Investment Management 20-21

Schlumberger

FOUR – ARM
HIGH RESOLUTION
CONTINUOUS DIPMETER

COUNTY COLUMBIA
FIELD MIST NEHALEM BASIN
LOCATION 20-6N-4W
WELL INVESTMENT MANAGE-MENT NO. 20-21
COMPANY AMERICAN QUASAR

COMPANY AMERICAN QUASAR PETROLEUM COMPANY
WELL INVESTMENT MANAGEMENT NO. 20-21
FIELD MIST NEHALEM BASIN
COUNTY COLUMBIA STATE OREGON

LOCATION 4142.9'NORTH & 1599.9'EAST OF THE SOUTHWEST CORNER OF:

API SERIAL NO.	SEC.	TWP	RANGE
	20	6N	4W

Other Services:
DIL
BHC

Permanent Datum: GL ; Elev.: 618.16
Log Measured From KB 10.5 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 628.66
D.F. --
G.L. 618.16

RECEIVED-PTLD
NOV 18 1980
DEPT OF GEOLOGY

Date	10-16-80			
Run No.	ONE			
Depth–Driller	2281			
Depth–Logger (Schl.)	2202			
Btm. Log Interval	2200			
Top Log Interval	522			
Casing–Driller	521 @ 7"	@	@	@
Casing–Logger	522			
Bit Size	6¼"			
Type Fluid in Hole	LIGNOSULFONATE			
Dens. | Visc.	73 | 45			
pH | Fluid Loss	9.5 | 6.0 ml	ml	ml	ml
Source of Sample	FLOWLINE			
Rm @ Meas. Temp.	1.95 @ 76 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	2.64 @ 54 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	3.21 @ 52 °F	@ °F	@ °F	@ °F
Source: Rmf | Rmc	M | M			
Rm @ BHT	1.45 @ 102°F	@ °F	@ °F	@ °F
TIME Circulation Stopped	0830			
TIME Logger on Bottom	1330			
Max. Rec. Temp.	102 °F	°F	°F	°F
Equip. | Location	8128 | SAC			
Recorded By	BORATKO/SCANLAN			
Witnessed By Mr.	SMITH			

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

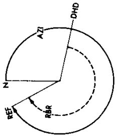
REMARKS: Service Order No. 135760 Magnetic Declination 22°

Run No.	1	2	3	4
Tool Type	HDT			
HDP	962			
DDR | TTR	-			
DPI	-			
HDM	-			
HDE	-			
HDS	-			
Adapter Head	-			
UG | CG | SAH	X			
5" Film | 10" Film | 60" Record	X			
Analog | Digital	X | X			
TIME Circulation Stopped	0830			
TIME Schl. on Bottom	1330			

ROLL NO.	INTERVAL

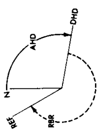
TOOL AZIMUTH AND HOLE DIRECTION CALCULATION DEFINITIONS

(DHD) HIGH SIDE OF TOOL = Direction from center of tool to upper side of tool.
(N) NORTH = Direction from center of tool to Magnetic North.
(REF) REFERENCE ELECTRODE = Direction from center of tool to #1 electrode.
(AZI) AZIMUTH OF REFERENCE ELECTRODE = Clockwise angle from N to REF.
(RBR) RELATIVE BEARING = Clockwise angle from DHD to REF.
(AHD) AZIMUTH OF HOLE DEV. (TOOL AXIS) = Clockwise angle from N to DHD.



LOW ANGLE UNIT ☐

EXAMPLE
HDM - Low Angle Unit (0-36°)
AZI (solid curve) = 330°
RBR (dotted curve) = 230°
AHD = AZI − RBR = 330° − 230° = 100°



HIGH ANGLE UNIT ☐

EXAMPLE
HDM - High Angle Unit (0-72°)
AHD (solid curve) = 100°
RBR (dotted curve) = 230°
AZI = AHD + RBR = 100° + 230° = 330°

