Schlumberger

Company: PETRO-CANADA

Well: PETRO-CANADA BLACKWATER KWIJIKA M-59
Field: KWIJIKA
Province: NORTHWEST TERRITORIES *** MD ***

Province: NORTHWEST TERRITORIES
Field: KWIJIKA
Location: LSD: M-59
Well: PETRO-CANADA BLACKWATER KWIJIKA M
Company: PETRO-CANADA

DIPOLE SHEAR
SONIC IMAGER LOG

N E B COPY

LSD: M-59		Elev.:	K.B. 252.1 m
UWID: 300M596440122300			G.L. 245.9 m
			D.F. 251.8 m
Permanent Datum:	GROUND LEVEL	Elev.:	245.9 m
Log Measured From:	KELLY BUSHING	6.2 m	above Perm. Datum
Drilling Measured From:	KELLY BUSHING		

LOCATION

API Serial No.
1165

	Run 1	Run 2	Run 3	Run 4
Logging Date	23-Feb-2008			
Run Number	ONE			
Depth Driller	1200 m			
Schlumberger Depth	1201 m			
Bottom Log Interval	1183.3 m			
Top Log Interval	347.5 m			
Casing Driller Size @ Depth	244.500 mm @ 348 m		@	
Casing Schlumberger	347.5 m			
Bit Size	222.000 mm			
Type Fluid In Hole	KCL POLYMER			
MUD Density / Viscosity	1180 kg/m3 / 47 s			
MUD Fluid Loss / PH	7 cm3 / 10			
MUD Source Of Sample	FLOWLINE			
RM @ Measured Temperature	0.117 ohm.m @ 20 degC		@	
RMF @ Measured Temperature	0.103 ohm.m @ 20 degC		@	
RMC @ Measured Temperature	0.228 ohm.m @ 20 degC		@	
Source RMF / RMC	PRESSED / PRESSED			
RM @ MRT / RMF @ MRT	0.100 @ 27 / 0.088 @ 27	@ / @	@ / @	@ / @
Maximum Recorded Temperatures	27 degC			
Circulation Stopped / Time	23-Feb-2008 / 7:15			
Logger On Bottom / Time	23-Feb-2008 / 22:05			
Unit Number / Location	4301 / NORMAN WELLS			
Recorded By	J.ROLLINGS / R. JACOBS			
Witnessed By	G. TIMMONS / G. DEON			

DEPTH SUMMARY LISTING

Date Created: 23-FEB-2008 23:31:57

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	7-46A XXS
Serial Number:	6423	Serial Number:	2565	Serial Number:	6199
Calibration Date:	15-FEB-2008	Calibration Date:	15-FEB-2008	Length:	7800.14 M
Calibrator Serial Number:	4	Calibrator Serial Number:	-999	Conveyance Method:	Wireline
Calibration Cable Type:	7-46P	Calibration Gain:	0.88	Rig Type:	Land
Wheel Correction 1:	-4	Calibration Offset:	336.00		
Wheel Correction 2:	-5				

Depth Control Parameters

Log Sequence: Subsequent Log In the Well

Reference Log Name: PLATFORM EXPRESS COMPENSATED NEUTRON DUAL LITHO-DENSITY LOG
Reference Log Run Number: ONE
Reference Log Date: 23-FEB-2008

Depth Control Remarks

1. IDW IS PRIMARY DEPTH MEASUREMENT
2. Z-CHART USED AS A SECONDARY DEPTH MEASUREMENTS
3.
4.
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	OTHER SERVICES2
OS1: PEX-HRLA-TLD2-HNGS	OS1:
OS2: FMI-DSI-EMS	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
ALL PRESENTATIONS AS PER LOGGING PROGRAM DATED FEB 6,2008	
INTERVALS CONFIRMED ON LOCATION BY WELLSITE GEOLOGIST	
RUN 1: TLD-HGNS-HRLA-TLD2-HNGS-SP	
RUN 2: FMI-DSI-EMS-EMA-GR-SAH-F	
MAXIMUM TEMPERATURE TAKEN FROM HEAD THERMOMETER COMPARED TO EMA	
DIPOLE RAN IN P&S, LOWER & UPPER DIPOLE MODE	
FMI & DSI INTERVAL: TD-CS	
SWIVEL RAN DUE TO NEW CABLE	
RELABELLED DSI IN FIELD	
EMS CALIPERS USED TO COMPUTE HOLE & CEMENT VOLUME	
MUD RESISTIVTY PRESENTED ON EMS PRESENTATION	
GR NOT REPEATED FROM 1160-1165M DUE TO TELEMETRY ISSUE ON REPEAT	
PULLED TIGHT OFF BOTTOM ON REPEAT PASS	
C2 FMI CALIPER SENSOR DAMAGED AT 640M, INTERMITTENTLY WORKING TO CS	
FMI IMAGES NOT AFFECTED ONLY C2 SENSORS	
RIG: AKITA 51	
CREW: BILLY LIAM, LARRY DUDUS	

RUN 1		RUN 2	
SERVICE ORDER #:	11958995	SERVICE ORDER #:	
PROGRAM VERSION:	15C0-309	PROGRAM VERSION:	
FLUID LEVEL:		FLUID LEVEL:	

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

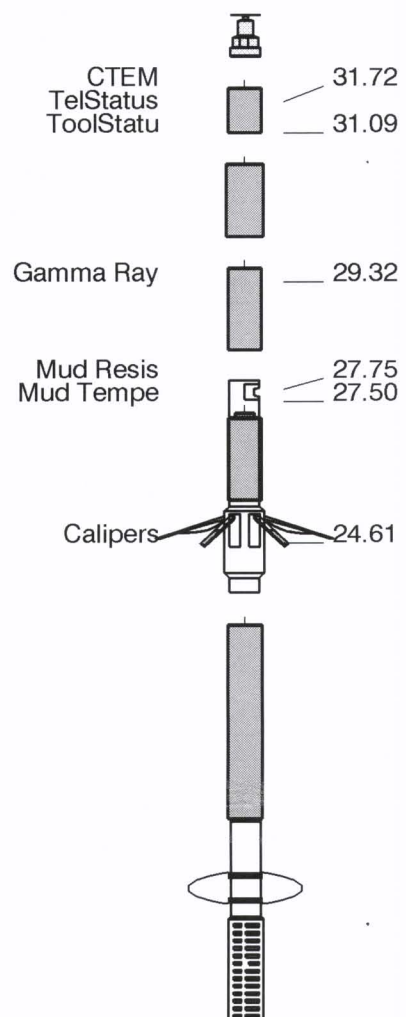
EQUIPMENT DESCRIPTION

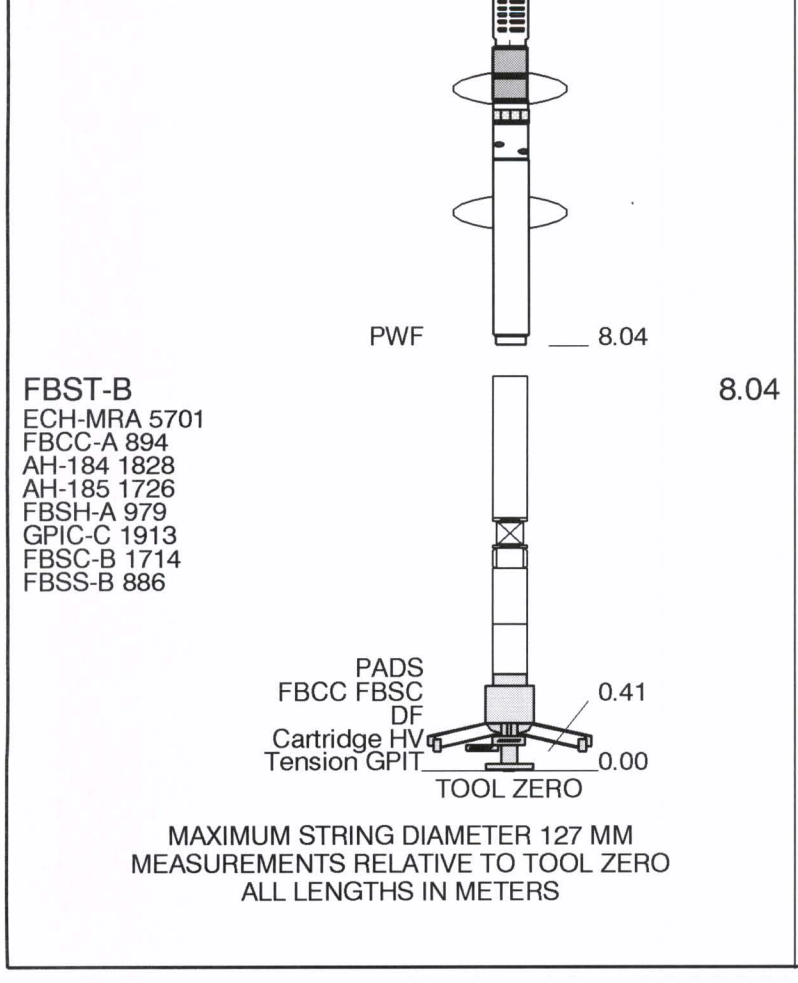
RUN 1 | RUN 2

SURFACE EQUIPMENT

GSR-U/Y 1237
WITM (DTS)-A

DOWNHOLE EQUIPMENT





Input DLIS Files

DEFAULT	FMI_DSI_EMS_029LUP	FN:44	PRODUCER	23-Feb-2008 22:29	1202.1 M	278.4 M

Output DLIS Files

DEFAULT	FMI_DSI_EMS_031PUP	FN:48	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
BACKUP	FMI_DSI_EMS_031PUP	FN:49	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
IMAGE	FMI_DSI_EMS_031PUP	FN:50	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
REDUCED	FMI_DSI_EMS_031PUP	FN:51	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M

Integrated Hole/Cement Volume Summary

Hole Volume = 34.48 M3

Cement Volume = 13.30 M3 (assuming 177.80 MM casing O.D.)

