

COMPUTALOG

SPECTRAL DENSITY
COMPENSATED NEUTRON
GAMMA RAY LOG

CS400

PROVINCE NORTH WEST TERRITORIES
FIELD CAMERON HILLS
WELL PARA ET AL CAMERON H-03
COMPANY PARAMOUNT RESOURCES LTD.COMPANY PARAMOUNT RESOURCES LTD
WELL PARA ET AL CAMERON H-03
FIELD CAMERON HILLS
PROVINCE NORTH WEST TERRITORIES
LOCATION
H-03 60° 10', 117° 30'
Other Services:
HBC
STI MRT
CIBF
Perm. Datum GROUND LEVEL Elev. 764.50 m
Log measured from KB 4.47 m above
Permanent Datum
ELEV. K.B. 768.97 m
G.L. 764.50 mDate 05-MAR-2002
RUN No. ONE
First Reading 1660.0 m
Last Reading 1200.0 m
Meters Meas. 460.0 m
Depth Reached 1660.7 m
Bot. Driller 1661.0 m
CS9. Log9er 423.0 m
CS9. Driller 423.0 m
Fluid Type GEL CHEMICAL
Dens. & Visc. 1120 75
Mud pH 10.0
Mud Motor Loss 9.0
Mud Res. @ BHT 0.5 @ 16 °C
Rmc 0.3 @ 49 °C
Rmc 0.6 @ 16 °C
Rmf 0.3 @ 16 °C
Rmf @ BHT 0.2 @ °C
Bit Size 222 mm
Spacing N A
Operating Time 3.0 hrs.
Unit # 380
Location EDMONTON CA
Recorded By D. HRYNKIV
Witnessed By D. NORDBYGR/DAC TO CSG
1200.0 m
423.0 m
777.0 m
244.5mm @ 53.6K9/m

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFULL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES, OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO OUR GENERAL TERMS AND CONDITIONS SET OUT IN OUR CURRENT PRICE SCHEDULE.

REMARKS Rig: PRECISION #117 Service Order # 30010823
Drilling Stopped 12:00/4th Circulation Stopped 18:30/4th Tool on Bottom 3.5th BHT 49 °C
SPED/CNT/GR/MRT/DAC LOGGED IN COMBINATION

Prints: 2

CHANGES IN MUD TYPE OR NEW SAMPLE

Date	Sample No.	Type Log
Depth - Driller		
Type Fluid in Hole		
Dens. Visc.		
pH Water Loss		
Source of Sample		
Rm @ Meas. Temp.	@ °C	
Rmf @ Meas. Temp.	@ °C	
Rmc @ Meas. Temp.	@ °C	
Source Rmf	Rmc	
Rm @ BHT	@ °C	
Rmf @ BHT	@ °C	
Rmc @ BHT	@ °C	

SCALE CHANGES

Interval Scale

Type Log

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REMARKS

MAIN PASS
1:600 SCALE
BULK DENSITY PRESENTATION
OPEN HOLE VOLUME ON THE LEFT, ANNULAR
VOLUME ON THE RIGHT FOR 177.8mm CASING

