Schlumberger

FOUR — ARM
HIGH RESOLUTION
CONTINUOUS DIPMETER
(COMPUTED)

COUNTY COLUMBIA
FIELD or LOCATION 14-6N-5W, WBSM
WELL LIBEL #12-14
COMPANY REICHHOLD ENERGY

COMPANY REICHHOLD ENERGY CORPORATION

RECEIVED-PTLF
NOV 1[illegible] 1982
DEPT OF GEOLOGY &

WELL LIBEL #12-14
FIELD MIST
COUNTY COLUMBIA STATE OREGON

LOCATION
1819' SOUTH OF NORTH LINE &
424' EAST OF WEST LINE
Sec. 14 Twp. 6N Rge. 5W,WBSM

Other Services:
DIL
PHC

Permanent Datum: GL, Elev. 525.7'
Log Measured From KB, 11.4 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 537.1'
D.F. N/A
G.L. 525.7'

Date	21 OCT 82			
Run No.	1			
Depth—Driller	2681.0'			
Depth—Logger	2680.0'			
Btm. Log Interval	2670.0'			
Top Log Interval	419.0'			
Casing—Driller	7" @ 417'	@	@	@
Casing—Logger	419'			
Bit Size	6¼"			
Type Fluid in Hole	GEL/LIGNO			
Dens. | Visc.	10.2 | 51.0			
pH | Fluid Loss	9.5 | 4.8 ml	ml	ml	ml
Source of Sample	FLOWLINE			
R_m @ Meas. Temp.	1.90 @ 75 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	1.97 @ 63 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	2.01 @ 61 °F	@ °F	@ °F	@ °F
Source: R_{mf} | R_{mc}	M | M			
R_m @ BHT	1.145 @ 129 °F	@ °F	@ °F	@ °F
Time Since Circ.	0100			
Max. Rec. Temp.	129 °F	°F	°F	°F
Equip. | Location	8126 | SAC			
Recorded By	COLLINS			
Witnessed By	ALGER			

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	[illegible]			
HDM No.	[illegible]			
Magnetic Declination	20° E			
Analog Panel No.	-			
Digital Panel No.	752			
Correlated By	PCDCC			
Computed By	PCDCC			
Plotted By	PCDCC			

Remarks — SERVICE ORDER NO. 302821

"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')	DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF 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°

REICHHOLD ENERGY CORP.
LIBEL #12-14
MIST FIELD
COLUMBIA COUNTY, OREGON
RUN NO. ONE 21-OCT-82
P.C.C.C.
ARROW PLOT FROM CLUSTER PROGRAM

CORRELATION LENGTH 4 FT.
STEP LENGTH 2 FT.
SEARCH ANGLE 30 DEGREES X2
HDT-G CSU VAX 11/780

POOLED ARROW PLOT

2 LEVELS POOLED WHEN WITHIN

3.5 DEGREES SOLID ANGLE

BLACK ARROWS ARE POOLED RESULTS

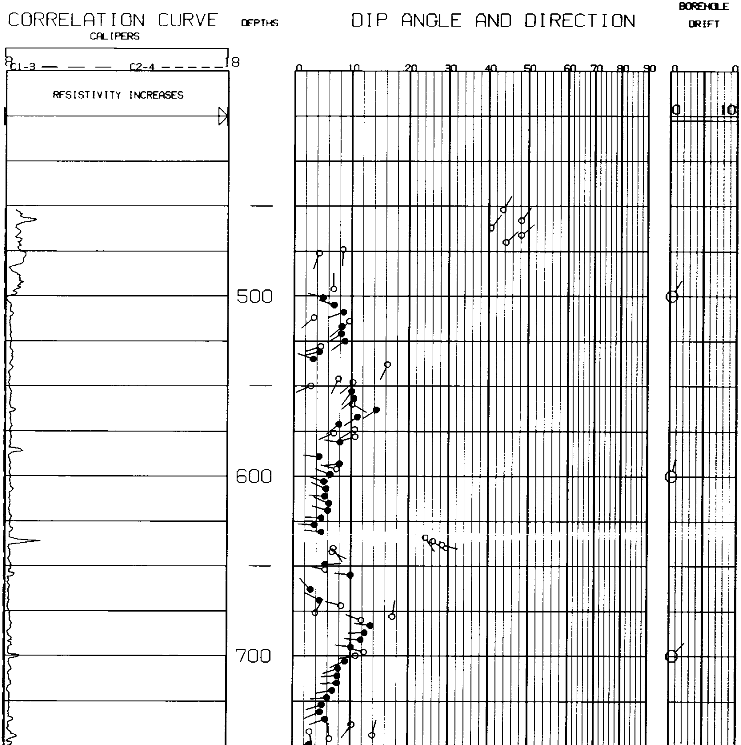
CORRELATION LENGTH 4 FT.

