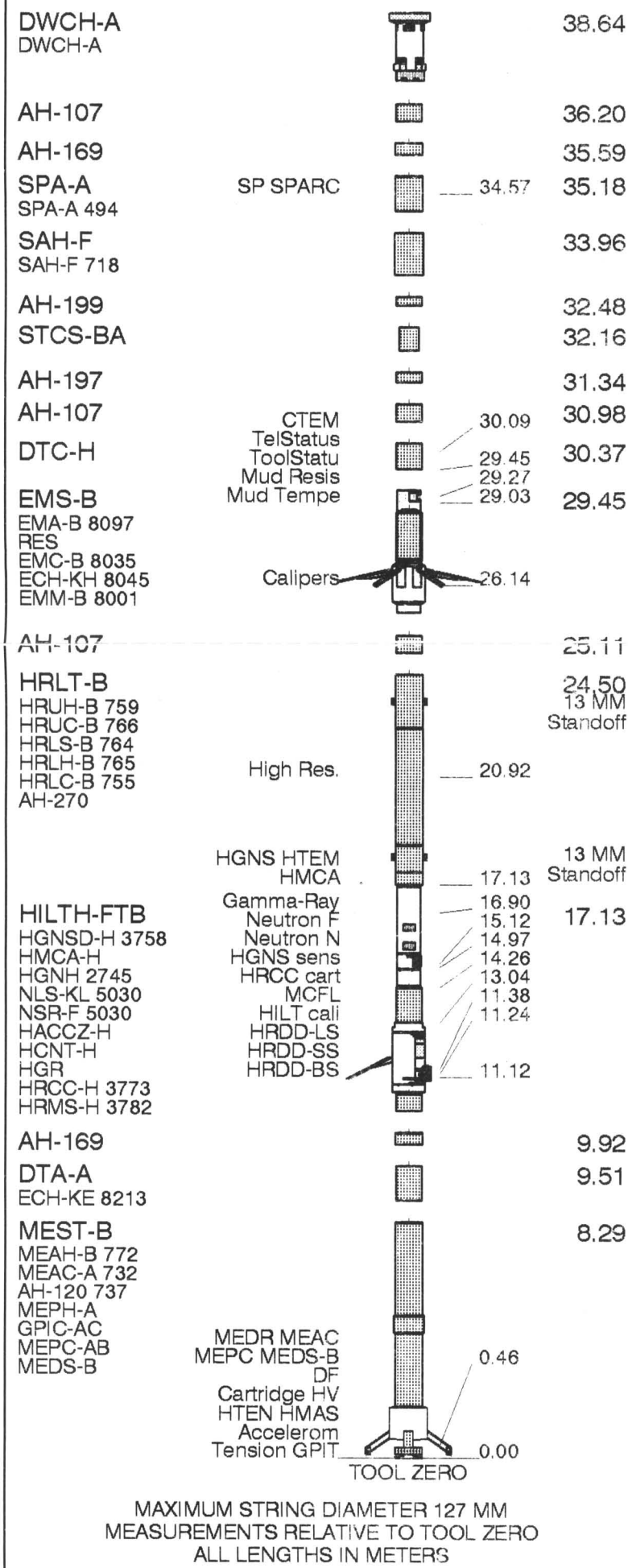




Input DLIS Files

DEFAULT FMS_TLD_MCFL_CNI_065PUP FN:64 PRODUCER 23-Feb-2004 00:24 3692.2 M 2781.0 M

Integrated Hole/Cement Volume Summary

Hole Volume = 15.05 m3
Cement Volume = 15.05 m3 (assuming 0.00 mm casing O.D.)
Computed from 3691.9 m to 2912.1 m

OP System Version: 11C0-305

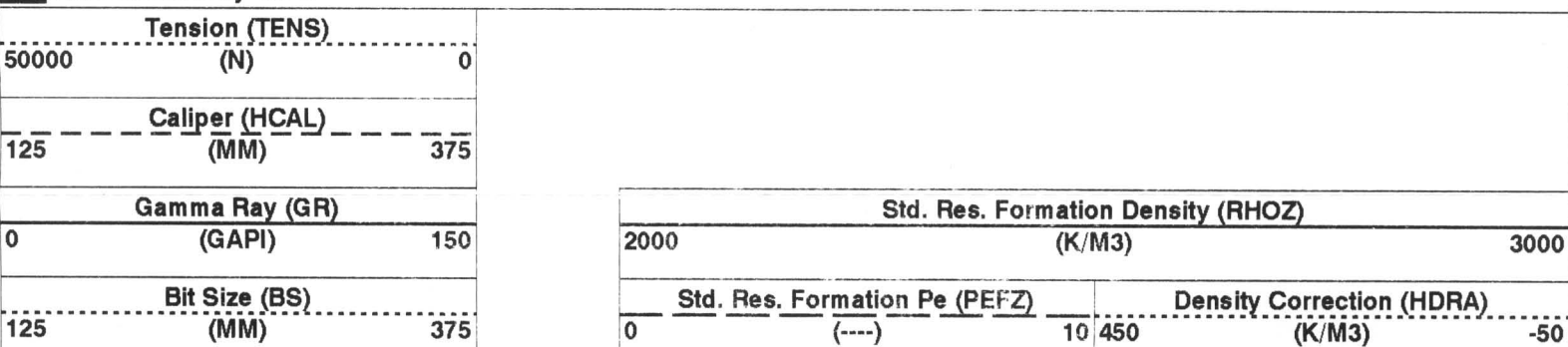
MCM

MESTB	11C0-305	DTAA	OP11-KP1
HILTHD	op11kp1_newpex150kit_G_b	HRLT	op11kp1_HrltKit_b
EMS	11C0-305	DTCH	11C0-305
SPAA	11C0-305		

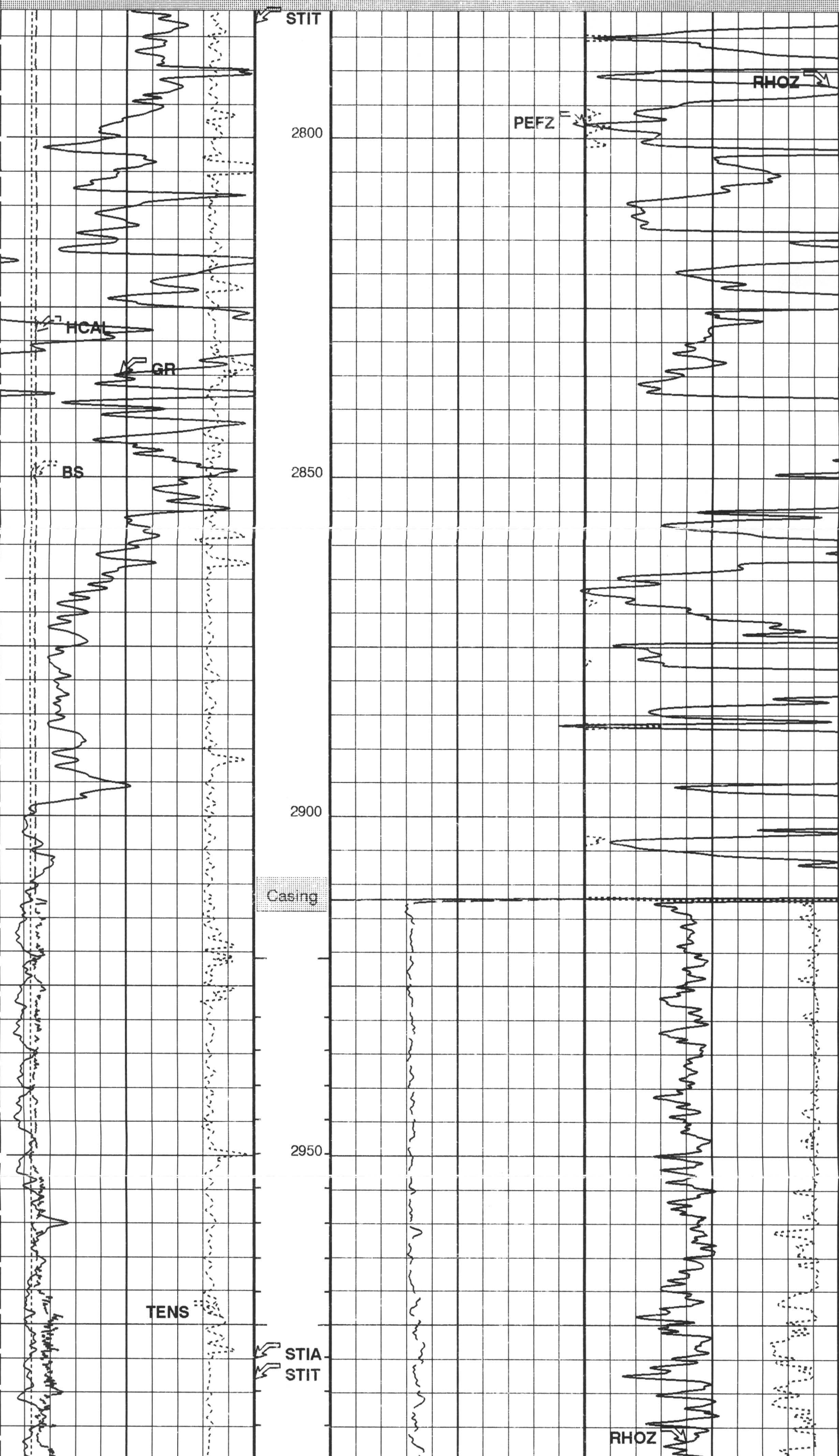
PIP SUMMARY

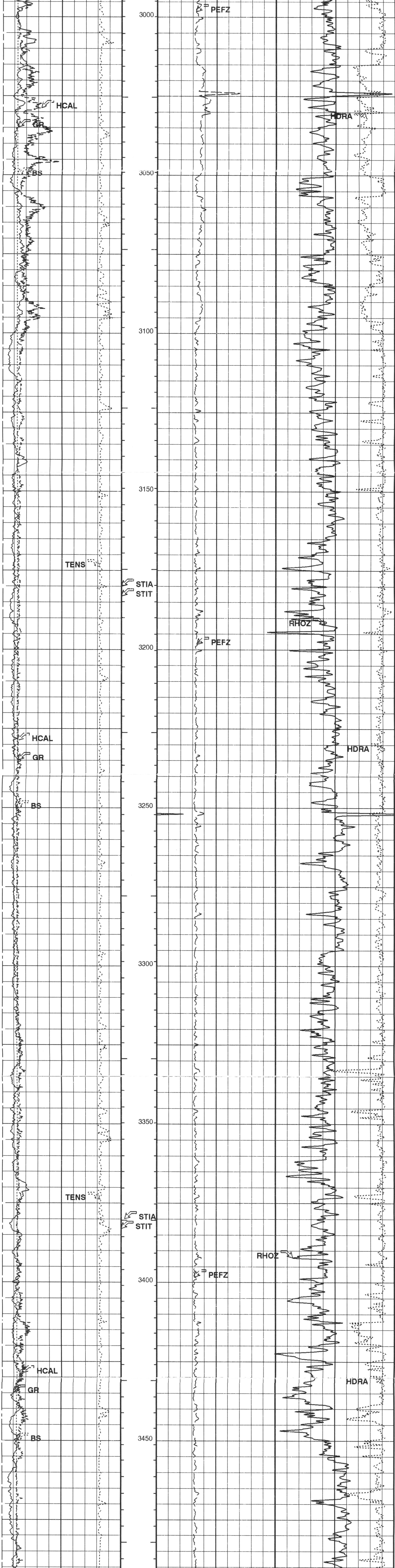
- Integrated Hole Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Cement Volume Minor Pip Every 0.1 M3
- Integrated Cement Volume Major Pip Every 1 M3

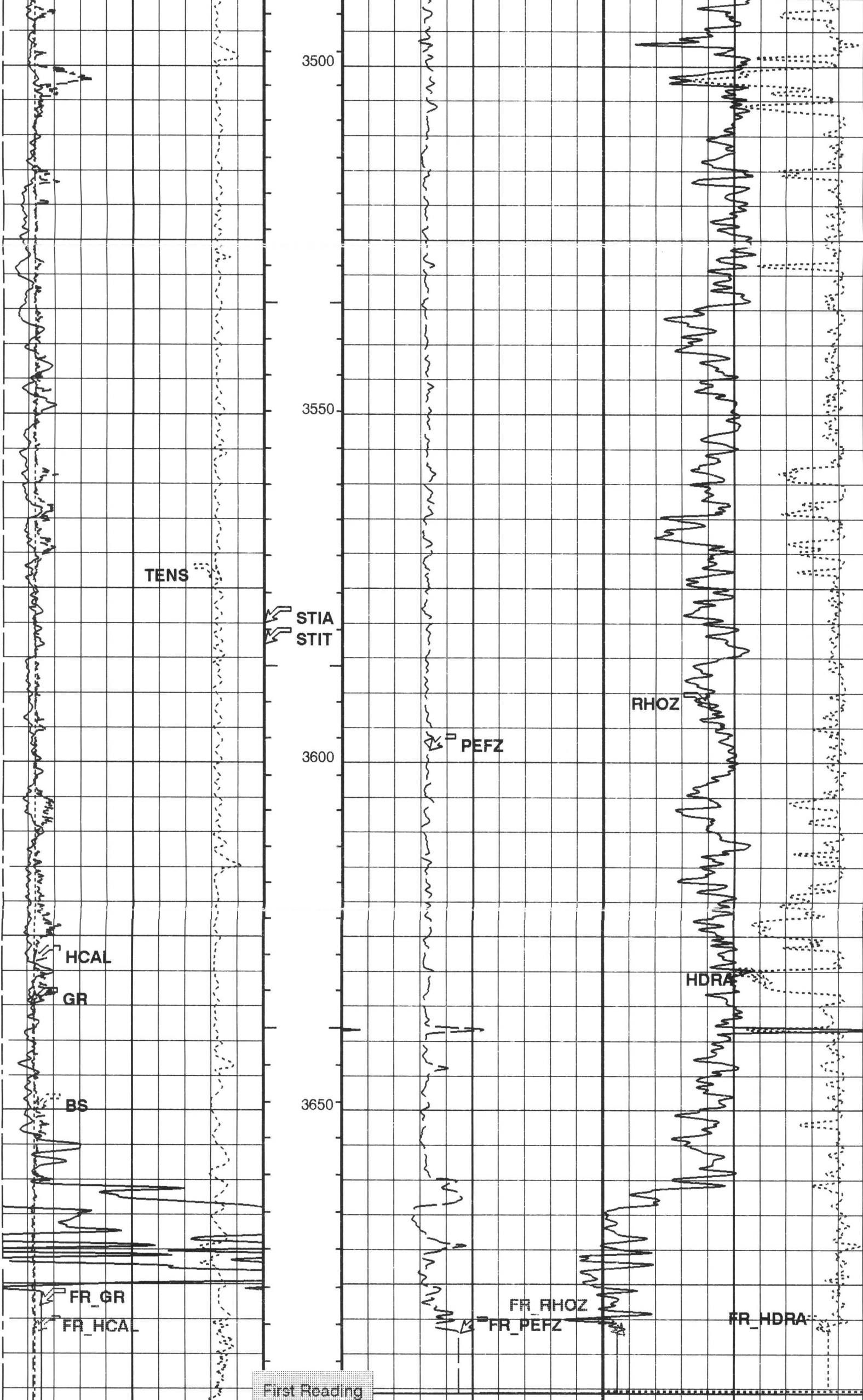
Time Mark Every 60 S



MAIN PASS: *** DENSITY - LIMESTONE 2710 KG/M3 ***







MAIN PASS: *** DENSITY - LIMESTONE 2710 KG/M3 ***

125	Bit Size (BS) (MM)	375	0	Std. Res. Formation Pe (PEFZ) (----	10	450	Density Correction (HDRA) (K/M3)	-50
0	Gamma Ray (GR) (GAPI)	150	2000	Std. Res. Formation Density (RHOZ) (K/M3)				3000
125	Caliper (HCAL) (MM)	375						
50000	Tension (TENS) (N)	0						

PIP SUMMARY								
└ Integrated Hole Volume Minor Pip Every 0.1 M3								
└ Integrated Hole Volume Major Pip Every 1 M3								
└ Integrated Cement Volume Minor Pip Every 0.1 M3								
└ Integrated Cement Volume Major Pip Every 1 M3								
Time Mark Every 60 S								

