



NEP COPY

PROVINCE	N.W.T.
FIELD	CAMERON HILLS
WELL	PARA ET AL CAMERON C-16
COMPANY	PARAMOUNT RESOURCES LTD.
LOCATION	300C166010117300
Perf. Datum GROUND LEVEL	Elev. 754.22 m
Log measured from	KB 4.50 m above
Permanent Datum	Elev. K.B. 758.82 m
	G.L. 754.22 m
	CBF -----
Other Services:	
MRT/CAL	STI/SP
HBC/CAL	

Date	15-MAR-2004
Run No.	ONE
First Reading	1444.4 m
Last Reading	428.7 m
Meters Meas.	1015.7 m
Depth Reached	1454.0 m
Bot. Driller	1454.0 m
CSG. Logger	428.7 m
CSG. Driller	430.0 m
Fluid Type	GEL CHEMICAL
Dens. & Visc.	1100 81
Mud pH	10.5
Mud Water Loss	8.0
Mud Res.	0.7 24 °C
Mud Res. @ BHT	0.4 57 °C
Rmc	0.3 24 °C
Rmc	0.6 24 °C
Rmf @ BHT	0.3 57 °C
Bit Size	200.0 mm
Spacing	N/A
Operating Time	3.5 HRS
Unit #	361
Location	GRANDE PRA
Recorded By	K. TOEMS
Witnessed By	B. POWELL

All interpretations of log data are opinions based on inferences from electrical or other measurements. We do not guarantee the accuracy or correctness of any interpretation or recommendation and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by anyone resulting from any interpretation or recommendation made by any of our employees or agents.

REMARKS Rig: PRECISION 247 Service Order # 30018057
Drilling Stopped 15:15/14 Circulation Stopped 20:15/14 Tool on Bottom 01:30/15 BHT 57 °C
- STI/SPED/CNT/UGR/MRT/CAL LOGGED IN COMBINATION FIRST
- HBC/UGR/CAL LOGGED IN COMBINATION SECOND

Prints: 2

CHANGES IN MUD TYPE OR NEW SAMPLE				SCALE CHANGES		
Date	Sample No.			Type Log	Interval	Scale
Depth - Driller						
Type Fluid in Hole						
Dens.	Visc.					
pH	Water Loss					
Source of Sample				EQUIPMENT DATA		
Rm @ Meas. Temp.		@	°C	Run No.	Tool Type	Tool No.
Rmf @ Meas. Temp.		@	°C	ONE	SPED	146126
Rmc @ Meas. Temp.		@	°C		CNT	163
Source Rmf	Rmc				UGR	191
Rm @ BHT		@	°C		CAL	119
Rmf @ BHT		@	°C			
Rmc @ BHT		@	°C			

REMARKS

MAIN PASS
1:600 SCALE
BULK DENSITY PRESENTATION
BOREHOLE VOLUME ON THE LEFT
ANNULAR VOLUME ON THE RIGHT FOR 139.7 mm CASING

