RAU 18-14-64 & RD 1

Schlumberger

FOUR – ARM
HIGH RESOLUTION
CONTINUOUS DIPMETER
(COMPUTED)

COUNTY COLUMBIA
FIELD or LOCATION MIST
WELL RAU 18-14 RD
COMPANY AMERICAN QUASAR

COMPANY AMERICAN QUASAR PETROLEUM COMPANY

RECEIVED PTLD
24 1980
DEPT OF GEOLOGY & MINERAL

WELL RAU 18-14 RD

FIELD MIST

COUNTY COLUMBIA STATE OREGON

LOCATION 900'FNL, 1099.41'FEL FROM SW CORNER

Sec. 18 Twp. 6N Rge. ~~5W~~ 4W

Other Services:
DIL
BHC
FDC/CNL-GR

Permanent Datum: GL, Elev. 583
Log Measured From KB 10.5 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 593.5
D.F. ---
G.L. 583

Date	9-15-80			
Run No.	ONE			
Depth—Driller	2440	(4 X 2 X 40 X 2)		
Depth—Logger	2440			
Btm. Log Interval	2439			
Top Log Interval	515			
Casing—Driller	7 @ 515	@	@	@
Casing—Logger	515			
Bit Size	6-1/4			
Type Fluid in Hole	Q-BROXIN			
Dens. | Visc.	9.7 | 40			
pH | Fluid Loss	10.5 | 5.8 ml	ml	ml	ml
Source of Sample	CIRC.			
R_m @ Meas. Temp.	2.23 @ 65 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	2.57 @ 48 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	3.39 @ 68 °F	@ °F	@ °F	@ °F
Source: R_{mf} | R_{mc}	M | M			
R_m @ BHT	1.76 @ 84 °F	@ °F	@ °F	@ °F
Time Since Circ.	NA			
Max. Rec. Temp.	84 °F	°F	°F	°F
Equip. | Location	8128 | SAC.			
Recorded By	LANGFORD			
Witnessed By	SMITH			

SWS-1654-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	HDT-D			
HDM No.	819			
Magnetic Declination	20			
Analog Panel No.	962			
Digital Panel No.	----			
Correlated By	4 X 2 X	40 X 2		
Computed By	11/70			
Plotted By	CAL COMP			
Remarks —	SO #135729 JOB #7504			

"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

VERTICAL DISPLACEMENT
FOR HORIZONTAL DISTANCES
OF

VERTICAL DISPLACEMENT
FOR HORIZONTAL DISTANCES
OF

DIP ANGLES (degrees)	100′	1000′	1 mile (5280′)	DIP ANGLES (degrees)	100′	1000′	1 mile (5280′)
1	1.75	17.5	92.2	19	34.4	344.	1818.
2	3.5	35.	184.	20	36.4	364.	1922.
3	5.2	52.	277.	21	38.4	384.	2027.
4	7.0	70.	369.	22	40.4	404.	2133.
5	8.8	88.	462.	23	42.5	425.	2241.
6	10.5	105.	555.	24	44.5	445.	2351.
7	12.3	123.	648.	25	46.6	466.	2462.
8	14.1	141.	742.	30	57.7	577.	3048.
9	15.8	158.	836.	35	70.0	700.	3697.
10	17.6	176.	931.	40	83.9	839.	4430.
11	19.4	194.	1026.	45	100.0	1000.	5280.
12	21.3	213.	1122.	50	119.2	1192.	6293.
13	23.1	231.	1219.	55	142.8	1428.	7540.
14	24.9	249.	1316.	60	173.2	1732.	9145.
15	26.8	268.	1415.	65	214.4	2144.	11323.
16	28.7	287.	1514.	70	274.8	2748.	14507.
17	30.6	306.	1614.	75	373.2	3732.	19705.
18	32.5	325.	1716.	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	DRIFT & DIRECTION OF SONDE
		0° 10° 20° 30° 40° 50° 60° 70° 80° 90°	0°

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CORRELATION CURVE  DEPTHS   DIP ANGLE AND DIRECTION   BOREHOLE
                                                       DRIFT

                    0  10  20  30  40  50  60  70  80  90  0  10

       POOLED ARROW PLOT

       2 LEVELS POOLED WHEN WITHIN

       3.5 DEGREES SOLID ANGLE

       BLACK ARROWS ARE POOLED RESULTS


       CORRELATION LENGTH      4 FT.

       STEP LENGTH             2 FT.

