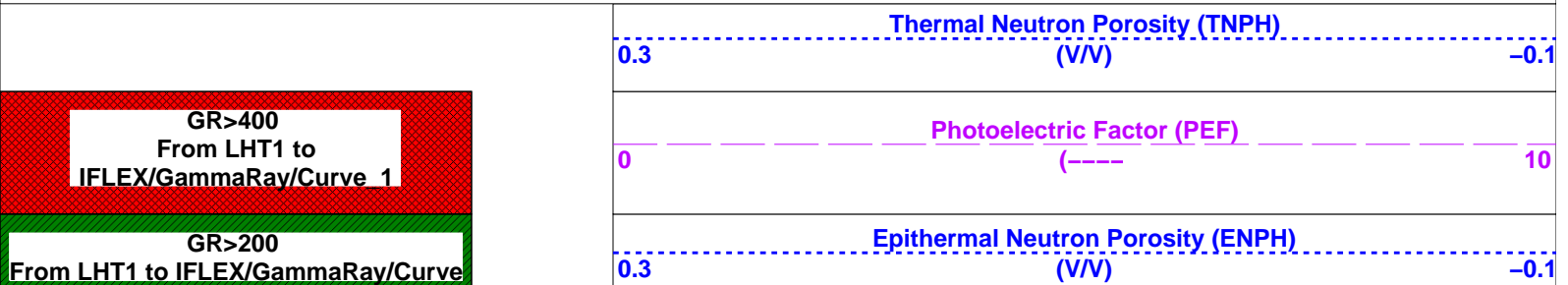
OP System Version: 19C1-222

IDFR-E	19C1-222	ILDT-B	19C1-222
ITGN-B	19C1-222		

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

Time Mark Every 60 S



GR>400
From LHT1 to
IFLEX/GammaRay/Curve 1

GR>200
From LHT1 to IFLEX/GammaRay/Curve

Tension (TENS)
(LBF) 0

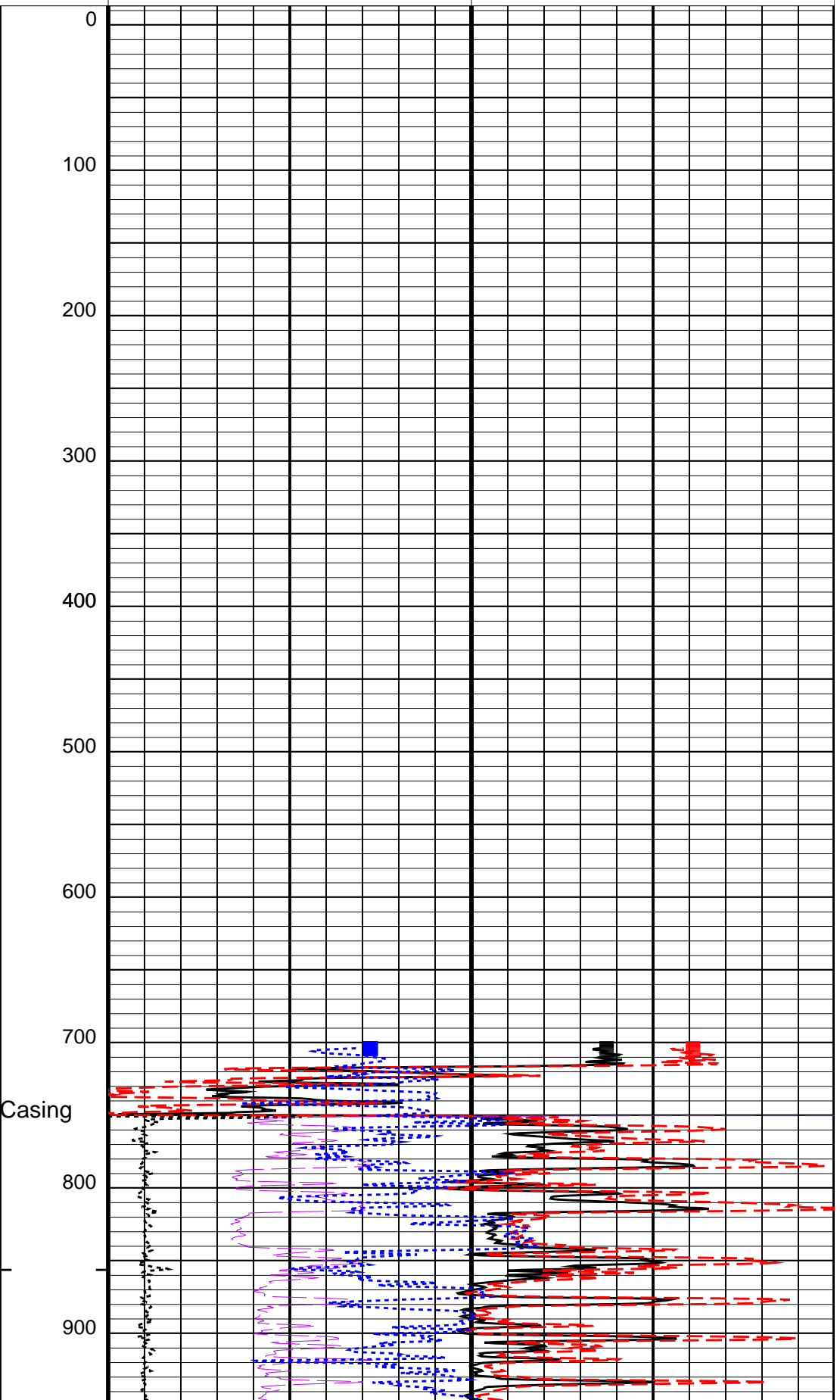
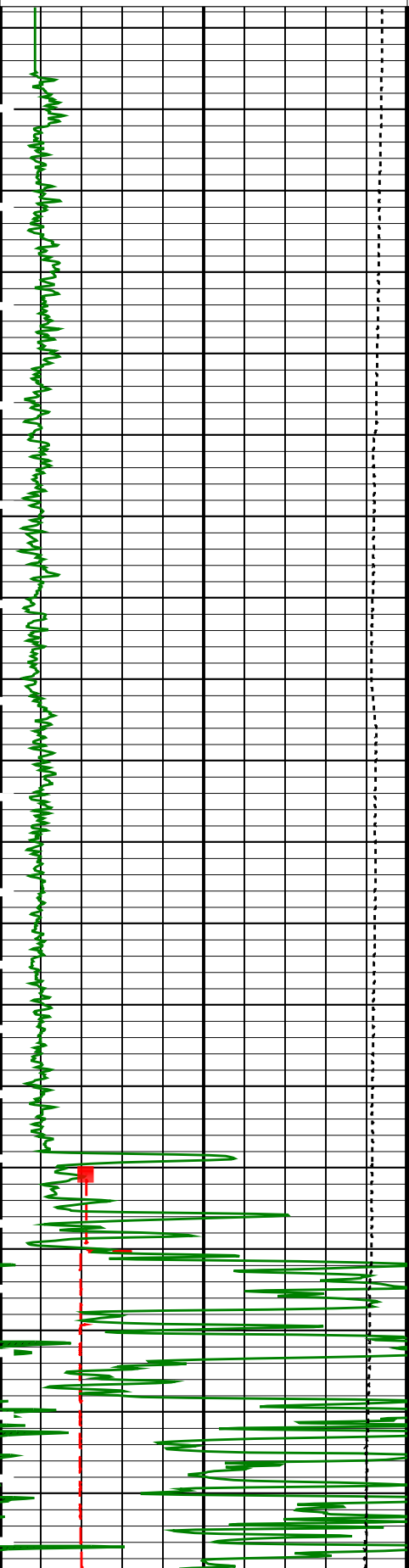
Gamma Ray (GR)
(GAPI) 0 200

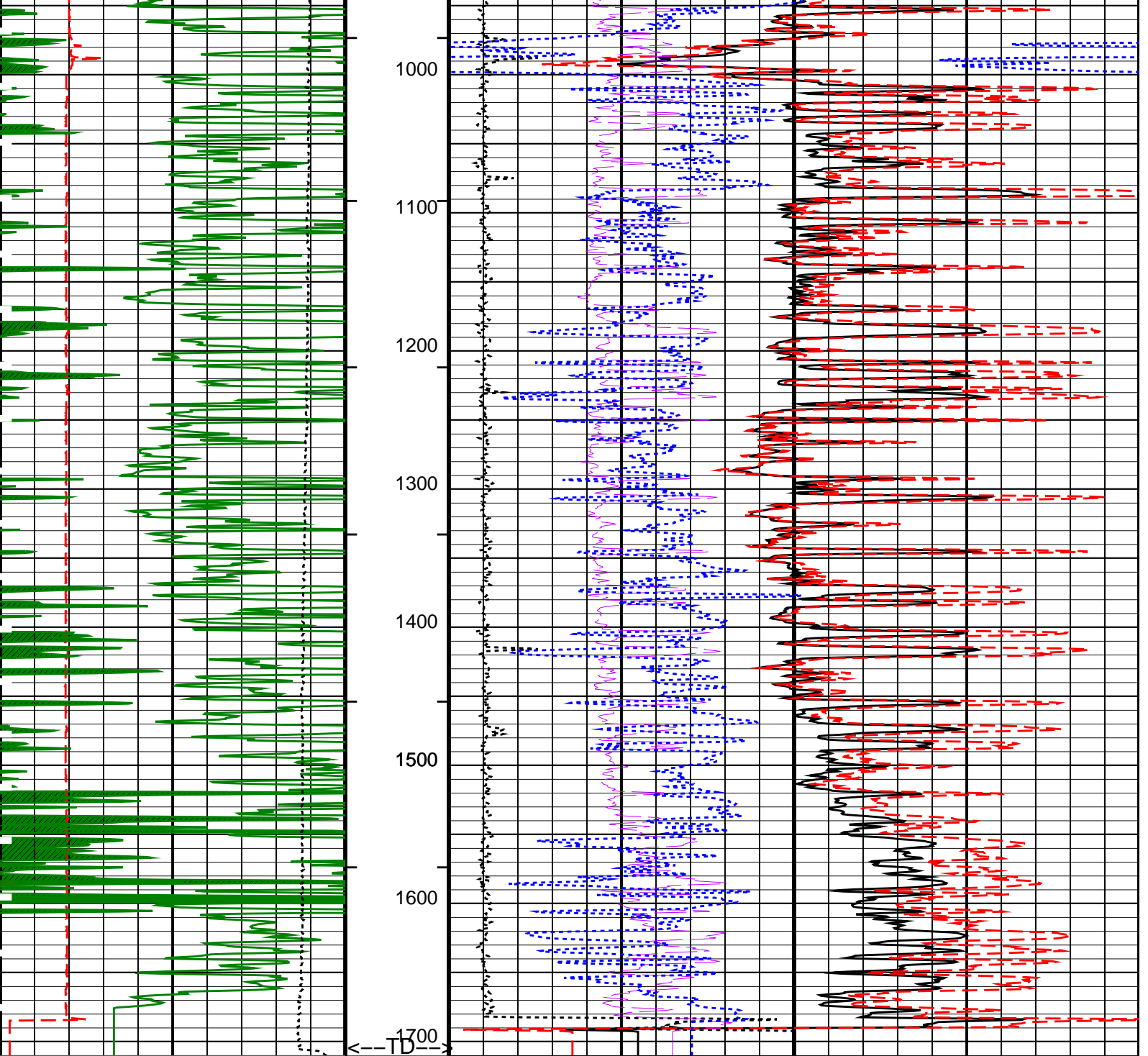
Caliper (CALI)
(IN) 2 12

Density Porosity (DPHI)
(V/V) 0.3 -0.1

Bulk Density (RHOB)
(G/C3) 2 3

Bulk Density Correction (DRHO)
(G/C3) -0.05 0.45





Caliper (CALI) (IN)	2	12
Gamma Ray (GR) (GAPI)	0	200
Tension (TENS) (LBF)	5000	0
GR>200 From LHT1 to IFLEX/GammaRay/Curve		
GR>400 From LHT1 to IFLEX/GammaRay/Curve 1		

Bulk Density Correction (DRHO) (G/C3)	-0.05	0.45
Bulk Density (RHOB) (G/C3)	2	3
Density Porosity (DPHI) (V/V)	0.3	-0.1
Epithermal Neutron Porosity (ENPH) (V/V)	0.3	-0.1
Photoelectric Factor (PEF) (----)	0	10
Thermal Neutron Porosity (TNPH) (V/V)	0.3	-0.1

PIP SUMMARY

└ Integrated Cement Volume Major Pip Every 100 F3

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

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
IDFR-E: iFlex Dual Formation Resistivity Tool			
BHS	Borehole Status	OPEN	
DFT_IFLEX	Drilling Fluid Type	WATER	
GCSE	Generalized Caliper Selection	CALI	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
ILDT-B: iFlex Litho Density Tool			
BHS	Borehole Status	OPEN	
DFT_IFLEX	Drilling Fluid Type	WATER	
DHNV_ICEC	ICEC Firmware Version	09.19.19	
DHNV_IPDP	IPDP Firmware Version	07.19.19	
FD	Fluid Density	1	G/C3
GCSE	Generalized Caliper Selection	CALI	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MDEN	Matrix Density	2.65	G/C3
PVN_ICEC	ICEC Computation Version	1.000	
PVN_IPDP	IPDP Computation Version	2.009	
TBHDS_ILDT	ILDT Tool Borehole Diameter Source	CALI	
ITGN-B: iFlex Telemetry Gamma Neutron Tool			
BARI_ITGN	Barite Mud Presence Flag	NO	
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	YES	
DFT_IFLEX	Drilling Fluid Type	WATER	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	CALI	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MWCO	Mud Weight Correction Option	NO	
NICO	Neutron Interference Correction Option	YES	
PTCO	Pressure Temperature Correction Option	NO	
PVN_ITGN	ITGN Computation Version	1.005	
SDAT	Standoff Data Source	SOCN	
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	NO	
TBHDS	Tool Borehole Diameter Source	CALI	
TBHTS	Tool Borehole Temperature Source	GTSE	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	CALI	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
System and Miscellaneous			
BS	Bit Size	3.780	IN
BSAL	Borehole Salinity	-50000.00	PPM
CWEI	Casing Weight	11.30	LB/F
DFD	Drilling Fluid Density	8.30	LB/G
DO	Depth Offset for Playback	-0.5	FT
MST	Mud Sample Temperature	-50000.00	DEGF
PP	Playback Processing	OFF	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
TD	Total Depth	1802	FT

Format: BRAD_NUC2_1 Vertical Scale: 1" per 100' Graphics File Created: 04-Oct-2013 20:09