DEPTH SCALE: 1:600

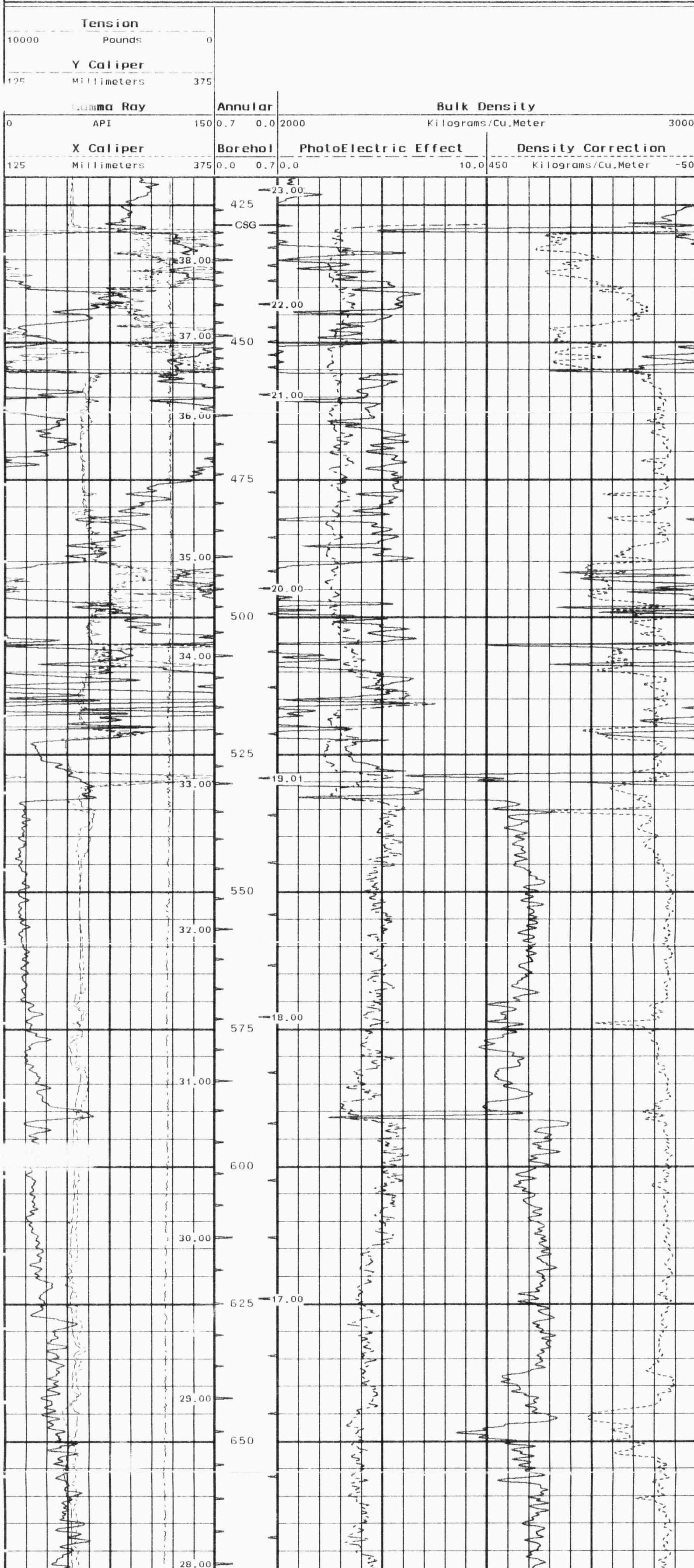
VERSION: 2004.02.11.263

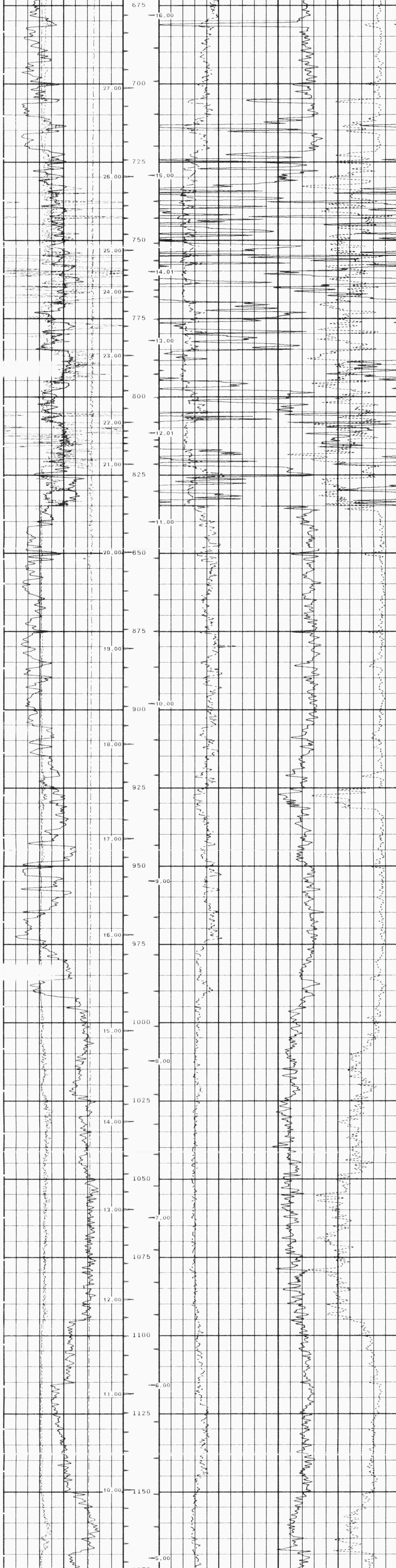
MAIN PASS

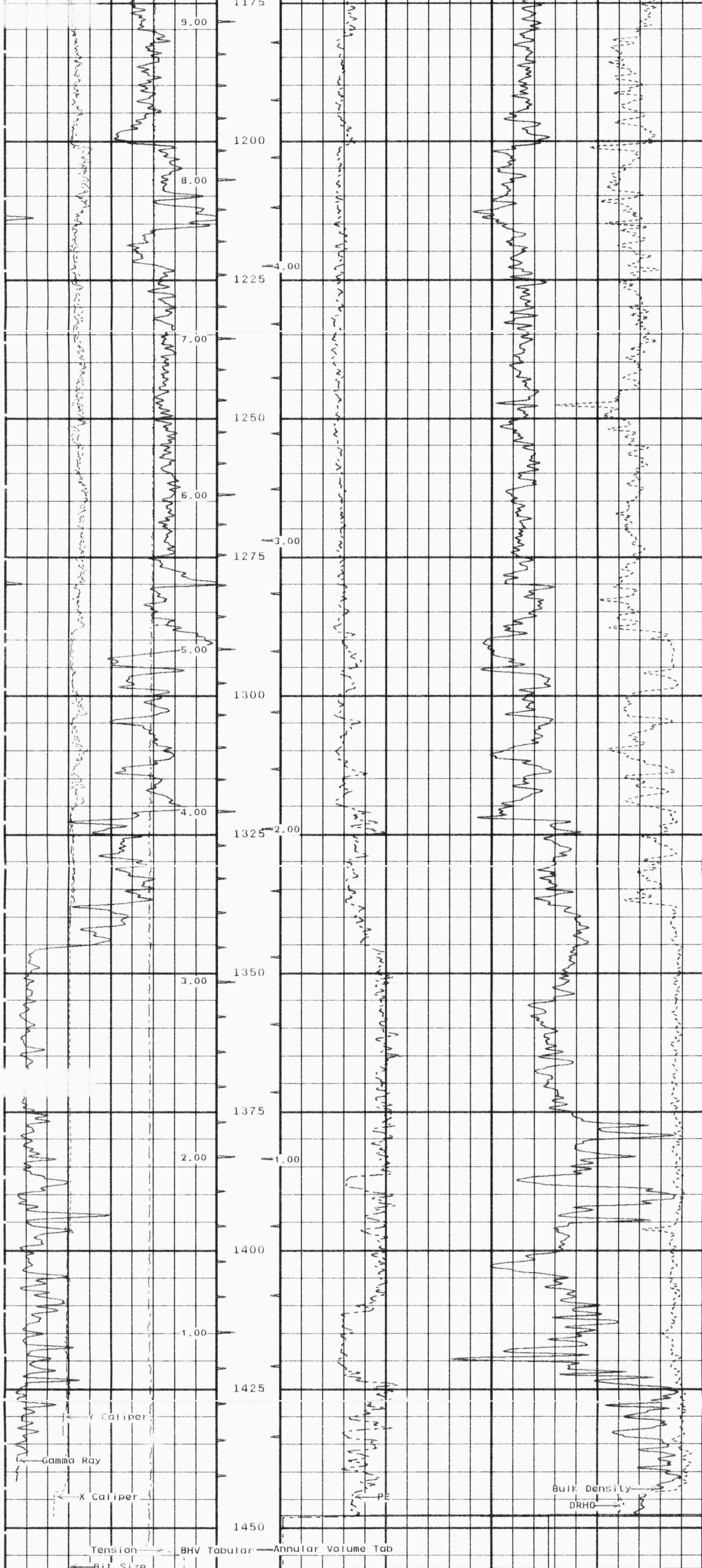
30018057 STIMP

BHV CASING SIZE: 139.70 Millimeters CALIPERS: CALI,CAL2,None

FINISH DEPTH: 0.0 Meters DIRECTION: UP DATE: TIME: MODE: TRACE PLAYBACK







X Caliper		Borehole	PhotoElectric Effect		Density Correction	
125	Millimeters	375	0.0	0.7	10.0	450 Kilograms/Cu.Meter -50
Gamma Ray		Annular	Bulk Density			
0	API	150	0.7	0.0	2000	Kilograms/Cu.Meter 3000
Y Caliper						
125	Millimeters	375				
Tension						
10000	Pounds	0				

START DEPTH: 1458.0 DIRECTION: UP DATE: 03/15/2004 TIME:03:51 MODE: TRACE PLAYBACK
BHV CASING SIZE: 139.70 Millimeters CALIPERS: CAL1,CAL2,None
30018057 STIMP