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

ORIENTATION	DEPTHS	CORRELATION CURVES ← CONDUCTIVITY

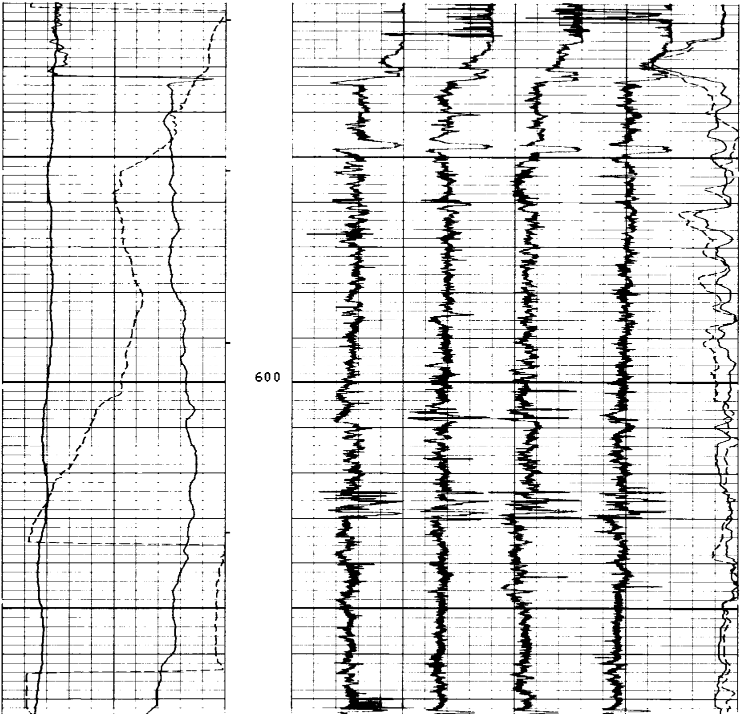
PARAMETERS

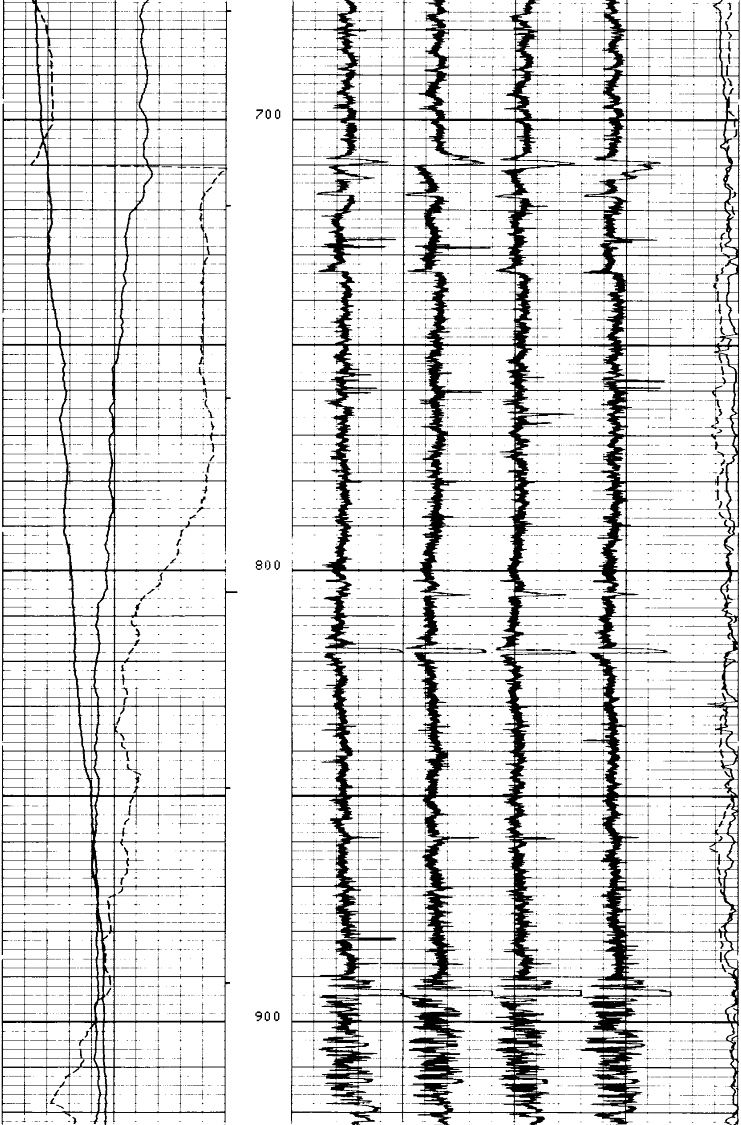
NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
STYP		STAN	MCT	DEG	72	BS	INCH	6.250
DO		0.0	BHS		OPEN	FPHI		PHIX

