COUNTY CROOK
FIELD or LOCATION 17-19S-20E
WELL LOGAN BUTTE UNIT 17 NO. 1
COMPANY TEXACO, INC.

Schlumberger

FOUR – ARM
HIGH RESOLUTION
CONTINUOUS DIPMETER
(COMPUTED)

COMPANY TEXACO, INC.

Well 17-01
WELL LOGAN BUTTE UNIT 17 NO. 1
FIELD LOGAN BUTTE
COUNTY CROOK STATE OREGON

LOCATION: 1670'SOUTH & 251'EAST FROM THE NORTHWEST CORNER OF:
Sec. 17 Twp. 19S Rge. 20E

Other Services:
DIL BHC

Permanent Datum: GL, Elev. 5100
Log Measured From KB, 12 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 5112
D.F. --
G.L. 5100

Date	12-2-80		RECEIVED-PTLD	
Run No.	ONE			
Depth—Driller	2000		MAR 25 1981	
Depth—Logger	1993			
Btm. Log Interval	1992		DEPT OF GEOLOGY & MINE [illegible]	
Top Log Interval	380			
Casing—Driller	13⅜" @ 380	@	@	@
Casing—Logger	380			
Bit Size	12¼"			
Type Fluid in Hole	GEL-CYPAN			
Dens. | Visc.	9.7 | 45			
pH | Fluid Loss	8.0 | - ml	ml	ml	ml
Source of Sample	FLOWLINE			
R_m @ Meas. Temp.	10.9 @ 44 °F	@ °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	11.5 @ 54 °F	@ °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	6.9 @ 56 °F	@ °F	@ °F	@ °F
Source: R_{mf} | R_{mc}	M | M			
R_m @ BHT	5.8 @ 87 °F	@ °F	@ °F	@ °F
Time Since Circ.	27 HOURS			
Max. Rec. Temp.	87 °F	°F	°F	°F
Equip. | Location	8128 | SAC			
Recorded By	LANGFORD			
Witnessed By	CONDRA			

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-E			
HDM No.	STAND.			
Magnetic Declination	19°			
Analog Panel No.	--			
Digital Panel No.	967			
Correlated By	PCDCC			
Computed By	PCDCC			
Plotted By	PCDCC			
Remarks —	SERVICE ORDER NO. 135687			

"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

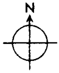
VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF

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.



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° 10°

0-800-165870

TEXACO, INC.
LOGAN BUTTE 17 #1
LOGAN BUTTE FIELD
CROOK COUNTY, OREGON
RUN NO. ONE 2-DEC-80
P.C.D.C.
ARROW PLOT FROM CLUSTER PROGRAM
CORRELATION LENGTH 4 FT.
STEP LENGTH 2 FT.
SEARCH ANGLE 30 DEGREES X2
HDT-G CSU PDP/11

JOB 5020.00

SCHLUMBERGER

FOOT DUO-DECIM

DIPMETER ARROW PLOT

SCHLUMBERGER

CORRELATION CURVE

DEPTHS

DIP ANGLE AND DIRECTION

0 10 20 30 40 50 60 70 80 90

BOREHOLE DRIFT

0 10

POOLED ARROW PLOT

2 LEVELS POOLED WHEN WITHIN

3.5 DEGREES SOLID ANGLE

BLACK ARROWS ARE POOLED RESULTS

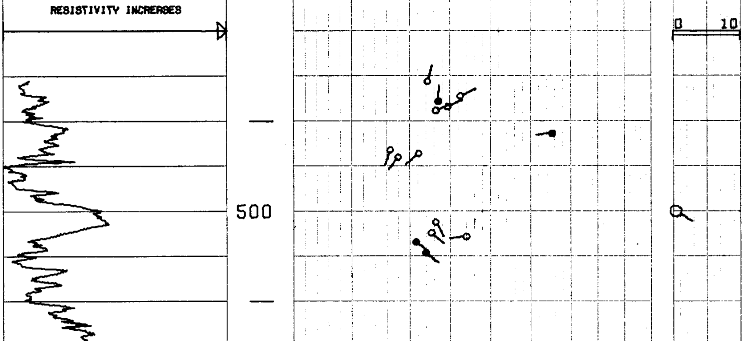
CORRELATION LENGTH 4 FT.

STEP LENGTH 2 FT.