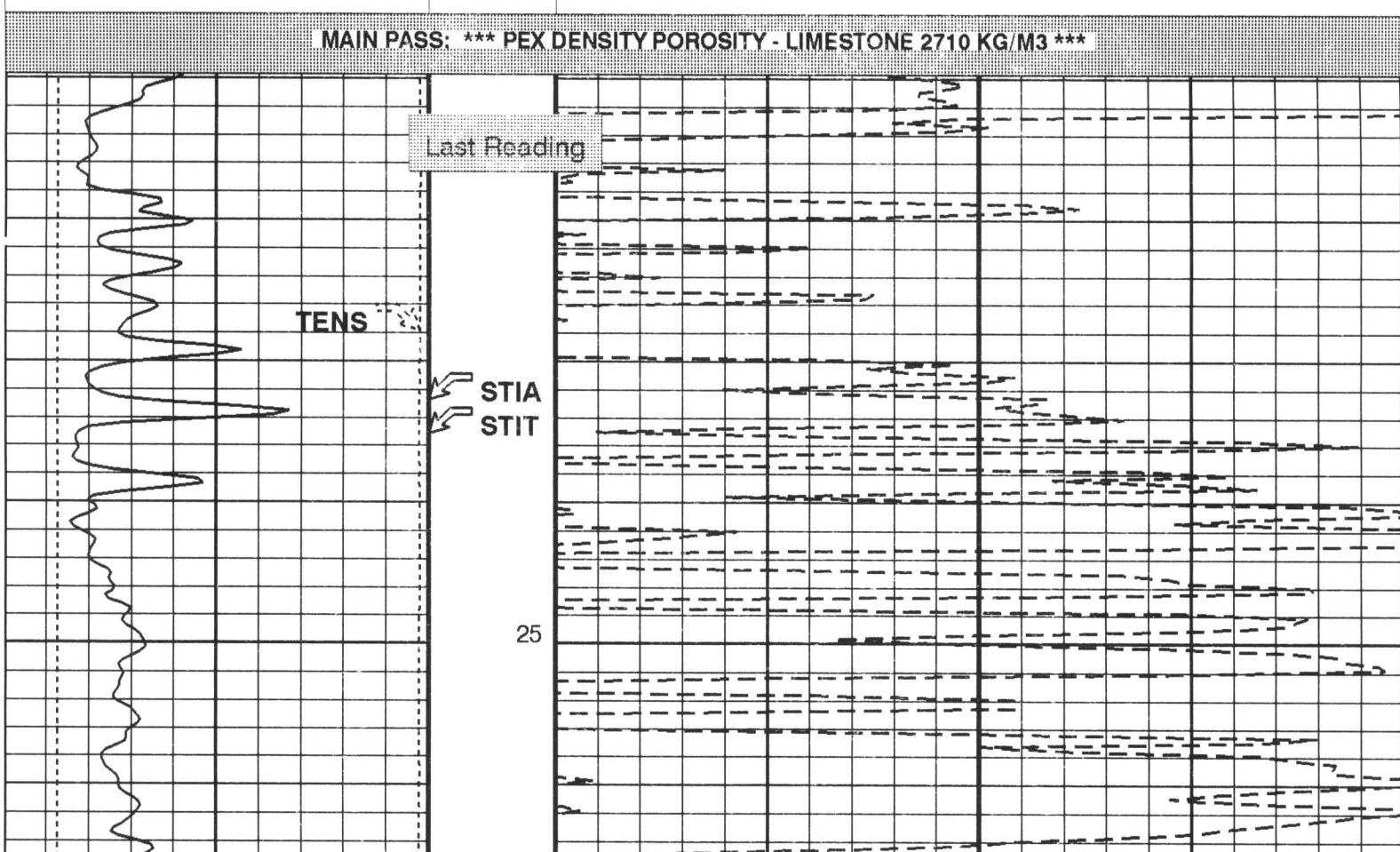
Parameters		
DLIS Name	Description	Value
HILTH-FTB: High resolution Integrated Logging Tool-DTS		
DHC	Density Hole Correction	BS
NAAC	HRDD APS Activation Correction	OFF
NMT	HILT Nuclear Mud Type	NOBARITE
NPRM	HRDD Processing Mode	HIRES
NSAR	HRDD Depth Sampling Rate	25.400 mm
DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0.000 m
TIMD	Along-hole depth of Tie-in Point	75.200 m
TIVD	TVD of Tie-in Point	75.200 m
STI: Stuck Tool Indicator		
STKT	STI Stuck Threshold	1.524 m
TDD	Total Depth - Driller	3700.0 m
TDL	Total Depth - Logger	3692.0 m
System and Miscellaneous		
BS	Bit Size	156.0 mm
DFD	Drilling Fluid Density	1050.0 kg/m3
Format: DENS Vertical Scale: 1:600 Graphics File Created: 23-Feb-2004 01:24		

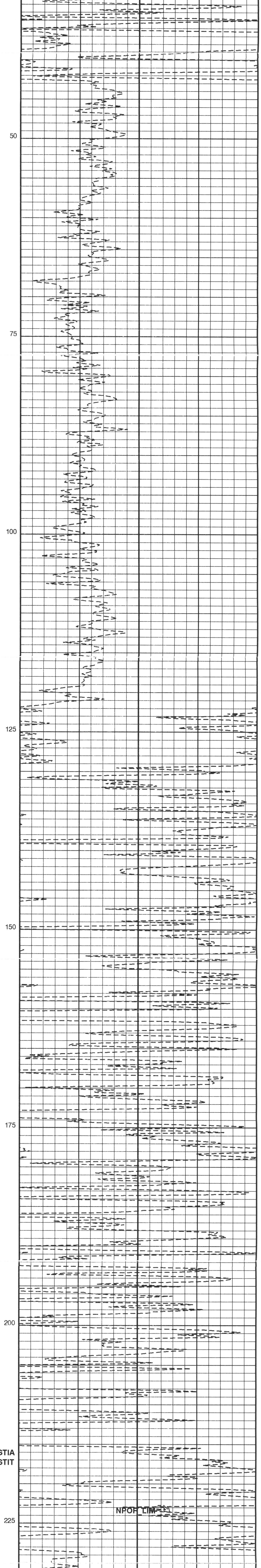
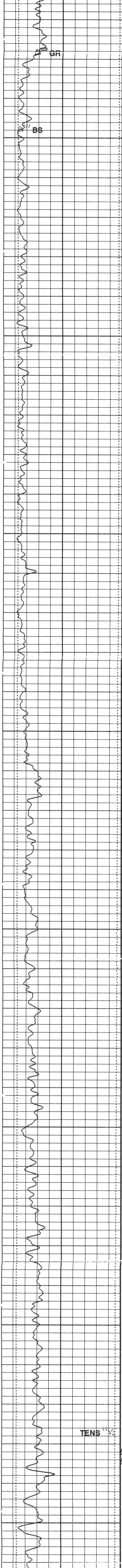
OP System Version: 11C0-305					
MCM					
MESTB	11C0-305	DTAA	OP11-KP1		
HILTHD	op11kp1_newpex150kit_G_b	HRLT	op11kp1_HrltKit_b		
EMS	11C0-305	DTCH	11C0-305		
SPAA	11C0-305				
Input DLIS Files					
DEFAULT	FMS_TLD_MCFL_CNL_065PUP	FN:64	PRODUCER	23-Feb-2004 00:24	3692.2 M 2781.0 M

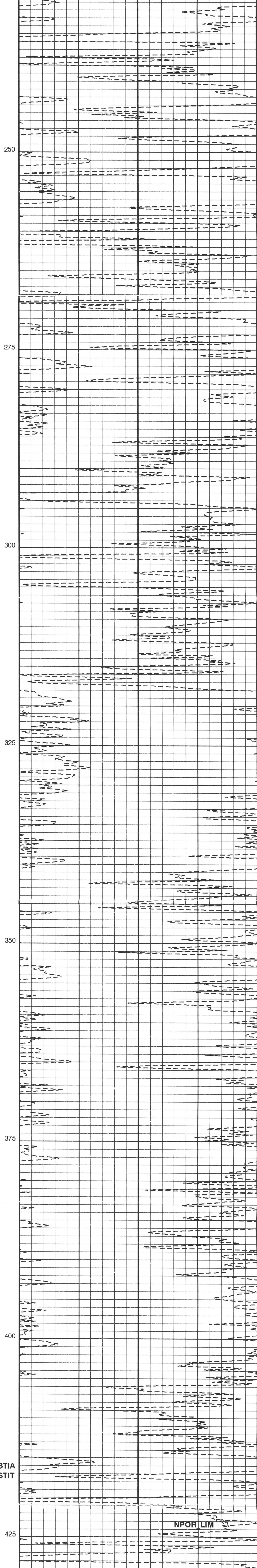
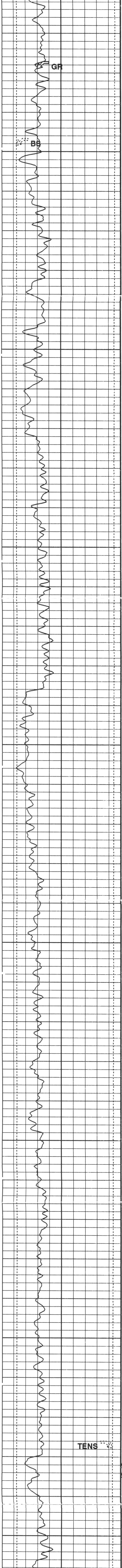
Input DLIS Files					
DEFAULT	EMS_TLD_MCFL_CNL_095LUP	FN:84	PRODUCER	23-Feb-2004 12:59	2931.6 M 4.7 M
Output DLIS Files					
DEFAULT	EMS_TLD_MCFL_CNL_097PUP	FN:86	PRODUCER	23-Feb-2004 14:40	2931.3 M 4.9 M
REDUCED	EMS_TLD_MCFL_CNL_097PUP	FN:87	PRODUCER	23-Feb-2004 14:40	2931.3 M 4.9 M

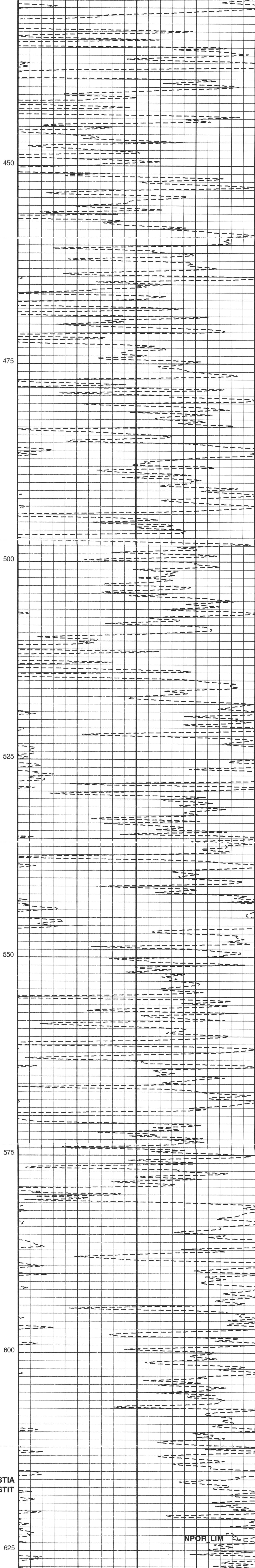
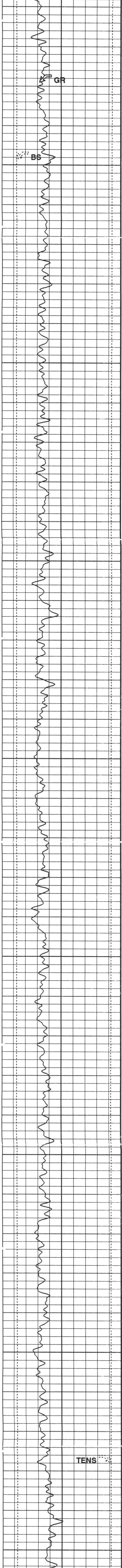
OP System Version: 11C0-305			
MCM			
EMS-B	11C0-305	HILTH-FTB	op11kp1_newpex150kit_G_b
DTC-H	11C0-305		
PIP SUMMARY			
└ Integrated Cement Volume Major Pip Every 1 M3			
└ Integrated Cement Volume Minor Pip Every 0.1 M3			
└ Integrated Hole Volume Major Pip Every 1 M3			
└ Integrated Hole Volume Minor Pip Every 0.1 M3			
Time Mark Every 60 S			

50000	Tension (TENS) (N)	0	0.45	NPOR for LIME (NPOR LIM) (V/V)	-0.15
0	Gamma Ray (GR) (GAPI)	150			
125	Bit Size (BS) (MM)	375			
MAIN PASS: *** PEX DENSITY POROSITY - LIMESTONE 2710 KG/M3 ***					





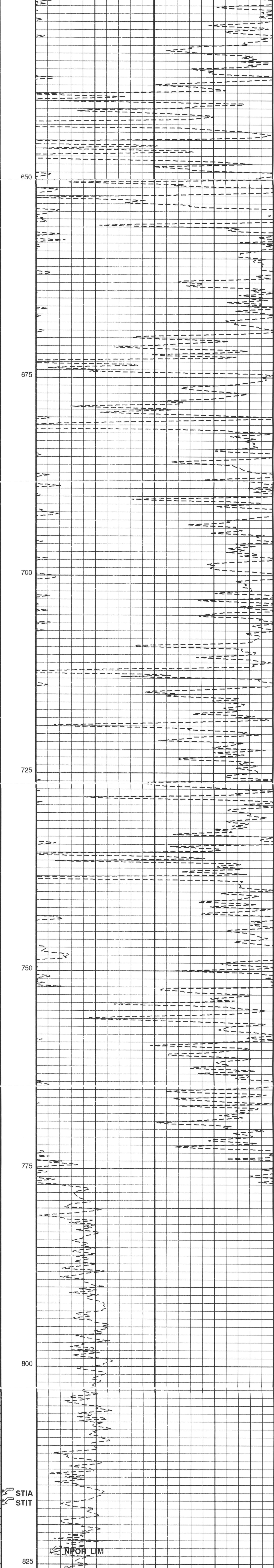
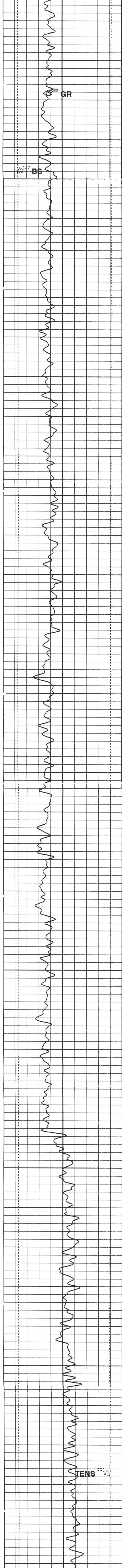




TENS

STIA
STIT

NPOR LIM



GR

BS

850

875

900

925

950

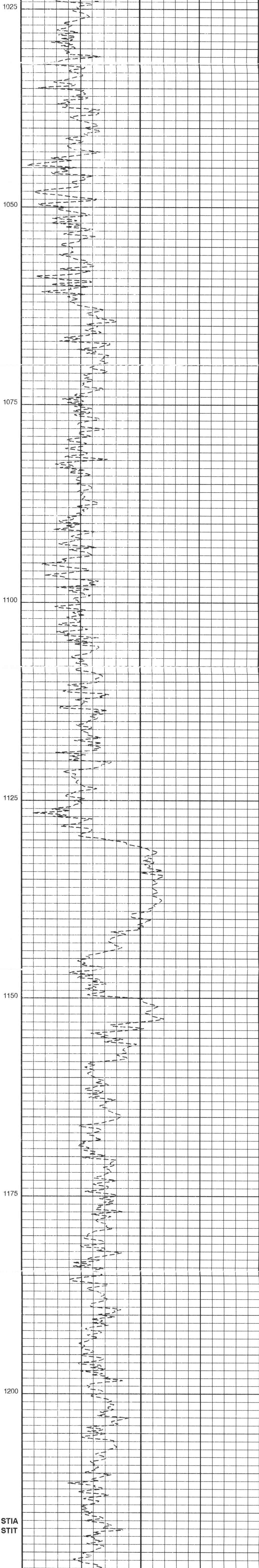
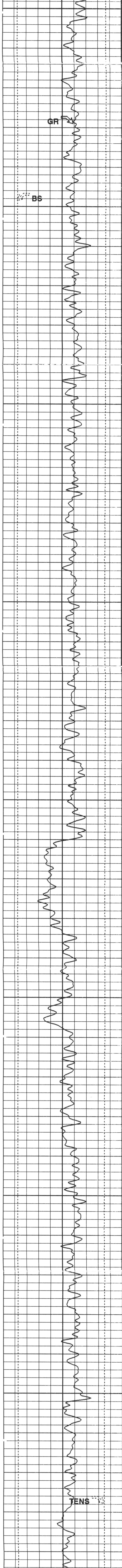
975