Computed from 1200.9 M to 348.1 M using data channel(s) RD1 RD2 RD3 RD4 RD5 RD6

OP System Version: 15C0-309

MCM

FBST-B	15C0-309	DSST-B	15C0-309
EMS-B	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

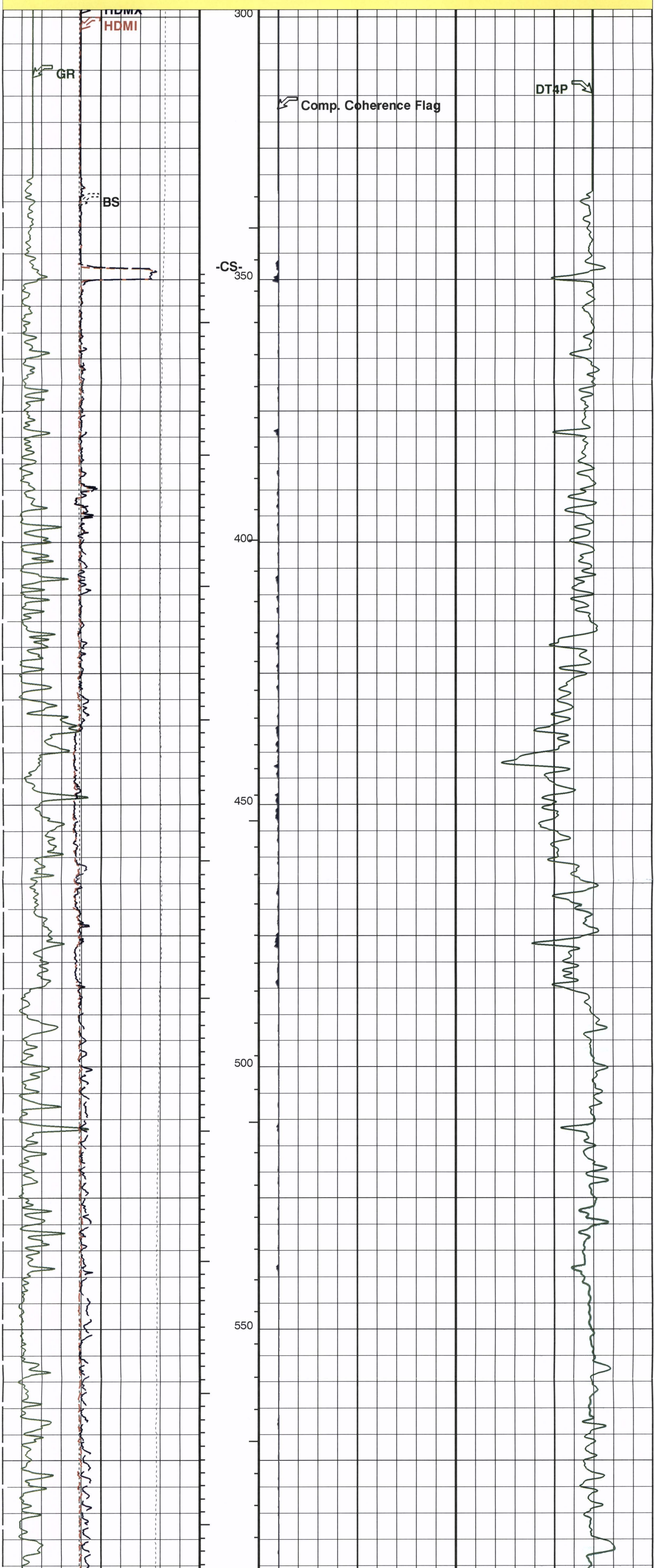
PIP SUMMARY

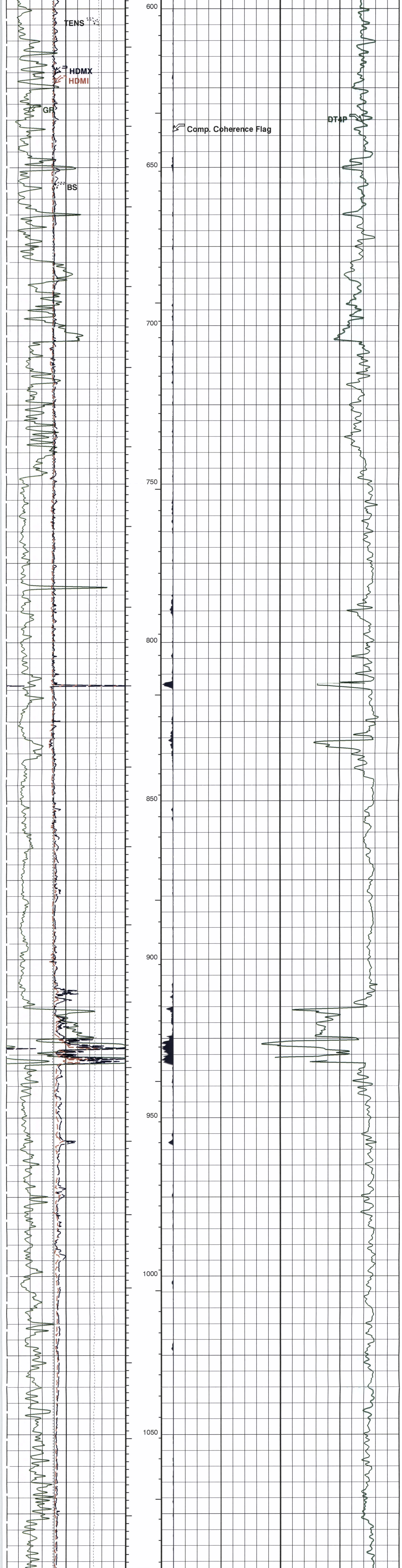
- Integrated Hole Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Transit Time Minor Pip Every 1 MS
- Integrated Transit Time Major Pip Every 10 MS

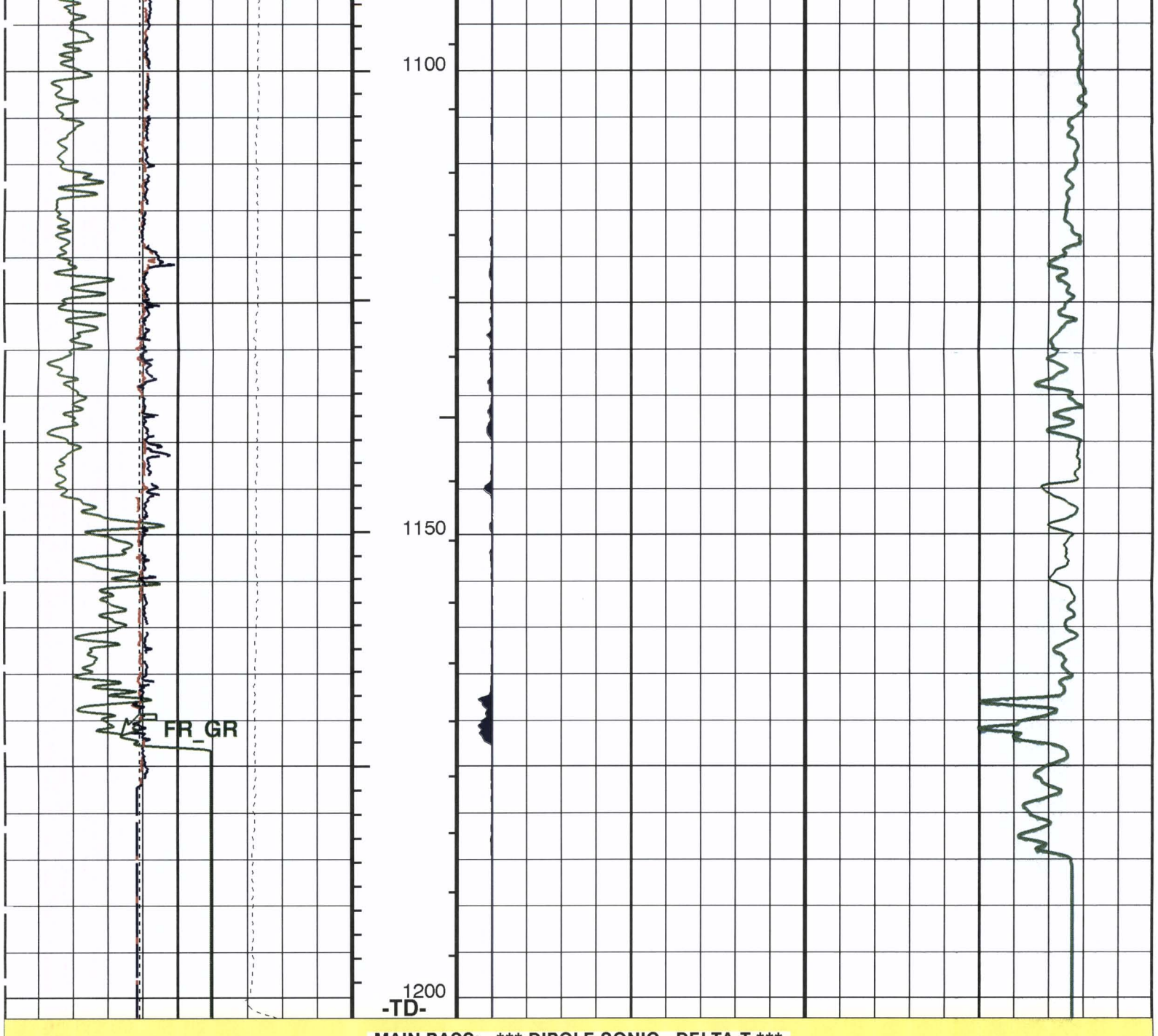
Time Mark Every 60 S

Tension (TENS)	25000 (N)	0
Hole Diameter Maximum (HDMX)	125 (MM)	375
Hole Diameter Minimum (HDMI)	125 (MM)	375
Gamma Ray (GR)	0 (GAPI)	150
Bit Size (BS)	125 (MM)	375
Low Comp Coherence Flag		
Delta-T Comp - P & S (DT4P)	500 (US/M)	100

MAIN PASS: * DIPOLE SONIC - DELTA-T *****




TENS
HDMX
HDMI
GR
BS
600
650
700
750
800
850
900
950
1000
1050
Comp. Coherence Flag
DT4P



MAIN PASS: *** DIPOLE SONIC - DELTA-T ***

Bit Size (BS) 125 (MM) 375	Delta-T Comp - P & S (DT4P) 500 (US/M) 100
Gamma Ray (GR) 0 (GAPI) 150	Low Comp Coherence Flag
Hole Diameter Minimum (HDMI) 125 (MM) 375	
Hole Diameter Maximum (HDMX) 125 (MM) 375	
Tension (TENS) 25000 (N) 0	