SEARCH ANGLE 30 DEGREES X2

PC0130023518307001020420

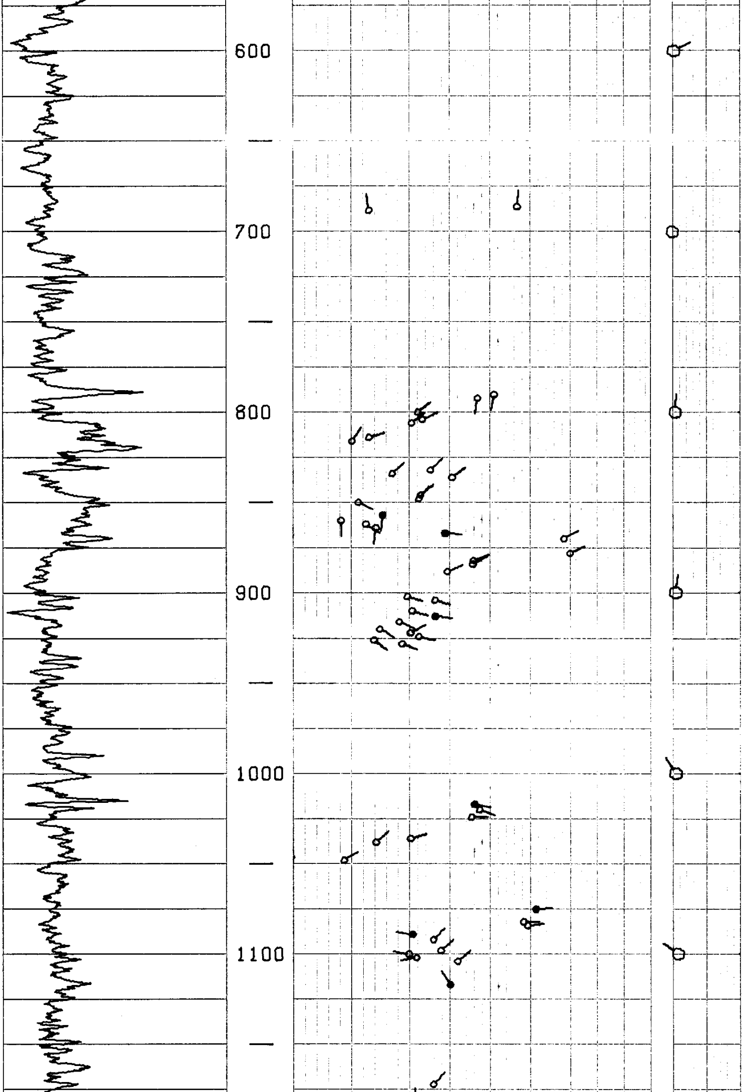
ZONE FROM 428 TO 1960



AL .500 IN. GRID
FOOT DUO-DECI

DIPMETER ARROW PLOT

SCHLUMBERGER



MAL .500 IN. GRID

FOOT DUO-DECIM

DIPMETER ARROW PLOT

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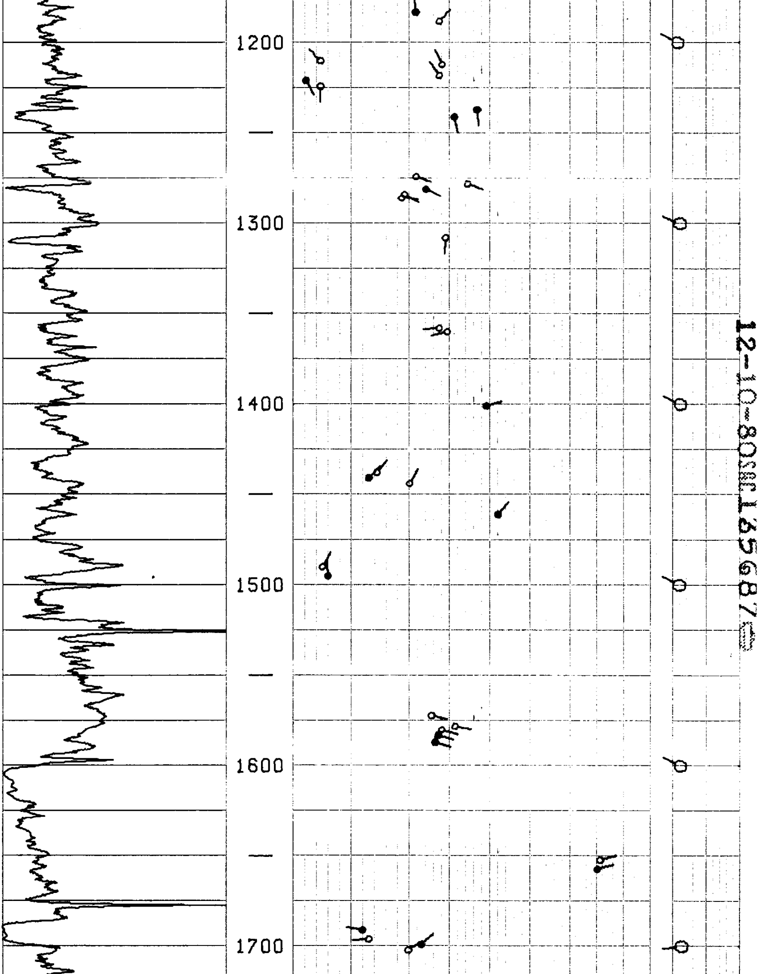
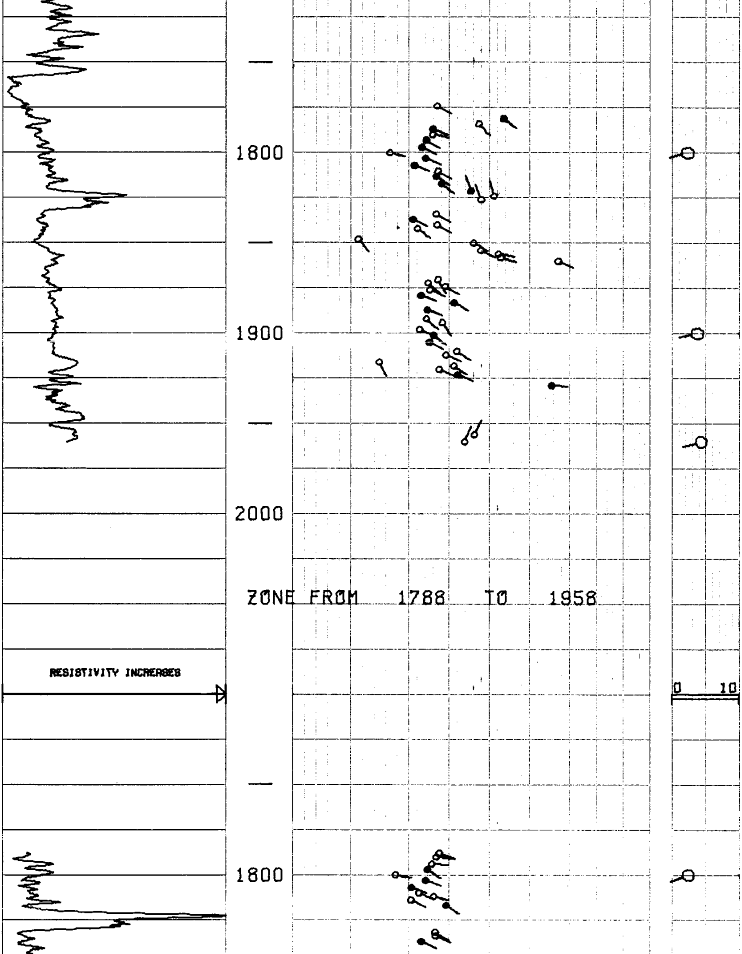
12-10-80 [illegible] 135687