OP System Version: 19C1-222

IDFR-E	19C1-222	ILDT-B	19C1-222
ITGN-B	19C1-222		

Input DLIS Files

IDL_LDL_CNL_017LUP	FN:16	03-Oct-2013 10:41	1710.0 FT	-13.0 FT
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Output DLIS Files

DEFAULT	IDL_LDL_CNL_014PUP	FN:19	PRODUCER	04-Oct-2013 20:09
CUSTOMER	IDL_LDL_CNL_014PUC	FN:20	CUSTOMER	04-Oct-2013 20:09

Input DLIS Files

IDL_LDL_CNL_017LUP FN:16 03-Oct-2013 10:41 1710.0 FT -13.0 FT

Output DLIS Files

DEFAULT IDL_LDL_CNL_014PUP FN:19 PRODUCER 04-Oct-2013 20:09 1710.0 FT -13.5 FT
 CUSTOMER IDL_LDL_CNL_014PUC FN:20 CUSTOMER 04-Oct-2013 20:09 1710.0 FT -13.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 21.37 F3
 Cement Volume = 21.37 F3 (assuming 0.00 IN casing O.D.)
 Computed from 1710.0 FT to 1441.0 FT using data channel(s) CALI

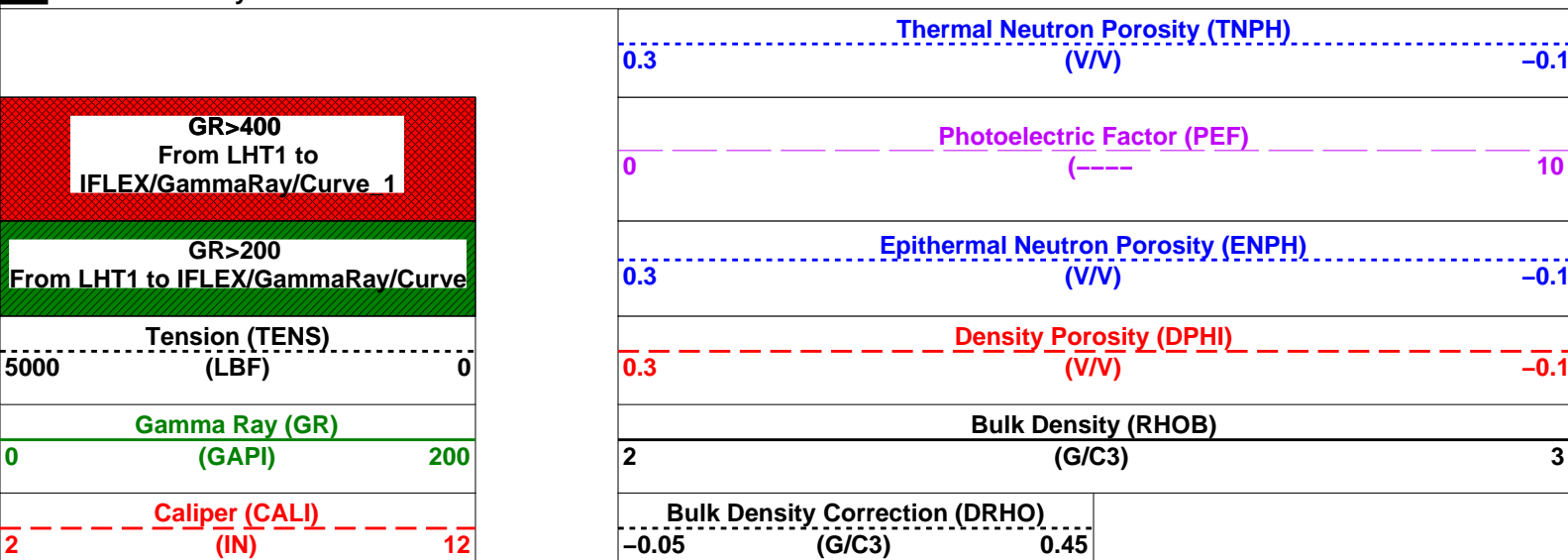
OP System Version: 19C1-222

IDFR-E 19C1-222 ILDT-B 19C1-222
 ITGN-B 19C1-222

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

Time Mark Every 60 S



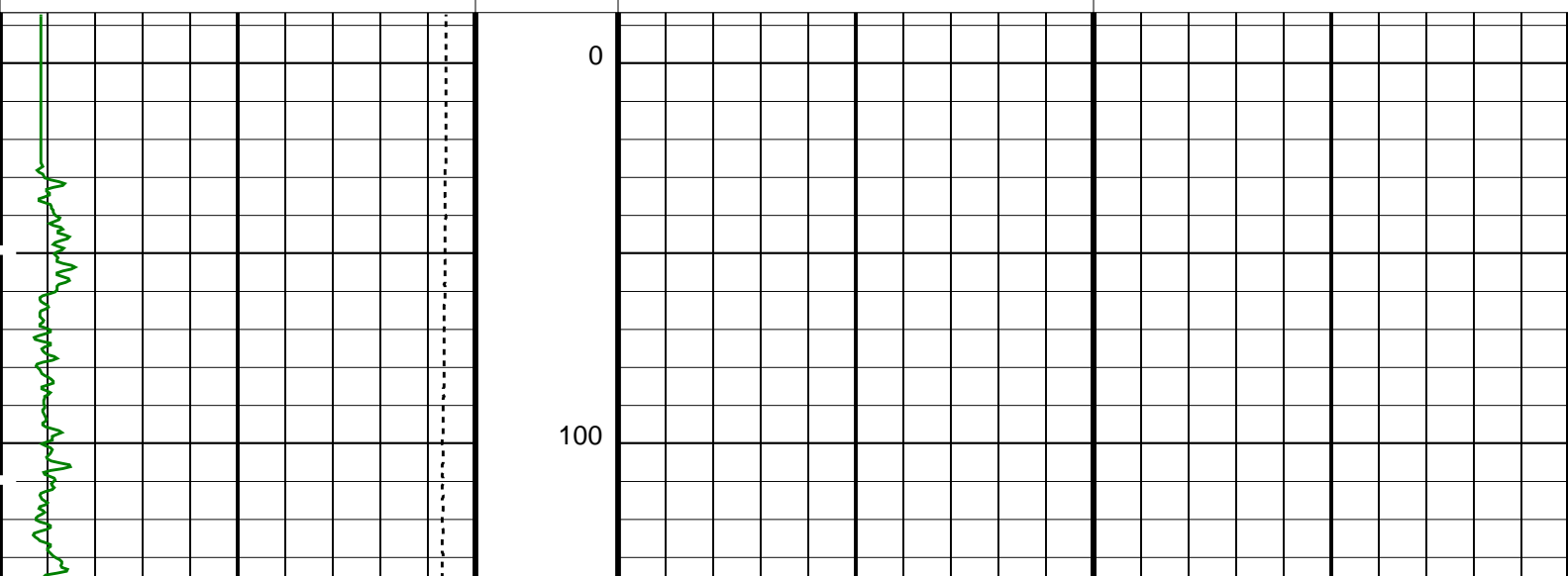
GR>400
 From LHT1 to
 IFLEX/GammaRay/Curve 1

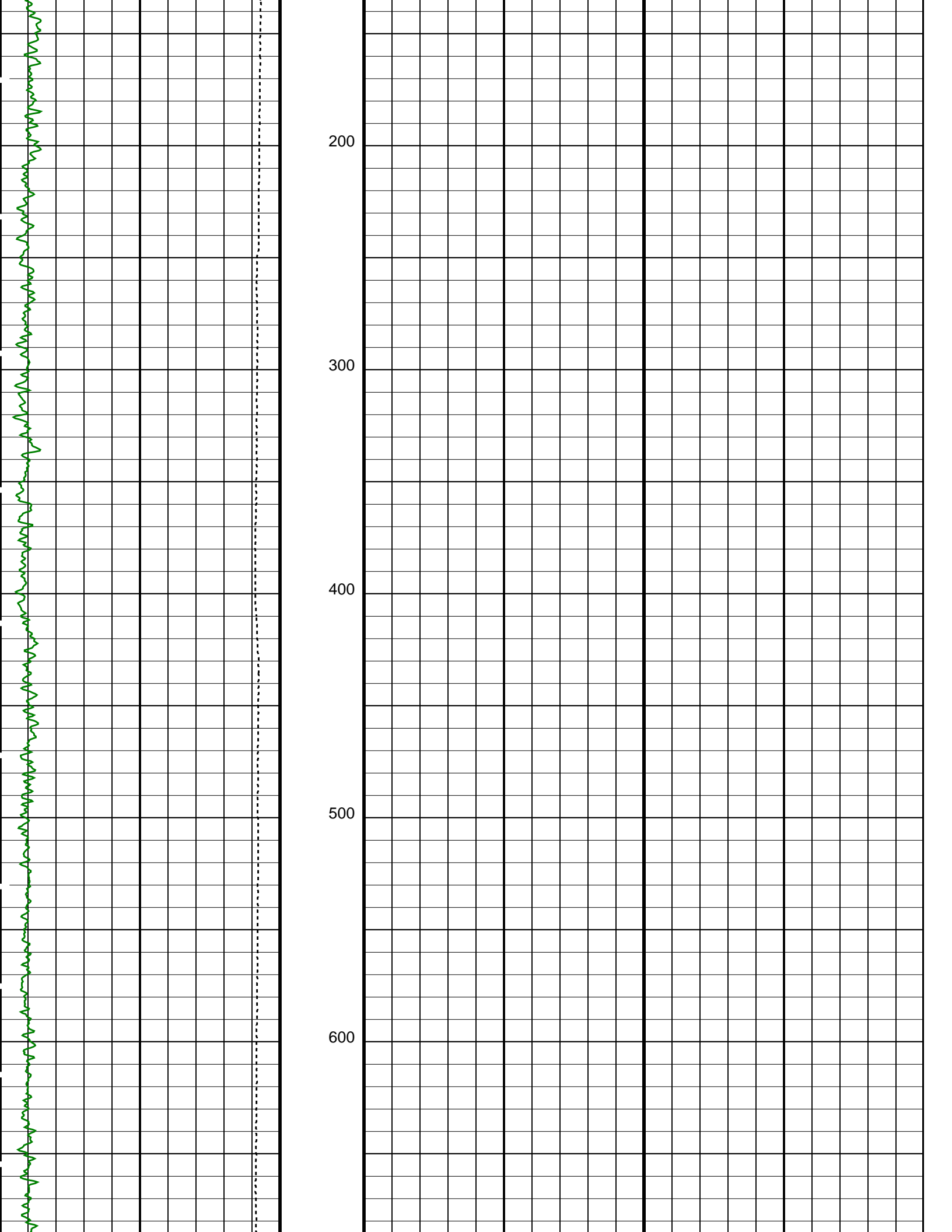
GR>200
 From LHT1 to IFLEX/GammaRay/Curve