VERSION 2002.01.30.16

MAIN PASS

30010823 SPEMP

BHV CASING SIZE: 177.80 Millimeters CALIPERS: X Caliper, Y Caliper, None

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

Tension

Pounds 0

Y Caliper

Millimeters 375

Gamma Ray

API 150

X Caliper

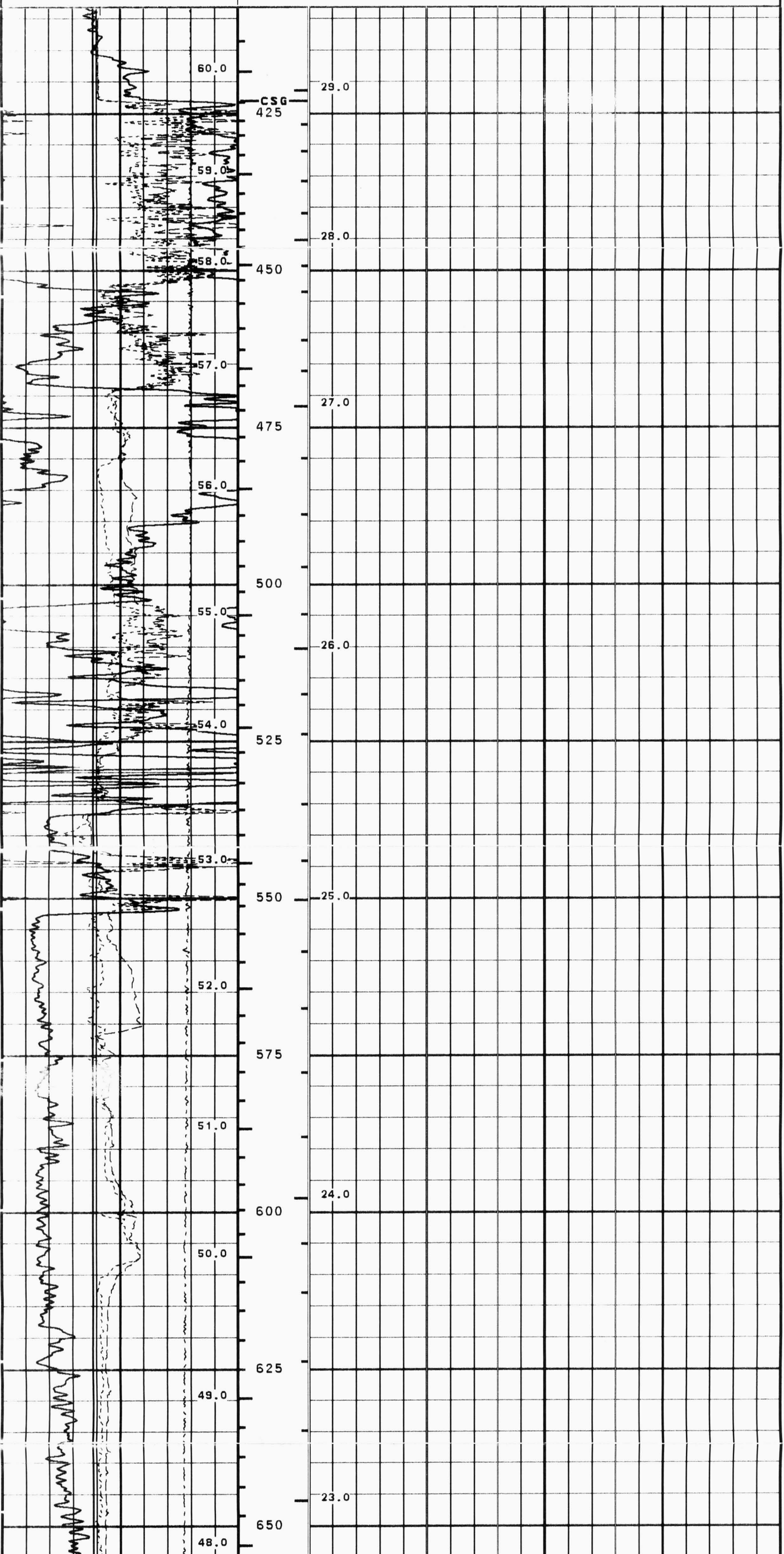
Millimeters 375

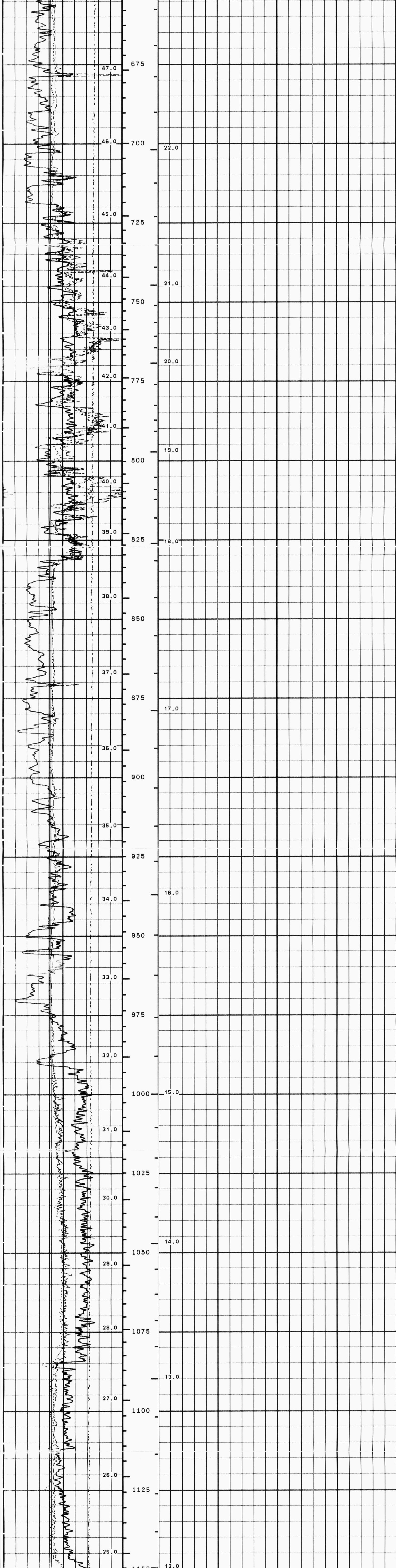
ABHV

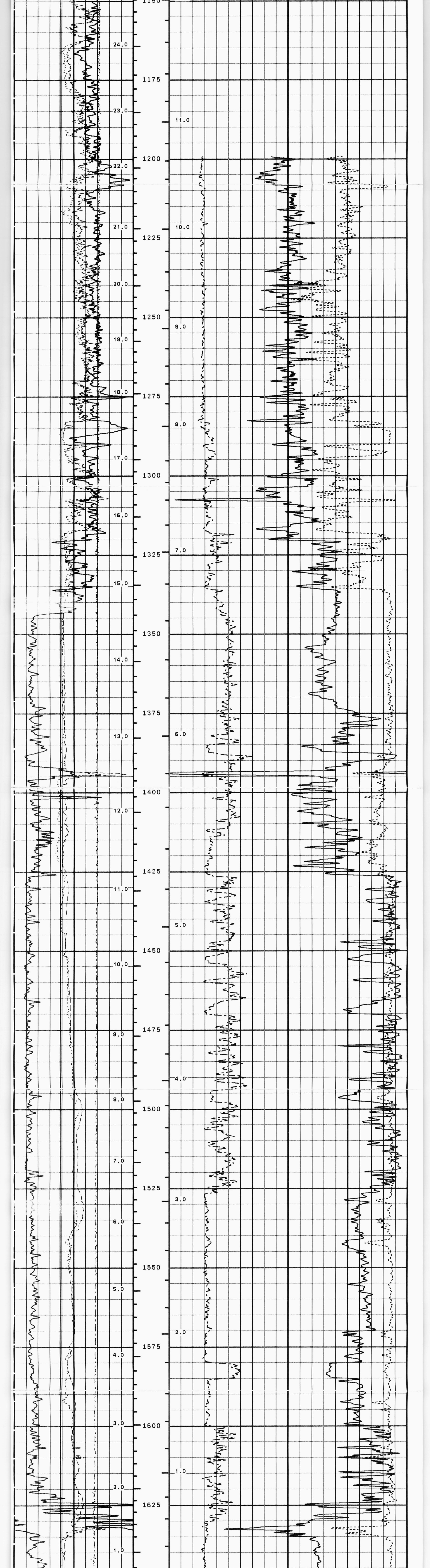
1.0 0.0

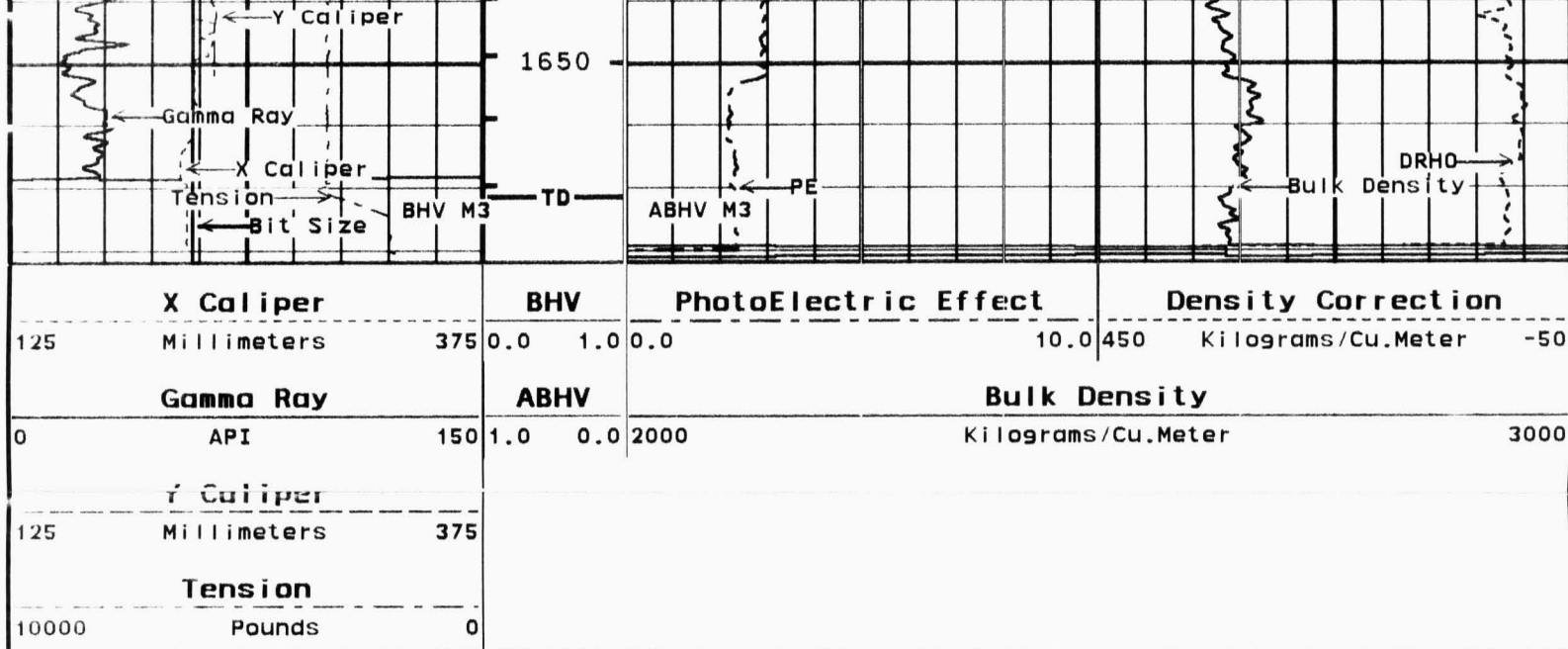
BHV

0.0 1.0









START DEPTH: 1665.9 DIRECTION: UP DATE: 03/05/2002 TIME: 06:16 MODE: TRACE PLAYBACK
BHV CASING SIZE: 177.80 Millimeters CALIPERS: X Caliper,Y Caliper,None
30010823 SPEMP

MAIN PASS

VERSION: 2002.01.30.16

SYSTEM CONSTANTS

NAME	DESCRIPTION	VALUE	UNITS
TDL	TD-Logger	1660.70	Meters
BS	Bit Size	222.00	Millimeters
BHT	Bottom Hole Temp	49.0	DegreesCentigrade
BARI	Barite Correction	OFF	
MW	Mud Weight	1120.0	Kilograms/Cu.Meter
SCAL	Density BH Diam Source	X Caliper	
BHC4	BHV Casing Size	177.80	Millimeters
BHC6	BHV Method	Standard BHV	
BHC5	BHV Calipers	X Caliper,Y Caliper,None	