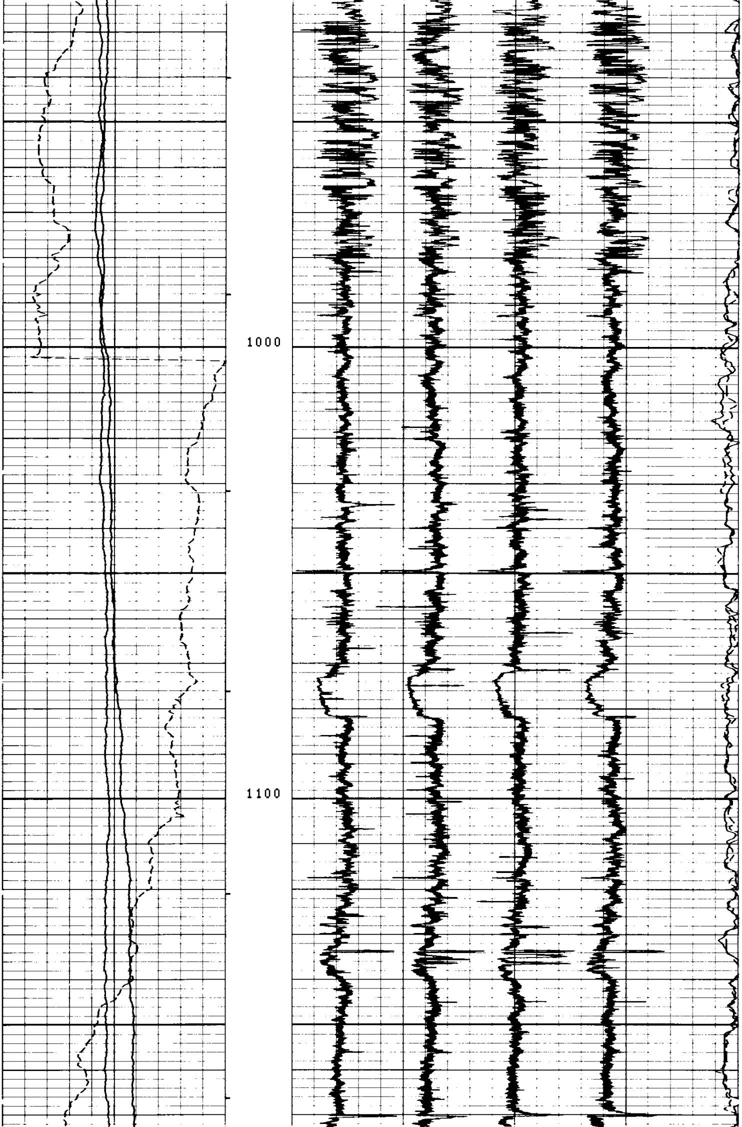
Curve	Left	Right
DEVI(DEG)	-1.000	9.000
RB (DEG)	-40.00	360.0
AZIM(DEG)	-40.00	360.0
C2 (INCH)	26.00	6.000
C1 (INCH)	26.00	6.000

