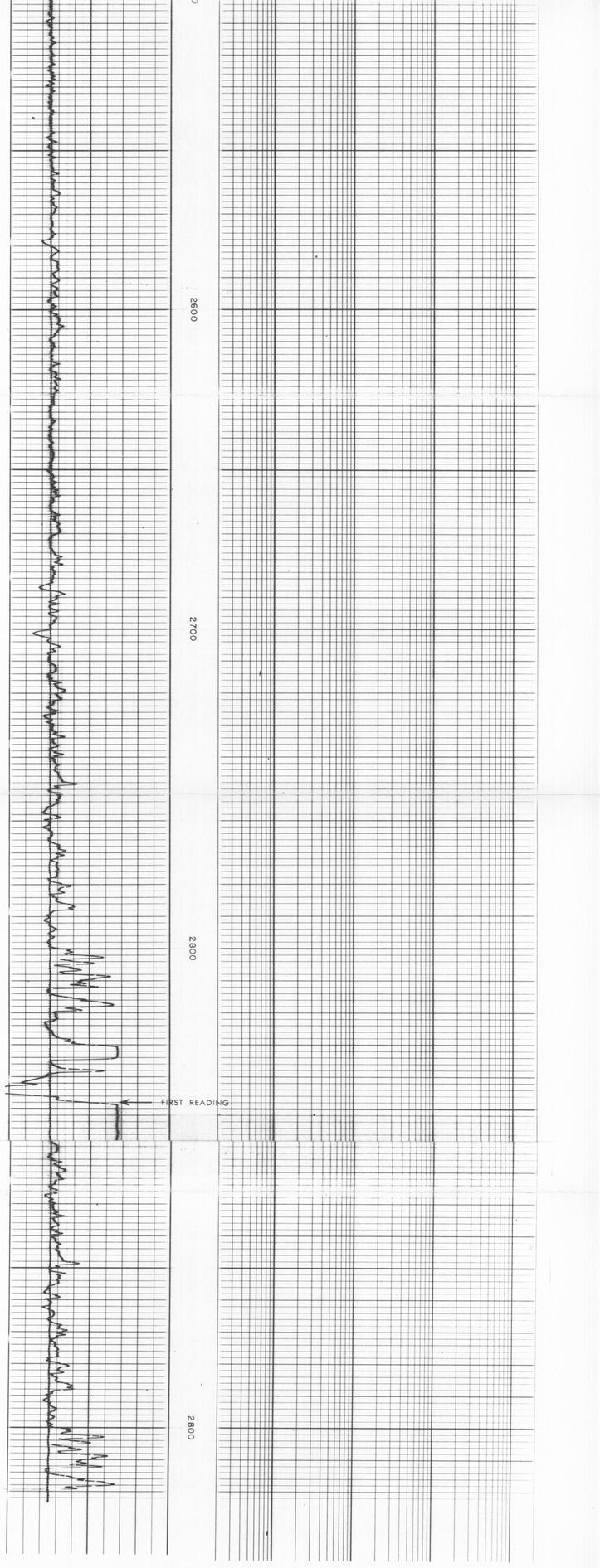
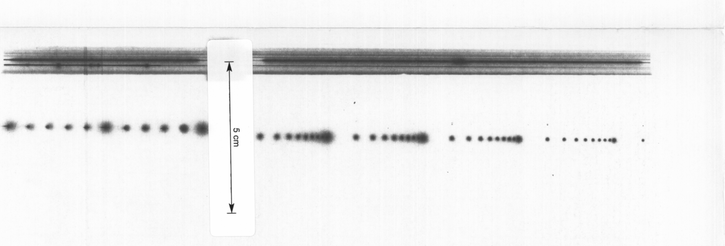
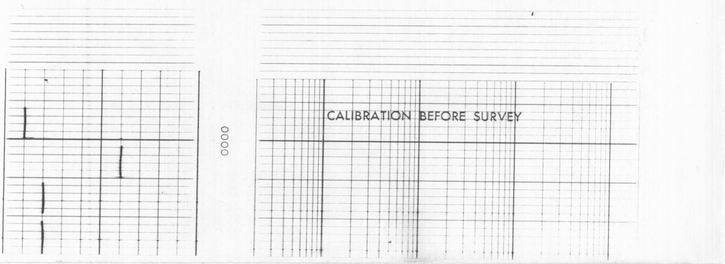