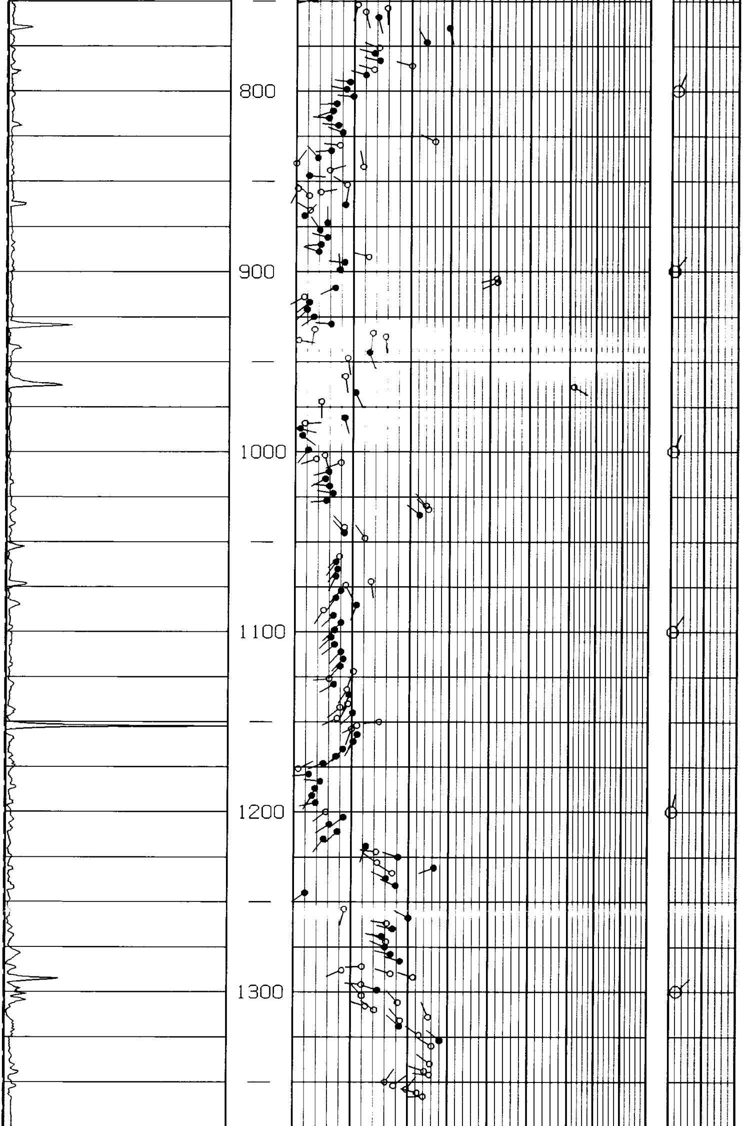
STEP LENGTH 2 FT.