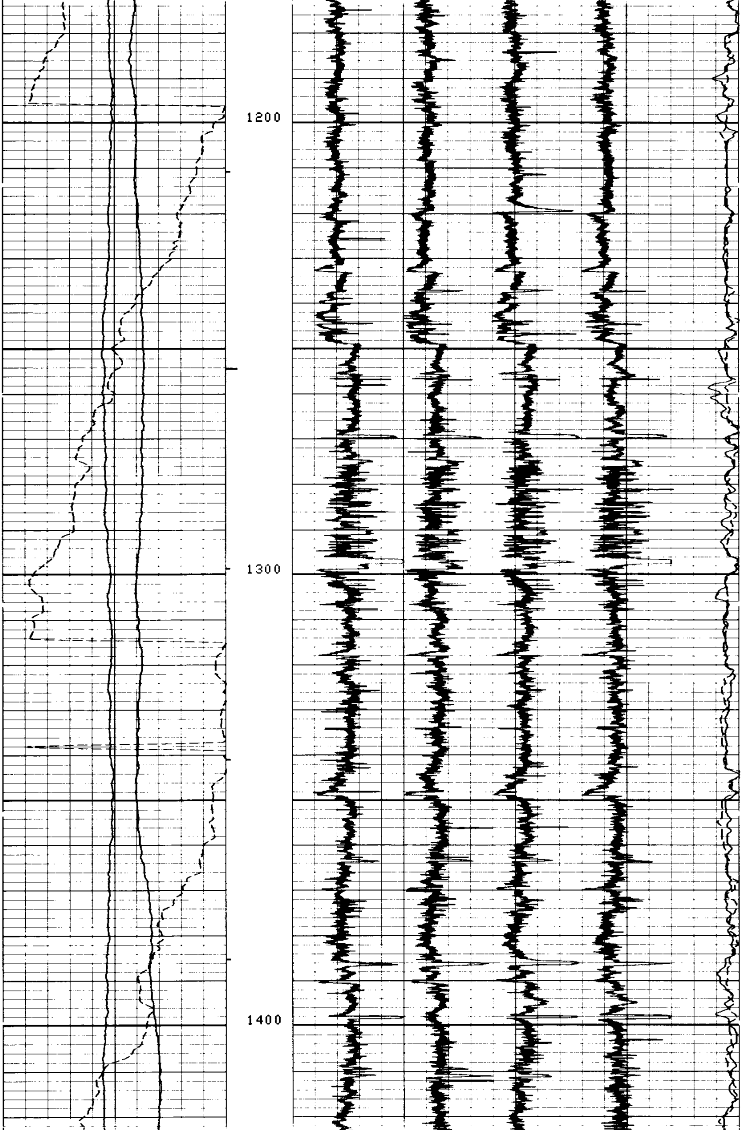
FILE

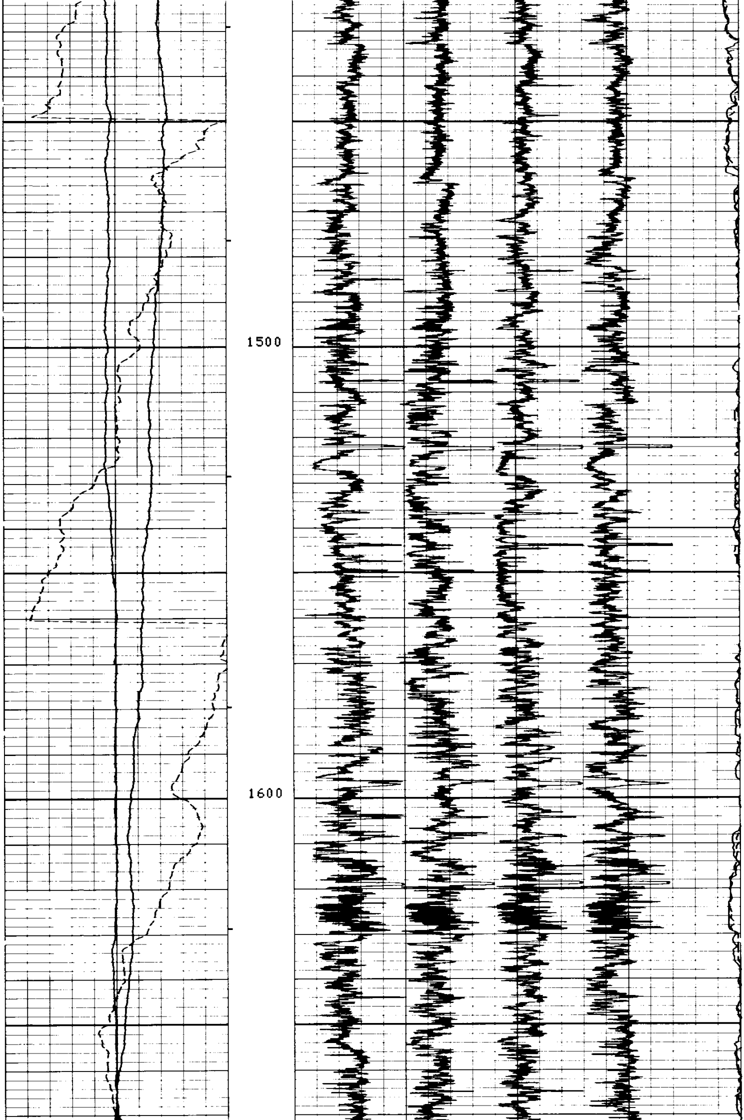