MAIN PASS
DEPTH SCALE: 1:600
VERSION: 2004.02.11.263

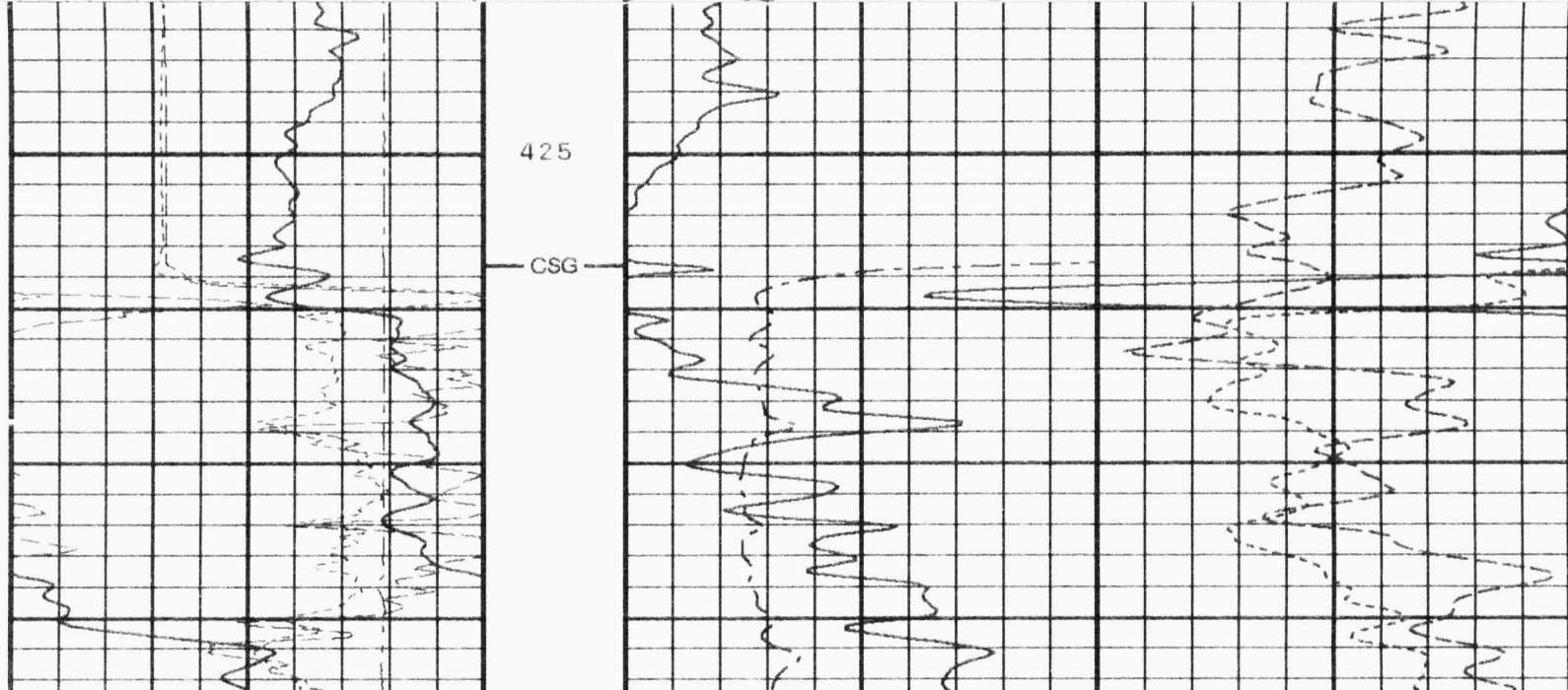
SYSTEM CONSTANTS			
NAME	DESCRIPTION	VALUE	UNITS
IDL	ID-Logger	1454.00	Meters
BS	Bit Size	200.0	Millimeters
BHT	Bottom Hole Temp	57.0	DegreesCentigrade
BARI	Barite Correction	OFF	
MW	Mud Weight	1100.0	Kilograms/Cu.Meter
SCAL	Density BH Dia Source	Bitsize	
BHC1	BHV Caliper Source 1	CALI	
BHC2	BHV Caliper Source 2	CALI	
BHC3	BHV Caliper Source 3	None	
BDC1	BHV Diff Cal Source	CALI	
BHC6	BHV Method	Standard BHV	

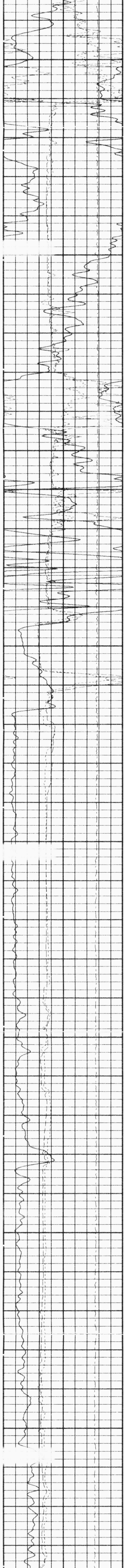
REMARKS
MAIN PASS
1:240 SCALE
LIMESTONE MATRIX (2710 kg/m^3)

DEPTH SCALE: 1:240
MAIN PASS
VERSION: 2004.02.11.263

30018057 STIMP
FINISH DEPTH: 0.0 Meters DIRECTION: UP DATE: TIME: MODE: TRACE PLAYBACK

Tension		Neut. Porosity (LS)	
10000	Pounds	0	
Y Caliper		Den. Porosity (LS)	
125	Millimeters	375	
Gamma Ray		PhotoElectric Effect	
0	API	150	
X Caliper		Density Correction	
125	Millimeters	375	





450

475

500

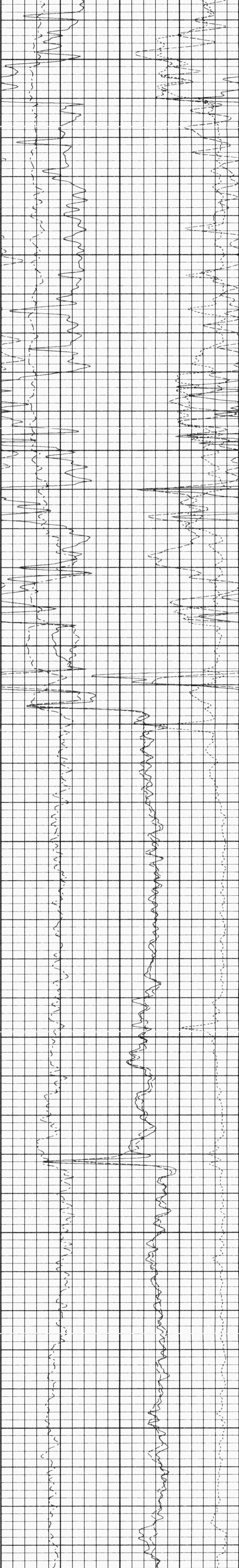
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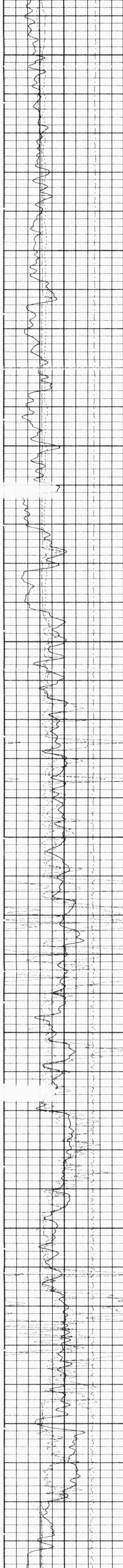
550