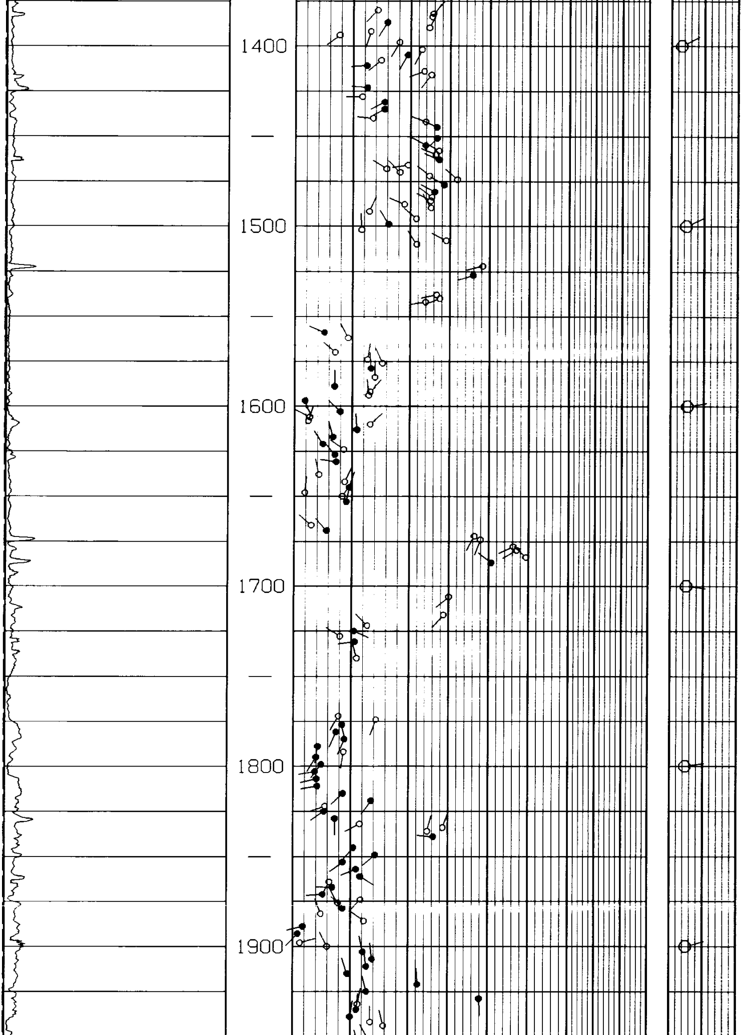
SEARCH ANGLE 30 DEGREES X2

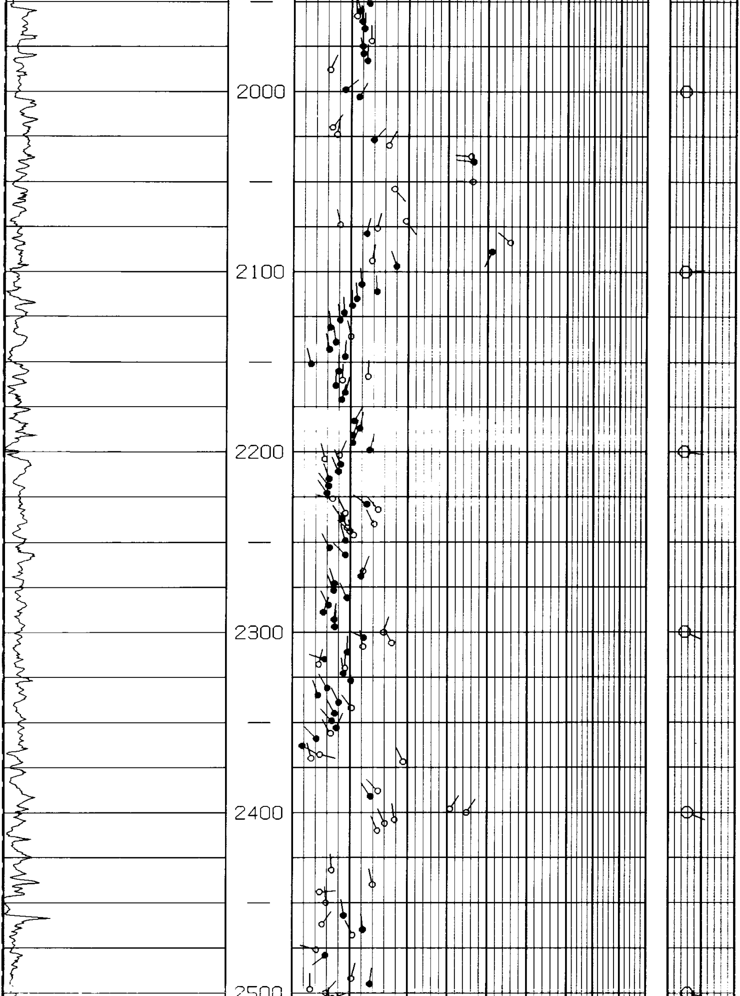
PC0130023518307001020420

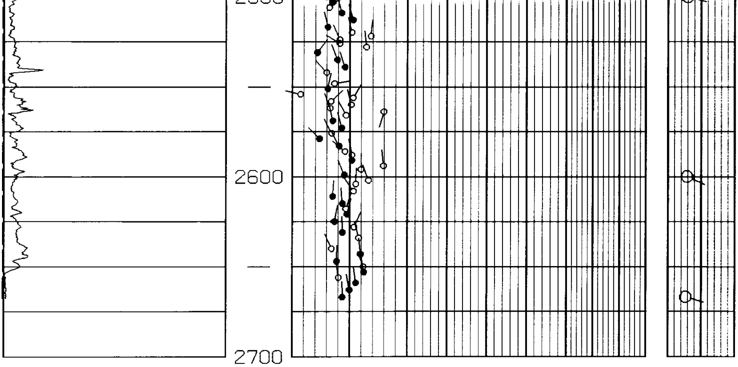
ZONE FROM 452 TO 2667





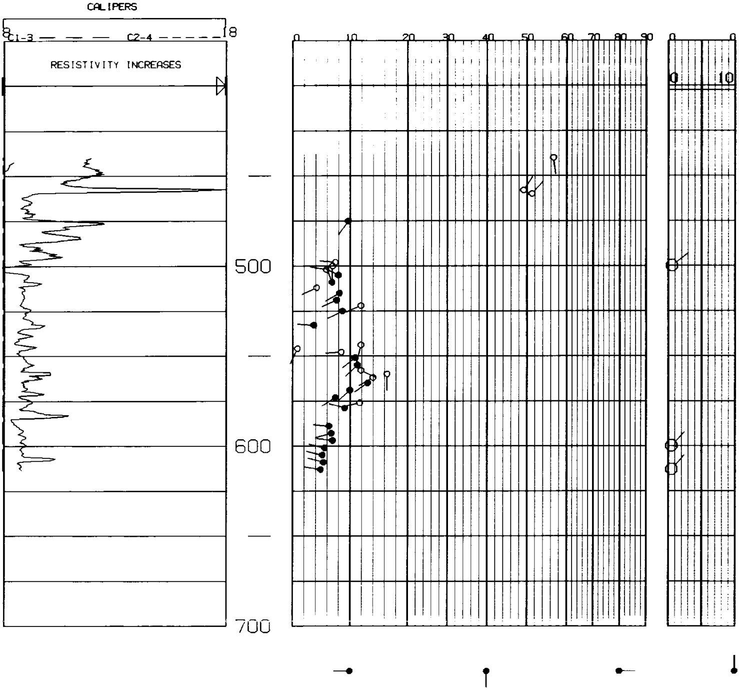






ZONE FROM 440 TO 613

CORRELATION CURVE DEPTHS DIP ANGLE AND DIRECTION BOREHOLE DRIFT



USER: 7030   29-OCT-1982 23:57:02.05

USER: 7030   29-OCT-1982 23:57:02.05

ALL QUALITY ARROW PLOT   7030

FROM THE CLUSTER PROGRAM

BLACK ARROWS ARE HIGHEST QUALITY

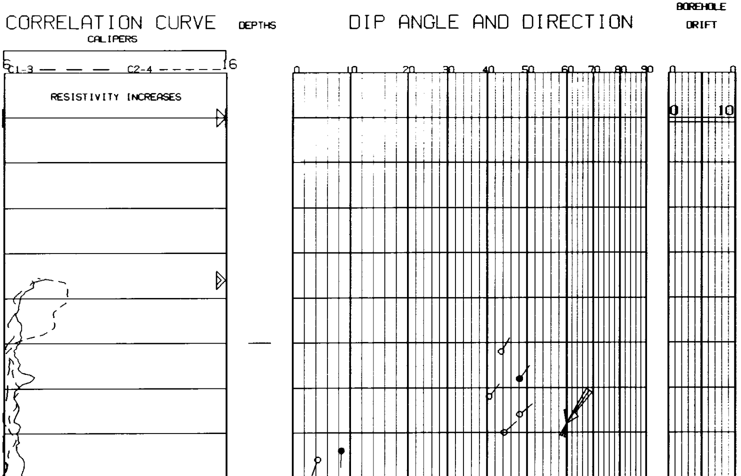
CORRELATION LENGTH   4 FT.