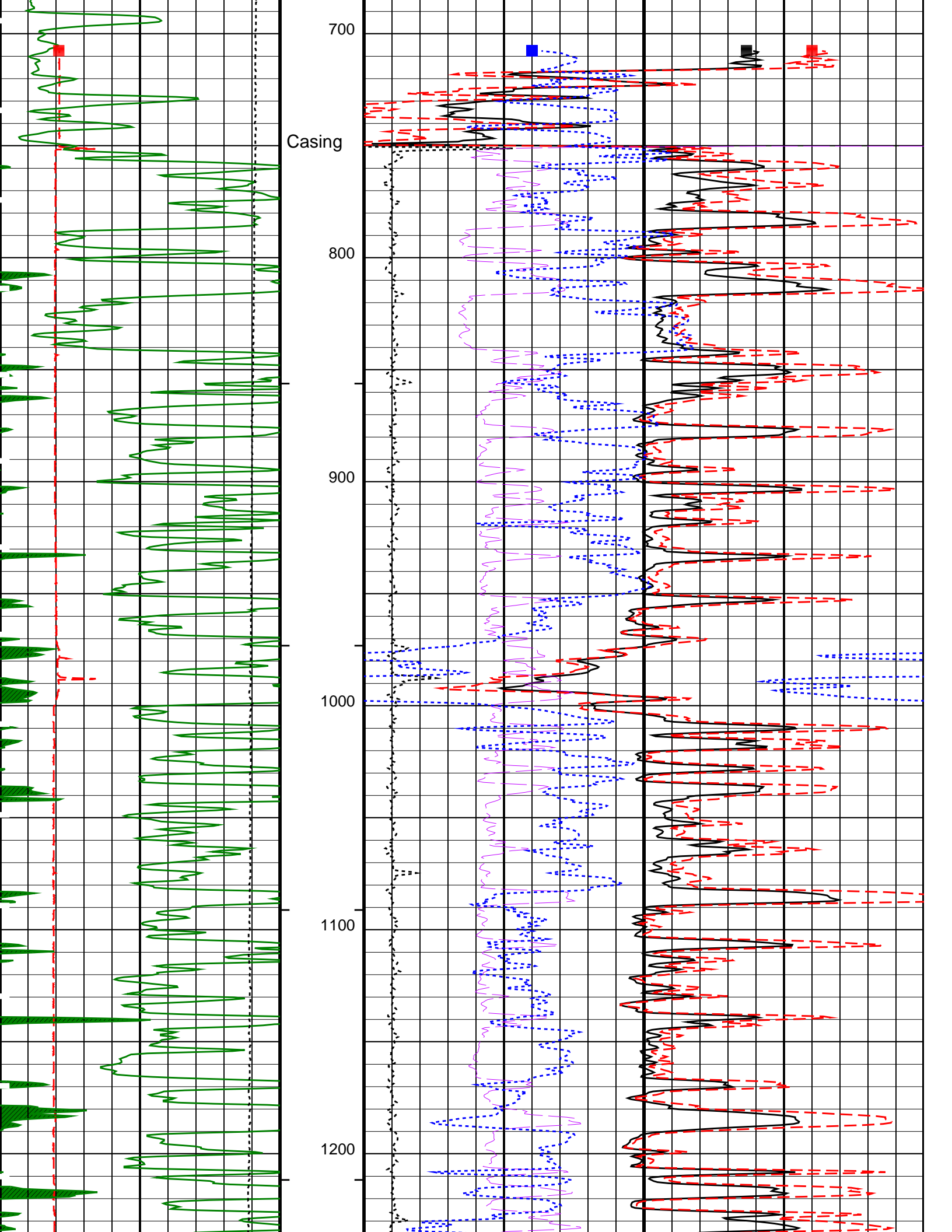
Tension (TENS)
 (LBF) 0

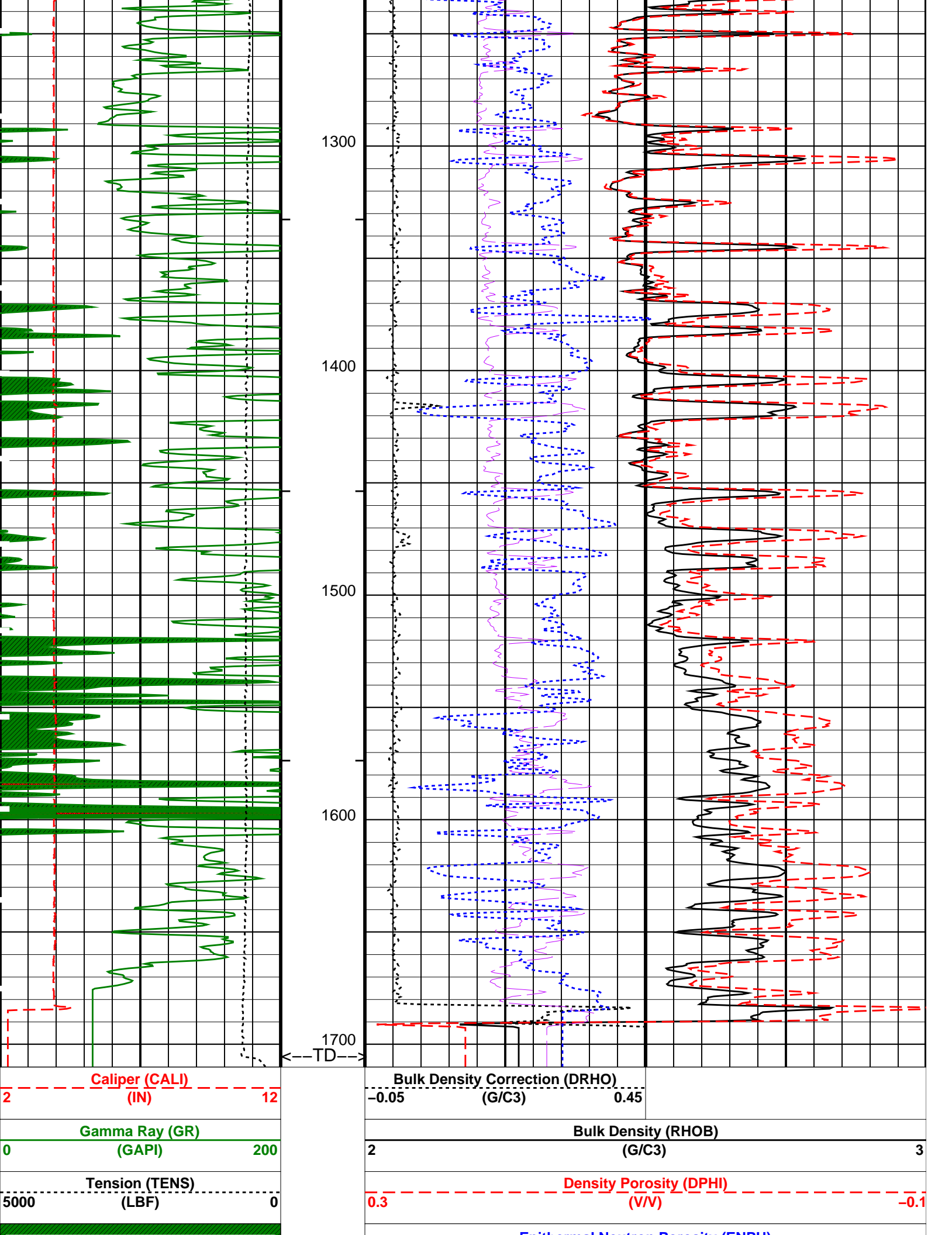
Gamma Ray (GR)
 (GAPI) 200

Caliper (CALI)
 (IN) 2 12









GR>200
From LHT1 to IFLEX/GammaRay/Curve

0.3	Epiternal Neutron Porosity (ENPH) (V/V)	-0.1
0	Photoelectric Factor (PEF) (---	10
0.3	Thermal Neutron Porosity (TNPH) (V/V)	-0.1

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

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
IDFR-E: iFlex Dual Formation Resistivity Tool			
BHS	Borehole Status	OPEN	
DFT_IFLEX	Drilling Fluid Type	WATER	
GCSE	Generalized Caliper Selection	CALI	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
ILDT-B: iFlex Litho Density Tool			
BHS	Borehole Status	OPEN	
DFT_IFLEX	Drilling Fluid Type	WATER	
DHNV_ICEC	ICEC Firmware Version	09.19.19	
DHNV_IPDP	IPDP Firmware Version	07.19.19	
FD	Fluid Density	1	G/C3
GCSE	Generalized Caliper Selection	CALI	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MDEN	Matrix Density	2.65	G/C3
PVN_ICEC	ICEC Computation Version	1.000	
PVN_IPDP	IPDP Computation Version	2.009	
TBHDS_ILDT	ILDT Tool Borehole Diameter Source	CALI	
ITGN-B: iFlex Telemetry Gamma Neutron Tool			
BARI_ITGN	Barite Mud Presence Flag	NO	
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	YES	
DFT_IFLEX	Drilling Fluid Type	WATER	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	CALI	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MWCO	Mud Weight Correction Option	NO	
NICO	Neutron Interference Correction Option	YES	
PTCO	Pressure Temperature Correction Option	NO	
PVN_ITGN	ITGN Computation Version	1.005	
SDAT	Standoff Data Source	SOCN	
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	NO	
TBHDS	Tool Borehole Diameter Source	CALI	
TBHTS	Tool Borehole Temperature Source	GTSE	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	CALI	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
System and Miscellaneous			
BS	Bit Size	3.780	IN
BSAL	Borehole Salinity	-50000.00	PPM
CWEI	Casing Weight	11.30	LB/F
DFD	Drilling Fluid Density	8.30	LB/G
DO	Depth Offset for Playback	-0.5	FT
MST	Mud Sample Temperature	-50000.00	DEGF
PP	Playback Processing	OFF	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
TD	Total Depth	1802	FT

Input DLIS Files

IDL_LDL_CNL_017LUP	FN:16	03-Oct-2013 10:41	1710.0 FT	-13.0 FT
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Output DLIS Files

DEFAULT	IDL_LDL_CNL_014PUP	FN:19	PRODUCER	04-Oct-2013 20:09
CUSTOMER	IDL_LDL_CNL_014PUC	FN:20	CUSTOMER	04-Oct-2013 20:09

Company: LAMONT DOHERTY EARTH OBSERVATORY Well: TW #4

Input DLIS Files

IDL_LDL_CNL_017LUP	FN:16	03-Oct-2013 10:41	1710.0 FT	-13.0 FT
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Output DLIS Files

DEFAULT	IDL_LDL_CNL_014PUP	FN:19	PRODUCER	04-Oct-2013 20:09	1710.0 FT	-13.5 FT
CUSTOMER	IDL_LDL_CNL_014PUC	FN:20	CUSTOMER	04-Oct-2013 20:09	1710.0 FT	-13.5 FT

Integrated Hole/Cement Volume Summary

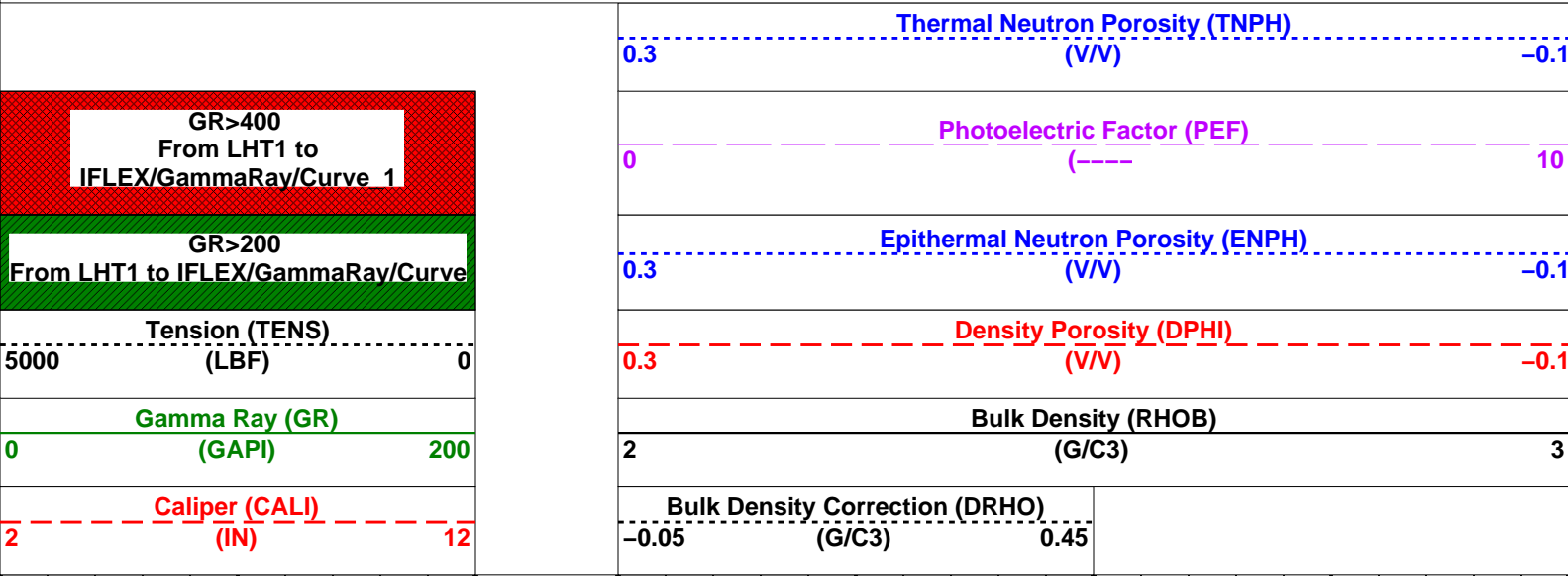
Hole Volume = 21.37 F3
 Cement Volume = 21.37 F3 (assuming 0.00 IN casing O.D.)
 Computed from 1710.0 FT to 1441.0 FT using data channel(s) CALI