       SEARCH ANGLE          40 DEGREES X2
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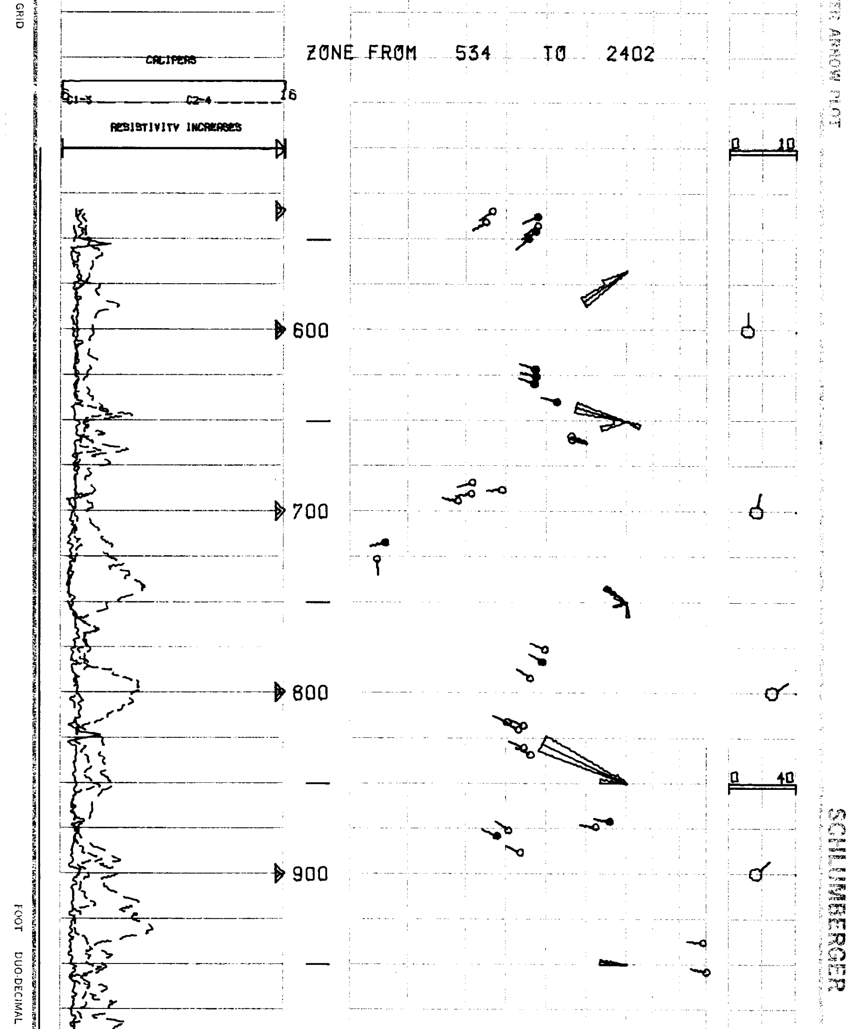
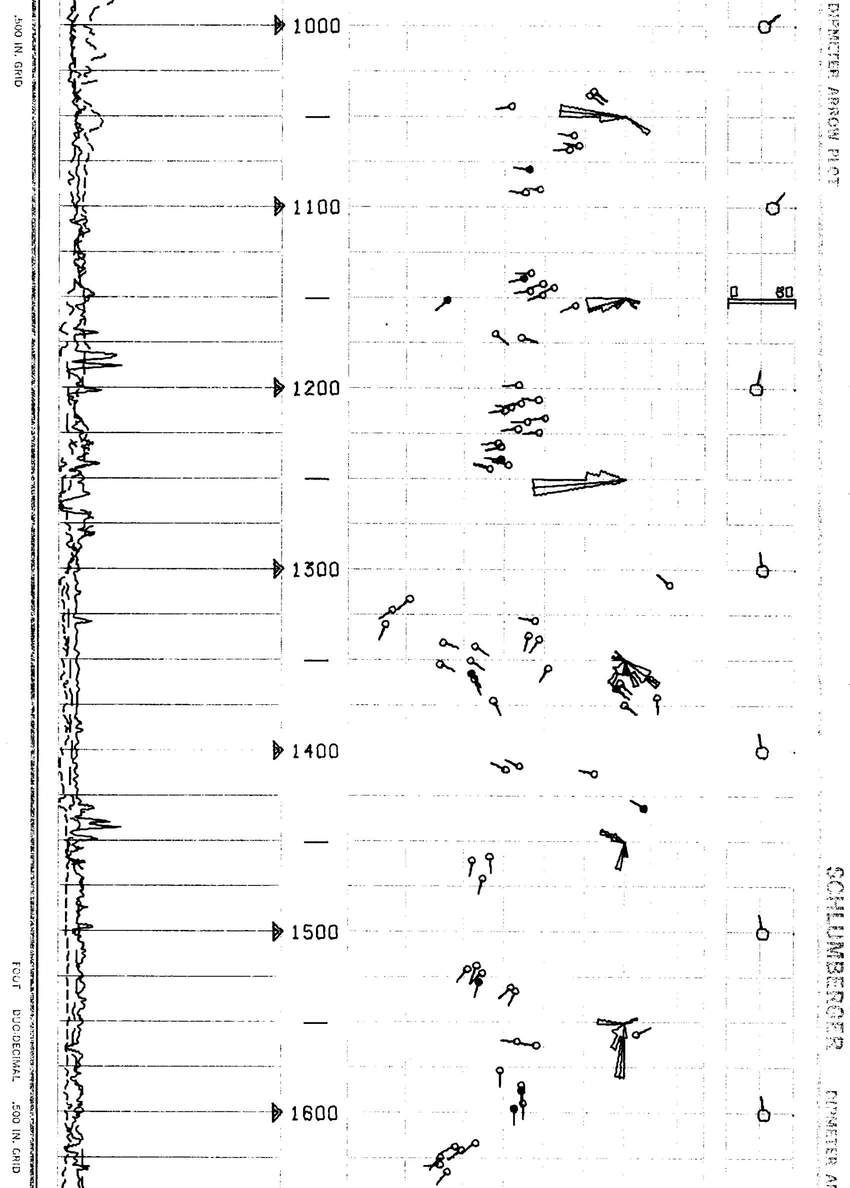
FOOT DUO-DECIMAL .500 IN.