REMARKS

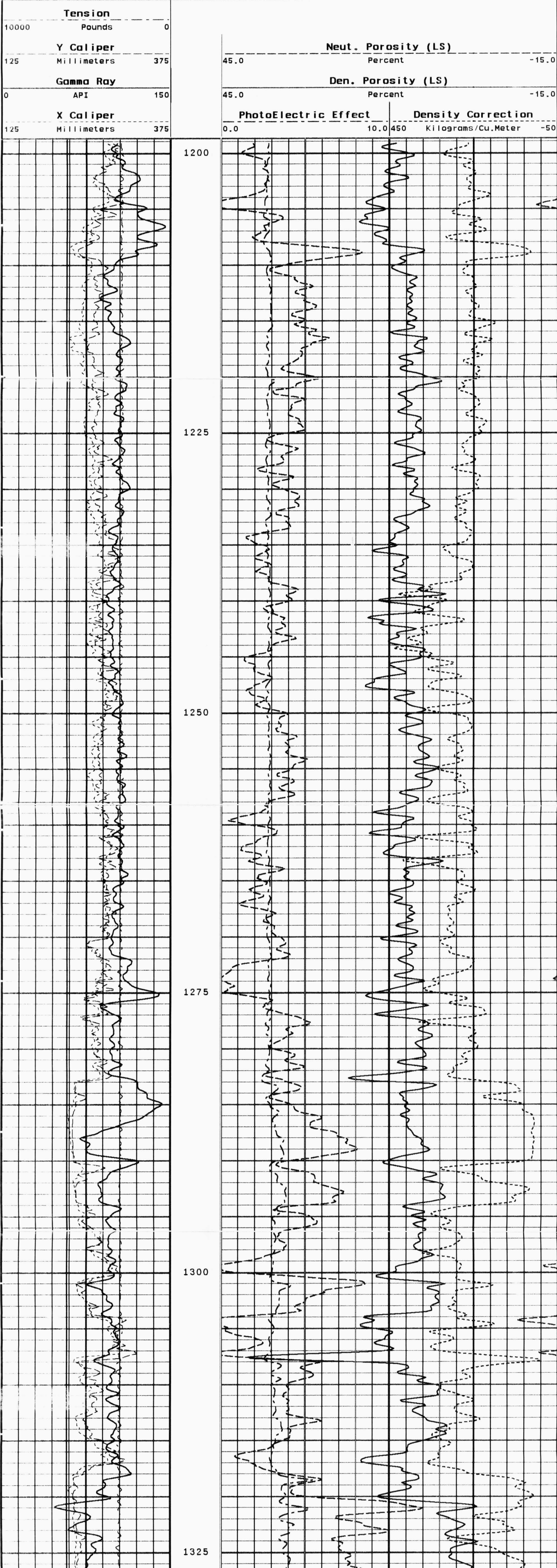
MAIN PASS
1:240 SCALE
LIMESTONE MATRIX

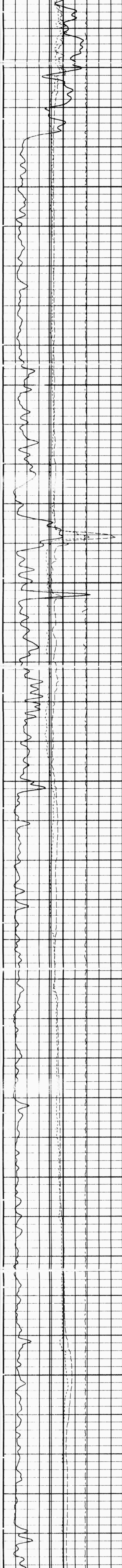
VERSION 2002.01.30.16

MAIN PASS

30010823 SPEMP

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





1350

1375

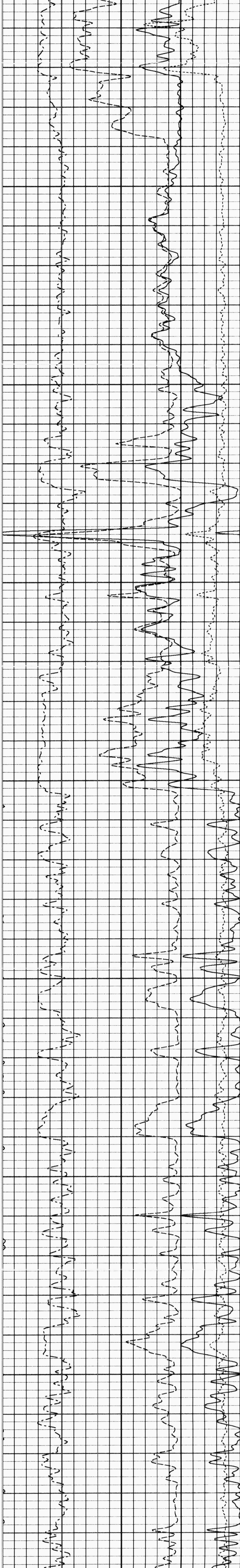
1400

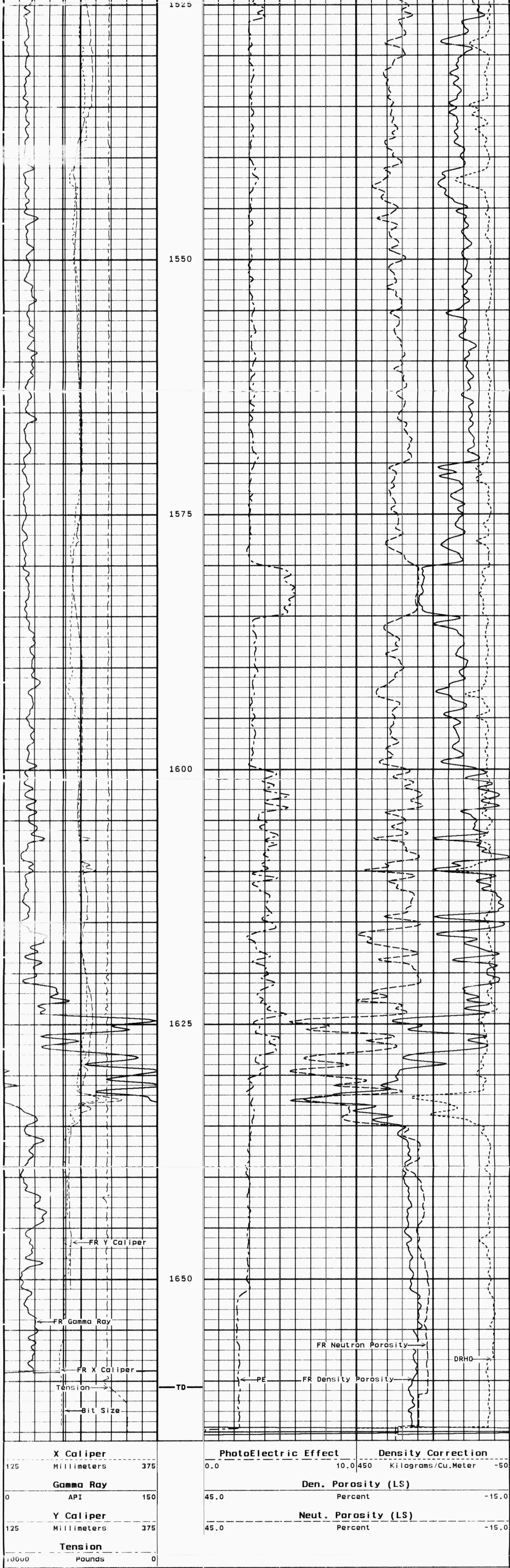
1425

1450

1475

1500





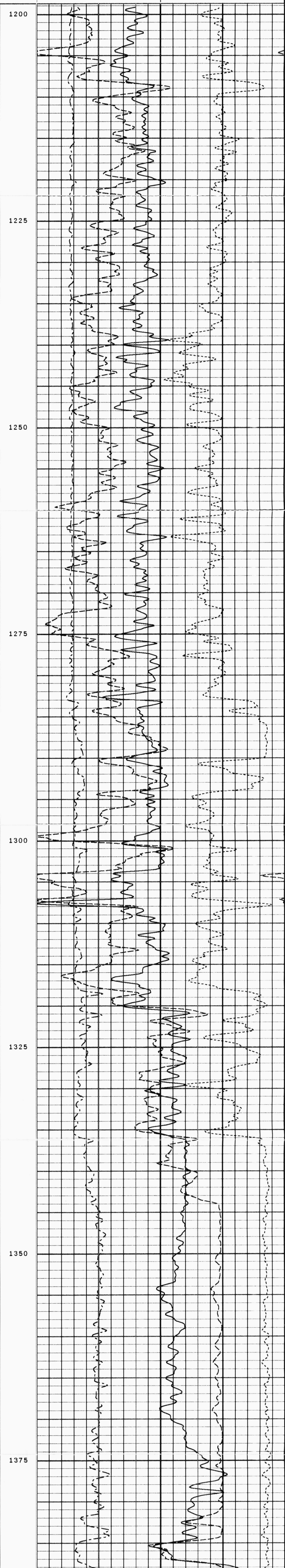
START DEPTH: 1665.9		DIRECTION: UP		DATE: 03/05/2002		TIME: 06:16		MODE: TRACE PLAYBACK	
30010823 SPEMP									
MAIN PASS									
VERSION: 2002.01.30.16									
SYSTEM CONSTANTS									
NAME	DESCRIPTION			VALUE			UNITS		
TDL	TD-Logger			1660.70			Meters		
BS	Bit Size			222.00			Millimeters		
BHT	Bottom Hole Temp			49.0			DegreesCentigrade		
SACC	Accumulation Time			100			Seconds		
BARI	Barite Correction			OFF					
MW	Mud Weight			1120.0			Kilograms/Cu.Meter		
NGAI	K Factor-NEJ			1.012					
BHS	Open/Cased Hole			Open					
NBSC	Bitsize/Calp Sel-CNT			Caliper					
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 Diam Source			X Caliper					