AL. .500 IN. GRID

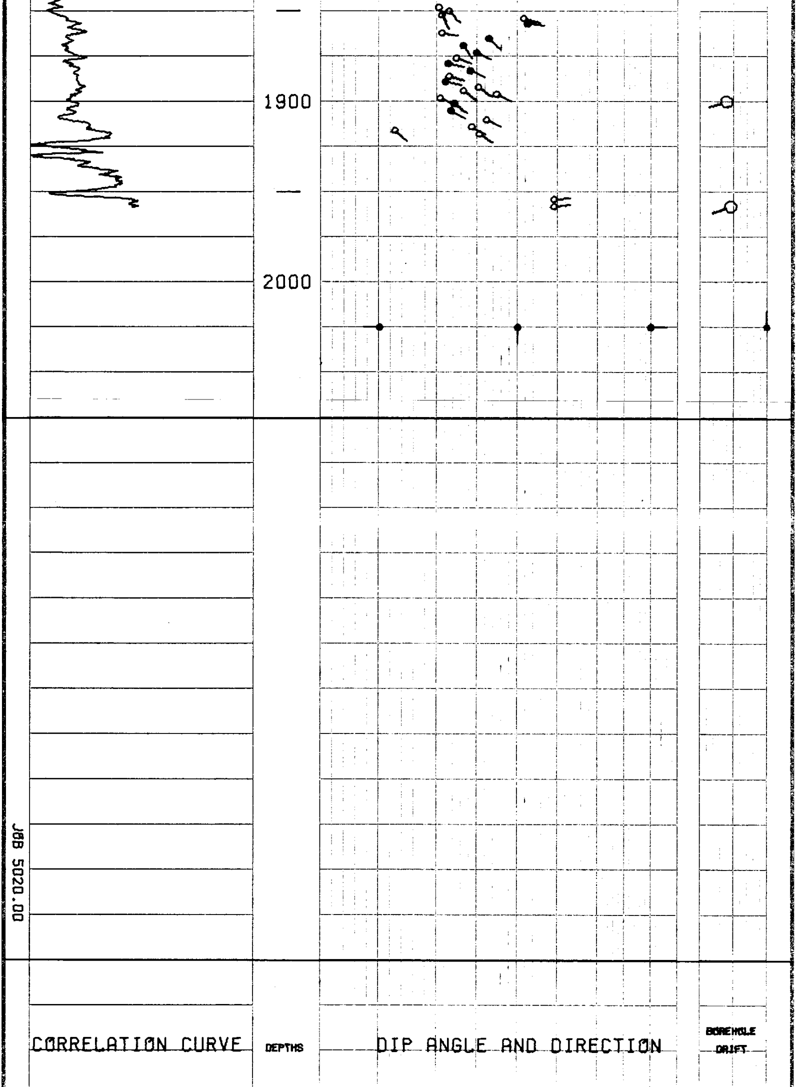
BERGER DIPMETER ARROW PLOT

FOOT DUO-DECIMAL .500 IN. GRID



SCHLUMBERGER DIPMETER ARROW PLOT

FOOT DUO-DECIMAL .500 IN. GRID



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

ALL QUALITY ARROW PLOT 5020

FROM THE CLUSTER PROGRAM

BLACK ARROWS ARE HIGHEST QUALITY

CORRELATION LENGTH 4 FT.

