391181

W

ENCLOSURE 10

OR.354

C. 73.069 - FEV. 77 - DH

Schlumberger

SIMULTANEOUS

COMPENSATED NEUTRON FORMATION DENSITY

COUNTRY AUSTRALIA
FIELD or LOCATION WILDCAT
WELL PELICAN
COMPANY HEMATITE

COMPANY Hematite Petroleum Pty.Ltd.
WELL Pelican #4
FIELD Wildcat
COUNTRY Australia
Location 40° 21' 3[illegible]" S
145° 52' 1[illegible]" 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.,79
Run No.	TWO
Depth Driller	10009
Depth Logger	10017
Btm log interval	9987
Top log interval	9250
Type Fluid in hole	SALT WATER/GEL
Salinity PPM Cl.	
Dens. / Visc.	11.6 / 40
PH / Fluid loss	11.4 / 7.0
Level	SURFACE
Max rec. temp.	240oF
Op. Rig. time	
Time since Circ.	14 Hours
Max hole dev.	@
Recorded by	P.FRANKLIN
Witnessed by	B.ATKINS

BORE-HOLE RECORD				CASING RECORD			
RUN No	Bit.	From	To	Size	Wgt.	From	To
2	12¼	TD	2789	13 3/8		2789	SURFACE

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

EQUIPMENT DATA

Run N°	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	EJ1065	EB923	D868	EC919	B2978	C796	AB627	A487	FA549	AB1037	JAA1007	EB868	AB939

LOGGING DATA

	Compensated Neutron						Compensated Density					
Run N°	Time Constant	Hole Size Setting	Matrix	Porosity Scale	From	To	Time Constant	Liquid Density	Matrix Density	Porosity Scale	From	To
2	2	AUTO	L.S.	30	TD		2	1.00	2.71		TD	

CALIBRATION DATA

	Gamma Ray		Compensated Neutron				Compensated Density			
	C P S		Before Log Av. CPS		After Log Av. CPS		Before Log Av. CPS		After Log Av. CPS	
Run N°	Background	Total	Long Spacing	Short Spacing	Long Spacing	Short Spacing	Long Spacing	Short Spacing	Long Spacing	Short Spacing
2	12	235	1390	3200	1384	3192	407	719	403	728

REMARKS

CALIPER
hole diameter in inches
10 20

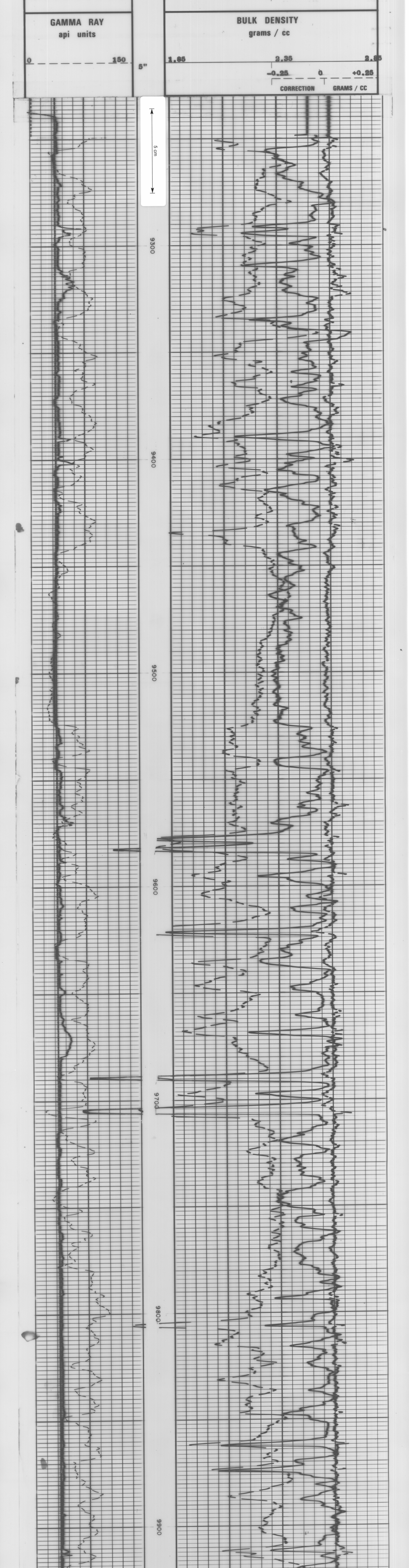
Depths 5"

NEUTRON POROSITY %
L.S. matrix
45 15 -15

GAMMA RAY
api units
0 150

5"