2600
2700
2800
FIRST READING


5cm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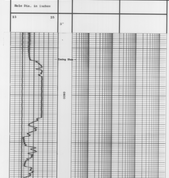
CALIBRATION BEFORE SURVEY

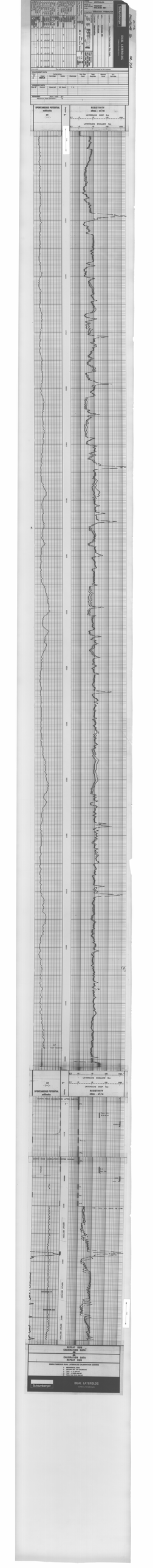
04-357

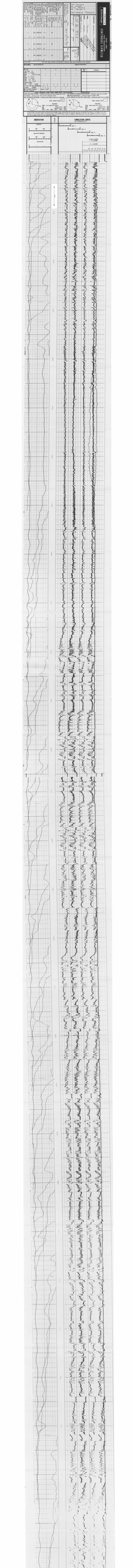


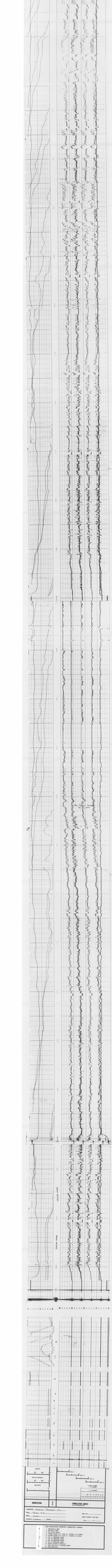


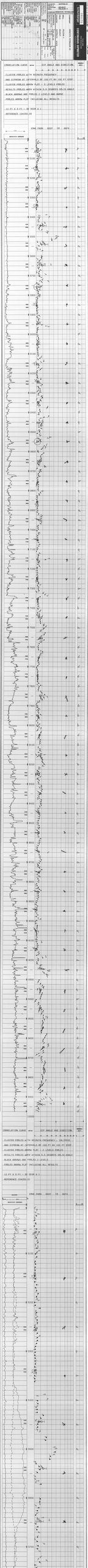





DUAL LATEROLOG
Schlumberger
SPONTANEOUS POTENTIAL
RESISTIVITY
LATEROLOG DEEP Rxo
LATEROLOG SHALLOW Rxo
REPEAT SECTION
MAIN PASS
CALIBRATION DATA
REPEAT DATA
DUAL LATEROLOG




INDUCTION
CORRELATION CURVES
Customer: Anadarko - El Paso
Well: Crown A-5
Field: Crown Pinnacle - Delhi
Date: 4/1/
Depth Control Log Type:
Type Log
Run No.
Date Logged
Recorded By
Witnessed By
Bit Size
Type Fluid in Hole
Max. Rec. Temp.
Equip. Location
Recorded By
Witnessed By
Run No.
Date
Depth-Driller
Depth-Logger
Bottom Logged Interval
Top Logged Interval
Type Fluid in Hole
Salinity
Density
Level