OP System Version: 19C1-222

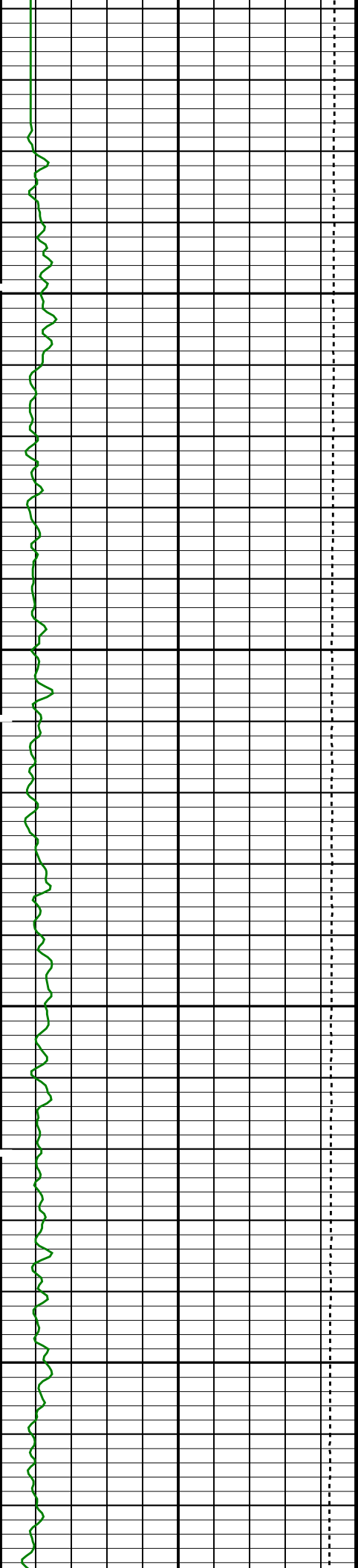
PIP SUMMARY

- └ 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

Time Mark Every 60 S

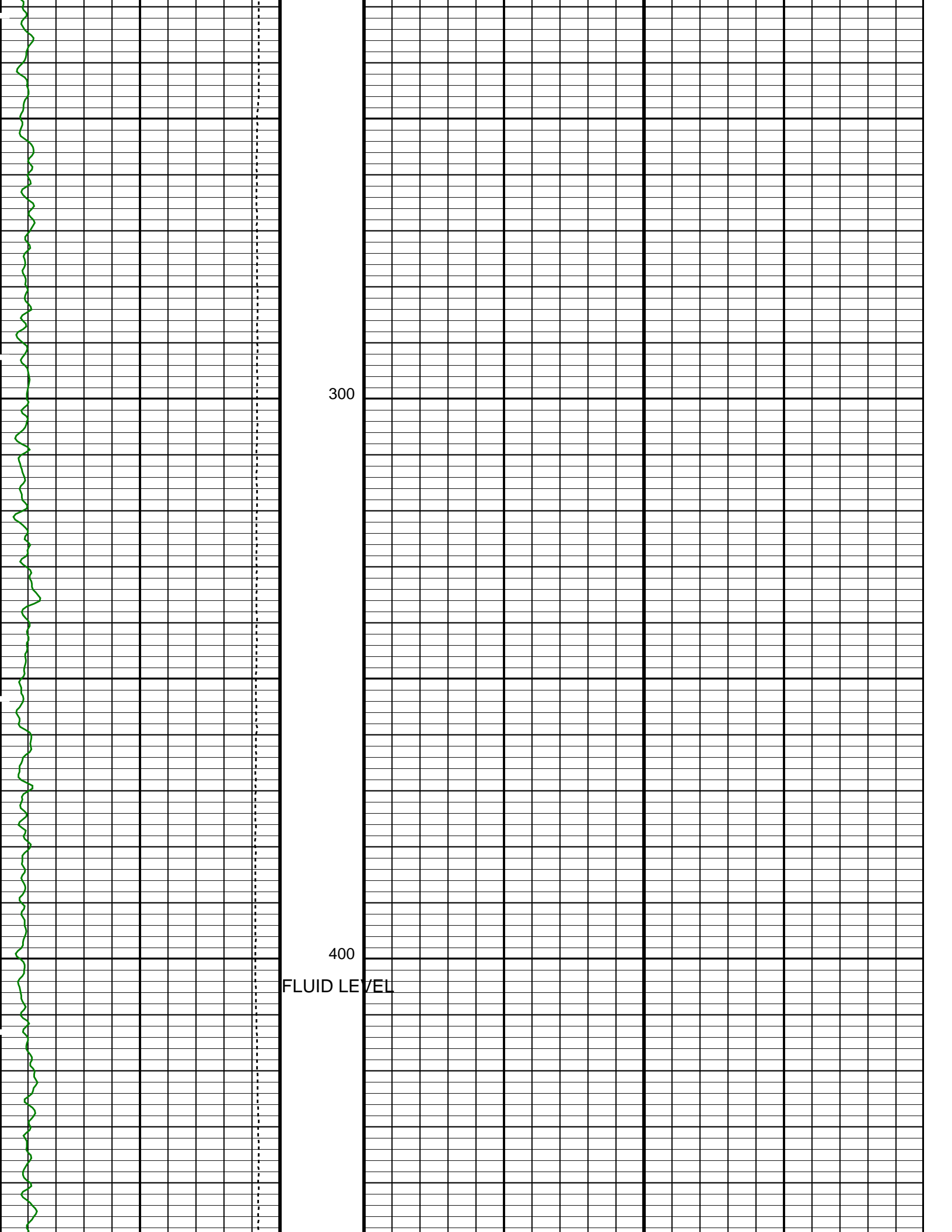


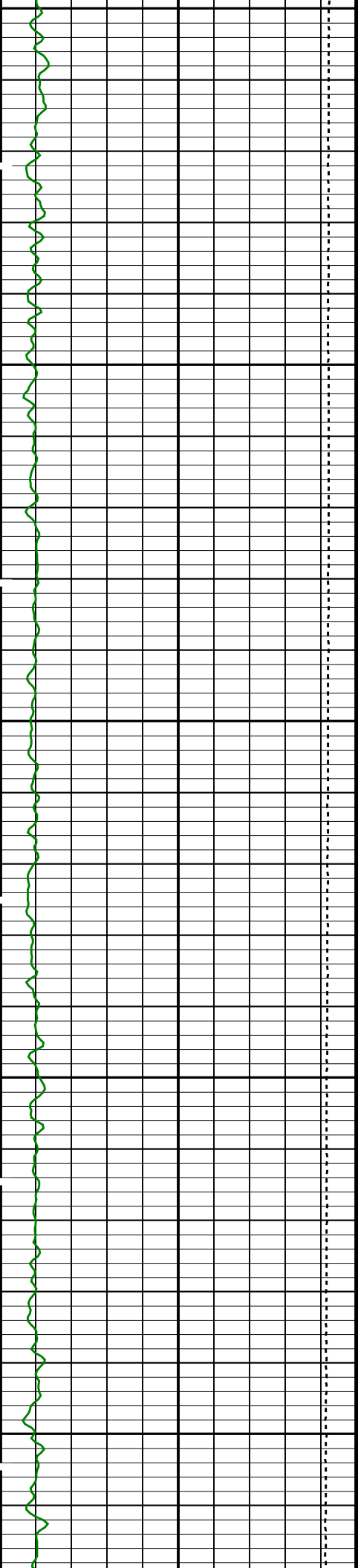
<div style="border-bottom: 1px solid green; padding: 5px; margin-bottom: 5px;"> Gamma Ray (GR) (GAPI) </div> <div style="border-bottom: 1px dashed red; padding: 5px; margin-bottom: 5px;"> Caliper (CALI) (IN) </div>	<div style="border-bottom: 1px solid black; padding: 5px; margin-bottom: 5px;"> Bulk Density (RHOB) (G/C3) </div> <div style="border-bottom: 1px dashed black; padding: 5px; margin-bottom: 5px;"> Bulk Density Correction (DRHO) (G/C3) </div>
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100

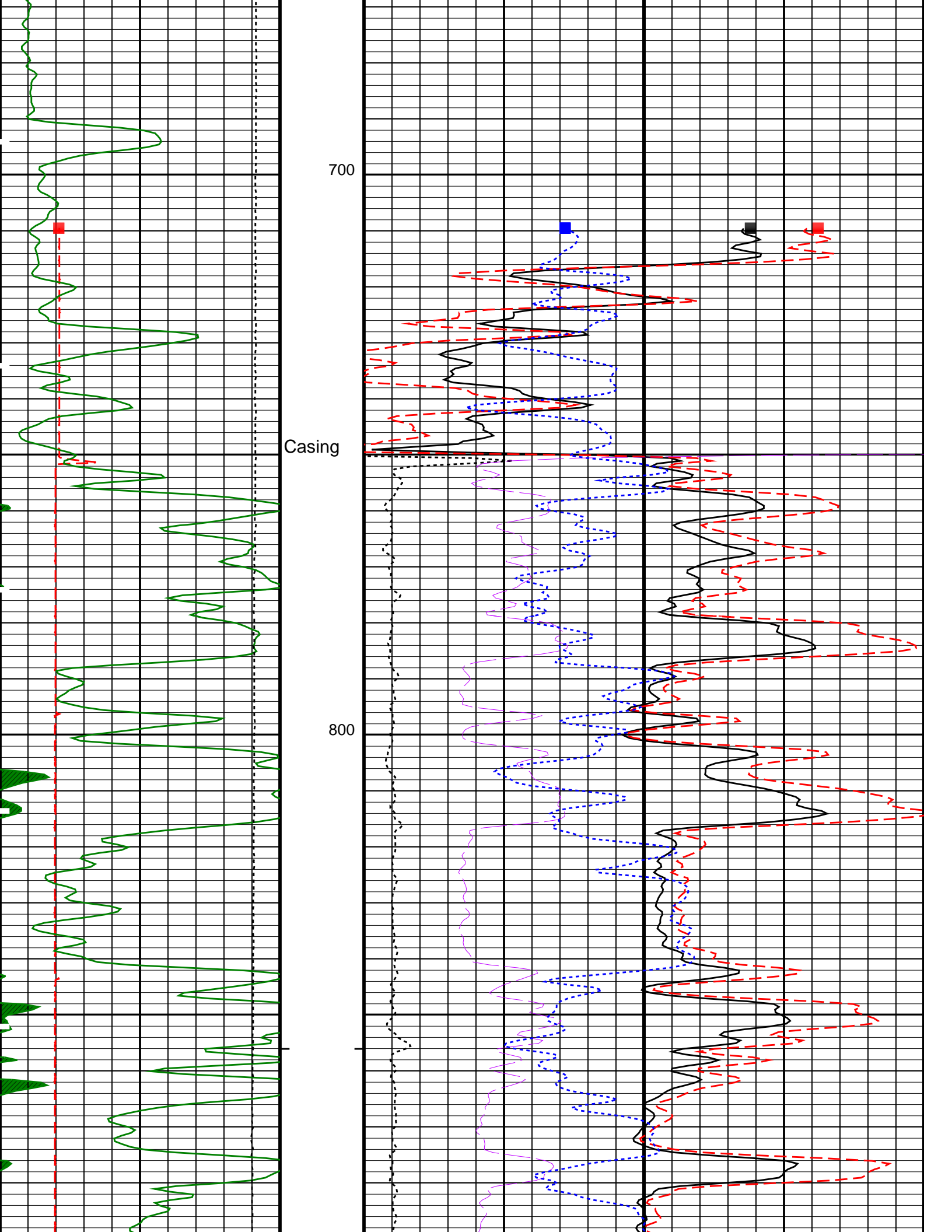
200

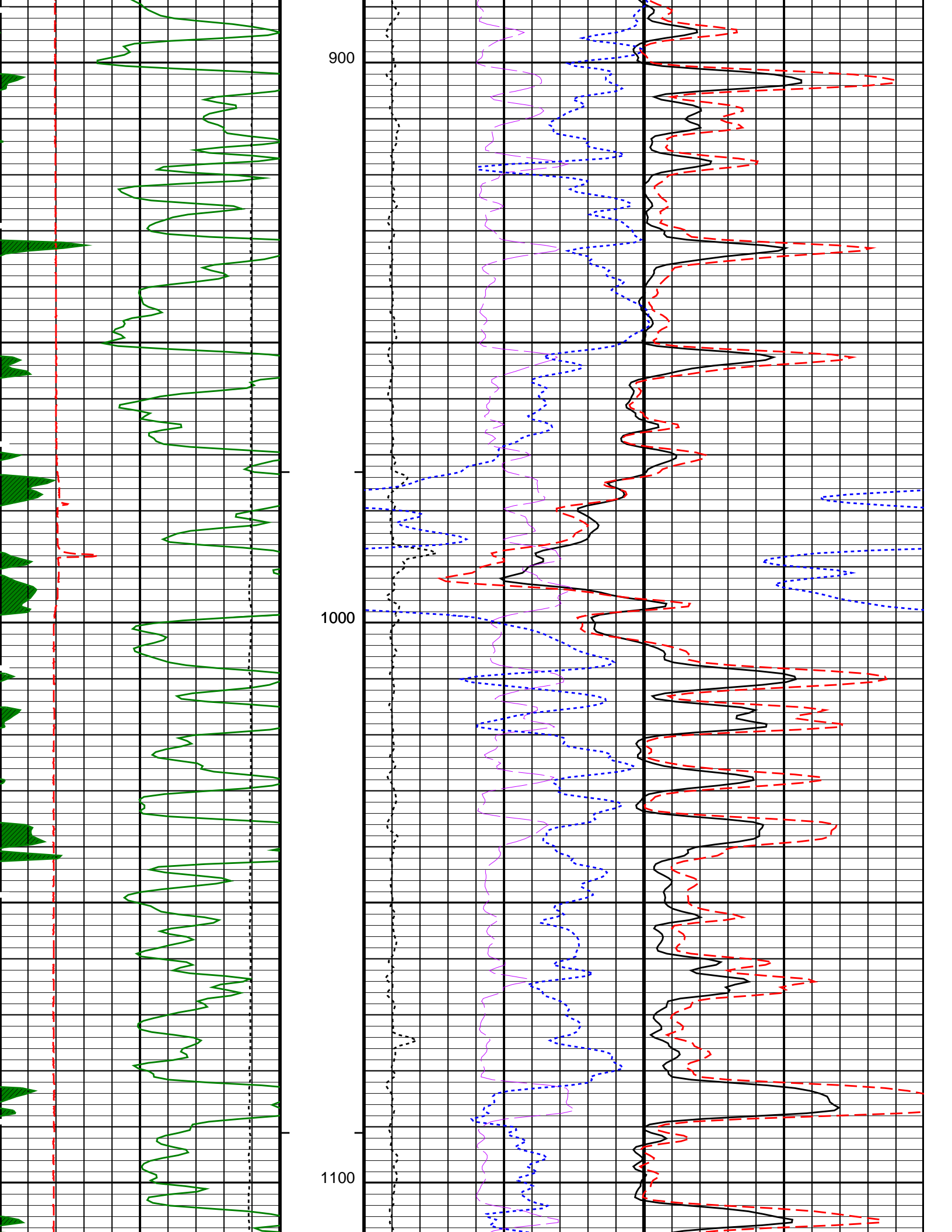


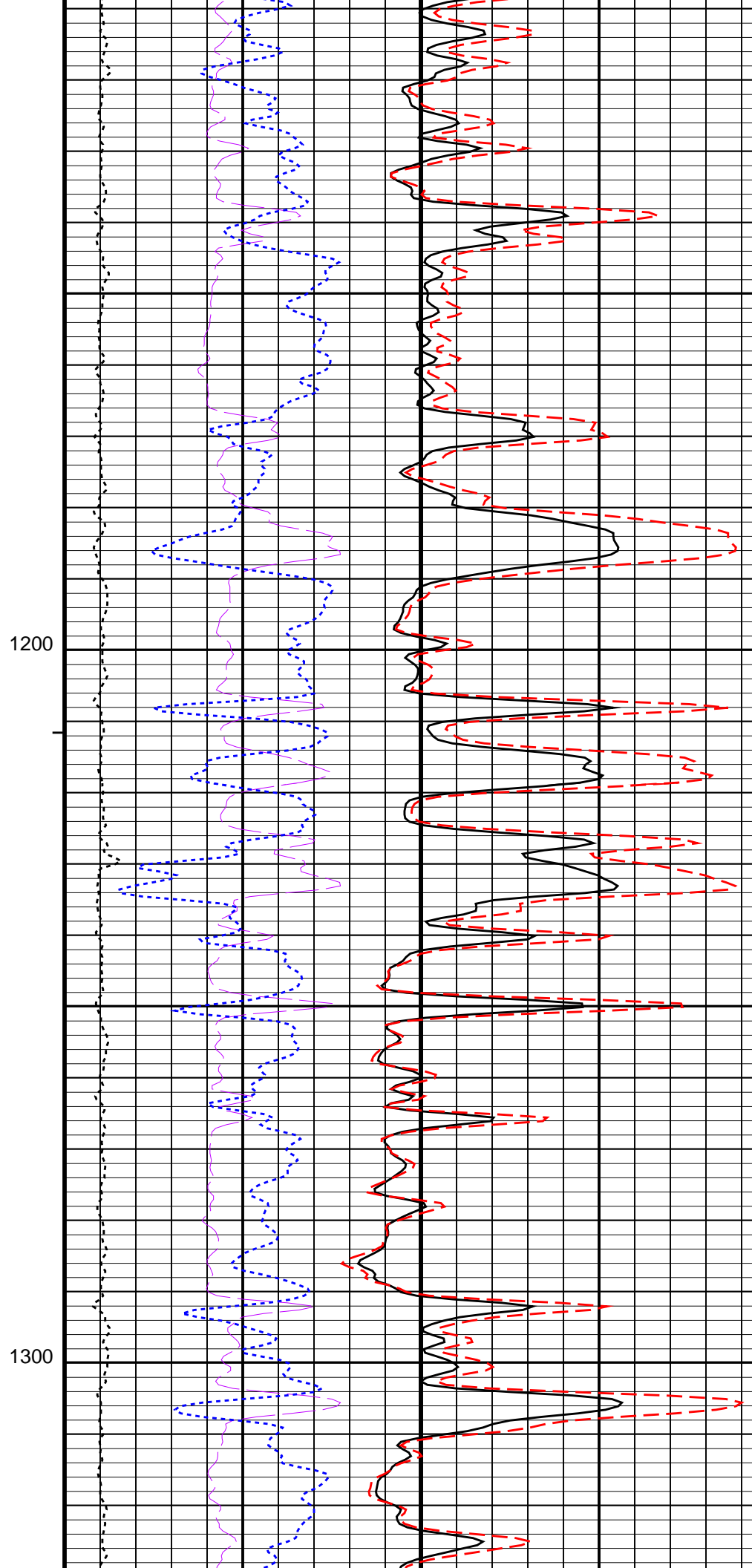
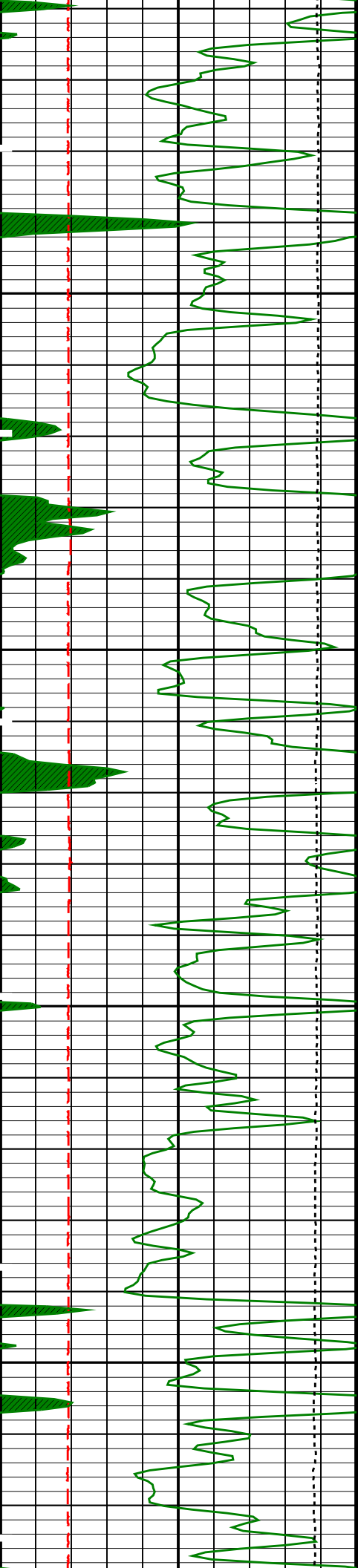


