GL04468_14

Schlumberger

FOUR – ARM HIGH RESOLUTION CONTINUOUS DIPMETER
(COMPUTED)

COUNTY CHURCHILL
FIELD or LOCATION 21-22N-36E
WELL DIXIE FEDERAL 66-21
COMPANY THERMAL POWER CO

COMPANY THERMAL POWER COMPANY

WELL DIXIE FEDERAL 66-21

FIELD DIXIE VALLEY

COUNTY CHURCHILL STATE NEVADA

LOCATION: N/A

Sec. 21 Twp. 22N Rge. 36E

Other Services:
FDC/CNL/GR
DI-SFL
BHC
17

Permanent Datum: GL, Elev. 3430
Log Measured From KB, 23 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 3453
D.F. 3452
G.L. 3430

Date	8-3-79			
Run No.	ONE			
Depth—Driller	4580			
Depth—Logger	4579			
Btm. Log Interval	4579			
Top Log Interval	3000			
Casing—Driller	@ 2152	@	@	@
Casing—Logger	2154			
Bit Size	12¼"			
Type Fluid in Hole	LIGNOSULFONATE			
Dens. | Visc.	10.10 | 50.0			
pH | Fluid Loss	9.8 | 1.6 ml	ml	ml	ml
Source of Sample	FLOWLINE			
R_m @ Meas. Temp.	1.09 @ 114 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	1.26 @ 80 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	2.18 @ 80 °F	@ °F	@ °F	@ °F
Source: R_{mf} | R_{mc}	M | M			
R_m @ BHT	0.50 @ 247 °F	@ °F	@ °F	@ °F
Time Since Circ.	11 ½ HOURS			
Max. Rec. Temp.	247 °F	°F	°F	°F
Equip. | Location	8126 | SAC			
Recorded By	FINNELL/KAISER			
Witnessed By	DELEON			

SWS-1854-B

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

Changes in Mud Type or Additional Samples		
Date | Sample No.		
Depth—Driller		
Type Fluid in Hole		
Dens. | Visc.		
ph | Fluid Loss	ml	
Source of Sample		
R_m @ Meas. Temp.	@ °F	@ °F
R_{mf} @ Meas. Temp.	@ °F	@ °F
R_{mc} @ Meas. Temp.	@ °F	@ °F
Source: R_{mf} | R_{mc}		
R_m @ BHT	@ °F	@ °F
R_{mf} @ BHT	@ °F	@ °F
R_{mc} @ BHT	@ °F	@ °F

Run No.	1	2	3	4
Tool Type	HDTE			
HDM No.	VENTURA			
Magnetic Declination	17°			
Analog Panel No.	CSU			
Digital Panel No.	--			
Correlated By	PCDCC			
Computed By	PCDCC			
Plotted By	PCDCC			

Remarks —

SERVICE ORDER # 82954

"Any directional computations made from the dipmeter log must be regarded as approximate only. This is because the dipmeter log indicates the orientation of the instrument itself, rather than the direction and amount of the wall drift. Therefore, we do not and cannot guarantee the accuracy of such directional computations, and we shall not, except in the case of willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained that may result from any such computations."

TABLE OF VERTICAL DISPLACEMENT IN FEET CORRESPONDING TO VARIOUS HORIZONTAL DISTANCES AND ANGLES OF DIP

DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF 100'	1000'	1 mile (5280')
1	1.75	17.5	92.2
2	3.5	35.	184.
3	5.2	52.	277.
4	7.0	70.	369.
5	8.8	88.	462.
6	10.5	105.	555.
7	12.3	123.	648.
8	14.1	141.	742.
9	15.8	158.	836.
10	17.6	176.	931.
11	19.4	194.	1026.
12	21.3	213.	1122.
13	23.1	231.	1219.
14	24.9	249.	1316.
15	26.8	268.	1415.
16	28.7	287.	1514.
17	30.6	306.	1614.
18	32.5	325.	1716.

DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF 100'	1000'	1 mile (5280')
19	34.4	344.	1818.
20	36.4	364.	1922.
21	38.4	384.	2027.
22	40.4	404.	2133.
23	42.5	425.	2241.
24	44.5	445.	2351.
25	46.6	466.	2462.
30	57.7	577.	3048.
35	70.0	700.	3697.
40	83.9	839.	4430.
45	100.0	1000.	5280.
50	119.2	1192.	6293.
55	142.8	1428.	7540.
60	173.2	1732.	9145.
65	214.4	2144.	11323.
70	274.8	2748.	14507.
75	373.2	3732.	19705.
80	567.1	5671.	29945.