CORRELATION CURVE
DIP ANGLE AND DIRECTION
CLUSTER POOLED WITH AZIMUTH FREQUENCY
AND DIPMEAN AT INTERVALS OF 100 FT BY 100 FT STEP
CLUSTER POOLED ARROW PLOT - 3 LEVELS POOLED
RESULTS POOLED WHEN WITHIN 3.5 DEGREES SOLID ANGLE
BLACK ARROWS ARE POOLED 2 LEVELS AND ABOVE
POOLED ARROW PLOT INCLUDING ALL RESULTS
12 FT X 3 FT - 35 DEGR X 1
REFERENCE 104250.00
ZONE FROM 5007 TO 9074
5100
5200
5300
5400
5500
5600
5700
5800
5900
6000
6100
6200
6300
6400
6500
6600
6700
6800
6900
7000
7100
7200
7300
7400
7500
7600
7700
7800
7900
8000
8100
8200
8300
8400
8500
8600
8700
8800
8900
9000
9100
9200
9300
9400
9500
9600
9700
9800
9900
10000

9700
9800
9900
10000
10100
10200
10300
10400
10500
10600
10700
10800
10900
11000
11100
11200
11300
11400
11500
11600
11700
11800
11900
12000
12100
12200
12300
12400
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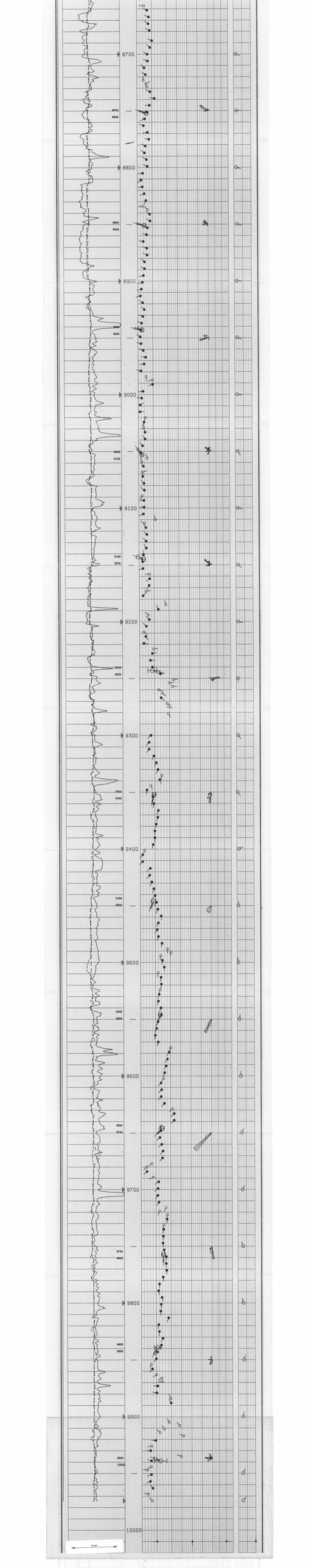
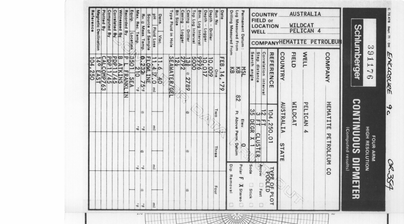
13100
13200
13300
13400
13500
13600
13700
13800
13900


8700
8800
8900
9000
9100
9200
9300
9400
9500
9600
9700
9800
9900
10000
5 cm



REFERENCE 104250.01

POLAR FREQUENCY PLOT

12 FT X 3 FT - 35/DEGR X 1

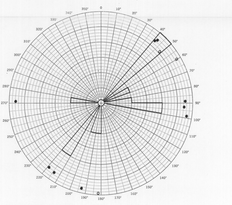
CLUSTER POOLED RESULTS - 2 LEVELS POOLED

BLACK RESULTS ARE POOLED 2 LEVELS

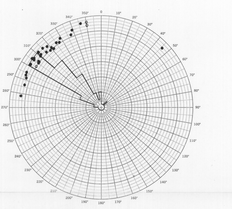
ALL RESULTS ARE PLOTTED



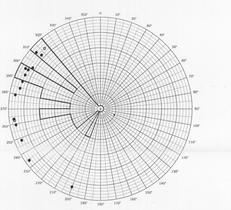
ZONE FROM 8150 TO 8213
FREQUENCY SCALE - FROM CENTER TO EDGE 3 RESULTS
POLAR SCALE - FROM EDGE TO CENTER 60 DEGREES