1000

TENS

STIA
STIT

NDOR LIM



2- NPOF LIM

1225

1250

1275

1300

1325

1350

1375

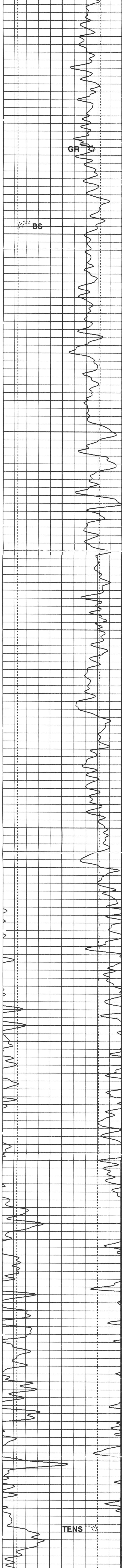
1400

GR

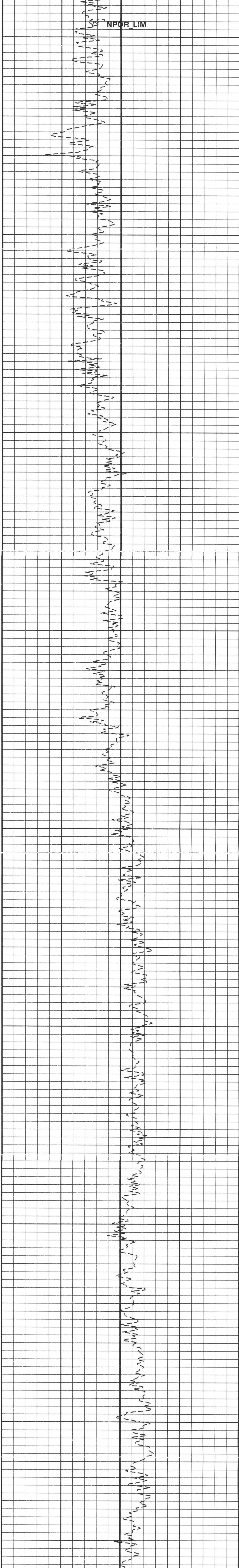
BS

11-150

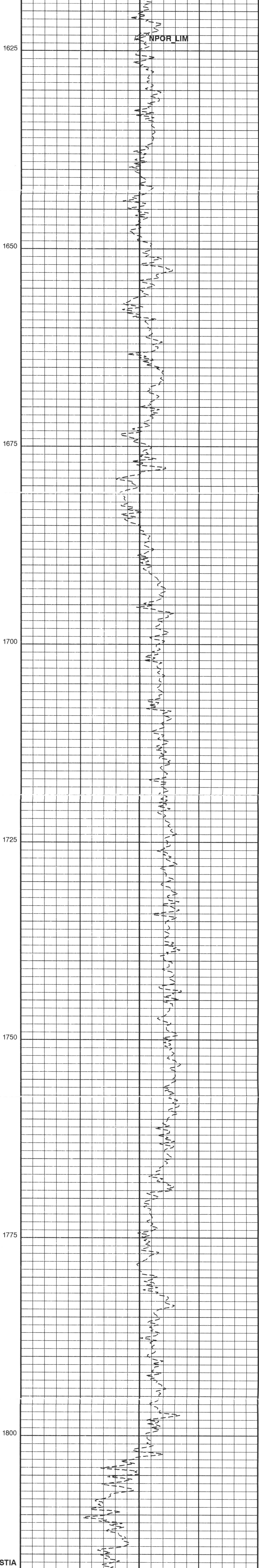
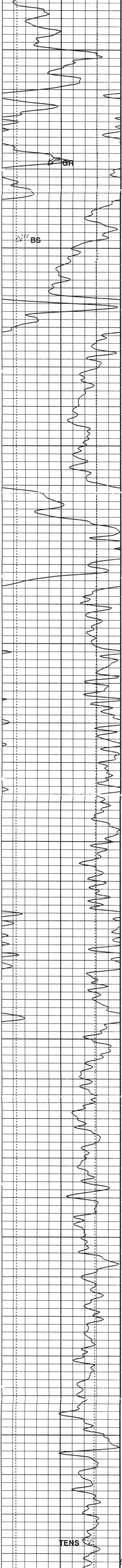
STIA
STIT



1425
1450
1475
1500
1525
1550
1575
1600



STIA
STIT



STIT

1825

NFOR LIM

1850

1875

1900

1925

1950

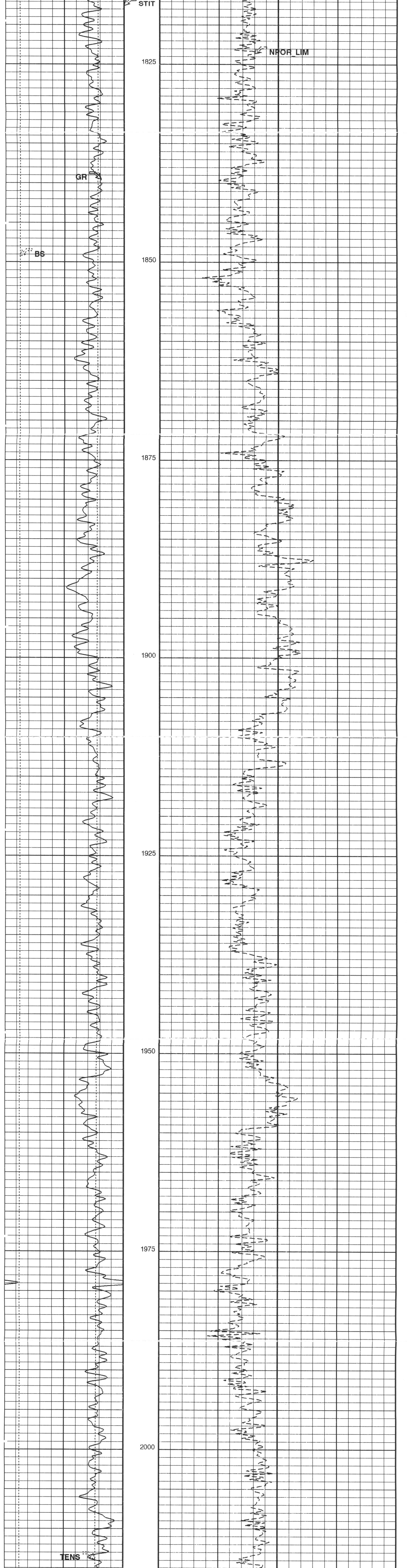
1975

2000

GR

BS

TENS



STIA
STIT

2025

NPOR LIM

2050

2075

2100

2125

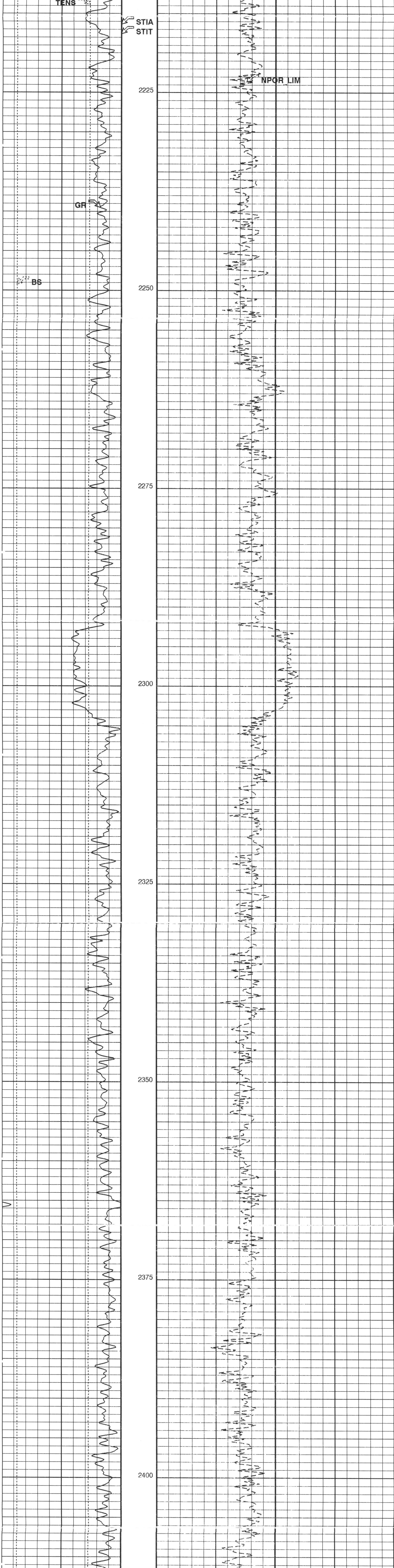
2150

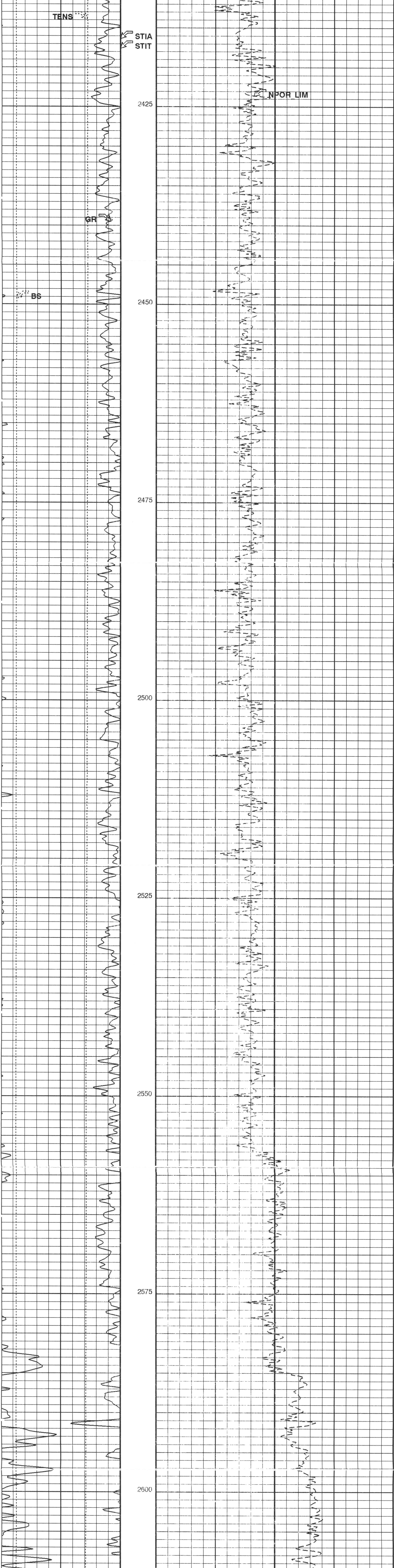
2175

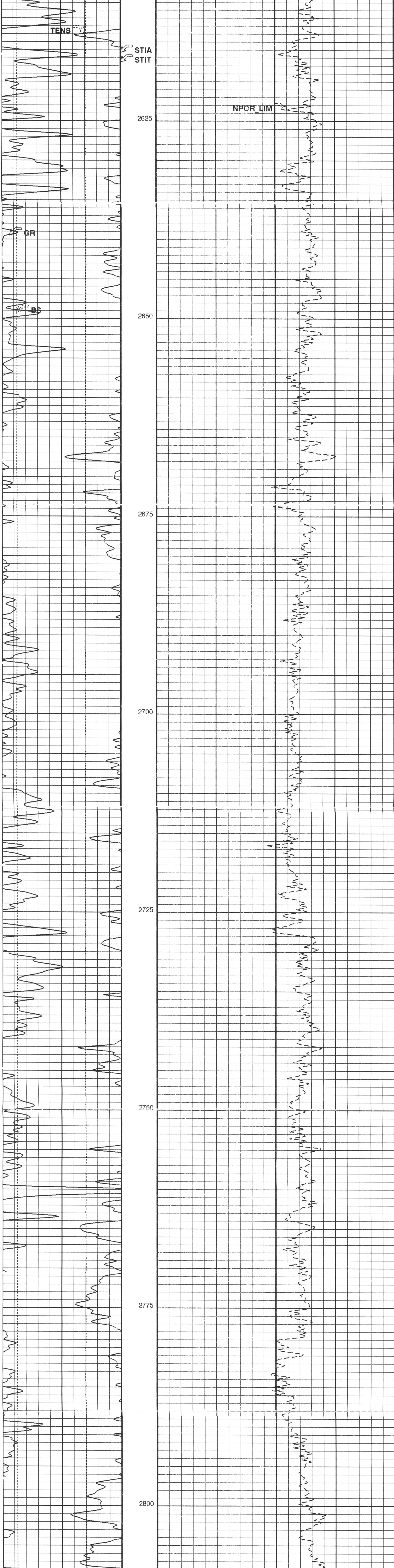
2200

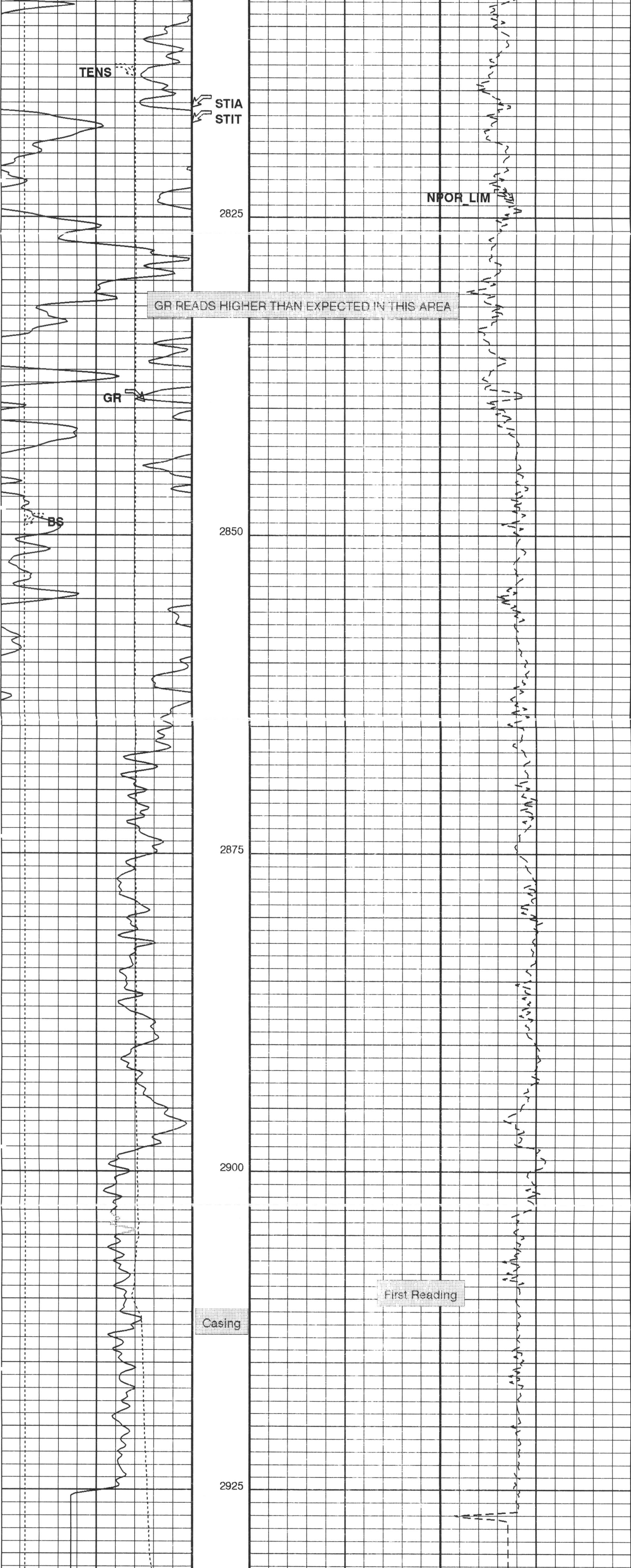
GR

BS









MAIN PASS: *** PEX DENSITY POROSITY - LIMESTONE 2710 KG/M3 ***

125	Bit Size (BS)	375
(MM)		
0	Gamma Ray (GR)	150
(GAPI)		
50000	Tension (TENS)	0
(N)		

0.45	NPOR for LIME (NPOR_LIM)	-0.15
(V/V)		

PIP SUMMARY

- └ Integrated Cement Volume Major Pip Every 1 M3
- └ Integrated Cement Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
- └ Integrated Hole Volume Minor Pip Every 0.1 M3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
EMS-B: Environment Measurement Sonde			
EAAB	EMS Accelerometer Coefficient:Ab	0	
EAAS	EMS Accelerometer Coefficient:As	0	
EABB	EMS Accelerometer Coefficient:Bb	0	
EABS	EMS Accelerometer Coefficient:Bs	0	
EACB	EMS Accelerometer Coefficient:Cb	0	
EACS	EMS Accelerometer Coefficient:Cs	0	
ECOF	EMS Caliper Offset	50.8	MM
EFC	EMS Fixed Caliper Operation	OFF	
ESCL	EMS Synthetic Caliper Log	OFF	
FCD	Future Casing (Outer) Diameter	0	MM
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	CASED	
BHT	Bottom Hole Temperature (used in calculations)	149	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	40	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	CHART GEN 9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HART	Accelerometer Reference Temperature	25	DEGC
HDCOD	HILT Density Coal detection	2000	K/M3
HDSAD	HILT Density Salt detection	2100	K/M3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	K/M3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	0.45	V/V
HNSAD	HILT Neutron Salt detection	0.05	V/V
HPHIECUT	HILT effective Porosity Cutoff	0.05	V/V
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
NMT	HILT Nuclear Mud Type	NOBARITE	
PHIMAX	HILT max porosity	0.35	V/V
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	3.175	MM
SOCO	Standoff Correction Option	YES	
DIR: Directional Survey Computation			
SPED	East Departure of Starting Point	0	M
SPND	North Departure of Starting Point	0	M
SPVD	TVD of Starting Point	0	M
TAZI	Vertical Section Azimuth	0	DEG
TIED	East Departure of Tie-in Point	-0.26	M
TIND	Along-hole depth of Tie-in Point	75.2	M
TIND	North Departure of Tie-in Point	-0.24	M
TIVD	TVD of Tie-in Point	75.2	M
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	1.524	M
TDD	Total Depth - Driller	2700.00	M

TDL	System and Miscellaneous		Total Depth - Logger	3692.00	M
ALTDPC	Name of alternate depth channel		TrueVerticalDepth	156.000	MM
BS	Bit Size			-50000.00	PPM
BSAL	Borehole Salinity			177.800	MM
CSIZ	Current Casing Size			38.70	KG/M
CWEI	Casing Weight			1050.00	K/M3
DFD	Drilling Fluid Density			-0.3	M
DO	Depth Offset for Playback			23.53	DEGC
MST	Mud Sample Temperature			NO	
PBVSADP	Use alternate depth channel for playback			NORMAL	
PP	Playback Processing			1.2110	OHMM
RMFS	Resistivity of Mud Filtrate Sample			1.0000	OHMM
RW	Resistivity of Connate Water			3692	M
TD	Total Depth			37.78	DEGC
TWS	Temperature of Connate Water Sample				

