ENCLOSURE 10c

OR-354

391180

Schlumberger

SIMULTANEOUS
COMPENSATED NEUTRON FORMATION DENSITY

COUNTRY AUSTRALIA
FIELD or LOCATION WILDCAT
WELL PELICAN 4
COMPANY HEMATITE PETROLEUM

COMPANY HEMATITE PETROLEUM Co
WELL PELICAN # 4
FIELD WILDCAT
COUNTRY AUSTRALIA
Location 40° 21' 38.3" S 145° 52' 17.7" E

Other Services :

Permanent Datum : MSL ; Elev.: 0
Log Measured From KB , 82 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 82
D.F. 81
G.L. -264

Date	13 FEB 1979		
Run No.	TWO		
Depth Driller	10,009		
Depth Logger	10,017		
Btm log Interval	9987		
Top log Interval	9250		
Casing Driller	13⅜ @ 2789	@	@
Casing Logger	2792		
Bit Size	12¼		
Max. Hole Dev.	@	@	@
Type Fluid in Hole	Seawater / Gel		
Barite Content	8%		
Fluid Level	SURFACE		
Dens. | Viscosity	11.6 | 40		
pH | Fluid Loss	11.4 | 7.0 ml	ml	ml
Rm @ Meas. Temp.	0.232 @ 25 °C	@ °C	@ °C
Rmf @ Meas. Temp.	0.164 @ 25 °C	@ °C	@ °C
Time Since Circ.	14 HOURS		
Max. Rec. Temp.	240° F	°C	°C
Equip. | Location	3501 | SEA		
Recorded By	P. FRANKLIN		
Witnessed By	B. ATKINS		

FOLD HERE The well name, location and borehole reference data were furnished by the customer

Run No	BOREHOLE RECORD			CASING RECORD			
	Bit Size	From	To	Size	Weight	From	To
2	12¼	TD	2789	13⅜	–	2789	SURF

EQUIPMENT DATA

Run No	Density Panel	Density Cartridge	Density Skid	Density Sonde	Density Source	Density Calibrator	Neutron Panel	Neutron Cartridge	Neutron Source	Neutron Calibrator	G R Cartridge	Tape Recorder	Memory Panel
2	EJ-1065	EB 923	D 868	EC 919	82978	C-796	AB-627	A-487	FA-549	AB-1037	JAA-1007	E8-868	AB-939