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Transit Time Minor Pip Every 1 MS
- Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
DSST-B: Dipole Shear Imager - B			
BHS	Borehole Status	OPEN	
CASF	Label Casing Function - Monopole P&S	50	
COLL	Label Slowness Lower Limit - Monopole P&S Compressional	131.234	US/M
COUL	Label Slowness Upper Limit - Monopole P&S Compressional	590.551	US/M
DTF	Delta-T Fluid	620.079	US/M
FILG	Label Fill Gap Control - Monopole P&S	COMP_SHEAR	
ITTS	Integrated Transit Time Source	DTCO	
LFC	Label Formation Character - Monopole P&S	COMP_FIRST	
MCS	Mean Casing Slowness	187.008	US/M
MTXG	Monopole Transmitter Geometry	4724	MM
NWI4	Number Waveform Items 4	8	
RSMN	Label Shear/Compressional Minimum Ratio - Monopole P&S	1.4	
RSMX	Label Shear/Compressional Maximum Ratio - Monopole P&S	2.12	
RX1G	Receiver 1 Geometry	7468	MM
RX2G	Receiver 2 Geometry	7620	MM
RX3G	Receiver 3 Geometry	7772	MM
RX4G	Receiver 4 Geometry	7925	MM
RX5G	Receiver 5 Geometry	8077	MM
RX6G	Receiver 6 Geometry	8230	MM
RX7G	Receiver 7 Geometry	8382	MM
RX8G	Receiver 8 Geometry	8534	MM
SAS4	STC Sonic Array Status - Monopole P&S	255	
SHLL	Label Slowness Lower Limit - Monopole P&S Shear	246.063	US/M
SHUL	Label Slowness Upper Limit - Monopole P&S Shear	590.551	US/M
SSW4	STC Source Waveform - Monopole P&S	WF_SAM4	
STLL	Label Slowness Lower Limit - Monopole Stoneley	590.551	US/M
STUL	Label Slowness Upper Limit - Monopole Stoneley	2559.06	US/M
TWI4	STC Integration Time Window - Monopole P&S	500	US
EMS-B: Environment Measurement Sonde			
BHS	Borehole Status	OPEN	
ECOF	EMS Caliper Offset	50.8	MM
EFC	EMS Fixed Caliper Operation	OFF	
FCD	Future Casing (Outer) Diameter	177.8	MM
HVCS	Integrated Hole Volume Caliper Selection	EMS_Calipers	
SGT-N: Scintillation Gamma Ray Tool - N			
BHS	Borehole Status	OPEN	
DIR: Directional Survey Computation			
SPVD	TVD of Starting Point	0	M
TIMD	Along-hole depth of Tie-in Point	348	M
TIVD	TVD of Tie-in Point	348	M
HOLEV: Integrated Hole/Cement Volume			
FCD	Future Casing (Outer) Diameter	177.8	MM
HVCS	Integrated Hole Volume Caliper Selection	EMS_Calipers	
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	1.524	M
TDD	Total Depth - Driller	1200.00	M
TDL	Total Depth - Logger	1201.00	M
System and Miscellaneous			
BS	Bit Size	222.000	MM
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	1201	M

Format: DSI_S2 Vertical Scale: 1:600 Graphics File Created: 24-Feb-2008 01:17

OP System Version: 15C0-309

MCM

FBST-B	15C0-309	DSST-B	15C0-309
EMS-B	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

Input DLIS Files

DEFAULT	FMI_DSI_EMS_029LUP	FN:44	PRODUCER	23-Feb-2008 22:29	1202.1 M	278.4 M

Output DLIS Files

DEFAULT	FMI_DSI_EMS_031PUP	FN:48	PRODUCER	24-Feb-2008 01:17		
BACKUP	FMI_DSI_EMS_031PUP	FN:49	PRODUCER	24-Feb-2008 01:17		
IMAGE	FMI_DSI_EMS_031PUP	FN:50	PRODUCER	24-Feb-2008 01:17		
REDUCED	FMI_DSI_EMS_031PUP	FN:51	PRODUCER	24-Feb-2008 01:17		

Input DLIS Files

DEFAULT	FMI_DSI_EMS_029LUP	FN:44	PRODUCER	23-Feb-2008 22:29	1202.1 M	278.4 M

Output DLIS Files

DEFAULT	FMI_DSI_EMS_031PUP	FN:48	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
BACKUP	FMI_DSI_EMS_031PUP	FN:49	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
IMAGE	FMI_DSI_EMS_031PUP	FN:50	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
REDUCED	FMI_DSI_EMS_031PUP	FN:51	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M

Integrated Hole/Cement Volume Summary

Hole Volume = 34.48 M3

Cement Volume = 13.30 M3 (assuming 177.80 MM casing O.D.)

Computed from 1200.9 M to 348.1 M using data channel(s) RD1 RD2 RD3 RD4 RD5 RD6

OP System Version: 15C0-309

MCM

FBST-B	15C0-309	DSST-B	15C0-309
EMS-B	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Transit Time Minor Pip Every 1 MS
- Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

Tension (TENS) 25000 (N) 0	
Hole Diameter Maximum (HDMX) 125 (MM) 375	
Hole Diameter Minimum (HDMI) 125 (MM) 375	
Gamma Ray (GR) 0 (GAPI) 150	Low Comp Coherence Flag
Bit Size (BS) 125 (MM) 375	Delta-T Comp - P & S (DT4P) 500 (US/M) 100

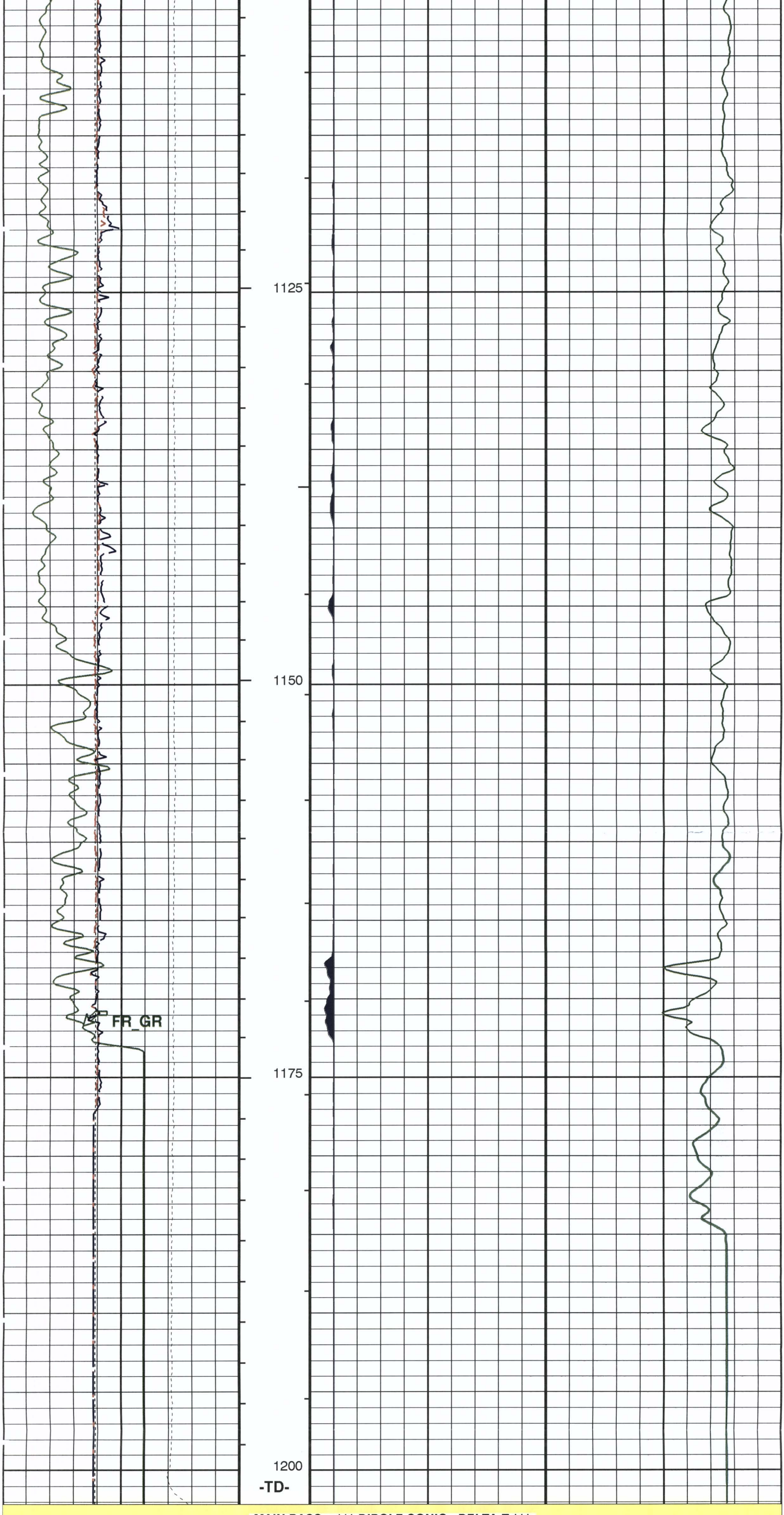
MAIN PASS: *** DIPOLE SONIC - DELTA-T ***

TENS
HDMX
HDMI
GR
BS
325
Comp. Coherence Flag
DT4P
-CS-
350
375
400
425
450
475
500

525
550
575
600
625
650
675
700
TENS
HDMX
HDMI
GR
BS
Comp. Coherence Flag
DT4P

725
750
775
800
825
850
875
900

925
950
975
1000
1025
1050
1075
1100



MAIN PASS: * DIPOLE SONIC - DELTA-T *****

Bit Size (BS)		
125	(MM)	375

Gamma Ray (GR)		
0	(GAPI)	150

Hole Diameter Minimum (HDMI)		
125	(MM)	375

Hole Diameter Maximum (HDMX)		
125	(MM)	375

Tension (TENS)		
25000	(N)	0

Delta-T Comp - P & S (DT4P)		
500	(US/M)	100

Low Comp Coherence Flag

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Transit Time Minor Pip Every 1 MS
- Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	DSST-B: Dipole Shear Imager - B		
BHS	Borehole Status	OPEN	
CASF	Label Casing Function - Monopole P&S	50	
COLL	Label Slowness Lower Limit - Monopole P&S Compressional	131.234	US/M
COUL	Label Slowness Upper Limit - Monopole P&S Compressional	590.551	US/M
DTF	Delta-T Fluid	620.079	US/M
FILG	Label Fill Gap Control - Monopole P&S	COMP_SHEAR	
ITTS	Integrated Transit Time Source	DTCO	
LFC	Label Formation Character - Monopole P&S	COMP_FIRST	
MCS	Mean Casing Slowness	187.008	US/M
MTXG	Monopole Transmitter Geometry	4724	MM
NWI4	Number Waveform Items 4	8	
RSMN	Label Shear/Compressional Minimum Ratio - Monopole P&S	1.4	
RSMX	Label Shear/Compressional Maximum Ratio - Monopole P&S	2.12	
RX1G	Receiver 1 Geometry	7468	MM
RX2G	Receiver 2 Geometry	7620	MM
RX3G	Receiver 3 Geometry	7772	MM
RX4G	Receiver 4 Geometry	7925	MM
RX5G	Receiver 5 Geometry	8077	MM
RX6G	Receiver 6 Geometry	8230	MM
RX7G	Receiver 7 Geometry	8382	MM
RX8G	Receiver 8 Geometry	8534	MM
SAS4	STC Sonic Array Status - Monopole P&S	255	
SHLL	Label Slowness Lower Limit - Monopole P&S Shear	246.063	US/M
SHUL	Label Slowness Upper Limit - Monopole P&S Shear	590.551	US/M
SSW4	STC Source Waveform - Monopole P&S	WF_SAM4	
STLL	Label Slowness Lower Limit - Monopole Stoneley	590.551	US/M
STUL	Label Slowness Upper Limit - Monopole Stoneley	2559.06	US/M
TWI4	STC Integration Time Window - Monopole P&S	500	US
	EMS-B: Environment Measurement Sonde		
BHS	Borehole Status	OPEN	
ECOF	EMS Caliper Offset	50.8	MM
EFC	EMS Fixed Caliper Operation	OFF	
FCD	Future Casing (Outer) Diameter	177.8	MM
HVCS	Integrated Hole Volume Caliper Selection	EMS_Calipers	
	SGT-N: Scintillation Gamma Ray Tool - N		
BHS	Borehole Status	OPEN	
	DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0	M
TIMD	Along-hole depth of Tie-in Point	348	M
TIVD	TVD of Tie-in Point	348	M
	HOLEV: Integrated Hole/Cement Volume		
FCD	Future Casing (Outer) Diameter	177.8	MM
HVCS	Integrated Hole Volume Caliper Selection	EMS_Calipers	
	STI: Stuck Tool Indicator		
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	1.524	M
TDD	Total Depth - Driller	1200.00	M
TDL	Total Depth - Logger	1201.00	M
	System and Miscellaneous		
BS	Bit Size	222.000	MM
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	
TD	Total Depth	1201	M