575

600

625





650

675

700

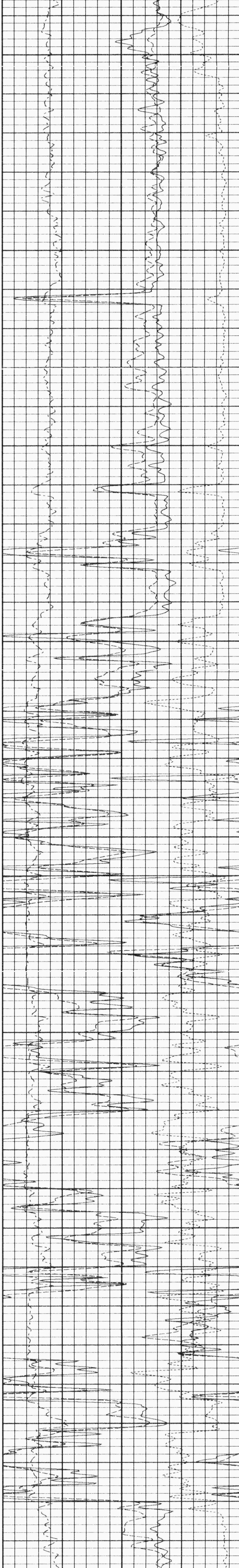
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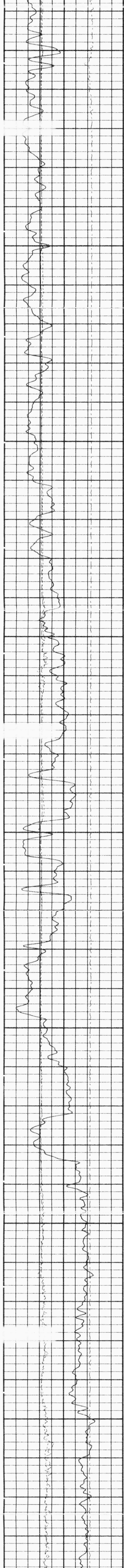
750

775

800

825





850

875

900

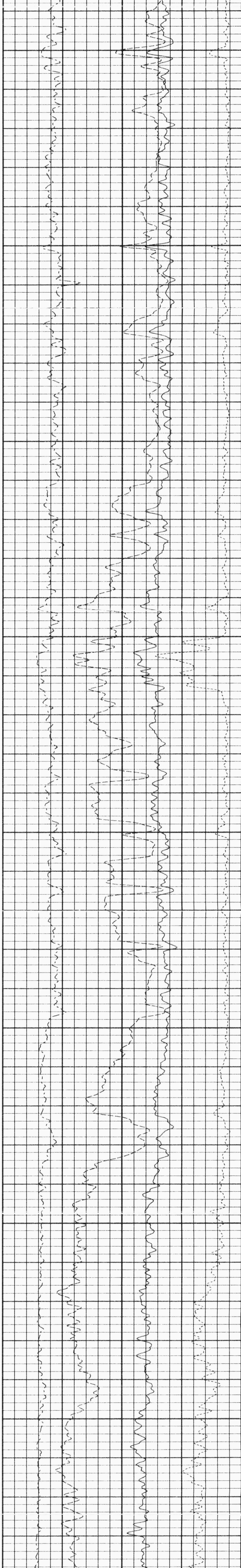
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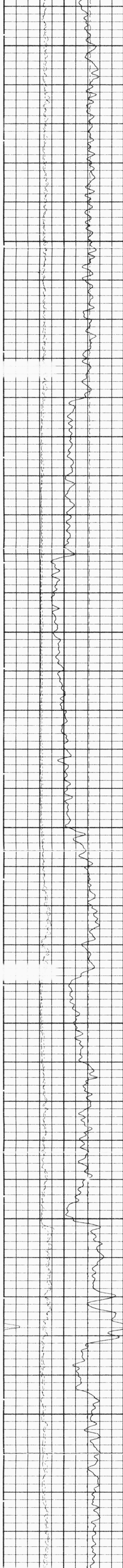
950