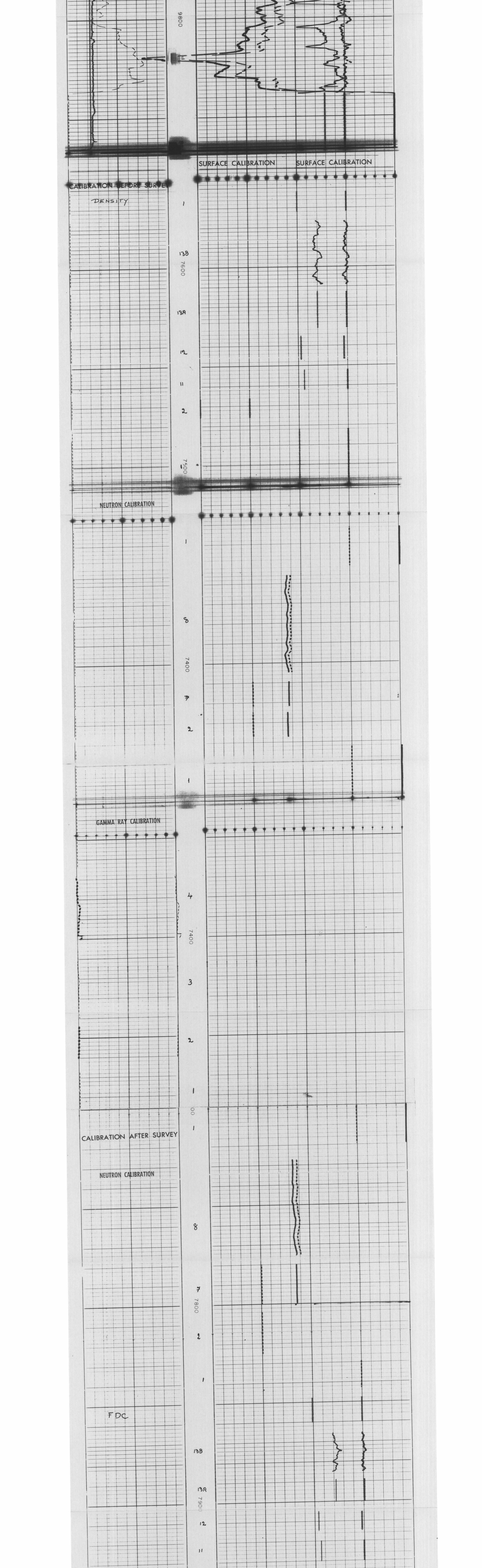
LOGGGING DATA

Run No	Compensated Neutron						Compensated Density					
	Time Constant	Hole Size Setting	Matrix	Porosity Scale	From	To	Time Constant	Fluid Density	Matrix Density	Porosity Scale	From	To
2	2	AUTO	L.S.	30	TD		2	1.00	2.71	–	TD	

CALIBRATION DATA

Run No	Gamma Ray (cps)		Compensated Neutron				Compensated Density			
			Before Log Av. cps		After Log Av. cps		Before Log Av. cps		After Log Av. cps	
	Background	Total	Long Spacing	Short Spacing	Long Spacing	Short Spacing	Long Spacing	Short Spacing	Long Spacing	Short Spacing
2										

REMARKS



CALIPER
hole diameter in inches
10 20

GAMMA RAY
api units
0 150

BULK DENSITY
grams / cc
1.85 2.35 2.85
CORRECTION GRAMS / CC
-0.25 0 +0.25

NEUTRON POROSITY %
LS matrix
45 15 -15

Depths

REPEAT SECTION

CALIBRATION DATA

COMPENSATED NEUTRON CALIBRATION CODING

1. MECHANICAL ZERO
2. RECORDED SENSITIVITY (THRU MEMORIZER IF USED)
PANEL TEST

	RATIO	OH POROSITY (LS)	CH POROSITY (LS)
3.	1	1.6	0.1
4.	2	15.6	9.0
5.	3	30.7	24.1
6.	4	45.3	43.2

7. POROSITY NORMALIZED WITH CNB - A IN PLACE
7 A. TOOL IN NCT - B
8. LOG POSITION WITH CNB - A IN PLACE
8 A. TOOL IN NCT - B

OH	CH
LS	LS
18	11.2

$$\text{RATIO (NORMALIZED)} = \frac{2.17 \times \text{RATIO LOG}}{\text{RATIO (NCT - B)}}$$

FORMATION DENSITY COMPENSATED CALIBRATION CODING

1. MECHANICAL ZERO
2. RECORDER SENSITIVITY
PANEL TEST FDC LIQUID

	POS	ρ	$\Delta\rho$
3.	# 1	2.92	.00
4.	# 2	2.78	+.14
5.	# 3	2.42	−.10
6.	# 4	2.35	.00
7.	# 5	2.08	.01

8. MECHANICAL ZERO CALIPER
9. 8" RING
10. 12" RING
11. TOOL CALIBRATE # 1 SET ρ = 2.50
12. TOOL CALIBRATE # 2 SET $\Delta\rho$ = .00
13. LOG POSITION ρ = 2.59, $\Delta\rho$ = .015