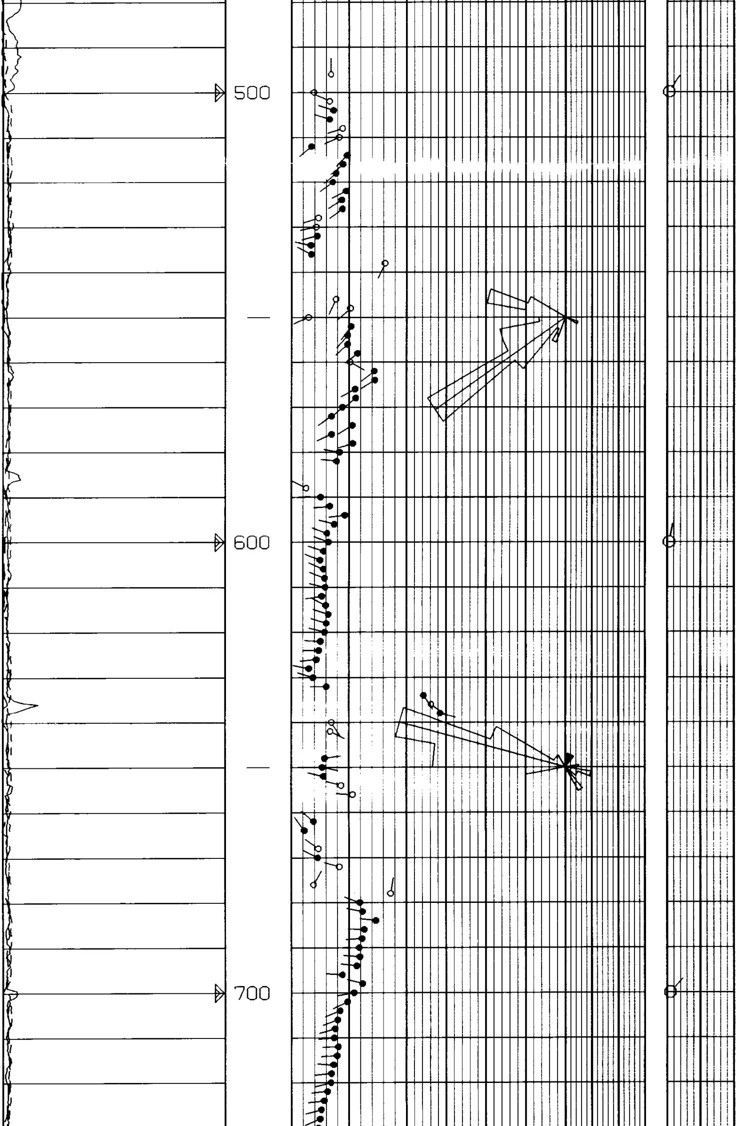
STEP LENGTH   2 FT.