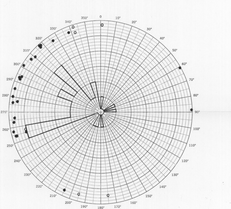
ZONE FROM 8217 TO 8274
FREQUENCY SCALE - FROM CENTER TO EDGE 3 RESULTS
POLAR SCALE - FROM EDGE TO CENTER 60 DEGREES



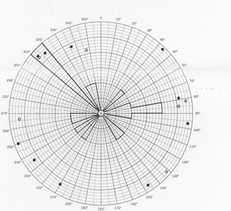
ZONE FROM 8280 TO 8475
FREQUENCY SCALE - FROM CENTER TO EDGE 12 RESULTS
POLAR SCALE - FROM EDGE TO CENTER 60 DEGREES



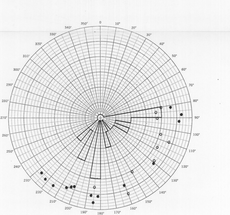
ZONE FROM 8811 TO 8895
FREQUENCY SCALE - FROM CENTER TO EDGE 3 RESULTS
POLAR SCALE - FROM EDGE TO CENTER 60 DEGREES



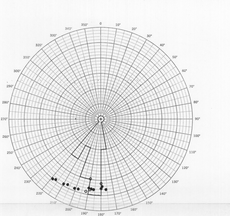
ZONE FROM 8901 TO 9059
FREQUENCY SCALE - FROM CENTER TO EDGE 6 RESULTS
POLAR SCALE - FROM EDGE TO CENTER 60 DEGREES



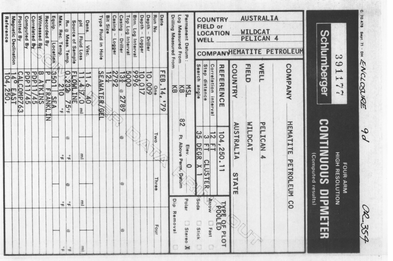
ZONE FROM 9153 TO 9228
FREQUENCY SCALE - FROM CENTER TO EDGE 3 RESULTS
POLAR SCALE - FROM EDGE TO CENTER 60 DEGREES