975

1000

1025





1050

1075

1100

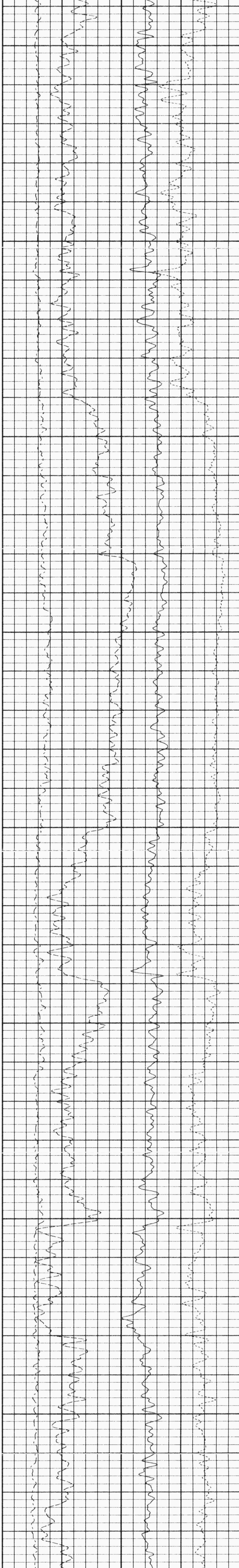
1125

1150

1175

1200

1225



1250

1275

1300

1325

1350

1375

1400

1425

FR Y Caliper

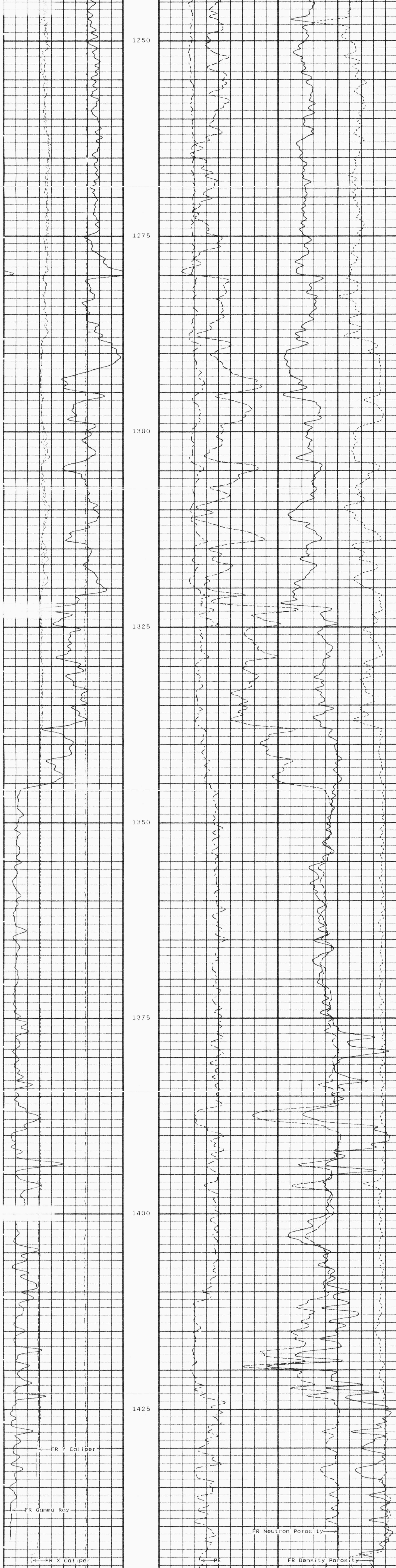
FR Gamma Ray

FR X Caliper

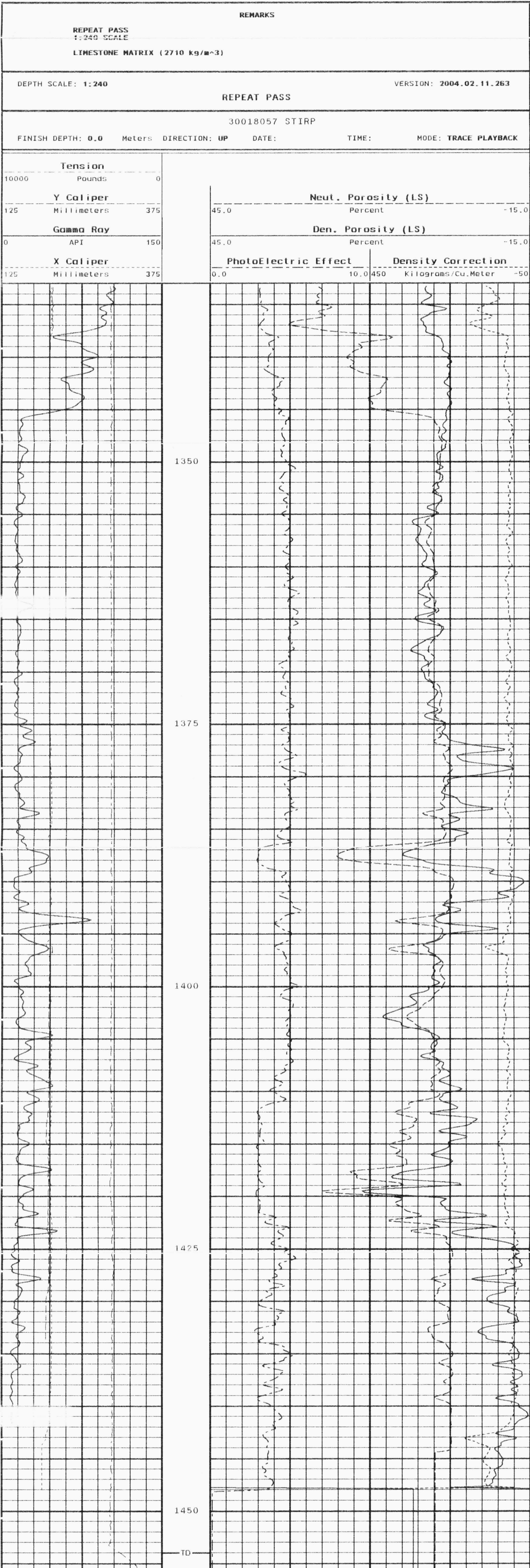
FR Neutron Porosity

FR Density Porosity

PE



DRHO 1450 Tension TD Bit Size																																																															
X Caliper 125 Millimeters 375 Gamma Ray 0 API 150 Y Caliper 125 Millimeters 375 Tension 10000 Pounds 0		PhotoElectric Effect 0.0 10.0 450	Density Correction Kilograms/Cu.Meter -50																																																												
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START DEPTH: 1458.0 DIRECTION: UP DATE: 03/15/2004 TIME: 03:51 MODE: TRACE PLAYBACK 30018057 STIMP																																																															
MAIN PASS																																																															
DEPTH SCALE: 1:240 VERSION: 2004.02.11.263																																																															
SYSTEM CONSTANTS <table><thead><tr><th>NAME</th><th>DESCRIPTION</th><th>VALUE</th><th>UNITS</th></tr></thead><tbody><tr><td>TDL</td><td>TD-Logger</td><td>1454.00</td><td>Meters</td></tr><tr><td>BS</td><td>Bit Size</td><td>200.0</td><td>Millimeters</td></tr><tr><td>BHT</td><td>Bottom Hole Temp</td><td>57.0</td><td>DegreesCentigrade</td></tr><tr><td>SACC</td><td>Accumulation Time</td><td>100</td><td>Seconds</td></tr><tr><td>BARI</td><td>Barite Correction</td><td>OFF</td><td></td></tr><tr><td>MW</td><td>Mud Weight</td><td>1100.0</td><td>Kilograms/Cu.Meter</td></tr><tr><td>NGAI</td><td>K Factor-NEU</td><td>0.990</td><td></td></tr><tr><td>BHS</td><td>Open/Cased Hole</td><td>Open</td><td></td></tr><tr><td>NBCS</td><td>Bitsize/Calp Sel-CNT</td><td>Bitsize</td><td></td></tr><tr><td>NTLS</td><td>Tool Type-CNT</td><td>CNT-S</td><td></td></tr><tr><td>NCOT</td><td>Constant Temp-CNT</td><td>21.0</td><td>DegreesCentigrade</td></tr><tr><td>OCOR</td><td>Cnt Environ.correction</td><td>OFF</td><td></td></tr><tr><td>NCAL</td><td>LIS Caliper Name-CNT</td><td>X Caliper</td><td></td></tr><tr><td>SCAL</td><td>Density BH Dia Source</td><td>Bitsize</td><td></td></tr></tbody></table>				NAME	DESCRIPTION	VALUE	UNITS	TDL	TD-Logger	1454.00	Meters	BS	Bit Size	200.0	Millimeters	BHT	Bottom Hole Temp	57.0	DegreesCentigrade	SACC	Accumulation Time	100	Seconds	BARI	Barite Correction	OFF		MW	Mud Weight	1100.0	Kilograms/Cu.Meter	NGAI	K Factor-NEU	0.990		BHS	Open/Cased Hole	Open		NBCS	Bitsize/Calp Sel-CNT	Bitsize		NTLS	Tool Type-CNT	CNT-S		NCOT	Constant Temp-CNT	21.0	DegreesCentigrade	OCOR	Cnt Environ.correction	OFF		NCAL	LIS Caliper Name-CNT	X Caliper		SCAL	Density BH Dia Source	Bitsize	
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X Caliper 125 Millimeters 375			PhotoElectric Effect 0.0 10.0 450		Density Correction Kilograms/Cu.Meter -50	
Gamma Ray 0 API 150			Den. Porosity (LS) 45.0 Percent -15.0			
Y Caliper 125 Millimeters 375			Neut. Porosity (LS) 45.0 Percent -15.0			
Tension 10000 Pounds 0						