Format: DSI_S5 Vertical Scale: 1:240 Graphics File Created: 24-Feb-2008 01:17

OP System Version: 15C0-309

MCM

FBST-B	15C0-309	DSST-B	15C0-309
EMS-B	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

Input DLIS Files

DEFAULT	FMI_DSI_EMS_029LUP	FN:44	PRODUCER	23-Feb-2008 22:29	1202.1 M	278.4 M

Output DLIS Files

DEFAULT	FMI_DSI_EMS_031PUP	FN:48	PRODUCER	24-Feb-2008 01:17
BACKUP	FMI_DSI_EMS_031PUP	FN:49	PRODUCER	24-Feb-2008 01:17
IMAGE	FMI_DSI_EMS_031PUP	FN:50	PRODUCER	24-Feb-2008 01:17
REDUCED	FMI_DSI_EMS_031PUP	FN:51	PRODUCER	24-Feb-2008 01:17

Input DLIS Files

DEFAULT	FMI_DSI_EMS_031PUP	FN:48	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
DEFAULT	FMI_DSI_EMS_028PUP	FN:41	PRODUCER	23-Feb-2008 22:25	1204.6 M	1054.8 M

Integrated Hole/Cement Volume Summary

Hole Volume = 11.59 M3

Cement Volume = 4.69 M3 (assuming 177.80 MM casing O.D.)

Computed from 1200.9 M to 923.1 M using data channel(s) RD1 RD2 RD3 RD4 RD5 RD6

OP System Version: 15C0-309

MCM

FBST-B	15C0-309	DSST-B	15C0-309
EMS-B	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Transit Time Minor Pip Every 1 MS
- Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

TENS_REP Curve (TENS_REP) 25000 (N) 0

HDMX_REP Curve (HDMX_REP) 125 (MM) 375

HDMI_REP Curve (HDMI_REP) 125 (MM) 375

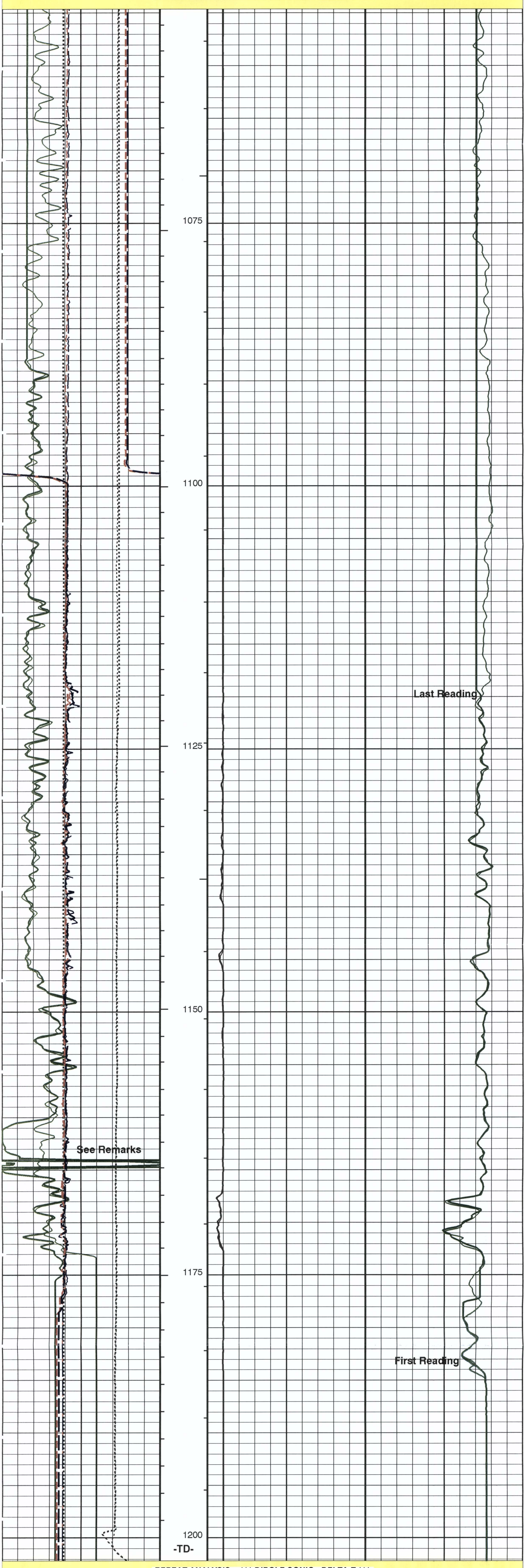
GR_REP Curve (GR_REP) 0 (GAPI) 150

BS_REP Curve (BS_REP) 125 (MM) 375

DSST_STC_DT4P_REP Curve (DT4P_REP) 500 (US/M) 100

DSST_STC_CHRP_REP Curve (CHRP_REP) 0 (----) 5

REPEAT ANALYSIS: *** DIPOLE SONIC - DELTA-T ***



REPEAT ANALYSIS: *** DIPOLE SONIC - DELTA-T ***

BS_REP Curve (BS_REP) 125 (MM) 375

GR_REP Curve (GR_REP) 0 (GAPI) 150

HDMI_REP Curve (HDMI_REP) 125 (MM) 375

HDMX_REP Curve (HDMX_REP) 125 (MM) 375

TENS_REP Curve (TENS_REP)

DSST_STC_CHRP_REP Curve (CHRP_REP) 0 (----) 5

DSST_STC_DT4P_REP Curve (DT4P_REP) 500 (US/M) 100

	25000 (N)	0

PIP SUMMARY

- Integrated Hole Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Transit Time Minor Pip Every 1 MS
- Integrated Transit Time Major Pip Every 10 MS

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
DSST-B: Dipole Shear Imager - B			
BHS	Borehole Status	OPEN	
CASF	Label Casing Function - Monopole P&S	50	
COLL	Label Slowness Lower Limit - Monopole P&S Compressional	131.234	US/M
COUL	Label Slowness Upper Limit - Monopole P&S Compressional	590.551	US/M
DTF	Delta-T Fluid	620.079	US/M
FILG	Label Fill Gap Control - Monopole P&S	COMP_SHEAR	
ITTS	Integrated Transit Time Source	DTCO	
LFC	Label Formation Character - Monopole P&S	COMP_FIRST	
MCS	Mean Casing Slowness	187.008	US/M
MTXG	Monopole Transmitter Geometry	4724	MM
NWI4	Number Waveform Items 4	8	
RSMN	Label Shear/Compressional Minimum Ratio - Monopole P&S	1.4	
RSMX	Label Shear/Compressional Maximum Ratio - Monopole P&S	2.12	
RX1G	Receiver 1 Geometry	7468	MM
RX2G	Receiver 2 Geometry	7620	MM
RX3G	Receiver 3 Geometry	7772	MM
RX4G	Receiver 4 Geometry	7925	MM
RX5G	Receiver 5 Geometry	8077	MM
RX6G	Receiver 6 Geometry	8230	MM
RX7G	Receiver 7 Geometry	8382	MM
RX8G	Receiver 8 Geometry	8534	MM
SAS4	STC Sonic Array Status - Monopole P&S	255	
SHLL	Label Slowness Lower Limit - Monopole P&S Shear	246.063	US/M
SHUL	Label Slowness Upper Limit - Monopole P&S Shear	590.551	US/M
SSW4	STC Source Waveform - Monopole P&S	WF_SAM4	
STLL	Label Slowness Lower Limit - Monopole Stoneley	590.551	US/M
STUL	Label Slowness Upper Limit - Monopole Stoneley	2559.06	US/M
TWI4	STC Integration Time Window - Monopole P&S	500	US
EMS-B: Environment Measurement Sonde			
ECOF	EMS Caliper Offset	50.8	MM
EFC	EMS Fixed Caliper Operation	OFF	
FCD	Future Casing (Outer) Diameter	177.8	MM
HVCS	Integrated Hole Volume Caliper Selection	EMS_Calipers	
SGT-N: Scintillation Gamma Ray Tool - N			
BHS	Borehole Status	OPEN	
DIR: Directional Survey Computation			
SPVD	TVD of Starting Point	0	M
TIMD	Along-hole depth of Tie-in Point	348	M
TIVD	TVD of Tie-in Point	348	M
HOLEV: Integrated Hole/Cement Volume			
FCD	Future Casing (Outer) Diameter	177.8	MM
HVCS	Integrated Hole Volume Caliper Selection	EMS_Calipers	
System and Miscellaneous			
BS	Bit Size	222.000	MM
DO	Depth Offset for Playback	0.0	M
DORL	Depth Offset for Repeat Analysis	0.0	M
PP	Playback Processing	NORMAL	
TD	Total Depth	1201	M

Format: DSI_S5_REP Vertical Scale: 1:240 Graphics File Created: 24-Feb-2008 02:03

OP System Version: 15C0-309

MCM

FBST-B	15C0-309	DSST-B	15C0-309
EMS-B	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

Input DLIS Files

DEFAULT	FMI_DSI_EMS_031PUP	FN:48	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
DEFAULT	FMI_DSI_EMS_028PUP	FN:41	PRODUCER	23-Feb-2008 22:25	1204.6 M	1054.8 M

Input DLIS Files

DEFAULT	FMI_DSI_EMS_029LUP	FN:44	PRODUCER	23-Feb-2008 22:29	1202.1 M	278.4 M

Output DLIS Files

DEFAULT	FMI_DSI_EMS_031PUP	FN:48	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
BACKUP	FMI_DSI_EMS_031PUP	FN:49	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
IMAGE	FMI_DSI_EMS_031PUP	FN:50	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
REDUCED	FMI_DSI_EMS_031PUP	FN:51	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M

OP System Version: 15C0-309

MCM

FBST-B	15C0-309	DSST-B	15C0-309
EMS-B	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