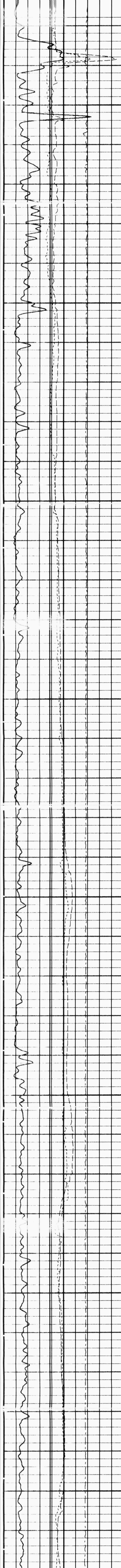
REMARKS	
MAIN PASS 1:240 SCALE DOLOMITE MATRIX	
VERSION 2002.01.30.16	
MAIN PASS	
30010823 SPEMP	
FINISH DEPTH: 0.0 Meters	DIRECTION: UP DATE: TIME: MODE: TRACE PLAYBACK

Tension	Neut. Porosity (DL)
10000 Pounds 0	
Y Caliper	

125 Millimeters 375
Gamma Ray
0 API 150
X Caliper
125 Millimeters 375

45.0 Percent -15.0
Den. Porosity (DL)
45.0 Percent -15.0
PhotoElectric Effect Density Correction
0.0 10.0 450 Kilograms/Cu.Meter -50