START DEPTH: 1458.0 DIRECTION: UP DATE: 03/15/2004 TIME:02:15 MODE: TRACE PLAYBACK

30018057 STIRP

REPEAT PASS

DEPTH SCALE: 1:240

VERSION: 2004.02.11.263

SYSTEM CONSTANTS			
NAME	DESCRIPTION	VALUE	UNITS
TDL	TD-Logger	1454.00	Meters
BS	Bit Size	200.0	Millimeters
BHT	Bottom Hole Temp	57.0	DegreesCentigrade
SACC	Accumulation Time	100	Seconds
BARI	Barite Correction	OFF	
MM	Mud Weight	1100.0	Kilograms/Cu.Meter
NGAI	K Factor-NEU	0.990	
BHS	Open/Cased Hole	Open	
NBCS	Bitsize/Calp Sel-CNT	Bitsize	
NTLS	Tool Type-CNT	CNT-S	
NCOT	Constant Temp-CNT	21.0	DegreesCentigrade
OCOR	Cnt Environ.correction	OFF	
NCAL	LIS Caliper Name-CNT	X Caliper	
SCAL	Density BH Dia Source	Bitsize	

REMARKS

MAIN PASS
1:240 SCALE

DOLOMITE MATRIX (2870 kg/m^3)

DEPTH SCALE: 1:240

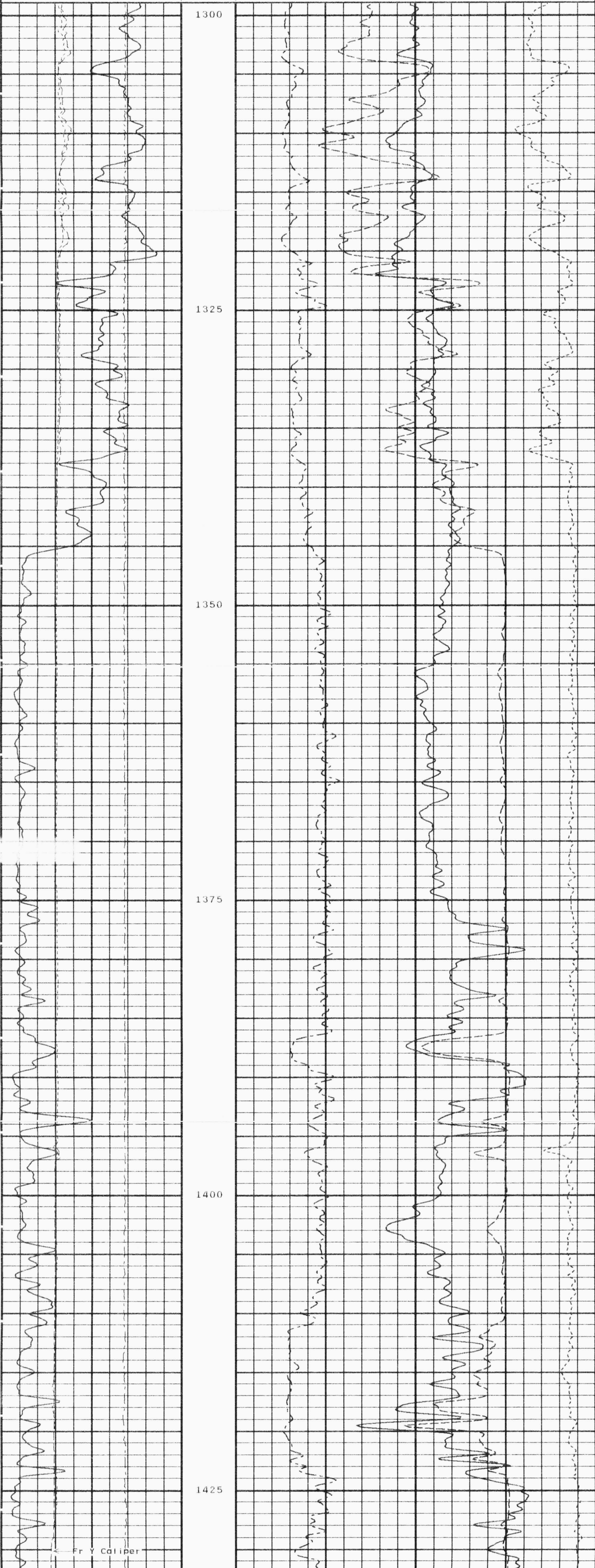
VERSION: 2004.02.11.263

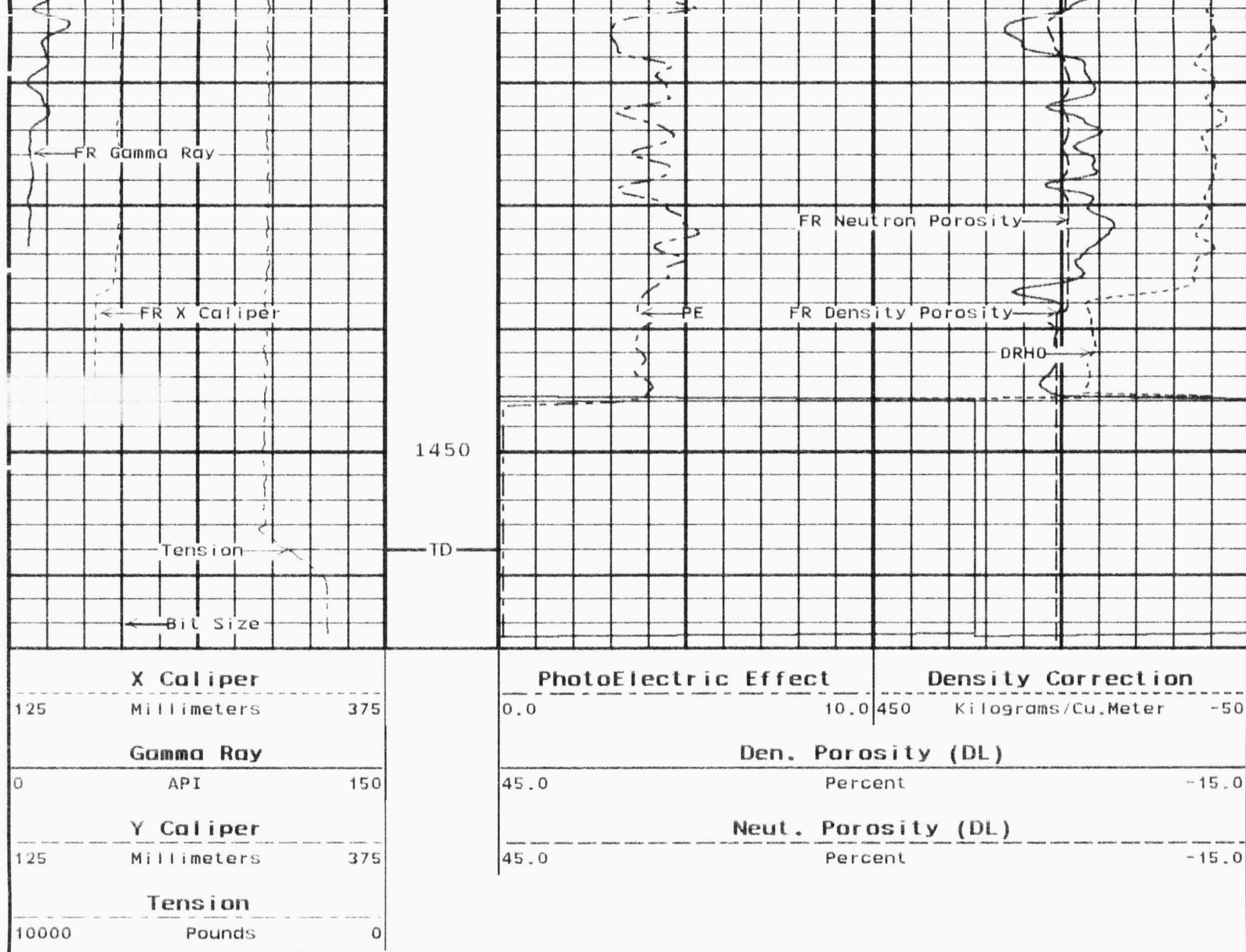
MAIN PASS

30018057 STIMP

FINISH DEPTH: 0.0 Meters DIRECTION: UP DATE: TIME: MODE: TRACE PLAYBACK

Tension 10000 Pounds 0			Neut. Porosity (DL) 45.0 Percent -15.0		
Y Caliper 125 Millimeters 375			Den. Porosity (DL) 45.0 Percent -15.0		
Gamma Ray 0 API 150			PhotoElectric Effect 0.0 10.0 450		
X Caliper 125 Millimeters 375			Density Correction Kilograms/Cu.Meter -50		





START DEPTH: 1458.0 DIRECTION: UP DATE: 03/15/2004 TIME:02:41 MODE: TRACE PLAYBACK
30018057 STIMP

MAIN PASS
DEPTH SCALE: 1:240 VERSION: 2004.02.11.263

SYSTEM CONSTANTS			
NAME	DESCRIPTION	VALUE	UNITS
TDL	TD-Logger	1454.00	Meters
BS	Bit Size	200.0	Millimeters
BHT	Bottom Hole Temp	57.0	DegreesCentigrade
SACC	Accumulation Time	100	Seconds
BARI	Barite Correction	0FF	
MW	Mud Weight	1100.0	Kilograms/Cu.Meter
NGAI	K Factor-NEU	0.990	
BHS	Open/Cased Hole	Open	
NBCS	Bitsize/Calp Sel-CNT	Bitsize	
NTLS	Tool Type-CNT	CNT-S	
NCOT	Constant Temp-CNT	21.0	DegreesCentigrade
NCOR	Cnt Environ.correction	0FF	
NCAL	LIS Caliper Name-CNT	X Caliper	
SCAL	Density BH Dia Source	Bitsize	

03/14/04	23:30	0.0 M	Ver 40211263	Job 30018057
Caliper Before Survey Calibration				
Tool Type: CAL-FA		Serial No:calf119		
	Small	Measured Large Units	Small Large Units	
WCL0	747.9	1406.0 mv	177.8 355.6	

03/14/04	23:42	0.0 M	Ver 40211263	Job 30018057
Gamma Ray Before Survey Calibration				
Tool Type: UGR-JA		Serial No: ugrj191		
Calibrator No: RA-20S-737				
	Background	Calibrator	Standard	Units