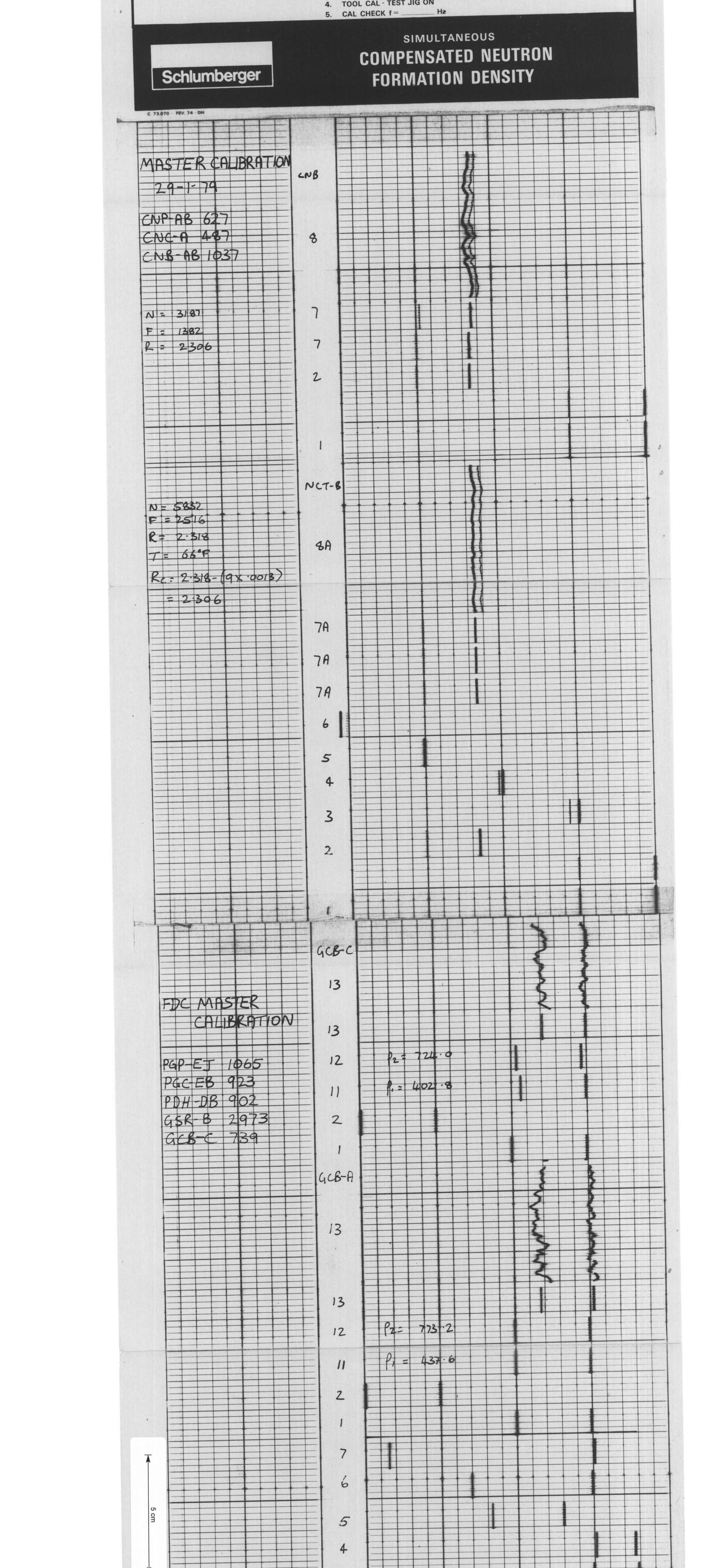
GAMMA RAY CALIBRATION CODING

1. MECHANICAL ZERO
2. TEST - 1 - ELECTRICAL ZERO
3. TOOL CAL - BACKGROUND
4. TOOL CAL - TEST JIG ON
5. CAL CHECK f = ______ Hz

Schlumberger

SIMULTANEOUS
COMPENSATED NEUTRON
FORMATION DENSITY

C 73.070 - FEV. 74 - DH



MASTER CALIBRATION
29-1-79

CNP-AB 627
CNC-A 487
CNB-AB 1037

N = 3187
F = 1382
R = 2306

N = 5832
F = 2516
R = 2.318
T = 66°F
R_c = 2.318 - (9 x .0013)
= 2.306

FDC MASTER CALIBRATION

PGP-EJ 1065
PGC-EB 923
PDH-DB 902
GSR-B 2973
GCB-C 739

ρ_2 = 724.0
ρ_1 = 402.8

ρ_2 = 773.2
ρ_1 = 437.6