To obtain vertical displacements corresponding to multiples of hundreds feet, thousands of feet or miles, multiply the number found in the table by the number of hundreds, thousands or miles.

Example: The formation dip is 16 degrees. The vertical displacement occurring at a spot 660 feet away from the well is desired. The table shows 28.7 feet per 100 feet for 16° dip. Therefore 28.7 x 6.60 = 189.42, or 189. feet.

N

GRAPHIC PRESENTATION

CORRELATION CURVE	DEPTHS	TRUE DIP ANGLE AND DIRECTION 0° 10° 20° 30° 40° 50° 60° 70° 80° 90°	DRIFT & DIRECTION OF SONDE 0°

8-14-79 SEC 082954

THERMAL POWER

DIXIE FEDERAL 66-21

DIXIE VALLEY FIELD

CHURCHILL COUNTY,NEVADA

RUN NO. ONE 3-AUG-79

P.C.D.C.

ARROW PLOT FROM CLUSTER PROGRAM

CORRELATION LENGTH 4 FT.

STEP LENGTH 2 FT.

SEARCH ANGLE 70 DEGREES X1

HDT-D CSU PDP/11

JOB 3416.00

FOOT DUO-DECIMAL .500 IN. GRID

DEPTHS	DIP ANGLE AND DIRECTION 0 10 20 30 40 50 60 70 80 90	BOREHOLE DRIFT 0 20

POOLED ARROW PLOT

2 LEVELS POOLED WHEN WITHIN

8-14-79 [illegible] C082954

3.5 DEGREES SOLID ANGLE

BLACK ARROWS ARE POOLED RESULTS

CORRELATION LENGTH 4 FT.

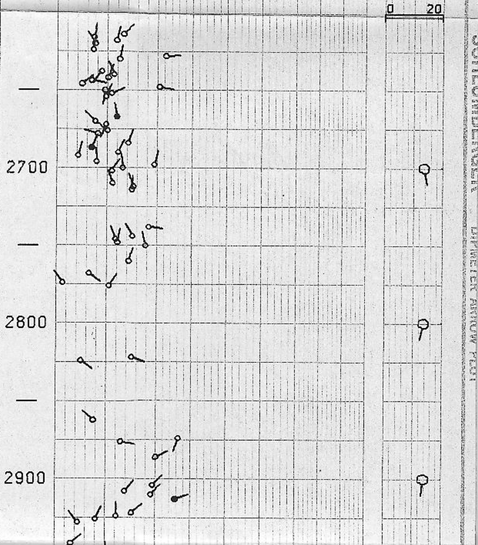
STEP LENGTH 2 FT.