1400

1425

1450

1475

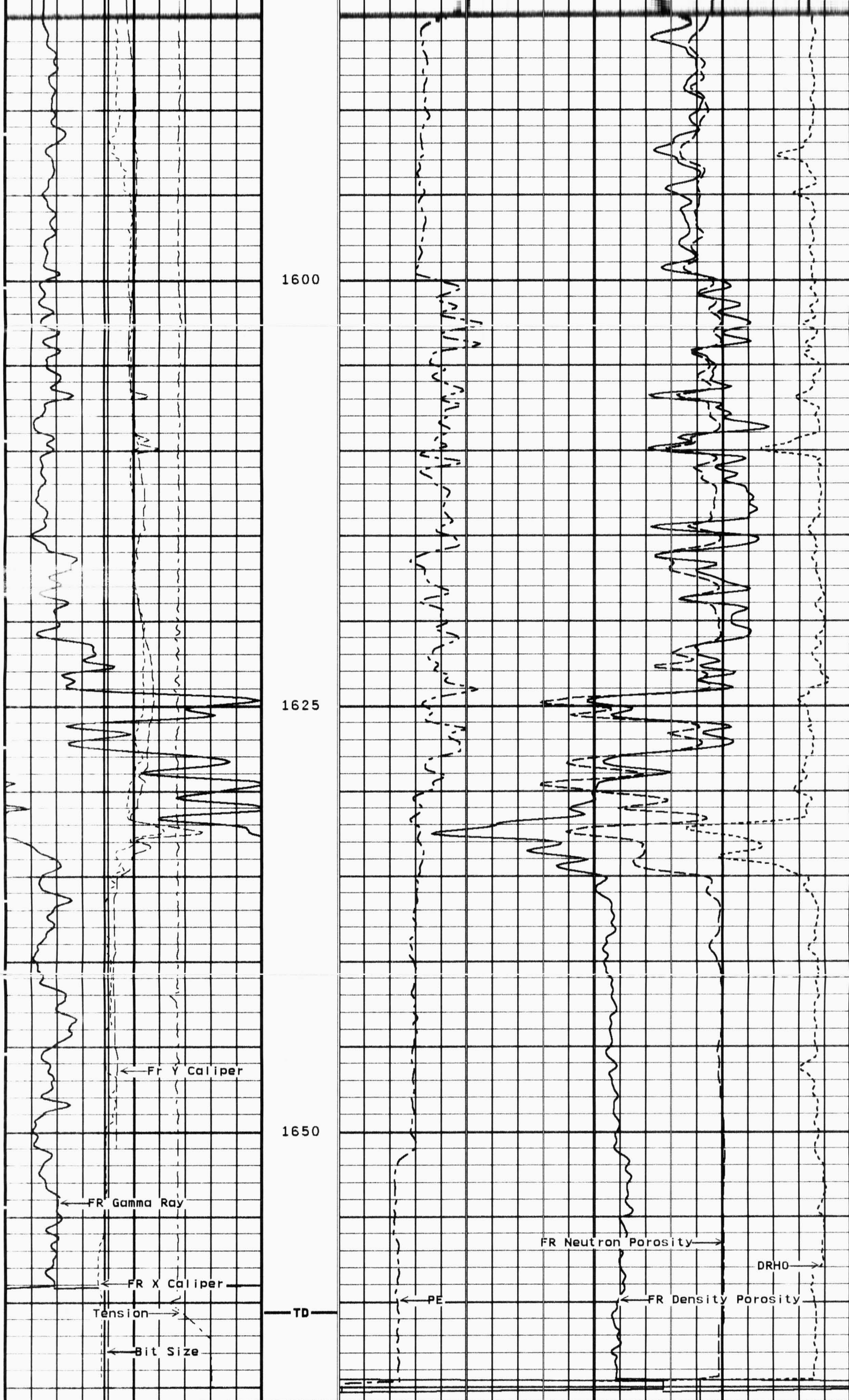
1500

1525

1550

1575





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

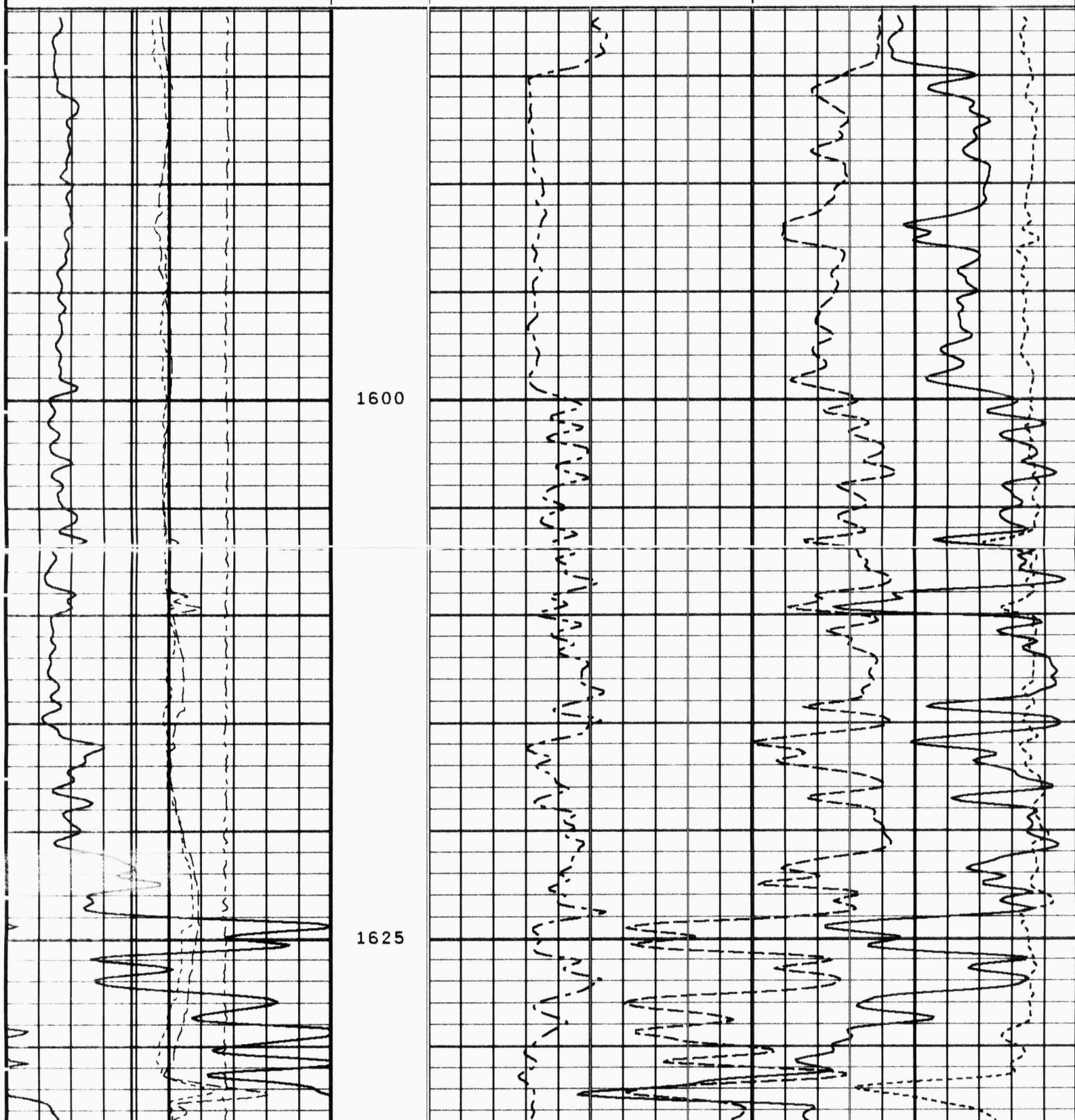
START DEPTH: 1665.9	DIRECTION: UP	DATE: 03/05/2002	TIME: 06:16	MODE: TRACE PLAYBACK
30010823 SPEMP				
MAIN PASS				
VERSION: 2002.01.30.16				
SYSTEM CONSTANTS				
NAME	DESCRIPTION	VALUE	UNITS	
TDL	TD-Logger	1660.70	Meters	
BS	Bit Size	222.00	Millimeters	
BHT	Bottom Hole Temp	49.0	DegreesCentigrade	
SACC	Accumulation Time	100	Seconds	
BARI	Barite Correction	OFF		
MW	Mud Weight	1120.0	Kilograms/Cu.Meter	
NGAI	K Factor-NEJ	1.012		
BHS	Open/Cased Hole	Open		
NBCH	Bitsize/Calp Sel-CNT	Caliper		
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 Diam Source	X Caliper		

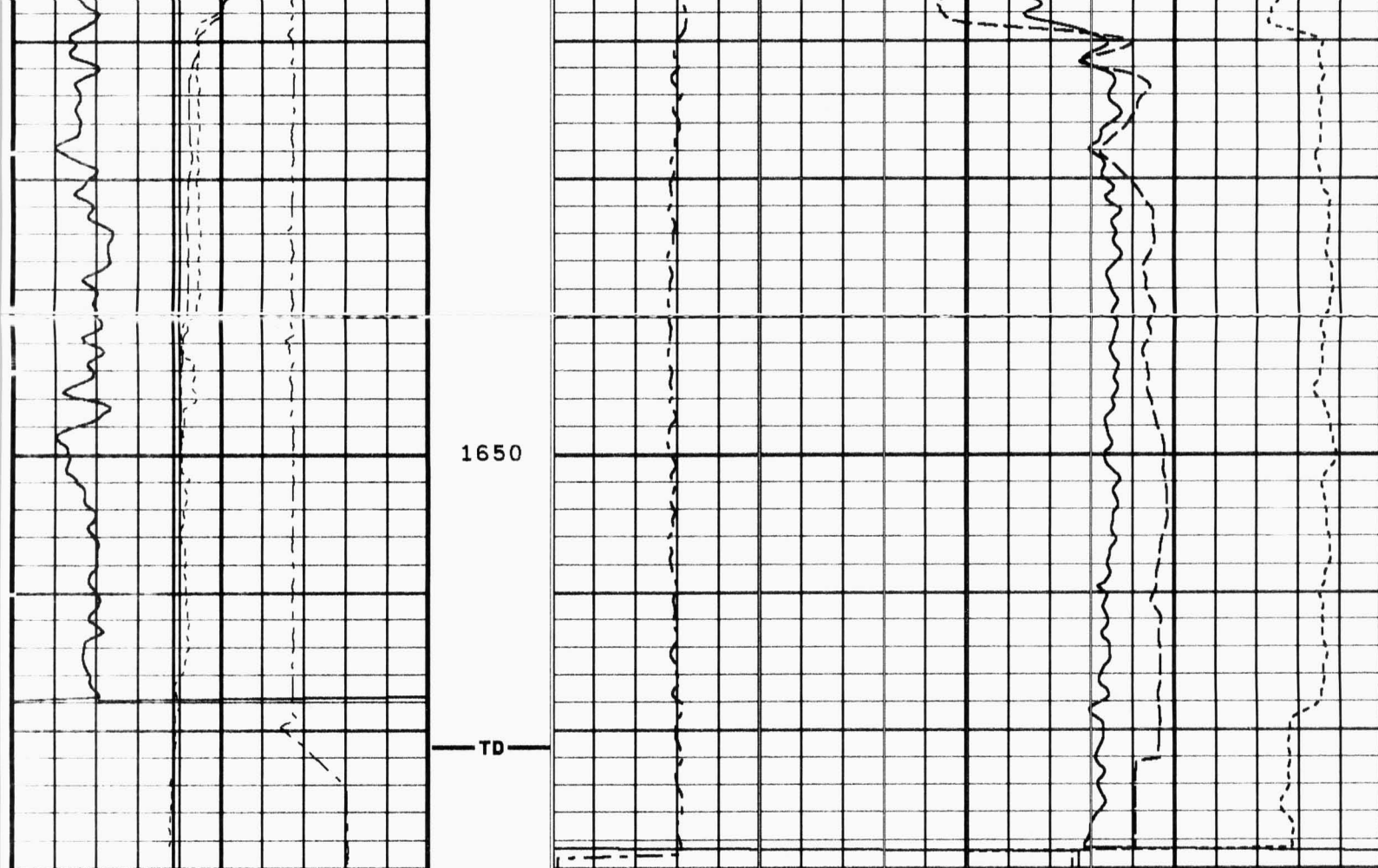
REPEAT PASS		REMARKS	
1:240 SCALE			
LIMESTONE MATRIX			