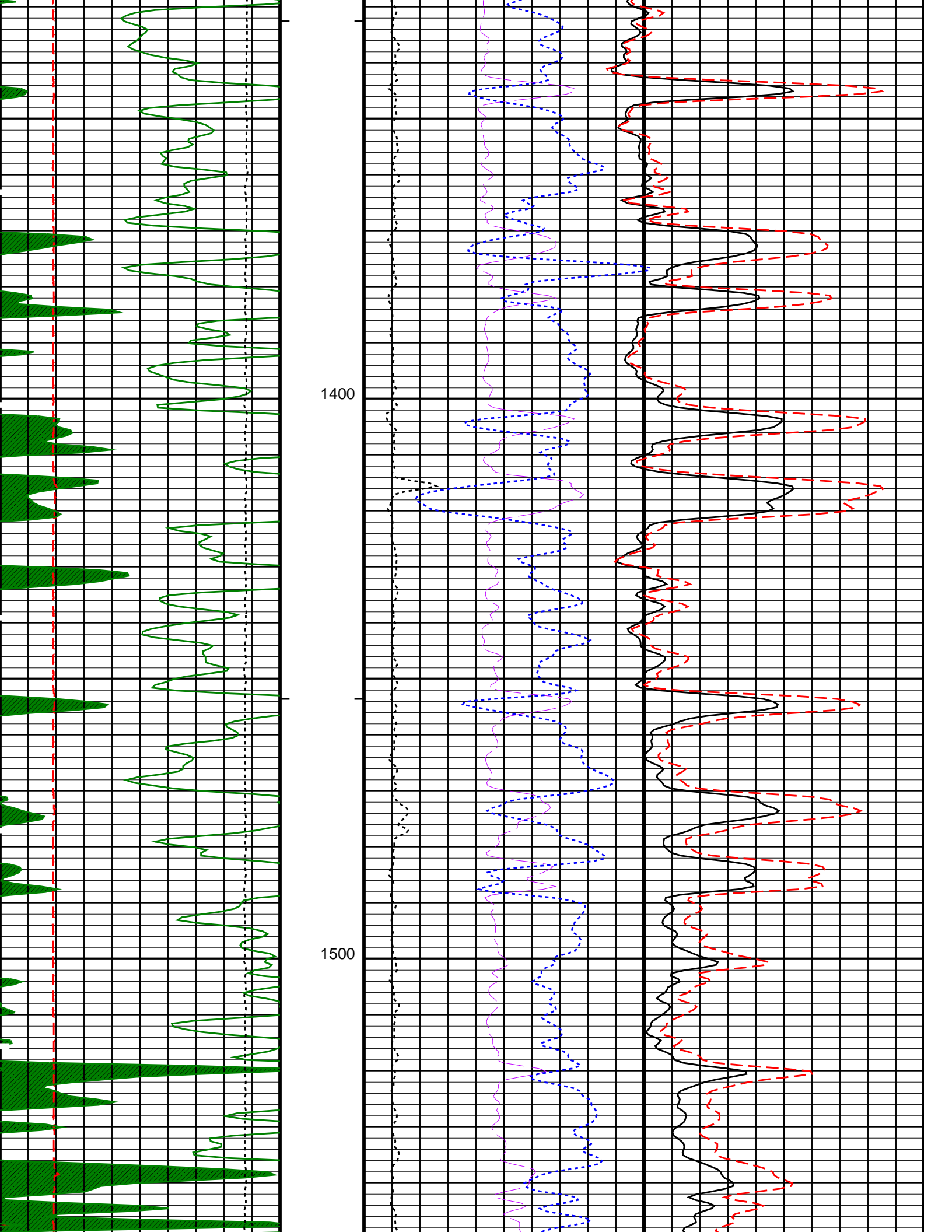
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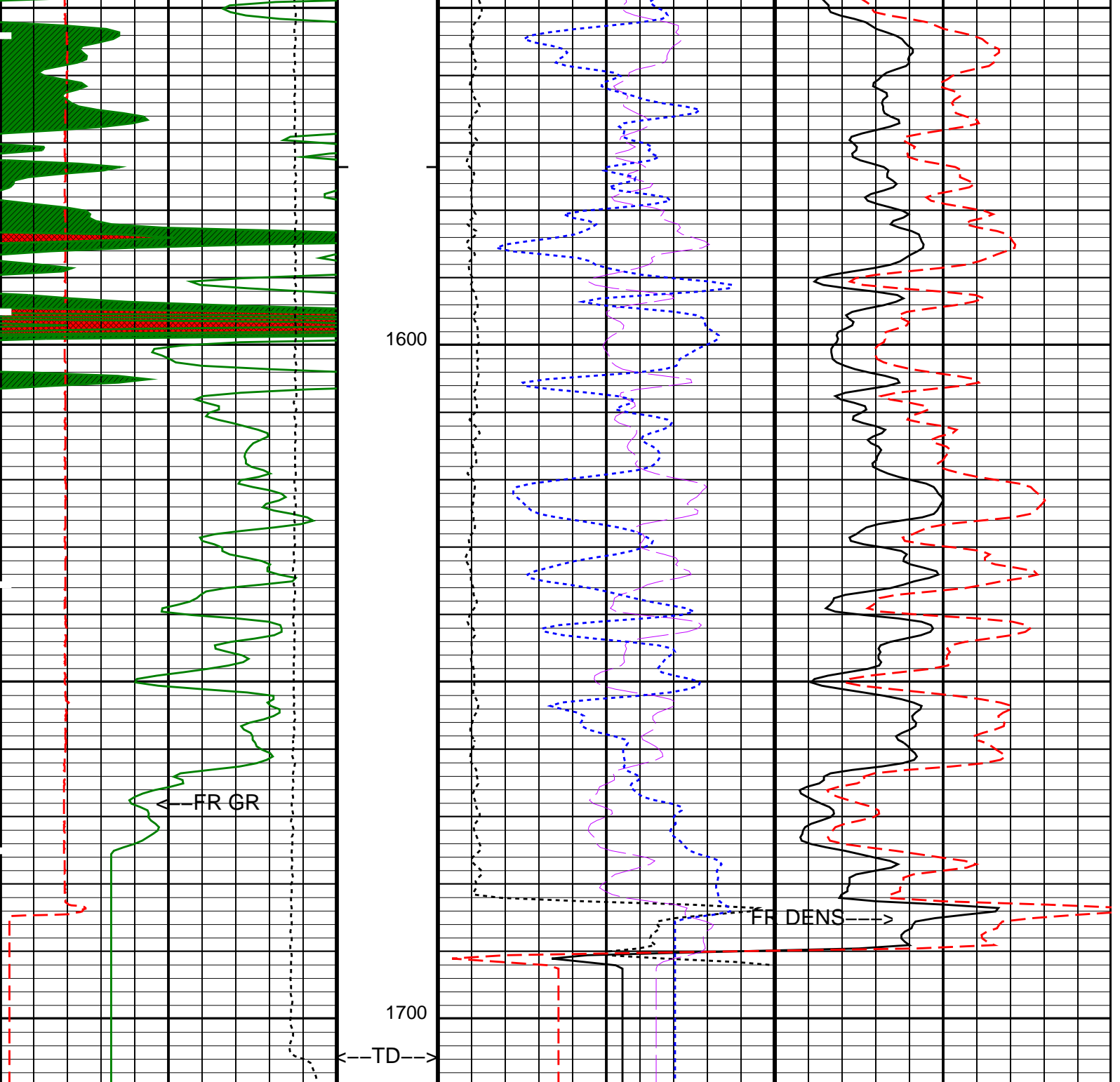
600











Caliper (CALI)
(IN)

Gamma Ray (GR)
(GAPI)

Tension (TENS)
(LBF)

GR>200
From LHT1 to IFLEX/GammaRay/Curve

GR>400
From LHT1 to
IFLEX/GammaRay/Curve 1

Bulk Density Correction (DRHO)
(G/C3)

Bulk Density (RHOB)
(G/C3)

Density Porosity (DPHI)
(V/V)

Epithermal Neutron Porosity (ENPH)
(V/V)

Photoelectric Factor (PEF)
(----

Thermal Neutron Porosity (TNPH)
(V/V)

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

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
IDFR-E: iFlex Dual Formation Resistivity Tool			
BHS	Borehole Status	OPEN	
DFT_IFLEX	Drilling Fluid Type	WATER	
GCSE	Generalized Caliper Selection	CALI	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
ILDT-B: iFlex Litho Density Tool			
BHS	Borehole Status	OPEN	
DFT_IFLEX	Drilling Fluid Type	WATER	
DHNV_ICEC	ICEC Firmware Version	09.19.19	
DHNV_IPDP	IPDP Firmware Version	07.19.19	
FD	Fluid Density	1	G/C3
GCSE	Generalized Caliper Selection	CALI	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MDEN	Matrix Density	2.65	G/C3
PVN_ICEC	ICEC Computation Version	1.000	
PVN_IPDP	IPDP Computation Version	2.009	
TBHDS_ILDT	ILDT Tool Borehole Diameter Source	CALI	
ITGN-B: iFlex Telemetry Gamma Neutron Tool			
BARI_ITGN	Barite Mud Presence Flag	NO	
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	YES	
DFT_IFLEX	Drilling Fluid Type	WATER	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	CALI	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MWCO	Mud Weight Correction Option	NO	
NICO	Neutron Interference Correction Option	YES	
PTCO	Pressure Temperature Correction Option	NO	
PVN_ITGN	ITGN Computation Version	1.005	
SDAT	Standoff Data Source	SOCN	
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	NO	
TBHDS	Tool Borehole Diameter Source	CALI	
TBHTS	Tool Borehole Temperature Source	GTSE	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	CALI	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
System and Miscellaneous			
BS	Bit Size	3.780	IN
BSAL	Borehole Salinity	-50000.00	PPM
CWEI	Casing Weight	11.30	LB/F
DFD	Drilling Fluid Density	8.30	LB/G
DO	Depth Offset for Playback	-0.5	FT
MST	Mud Sample Temperature	-50000.00	DEGF
PP	Playback Processing	OFF	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
TD	Total Depth	1802	FT

Format: BRAD_NUC_5 Vertical Scale: 5" per 100'

Graphics File Created: 04-Oct-2013 20:09

OP System Version: 19C1-222

IDFR-E 19C1-222 ILDT-B 19C1-222
 ITGN-B 19C1-222

Input DLIS Files

IDL_LDL_CNL_017LUP FN:16 03-Oct-2013 10:41 1710.0 FT -13.0 FT

Output DLIS Files

Company: LAMONT DOHERTY EARTH OBSERVATORY Well: TW #4

Input DLIS Files

IDL_LDL_CNL_016LUP	FN:15	03-Oct-2013 10:41	1710.0 FT	1440.0 FT
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Output DLIS Files

DEFAULT	IDL_LDL_CNL_012PUP	FN:15	PRODUCER	04-Oct-2013 19:59	1710.0 FT	1440.0 FT
CUSTOMER	IDL_LDL_CNL_012PUC	FN:16	CUSTOMER	04-Oct-2013 19:59	1710.0 FT	1440.0 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 21.37 F3
 Cement Volume = 21.37 F3 (assuming 0.00 IN casing O.D.)
 Computed from 1710.0 FT to 1441.0 FT using data channel(s) CALI