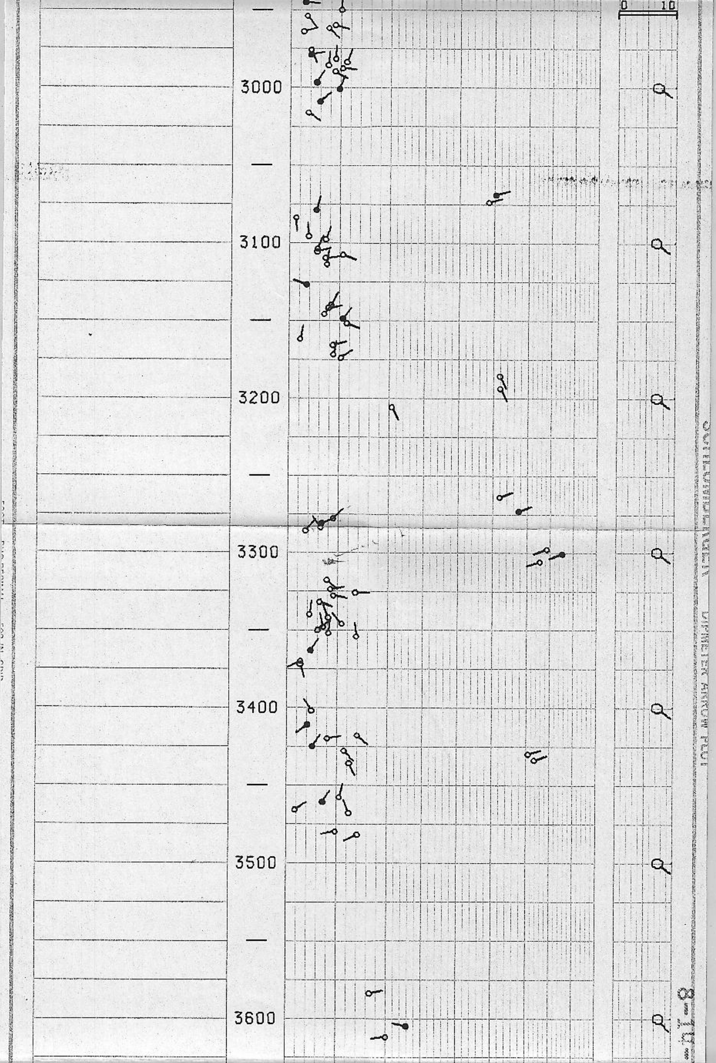
SEARCH ANGLE 70 DEGREES X1

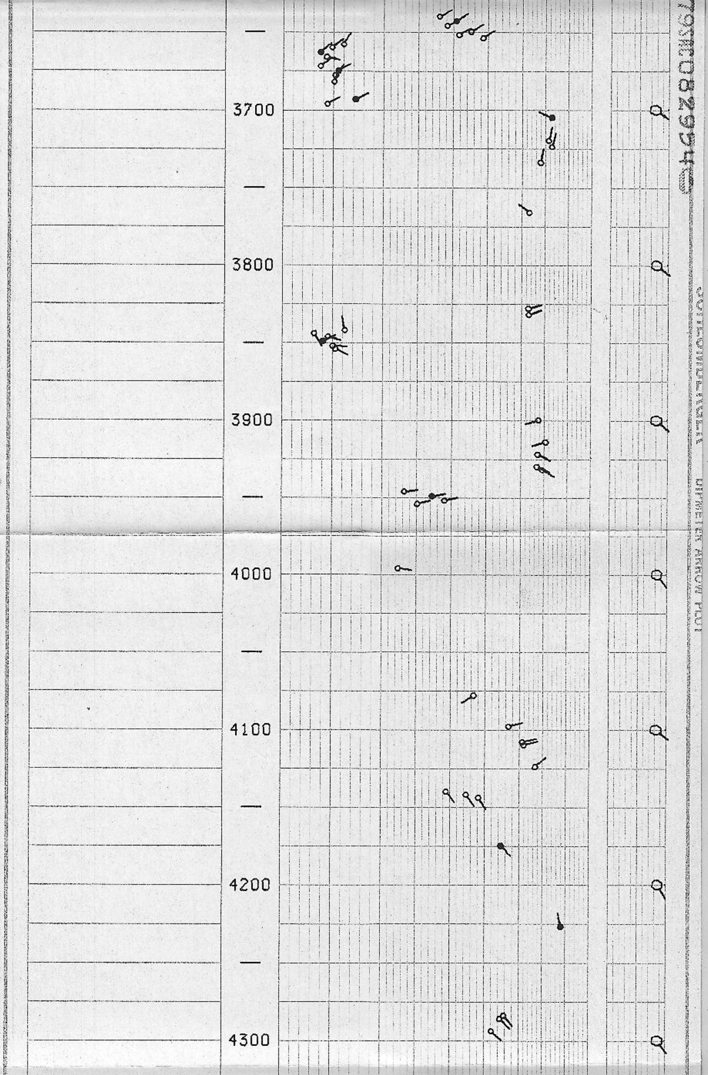
PC0130023518307001020420

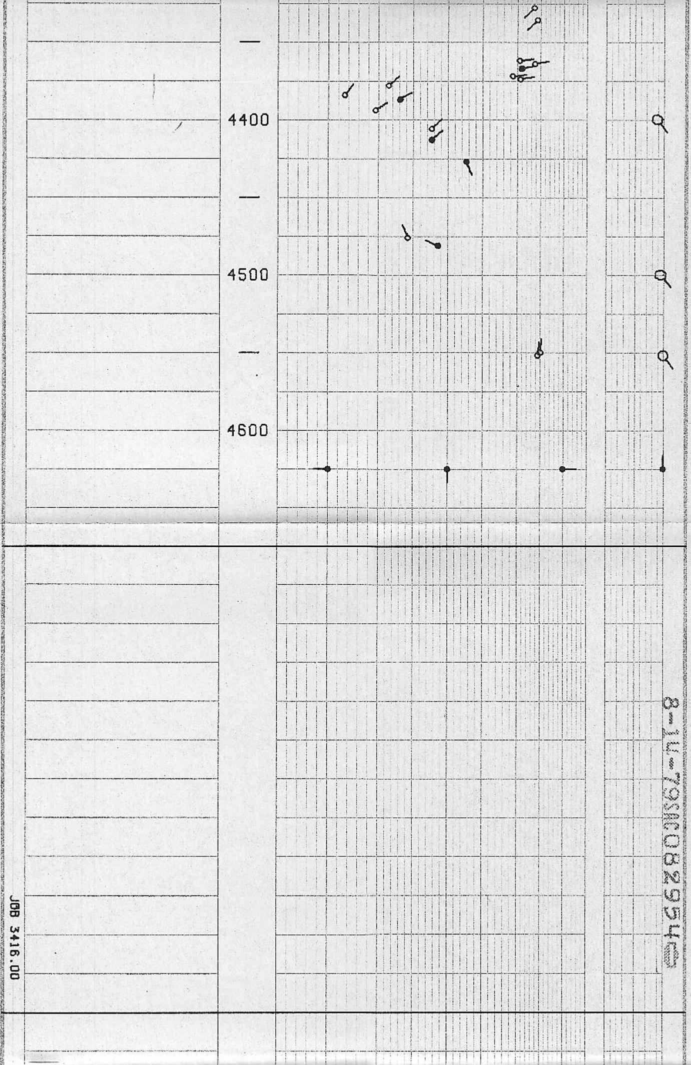
ZONE FROM 2614 TO 4552

SCHLUMBERGER DIPMETER ARROW PLOT









DEPTHS

DIP ANGLE AND DIRECTION

BOREHOLE DRIFT

0 10 20 30 40 50 60 70 80 90

0 20

ALL QUALITY ARROW PLOT 3416

FROM THE CLUSTER PROGRAM

BLACK ARROWS ARE HIGHEST QUALITY

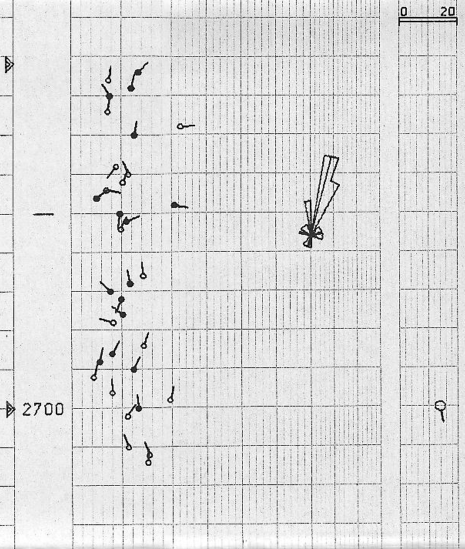
CORRELATION LENGTH 4 FT.

STEP LENGTH 2 FT.