Format: PORO-LIME-CAN Vertical Scale: 1:240 Graphics File Created: 23-Feb-2004 14:40

OP System Version: 11C0-305
MCM

EMS-B	11C0-305	HILTH-FTB	op11kp1_newpex150kit_G_b
DTC-H	11C0-305		

Input DLIS Files

DEFAULT	EMS_TLD_MCFL_CNL_095LUP	FN:84	PRODUCER	23-Feb-2004 12:59
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Output DLIS Files

DEFAULT	EMS_TLD_MCFL_CNL_097PUP	FN:86	PRODUCER	23-Feb-2004 14:40
REDUCED	EMS_TLD_MCFL_CNL_097PUP	FN:87	PRODUCER	23-Feb-2004 14:40

Input DLIS Files

DEFAULT	FMS_TLD_MCFL_CNL_065PUP	FN:64	PRODUCER	23-Feb-2004 00:24	3692.2 M	2781.0 M
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Integrated Hole/Cement Volume Summary

Hole Volume = 15.05 m3
Cement Volume = 15.05 m3 (assuming 0.00 mm casing O.D.)
Computed from 3691.9 m to 2912.1 m

OP System Version: 11C0-305
MCM

MESTB	11C0-305	DTAA	OP11-KP1
HILTHD	op11kp1_newpex150kit_G_b	HRLT	op11kp1_HrltKit_b
EMS	11C0-305	DTCH	11C0-305
SPAA	11C0-305		

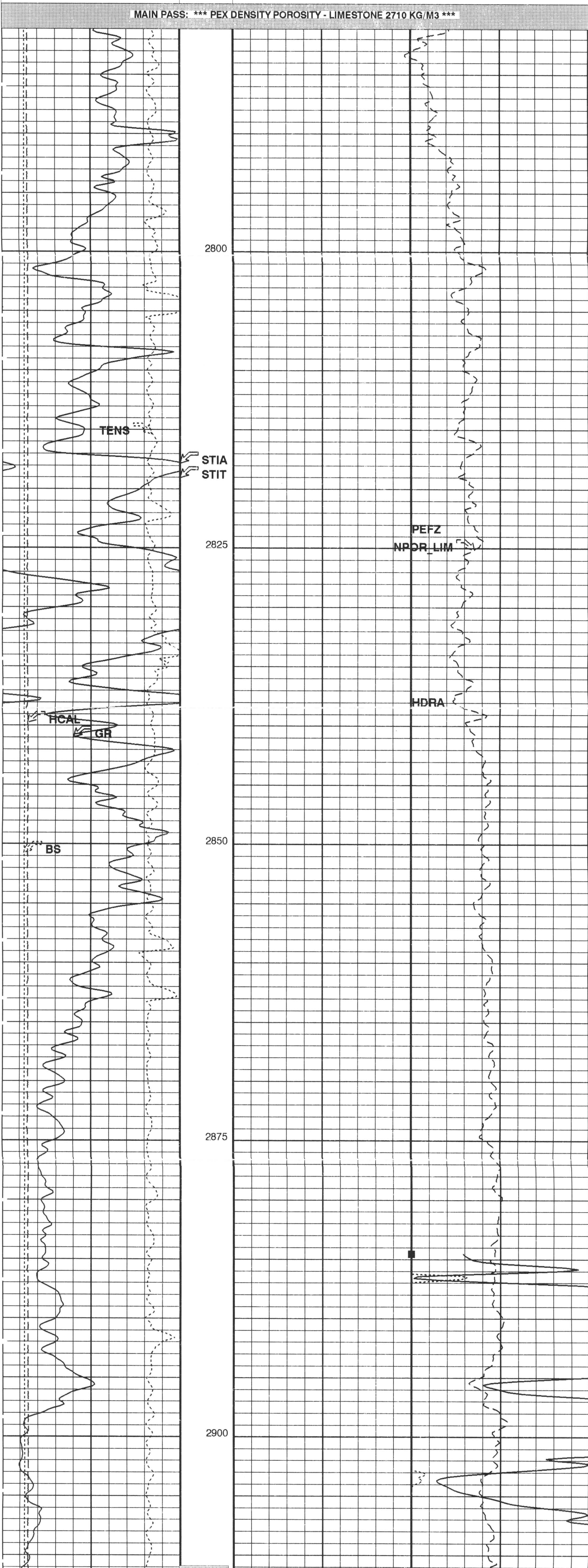
FIP SUMMARY

→ Integrated Cement Volume Major Pip Every 1 M3
→ Integrated Cement Volume Minor Pip Every 0.1 M3
└ Integrated Hole Volume Major Pip Every 1 M3
└ Integrated Hole Volume Minor Pip Every 0.1 M3

Time Mark Every 60 S

Tension (TENS) (N)	
50000	0
Caliper (HCAL) (MM)	
125	375
Gamma Ray (GR) (GAPI)	
0	150
Bit Size (BS) (MM)	
125	375

Std. Res. Formation Pe (PEFZ) (----	10	450	Density Correction (HDRA) (K/M3)	-50
NPOR for LIME (NPOR LIM) (V/V)				
0.45				
DPHI for LIME (DPHI LIM) (V/V)				
0.45				



Casing

2925

2950

2975

3000

3025

3050

3075

3100

TENS

STIA
STIT

PEFZ

NPOR_LIM

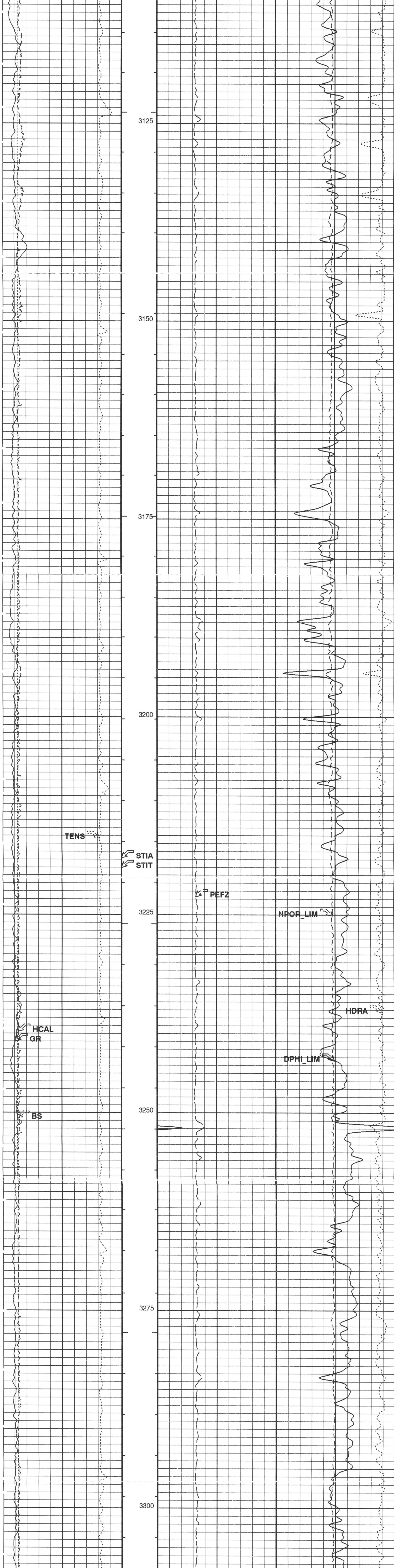
HDRA

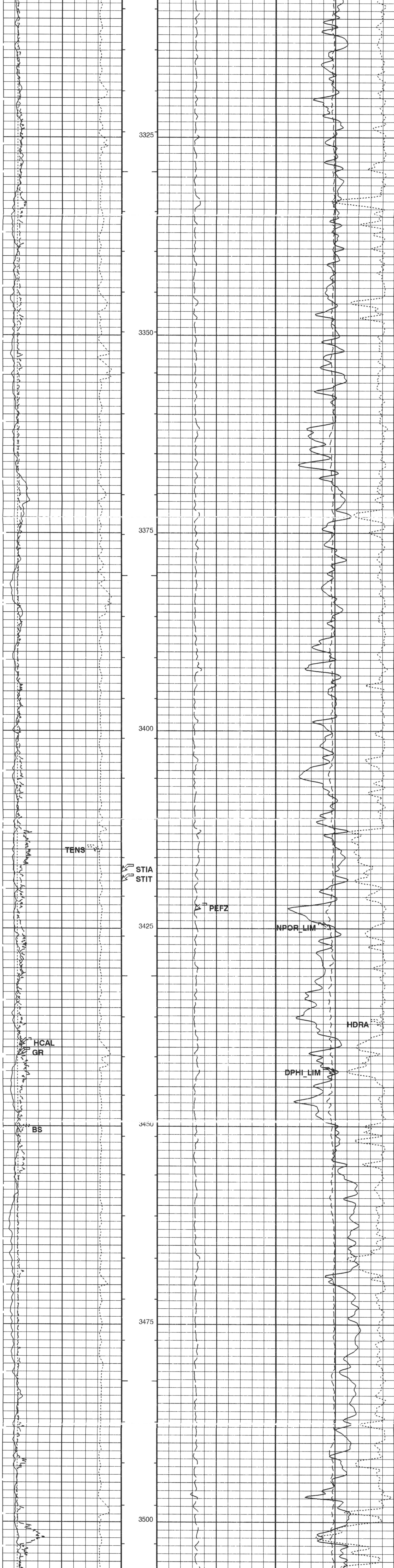
DPHI_LIM

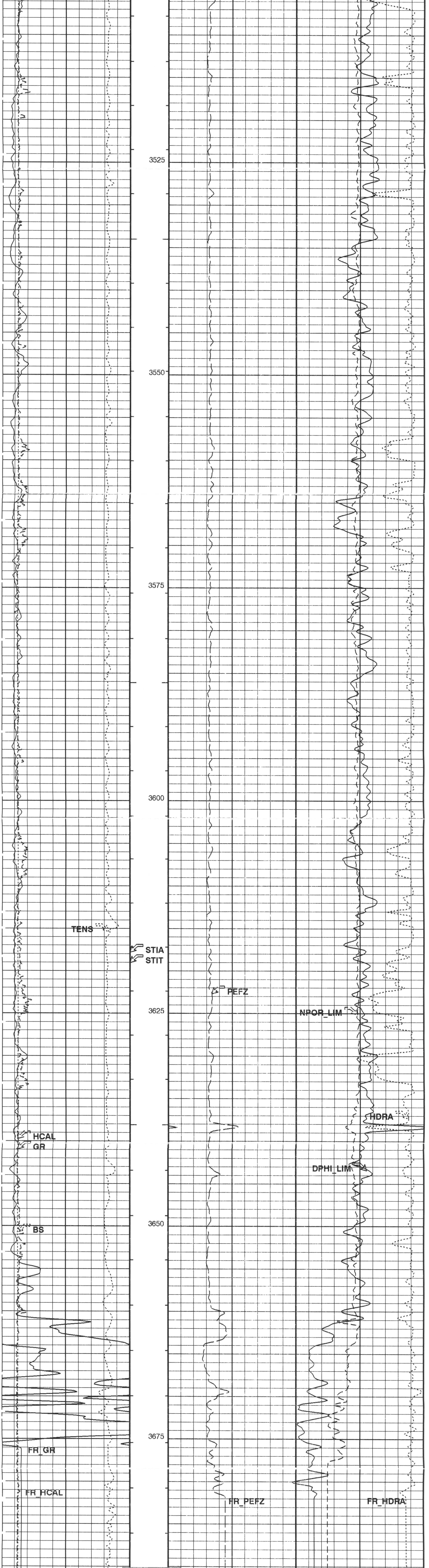
HCAL

GR

BS







MAIN PASS: *** PEX DENSITY POROSITY - LIMESTONE 2710 KG/M3 ***			
Bit Size (BS) (MM)		DPHI for LIME (DPHI_LIM) (V/V)	
125	375	0.45	-0.15
Gamma Ray (GR) (GAPI)		NPOR for LIME (NPOR_LIM) (V/V)	
0	150	0.45	-0.15
Caliper (HCAL) (MM)		Std. Res. Formation Pe (PEFZ)	
125	375	0	10 450
Tension (TENS)		Density Correction (HDRA) (K/M3)	
			-50