ZONE FROM 9234 TO 9360
FREQUENCY SCALE - FROM CENTER TO EDGE 6 RESULTS
POLAR SCALE - FROM EDGE TO CENTER 60 DEGREES



ZONE FROM 9441 TO 9519
FREQUENCY SCALE - FROM CENTER TO EDGE 6 RESULTS
POLAR SCALE - FROM EDGE TO CENTER 60 DEGREES


Schlumberger
CONTINUOUS DIPMETER
HIGH RESOLUTION
COUNTRY AUSTRALIA
FIELD or LOCATION WILDCAT
WELL PELICAN 4
COMPANY HEMATITE PETROLEUM
COMPANY HEMATITE PETROLEUM CO.
WELL PELICAN 4
FIELD WILDCAT
COUNTRY AUSTRALIA STATE
REFERENCE 104 250.11
12 FT CLUSTER
35 DEGR X 1
TYPE OF PLOT
TADPOLE
Run No. ONE
Date 8 FEB 79
Depth - Driller 11,477
Depth - Logger 11,477
Btm. log interval 11,477
Top log interval 9000
Casing - Logger 9000
Bit Size 8 1/2"
Type fluid in hole SEAWATER/GEL
Dens. Visc. 9.2 39
pH Fluid loss 10.5 7.2
Source of Sample CIRCULATION
Rm @ Meas. Temp. 2.52 @ 70°F
Rmf @ Meas. Temp. 2.08 @ 70°F
Rmc @ Meas. Temp. 3.03 @ 70°F
Source: Rmf Rmc CALCULATED
Rm @ BHT 1.71 @ 170°F
Time Since Circ. 12 HRS
Max. Rec. Temp. 170°F
Equip. No. Location 1464 PERTH
Recorded By P. L. HANNAN
Witnessed By P. J. TIERNEY
Permanent Datum Ground Level
Elevation 68
Log Measured from KB
Above Perm. Datum 82
Drilling Measured from KB
Elev.: K.B. 150
D.F. 149
G.L. 68
Run No. ONE
Depth - Driller 11,477
Depth - Logger 11,477
Btm. log interval 11,477
Top log interval 9000
Casing - Logger 9000
Bit Size 8 1/2"
Type fluid in hole SEAWATER/GEL
Dens. Visc. 9.2 39
pH Fluid loss 10.5 7.2
Source of Sample CIRCULATION
Rm @ Meas. Temp. 2.52 @ 70°F
Rmf @ Meas. Temp. 2.08 @ 70°F
Rmc @ Meas. Temp. 3.03 @ 70°F
Source: Rmf Rmc CALCULATED
Rm @ BHT 1.71 @ 170°F
Time Since Circ. 12 HRS
Max. Rec. Temp. 170°F
Equip. No. Location 1464 PERTH
Recorded By P. L. HANNAN
Witnessed By P. J. TIERNEY
Run No. TWO
Depth - Driller 12,017
Depth - Logger 12,017
Btm. log interval 12,017
Top log interval 11,470
Casing - Logger 9000
Bit Size 8 1/2"
Type fluid in hole SEAWATER/GEL
Dens. Visc. 9.2 39
pH Fluid loss 10.5 7.2
Source of Sample CIRCULATION
Rm @ Meas. Temp. 2.52 @ 70°F
Rmf @ Meas. Temp. 2.08 @ 70°F
Rmc @ Meas. Temp. 3.03 @ 70°F
Source: Rmf Rmc CALCULATED
Rm @ BHT 1.71 @ 170°F
Time Since Circ. 12 HRS
Max. Rec. Temp. 170°F
Equip. No. Location 1464 PERTH
Recorded By P. L. HANNAN
Witnessed By P. J. TIERNEY
Run No. THREE
Depth - Driller 12,017
Depth - Logger 12,017
Btm. log interval 12,017
Top log interval 11,470
Casing - Logger 9000
Bit Size 8 1/2"
Type fluid in hole SEAWATER/GEL
Dens. Visc. 9.2 39
pH Fluid loss 10.5 7.2
Source of Sample CIRCULATION
Rm @ Meas. Temp. 2.52 @ 70°F
Rmf @ Meas. Temp. 2.08 @ 70°F
Rmc @ Meas. Temp. 3.03 @ 70°F
Source: Rmf Rmc CALCULATED
Rm @ BHT 1.71 @ 170°F
Time Since Circ. 12 HRS
Max. Rec. Temp. 170°F
Equip. No. Location 1464 PERTH
Recorded By P. L. HANNAN
Witnessed By P. J. TIERNEY
Run No. Run No.
Depth - Driller Depth - Driller
Depth - Logger Depth - Logger
Btm. log interval Btm. log interval
Top log interval Top log interval
Casing - Logger Casing - Logger
Bit Size Bit Size
Type fluid in hole Type fluid in hole
Dens. Visc. Dens. Visc.
pH Fluid loss pH Fluid loss
Source of Sample Source of Sample
Rm @ Meas. Temp. Rm @ Meas. Temp.
Rmf @ Meas. Temp. Rmf @ Meas. Temp.
Rmc @ Meas. Temp. Rmc @ Meas. Temp.
Source: Rmf Rmc Source: Rmf Rmc
Rm @ BHT Rm @ BHT
Time Since Circ. Time Since Circ.
Max. Rec. Temp. Max. Rec. Temp.
Equip. No. Location Equip. No. Location
Recorded By Recorded By
Witnessed By Witnessed By
Permanent Datum
Elevation
Log Measured from
Above Perm. Datum
Drilling Measured from
Elev.: K.B.
D.F.
G.L.
Run No.
Depth - Driller
Depth - Logger
Btm. log interval
Top log interval
Casing - Logger
Bit Size
Type fluid in hole
Dens. Visc.
pH Fluid loss
Source of Sample
Rm @ Meas. Temp.
Rmf @ Meas. Temp.
Rmc @ Meas. Temp.
Source: Rmf Rmc
Rm @ BHT
Time Since Circ.
Max. Rec. Temp.
Equip. No. Location
Recorded By
Witnessed By