STEP LENGTH 2 FT.

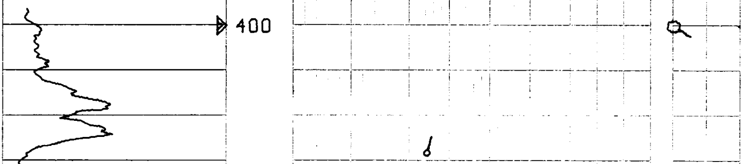
SEARCH ANGLE 30 DEGREES X2

PC0130023518307001020420

ZONE FROM 396 TO 1988

RESISTIVITY INCREASES

0 10



FOOT DUO-DECIMAL .500 IN. GRID

SCHLUMBERGER DIPMETER ARROW PLOT

12-10-80 165687

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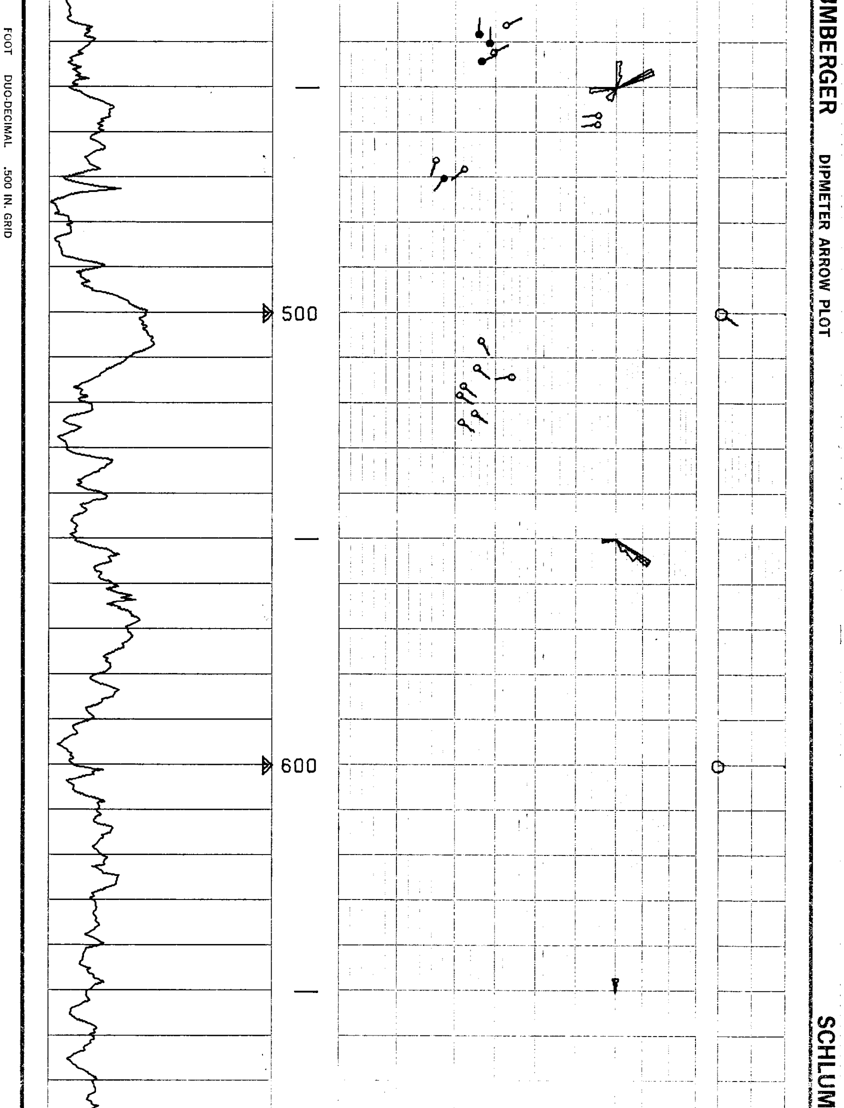