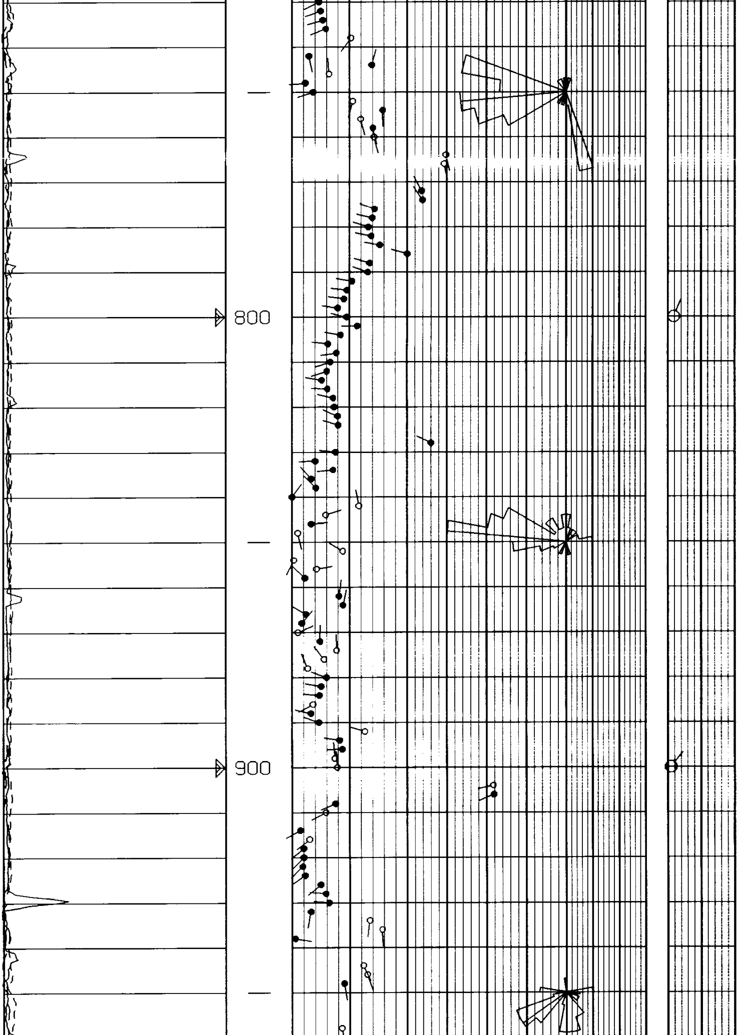
SEARCH ANGLE   30 DEGREES X2

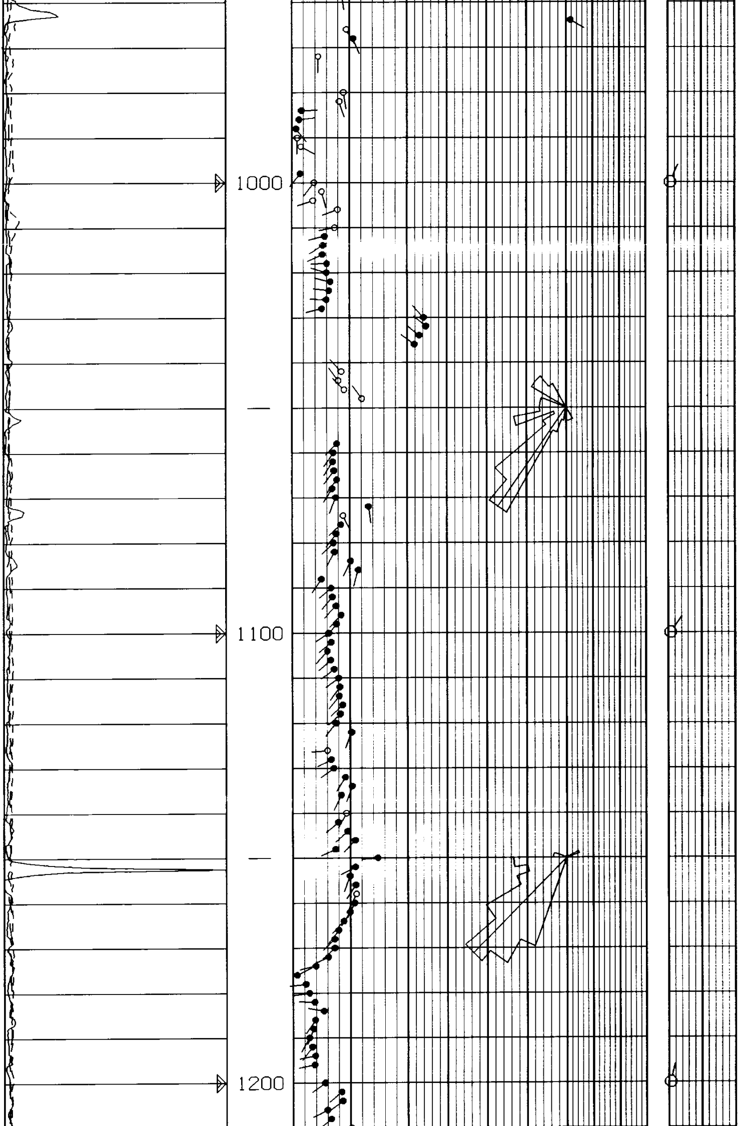
PC0130023518307001020420

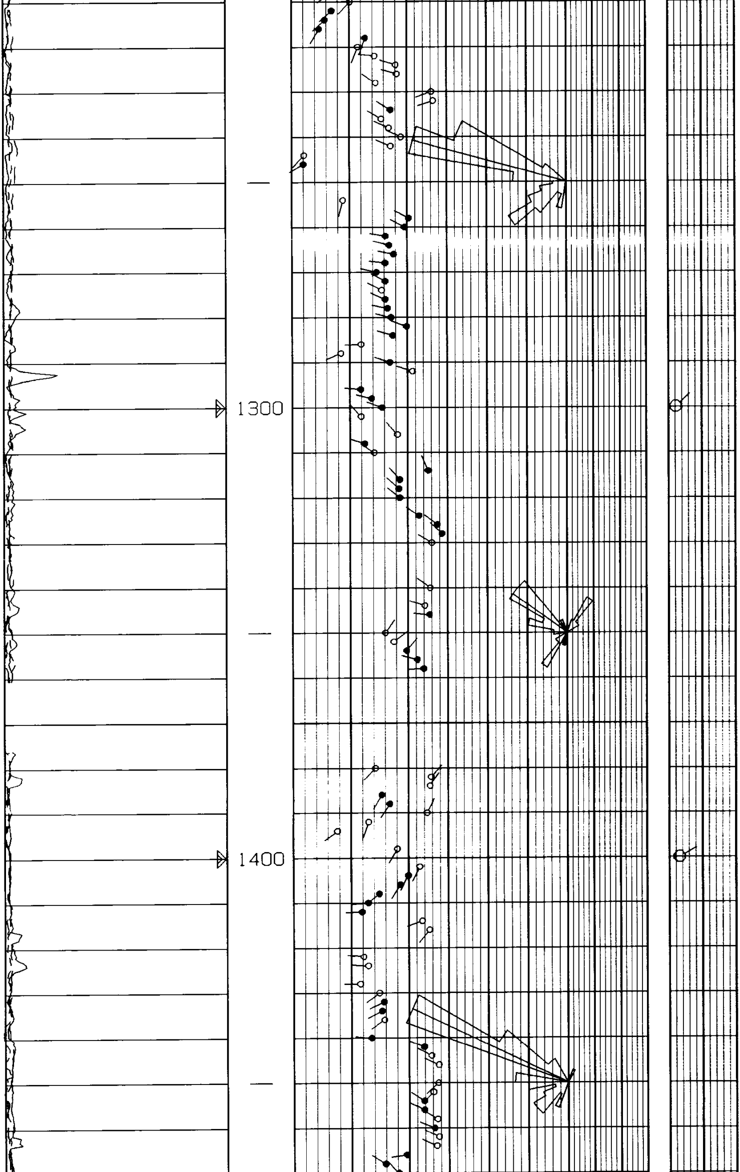
ZONE FROM 436 TO 2668

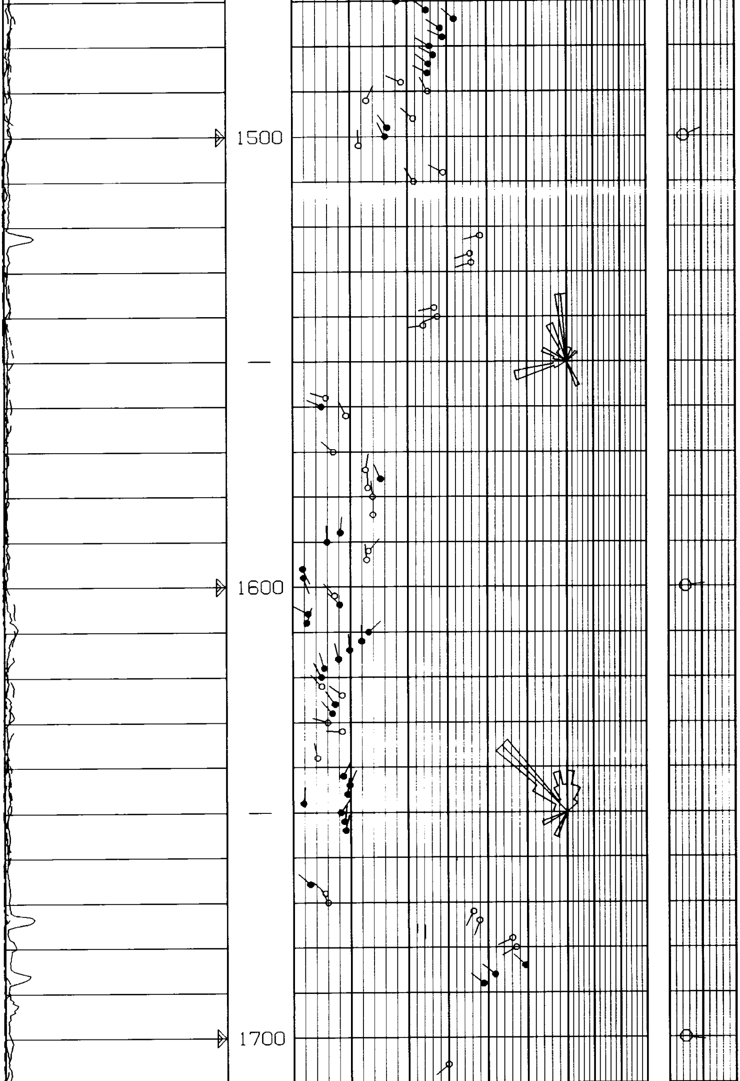