PIP SUMMARY

Time Mark Every 60 S

Tension (TENS) 25000 (N) 0

Hole Diameter Maximum (HDMX) 125 (MM) 375

Hole Diameter Minimum (HDMI) 125 (MM) 375

Gamma Ray (GR) 0 (GAPI) 150

Poisson's Ratio (PR) 0 (----) 0.5

Bit Size (BS) 125 (MM) 375

Low Shear Coherence Flag

Low Comp Coherence Flag

Min Amplitude Max

Rec.Array P&S Slow Proj. CVDL (SPR4) 100 (US/M) 600

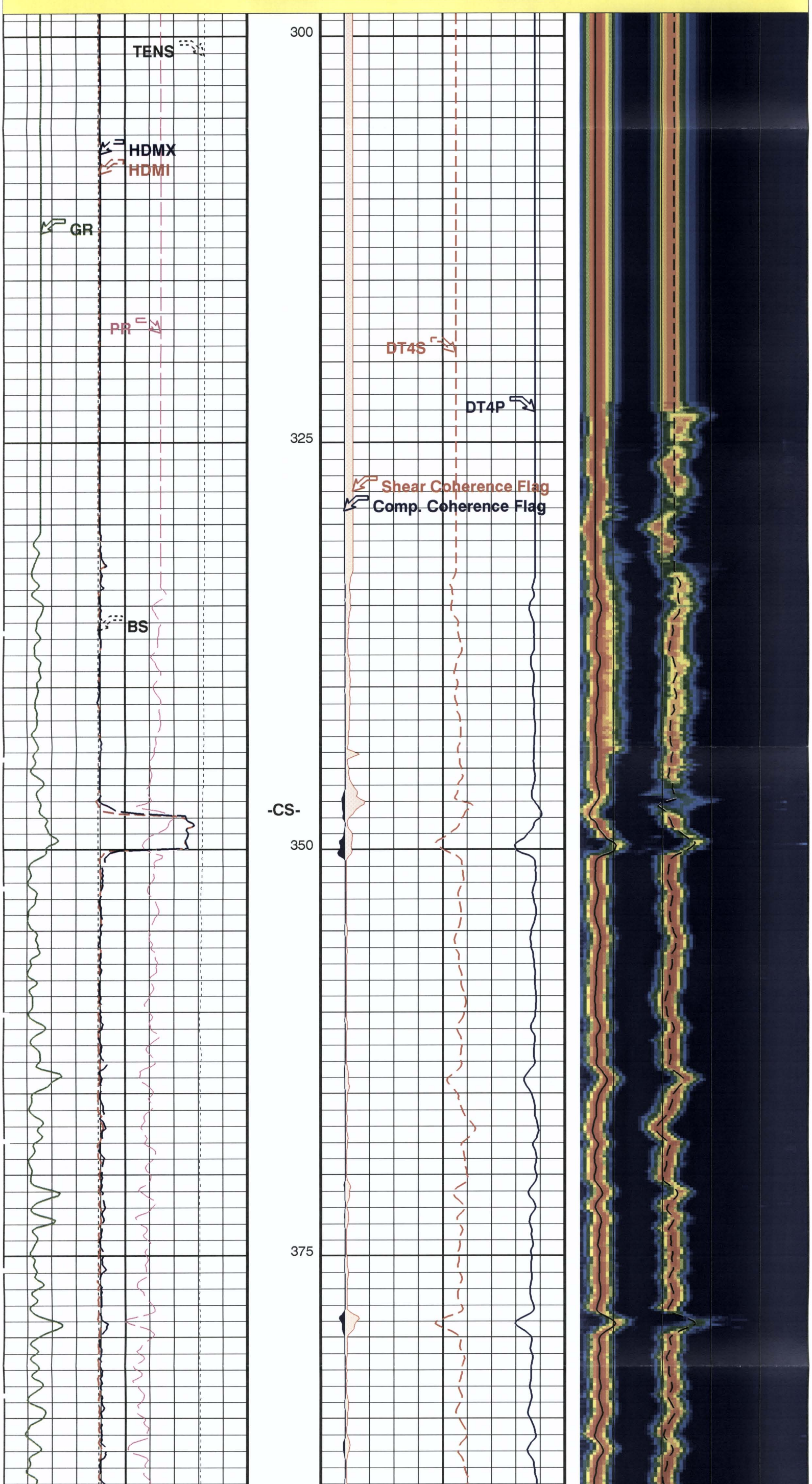
Delta-T Shear - P & S (DT4S) 600 (US/M) 100

Delta-T Shear / RA - P & S (DTRS) 100 (US/M) 600

Delta-T Comp - P & S (DT4P) 600 (US/M) 100

Delta-T Comp / RA - P & S (DTRP) 100 (US/M) 600

MAIN PASS: *** DIPOLE SONIC - P & S IMAGE ***



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425
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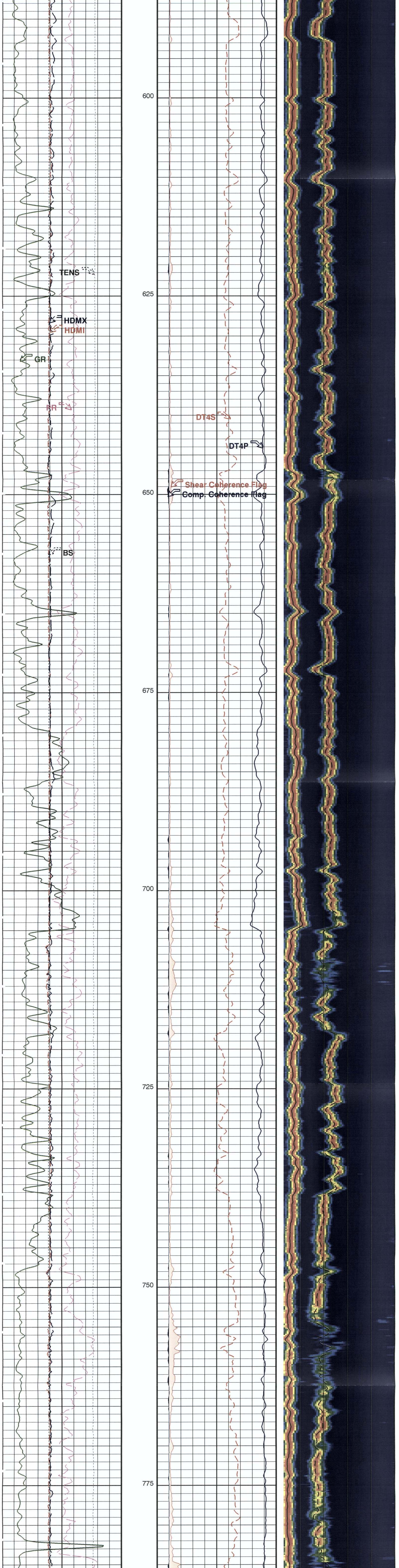
525
550
575


TENS
HDMX
HDMI
GR
RR
BS
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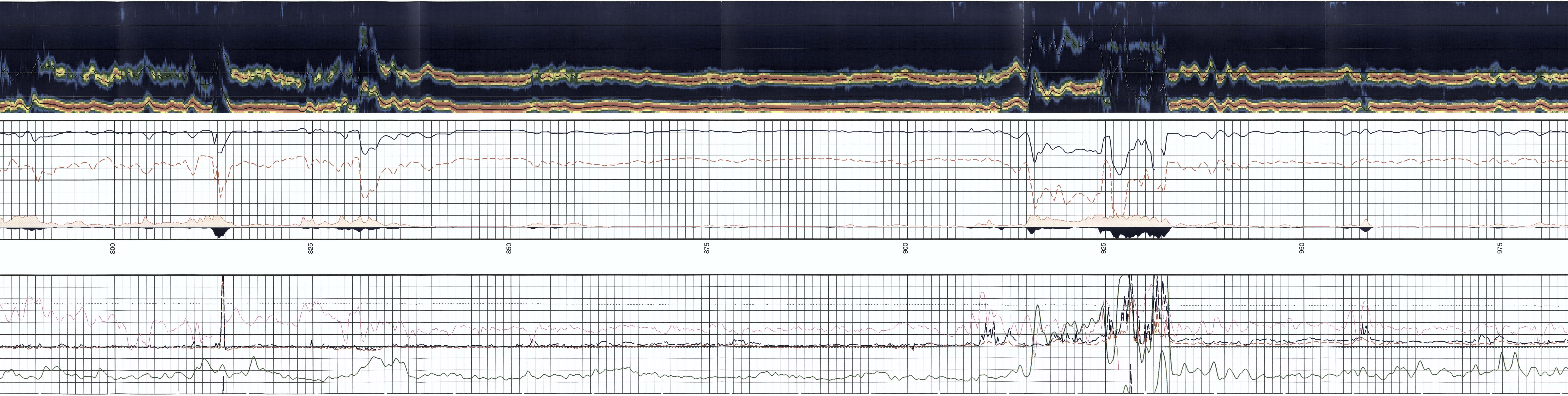
625
650
675
700
725
750
775
DT4S
DT4P
Shear Coherence Flag
Comp. Coherence Flag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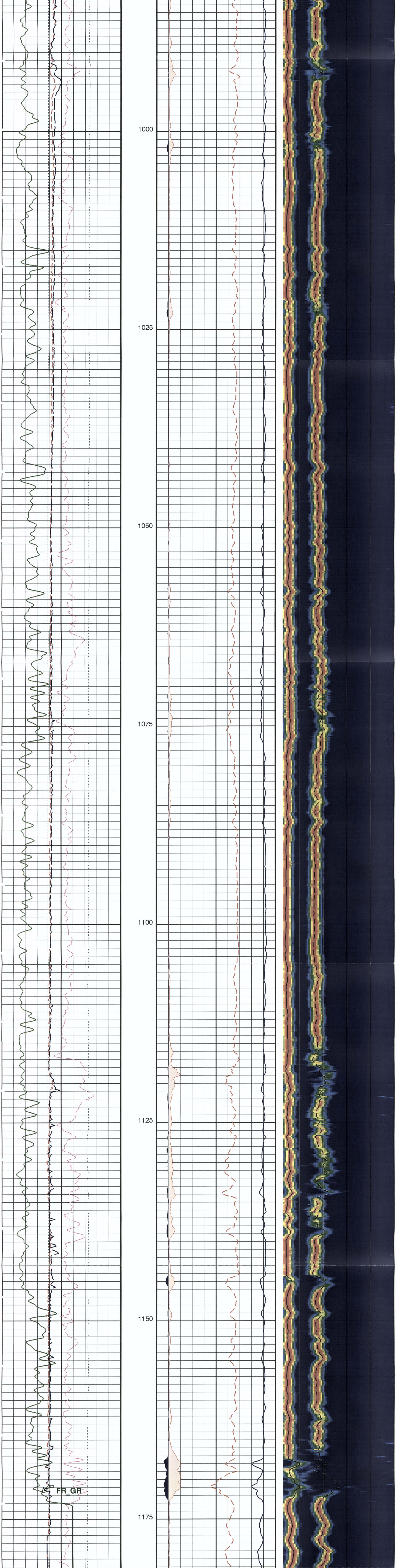
975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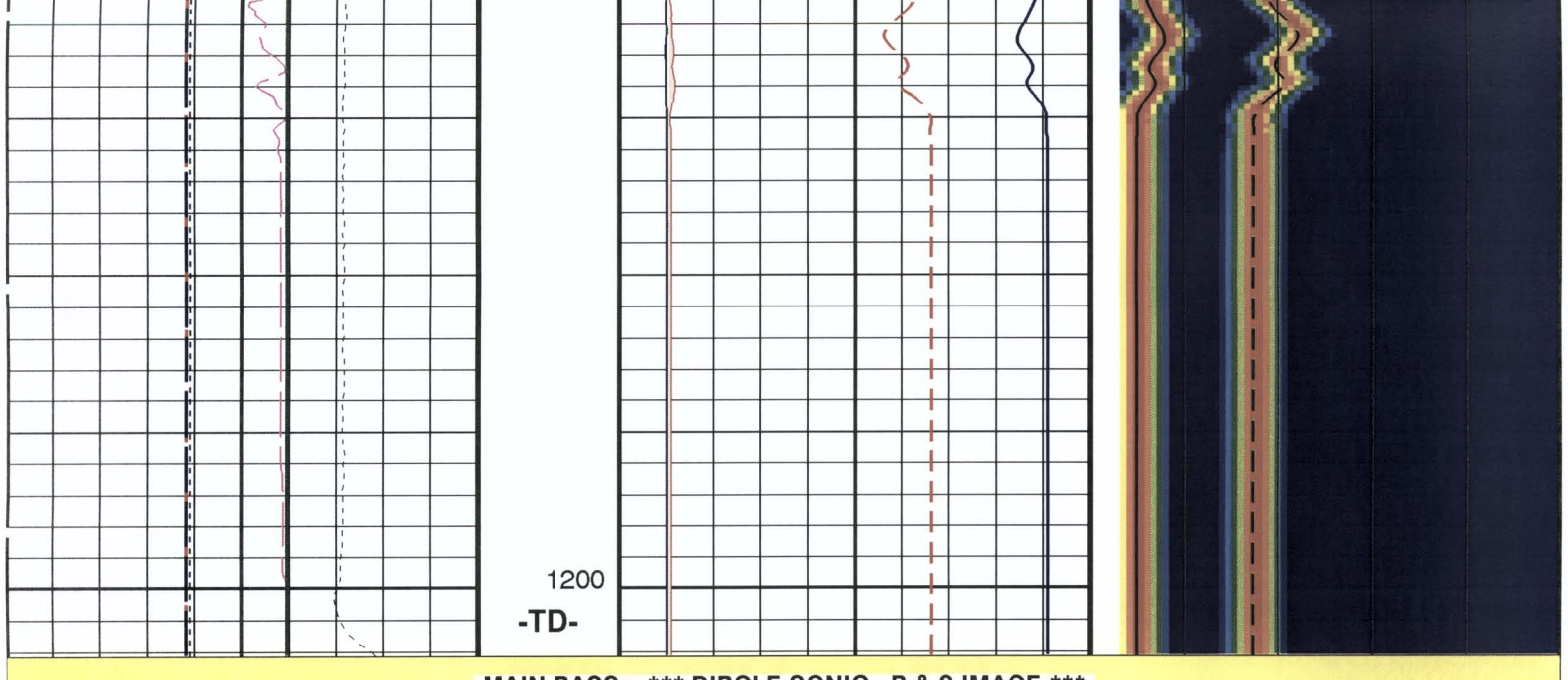
FR_GR