	111.8	578.2	140.0	API
Delta Counts Per Sec: 466.4		CPS/API = 3.331		

02/28/04	05:37	0.0 M	Ver 40211263	Job SHOP
Compensated Neutron Shop Calibration				
Tool Type: CNT-S		Serial No: cnts163		
Verifier No: MSV005		Source No: T-306		
Tank Type: NCT-AA				
	Low Porosity	Med Porosity	High Porosity	Units
Tank Ratio:	0.713	1.457	2.294	SS/LS
Tank Porosity:	-0.76	10.25	25.73	LM-PU
LS Detector:	1434.8	344.0	141.6	CPS
SS Detector:	995.0	506.2	332.7	CPS
Tool Ratio:	0.693	1.471	2.349	SS/LS
Tool Porosity:	-1.04	10.25	26.39	LM-PU
Tool Constant: 0.990				
Surface Temperature: 21 DegC				
	SS Detector	LS Detector	Ratio	Porosity
	302.3 CPS	182.1 CPS	1.661	13.53

03/14/04	23:47	0.0 M	Ver 40211263	Job 30018057
Compensated Neutron Before Survey Calibration				
Tool Type: CNT-S		Serial No: cnts163		
Verifier No: MSV005		Source No: T-306		
	LS Detector:	Verifier Check	Units	
		182.5	CPS	
	SS Detector:	302.7	CPS	
	Tool Ratio:	1.659	SS/LS	
	Tool Porosity:	13.50	LM-PU	
Tool Constant: 0.990				

03/15/04	04:55	0.0 M	Ver 40211263	Job 30018057
Compensated Neutron After Survey Calibration				
Tool Type: CNT-S		Serial No: cnts163		
Verifier No: MSV005		Source No: T-306		
	Verifier Check	Before	After	Units
LS Detector:	182.5	183.1	CPS	
SS Detector:	302.7	302.9	CPS	
Tool Ratio:	1.659	1.654	SS/LS	
Tool Porosity:	13.50	13.42	LM-PU	
Tool Constant: 0.990				

02/20/04	18:34	0.0 M	Ver 40211263	Job shop
Spectral Pe Density Shop Calibration				
Tool Type: SPS-AB		Sonde No: SPSB146		
Firmware Ver: 0		Electronics No: SPCB126		
Aluminum Blk No: ALBA110		Source No: 1950-GM		
Magnesium Blk No: MGBA110				
	Bkg	Al	Al+Fe	Hg Units
Cs Pk	109.74	109.49	109.83	109.67 Ch
Gain	0.166	0.165	0.166	0.166 Ch/Kev
Tn9 Pk	11.42			
Off	-0.019			
Res	9.18	9.26	9.16	9.24 %
LLPE	175	1367	896	9205 cps
LUPE	97	996	776	6153 cps
LSUC	540	929	833	5321 cps
LCMP	1097	3600	3164	21201 cps
Cs Pk	110.02	109.91	109.92	110.21 Ch
Gain	0.166	0.166	0.166	0.166 Ch/Kev
Tn9 Pk	11.46			
Off	-0.003			
Res	9.55	9.09	8.93	9.44 %
SLPE	166	2565	1774	3852 cps
SUPE	91	1824	1412	2641 cps
SSUC	478	4279	3861	5935 cps
SCMP	1009	10329	9156	15196 cps
Acc	250	250	250	250 Secs
Density Calibration				
Spine Angle =		Fresh	Barite	
Spine Length =		77.72	79.38	
		200.18	195.88	
Pe Calibration				
LS Slope =		Fresh	Barite	
LS Intercept =		1.6015	0.3649	
		-0.2445	-0.1733	