PIP SUMMARY

- Integrated Cement Volume Major Pip Every 1 M3
- Integrated Cement Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Hole Volume Minor Pip Every 0.1 M3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
MEST-B: Micro Electrical Scanner - B (Slim)		
ACCC	Accelerometer coefficients	-0.002
ACCM	Accelerometer Month of Calibration	1
ACCN	Accelerometer Serial Number	470
ACCT	Accelerometer Type (Manufacturer Code)	3
ACCY	Accelerometer Year of Calibration	2
ACPP	Accelerometer PROM Presence	PRESENT
AFMO	Accelerometer Filtering Mode	MAVE
ART	Accelerometer Reference Temperature	20.000 degC
ATIM	Time of acc calibration	1077489314
ERDS	EMEX Regulation Data Set	ALL_DIP
GLM	GPIT Logging Mode	DIPM
GTM	GPIT Telemetry Mode	DIPM
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION
LATD	Latitude (N=+ S=-)	60.500 deg
LOND	Longitude (E=+ W=-)	-123.500 deg
MAGM	Magnetometer Month of Calibration	10
MAGN	Magnetometer Serial Number	275
MAGT	Magnetometer Type (Manufacturer Code)	3
MAGY	Magnetometer Year of Calibration	98
MAPP	Magnetometer PROM Presence	PRESENT
MDEC	Magnetic Field Declination	24.857 deg
MFIN	Magnetic Field Intensity	46.760 A/m
MGMC	Magnetometer coefficients	-0.001
MINC	Magnetic Field Inclination	78.565 deg
MLM	MEST Logging Mode	FSCA
MRTE	Magneto Reference Temperature	23.000 degC
MTIM	Time of magnetometer calibration	1077489319
PADT	Presentation Allow Disallow Threshold	0.500 deg
PTYP	Pad Type - High Resolution or Medium Extended Coverage	HR
RBS	Resistivity Button Selection	AUTO
SOFF	Standoff	0.000 mm
U-MAEP	MEST Automatic EMEX Policy	TRADITIONAL
XGAI	Gain	3
XMOD	Emex Mode	MANUAL
XOFF	Offset	0
XVOL	Emex Voltage	0 V
DTA-A: Downhole Toolbus Adapter - A		
TMRI	Telemetry Error Msg Report Interval (for SCP)	60 s
TSRI	Telemetry Status Report Interval (for IO Mon)	10 s
HILTH-FTB: High resolution Integrated Logging Tool-DTS		
A1T1	Stab Counts Temperature Correction Coefficient	-31.998
A1T2	Stab Counts Temperature Correction Coefficient	-31.998
A1T3	Stab Counts Temperature Correction Coefficient	-31.998
BHFL	Borehole Fluid Type	WATER
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	149.0 degC
BSCO	Borehole Salinity Correction Option	NO
CCCO	Casing & Cement Thickness Correction Option	NO
DHC	Density Hole Correction	BS
DPPM	Density Porosity Processing Mode	HIRS
ETEM	HILT External Temperature	25.000 degC
EXSICL	External Shale Indicator Clean Value	20.000
EXSISH	External Shale Indicator Shale Value	150.0
FD	Fluid Density	1000.0 kg/m3
FEXP	Form Factor Exponent	2.000
FNUM	Form Factor Numerator	1.000
FPHI	Form Factor Porosity Source	DPHZ
FSCO	Formation Salinity Correction Option	NO
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	40.000 deg
GGRD	Geothermal Gradient	0.018 degC/m
GLS_VJ_OLD_SERNUM-1	GLS-VJ serial number from previous calibrations	0
GLS_VJ_OLD_SERNUM-2	GLS-VJ serial number from previous calibrations	0
GRSE	Generalized Mud Resistivity Selection	REMS
GTSE	Generalized Temperature Selection	HSTS_HTEM
HACCC	Accelerometer coefficients	-1234.800
HACCM	Accelerometer Month of Calibration	5
HACCN	Accelerometer Serial Number	1598
HACCT	Accelerometer Type (Manufacturer Code)	5
HACCY	Accelerometer Year of Calibration	2
HACPP	Accelerometer PROM Presence	PRESENT_FILE
HACTI	Time of accelerometer calibration	1077489658
HART	Accelerometer Reference Temperature	25.000 degC
HDCOD	HILT Density Coal detection	2000.0 kg/m3
HDSAD	HILT Density Salt detection	2100.0 kg/m3
HETF	HILT filter	ON
HILT_GAS_DENSITY	HILT Gas Downhole Density	0.000 kg/m3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF
HISC	HGNS Centered/Eccentered	ECCENTERED
HMCA_BOARD_TYPE	HMCA Board Type	1
HNCOD	HILT Neutron Coal detection	0.450 m3/m3
HNSAD	HILT Neutron Salt detection	0.050 m3/m3
HPHIECUT	HILT effective Porosity Cutoff	0.050 m3/m3
HPUW	HILT: Power Up Status Words	0
HRCC_OLD_SERNUM-1	HRCC serial number from previous calibrations	0
HRCC_OLD_SERNUM-2	HRCC serial number from previous calibrations	0
HRED	HILT Activate Data Reduction	NO
HRGD_BOARD_TYPE	HRGD Board Type	WITH_HET
HRGD_OLD_SERNUM-1	HRGD serial number from previous calibrations	0
HRGD_OLD_SERNUM-2	HRGD serial number from previous calibrations	0
HRMS_OLD_SERNUM-1	HRMS serial number from previous calibrations	0
HRMS_OLD_SERNUM-2	HRMS serial number from previous calibrations	0
HSCO	Hole Size Correction Option	YES
HSIS	HILT Shale Indicator Selection	GR
HSWCUT	HILT Water Saturation from AITH cutoff	50.000 %
HTES	HMCA: Cable Head Tension Source	NO_HTEN
MATR	Rock Matrix for Neutron Porosity Corrections	LIME
MCCO	Mud Cake Correction Option	NO
MCOR	Mud Correction	NATU
MDEN	Matrix Density	2710.0 kg/m3
MHC0	MCFL B0 Contrast Correction Coefficient	0.000 ohm
MHC1	MCFL B1 Contrast Correction Coefficient	0.000 ohm
MHCC	MCFL High Contrast Correction Switch	NO
MPOF	MCFL Processing Operation Mode	ON
MWCO	Mud Weight Correction Option	NO
NAAC	HRDD APS Activation Correction	OFF
NCWR	Temperature Correction Scheme	PEX150 INDIVIDUAL TEMPERATURE CORRECTION
NDTC	HRDD Dead Time Correction	APPLY
NIAV	HRDD Density/Pe Algorithm Version	2.600
NMT	HILT Nuclear Mud Type	NOBARITE
NPRM	HRDD Processing Mode	HIRES
NPUC	HRDD Pile-Up Correction	NOT_APPLY
NSAR	HRDD Depth Sampling Rate	25.400 mm
NTCO	HRDD Temperature Correction Option	ON
PHIMAX	HILT max porosity	0.350 m3/m3
PTCO	Pressure/Temperature Correction Option	NO
RIAV	MCFL Resistivity Algorithm Version	1.080
SD1B	BS Pulse Processing Filter Temperature Coefficient	1.000
SD1L	LS Pulse Processing Filter Temperature Coefficient	1.000
SD1S	SS Pulse Processing Filter Temperature Coefficient	1.000
SDAT	Standoff Data Source	SOCN
SEXP_HILT	HILT Saturation Exponent	2.000
SHT	Surface Hole Temperature	20.000 degC
SNBS	HRGD BS Serial Number	42767.0
SNLS	HRGD LS Serial Number	42767.0
SNSS	HRGD SS Serial Number	42767.0
SOCN	Standoff Distance	3.175 mm
SOCO	Standoff Correction Option	YES
SSHB	BS Barium Meas High Energy Temperature Shift	-6.300
SSHL	LS Barium Meas High Energy Temperature Shift	-6.300
SSHS	SS Barium Meas High Energy Temperature Shift	-6.300
SSLB	BS Barium Meas Low Energy Temperature Shift	-6.300
SSLL	LS Barium Meas Low Energy Temperature Shift	-6.300
SSLS	SS Barium Meas Low Energy Temperature Shift	-6.300
STSO_HRDD	HRDD Temperature Source	HET
TA1B	BS Stab Counts Measurement Temperature	-255.980 degC
TA1L	LS Stab Counts Measurement Temperature	-255.980 degC
TA1S	SS Stab Counts Measurement Temperature	-255.980 degC
TSHB	BS Barium Meas Temperature	-255.980 degC
TSHL	LS Barium Meas Temperature	-255.980 degC
TSHS	SS Barium Meas Temperature	-255.980 degC
HRLT-B: High Resolution Laterolog Array - B		
ACQMOD	HRLT Acquisition Mode	LOG
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	149.0 degC
CALMOD	HRLT Calibration Mode	LOG_MODE
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE
CALTEMP	HRLTB Calibration Temperature	124.0 degC
FREQ0	HRLT Frequency Index for Mode 0	32
FREQ1	HRLT Frequency Index for Mode 1	128
FREQ2	HRLT Frequency Index for Mode 2	104
FREQ3	HRLT Frequency Index for Mode 3	86
FREQ4	HRLT Frequency Index for Mode 4	56
FREQ5	HRLT Frequency Index for Mode 5	44
FREQ6	HRLT Frequency Index for Mode 6	116
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	40.000 deg
GGRD	Geothermal Gradient	0.018 degC/m
GRSE	Generalized Mud Resistivity Selection	REMS
GTSE	Generalized Temperature Selection	HSTS_HTEM
KFAC_HRLT	HRLT K Factor Option	SONDE
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW
LOOPGAIN_S	HRLT Loop Gain for Shallow Modes	0.200
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO
MANUATT0	HRLT Manual Source Attenuation Mode 0	21.920 dB
MANUATT1	HRLT Manual Source Attenuation Mode 1	16.780 dB
MANUATT2	HRLT Manual Source Attenuation Mode 2	23.950 dB
MANUATT3	HRLT Manual Source Attenuation Mode 3	24.940 dB
MANUATT4	HRLT Manual Source Attenuation Mode 4	26.460 dB
MANUATT5	HRLT Manual Source Attenuation Mode 5	26.830 dB
MANUATT6	HRLT Manual Source Attenuation Mode 6	17.570 dB
MATR	Rock Matrix for Neutron Porosity Corrections	LIME
MUXFIXCHAN	HRLT Multiplexer Channel Address	VCAL
MUXPGAMOD	HRLT Multiplexer and Programmable Gain Amplifier Sequence	AUTO
PGAFIXGN	HRLT Programmable Gain Amplifier Fixed Value	G_1
PQSELECT	HRLT InPhase or Quadrature Component Selection	P
PROCNV	Inversion Selection	ON
PROCMFL	Inversion Micro-Resistivity Selection	RXOZ
PROCMSO	Mechanical Standoff Fin Size	12.700 mm
PROCRM	Processing Mud Resistivity Select	EXTERNAL_GRSE
PROCSPO	Sonde Position	ECCENTERED
SCMOD	HRLT Slow Channel Mode	SCAN
SHT	Surface Hole Temperature	20.000 degC
EMS-B: Environment Measurement Sonde		
ADCO	ADC offset	2048.0
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	149.0 degC
CD	Casing Shoe Depth	2912.0 m
EAAB	EMS Accelerometer Coefficient:Ab	0.000
EAAS	EMS Accelerometer Coefficient:As	0.000
EABB	EMS Accelerometer Coefficient:Bb	0.000
EABS	EMS Accelerometer Coefficient:Bb	0.000
EACB	EMS Accelerometer Coefficient:Cb	0.000
EACR	EMS ADC Conversion Rate (LSB)	2.210 mV
EACS	EMS Accelerometer Coefficient:Cs	0.000
ECOF	EMS Caliper Offset	50.800 mm
ECOM	EMS Command	8
EDDP	EMS Diag.Data Parameter	0
EEM	EMS Error Message	OFF
EFC	EMS Fixed Caliper Operation	OFF
EMTY	EMS Type	PS
EMUD	EMS Mudcake Correction	OFF
ESCL	EMS Synthetic Caliper Log	OFF
ESIM	EMS Simulator	TEST
FCD	Future Casing (Outer) Diameter	0.000 mm
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	40.000 deg
GGRD	Geothermal Gradient	0.018 degC/m
GRSE	Generalized Mud Resistivity Selection	REMS
GTSE	Generalized Temperature Selection	HSTS_HTEM
HVCS	Integrated Hole Volume Caliper Selection	C1/C2
IHVC	Integrated Hole Volume Control	SNAP
MATR	Rock Matrix for Neutron Porosity Corrections	LIME
SHT	Surface Hole Temperature	20.000 degC
VCEM	Cumulated Cement Volume	0.000 m3
VHOL	Cumulated Hole Volume	0.000 m3
DTC-H: DTS Telemetry Tool		
DDLG	Digital Telemetry Module Downlink Gain	AUTOMATIC_
DDLGS	Digital Telemetry Module Downlink Shape	AUTOMATIC_
DULG	Digital Telemetry Cartridge Uplink Gain	AUTOMATIC_
DULM	Digital Telemetry Cartridge Uplink Mode	T5T7
DULR	Digital Telemetry Cartridge Uplink Rate	420KBS
TMRI	Telemetry Error Msg Report Interval (for SCP)	60 s
TSRI	Telemetry Status Report Interval (for IO Mon)	10 s
SPA-A: SP ADAPTOR		
SPDR	SP Drift	0.000 mV/m
SPNV	SP Next Value	0.000 mV

CD	HOLEV: Integrated Hole/Cement Volume		0.000	m
FCD	Casing Shoe Depth		2912.0	m
HVCS	Future Casing (Outer) Diameter		0.000	mm
IHVC	Integrated Hole Volume Caliper Selection		C1/C2	
VCEM	Integrated Hole Volume Control		SNAP	
VHOL	Cumulated Cement Volume		0.000	m3
	Cumulated Hole Volume		0.000	m3
DIP: Dip Computation				
CSBL	CSB DIP Number of Levels		2L	
DPAD	Disabled Pad		NONE	
ELRA	Electrical Radius		12.700	mm
INT	Correlation Interval		1.219	m
SANG	Correlation Search Angle		35.000	deg
SBUT	DIP Set of Buttons		MSD	
SDFA	Side-by-Side Distance Factor		22.860	mm
SPAN	DIP Spanning		1/4	
STDA	Structural DIP Azimuth		0.000	deg
STDI	Structural DIP Angle		0.000	deg
STEP	Correlation Step		0.610	m
DIR: Directional Survey Computation				
SPED	East Departure of Starting Point		0.000	m
SPND	North Departure of Starting Point		0.000	m
SPVD	TVD of Starting Point		0.000	m
TAZI	Vertical Section Azimuth		0.000	deg
TIED	East Departure of Tie-in Point		-0.260	m
TIMD	Along-hole depth of Tie-in Point		75.200	m
TIND	North Departure of Tie-in Point		-0.240	m
TIVD	TVD of Tie-in Point		75.200	m
STI: Stuck Tool Indicator				
LBFR	Trigger for MAXIS First Reading Label		TDL	
STKT	STI Stuck Threshold		1.524	m
TTD	Total Depth - Driller		3700.0	m
TDL	Total Depth - Logger		3692.0	m
System and Miscellaneous				
ALTDPC	Name of alternate depth channel	TRUEVERTICALDEPTH		
AMD	Azimuth of Maximum Deviation		130.4	deg
APD	Above Permanent Datum		7.400	m
APIN	API Serial Number		SDL99	
BG	Gas Formation Volume Factor, Bg			
BLI	Bottom Log Interval			
BO	Oil Formation Volume Factor, Bo			
BPP	Bubble Point Pressure			
BPT	Bubble Point Temperature			
BS	Bit Size		156.0	mm
BSAL	Borehole Salinity			
BSDF	Bit Size Depth From			
BSDT	Bit Size Depth To			
BW	Water Formation Volume Factor, Bw			
CADD	Cement Additives			
CADT	Casing Depth To			
CASG	Casing Grade			
CASN	Casing String Number			
CBDR	Casing Bottom of Driller		2912.0	m
CBLO	Casing Bottom of Logger		2912.0	m
CDEN	Cement Density			
CDF	Casing Depth From			
CJT	Cement Job Type	Primary		
CLAB	County/Rig Label	Territory:		
CN	Company Name	CHEVRON CANADA RESOURCES LTD.		
CN1	Company Name Line 1			
CONT	Continent			
CONTYP	Conveyance Type	DRILLPIPE (TLC)		
COUN	County or Rig Name	NORTHWEST TERRITORIES		
CSIZ	Current Casing Size		177.8	mm
CTOP	Estimated Cement Top			
CWEI	Casing Weight		38.700	kg/m
CWLO	Cement Water Loss			
DATE	Date as Month-Day-Year		21-Feb-2004	
DCS	Date Circulation Stopped		21-Feb-2004	
DEPREM1	Depth Remark 1			
DEPREM2	Depth Remark 2	PRIMARY DEPTH MEASUREMENT = IDW		
DEPREM3	Depth Remark 3			
DEPREM4	Depth Remark 4	LOGS CORRELATED TO MWD GR LOG		
DEPREM5	Depth Remark 5			
DEPREM6	Depth Remark 6			
DFD	Drilling Fluid Density		1050.0	kg/m3
DFL	Drilling Fluid Loss		7.000	cm3
DFPH	Drilling Fluid PH		9.500	
DFT	Drilling Fluid Type	CLAY-FREE POLYMER		
DFV	Drilling Fluid Viscosity		44.000	s
DIFF	Maximum Permitted Depth Difference		0.305	m
DLAB	Date Logger At Bottom		22-Feb-2004	
DMF	Drilling Measured From	KELLY BUSHING		
EDF	Elevation of Derrick Floor		417.0	m
EGL	Elevation of Ground Level		409.9	m
EKB	Elevation of Kelly Bushing		417.3	m
ELZ	Elevation of Log Zero		417.3	m
ENGI	Engineer's Name	MICHEL LAPOINTE		
ENVI	Acquisition Environment	FTB_TELEMETRY		
EPD	Elevation of Permanent Datum		409.9	m
FL	Field Location	LATITUDE: 60DEG 28MIN 42.4SEC NORTH LONGITUDE: 123DEG 35MIN 4.3SEC WEST		
FL1	Field Location Line 1			
FL2	Field Location Line 2			
FLEV	Fluid Level			
FLSHSTRM	Flush depth-delayed streams to output at end		NO	
FN	Field Name		LIARD	
FSAL	Formation Salinity			
GGRA	Gas Gravity			
HID1	Header Identifier Line 1	HRLA LATEROLOG		
HID2	Header Identifier Line 2			
HIDE	Header Identifier	PLATFORM EXPRESS		
HLD	Header Legal Disclaimer	INCLUDE		
IBG	1/Gas Formation Volume Factor, 1/Bg			
IDWCD	IDW Calibration Date (dd-Mmm-yyyy)		11-APR-2003	
IDWCSN	IDW Calibrator Serial Number		4	
IDWLCN	IDW Calibration Cable Type		7-46P	
IDWSN	IDW Serial Number		1775	
IDWTYP	IDW Type		IDW-B	
IDWWC1	IDW Wheel Correction 1		-6	
IDWWC2	IDW Wheel Correction 2		-5	
ILL1	Instrumentation Logo Line 1			
ILL2	Instrumentation Logo Line 2			
JETA	Job Events Auto Save		ALLOW	
LATI	Latitude			
LCC	Logging Company Code		440	
LCL	Logging Cable Length		6325	m
LCMT	Lead Cement Type			
LCN	Logging Cable Name (Type)			
LCSN	Logging Cable Serial Number		2022	
LCVO	Lead Cement Volume			
LLAB	Section Label			
LMF	Log Measured From	KELLY BUSHING		
LOGMODE	Depth Logging Mode	MEASURED DEPTH		
LOGSEQ	Log Sequence	FIRST_LOG_IN_WELL		
LONG	Longitude			
LUL	Logging Unit Location	GRANDE PRAIRIE		
LUN	Logging Unit Number		2028	
MCSS	Mud Cake Sample Source	MUD PRESS		
MCST	Mud Cake Sample Temperature		23.410	degC
MFSS	Mud Filtrate Sample Source	MUD PRESS		
MFST	Mud Filtrate Sample Temperature		20.680	degC
MHD	Maximum Hole Deviation		90.380	deg
MMDU	Magnetic Mark Depth Units		FEET	
MRT	Maximum Recorded Temperature		149.0	degC
MRT1	Maximum Recorded Temperature 1		149.0	degC
MRT2	Maximum Recorded Temperature 2			
MRT3	Maximum Recorded Temperature 3			
MSS	Mud Sample Source	FLOWLINE		
MST	Mud Sample Temperature		23.530	degC
NATI	Nation			
NLS	Nominal Logging Speed			
ODEN	Oil Density			
OPER	Operator's Code		6840	
OS1	Other Services Line 1	FMS FORMATION IMAGER		
OS2	Other Services Line 2	LITHODENSITY		
OS3	Other Services Line 3	COMPENSATED NEUTRON		
OS4	Other Services Line 4	HRLA LATEROLOG		
OS5	Other Services Line 5	EMS TEMPERATURE		
PBVSADP	Use alternate depth channel for playback		NO	
PDAT	Permanent Datum	GROUND LEVEL		
PVER	Program Version	11C0-305		
R1	Remark Line 1	Client requested that no toolturners be run on toolstring.		
R10	Remark Line 10	Logs correlated to Schlumberger MWD GR log, ran from Feb 4, 2004 to Feb 15, 2004.		
R11	Remark Line 11	SP not presented in HRLA log as per client.		
R12	Remark Line 12			
R13	Remark Line 13	RLA1 curve reads significantly lower than other HRLA curves. Repeat pass pulled below casing.		
R14	Remark Line 14	PRINTS: 2 FIELD		
R15	Remark Line 15	RIG: AKITA 48E		
R16	Remark Line 16	CREW: P. LANTHIER, D. FOURNIER		
R17	Remark Line 17			
R2	Remark Line 2	Neutron run without bowspring eccentricizer due to hole size restriction.		
R3	Remark Line 3	HRLA run with two 13 mm standoffs for centralization.		
R4	Remark Line 4			
R5	Remark Line 5	Hole volume computed using C1 and C2 FMS calipers, as per client.		
R6	Remark Line 6	No liner to be run. EMS ran only for temperature log.		
R7	Remark Line 7	All tools run on first descent using TLC. Neutron and GR logged on wireline through casing on second descent.		
R8	Remark Line 8	Tools not run below 3692 m.		
R9	Remark Line 9			
RANG	Range			
RIGTYP	Rig Type			
RLAB	Range Label			
RLDT	Reference Log Date (dd-Mmm-yyyy)		4-FEB-2004	
RLNM	Reference Log Name	SLIMPULSE REAL TIME		
RLRN	Reference Log Run Number	NO RUN NUMBER - REAL TIME LOG		
RMB	Resistivity of Mud - BHT		0.410	ohm.m
RMCS	Resistivity of Mud Cake Sample		1.331	ohm.m
RMFB	Resistivity of Mud Filtrate - BHT		0.300	ohm.m
RMFS	Resistivity of Mud Filtrate Sample		1.211	ohm.m
RMS	Resistivity of Mud Sample		1.550	ohm.m
RULB	Rig Up Length at Bottom		0.000	m
RULS	Rig Up Length at Surface		0.000	m
RUN	Run Number		ONE	
RW	Resistivity of Connate Water		1.000	ohm.m
SCD ACCEL	Accelerometer driving Speed Corrected Depth		HILT	
SCORR	Stretch Correction			
SECT	Section			
SGOR	Solution Gas Oil Ratio			
SIMULATE_DELAY	Simulate Acquisition Delay		0.000	
SLAB	State/Province Label			
SON	Service Order Number		10600795	
SPEE	Simulated Logging Speed		1800	ft/h
STAT	State or Province			
STDLC	Subsequent Trip Down Log Correction			
STEM	Surface Temperature		-5.000	degC
TCA	Tail Cement Additives			
TCDE	Tail Cement Density			
TCS	Time Circulation Stopped		23:45	
TCTY	Tail Cement Type			
TCV	Tail Cement Volume			
TCWL	Tail Cement Water Loss			
TD	Total Depth		3692.0	m
TLAB	Time Logger At Bottom		19:15	
TLI	Top Log Interval		2912.0	m
TLLAB	Township Label			
TNDCD	Tension Device Calibration Date (dd-Mmm-yyyy)		11-FEB-2004	
TNDCSN	Tension Device Calibrator Serial Number		78130	
TNDGN	Tension Device GAIN		0.903	
TNDOFF	Tension Device Offset		507.0	
TNDSN	Tension Device Serial Number		1716	
TNDTYP	Tension Device	CMTD-B/A		
TOWN	Township			
TREF	Reference Tension of the Cable		1000.0	lbf
TWS	Temperature of Connate Water Sample		37.778	degC
UWID	Unique Well Identification Number	303K296030123300		
WITN	Witness's Name	BROCK LILICO		
WN	Well Name	CHEVRON ET AL LIARD 3K-29		
ZRCS	Tool Zero Reference Check at Surface		0.050	m