BERGER DIPMETER ARROW PLOT

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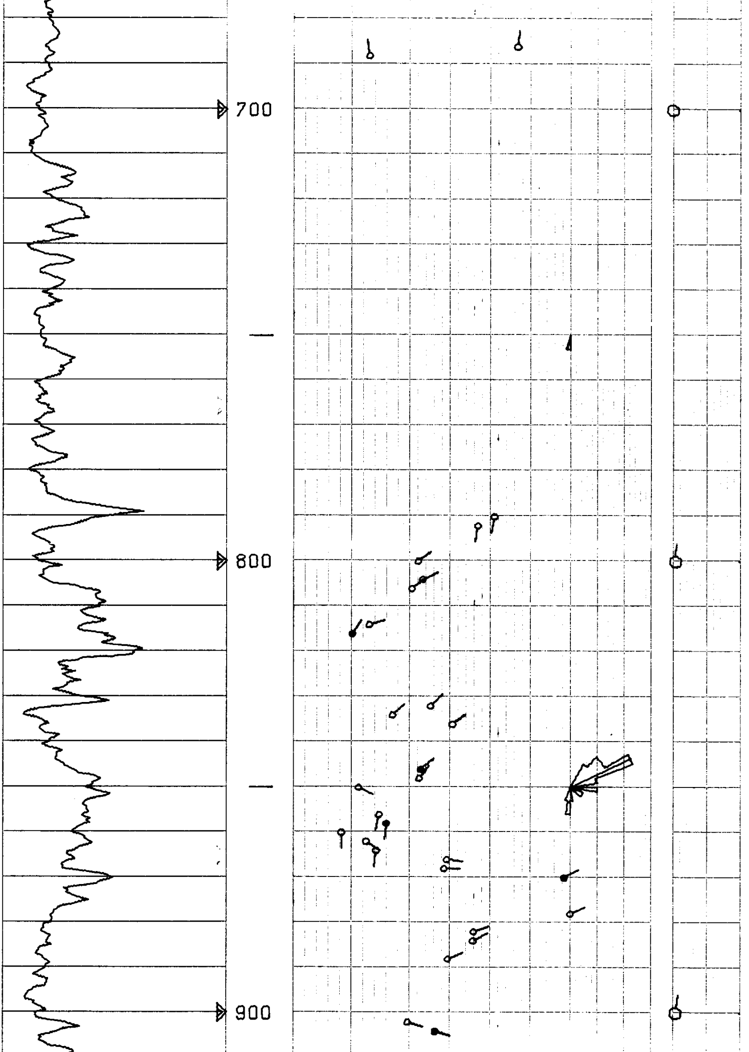