					VERSION 2002.01.30.16							
REPEAT PASS												
30010823 SPERP												
FINISH DEPTH: 1582.4 Meters					DIRECTION: UP		DATE: 03/05/2002		TIME: 05:57		MODE: TRACE PLAYBACK	

Tension		
10000	Pounds	0
Y Caliper		
125	Millimeters	375
Gamma Ray		
0	API	150
X Caliper		
125	Millimeters	375

Neut. Porosity (LS)		
45.0	Percent	-15.0
Den. Porosity (LS)		
45.0	Percent	-15.0
PhotoElectric Effect		Density Correction
0.0	10.0	450 Kilograms/Cu.Meter -50





X Caliper			
125	Millimeters	375	
Gamma Ray			
0	API	150	
Y Caliper			
125	Millimeters	375	
Tension			
10000	Pounds	0	

START DEPTH: 1665.6	DIRECTION: UP	DATE: 03/05/2002	TIME: 05:57	MODE: TRACE PLAYBACK
30010823 SPERP				

REPEAT PASS	
VERSION: 2002.01.30.16	

SYSTEM CONSTANTS			
NAME	DESCRIPTION	VALUE	UNITS
TDL	TD-Logger	1660.70	Meters
BS	Bit Size	222.00	Millimeters
BHT	Bottom Hole Temp	49.0	DegreesCentigrade
SACC	Accumulation Time	100	Seconds
BARI	Barite Correction	OFF	
MM	Mud Weight	1120.0	Kilograms/Cu.Meter
NGAI	K Factor-NEU	1.012	
BHS	Open/Cased Hole	Open	
NBCS	Bitsize/Calp Sel-CNT	Caliper	
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 Diam Source	X Caliper	

02/24/02	14:55	0.0 M	Ver 2.0b-2.0b	Job 30012311
Caliper Before Survey Calibration				
Tool Type: CAL-FA		Serial No: calf117		
	Measured		Calibrated	
	Small Large Units		Small Large Units	
WCLO	822.5 1478.6 mv		177.0 355.0 mm	

03/04/02	23:55	0.0 M	Ver 2.0b-2.0b	Job 30010823
Gamma Ray Before Survey Calibration				
Tool Type: UGR-JA		Serial No: ugrj193		
Calibrator No: RA-20S-124				
Background	Calibrator	Standard	Units	
191.2	674.1	140.0	API	
Delta Counts Per Sec: 432.9		CPS/API = 3.449		

02/12/02	15:47	0.0 M	Ver 2.0b-2.0b	Job SHOP
Compensated Neutron Shop Calibration				
Tool Type: CNT-S		Serial No: cnts186		
Verifier No: WSV-205		Source No: N-601		
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:	1332.7	335.9	143.9	CPS
SS Detector:	936.0	483.8	326.9	CPS
Tool Ratio:	0.702	1.440	2.272	SS/LS
Tool Porosity:	-0.79	10.25	25.82	LM-PU
Tool Constant: 1.012				
Surface Temperature: 21 DegC				
	SS Detector	LS Detector	Ratio	Porosity
	371.6 CPS	239.7 CPS	1.550	12.19

03/04/02	23:49	0.0 M	Ver 2.0b-2.0b	Job 30010823
Compensated Neutron Before Survey Calibration				
Tool Type: CNT-S		Serial No: cnts186		
Verifier No: WSV-205		Source No: N-601		
	LS Detector:	Verifier Check	Units	
		234.1	CPS	
	SS Detector:	371.8	CPS	
	Tool Ratio:	1.588	SS/LS	
	Tool Porosity:	12.88	LM-PU	
Tool Constant: 1.012				

03/05/02	08:16	0.0 M	Ver 2.0b-2.0b	Job 30010823
Compensated Neutron After Survey Calibration				
Tool Type: CNT-S		Serial No: cnts186		
Verifier No: WSV-205		Source No: N-601		
	Verifier Check		Units	
	Before After			
LS Detector:	234.1	236.8	CPS	
SS Detector:	371.3	372.9	CPS	
Tool Ratio:	1.583	1.575	SS/LS	
Tool Porosity:	12.83	12.63	LM-PU	
Tool Constant: 1.012				