Format: PORO-LIME-CAN

Vertical Scale: 1:240

Graphics File Created: 23-Feb-2004 01:24

OP System Version: 11C0-305

MCM				
MESTB	11C0-305	DTAA	OP11-KP1	
HILTHD	op11kp1_newpex150kit_G_b	HRLT	op11kp1_HrltKit_b	
EMS	11C0-305	DTCH	11C0-305	
SPAA	11C0-305			

Input DLIS Files

DEFAULT	FMS_TLD_MCFL_CNL_065PUP	FN:64	PRODUCER	23-Feb-2004 00:24	3692.2 M	2781.0 M
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Input DLIS Files

DEFAULT	FMS_TLD_MCFL_CNL_065PUP	FN:64	PRODUCER	23-Feb-2004 00:24	3692.2 M	2781.0 M
DEFAULT	FMS_TLD_MCFL_CNL_069PUP	FN:68	PRODUCER	23-Feb-2004 00:53	2978.4 M	2892.6 M

Integrated Hole/Cement Volume Summary

Hole Volume = 15.05 m3
Cement Volume = 15.05 m3 (assuming 0.00 mm casing O.D.)
Computed from 2977.7 m to 2912.1 m

OP System Version: 11C0-305

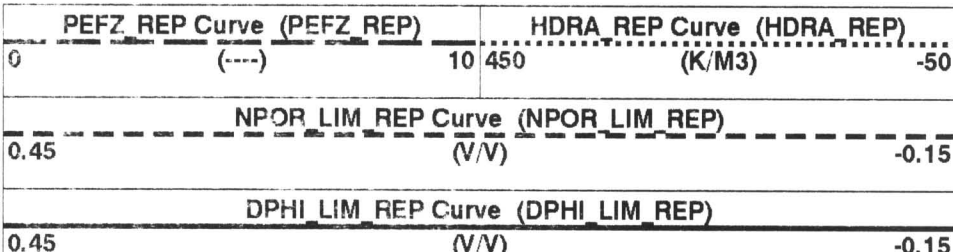
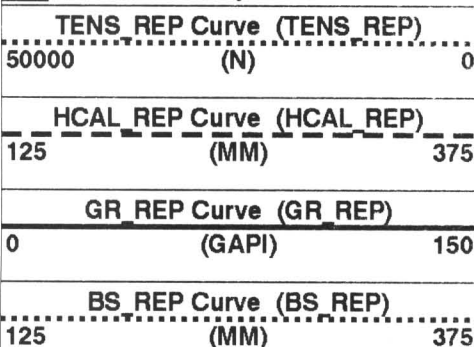
MCM

MESTB	11C0-305	DTAA	OP11-KP1
HILTHD	op11kp1_newpex150kit_G_b	HRLT	op11kp1_HrltKit_b
EMS	11C0-305	DTCH	11C0-305
SPAA	11C0-305		

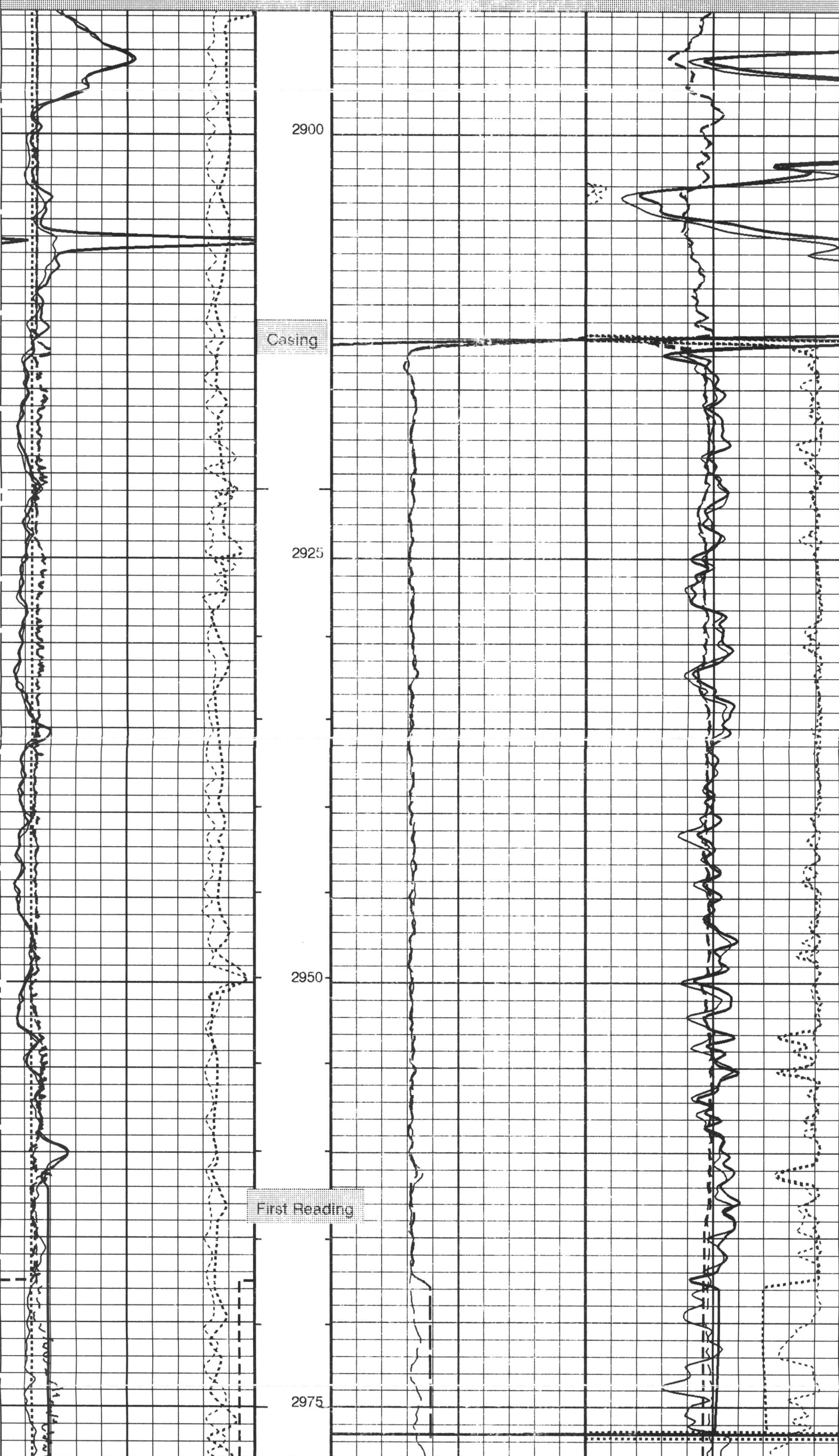
PIP SUMMARY

- Integrated Cement Volume Major Pip Every 1 M3
- Integrated Cement Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Hole Volume Minor Pip Every 0.1 M3

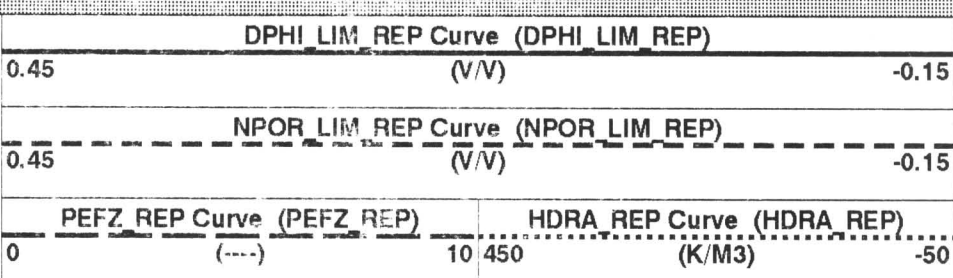
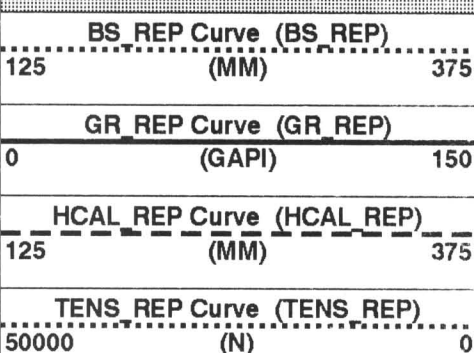
Time Mark Every 60 S



REPEAT ANALYSIS : *** PEX DENSITY POROSITY - LIMESTONE 2710 KG/M3 ***



REPEAT ANALYSIS : *** PEX DENSITY POROSITY - LIMESTONE 2710 KG/M3 ***



PIP SUMMARY

- Integrated Cement Volume Major Pip Every 1 M3
- Integrated Cement Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Hole Volume Minor Pip Every 0.1 M3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HILTH-FTB: High resolution Integrated Logging Tool-DTS		
BHFL	Borehole Fluid Type	WATER
BHS	Borehole Status	OPEN
BSCO	Borehole Salinity Correction Option	NO
CCCO	Casing & Cement Thickness Correction Option	NO
DHC	Density Hole Correction	BS
FD	Fluid Density	1000.0 kg/m3
FSCO	Formation Salinity Correction Option	NO
GDEV	Average Angular Deviation of Borehole from Normal	40.000 deg
GGRD	Geothermal Gradient	0.018 degC/m
HSCO	Hole Size Correction Option	YES
MCCO	Mud Cake Correction Option	NO
MCOR	Mud Correction	NATU
MWCO	Mud Weight Correction Option	NO
NAAC	HRDD APS Activation Correction	OFF
NMT	HILT Nuclear Mud Type	NOBARITE
NPRM	HRDD Processing Mode	HIRES
NSAR	HRDD Depth Sampling Rate	25.400 mm
PTCO	Pressure/Temperature Correction Option	NO
SDAT	Standoff Data Source	SOCN
SOCN	Standoff Distance	3.175 mm
SOCO	Standoff Correction Option	YES
HRLT-B: High Resolution Laterolog Array - B		
BHS	Borehole Status	OPEN
GDEV	Average Angular Deviation of Borehole from Normal	40.000 deg
GGRD	Geothermal Gradient	0.018 degC/m
EMS-B: Environment Measurement Sonde		
BHS	Borehole Status	OPEN
GDEV	Average Angular Deviation of Borehole from Normal	40.000 deg
GGRD	Geothermal Gradient	0.018 degC/m
DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0.000 m
TIMD	Along-hole depth of Tie-in Point	75.200 m
TIVD	TVD of Tie-in Point	75.200 m
STI: Stuck Tool Indicator		
TDL	Total Depth - Logger	3692.0 m
System and Miscellaneous		
BS	Bit Size	156.0 mm
BSAL	Borehole Salinity	
CSIZ	Current Casing Size	177.8 mm
CWEI	Casing Weight	38.700 kg/m
DFD	Drilling Fluid Density	1050.0 kg/m3
FSAL	Formation Salinity	
MST	Mud Sample Temperature	23.530 degC
RMFS	Resistivity of Mud Filtrate Sample	1.211 ohm.m

Format: PORO-LIME-CAN_REP Vertical Scale: 1:240 Graphics File Created: 23-Feb-2004 01:14

OP System Version: 11C0-305

MCM

MESTB	11C0-305	DTAA	OP11-KP1
HILTHD	op11kp1_newpex150kit_G_b	HRLT	op11kp1_HrltKit_b
EMS	11C0-305	DTCH	11C0-305
SPAA	11C0-305		

Input DLIS Files

DEFAULT	FMS_TLD_MCFL_CNL_065PUP	FN:64	PRODUCER	23-Feb-2004 00:24	3692.2 M	2781.0 M
DEFAULT	FMS_TLD_MCFL_CNL_069PUP	FN:68	PRODUCER	23-Feb-2004 00:53	2978.4 M	2892.6 M

Input DLIS Files

DEFAULT	FMS_TLD_MCFL_CNL_065PUP	FN:64	PRODUCER	23-Feb-2004 00:24	3692.2 M	2781.0 M
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Integrated Hole/Cement Volume Summary

Hole Volume = 15.05 m3
Cement Volume = 15.05 m3 (assuming 0.00 mm casing O.D.)
Computed from 3691.9 m to 2912.1 m

OP System Version: 11C0-305
MCM

MESTB	11C0-305	DTAA	OP11-KP1
HILTHD	op11kp1_newpex150kit_G_b	HRLT	op11kp1_HrltKit_b
EMS	11C0-305	DTCH	11C0-305
SPAA	11C0-305		