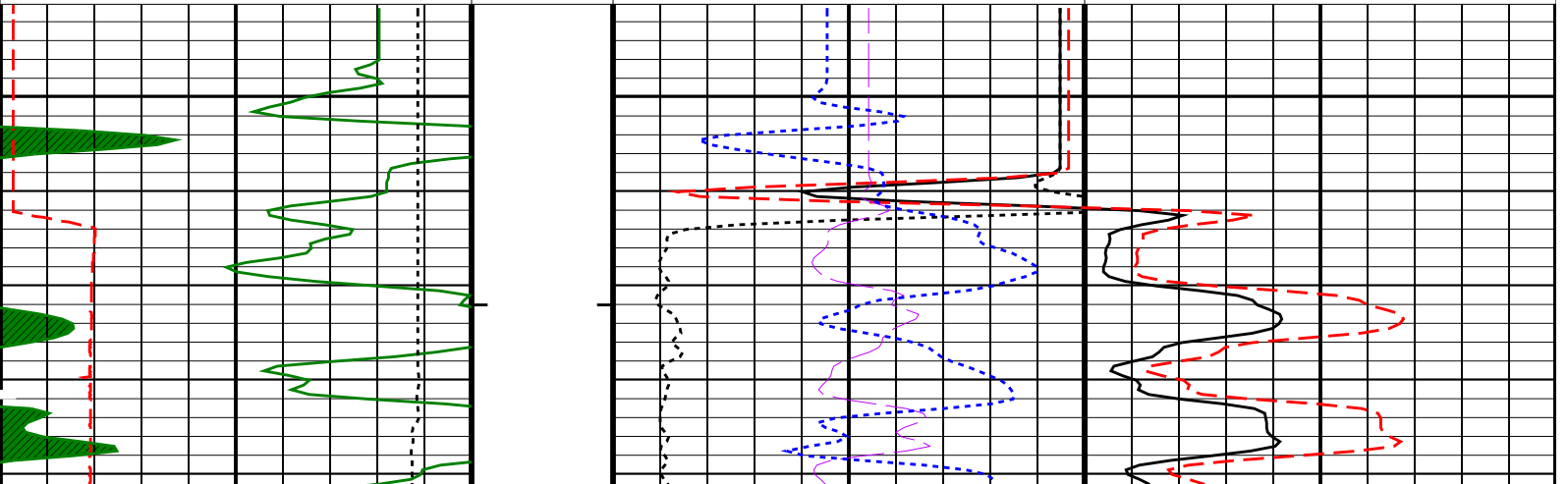
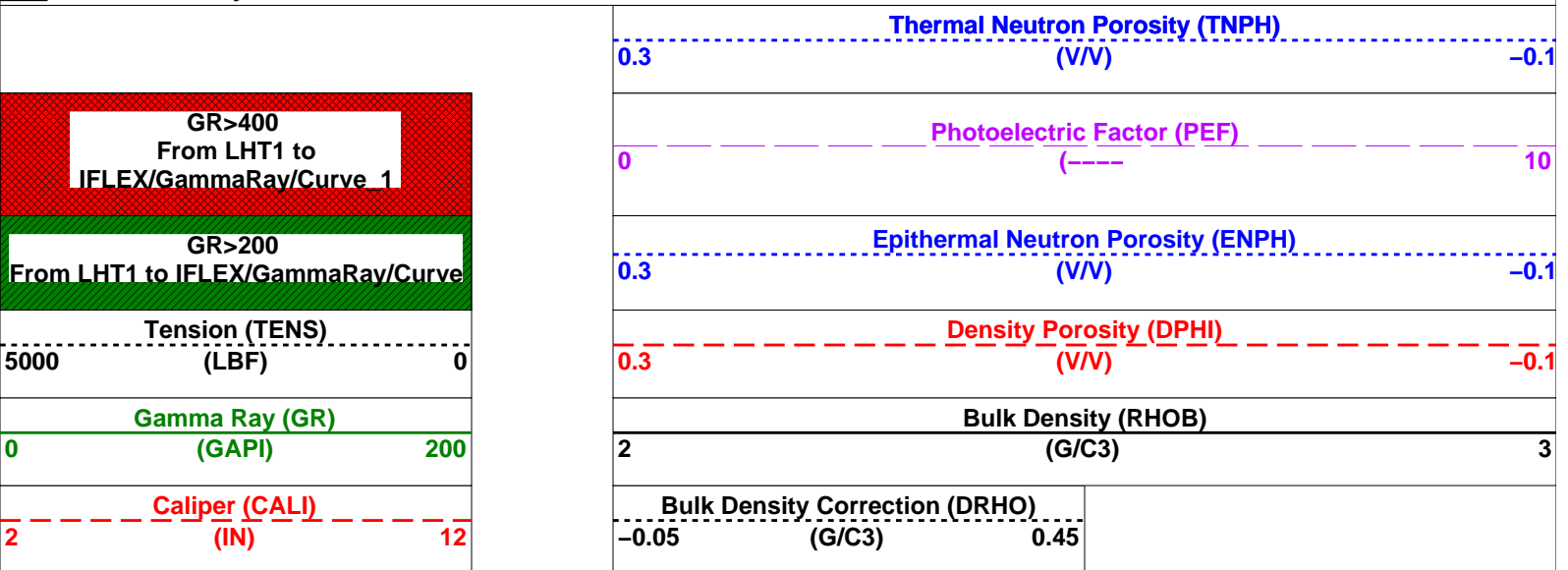
OP System Version: 19C1-222

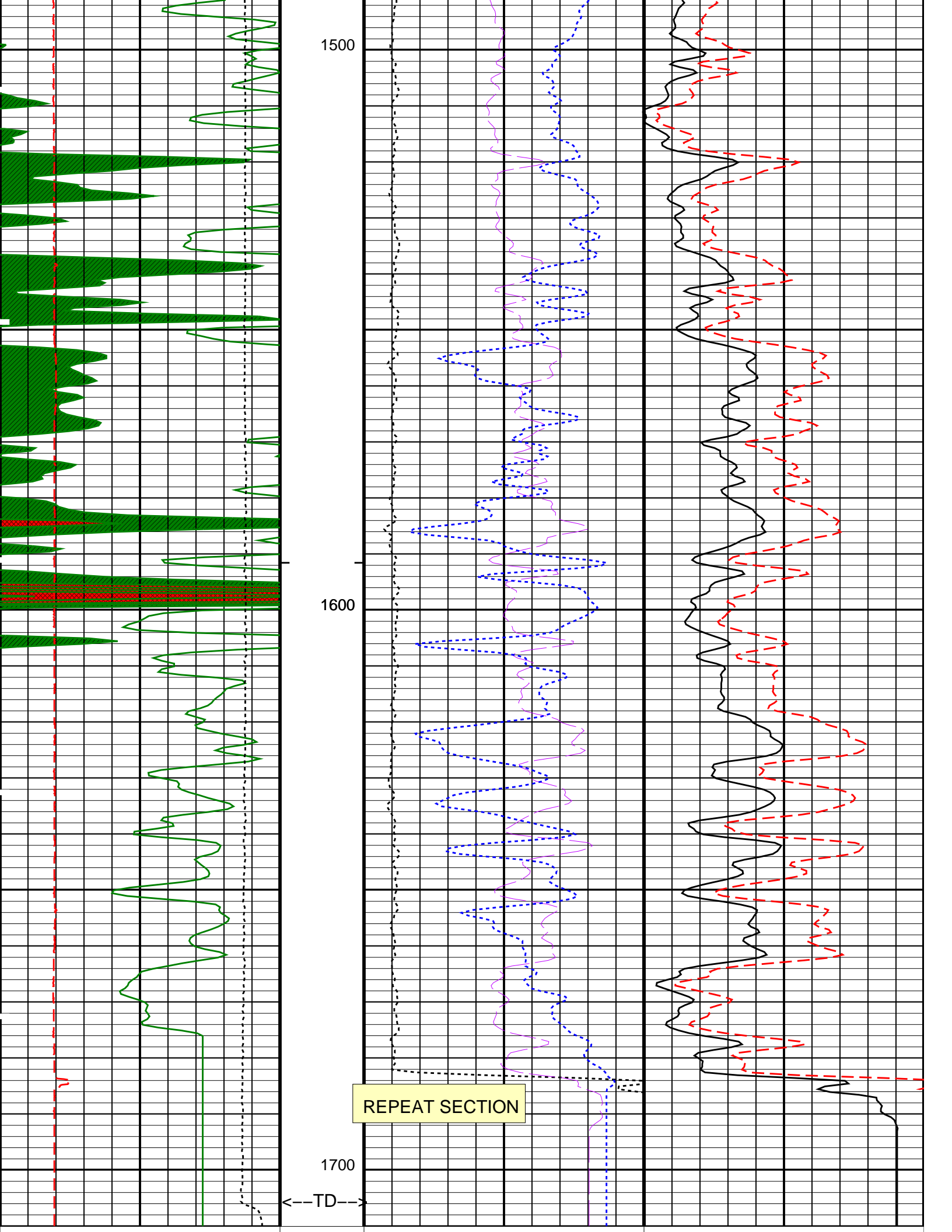
IDFR-E	19C1-222	ILDT-B	19C1-222
ITGN-B	19C1-222		

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

Time Mark Every 60 S





2	Caliper (CALI) (IN)	12
0	Gamma Ray (GR) (GAPI)	200
5000	Tension (TENS) (LBF)	0
GR>200 From LHT1 to IFLEX/GammaRay/Curve		
GR>400 From LHT1 to IFLEX/GammaRay/Curve 1		

-0.05	Bulk Density Correction (DRHO) (G/C3)	0.45
2	Bulk Density (RHOB) (G/C3)	3
0.3	Density Porosity (DPHI) (V/V)	-0.1
0.3	Epithermal Neutron Porosity (ENPH) (V/V)	-0.1
0	Photoelectric Factor (PEF) (----	10
0.3	Thermal Neutron Porosity (TNPH) (V/V)	-0.1

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

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
IDFR-E: iFlex Dual Formation Resistivity Tool		
BHS	Borehole Status	OPEN
DFT_IFLEX	Drilling Fluid Type	WATER
GCSE	Generalized Caliper Selection	CALI
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
ILDT-B: iFlex Litho Density Tool		
BHS	Borehole Status	OPEN
DFT_IFLEX	Drilling Fluid Type	WATER
DHNV_ICEC	ICEC Firmware Version	09.19.19
DHNV_IPDP	IPDP Firmware Version	07.19.19
FD	Fluid Density	1 G/C3
GCSE	Generalized Caliper Selection	CALI
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
MDEN	Matrix Density	2.65 G/C3
PVN_ICEC	ICEC Computation Version	1.000
PVN_IPDP	IPDP Computation Version	2.009
TBHDS_ILDT	ILDT Tool Borehole Diameter Source	CALI
ITGN-B: iFlex Telemetry Gamma Neutron Tool		
BARI_ITGN	Barite Mud Presence Flag	NO
BHS	Borehole Status	OPEN
BSCO	Borehole Salinity Correction Option	NO
CCCO	Casing & Cement Thickness Correction Option	YES
DFT_IFLEX	Drilling Fluid Type	WATER
FSAL	Formation Salinity	-50000 PPM
FSCO	Formation Salinity Correction Option	NO
GCSE	Generalized Caliper Selection	CALI
HSCO	Hole Size Correction Option	YES
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
MCCO	Mud Cake Correction Option	NO
MWCO	Mud Weight Correction Option	NO
NICO	Neutron Interference Correction Option	YES
PTCO	Pressure Temperature Correction Option	NO
PVN_ITGN	ITGN Computation Version	1.005
SDAT	Standoff Data Source	SOCN
SOCN	Standoff Distance	0 IN
SOCO	Standoff Correction Option	NO
TBHDS	Tool Borehole Diameter Source	CALI
TBHTS	Tool Borehole Temperature Source	GTSE
HOLEV: Integrated Hole/Cement Volume		
BHS	Borehole Status	OPEN
FCD	Future Casing (Outer) Diameter	0 IN
GCSE	Generalized Caliper Selection	CALI
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
System and Miscellaneous		
BS	Bit Size	3.780 IN
BSAL	Borehole Salinity	-50000.00 PPM
CWEI	Casing Weight	11.30 LB/F
DFD	Drilling Fluid Density	8.20 LB/C

DPD	Drilling Fluid Density	6.30	LB/G
DO	Depth Offset for Playback	-0.5	FT
MST	Mud Sample Temperature	-50000.00	DEGF
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
TD	Total Depth	1802	FT

Format: BRAD_NUC_5 Vertical Scale: 5" per 100' Graphics File Created: 04-Oct-2013 19:59

OP System Version: 19C1-222

IDFR-E	19C1-222	ILDT-B	19C1-222
ITGN-B	19C1-222		

Input DLIS Files

IDL_LDL_CNL_016LUP	FN:15	03-Oct-2013 10:41	1710.0 FT	1440.0 FT
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Output DLIS Files

DEFAULT	IDL_LDL_CNL_012PUP	FN:15	PRODUCER	04-Oct-2013 19:59
CUSTOMER	IDL_LDL_CNL_012PUC	FN:16	CUSTOMER	04-Oct-2013 19:59

Company: LAMONT DOHERTY EARTH OBSERVATORY Well: TW #4

Input DLIS Files

IDL_LDL_CNL_020LUP	FN:19	03-Oct-2013 10:41	905.0 FT	594.0 FT
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Output DLIS Files

DEFAULT	IDL_LDL_CNL_013PUP	FN:17	PRODUCER	04-Oct-2013 20:05	905.0 FT	593.5 FT
CUSTOMER	IDL_LDL_CNL_013PUC	FN:18	CUSTOMER	04-Oct-2013 20:05	905.0 FT	593.5 FT

Integrated Hole/Cement Volume Summary

Hole Volume = 21.37 F3
Cement Volume = 21.37 F3 (assuming 0.00 IN casing O.D.)
Computed from 1710.0 FT to 1441.0 FT using data channel(s) CALI