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



-0.25 0 +0.25
CORRECTION GRAMS / CC
1.85 2.35 2.85

GAMMA RAY
api units
0 150

BULK DENSITY
grams / cc

10 20

45 15 -15

CALIPER
hole diameter in inches

Depths

NEUTRON POROSITY %
LS matrix

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

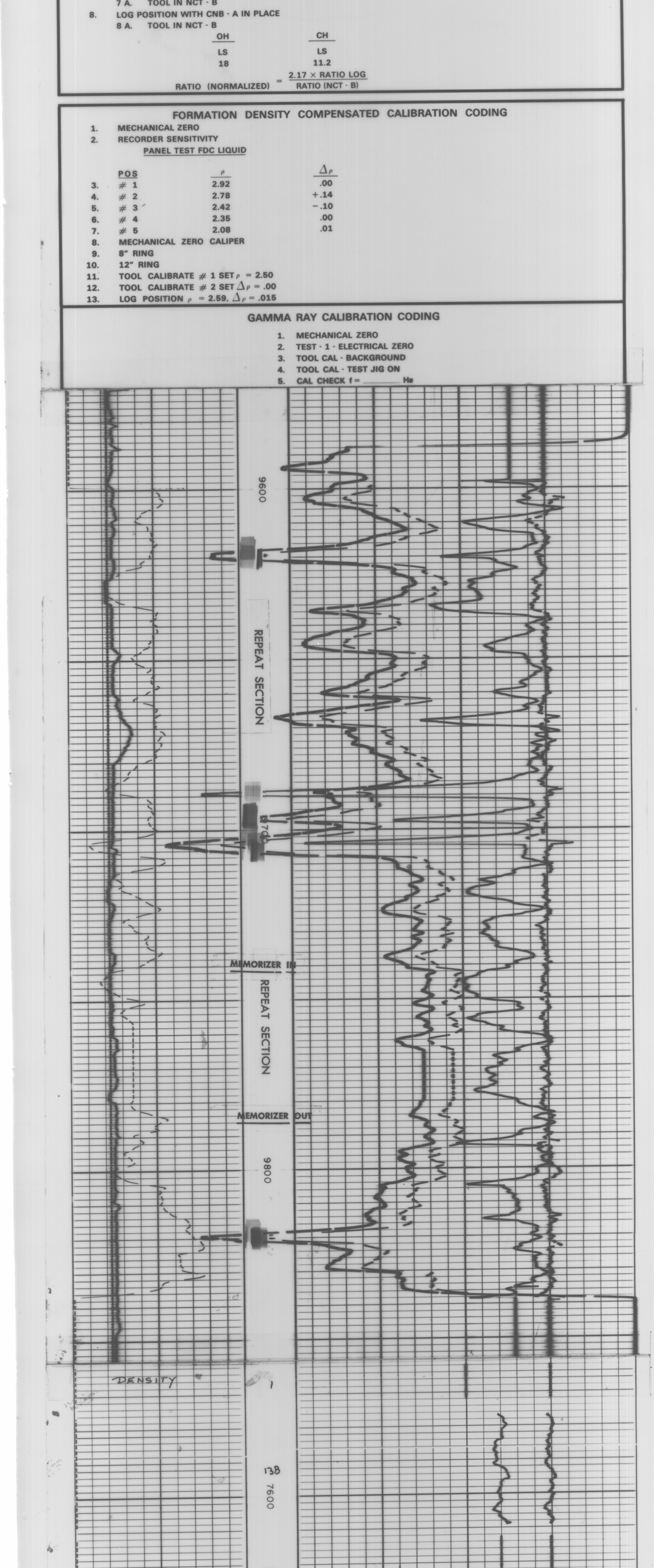
1. MECHANICAL ZERO
2. RECORDER SENSITIVITY
PANEL TEST FDC LIQUID

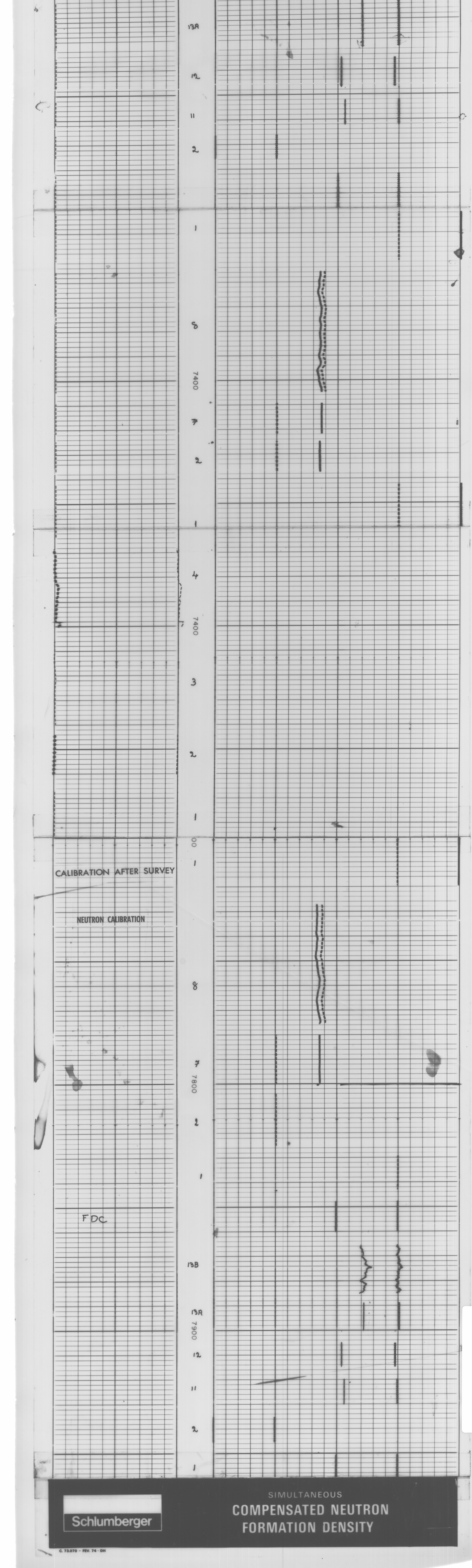
	POS	ρ	$\Delta\rho$
3.	# 1	2.92	.00
4.	# 2	2.78	+.14
5.	# 3	2.42	−.10
6.	# 4	2.35	.00
7.	# 5	2.08	.01

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