MAIN PASS: *** DIPOLE SONIC - P & S IMAGE ***

Bit Size (BS) 125 (MM) 375	Delta-T Comp - P & S (DT4P) 600 (US/M) 100	Delta-T Comp / RA - P & S (DTRP) 100 (US/M) 600
Poisson's Ratio (PR) 0 (----) 0.5	Delta-T Shear - P & S (DT4S) 600 (US/M) 100	Delta-T Shear / RA - P & S (DTRS) 100 (US/M) 600
Gamma Ray (GR) 0 (GAPI) 150	Low Comp Coherence Flag	Min Amplitude Max; Rec.Array P&S Slow Proj. CVDL (SPR4) 100 (US/M) 600
Hole Diameter Minimum (HDMI) 125 (MM) 375	Low Shear Coherence Flag	
Hole Diameter Maximum (HDMX) 125 (MM) 375		
Tension (TENS) 25000 (N) 0		

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	DSST-B: Dipole Shear Imager - B		
BHS	Borehole Status	OPEN	
CASF	Label Casing Function - Monopole P&S	50	
COLL	Label Slowness Lower Limit - Monopole P&S Compressional	131.234	US/M
COUL	Label Slowness Upper Limit - Monopole P&S Compressional	590.551	US/M
DDE4	Digitizing Delay 4	0	US
DDEX	Digitizing Delay X	0	US
DSI4	Digitizer Sample Interval 4	10	US
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta-T Source for DTCO Channel	PS_COMP	
DTF	Delta-T Fluid	620.079	US/M
DTSS	Shear Delta-T Source for DTSM Channel	LOWER_DIPOLE	
DWC4	Digitizer Word Count 4	512	
DWCX	Digitizer Word Count X	512	
FILG	Label Fill Gap Control - Monopole P&S	COMP_SHEAR	
LFC	Label Formation Character - Monopole P&S	COMP_FIRST	
MCS	Mean Casing Slowness	187.008	US/M
MTXG	Monopole Transmitter Geometry	4724	MM
NWI4	Number Waveform Items 4	8	
NWIX	Number Waveform Items X	0	
RSMN	Label Shear/Compressional Minimum Ratio - Monopole P&S	1.4	
RSMX	Label Shear/Compressional Maximum Ratio - Monopole P&S	2.12	
RX1G	Receiver 1 Geometry	7468	MM
RX2G	Receiver 2 Geometry	7620	MM
RX3G	Receiver 3 Geometry	7772	MM
RX4G	Receiver 4 Geometry	7925	MM
RX5G	Receiver 5 Geometry	8077	MM
RX6G	Receiver 6 Geometry	8230	MM
RX7G	Receiver 7 Geometry	8382	MM
RX8G	Receiver 8 Geometry	8534	MM
SAM4	DSST Sonic Acquisition Mode 4 - High Frequency Monopole Mode for P&S	EVEN	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
SAS4	STC Sonic Array Status - Monopole P&S	255	
SBO4	STC Search Band Offset - Monopole P&S	500	US
SBR4	STC Baseline Removal - Monopole P&S	ON	
SBW4	STC Search Bandwidth - Monopole P&S	2000	US
SFC4	STC Formation Character - Monopole P&S	SELECTABLE	
SFM4	STC Filter - Monopole P&S	B3-20K	
SHLL	Label Slowness Lower Limit - Monopole P&S Shear	246.063	US/M
SHUL	Label Slowness Upper Limit - Monopole P&S Shear	590.551	US/M
SLL4	STC Slowness Lower Limit - Monopole P&S	131.234	US/M
SST4	STC Slowness Step - Monopole P&S	6.56168	US/M
SSW4	STC Source Waveform - Monopole P&S	WF_SAM4	
STLL	Label Slowness Lower Limit - Monopole Stoneley	590.551	US/M
STUL	Label Slowness Upper Limit - Monopole Stoneley	2559.06	US/M
SUL4	STC Slowness Upper Limit - Monopole P&S	787.402	US/M
SWD4	STC Slowness Width - Monopole P&S	32.8084	US/M
TBF4	STC Time for Baseline Fill - Monopole P&S	300	US
TLL4	STC Time Lower Limit - Monopole P&S	150	US
TST4	STC Time Step - Monopole P&S	50	US
TUL4	STC Time Upper Limit - Monopole P&S	3660	US
TWD4	STC Time Width - Monopole P&S	1000	US
TWI4	STC Integration Time Window - Monopole P&S	500	US
TWSX	Transmitter Waveform Select X	0	
	EMS-B: Environment Measurement Sonde		
BHS	Borehole Status	OPEN	
ECOF	EMS Caliper Offset	50.8	MM
EFC	EMS Fixed Caliper Operation	OFF	
	SGT-N: Scintillation Gamma Ray Tool - N		
BHS	Borehole Status	OPEN	
	DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0	M
TIMD	Along-hole depth of Tie-in Point	348	M
TIVD	TVD of Tie-in Point	348	M
	STI: Stuck Tool Indicator		
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	1.524	M
TDD	Total Depth - Driller	1200.00	M
TDL	Total Depth - Logger	1201.00	M
	System and Miscellaneous		
BS	Bit Size	222.000	MM
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: DSI_P&S_MODE Vertical Scale: 1:240 Graphics File Created: 24-Feb-2008 01:17

OP System Version: 15C0-309

MCM

FBST-B	15C0-309	DSST-B	15C0-309
EMS-B	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

Input DLIS Files

DEFAULT	FMI_DSI_EMS_029LUP	FN:44	PRODUCER	23-Feb-2008 22:29	1202.1 M	278.4 M

Output DLIS Files

DEFAULT	FMI_DSI_EMS_031PUP	FN:48	PRODUCER	24-Feb-2008 01:17
BACKUP	FMI_DSI_EMS_031PUP	FN:49	PRODUCER	24-Feb-2008 01:17
IMAGE	FMI_DSI_EMS_031PUP	FN:50	PRODUCER	24-Feb-2008 01:17
REDUCED	FMI_DSI_EMS_031PUP	FN:51	PRODUCER	24-Feb-2008 01:17

Input DLIS Files

DEFAULT	FMI_DSI_EMS_029LUP	FN:44	PRODUCER	23-Feb-2008 22:29	1202.1 M	278.4 M

Output DLIS Files

DEFAULT	FMI_DSI_EMS_031PUP	FN:48	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
BACKUP	FMI_DSI_EMS_031PUP	FN:49	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
IMAGE	FMI_DSI_EMS_031PUP	FN:50	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M
REDUCED	FMI_DSI_EMS_031PUP	FN:51	PRODUCER	24-Feb-2008 01:17	1202.1 M	298.6 M