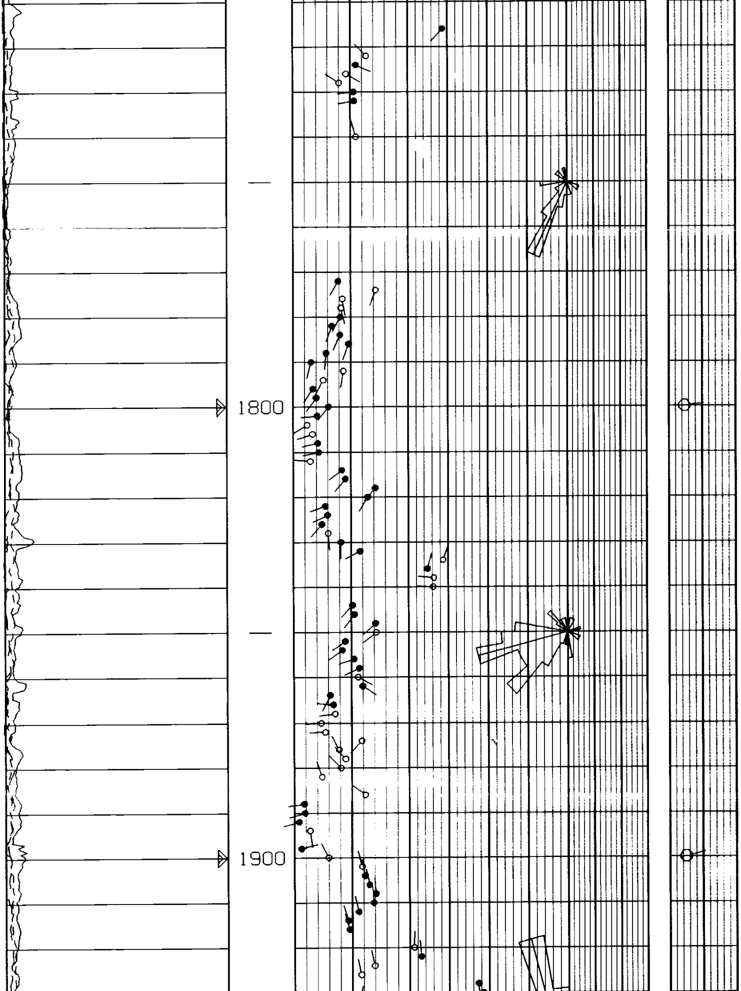


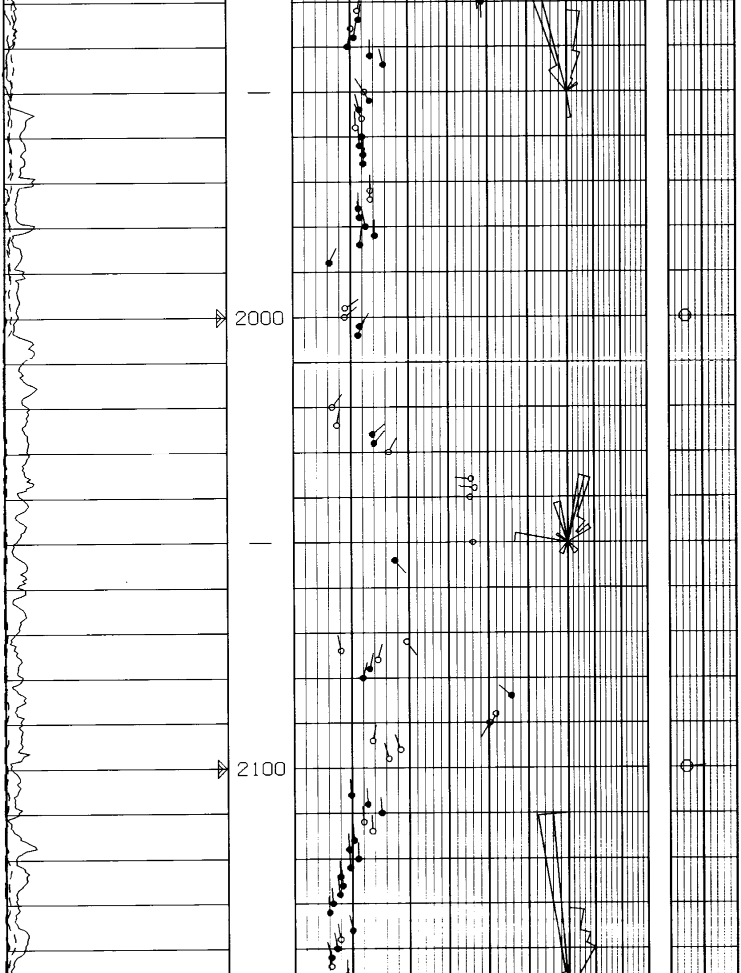


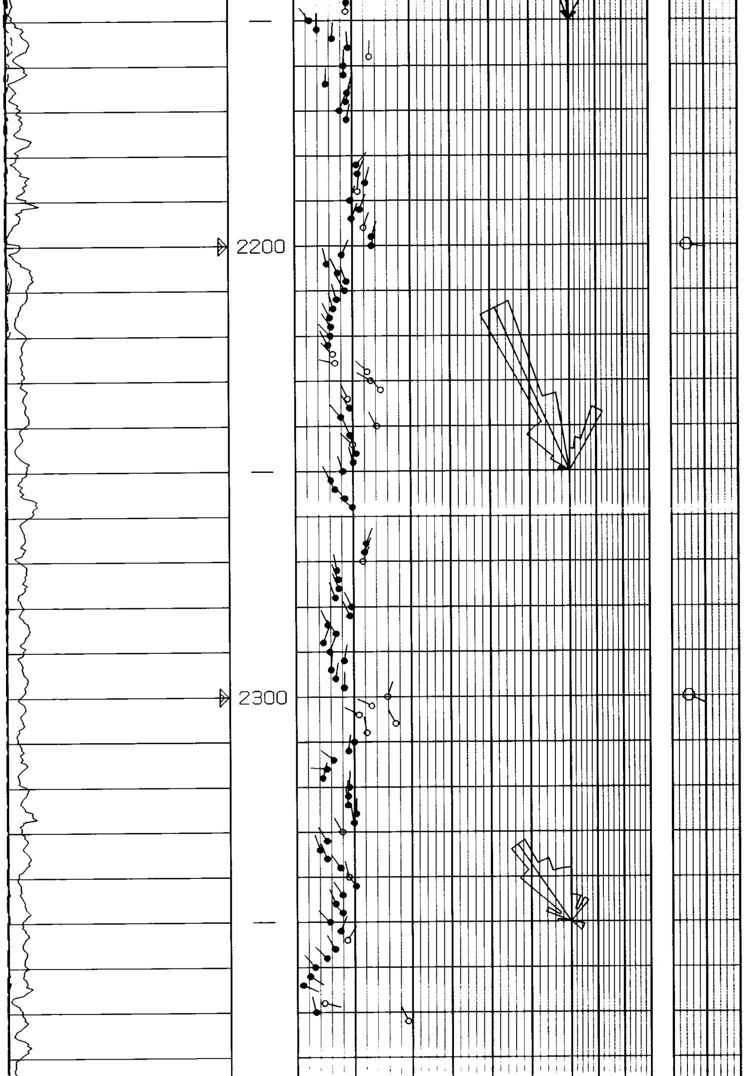


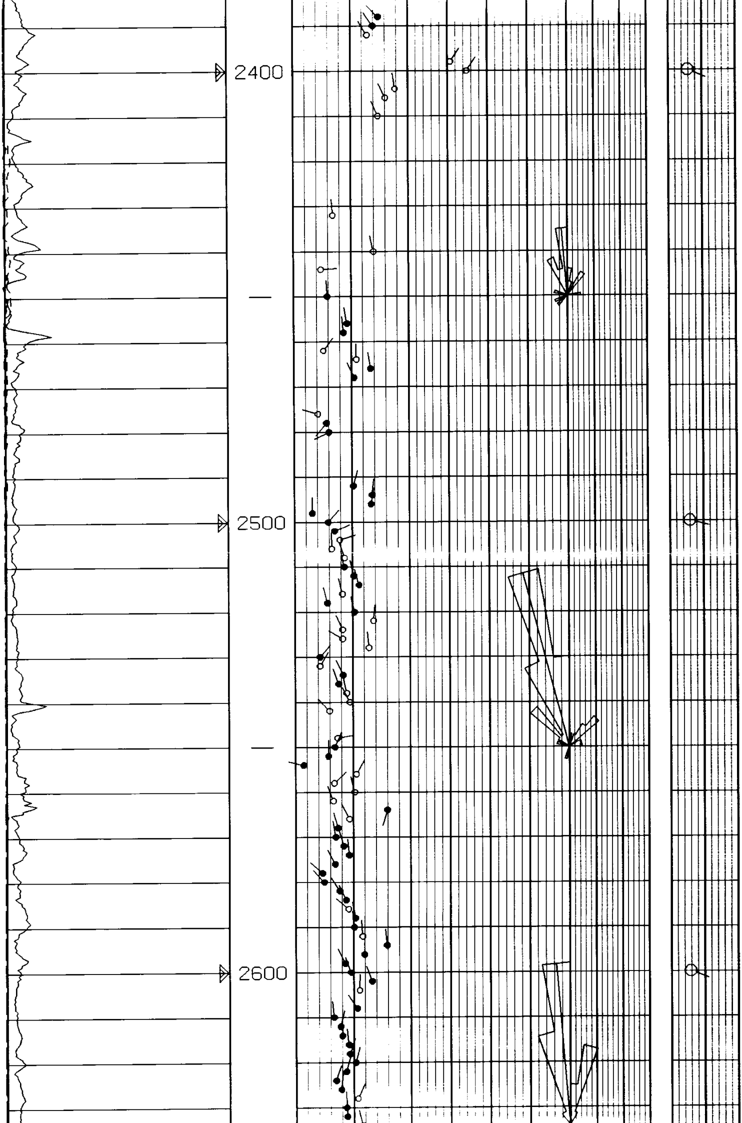


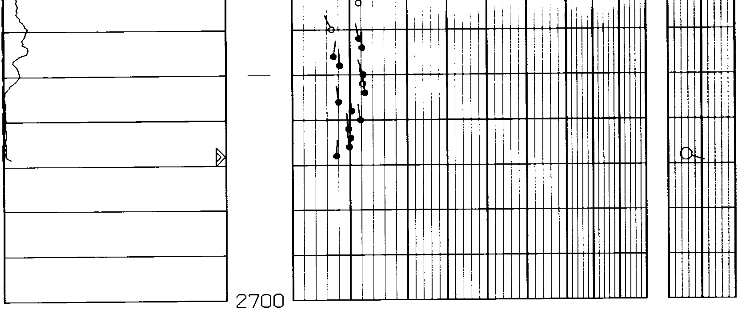