COUNTRY
FIELD or
LOCATION
WELL
COMPANY

Other Services

Permanent datum: Elevation: Elev.: K.B. D.F. G.L.
Log measured from: above Permanent datum
Drilling measured from:

Date
Run No.
Depth-Driller
Depth-Logger
Bottom logged interval
Top logged interval
Type fluid in hole
Salinity, PPM Cl
Density
Level
Max. rec. temp. deg. F
Equipment No.
Location
Recorded by
Witnessed by

RUN NO. BIT NO. FROM TO CASING SIZE WEIGHT TYPE FLUID DENSITY VISCOSITY PH FLUID LOSS SOURCE OF SAMPLE RM @ MEAS. TEMP. RMF @ MEAS. TEMP. RMC @ MEAS. TEMP. SOURCE RMF RMC RM @ BHT TIME SINCE CIRC. MAX. REC. TEMP. DEG. F EQUIP. NO. LOCATION RECORDED BY WITNESSED BY

TOOL NUMBER AND TYPE OF COMBINATION USED

DENSITY DATA

Run No.	Tool Position	Density Source	Density Matrix	Density Hole Corr.	Density Rmf	Density Rmc	Density Rm	Density Rm @ Temp.	Density Max. Rec. Temp.	Density Equip. No.	Density Location	Density Recorded By	Density Witnessed By

NEUTRON DATA

Run No.	Tool Position	Neutron Source	Neutron Matrix	Neutron Hole Corr.	Neutron Rmf	Neutron Rmc	Neutron Rm	Neutron Rm @ Temp.	Neutron Max. Rec. Temp.	Neutron Equip. No.	Neutron Location	Neutron Recorded By	Neutron Witnessed By

LOGGING DATA

Run No.	Tool Position	Neutron Source	Neutron Matrix	Neutron Hole Corr.	Neutron Rmf	Neutron Rmc	Neutron Rm	Neutron Rm @ Temp.	Neutron Max. Rec. Temp.	Neutron Equip. No.	Neutron Location	Neutron Recorded By	Neutron Witnessed By

Density Source | Density Matrix | Density Hole Corr. | Density Rmf | Density Rmc | Density Rm | Density Rm @ Temp. | Density Max. Rec. Temp. | Density Equip. No. | Density Location | Density Recorded By | Density Witnessed By

CALIBRATION DATA

Run No.	Tool Position	Neutron Source	Neutron Matrix	Neutron Hole Corr.	Neutron Rmf	Neutron Rmc	Neutron Rm	Neutron Rm @ Temp.	Neutron Max. Rec. Temp.	Neutron Equip. No.	Neutron Location	Neutron Recorded By	Neutron Witnessed By

Density Source | Density Matrix | Density Hole Corr. | Density Rmf | Density Rmc | Density Rm | Density Rm @ Temp. | Density Max. Rec. Temp. | Density Equip. No. | Density Location | Density Recorded By | Density Witnessed By

REMARKS

CALIPER
hole diameter in inches

NEUTRON POROSITY %
—.15 matrix

GAMMA RAY
api units

BULK DENSITY
g / cm³

REPEAT SECTION

CALIBRATION DATA

COMPENSATED NEUTRON CALIBRATION CODING

1. MECHANICAL ZERO
2. NEUTRON SENSITIVITY (1000) MEASURED IN UNITS
   PANEL TEST
   NOTE: DO POROSITY 2.65 DO POROSITY 2.65
3. 1 2.4 4.1
   2 2.6 4.3
   3 2.8 4.5
   4 3.0 4.7
4. DENSITY NORMALIZED WITH ONE .4 IN PLATE
5. T.A. TOOL IN SET TO
6. T.A. CALIBRATION WITH .4 IN PLATE
7. T.A. TOOL IN SET TO
   10 .20
   11 .3
   12 .4
   NOTE: POSITIONING 1.27 = METER DIP