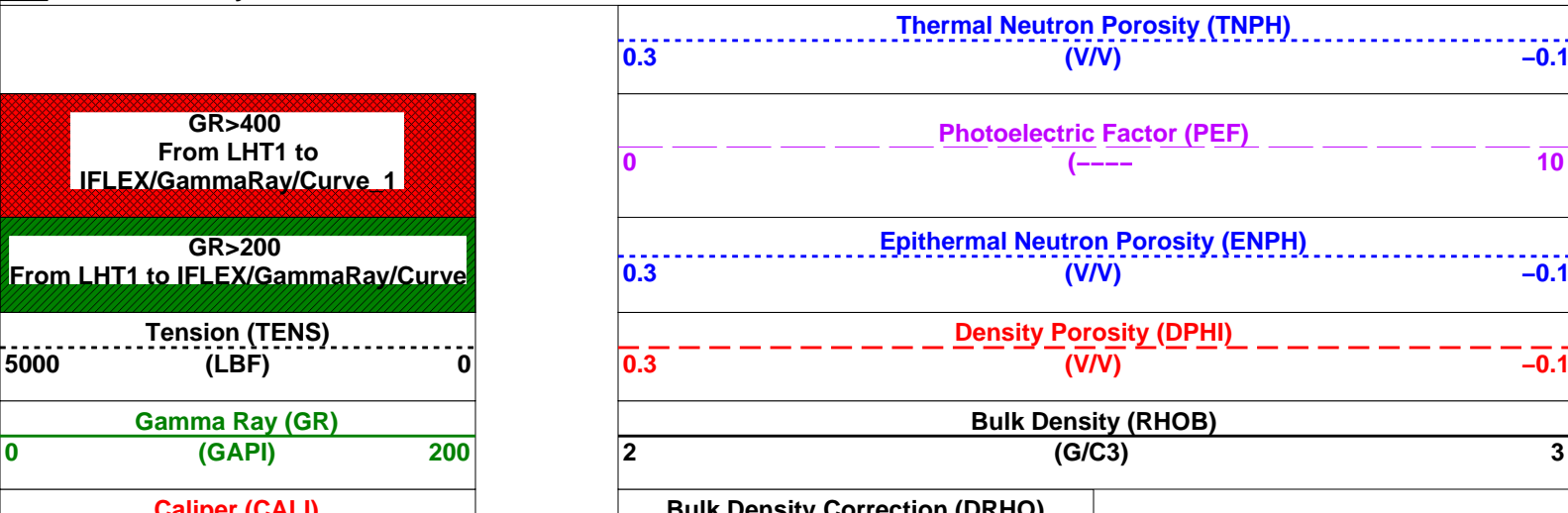
OP System Version: 19C1-222

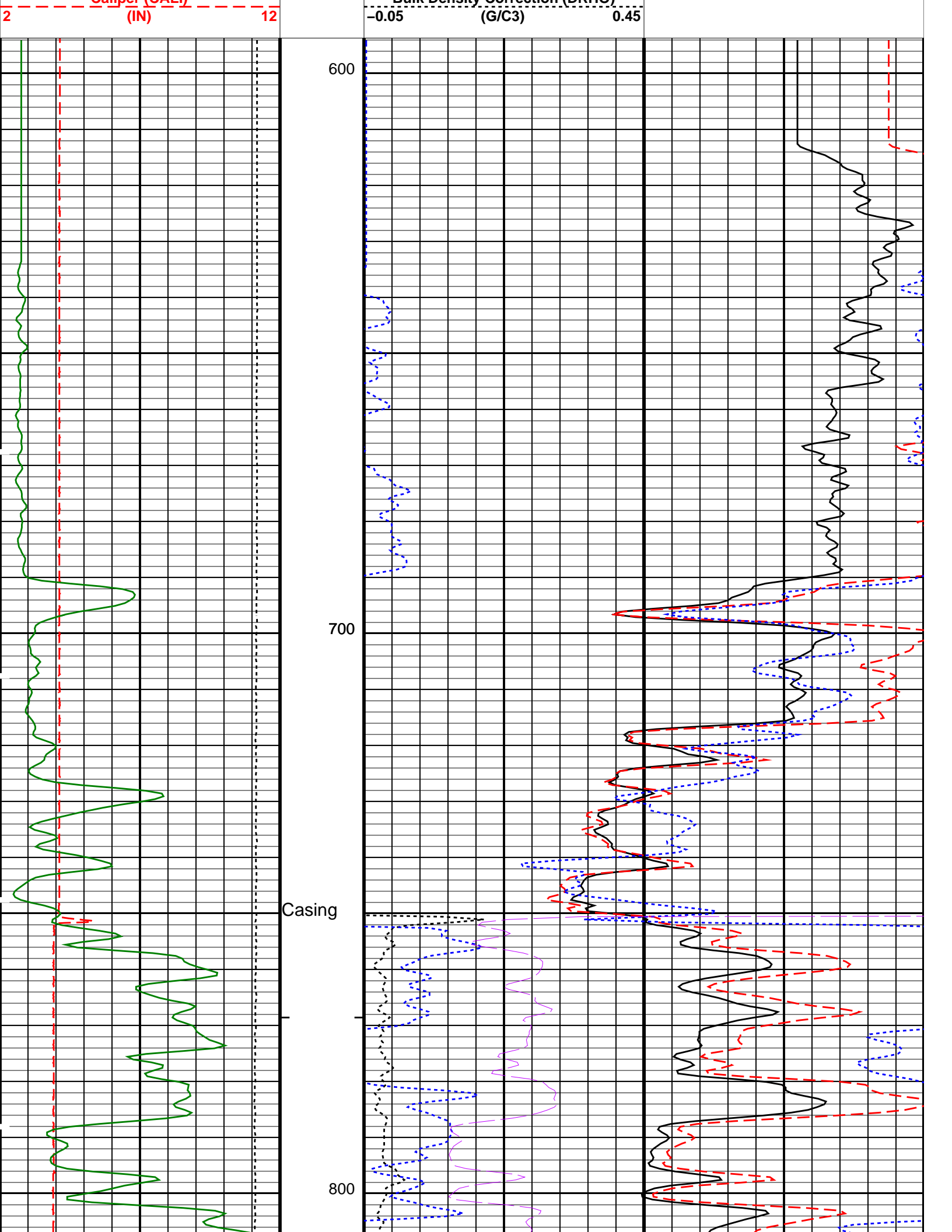
IDFR-E	19C1-222	ILDT-B	19C1-222
ITGN-B	19C1-222		

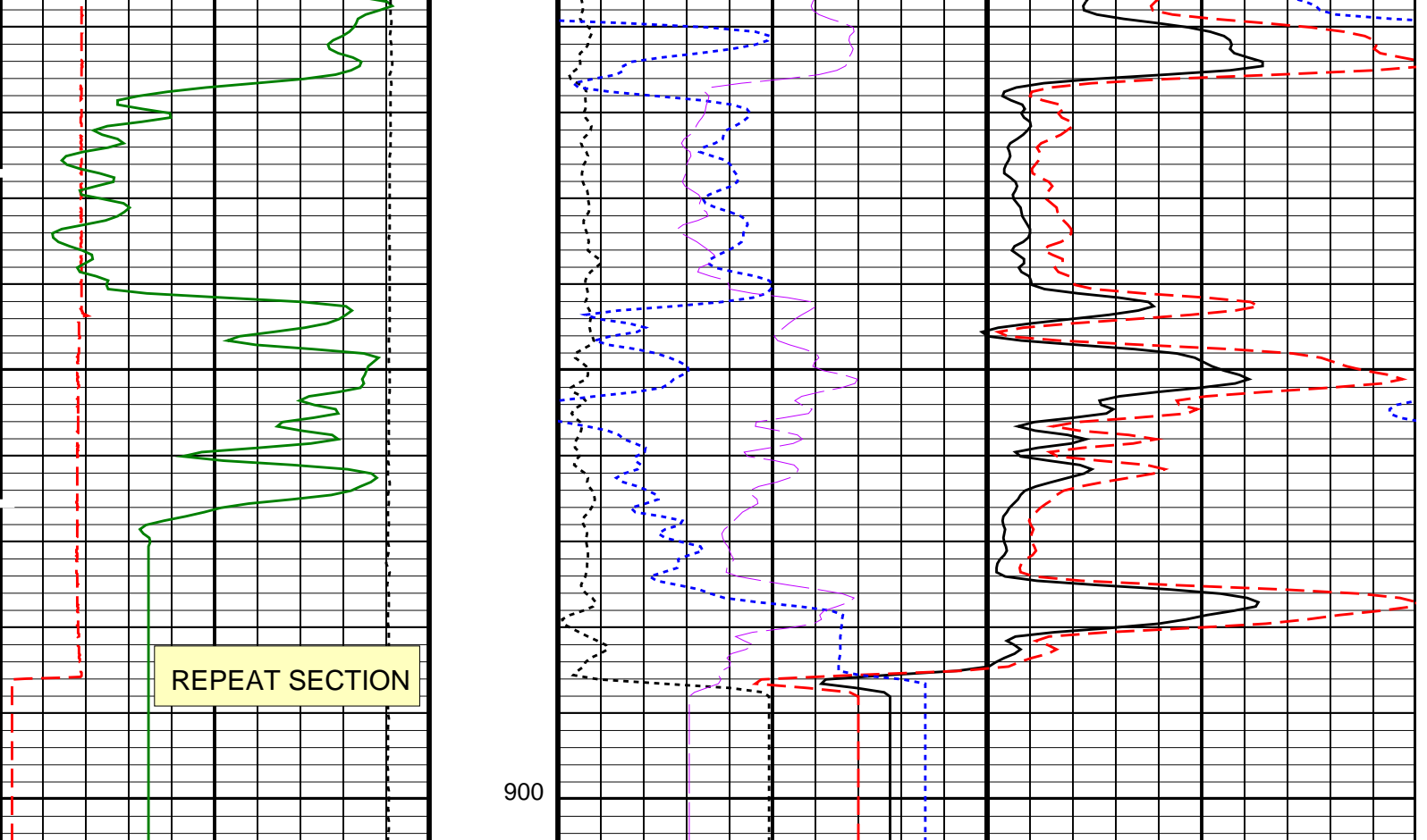
PIP SUMMARY

- 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

Time Mark Every 60 S







Caliper (CALI)
(IN) 2 12

Gamma Ray (GR)
(GAPI) 0 200

Tension (TENS)
(LBF) 5000 0

GR>200
From LHT1 to IFLEX/GammaRay/Curve

GR>400
From LHT1 to
IFLEX/GammaRay/Curve 1

Bulk Density Correction (DRHO)
(G/C3) -0.05 0.45

Bulk Density (RHOB)
(G/C3) 2 3

Density Porosity (DPHI)
(V/V) 0.3 -0.1

Epithermal Neutron Porosity (ENPH)
(V/V) 0.3 -0.1

Photoelectric Factor (PEF)
(---) 0 10

Thermal Neutron Porosity (TNPH)
(V/V) 0.3 -0.1

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

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
IDFR-E: iFlex Dual Formation Resistivity Tool		
BHS	Borehole Status	OPEN
DFT_IFLEX	Drilling Fluid Type	WATER
GCSE	Generalized Caliper Selection	CALI
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
ILD-T-B: iFlex Litho Density Tool		
BHS	Borehole Status	OPEN
DFT_IFLEX	Drilling Fluid Type	WATER
DHNV_ICEC	ICEC Firmware Version	09.19.19
DHNV_IPDP	IPDP Firmware Version	07.19.19
FD	Fluid Density	G/C3

FD	Fluid Density	1	G/C3
GCSE	Generalized Caliper Selection	CALI	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MDEN	Matrix Density	2.65	G/C3
PVN_ICEC	ICEC Computation Version	1.000	
PVN_IPDP	IPDP Computation Version	2.009	
TBHDS_ILDT	ILDT Tool Borehole Diameter Source	CALI	
ITGN-B: iFlex Telemetry Gamma Neutron Tool			
BARI_ITGN	Barite Mud Presence Flag	NO	
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	YES	
DFT_IFLEX	Drilling Fluid Type	WATER	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	CALI	
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MWCO	Mud Weight Correction Option	NO	
NICO	Neutron Interference Correction Option	YES	
PTCO	Pressure Temperature Correction Option	NO	
PVN_ITGN	ITGN Computation Version	1.005	
SDAT	Standoff Data Source	SOCN	
SOCN	Standoff Distance	0	IN
SOCO	Standoff Correction Option	NO	
TBHDS	Tool Borehole Diameter Source	CALI	
TBHTS	Tool Borehole Temperature Source	GTSE	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	CALI	
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
System and Miscellaneous			
BS	Bit Size	3.780	IN
BSAL	Borehole Salinity	-50000.00	PPM
CWEI	Casing Weight	11.30	LB/F
DFD	Drilling Fluid Density	8.30	LB/G
DO	Depth Offset for Playback	-0.5	FT
MST	Mud Sample Temperature	-50000.00	DEGF
PP	Playback Processing	OFF	
RMFS	Resistivity of Mud Filtrate Sample	-50000.0000	OHMM
TD	Total Depth	1802	FT

Format: BRAD_NUC_5 Vertical Scale: 5" per 100' Graphics File Created: 04-Oct-2013 20:05

OP System Version: 19C1-222

IDFR-E	19C1-222	ILDT-B	19C1-222
ITGN-B	19C1-222		

Input DLIS Files

IDL_LDL_CNL_020LUP	FN:19	03-Oct-2013 10:41	905.0 FT	594.0 FT
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Output DLIS Files

DEFAULT	IDL_LDL_CNL_013PUP	FN:17	PRODUCER	04-Oct-2013 20:05
CUSTOMER	IDL_LDL_CNL_013PUC	FN:18	CUSTOMER	04-Oct-2013 20:05

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
iFlex Litho Density Tool Wellsite Calibration - Detector Calibration							
Master: 31-Jul-2013 10:06 Before: 30-Sep-2013 5:01							
SS Window 1 Count Rate Master	1140	1084	1081	N/A	N/A	N/A	CPS
SS Window 2 Count Rate Master	1470	1391	1388	N/A	N/A	N/A	CPS
SS Window 3 Count Rate Master	760.0	718.0	712.5	N/A	N/A	N/A	CPS
SS Window 4 Count Rate Master	770.0	734.5	729.9	N/A	N/A	N/A	CPS
LS Window 1 Count Rate Master	79.00	74.28	86.00	N/A	N/A	N/A	CPS
LS Window 2 Count Rate Master	94.00	88.50	88.19	N/A	N/A	N/A	CPS
LS Window 3 Count Rate Master	280.0	255.0	254.8	N/A	N/A	N/A	CPS
LS Window 4 Count Rate Master	146.0	135.7	134.1	N/A	N/A	N/A	CPS

iFlex Litho Density Tool Wellsite Calibration – Detector Calibration

Master: 31-Jul-2013 10:06

SS Window 1 Count Rate Water L	27000	26760	N/A	N/A	N/A	N/A	CPS
SS Window 2 Count Rate Water L	23000	21470	N/A	N/A	N/A	N/A	CPS
SS Window 3 Count Rate Water L	13400	12480	N/A	N/A	N/A	N/A	CPS
SS Window 4 Count Rate Water L	11800	10900	N/A	N/A	N/A	N/A	CPS
LS Window 1 Count Rate Water L	1210	1177	N/A	N/A	N/A	N/A	CPS
LS Window 2 Count Rate Water L	1600	1454	N/A	N/A	N/A	N/A	CPS
LS Window 3 Count Rate Water L	2100	1928	N/A	N/A	N/A	N/A	CPS
LS Window 4 Count Rate Water L	530.0	490.5	N/A	N/A	N/A	N/A	CPS

iFlex Litho Density Tool Wellsite Calibration – Detector Calibration

Master: 31-Jul-2013 10:06

SS Window 1 Count Rate Water H	23000	18430	N/A	N/A	N/A	N/A	CPS
SS Window 2 Count Rate Water H	22000	18750	N/A	N/A	N/A	N/A	CPS
SS Window 3 Count Rate Water H	12800	11020	N/A	N/A	N/A	N/A	CPS
SS Window 4 Count Rate Water H	11300	9673	N/A	N/A	N/A	N/A	CPS
LS Window 1 Count Rate Water H	950.0	789.9	N/A	N/A	N/A	N/A	CPS
LS Window 2 Count Rate Water H	1380	1187	N/A	N/A	N/A	N/A	CPS
LS Window 3 Count Rate Water H	2000	1729	N/A	N/A	N/A	N/A	CPS
LS Window 4 Count Rate Water H	500.0	452.5	N/A	N/A	N/A	N/A	CPS