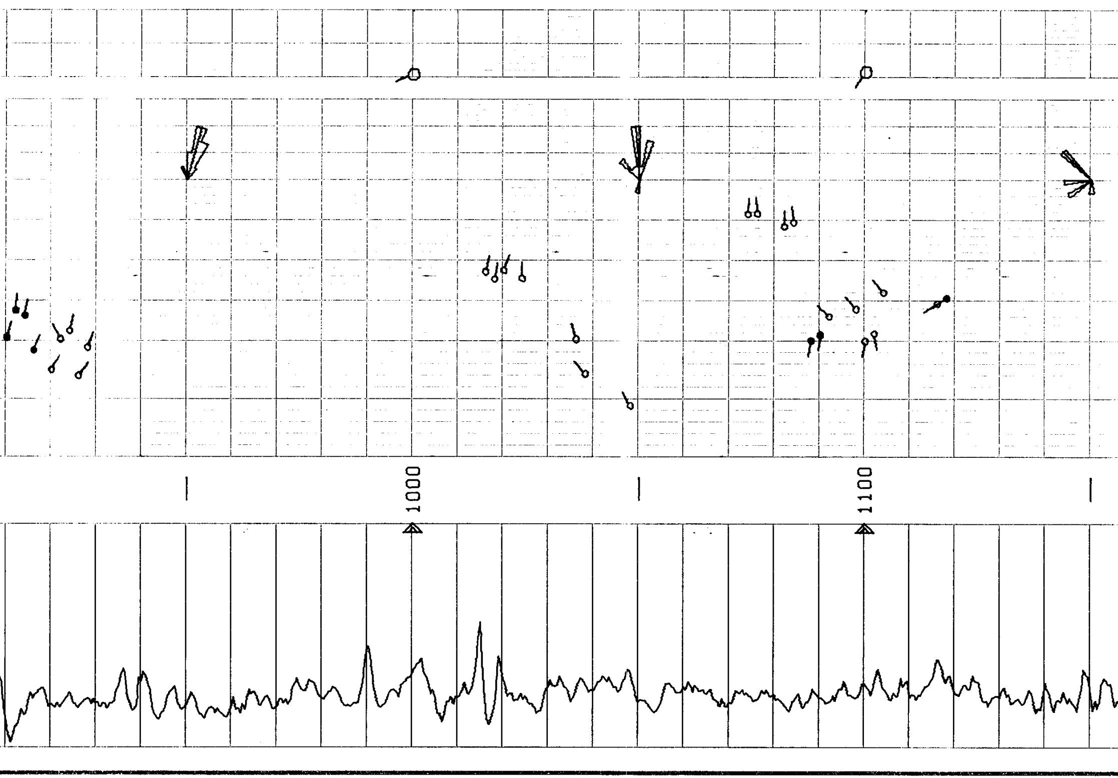
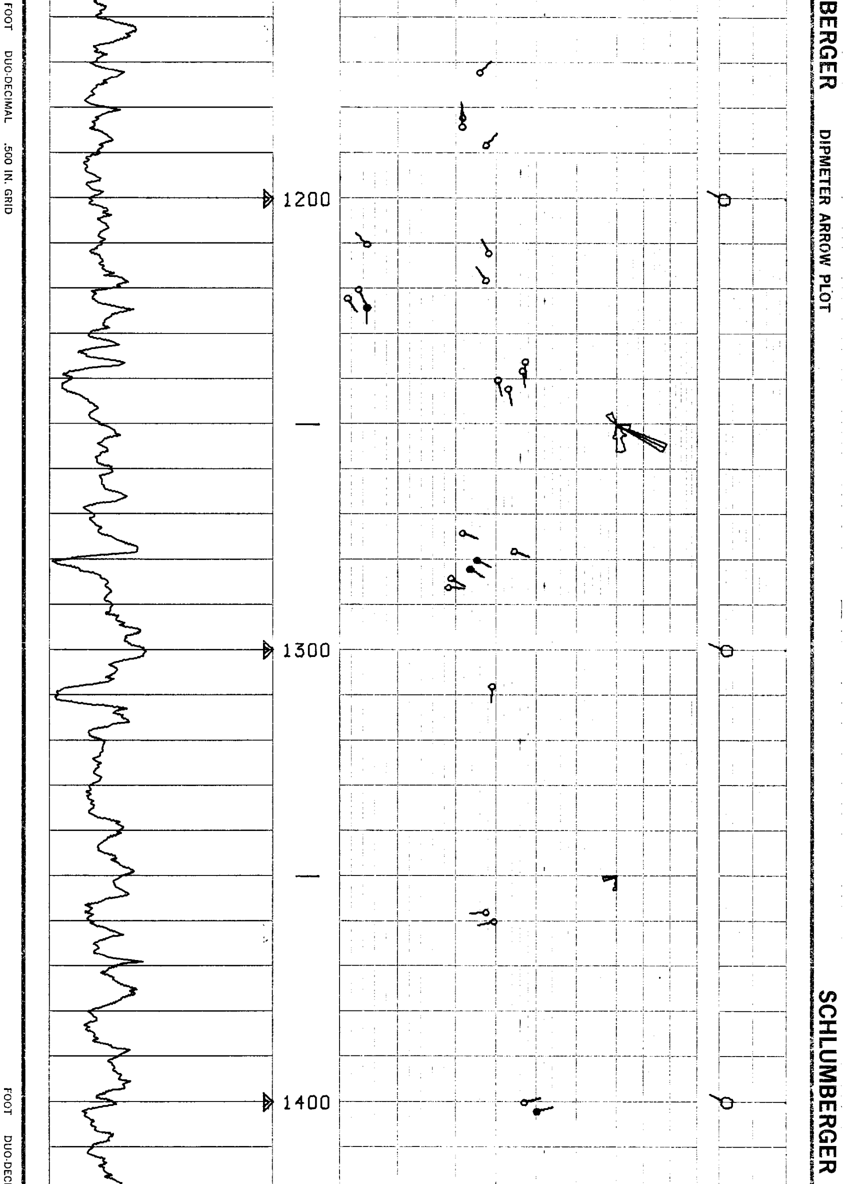