FORMATION DENSITY COMPENSATED CALIBRATION CODING

1. MECHANICAL ZERO
2. DENSITY CALIBRATION
   PANEL TEST (DO) LOGGED

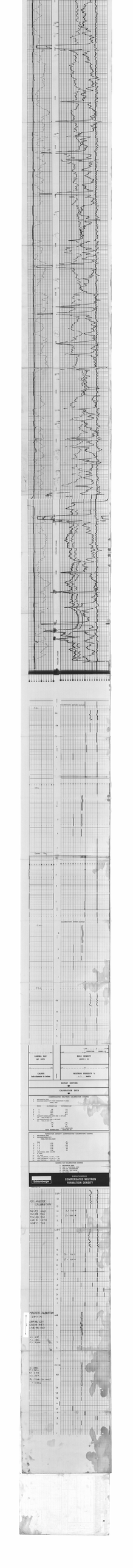
NOTE	DO	LOG
1	2.55	2.55
2	2.65	2.65
3	2.75	2.68
4	2.95	2.68
5	3.05	2.68

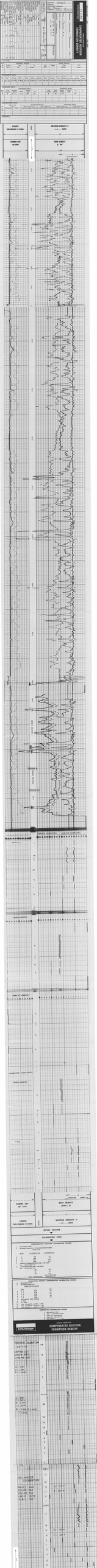
3. MECHANICAL ZERO CHANGE
   SET TOOL
4. SET TOOL
5. TOOL CALIBRATE @ 2.65 = 2.68
6. TOOL CALIBRATE @ 2.65 (1) = 2.68
7. USE POSITION 1.27 (1) = 2.68 (1) = 2.68

GAMMA RAY CALIBRATION CODING

1. MECHANICAL ZERO
2. TEST 1 ELECTRICAL ZERO
3. TEST 2 ELECTRICAL ZERO
4. TOOL CAL. TEST AT API
5. T.A. UNITS =




GAMMA RAY
API UNITS
CALIPER
hole diameter in inches
BULK DENSITY
grams / cc
NEUTRON POROSITY %
limestone
APPROX. NEUTRON
ON
CALIBRATION DATA
Schlumberger
COMPENSATED NEUTRON
FORMATION DENSITY



COMPENSATED NEUTRON
FORMATION DENSITY
CALIPER
hole diameter in inches
GAMMA RAY
API units
NEUTRON POROSITY %
limestone units
BULK DENSITY
g / cm³
REPEAT SECTION
CALIBRATION DATA
COMPENSATED NEUTRON
FORMATION DENSITY
Schlumberger

= 2·306

7A
7A
7A
6
5
4
3
2
1

GCB-C
13
13
12
11
2
1
GCB-A
13
13
12
11
2
1
7
6
5
4
3
2
1

FDC MASTER
CALIBRATION

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

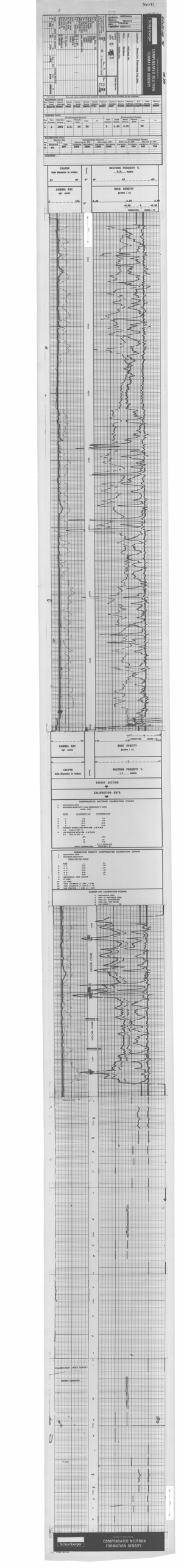
P_2 = 724·0

P_1 = 402·8

P_2 = 773·2

P_1 = 437·6

5 cm



Schlumberger
COMPENSATED NEUTRON FORMATION DENSITY
CALIBRATION AFTER SURVEY
NEUTRON GENERATOR
Schlumberger
COMPENSATED NEUTRON FORMATION DENSITY