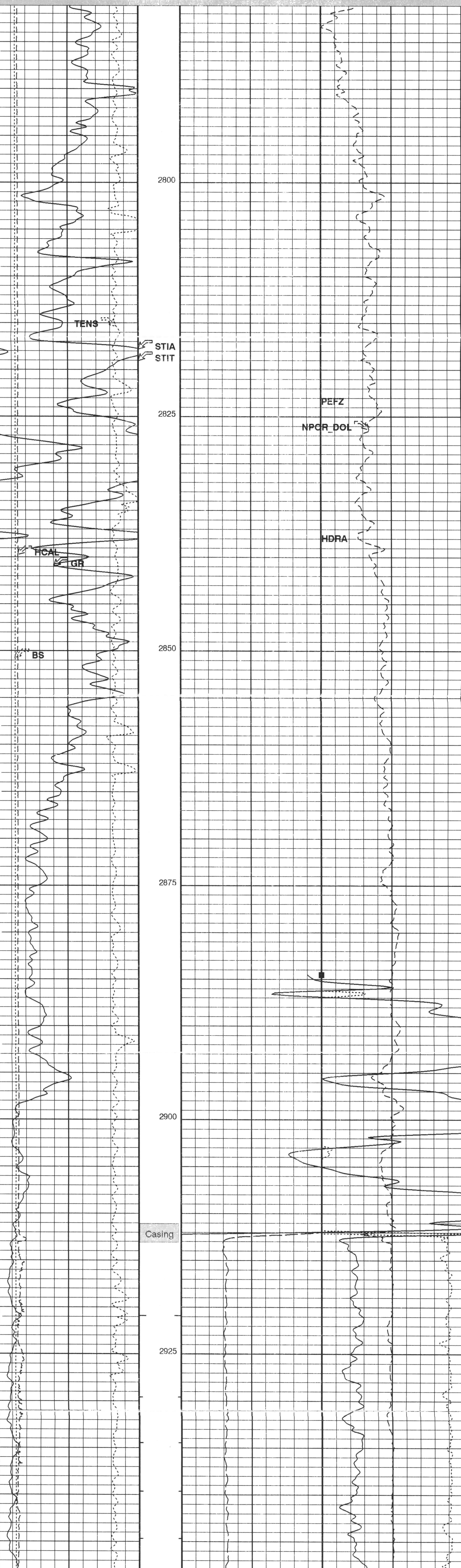
PIP SUMMARY

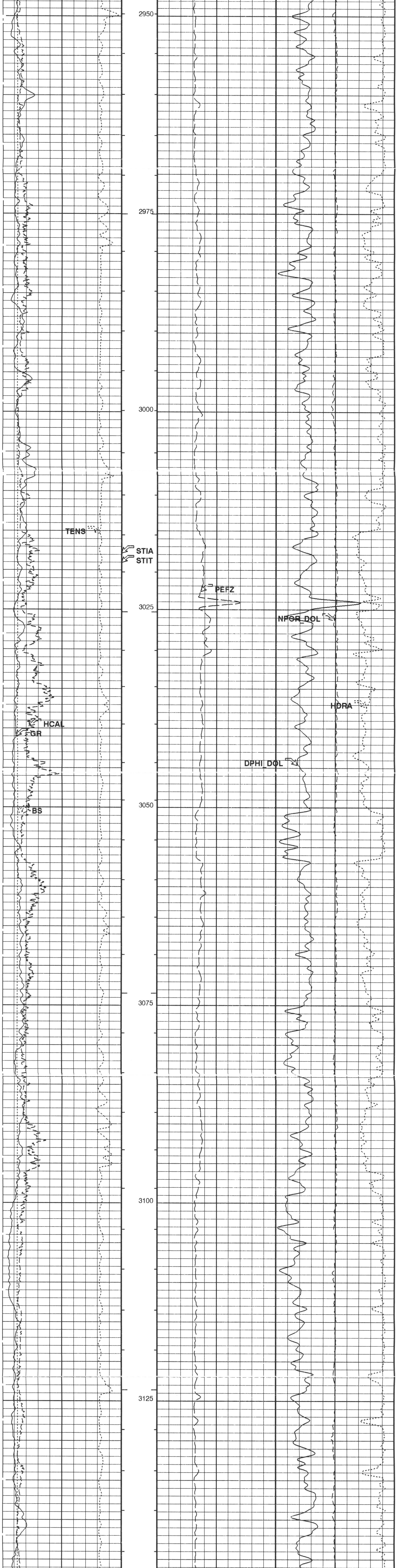
- Integrated Cement Volume Major Pip Every 1 M3
- Integrated Cement Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
- Integrated Hole Volume Minor Pip Every 0.1 M3

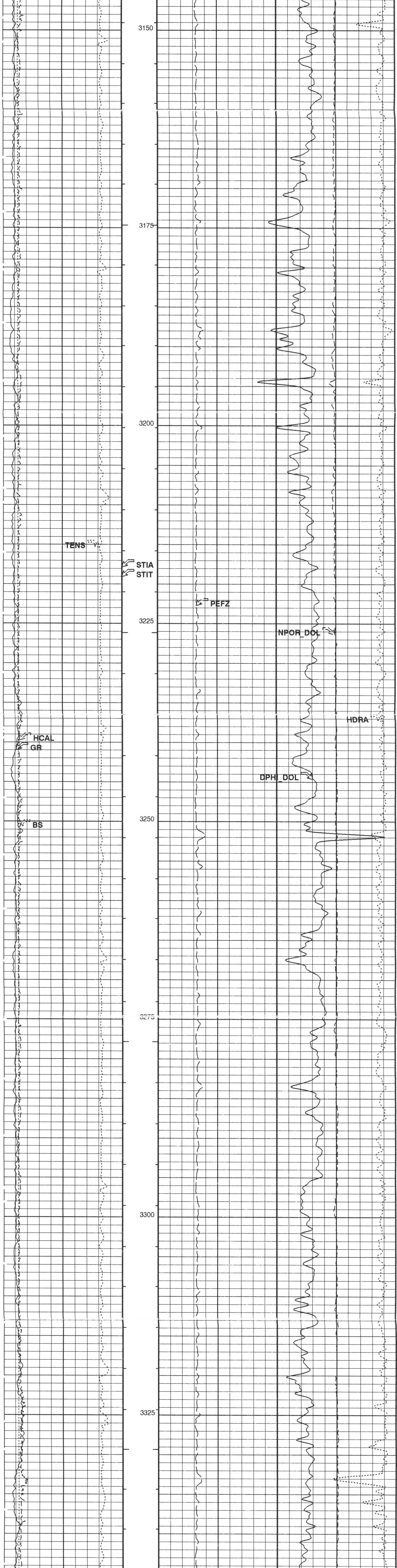
Time Mark Every 60 S

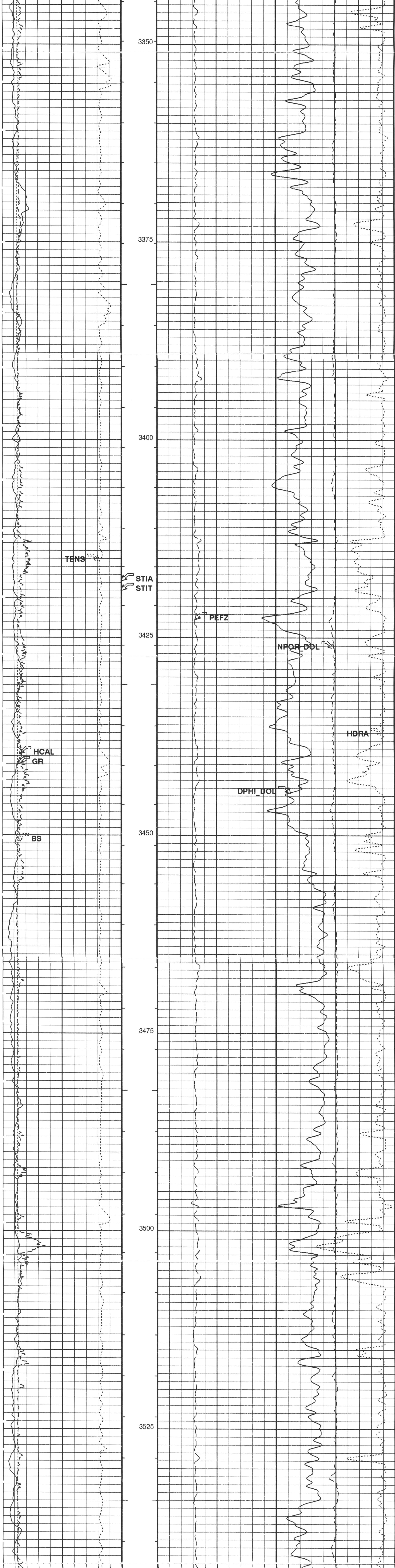
Tension (TENS) (N)		Std. Res. Formation P _e (PEFZ) (---)		Density Correction (HDRA) (K/M3)	
50000	0	0	10 450		-50
Caliper (HCAL) (MM)		NPOR for DOLO (NPOR_DOL) (V/V)			
125	375	0.45			-0.15
Gamma Ray (GR) (GAPI)		DPHI for DOLO (DPHI_DOL) (V/V)			
0	150	0.45			-0.15
Bit Size (BS) (MM)					
125	375				

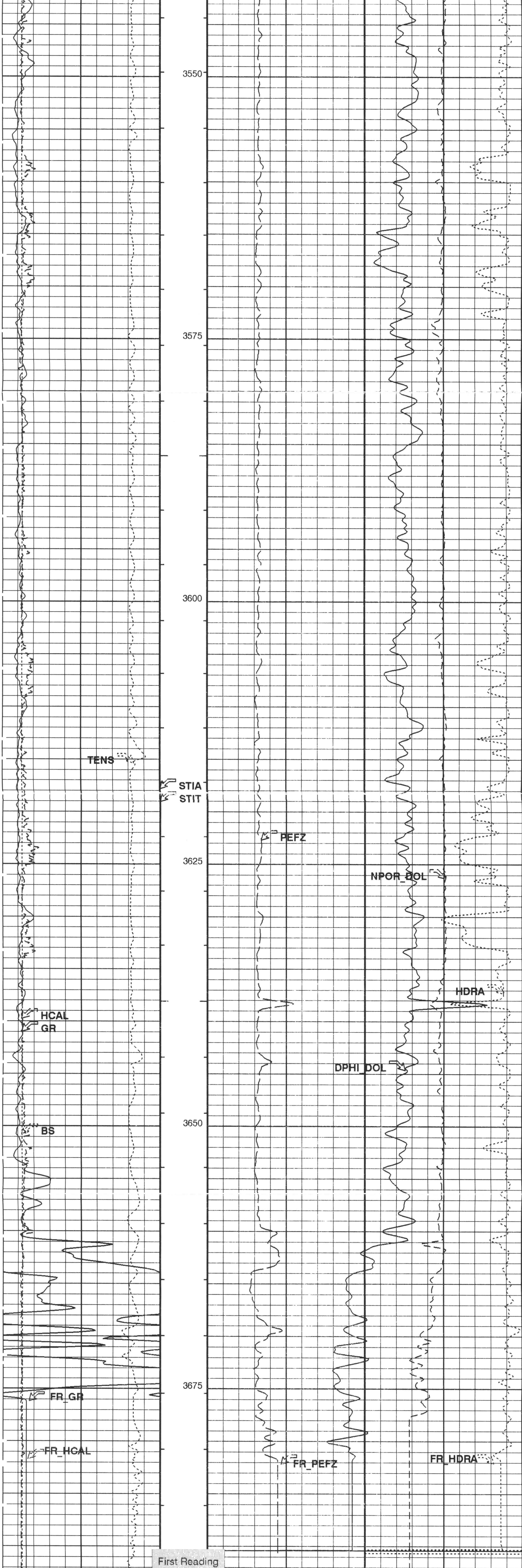
PLAYBACK SECTION: *** PEX DENSITY POROSITY - DOLOMITE 2850 KG/M3 ***











PLAYBACK SECTION: *** PEX DENSITY POROSITY - DOLOMITE 2850 KG/M3 ***

125	Bit Size (BS) (MM)	375
0	Gamma Ray (GR) (GAPI)	150
125	Caliper (HCAL) (MM)	375
50000	Tension (TENS) (N)	0

0.45	DPHI for DOLO (DPHI_DOL) (V/V)	-0.15
0.45	NPOR for DOLO (NPOR_DOL) (V/V)	-0.15
0	Std. Res. Formation Pe (PEFZ) (---)	10 450
	Density Correction (HDRA) (K/M3)	-50

PIP SUMMARY

- └ Integrated Cement Volume Major Pip Every 1 M3
- └ Integrated Cement Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
- └ Integrated Hole Volume Minor Pip Every 0.1 M3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HILTH-FTB: High resolution Integrated Logging Tool-DTS		
BHFL	Borehole Fluid Type	WATER
BHS	Borehole Status	OPEN
BSCO	Borehole Salinity Correction Option	NO
CCCO	Casing & Cement Thickness Correction Option	NO
DHC	Density Hole Correction	BS
FD	Fluid Density	1000.0 kg/m3
FSCO	Formation Salinity Correction Option	NO
GDEV	Average Angular Deviation of Borehole from Normal	40.000 deg
GGRD	Geothermal Gradient	0.018 degC/m
HSCD	Hole Size Correction Option	YES
MCCO	Mud Cake Correction Option	NO
MCOR	Mud Correction	NATU
MWCO	Mud Weight Correction Option	NO
NAAC	HRDD APS Activation Correction	OFF
NMT	HILT Nuclear Mud Type	NOBARITE
NPRM	HRDD Processing Mode	HIRES
PTCO	HRDD Depth Sampling Rate	25.400 mm
SDAT	Pressure/Temperature Correction Option	NO
SOCN	Standoff Data Source	SOCN
SOCO	Standoff Distance	3.175 mm
	Standoff Correction Option	YES
HRLT-B: High Resolution Laterolog Array - B		
BHS	Borehole Status	OPEN
GDEV	Average Angular Deviation of Borehole from Normal	40.000 deg
GGRD	Geothermal Gradient	0.018 degC/m
EMS-B: Environment Measurement Sonde		
BHS	Borehole Status	OPEN
GDEV	Average Angular Deviation of Borehole from Normal	40.000 deg
GGRD	Geothermal Gradient	0.018 degC/m
DIR: Directional Survey Computation		

SPVD	TVD of Starting Point	0.000	m
TIMD	Along-hole depth of Tie-in Point	75.200	m
TIVD	TVD of Tie-in Point	75.200	m
STI: Stuck Tool Indicator			
STKT	STI Stuck Threshold	1.524	m
TDD	Total Depth - Driller	3700.0	m
TDL	Total Depth - Logger	3692.0	m
System and Miscellaneous			
BS	Bit Size	156.0	mm
BSAL	Borehole Salinity		
CSIZ	Current Casing Size		
CWEI	Casing Weight	177.8	mm
DFD	Drilling Fluid Density	38.700	kg/m
FSAL	Formation Salinity	1050.0	kg/m3
MST	Mud Sample Temperature	23.530	degC
RMFS	Resistivity of Mud Filtrate Sample	1.211	ohm.m

Format: PORO-DOLO Vertical Scale: 1:240 Graphics File Created: 23-Feb-2004 01:24

OP System Version: 11C0-305

MCM

MESTB	11C0-305	DTAA	OP11-KP1
HILTHD	op11kp1_newpex150kit_G_b	HRLT	op11kp1_HrltKit_b
EMS	11C0-305	DTCH	11C0-305
SPAA	11C0-305		