FOOT DUO-DECIMAL .500 IN. GRID

UMBERGER DIPMETER ARROW PLOT SCHLUM

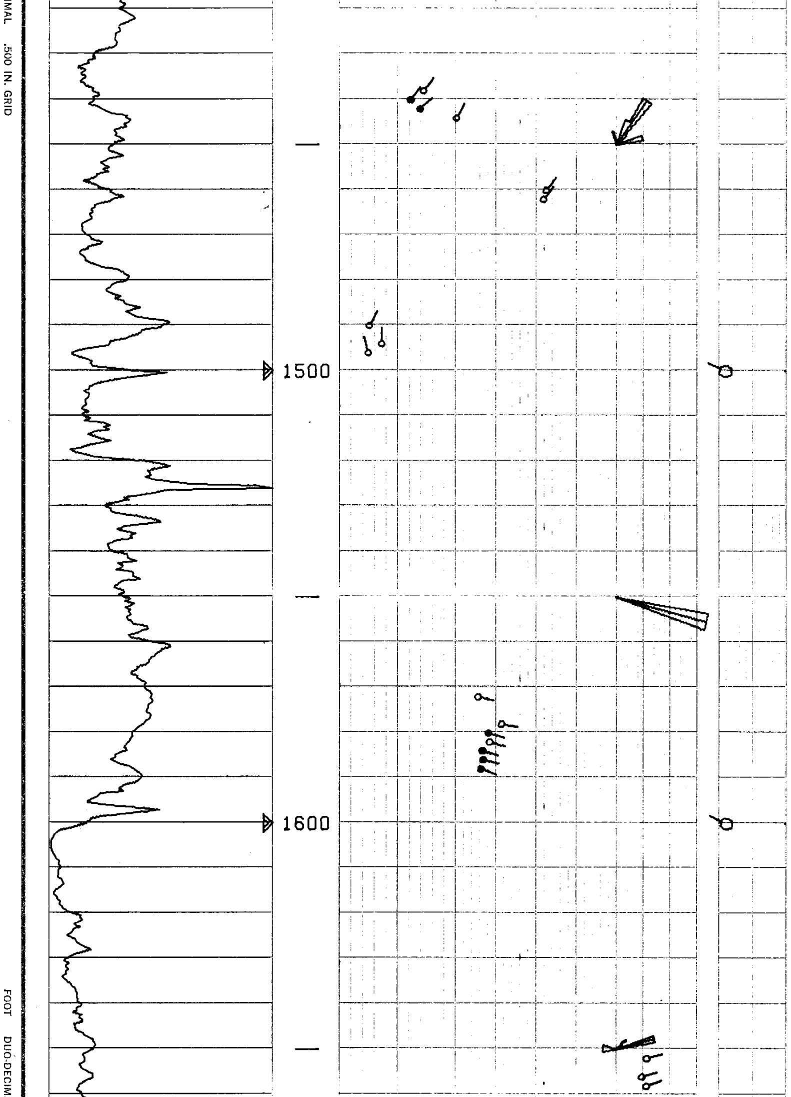


FOOT DUO-DECIMAL .500 IN. GRID



SCHLUMBERGER

DIPMETER ARROW PLOT



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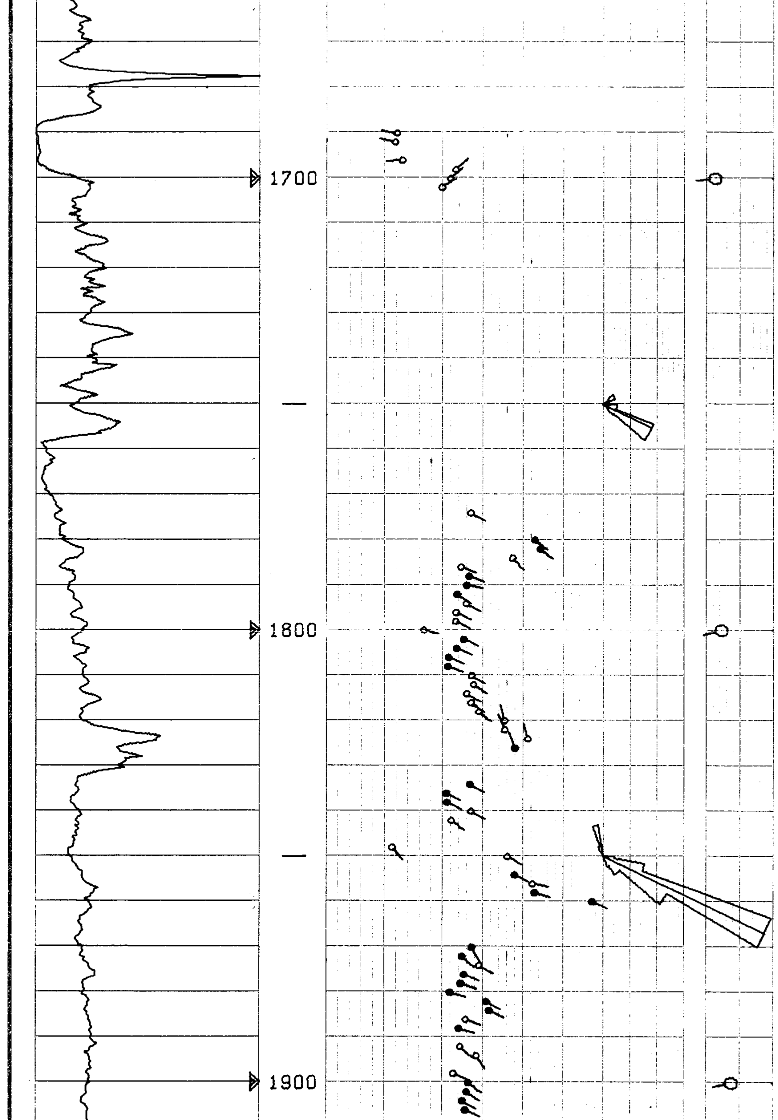
DIPMETER ARROW PLOT