SCHLUMBERGER

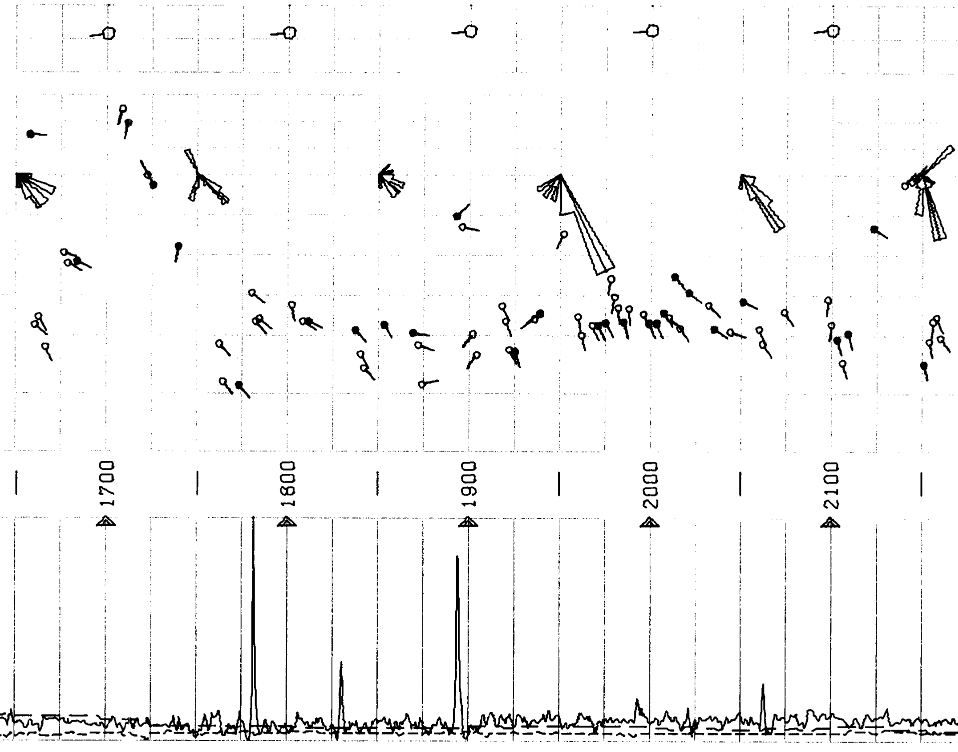




RROW PLOT

11-[illegible]-8[illegible] 135729

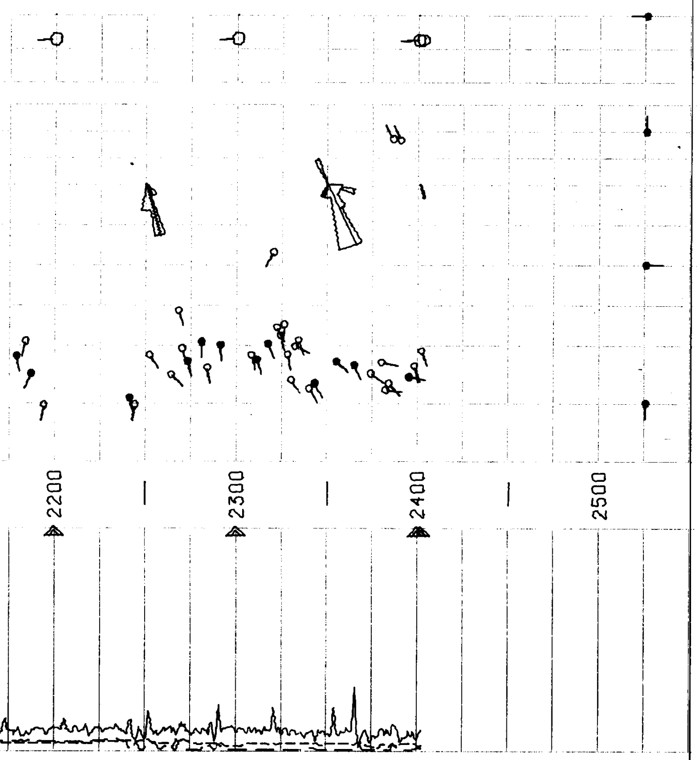
SCHLUMBERGER



FOOT DUO-DEC

DIPMETER ARROW PLOT

METER ARROW PLOT



AMERICAN QUASAR PETROLEUM CO.