SEARCH ANGLE 70 DEGREES X1

PC0130023518307001020420

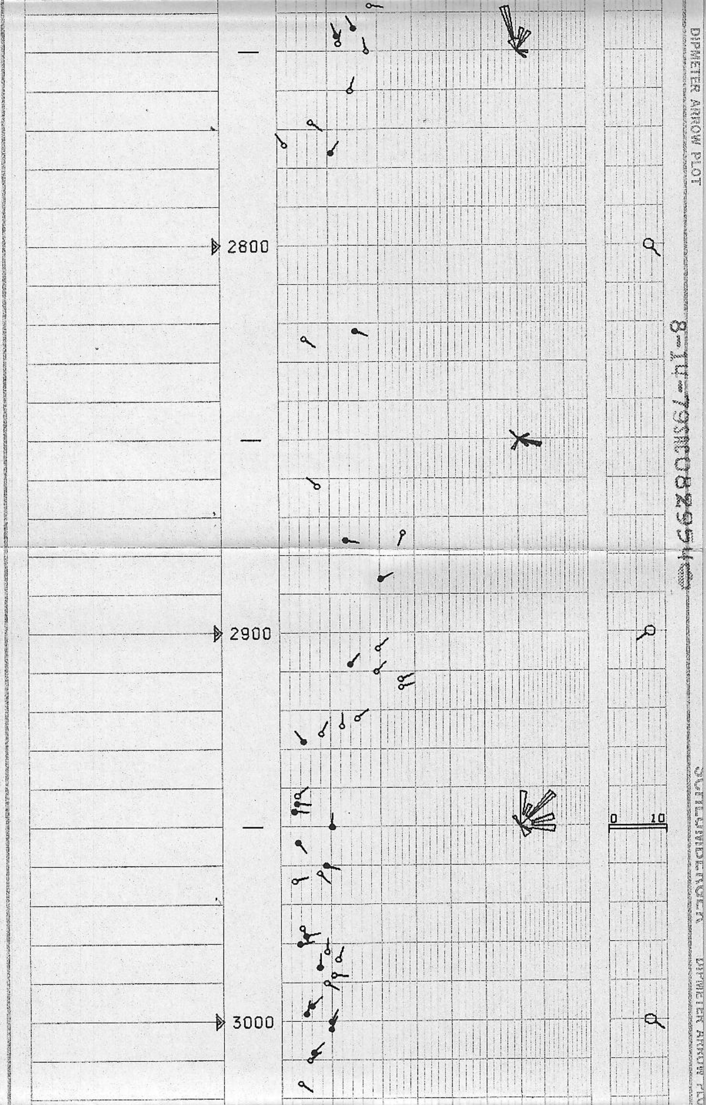
ZONE FROM 2612 TO 4556

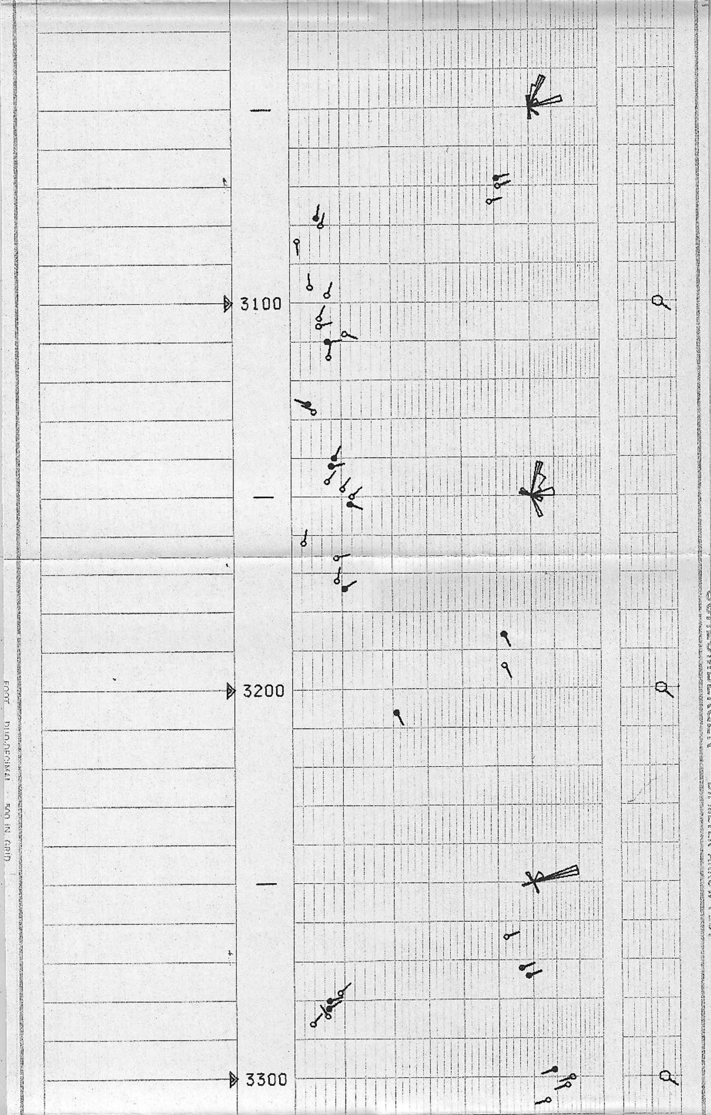


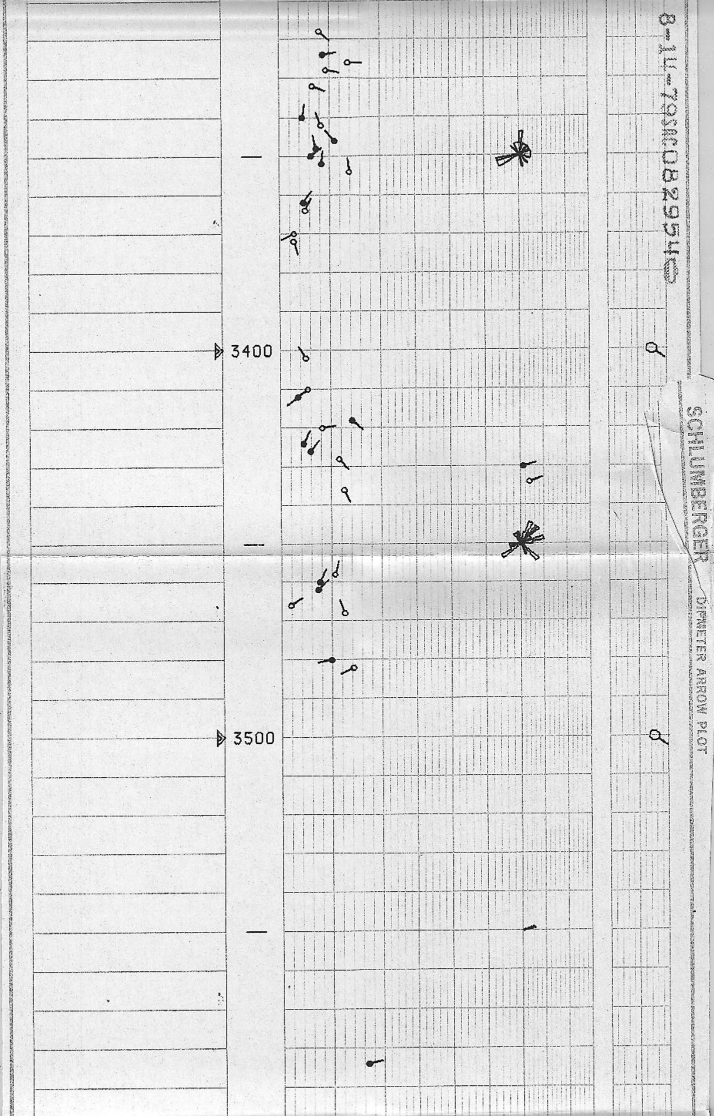
SCHLUMBERGER