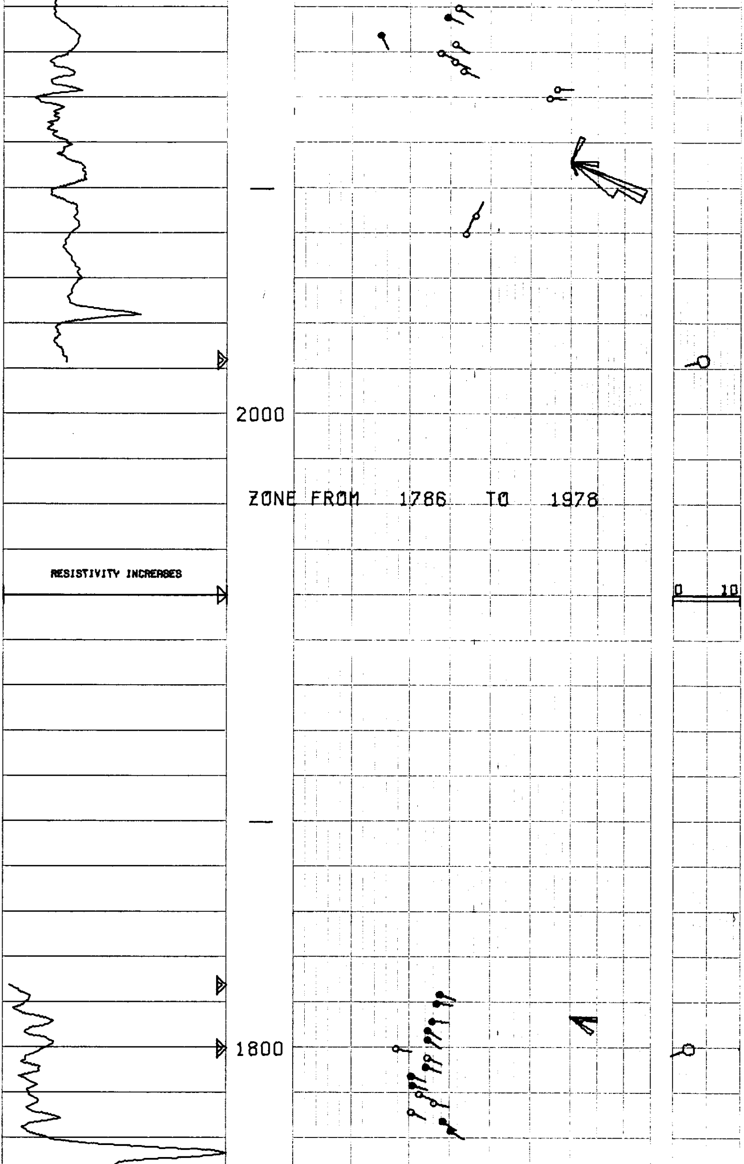


AL .500 IN. GRID

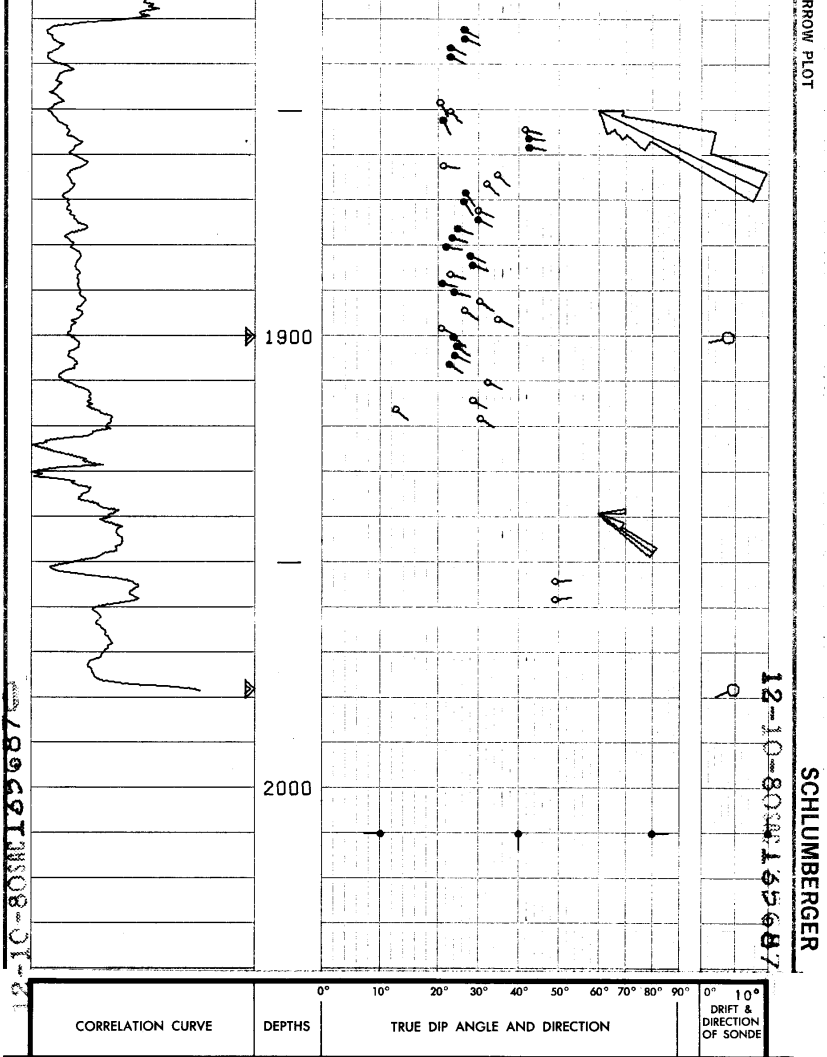
FOOT DUO-DECIMAL

PMETER ARROW PLOT

SCHLUMBERGER DIPMETER A



500 IN GRID FOOT DUODECIMAL 500 IN GRID



COMPANY TEXACO, INC.

WELL LOGAN BUTTE UNIT 17 NO. 1

FIELD LOGAN BUTTE

COUNTY CROOK STATE OREGON

Rm 10.9 @ 44 °F
Rmf 11.5 @ 54 °F
Rmc 6.9 @ 56 °F
BHT 87 °F

SCHL. FR 1992
SCHL. TD 1993
DRLR TD 2000
Elev:
KB 5112
DF --
GL 5100