RAU 18-14 RD

MIST FIELD

COLUMBIA COUNTY, OREGON

RUN NO. ONE 15-SEP-80

R.M.D.C.C. COMPUTED: 17-SEP-80

ARROW PLOT FROM CLUSTER PROGRAM

CORRELATION LENGTH	4 FT.
STEP LENGTH	2 FT.
SEARCH ANGLE	40 DEGREES X2
HDT-D CSU PDP/11	

JOB 7504

MAL .500 IN. GRID

00 IN. GRID

CORRELATION CURVE DEPTHS DIP ANGLE AND DIRECTION BOREHOLE DRIFT

0 10 20 30 40 50 60 70 80 90 0 10

ALL QUALITY ARROW PLOT 7504

FROM THE CLUSTER PROGRAM

BLACK ARROWS ARE HIGHEST QUALITY

CORRELATION LENGTH 4 FT.

STEP LENGTH 2 FT.

SEARCH ANGLE 40 DEGREES X2

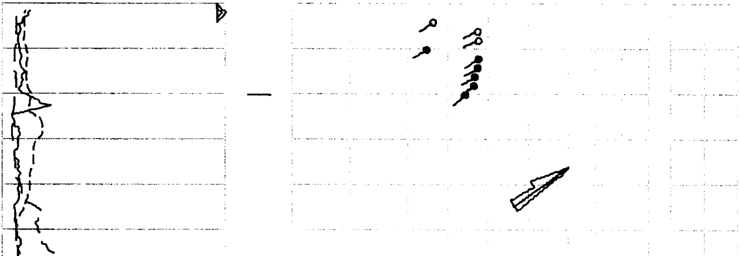
ZONE FROM 532 TO 2436

CALIPERS

6 C1-3 C2-4 16

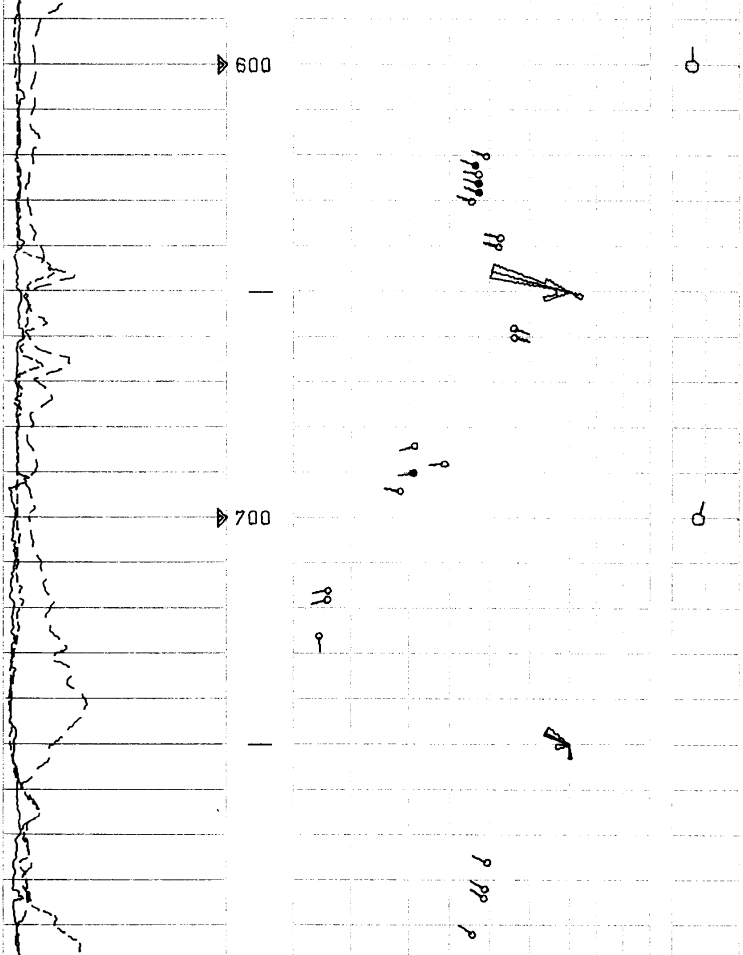
RESISTIVITY INCREASES

0 10



SCHLUMBERGER CLUSTER ARROW PLOT

FOOT DUO-DECIMAL .500 IN. GRID



SCHLUMBERGER DIPMETER ARROW PLOT

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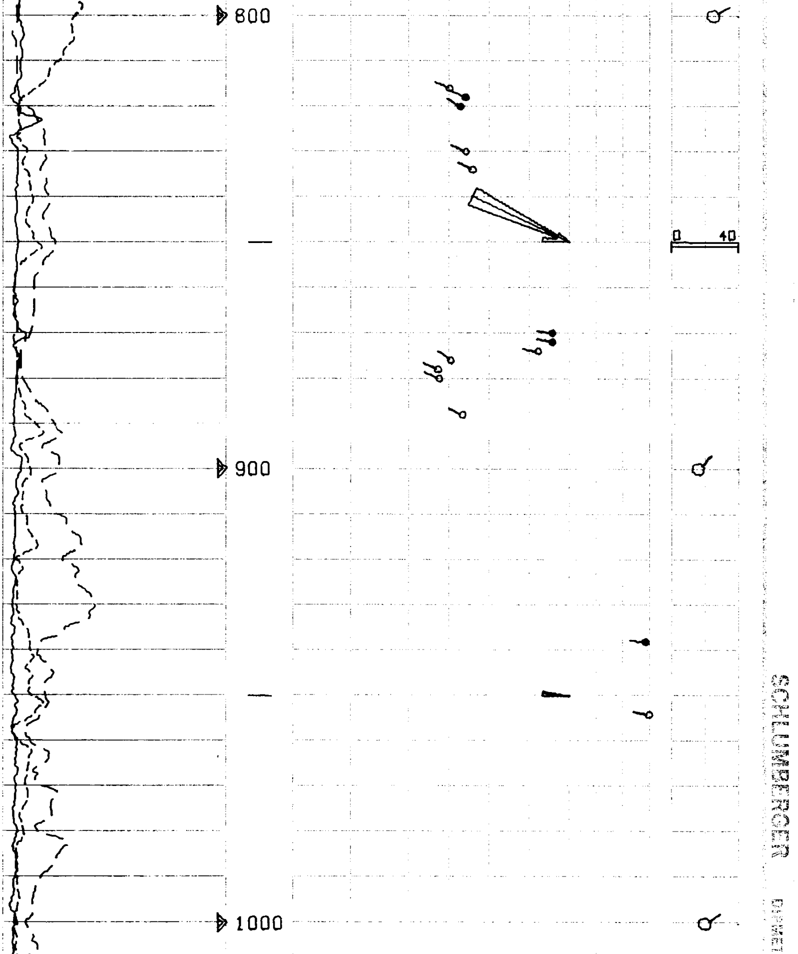
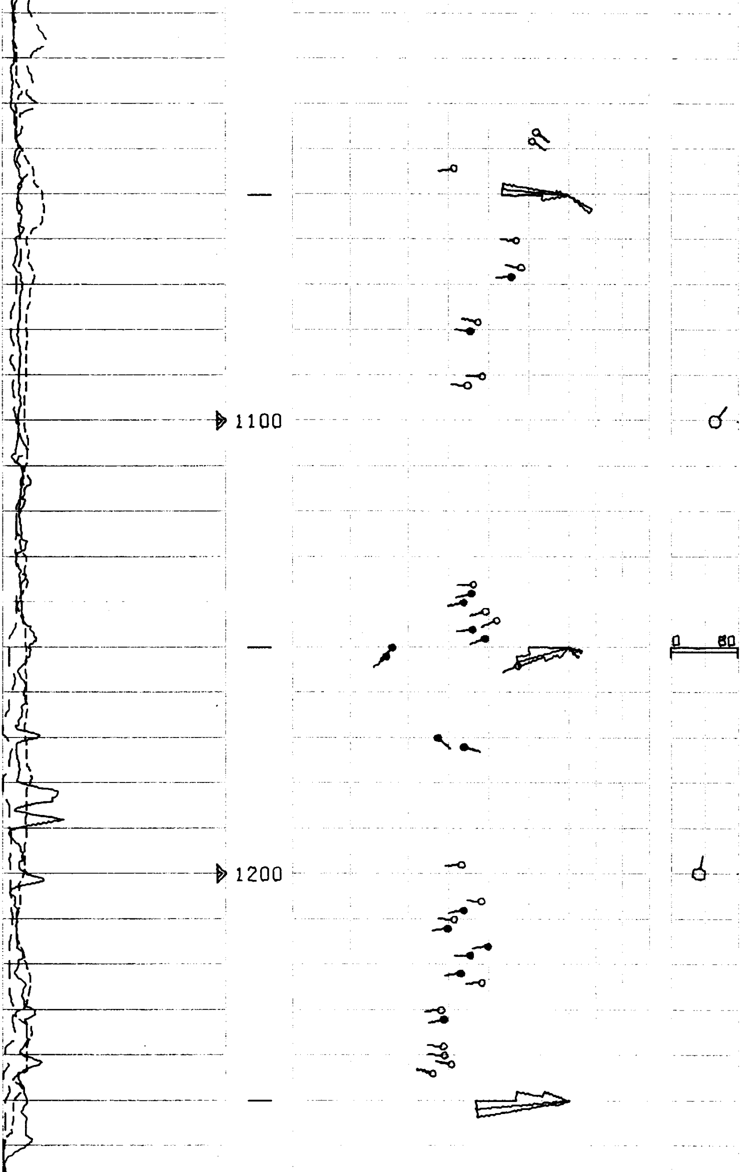