ZONE FROM 436 TO 614

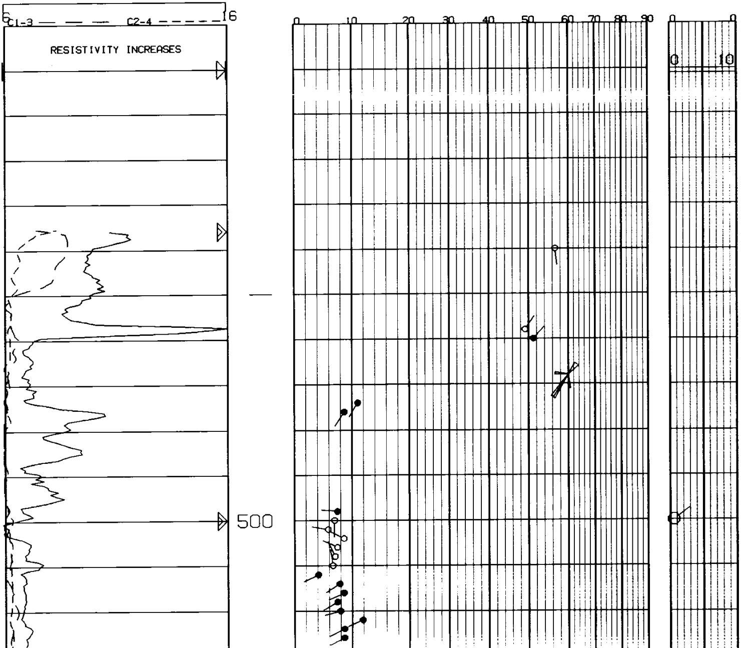
CORRELATION CURVE

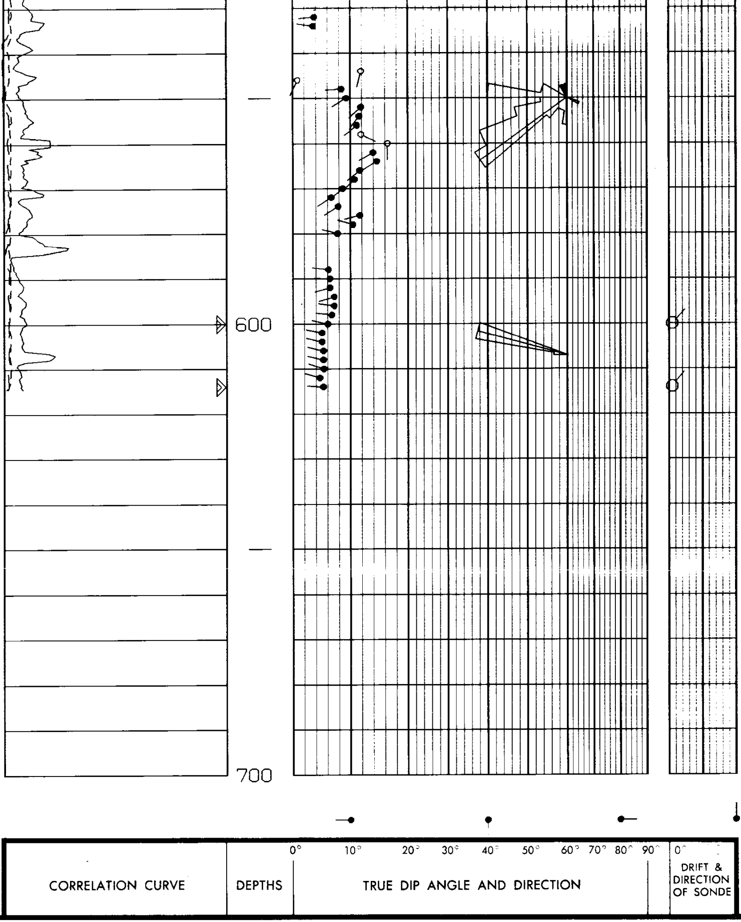
CALIPERS

DEPTHS

DIP ANGLE AND DIRECTION

BOREHOLE DRIFT





COMPANY REICHHOLD ENERGY CORPORATION

WELL LIBEL #12-14

FIELD MIST

COUNTY COLUMBIA STATE OREGON

Rm 1.900 @ 75 °F
Rmf 1.970 @ 63 °F
Rmc 2.010 @ 61 °F
BHT 129 °F

SCHL. FR 2670.0'
SCHL. TD 2650.0
DRLR TD 265[illegible].0
Elev:
KB 537.[illegible]
DF [illegible]
GL 525.7