OP System Version: 15C0-309

MCM

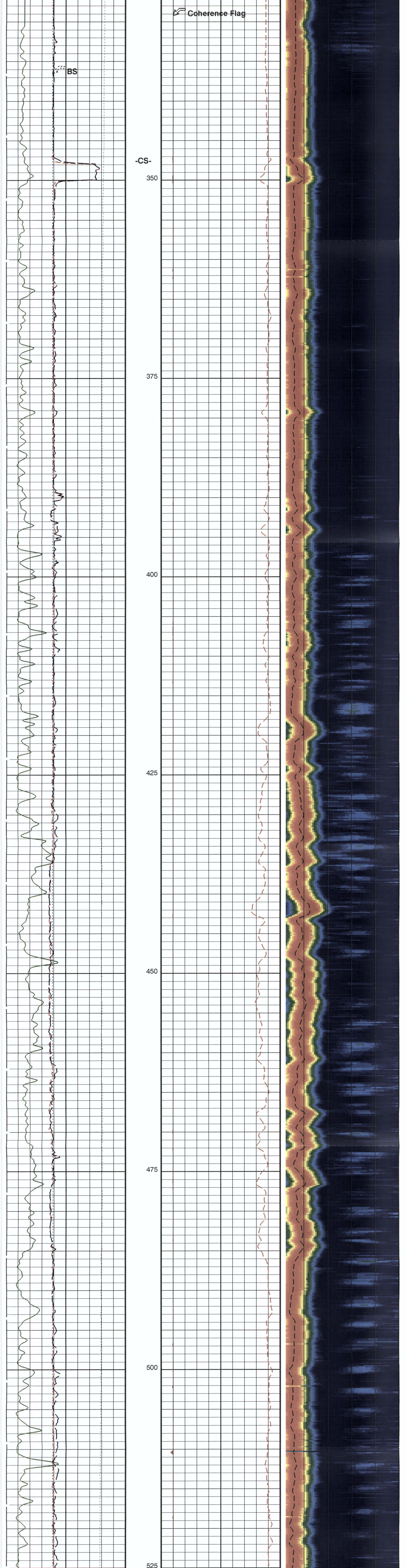
FBST-B	15C0-309	DSST-B	15C0-309
EMS-B	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

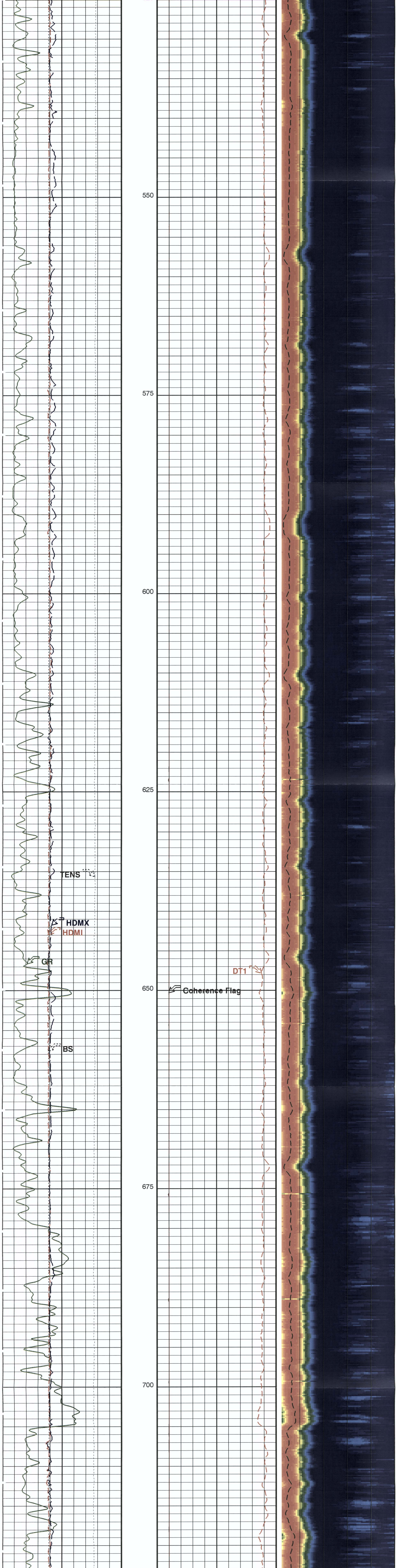
PIP SUMMARY

Time Mark Every 60 S

Tension (TENS) 25000 (N) 0		
Hole Diameter Maximum (HDMX) 125 (MM) 375		
Hole Diameter Minimum (HDMI) 125 (MM) 375		
Gamma Ray (GR) 0 (GAPI) 150	Low Shear Coherence Flag	Min Amplitude Max; Rec.Array L.Dipole Slow Proj. CVDL (SPR1) 200 (US/M) 1200
Bit Size (BS) 125 (MM) 375	Delta-T Shear - Lower Dipole (DT1) 1200 (US/M) 200	Delta-T Shear / RA - Lower Dipole (DT1R) 200 (US/M) 1200

MAIN PASS: *** DIPOLE SONIC - LOWER DIPOLE IMAGE ***


Coherence Flag
BS
-CS-
350
375
400
425
450
475
500
525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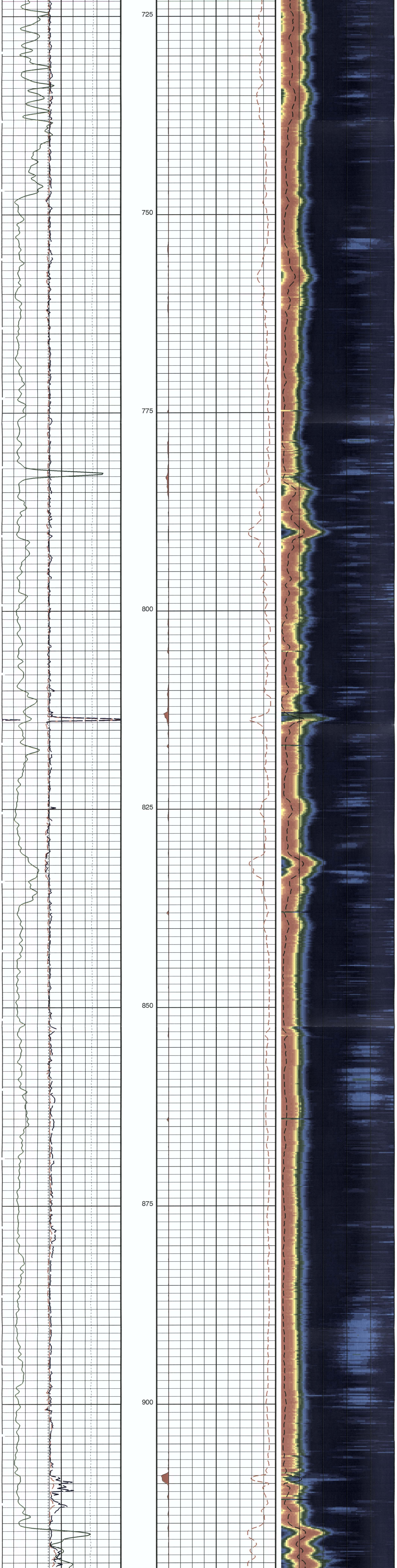
650
675
700
TENS
HDMX
HDMI
GR
BS
DT1
Coherence Flag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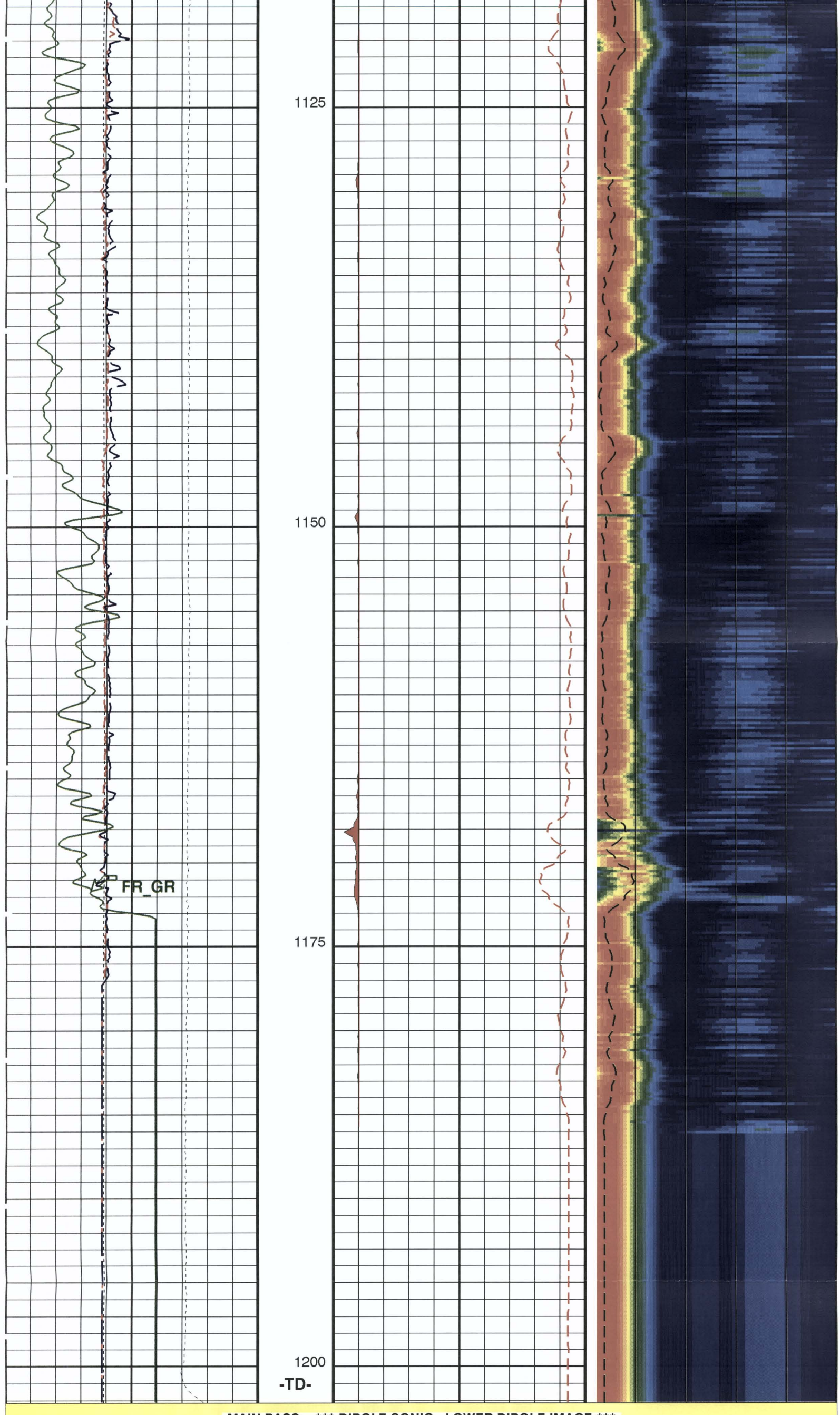

MAIN PASS: *** DIPOLE SONIC - LOWER DIPOLE IMAGE ***

Bit Size (BS) 125 (MM) 375	Delta-T Shear - Lower Dipole (DT1) 1200 (US/M) 200	Delta-T Shear / RA - Lower Dipole (DT1R) 200 (US/M) 1200
Gamma Ray (GR) 0 (GAPI) 150	Low Shear Coherence Flag	Min Amplitude Max; Rec.Array L.Dipole Slow Proj. CVDL (SPR1) 200 (US/M) 1200
Hole Diameter Minimum (HDMI) 125 (MM) 375		
Hole Diameter Maximum (HDMX) 125 (MM) 375		
Tension (TENS) 25000 (N) 0		