02/28/02	10:29	0.0 M	Ver 2.0b-2.0b	Job SHOP
Spectral Pe Density Shop Calibration				
Tool Type: SPS-AB		Sonde No: SPSB188		
Firmware Ver: 6.02		Electronics No: SPCB188		
		Source No: 2071-GW		
	Bkg	Al	Al+Fe	Mg Units
Cs Pk	110.90	110.10	109.41	110.95 Ch
Gain	0.167	0.166	0.165	0.168 Ch/Kev
Tng Pk	11.61			
Off	0.062			
Res	9.69	9.77	9.64	10.10 %
LLPE	165	1985	1287	12964 cps
LUPE	90	1532	1166	9143 cps
LSUC	523	1359	1210	8009 cps
LCMP	1068	5409	4672	31330 cps
Cs Pk	110.67	111.46	110.29	111.24 Ch
Gain	0.167	0.168	0.167	0.168 Ch/Kev
Tng Pk	11.59			
Off	0.057			
Res	9.15	9.15	9.19	8.81 %
SLPE	163	3118	2131	4784 cps
SUPE	87	2261	1698	3324 cps
SSUC	474	5710	5061	8072 cps
SCMP	995	13423	11665	19868 cps
Acc	250	250	250	250 Secs

Density Calibration			
	Spina Angle =	Fresh 77.42	Barite 78.96
	Spina Length =	198.53	199.36
Pe Calibration			
Fresh			

LS Slope = 1.6864
LS Intercept = -0.2553
SS Slope = 3.7046
SS Intercept = -0.4969

03/04/02 23:44 0.0 M Ver 2.0b-2.0b Job 30010823

Spectral Pe Density Before Survey Tool Check

Tool Type: SPS-AB Sonde No: SPSB188
Firmware Ver: 6.02 Electronics No: SPCB188
Source No: 2071-GW

	Shop	Before	Units
Cs Pk	110.90	110.26	Ch
Gain	0.167	0.167	Ch/Kev
Tn9 Pk	11.61	11.62	Ch
Off	0.062	0.101	Ch
Res	9.69	9.70	%
LLPE	165	165	
LUPE	90	89	
LSUC	523	522	
LCMP	1068	1070	
Cs Pk	110.67	111.00	Ch
Gain	0.167	0.168	Ch/Kev
Tn9 Pk	11.59	11.60	Ch
Off	0.057	0.142	Ch
Res	9.15	9.21	%
SLPE	163	164	
SUPE	87	87	
SSUC	474	475	
SCMP	995	998	
Acc	250	100	Secs

03/05/02 08:04 0.0 M Ver 2.0b-2.0b Job 30010823

Spectral Pe Density After Survey Tool Check

Tool Type: SPS-AB Sonde No: SPSB188
Firmware Ver: 6.02 Electronics No: SPCB188
Source No: 2071-GW

	Shop	Before	After	Units
Cs Pk	110.90	110.26	110.26	Ch
Gain	0.167	0.167	0.167	Ch/Kev
Tn9 Pk	11.61	11.62	11.48	Ch
Off	0.062	0.101	-0.025	Ch
Res	9.69	9.70	9.69	%
LLPE	165	165	166	cps
LUPE	90	89	91	cps
LSUC	523	522	525	cps
LCMP	1068	1070	1065	cps
Cs Pk	110.67	111.00	110.57	Ch
Gain	0.167	0.168	0.167	Ch/Kev
Tn9 Pk	11.59	11.60	11.57	Ch
Off	0.057	0.142	0.202	Ch
Res	9.15	9.21	9.18	%
SLPE	163	164	165	cps
SUPE	87	87	88	cps
SSUC	474	475	472	cps
SCMP	995	998	991	cps
Acc	250	100	100	Secs

02/19/02 15:06 0.0 M Ver 2.0b-2.0b Job 30012279

Caliper Before Survey Calibration

Tool Type: SPD-CL Serial No:spsb188

	Small	Measured Large	Units	Small	Calibrated Large	Units
WCL2	2005.5	3425.2	mv	177.8	355.6	mm

O.H. Adaptor Head

Weight 18.0 kg
Length 0.74 m
Max. Diameter 8.9 cm
Total Stack Weight 560.2 kg in air
Total Stack Length 19.54 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

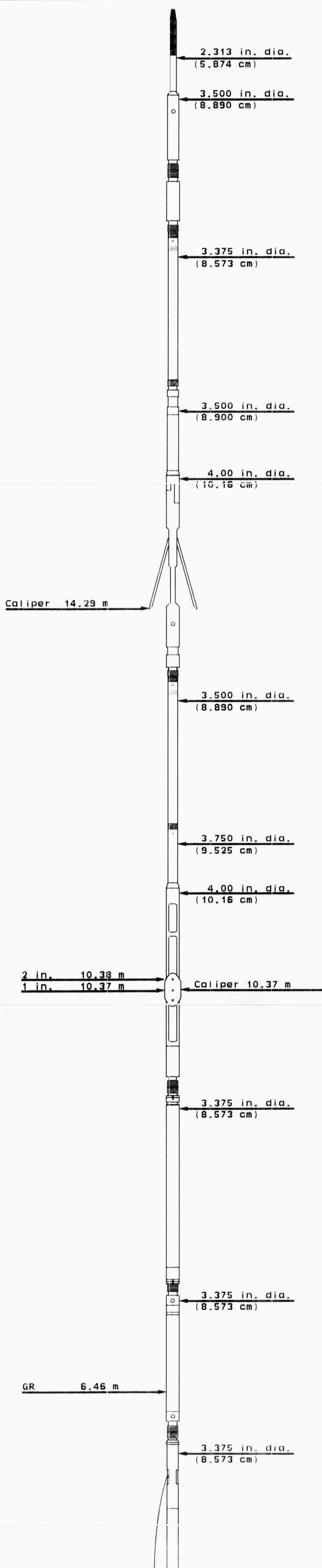
Weight 56.7 kg
Length 2.92 m
Max. Diameter 8.6 cm

Universal GR

Weight 37.3 kg
Length 1.40 m
Max. Diameter 8.6 cm

Mandrel Neutron

Weight 45.4 kg
Length 2.07 m
Max. Diameter 8.6 cm



LS cps
PHIN 4.13 m
SS cps

3.67 in. dia.
(9.32 cm)

SPeD 400 Pad Section

Weight 141.5 kg
Length 3.38 m
Max. Diameter 11.4 cm

Caliper 0.66 m

4.19 in. dia.
(10.64 cm)

LS cps/PE

PHID 0.68 m

SS cps/PE

Tool Zero

COMPANY PARAMOUNT RESOURCES LTD.

WELL PARA ET AL CAMERON H-03

FIELD CAMERON HILLS PROVINCE N.W.T.

COMPUTALOG