Input DLIS Files

DEFAULT	FMS_TLD_MCFL_CNL_065PUP	FN:64	PRODUCER	23-Feb-2004 00:24	3692.2 M	2781.0 M
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Calibration and Check Summary							
Measurement	Nominal	Master	Before	After	Change	Limit	Units
Micro Electrical Scanner - B (Slim) Wellsite Calibration - Caliper Calibration							
Before: 17-Feb-2004 15:15							
Caliper 1 Zero Measurement	203.2	N/A	205.8	N/A	N/A	N/A	MM
Caliper 2 Zero Measurement	203.2	N/A	217.4	N/A	N/A	N/A	MM
Caliper 1 Plus Measurement	304.8	N/A	308.9	N/A	N/A	N/A	MM
Caliper 2 Plus Measurement	304.8	N/A	318.2	N/A	N/A	N/A	MM
Micro Electrical Scanner - B (Slim) Wellsite Calibration - CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: 22-Feb-2004 15:35							
TEMPERATURE REFERENCE :	N/A	N/A	20	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	2	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	1	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	470	N/A	N/A	N/A	
Micro Electrical Scanner - B (Slim) Wellsite Calibration - CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: 22-Feb-2004 15:35							
TEMPERATURE REFERENCE :	N/A	N/A	23	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	98	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	275	N/A	N/A	N/A	
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Slab Measurement Summary							
Before: 20-Feb-2004 14:18							
BS Window Ratio	0.7664	N/A	0.7637	N/A	N/A	N/A	
BS Window Sum	28520	N/A	28520	N/A	N/A	N/A	CPS
SS Window Ratio	0.4825	N/A	0.4805	N/A	N/A	N/A	
SS Window Sum	12620	N/A	12600	N/A	N/A	N/A	CPS
LS Window Ratio	0.3047	N/A	0.3027	N/A	N/A	N/A	
LS Window Sum	1334	N/A	1323	N/A	N/A	N/A	CPS
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Photo-multiplier High Voltages Calibrations							
Before: 20-Feb-2004 14:18							
BS PM High Voltage (Command)	1421	N/A	1447	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1394	N/A	1404	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1361	N/A	1359	N/A	N/A	N/A	V
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Crystal Quality Resolutions Calibration							
Before: 20-Feb-2004 14:18							
BS Crystal Resolution	10.63	N/A	10.62	N/A	N/A	N/A	%
SS Crystal Resolution	9.427	N/A	9.446	N/A	N/A	N/A	%
LS Crystal Resolution	9.081	N/A	9.019	N/A	N/A	N/A	%
High resolution Integrated Logging Tool-DTS Wellsite Calibration - MCFL Calibration							
Before: 20-Feb-2004 14:04							
Raw B0 Resistivity	3875	N/A	3828	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3774	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3784	N/A	N/A	N/A	OHMM
High resolution Integrated Logging Tool-DTS Wellsite Calibration - HILT Caliper Calibration							
Before: 20-Feb-2004 14:00							
HILT Caliper Zero Measurement	203.2	N/A	199.1	N/A	N/A	N/A	MM
HILT Caliper Plus Measurement	304.8	N/A	306.7	N/A	N/A	N/A	MM
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Detector Calibration							
Before: 20-Feb-2004 14:09							
Gamma Ray Background	30.00	N/A	66.14	N/A	N/A	N/A	GAPI
Gamma Ray (Jig - Bkg)	156.3	N/A	156.3	N/A	N/A	14.21	GAPI
Gamma Ray (Calibrated)	167.0	N/A	167.0	N/A	N/A	15.00	GAPI
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Accelerometer Calibration							
Before: 22-Feb-2004 7:44							
Z-Axis Acceleration	9.810	N/A	9.825	N/A	N/A	N/A	M/S2
High resolution Integrated Logging Tool-DTS Master Calibration - Inversion results							
Master: 2-Feb-2004 21:43							
Rho Aluminum	2596	2602	--	--	--	--	K/M3
Rho Magnesium	1686	1687	--	--	--	--	K/M3
Pe Aluminum	2.570	2.545	--	--	--	--	
Pe Magnesium	2.650	2.618	--	--	--	--	
High resolution Integrated Logging Tool-DTS Master Calibration - Deviation Summary							
Master: 2-Feb-2004 21:43							
BS Average Deviation	0	0.3931	--	--	--	--	%
BS Max Deviation	0	1.134	--	--	--	--	%
SS Average Deviation	0	0.4284	--	--	--	--	%
SS Max Deviation	0	1.624	--	--	--	--	%
LS Average Deviation	0	0.8353	--	--	--	--	%
LS Max Deviation	0	1.817	--	--	--	--	%
High resolution Integrated Logging Tool-DTS Master Calibration - Zero Measurement							
Master: 18-Feb-2004 19:21							
CNTC Background	26.80	26.80	--	--	--	--	CPS
CFTC Background	28.50	28.50	--	--	--	--	CPS
High resolution Integrated Logging Tool-DTS Master Calibration - Tank Measurement							
Master: 18-Feb-2004 19:21							
Thermal Near Corr. (Tank)	6031	5189	--	--	--	--	CPS
Thermal Far Corr. (Tank)	2793	2196	--	--	--	--	CPS
CNTC/CFTC (Tank)	2.159	2.363	--	--	--	--	
High Resolution Laterolog Array - B Wellsite Calibration - HRLT M01							
Before: 22-Feb-2004 15:35							
HRLT M0-M1 Voltage Plus - 0	0	N/A	-317.5	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 1	0	N/A	-327.8	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 2	0	N/A	-328.6	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 3	0	N/A	-332.3	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 4	0	N/A	-322.7	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 5	0	N/A	-324.6	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 6	0	N/A	318.4	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus - 7	0	N/A	-322.7	N/A	N/A	9.681	UV
High Resolution Laterolog Array - B Wellsite Calibration - HRLT M12							
Before: 22-Feb-2004 15:35							
HRLT M1-M2 Voltage Plus - 0	0	N/A	1751	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 1	0	N/A	1807	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 2	0	N/A	1808	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 3	0	N/A	1829	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 4	0	N/A	1777	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 5	0	N/A	1789	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 6	0	N/A	-1763	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 7	0	N/A	1781	N/A	N/A	53.42	UV
High Resolution Laterolog Array - B Wellsite Calibration - HRLT M23							
Before: 22-Feb-2004 15:35							
HRLT M2-M3 Voltage Plus - 0	0	N/A	1741	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 1	0	N/A	1812	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 2	0	N/A	1812	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 3	0	N/A	1836	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 4	0	N/A	1778	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 5	0	N/A	1790	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 6	0	N/A	-1757	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 7	0	N/A	1781	N/A	N/A	53.42	UV
High Resolution Laterolog Array - B Wellsite Calibration - HRLT V34							
Before: 22-Feb-2004 15:35							
HRLT A3-A4 Voltage Plus - 0	0	N/A	68660	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 1	0	N/A	71390	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 2	0	N/A	71660	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	72830	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	70460	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	70950	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 6	0	N/A	-68200	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV
High Resolution Laterolog Array - B Wellsite Calibration - HRLT V45							
Before: 22-Feb-2004 15:35							
HRLT A4-A5 Voltage Plus - 0	0	N/A	68600	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	70950	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	71300	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	72580	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	70350	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	70880	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-67740	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV
High Resolution Laterolog Array - B Wellsite Calibration - HRLT V56							
Before: 22-Feb-2004 15:35							
HRLT A5-A6 Voltage Plus - 0	0	N/A	68740	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	71380	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	71660	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	72870	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	70520	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	71020	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-68190	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV
High Resolution Laterolog Array - B Wellsite Calibration - HRLT VTP							
Before: 22-Feb-2004 15:35							
HRLT Torpedo-M0 Voltage - 0	0	N/A	-67950	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-70930	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-71280	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-72490	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-70180	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-70660	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	67790	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV
High Resolution Laterolog Array - B Wellsite Calibration - HRLT VBD							
Before: 22-Feb-2004 15:35							
HRLT Bridle#9-M0 Voltage - 0	0	N/A	-67960	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-71010	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-71290	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-72520	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-70190	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-70670	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	67800	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV
High Resolution Laterolog Array - B Wellsite Calibration - HRLT ISO							
Before: 22-Feb-2004 15:35							
HRLT Source Current Plus - 0	0	N/A	283.3	N/A	N/A	8.520	UA
HRLT Source Current Plus - 1	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 2	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 3	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 4	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 5	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 6	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 7	0	N/A	281.1	N/A	N/A	8.520	UA
High Resolution Laterolog Array - B Wellsite Calibration - HRLT MV							
Before: 22-Feb-2004 15:35							
HRLT Vertical Voltage PI - 0	0	N/A	-317.9	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 1	0	N/A	-320.7	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 2	0	N/A	-320.7	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 3	0	N/A	-322.6	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 4	0	N/A	-310.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 5	0	N/A	-327.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 6	0	N/A	324.3	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI - 7	0	N/A	-322.7	N/A	N/A	9.681	UV

The GLS-VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :

NCT-B Water Temperature 17.7 DEGC.
Thermal Housing Size 85.700 MM.
NSR-F serial number 5030

Micro Electrical Scanner - B (Slim) / Equipment Identification

Primary Equipment:

MEST Sonde - B
MEST Preamplifier Cartridge - AB
GPIT Cartridge - AC
MEST Acquisition Cartridge - A

MEDS - B
MEPC - AB
GPIC - AC
MEAC - A

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Auxiliary Equipment:

MEST-B Preamplifier Cartridge Housing
MEST Acquisition Cartridge Housing (Slim)

MEPH - A
MEAH - B

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High resolution Integrated Logging Tool-DTS / Equipment Identification

Primary Equipment:

HILT high-Resolution Mechanical Sonde
HILT Rxo Gamma-ray Device
HILT Micro Cylindrically Focused Log Dev
GR Logging Source
HILT High Res. Control Cartridge
HILT Gamma-Ray Neutron Sonde-DTS
HILT Gamma-Ray Device
HILT Neutron Detector with Alpha Source

HRMS - H 3782
HRGD - H 3794
MCFL - H
GLS - VJ 7801
HRCC - H 3773
HGNS - H 3758
HGR -
HCNT - H

Auxiliary Equipment:

Neutron Calibration Tank
Gamma Source Radioactive

NCT - B
GSR - U/Y

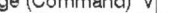
High resolution Integrated Logging Tool-DTS Wellsite Calibration

Stab Measurement Summary

Phase	BS Window Ratio	Value	Phase	SS Window Ratio	Value	Phase	LS Window Ratio	Value	
Before		0.7637	Before		0.4805	Before		0.3027	
	0.7281 (Minimum)	0.7664 (Nominal)	0.8048 (Maximum)	0.4584 (Minimum)	0.4825 (Nominal)	0.5066 (Maximum)	0.2694 (Minimum)	0.3047 (Nominal)	0.3199 (Maximum)
Phase	BS Window Sum CPS	Value	Phase	SS Window Sum CPS	Value	Phase	LS Window Sum CPS	Value	
Before		28520	Before		12690	Before		1323	
	27090 (Minimum)	28520 (Nominal)	29940 (Maximum)	11990 (Minimum)	12620 (Nominal)	13250 (Maximum)	1267 (Minimum)	1334 (Nominal)	1401 (Maximum)
Before: 20-Feb-2004 14:18									

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Photo-multiplier High Voltages Calibrations

Phase	BS PM High Voltage (Command) V	Value	Phase	SS PM High Voltage (Command) V	Value	Phase	LS PM High Voltage (Command) V	Value	
Before		1447	Before		1404	Before		1359	
	1321 (Minimum)	1421 (Nominal)	1521 (Maximum)	1294 (Minimum)	1394 (Nominal)	1494 (Maximum)	1261 (Minimum)	1361 (Nominal)	1461 (Maximum)
Before: 20-Feb-2004 14:18									

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Crystal Quality Resolutions Calibration

Phase	BS Crystal Resolution %	Value	Phase	SS Crystal Resolution %	Value	Phase	LS Crystal Resolution %	Value	
Before		10.62	Before		9.446	Before		9.019	
	9.633 (Minimum)	10.63 (Nominal)	11.63 (Maximum)	8.427 (Minimum)	9.427 (Nominal)	10.43 (Maximum)	8.081 (Minimum)	9.081 (Nominal)	10.08 (Maximum)
Before: 20-Feb-2004 14:18									

High resolution Integrated Logging Tool-DTS Wellsite Calibration

MCFL Calibration

Phase	Raw B0 Resistivity OHMM	Value	Phase	Raw B1 Resistivity OHMM	Value	Phase	Raw B2 Resistivity OHMM	Value	
Before		3828	Before		3774	Before		3784	
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)
Before: 20-Feb-2004 14:04									

High resolution Integrated Logging Tool-DTS Wellsite Calibration

HILT Caliper Calibration

Phase HILT Caliper Zero Measurement MM			Value	Phase HILT Caliper Plus Measurement MM			Value
Before			199.1	Before			306.7
152.4 (Minimum)	203.2 (Nominal)	254.0 (Maximum)		228.6 (Minimum)	304.8 (Nominal)	311.0 (Maximum)	
Before: 20-Feb-2004 14:00							

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Detector Calibration

Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig - Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value	
Before		66.14	Before		156.3	Before		167.0	
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)	142.1 (Minimum)	156.3 (Nominal)	170.5 (Maximum)	152.0 (Minimum)	167.0 (Nominal)	182.0 (Maximum)
Before: 20-Feb-2004 14:09									

High resolution Integrated Logging Tool-DTS Wellsite Calibration

Accelerometer Calibration

Accelerometer Calibration			
Phase	Z-Axis Acceleration M/S ²		Value
Before			9.825
	9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)
Before: 22-Feb-2004 7:44			

High resolution Integrated Logging Tool-DTS Master Calibration

Inversion results

Phase	Rho Aluminum K/M3		Value	Phase	Rho Magnesium K/M3		Value
Master			2602	Master			1687
	2596 (Minimum)	2596 (Nominal)	2606 (Maximum)		1676 (Minimum)	1686 (Nominal)	1696 (Maximum)
Phase	Pe Aluminum		Value	Phase	Pe Magnesium		Value
Master			2.545	Master			2.618
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)		2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)
Master: 2-Feb-2004 21:43							

High resolution Integrated Logging Tool-DTS Master Calibration

Deviation Summary

Section Summary									
Phase	BS Average Deviation %	Value	Phase	SS Average Deviation %	Value	Phase	LS Average Deviation %	Value	
Master		0.3931	Master		0.4284	Master		0.8353	
	-0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)	-1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)	-1.500 (Minimum)	0 (Nominal)	1.500 (Maximum)
Phase	BS Max Deviation %	Value	Phase	SS Max Deviation %	Value	Phase	LS Max Deviation %	Value	
Master		1.134	Master		1.624	Master		1.817	
	-1.600 (Minimum)	0 (Nominal)	1.600 (Maximum)	-2.500 (Minimum)	0 (Nominal)	2.500 (Maximum)	-3.500 (Minimum)	0 (Nominal)	3.500 (Maximum)
Master: 2-Feb-2004 21:43									

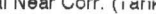
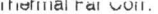
High resolution Integrated Logging Tool-DTS Master Calibration

Zero Measurement

Phase			CNTC Background CPS			Value			Phase			CNTC Background CPS			Value		
Master						26.80			Master						28.50		
5.000 (Minimum)			26.80 (Nominal)			40.00 (Maximum)			5.000 (Minimum)			28.50 (Nominal)			40.00 (Maximum)		
Master: 18-Feb-2004 19:21																	

High resolution Integrated Logging Tool-DTS Master Calibration

Tank Measurement

TANK MEASUREMENT									
Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CITC (Tank)	Value	
Master		5189	Master		2195	Master		2363	
	5000 (Minimum)	6031 (Nominal)	7200 (Maximum)	2075 (Minimum)	2793 (Nominal)	3125 (Maximum)	2120 (Minimum)	2159 (Nominal)	2540 (Maximum)
Master: 18-Feb-2004 19:21									

High Resolution Laterolog Array - B / Equipment Identification

Primary Equipment:

HRLT Sonde

HRLS - B 764

Auxiliary Equipment:

HRLT lower Housing
HRLT Lower Cartridge
HRLT upper Housing
HRLT Upper Cartridge

HRLH - B 765
HRLC - B 765
HRLU - B 766
HRLC - B 766

High Resolution Laterolog Array - B Wellsite Calibration

HRLT M01

Idx	Phase	HRLT M0-M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-317.5	-322.7	-280.7	-379.7
1	Before		-327.8	-322.7	-280.7	-379.7
2	Before		-328.6	-322.7	-280.7	-379.7
3	Before		-332.3	-322.7	-280.7	-379.7
4	Before		-322.7	-322.7	-280.7	-379.7
5	Before		-324.6	-322.7	-280.7	-379.7
6	Before		-318.4	-322.7	-280.7	-379.7
7	Before		-322.7	-322.7	-280.7	-379.7
		(Minimum) (Nominal) (Maximum)				
Before: 22-Feb-2004 15:35						

High Resolution Laterolog Array - B Wellsite Calibration

HRLT M12

Idx	Phase	HRLT M1-M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1751	1781	2095	1549
1	Before		1807	1781	2095	1549
2	Before		1808	1781	2095	1549
3	Before		1829	1781	2095	1549
4	Before		1777	1781	2095	1549
5	Before		1789	1781	2095	1549
6	Before		-1763	-1781	-1549	-2095
7	Before		1781	1781	2095	1549
		(Minimum) (Nominal) (Maximum)				
Before: 22-Feb-2004 15:35						

High Resolution Laterolog Array - B Wellsite Calibration

HRLT M23

Idx	Phase	HRLT M2-M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1741	1781	2095	1549
1	Before		1812	1781	2095	1549

2	Before		1812	1781	2095	1549
3	Before		1636	1781	2095	1549
4	Before		1778	1781	2095	1549
5	Before		1790	1781	2095	1549
6	Before		-1757	-1781	-1549	-2095
7	Before		1781	1781	2095	1549
(Minimum) (Nominal) (Maximum)						

Before: 22-Feb-2004 15:35

High Resolution Laterolog Array - B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3-A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68660	70000	82360	60900
1	Before		71390	70000	82360	60900
2	Before		71660	70000	82360	60900
3	Before		72830	70000	82360	60900
4	Before		70460	70000	82360	60900
5	Before		70950	70000	82360	60900
6	Before		-68200	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						

Before: 22-Feb-2004 15:35

High Resolution Laterolog Array - B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4-A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68600	70000	82360	60900
1	Before		70950	70000	82360	60900
2	Before		71300	70000	82360	60900
3	Before		72580	70000	82360	60900
4	Before		70350	70000	82360	60900
5	Before		70880	70000	82360	60900
6	Before		-67740	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						

Before: 22-Feb-2004 15:35

High Resolution Laterolog Array - B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5-A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68740	70000	82360	60900
1	Before		71380	70000	82360	60900
2	Before		71660	70000	82360	60900
3	Before		72870	70000	82360	60900
4	Before		70520	70000	82360	60900
5	Before		71020	70000	82360	60900
6	Before		-68190	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						

Before: 22-Feb-2004 15:35

High Resolution Laterolog Array - B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-67950	-70000	-60900	-82360
1	Before		-70990	-70000	-60900	-82360
2	Before		-71280	-70000	-60900	-82360
3	Before		-72490	-70000	-60900	-82360
4	Before		-70180	-70000	-60900	-82360
5	Before		-70660	-70000	-60900	-82360
6	Before		67790	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
(Minimum) (Nominal) (Maximum)						

Before: 22-Feb-2004 15:35

High Resolution Laterolog Array - B Wellsite Calibration						
HRLT VBD						
Idx	Phase	HRLT Bridle#9-M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-67960	-70000	-60900	-82360
1	Before		-71010	-70000	-60900	-82360
2	Before		-71290	-70000	-60900	-82360
3	Before		-72520	-70000	-60900	-82360
4	Before		-70190	-70000	-60900	-82360
5	Before		-70670	-70000	-60900	-82360
6	Before		67600	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
(Minimum) (Nominal) (Maximum)						

Before: 22-Feb-2004 15:35

High Resolution Laterolog Array - B Wellsite Calibration						
HRLT ISO						
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		283.3	281.0	330.7	247.0
1	Before		281.1	281.1	330.7	244.4
2	Before		281.1	281.1	330.7	244.4
3	Before		281.1	281.1	330.7	244.4
4	Before		281.1	281.1	330.7	244.4
5	Before		281.1	281.1	330.7	244.4
6	Before		281.1	281.1	330.7	244.4
7	Before		281.1	281.1	330.7	244.4
(Minimum) (Nominal) (Maximum)						

Before: 22-Feb-2004 15:35

High Resolution Laterolog Array - B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-317.9	-322.7	-280.7	-379.7
1	Before		-320.7	-322.7	-280.7	-379.7
2	Before		-320.7	-322.7	-280.7	-379.7
3	Before		-322.6	-322.7	-280.7	-379.7
4	Before		-310.4	-322.7	-280.7	-379.7
5	Before		-327.4	-322.7	-280.7	-379.7
6	Before		324.3	322.7	379.7	280.7
7	Before		-322.7	-322.7	-280.7	-379.7
(Minimum) (Nominal) (Maximum)						

Before: 22-Feb-2004 15:35

Company: CHEVRON CANADA RESOURCES LTD.

Schlumberger

Well: CHEVRON ET AL LIARD 3K-29

Field: LIARD

Territory: NORTHWEST TERRITORIES

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