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	DSST-B: Dipole Shear Imager - B		
DDE1	Digitizing Delay 1	0	US
DDEX	Digitizing Delay X	0	US
DLCS	Label Compressional Source - Dipole Shear	DONT_USE	
DSHL	Label Slowness Lower Limit - Dipole Shear	246.063	US/M
DSHU	Label Slowness Upper Limit - Dipole Shear	500	US/M
DSI1	Digitizer Sample Interval 1	40	US
DSIX	Digitizer Sample Interval X	40	US
DTCS	Compressional Delta-T Source for DTCO Channel	PS_COMP	
DWC1	Digitizer Word Count 1	512	
DWCX	Digitizer Word Count X	512	
LTXG	Lower Dipole Transmitter Geometry	3962	MM
NWI1	Number Waveform Items 1	8	
NWIX	Number Waveform Items X	0	
RX1G	Receiver 1 Geometry	7468	MM
RX2G	Receiver 2 Geometry	7620	MM
RX3G	Receiver 3 Geometry	7772	MM
RX4G	Receiver 4 Geometry	7925	MM
RX5G	Receiver 5 Geometry	8077	MM
RX6G	Receiver 6 Geometry	8230	MM
RX7G	Receiver 7 Geometry	8382	MM
RX8G	Receiver 8 Geometry	8534	MM
SAM1	DSST Sonic Acquisition Mode 1 - Lower Dipole Mode	EVEN	
SAMX	DSST Sonic Acquisition Mode X - Both Dipoles or Monopole Mode for Expert	OFF	
SAS1	STC Sonic Array Status - Lower Dipole	255	
SBO1	STC Search Band Offset - Lower Dipole	3000	US
SBW1	STC Search Bandwidth - Lower Dipole	8000	US
SFC1	STC Formation Character - Lower Dipole	SELECTABLE	
SFM1	STC Filter - Lower Dipole	B1-3K	
SLL1	STC Slowness Lower Limit - Lower Dipole	246.063	US/M
SST1	STC Slowness Step - Lower Dipole	13.1234	US/M
SSW1	STC Source Waveform - Lower Dipole	WF_SAM1	
SUL1	STC Slowness Upper Limit - Lower Dipole	2542.65	US/M
SWD1	STC Slowness Width - Lower Dipole	131.234	US/M
TBF1	STC Time for Baseline Fill - Lower Dipole	0	US
TLL1	STC Time Lower Limit - Lower Dipole	600	US
TST1	STC Time Step - Lower Dipole	200	US
TUL1	STC Time Upper Limit - Lower Dipole	15912.5	US
TWD1	STC Time Width - Lower Dipole	2000	US
TWI1	STC Integration Time Window - Lower Dipole	1600	US
TWSX	Transmitter Waveform Select X	0	
	EMS-B: Environment Measurement Sonde		
ECOF	EMS Caliper Offset	50.8	MM
EFC	EMS Fixed Caliper Operation	OFF	
	DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0	M
TIMD	Along-hole depth of Tie-in Point	348	M
TIVD	TVD of Tie-in Point	348	M
	STI: Stuck Tool Indicator		
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	1.524	M
TDD	Total Depth - Driller	1200.00	M
TDL	Total Depth - Logger	1201.00	M
	System and Miscellaneous		
BS	Bit Size	222.000	MM
DO	Depth Offset for Playback	0.0	M
PP	Playback Processing	RECOMPUTE	

Format: DSI_LOWER_DIPOLE Vertical Scale: 1:240 Graphics File Created: 24-Feb-2008 01:17

OP System Version: 15C0-309

MCM

FBST-B	15C0-309	DSST-B	15C0-309
EMS-B	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

Input DLIS Files

DEFAULT	FMI_DSI_EMS_029LUP	FN:44	PRODUCER	23-Feb-2008 22:29	1202.1 M	278.4 M

Output DLIS Files

DEFAULT	FMI_DSI_EMS_031PUP	FN:48	PRODUCER	24-Feb-2008 01:17
BACKUP	FMI_DSI_EMS_031PUP	FN:49	PRODUCER	24-Feb-2008 01:17
IMAGE	FMI_DSI_EMS_031PUP	FN:50	PRODUCER	24-Feb-2008 01:17
REDUCED	FMI_DSI_EMS_031PUP	FN:51	PRODUCER	24-Feb-2008 01:17

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Full-Bore Scanner - B Wellsite Calibration - Caliper Calibration							
Before: 16-Feb-2008 16:45							
Caliper 1 Small Jig	203.2	N/A	201.5	N/A	N/A	N/A	MM
Caliper 2 Small Jig	203.2	N/A	208.6	N/A	N/A	N/A	MM
Caliper 1 Large Jig	304.8	N/A	300.9	N/A	N/A	N/A	MM
Caliper 2 Large Jig	304.8	N/A	302.1	N/A	N/A	N/A	MM
Full-Bore Scanner - B Wellsite Calibration - CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: 23-Feb-2008 21:08							
TEMPERATURE REFERENCE :	N/A	N/A	20	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	6	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	11	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	1067	N/A	N/A	N/A	
Full-Bore Scanner - B Wellsite Calibration - CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: 23-Feb-2008 21:08							
TEMPERATURE REFERENCE :	N/A	N/A	17	N/A	N/A	N/A	DEGC

YEAR OF CALIBRATION :	N/A	N/A	6	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	10	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	751	N/A	N/A	N/A	
Environment Measurement Sonde Wellsite Calibration - EMS Caliper Calibration							
Before: 16-Feb-2008 15:25							
Radius 1 Short Radius	101.6	N/A	81.34	N/A	N/A	5.080	MM
Radius 1 Long Radius	203.2	N/A	187.4	N/A	N/A	5.080	MM
Radius 2 Short Radius	101.6	N/A	79.42	N/A	N/A	5.080	MM
Radius 2 Long Radius	203.2	N/A	184.6	N/A	N/A	5.080	MM
Radius 3 Short Radius	101.6	N/A	79.37	N/A	N/A	5.080	MM
Radius 3 Long Radius	203.2	N/A	184.5	N/A	N/A	5.080	MM
Radius 4 Short Radius	101.6	N/A	87.87	N/A	N/A	5.080	MM
Radius 4 Long Radius	203.2	N/A	190.2	N/A	N/A	5.080	MM
Radius 5 Short Radius	101.6	N/A	83.27	N/A	N/A	5.080	MM
Radius 5 Long Radius	203.2	N/A	186.9	N/A	N/A	5.080	MM
Radius 6 Short Radius	101.6	N/A	78.00	N/A	N/A	5.080	MM
Radius 6 Long Radius	203.2	N/A	183.6	N/A	N/A	5.080	MM
Scintillation Gamma Ray Tool - N Wellsite Calibration - Detector Calibration							
Before: 22-Feb-2008 14:45							
Gamma Ray (Jig - Bkg)	169.1	N/A	169.1	N/A	N/A	15.37	GAPI
Gamma Ray (Calibrated)	167.0	N/A	167.0	N/A	N/A	15.00	GAPI

Full-Bore Scanner - B / Equipment Identification

Primary Equipment:	
FullBore Scanner Sonde	FBSS - B
FullBore Scanner Sonde Upper part	FBSH - A
FullBore Scanner Sonde Cartridge	FBSC - B
GPIT Cartridge - C	GPIC - C
Insulating Sub	AH - 185
Flex Joint	AH - 184
FullBore Scanner Control Cartridge	FBCC - A
Auxiliary Equipment:	
Electronics Cartridge Housing	ECH - MRA

Full-Bore Scanner - B Wellsite Calibration

Caliper Calibration

Phase	Caliper 1 Small Jig MM	Value	Phase	Caliper 2 Small Jig MM	Value
Before	172.7 (Minimum) 203.2 (Nominal) 233.7 (Maximum)	201.5	Before	172.7 (Minimum) 203.2 (Nominal) 233.7 (Maximum)	208.6
Phase	Caliper 1 Large Jig MM	Value	Phase	Caliper 2 Large Jig MM	Value
Before	259.1 (Minimum) 304.8 (Nominal) 350.5 (Maximum)	300.9	Before	259.1 (Minimum) 304.8 (Nominal) 350.5 (Maximum)	302.1

Before: 16-Feb-2008 16:45

Environment Measurement Sonde / Equipment Identification

Primary Equipment:	
EMS Mechanical	EMM - B
EMS Cartridge	EMC - B
EMS Adaptor	EMA - B
Resistivity Meter	RES -
Auxiliary Equipment:	
Electronics Cartridge Housing	ECH - KH

Environment Measurement Sonde Wellsite Calibration

EMS Caliper Calibration

Phase	Radius 1 Short Radius MM	Value	Phase	Radius 1 Long Radius MM	Value
Before	76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)	81.34	Before	177.8 (Minimum) 203.2 (Nominal) 228.6 (Maximum)	187.4
Phase	Radius 2 Short Radius MM	Value	Phase	Radius 2 Long Radius MM	Value
Before	76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)	79.42	Before	177.8 (Minimum) 203.2 (Nominal) 228.6 (Maximum)	184.6
Phase	Radius 3 Short Radius MM	Value	Phase	Radius 3 Long Radius MM	Value
Before	76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)	79.37	Before	177.8 (Minimum) 203.2 (Nominal) 228.6 (Maximum)	184.5
Phase	Radius 4 Short Radius MM	Value	Phase	Radius 4 Long Radius MM	Value
Before	76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)	87.87	Before	177.8 (Minimum) 203.2 (Nominal) 228.6 (Maximum)	190.2
Phase	Radius 5 Short Radius MM	Value	Phase	Radius 5 Long Radius MM	Value
Before	76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)	83.27	Before	177.8 (Minimum) 203.2 (Nominal) 228.6 (Maximum)	186.9
Phase	Radius 6 Short Radius MM	Value	Phase	Radius 6 Long Radius MM	Value
Before	76.20 (Minimum) 101.6 (Nominal) 127.0 (Maximum)	78.00	Before	177.8 (Minimum) 203.2 (Nominal) 228.6 (Maximum)	183.6

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Scintillation Gamma Ray Tool - N / Equipment Identification

Primary Equipment:	
Scintillation Gamma Cartridge	SGC - TB
Scintillation Gamma Detector	SGD - TAB
Auxiliary Equipment:	
Scintillation Gamma Housing	SGH - K
Gamma Source Radioactive	GSR - U/Y

Scintillation Gamma Ray Tool - N Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig - Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value
Before	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)	10.18	Before	153.7 (Minimum) 169.1 (Nominal) 184.4 (Maximum)	169.1	Before	152.0 (Minimum) 167.0 (Nominal) 182.0 (Maximum)	167.0

Before: 22-Feb-2008 14:45

DTS Telemetry Tool / Equipment Identification

Primary Equipment:		
DTC-H Auxiliary Cartridge	DTCH - A	9397
DTC-H Telemetry Cartridge	DTCH - A	9397
Auxiliary Equipment:		
DTCH Telemetry Cartridge Housing	ECH - KC	10485

Company: **PETRO-CANADA**

Schlumberger

Well: **PETRO-CANADA BLACKWATER KWIJIKA M-59**

Field: **KWIJIKA**

Province: **NORTHWEST TERRITORIES**

*****MD*****

***MD ***

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