SCHLUMBERGER DIPMETER ARROW

ER ARROW PLOT



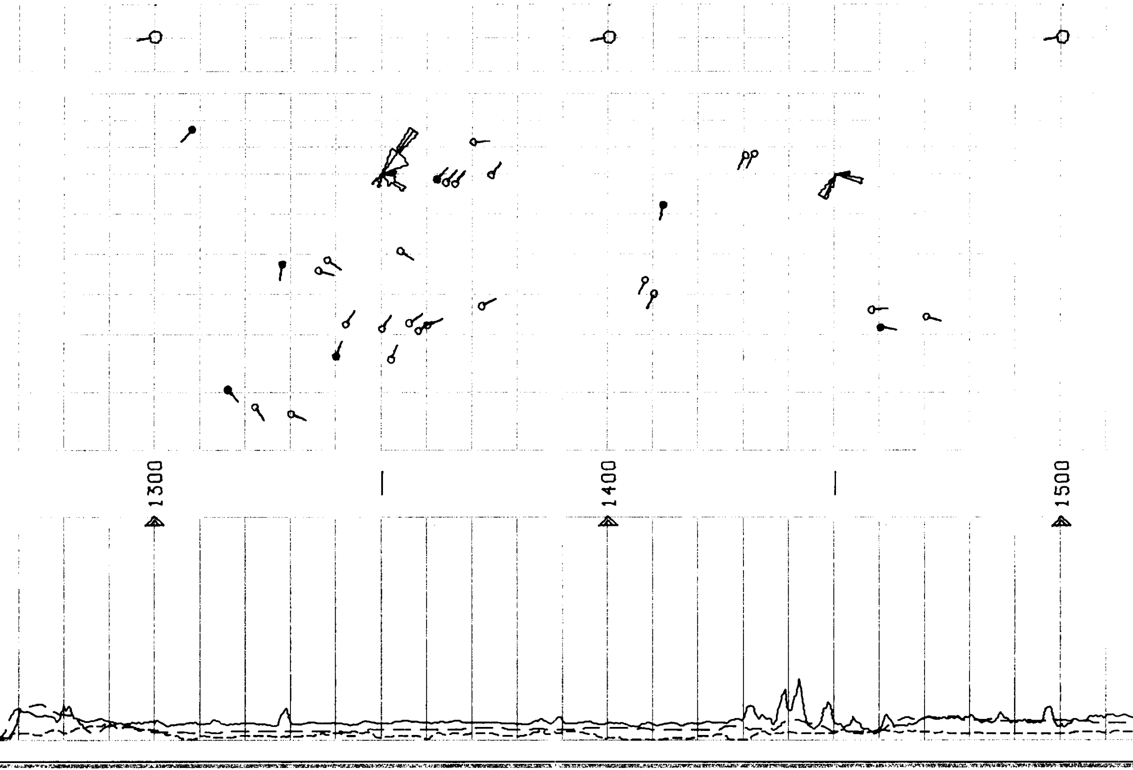
FOOT DUODECIMAL .500 IN. GRID

GRID

PLOT

11-17-80 135729

SCHLUMBERGER DIPMETER ARROW PLOT



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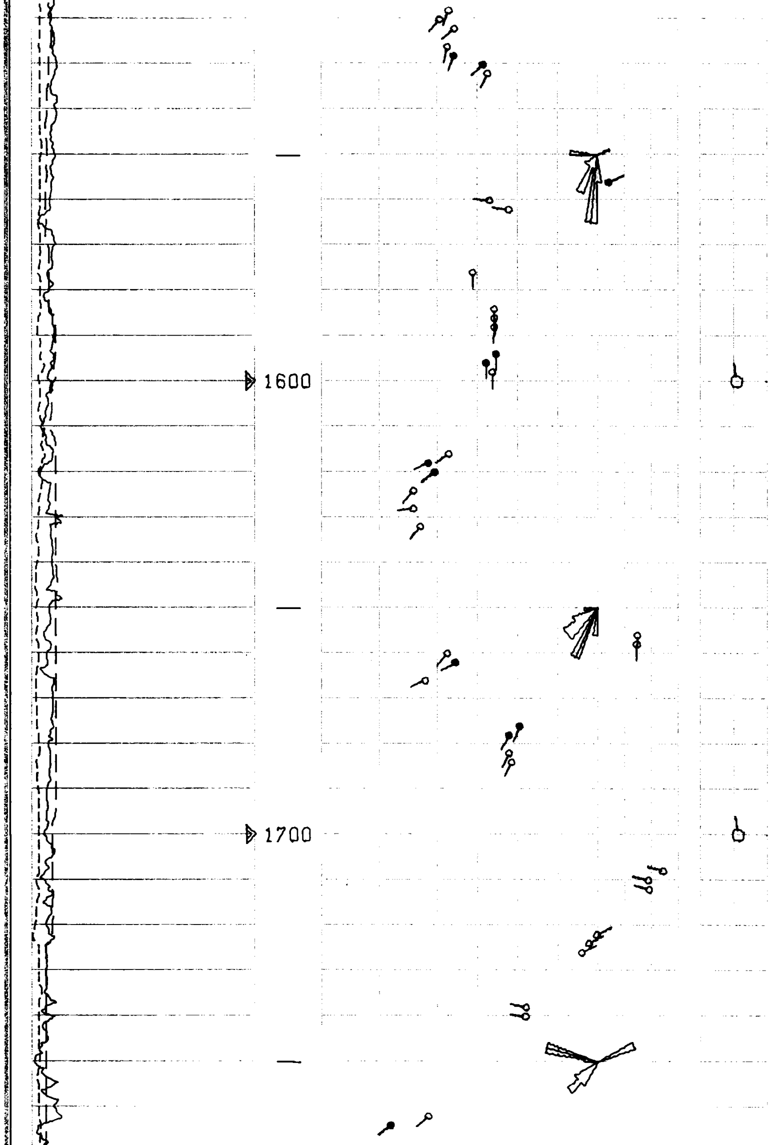