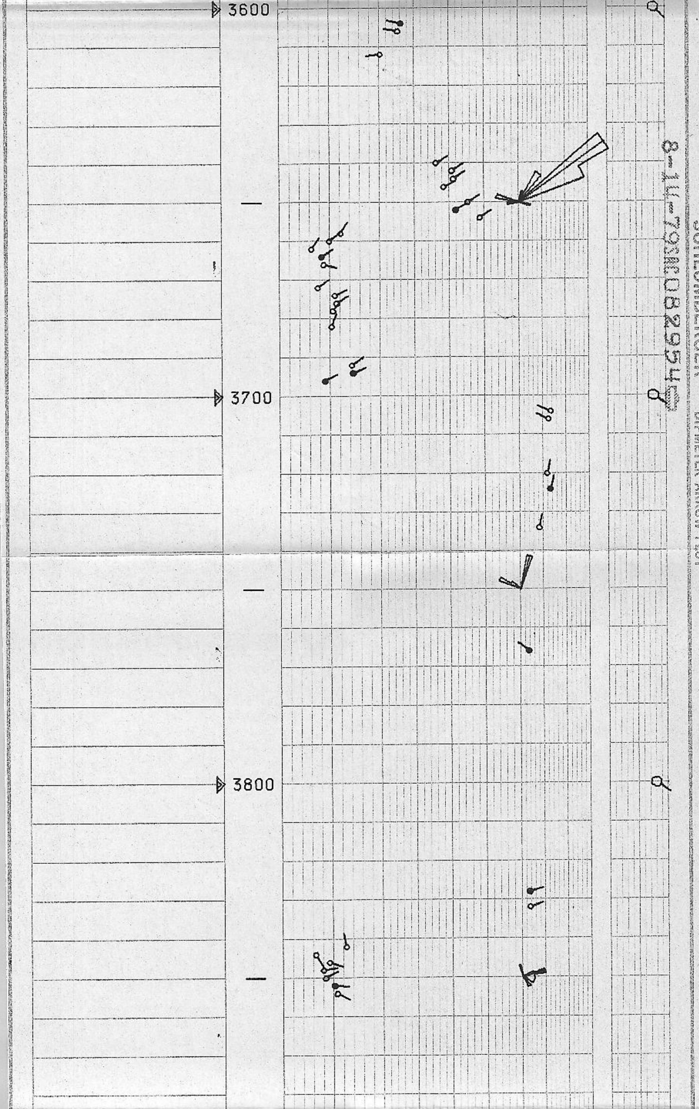
DIPMETER ARROW PLOT

SCHLUMBERGER

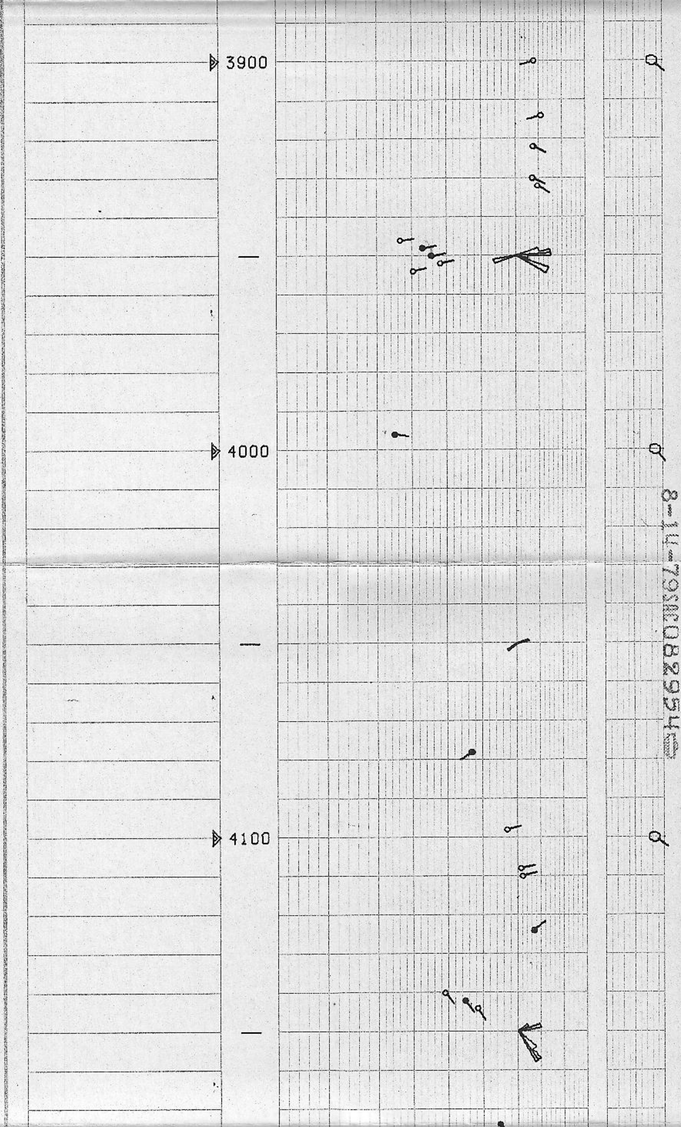






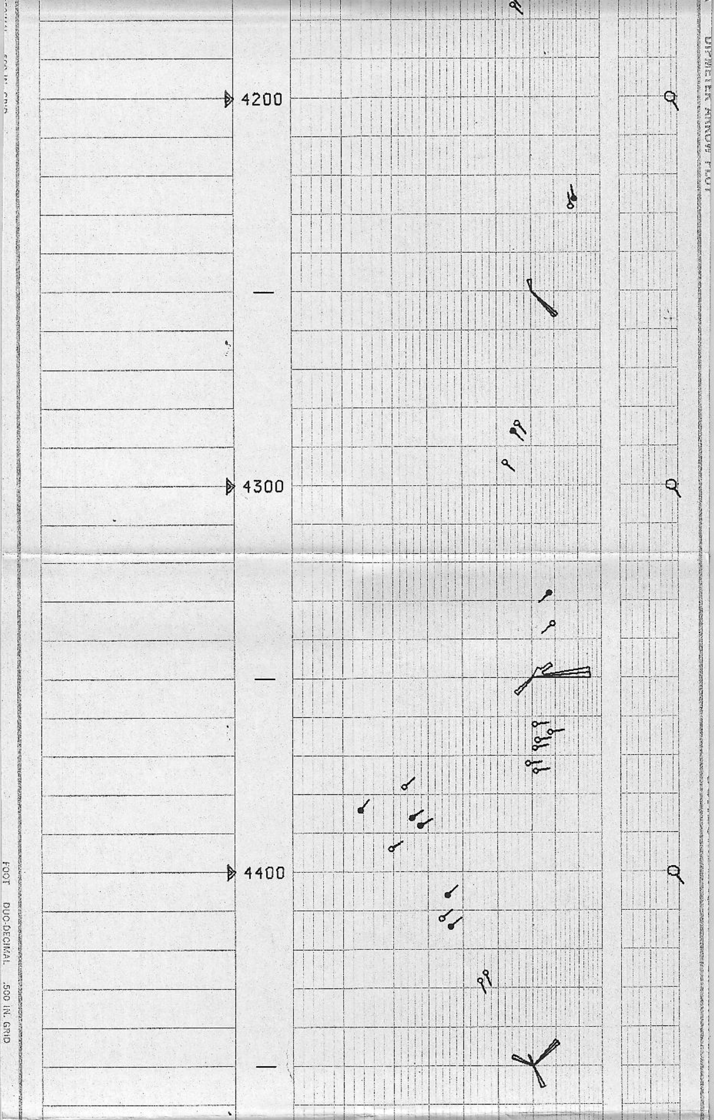


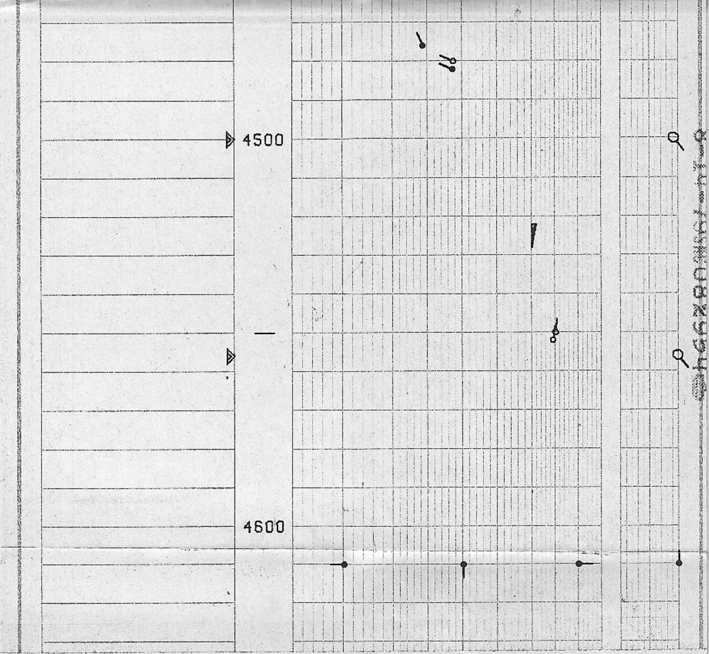
SCHLUMBERGER DIPMETER ARROW PLOT



8-14-79 SW 082954

SCHLUMBERGER





CORRELATION CURVE	DEPTHS	0° 10° 20° 30° 40° 50° 60° 70° 80° 90° TRUE DIP ANGLE AND DIRECTION	0° DRIFT & DIRECTION OF SONDE

COMPANY THERMAL POWER COMPANY
WELL DIXIE FEDERAL 66-21
FIELD DIXIE VALLEY
COUNTY CHURCHILL STATE NEVADA

Rm 1.09 @ 114 °F
Rmf 1.26 @ 80 °F
Rmc 2.18 @ 80 °F
BHT 247 °F

SCHL. FR 4579
SCHL. TD 4579
DRLR TD 4580
Elev:
KB 3453
DF 3452
GL 3430