03/14/04	23:36	0.0 M	Ver 40211263	Job 30018057
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Spectral Pe Density Before Survey Tool Check

Tool Type:	SPS-AB	Sonde No:	SPSB146
Firmware Ver:	. 0	Electronics No:	SPCB126
Aluminum Blk No:	ALBA110	Source No:	1950-GW
		Magnesium Blk No:	MGBA110

	Shop	Before	Units
Cs Pk	109.74	109.94	Ch
Gain	0.166	0.166	Ch/Kev
Tng Pk	11.42	11.49	Ch
Off	-0.019	-0.112	Ch
Res	9.18	9.23	%
LLPE	175	176	
LUPE	97	98	
LSUC	540	538	
LCMP	1097	1095	
Cs Pk	110.02	110.16	Ch
Gain	0.166	0.166	Ch/Kev
Tng Pk	11.46	11.56	Ch
Off	-0.003	-0.172	Ch
Res	9.55	9.48	%
SLPE	166	169	
SUPE	91	90	
SSUC	478	477	
SCMP	1009	1006	
Acc	250	100	Secs

03/15/04	04:51	0.0 M	Ver 40211263	Job 30018057
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Spectral Pe Density After Survey Tool Check

Tool Type:	SPS-AB	Sonde No:	SPSB146
Firmware Ver:	. 0	Electronics No:	SPCB126
Aluminum Blk No:	ALBA110	Source No:	1950-GW
		Magnesium Blk No:	MGBA110

	Shop	Before	After	Units
Cs Pk	109.74	109.94	110.03	Ch
Gain	0.166	0.166	0.166	Ch/Kev
Tng Pk	11.42	11.49	11.50	Ch
Off	-0.019	-0.112	-0.106	Ch
Res	9.18	9.23	9.27	%
LLPE	175	176	177	cps
LUPE	97	98	95	cps
LSUC	540	538	542	cps
LCMP	1097	1095	1098	cps
Cs Pk	110.02	110.16	110.00	Ch
Gain	0.166	0.166	0.166	Ch/Kev
Tng Pk	11.46	11.56	11.59	Ch
Off	-0.003	-0.172	-0.166	Ch
Res	9.55	9.48	9.45	%
SLPE	166	169	167	cps
SUPE	91	90	89	cps
SSUC	478	477	480	cps
SCMP	1009	1006	1008	cps
Acc	250	100	100	Secs

03/14/04	23:23	0.0 M	Ver 40211263	Job 30018057
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Caliper Before Survey Calibration

Tool Type:	SPD-CL	Serial No:	spsb146
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	Small	Measured Large	Units	Small	Calibrated Large	Units
HCL2	2482.4	3741.1	ev	177.8	355.5	mm

O.H. Adaptor Head

Weight	18.0 kg
Length	0.74 m
Max. Diameter	8.9 cm
Total Stack Weight	745.6 kg in air
Total Stack Length	28.85 m

Crossover

Weight	6.8 kg
Length	0.27 m

Wireline Communications Cartridge

Weight	53.6 kg
Length	2.31 m
Max. Diameter	8.6 cm

2-Arm Caliper

Weight	79.4 kg
Length	2.40 m
Max. Diameter	10.2 cm

MRT 400

Weight	121.5 kg
Length	4.04 m
Max. Diameter	12.7 cm

SPeD 400 Electronics

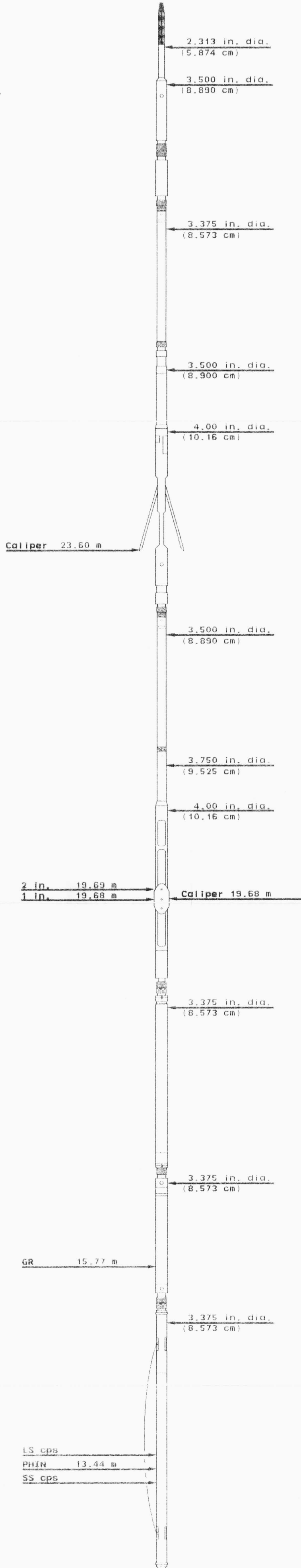
Weight	56.7 kg
Length	2.92 m
Max. Diameter	8.6 cm

Universal GR

Weight	37.3 kg
Length	1.40 m
Max. Diameter	8.6 cm

Mandel Neutron

Weight	49.4 kg
Length	2.07 m
Max. Diameter	10.2 cm



Offset Joint

Weight 3.0 kg
Length 0.36 m
Max. Diameter 8.6 cm

SPeD 400 Pad Section

Weight 141.5 kg
Length 3.38 m
Max. Diameter 11.4 cm

Simultaneous Triple Induction

Weight 176.9 kg
Length 8.75 m
Max. Diameter 10.2 cm

Caliper 9.61 m

110 1.20 m

2.1 m
2.31 m
2.10 m

1-CH

Weight 5.5 kg
Length 0.20 m

3.375 in. dia.
(8.573 cm)

3.67 in. dia.
(9.32 cm)

4.19 in. dia.
(10.64 cm)

LS cps/PE

PHID 9.63 m

SS cps/PE

4.00 in. dia.
(10.16 cm)

3.375 in. dia.
(8.573 cm)

4.00 in. dia.
(10.16 cm)

PRECISION
Wireline Technologies

WEAPON: WEAPON/RESOURCES LTD.

WEAPON: WEAPON/RESOURCES LTD.

FIELD: CAMERON HILLS PROVINCE N.W.T.