SCHLUMBERGER DIPMETER ARROW PLOT

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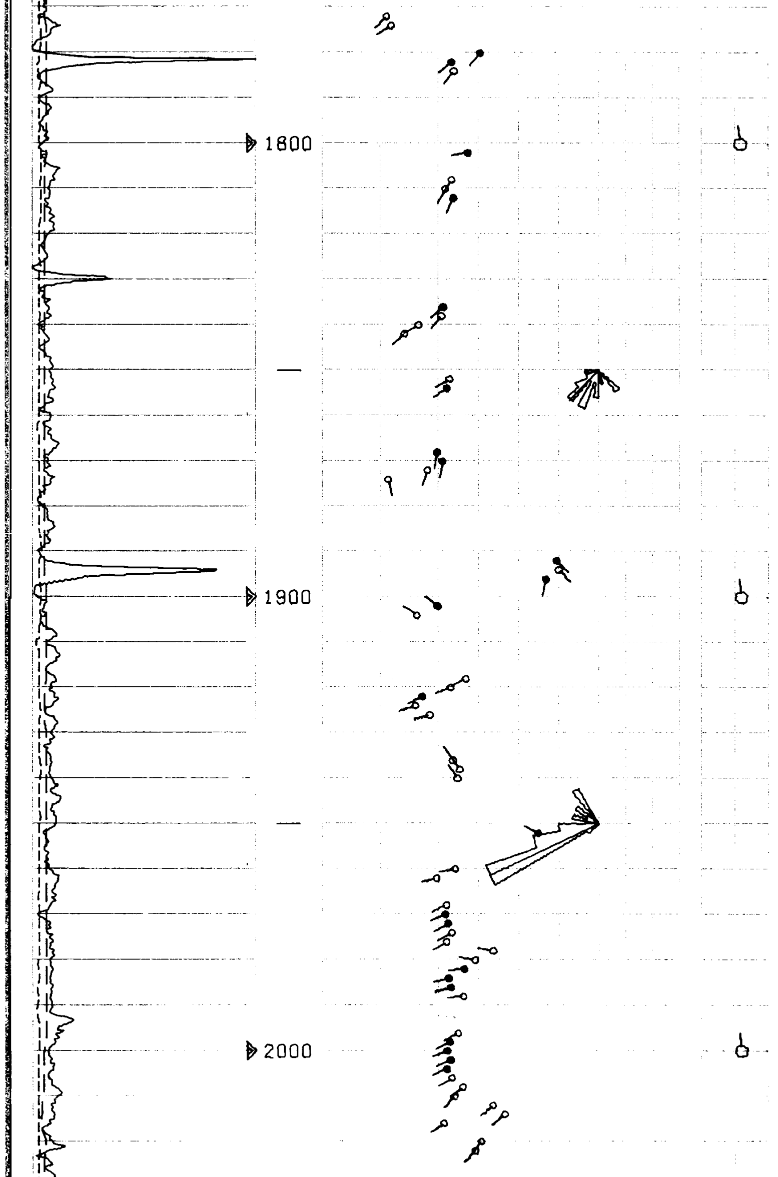
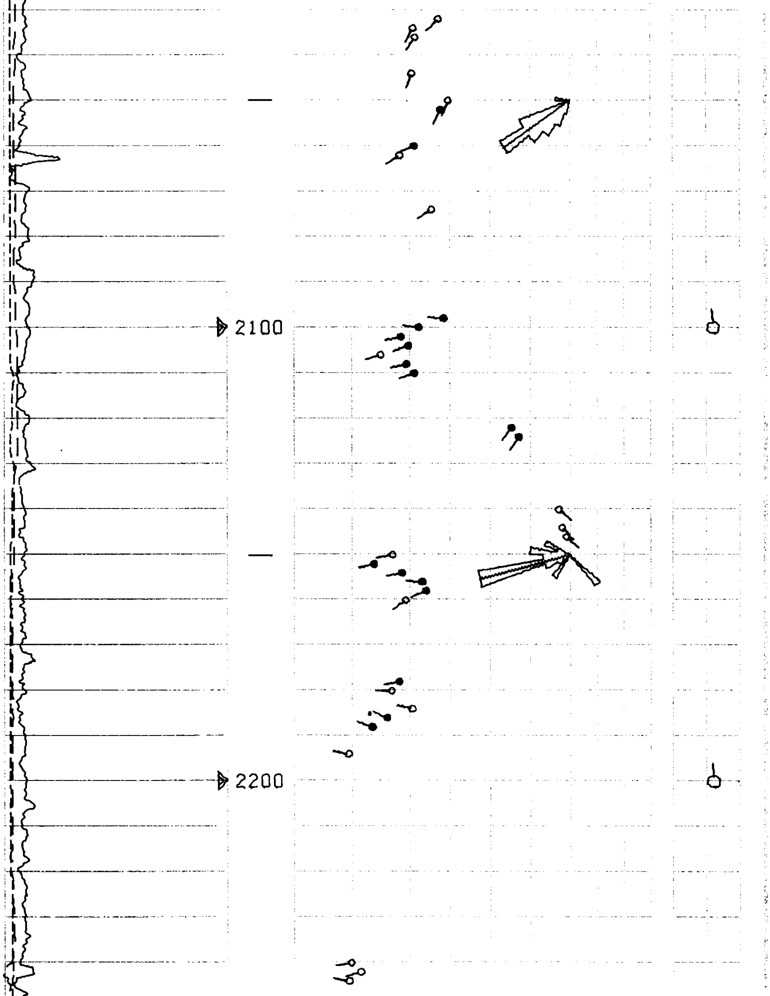
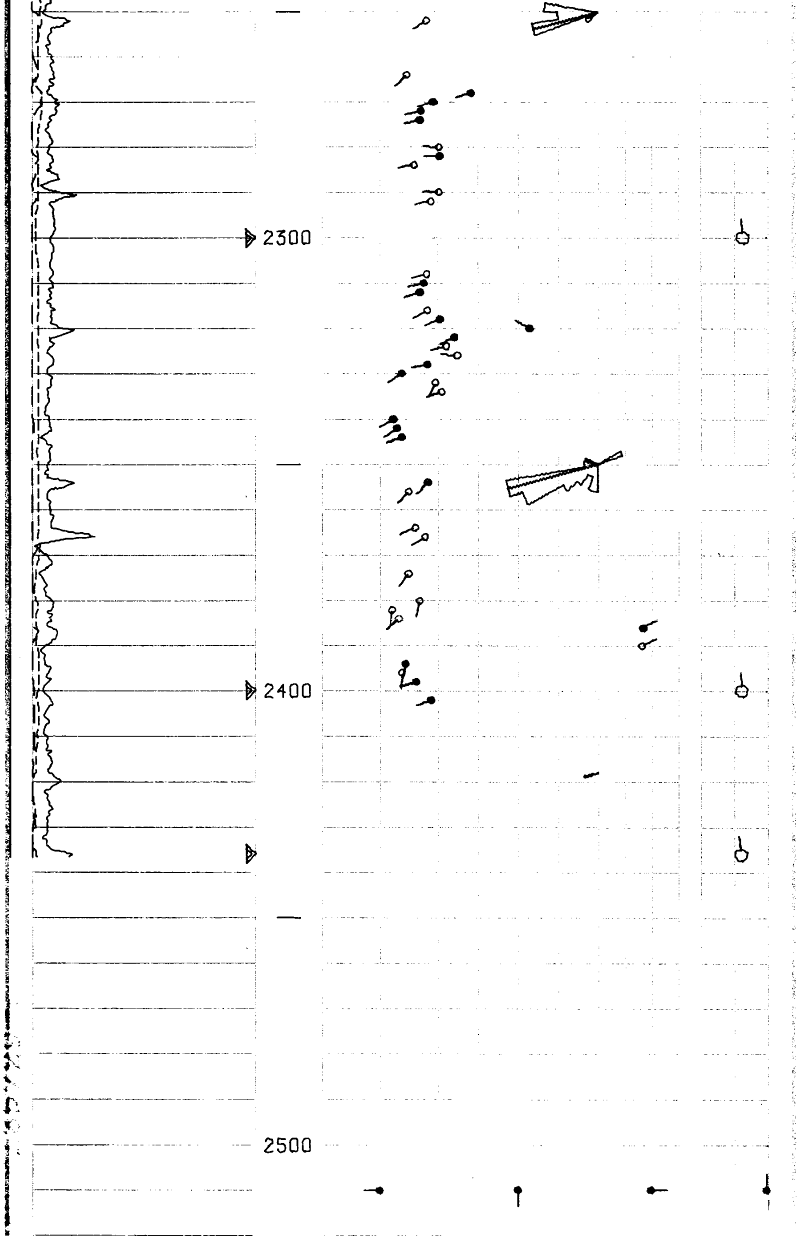


SCHLUMBERGER DIPMETER ARROW PLOT

FOOT DUO-DECIMAL .500 IN. GRID





FOOT DUO-DECIMAL .500 IN. GRID

SCHLUMBERGER DIPMETER ARROW PLOT

CORRELATION CURVE	DEPTHS	TRUE DIP ANGLE AND DIRECTION	DRIFT & DIRECTION OF SONDE

COMPANY AMERICAN QUASAR PETROLEUM COMPANY
WELL PAU 13-14 PI
FIELD MIST
COUNTY COLUMBIA STATE OREGON

Rm 2.23 @ 65 °F
Rmf 2.57 @ 48 °F
Rmc 3.39 @ 68 °F
BHT 84 °F

SCHL. FR 2439
SCHL. TD 2440
DRLR TD 2440
Elev:
KB 593.5
DF ---
GL 583