iFlex Litho Density Tool Wellsite Calibration – Detector Calibration

Master: 31-Jul-2013 10:06

SS Window 1 Count Rate Magnesi	28000	27660	N/A	N/A	N/A	N/A	CPS
SS Window 2 Count Rate Magnesi	24000	23000	N/A	N/A	N/A	N/A	CPS
SS Window 3 Count Rate Magnesi	13500	12590	N/A	N/A	N/A	N/A	CPS
SS Window 4 Count Rate Magnesi	11000	10130	N/A	N/A	N/A	N/A	CPS
LS Window 1 Count Rate Magnesi	5400	5063	N/A	N/A	N/A	N/A	CPS
LS Window 2 Count Rate Magnesi	6900	6285	N/A	N/A	N/A	N/A	CPS
LS Window 3 Count Rate Magnesi	8500	7735	N/A	N/A	N/A	N/A	CPS
LS Window 4 Count Rate Magnesi	1500	1384	N/A	N/A	N/A	N/A	CPS

iFlex Telemetry Gamma Neutron Tool Wellsite Calibration – Background

Master: 27-Aug-2013 10:57 Before: 30-Sep-2013 5:03

Near Thermal Count Rate Master	27.00	27.47	27.64	N/A	N/A	N/A	CPS
Far Thermal Count Rate Master	10.00	10.10	10.62	N/A	N/A	N/A	CPS
Epithermal Count Rate Master B	27.00	27.99	27.12	N/A	N/A	N/A	CPS

iFlex Telemetry Gamma Neutron Tool Wellsite Calibration – Tank Measurement

Master: 27-Aug-2013 10:57

Near Thermal Count Rate Tank M	7978	7858	N/A	N/A	N/A	N/A	CPS
Far Thermal Count Rate Tank Me	2847	2734	N/A	N/A	N/A	N/A	CPS
Epithermal Count Rate Tank Mea	813.0	797.5	N/A	N/A	N/A	N/A	CPS

iFlex Dual Formation Resistivity Tool / Equipment Identification

Primary Equipment:

iFlex Resistivity Mud Sensor	IRMS – A	105
iFlex Resistivity Pressure Sub	PSUB – A	125
iFlex Dual Formation Resistivity Sonde	IDRS – E	29

Auxiliary Equipment:

iFlex Litho Density Tool / Equipment Identification

Primary Equipment:

Mechanical Control Sonde	IMCS – A	26
Gamma Gamma Logging Source	GGLS – AA	3119
Powered Density Pad	IPDP – A	26
Caliper Electronics Cartridge	ICEC – B	26

Auxiliary Equipment:

iFlex Litho Density Tool Wellsite Calibration

Detector Calibration

Phase	SS Window 1 Count Rate Master Bkgd	CPS Value	Phase	SS Window 2 Count Rate Master Bkgd	CPS Value	Phase	SS Window 3 Count Rate Master Bkgd	CPS Value
Master		1084	Master		1391	Master		718.0
Before		1081	Before		1388	Before		712.5
	730.0 (Minimum) 1140 (Maximum) 1370 (Minimum)			990.0 (Minimum) 1470 (Maximum) 1720 (Minimum)			490.0 (Minimum) 760.0 (Maximum) 900.0 (Minimum)	

Phase Window 4 Count Rate Master Bkgd CPS Value				Phase Window 1 Count Rate Master Bkgd CPS Value				Phase Window 2 Count Rate Master Bkgd CPS Value			
Master			734.5	Master			74.28	Master			88.50
Before			729.9	Before			86.00	Before			88.19
480.0 (Minimum)	770.0 (Nominal)	940.0 (Maximum)		47.00 (Minimum)	79.00 (Nominal)	99.00 (Maximum)		54.00 (Minimum)	94.00 (Nominal)	121.0 (Maximum)	
Phase Window 3 Count Rate Master Bkgd CPS Value				Phase Window 4 Count Rate Master Bkgd CPS Value							
Master			255.0	Master			135.7				
Before			254.8	Before			134.1				
150.0 (Minimum)	280.0 (Nominal)	360.0 (Maximum)		83.00 (Minimum)	146.0 (Nominal)	190.0 (Maximum)					
Master: 31-Jul-2013 10:06						Before: 30-Sep-2013 5:01					

iFlex Litho Density Tool Wellsite Calibration											
Detector Calibration											
SS Window 1 Count Rate Water Low PE Insert CPS Value				SS Window 2 Count Rate Water Low PE Insert CPS Value				SS Window 3 Count Rate Water Low PE Insert CPS Value			
Master			26760	Master			21470	Master			12480
18000 (Minimum)	27000 (Nominal)	30000 (Maximum)		16000 (Minimum)	23000 (Nominal)	25000 (Maximum)		9800 (Minimum)	13400 (Nominal)	14500 (Maximum)	
SS Window 4 Count Rate Water Low PE Insert CPS Value				LS Window 1 Count Rate Water Low PE Insert CPS Value				LS Window 2 Count Rate Water Low PE Insert CPS Value			
Master			10900	Master			1177	Master			1454
8600 (Minimum)	11800 (Nominal)	12900 (Maximum)		820.0 (Minimum)	1210 (Nominal)	1400 (Maximum)		1050 (Minimum)	1600 (Nominal)	1800 (Maximum)	
LS Window 3 Count Rate Water Low PE Insert CPS Value				LS Window 4 Count Rate Water Low PE Insert CPS Value							
Master			1928	Master			490.5				
1450 (Minimum)	2100 (Nominal)	2400 (Maximum)		380.0 (Minimum)	530.0 (Nominal)	580.0 (Maximum)					
Master: 31-Jul-2013 10:06											

iFlex Litho Density Tool Wellsite Calibration											
Detector Calibration											
SS Window 1 Count Rate Water High PE Insert CPS Value				SS Window 2 Count Rate Water High PE Insert CPS Value				SS Window 3 Count Rate Water High PE Insert CPS Value			
Master			18430	Master			18750	Master			11020
16000 (Minimum)	23000 (Nominal)	26000 (Maximum)		15000 (Minimum)	22000 (Nominal)	24000 (Maximum)		9300 (Minimum)	12800 (Nominal)	13900 (Maximum)	
SS Window 4 Count Rate Water High PE Insert CPS Value				LS Window 1 Count Rate Water High PE Insert CPS Value				LS Window 2 Count Rate Water High PE Insert CPS Value			
Master			9673	Master			789.9	Master			1187
8200 (Minimum)	11300 (Nominal)	12400 (Maximum)		640.0 (Minimum)	950.0 (Nominal)	1100 (Maximum)		930.0 (Minimum)	1380 (Nominal)	1600 (Maximum)	
LS Window 3 Count Rate Water High PE Insert CPS Value				LS Window 4 Count Rate Water High PE Insert CPS Value							
Master			1729	Master			452.5				
1350 (Minimum)	2000 (Nominal)	2300 (Maximum)		360.0 (Minimum)	500.0 (Nominal)	550.0 (Maximum)					
Master: 31-Jul-2013 10:06											

iFlex Litho Density Tool Wellsite Calibration											
Detector Calibration											
SS Window 1 Count Rate Magnesium Low PE Insert CPS Value				SS Window 2 Count Rate Magnesium Low PE Insert CPS Value				SS Window 3 Count Rate Magnesium Low PE Insert CPS Value			
Master			27660	Master			23000	Master			12590
19000 (Minimum)	28000 (Nominal)	31000 (Maximum)		17000 (Minimum)	24000 (Nominal)	27000 (Maximum)		9900 (Minimum)	13500 (Nominal)	14700 (Maximum)	
SS Window 4 Count Rate Magnesium Low PE Insert CPS Value				LS Window 1 Count Rate Magnesium Low PE Insert CPS Value				LS Window 2 Count Rate Magnesium Low PE Insert CPS Value			
Master			10130	Master			5063	Master			6285
8000 (Minimum)	11000 (Nominal)	12000 (Maximum)		3600 (Minimum)	5400 (Nominal)	6200 (Maximum)		4600 (Minimum)	6900 (Nominal)	8000 (Maximum)	
LS Window 3 Count Rate Magnesium Low PE Insert CPS Value				LS Window 4 Count Rate Magnesium Low PE Insert CPS Value							
Master			7735	Master			1384				
5700 (Minimum)	8500 (Nominal)	9900 (Maximum)		1030 (Minimum)	1500 (Nominal)	1800 (Maximum)					
Master: 31-Jul-2013 10:06											

iFlex Litho Density Tool Master Calibration											
Detector Calibration											
Phase Window 1 Count Rate Master Bkgd CPS Value				Phase Window 2 Count Rate Master Bkgd CPS Value				Phase Window 3 Count Rate Master Bkgd CPS Value			
Master				Master				Master			

Master		1084	Master		1391	Master		718.0
Phase Window 4 Count Rate Master Bkgd CPS Value			Phase Window 1 Count Rate Master Bkgd CPS Value			Phase Window 2 Count Rate Master Bkgd CPS Value		
Master		734.5	Master		74.28	Master		88.50
Phase Window 3 Count Rate Master Bkgd CPS Value			Phase Window 4 Count Rate Master Bkgd CPS Value					
Master		255.0	Master		135.7			
Master: 31-Jul-2013 10:06								

iFlex Litho Density Tool Master Calibration								
Detector Calibration								
SS Phase Window 1 Count Rate Water Low PE Insert CPS Value			SS Phase Window 2 Count Rate Water Low PE Insert CPS Value			SS Phase Window 3 Count Rate Water Low PE Insert CPS Value		
Master		26760	Master		21470	Master		12480
LS Phase Window 4 Count Rate Water Low PE Insert CPS Value			LS Phase Window 1 Count Rate Water Low PE Insert CPS Value			LS Phase Window 2 Count Rate Water Low PE Insert CPS Value		
Master		10900	Master		1177	Master		1454
LS Phase Window 3 Count Rate Water Low PE Insert CPS Value			LS Phase Window 4 Count Rate Water Low PE Insert CPS Value					
Master		1928	Master		490.5			
Master: 31-Jul-2013 10:06								

iFlex Litho Density Tool Master Calibration								
Detector Calibration								
SS Phase Window 1 Count Rate Water High PE Insert CPS Value			SS Phase Window 2 Count Rate Water High PE Insert CPS Value			SS Phase Window 3 Count Rate Water High PE Insert CPS Value		
Master		18430	Master		18750	Master		11020
LS Phase Window 4 Count Rate Water High PE Insert CPS Value			LS Phase Window 1 Count Rate Water High PE Insert CPS Value			LS Phase Window 2 Count Rate Water High PE Insert CPS Value		
Master		9673	Master		789.9	Master		1187
LS Phase Window 3 Count Rate Water High PE Insert CPS Value			LS Phase Window 4 Count Rate Water High PE Insert CPS Value					
Master		1729	Master		452.5			
Master: 31-Jul-2013 10:06								

iFlex Litho Density Tool Master Calibration								
Detector Calibration								
SS Phase Window 1 Count Rate Magnesium Low PE Insert CPS Value			SS Phase Window 2 Count Rate Magnesium Low PE Insert CPS Value			SS Phase Window 3 Count Rate Magnesium Low PE Insert CPS Value		
Master		27660	Master		23000	Master		12590
LS Phase Window 4 Count Rate Magnesium Low PE Insert CPS Value			LS Phase Window 1 Count Rate Magnesium Low PE Insert CPS Value			LS Phase Window 2 Count Rate Magnesium Low PE Insert CPS Value		
Master		10130	Master		5063	Master		6285
LS Phase Window 3 Count Rate Magnesium Low PE Insert CPS Value			LS Phase Window 4 Count Rate Magnesium Low PE Insert CPS Value					
Master		7735	Master		1384			
Master: 31-Jul-2013 10:06								

iFlex Telemetry Gamma Neutron Tool / Equipment Identification

Primary Equipment:

Telemetry Gamma Neutron Sonde
 Neutron Neutron Logging Source – contain
 Telemetry Gamma Neutron Housing
 PSP Supply and Telemetry Cartridge
 PSP Telemetry Cartridge
 PSC 16.384MHz oscillator

ITNS – B 22
 NNLS – C 6011
 ITNH – B 22
 PSTC – A 3703
 PSC – ATS 3703
 PSC_ –

Auxiliary Equipment:

iFlex Telemetry Gamma Neutron Tool Wellsite Calibration											
Background											
Phase	Thermal Count Rate	Master Bkgd	CPS Value	Phase	Thermal Count Rate	Master Bkgd	CPS Value	Phase	Thermal Count Rate	Master Bkgd	CPS Value
Master			27.47	Master			10.10	Master			27.99
Before			27.64	Before			10.62	Before			27.12
	20.00 (Minimum)	27.00 (Nominal)	40.00 (Maximum)		7.000 (Minimum)	10.00 (Nominal)	17.00 (Maximum)		20.00 (Minimum)	27.00 (Nominal)	40.00 (Maximum)
Master: 27-Aug-2013 10:57				Before: 30-Sep-2013 5:03							

iFlex Telemetry Gamma Neutron Tool Wellsite Calibration											
Tank Measurement											
Phase	Thermal Count Rate	Tank Meas	CPS Value	Phase	Thermal Count Rate	Tank Meas	CPS Value	Phase	Thermal Count Rate	Tank Meas	CPS Value
Master			7858	Master			2734	Master			797.5
	7322 (Minimum)	7978 (Nominal)	8580 (Maximum)		2578 (Minimum)	2847 (Nominal)	3106 (Maximum)		746.0 (Minimum)	813.0 (Nominal)	881.0 (Maximum)
Master: 27-Aug-2013 10:57											

iFlex Telemetry Gamma Neutron Tool Master Calibration											
Tank Measurement											
Phase	Thermal Count Rate	Tank Meas	CPS Value	Phase	Thermal Count Rate	Tank Meas	CPS Value	Phase	Thermal Count Rate	Tank Meas	CPS Value
Master			7858	Master			2734	Master			797.5
	7322 (Minimum)	7978 (Nominal)	8580 (Maximum)		2578 (Minimum)	2847 (Nominal)	3106 (Maximum)		746.0 (Minimum)	813.0 (Nominal)	881.0 (Maximum)
Master: 27-Aug-2013 10:57											

Company: **LAMONT DOHERTY EARTH OBSERVATORY**



Well: **TW #4**
 Field: **WILDCAT**
 County: **ROCKLAND**
 State: **NEW YORK**

MAXIS EXPRESS
 DENSITY / NEUTRON
 GAMMA RAY / CALIPER