6

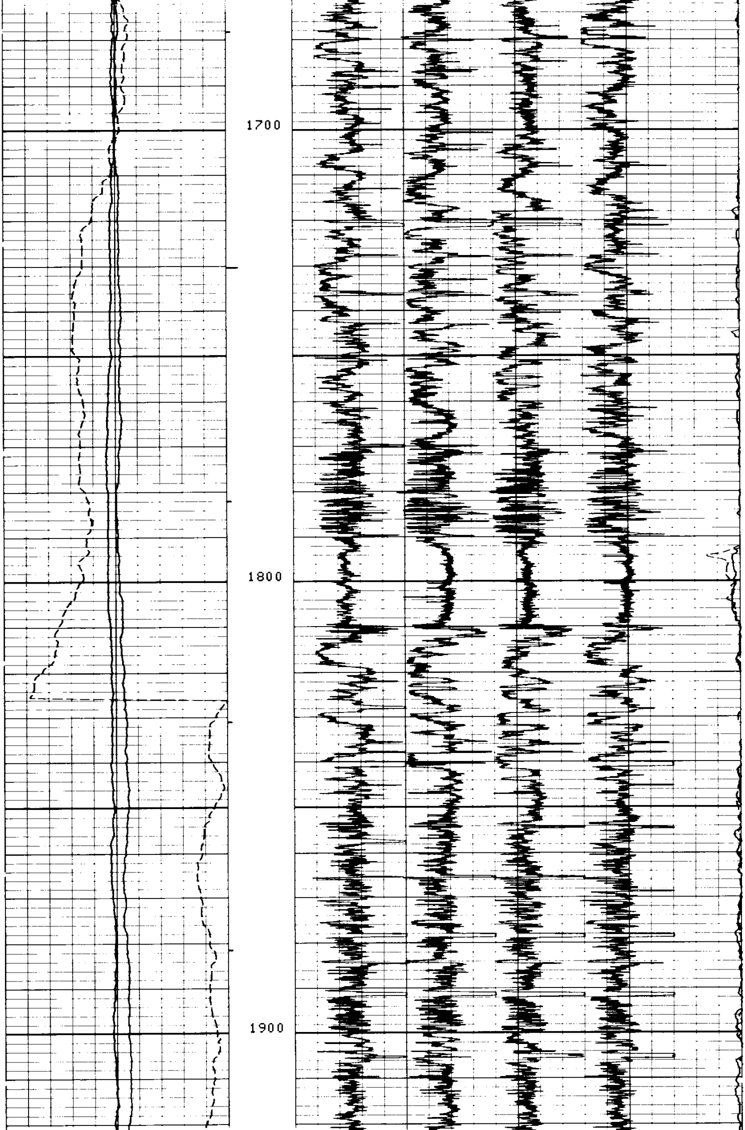


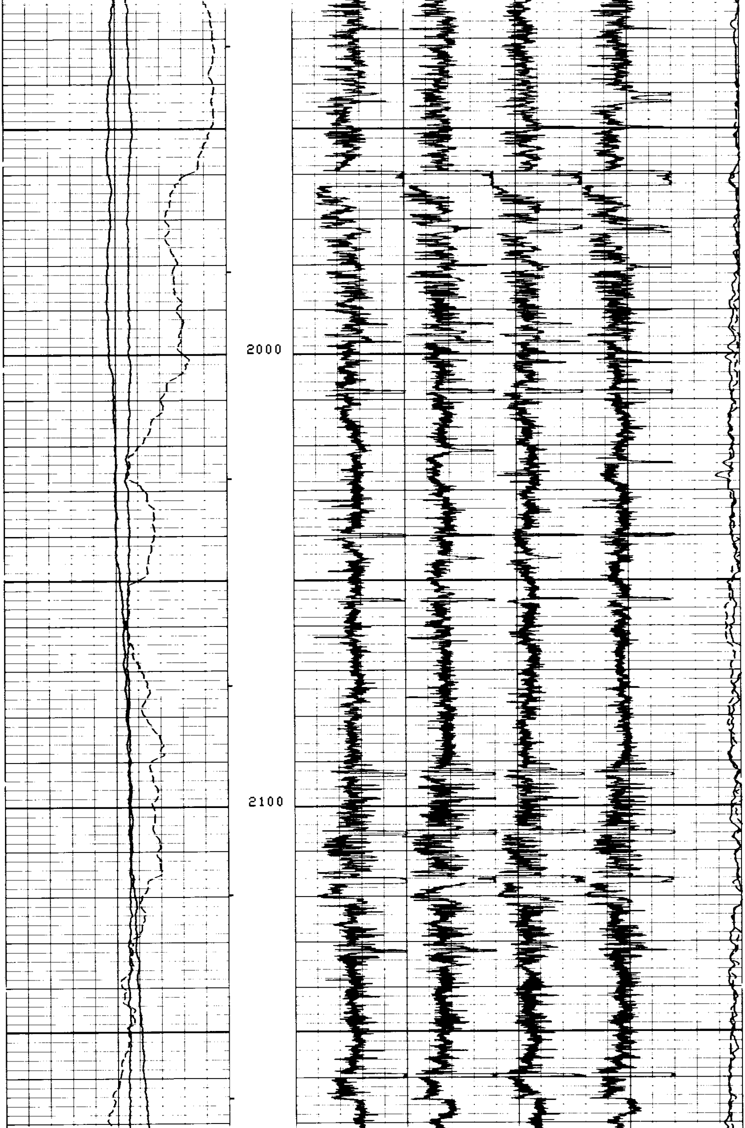


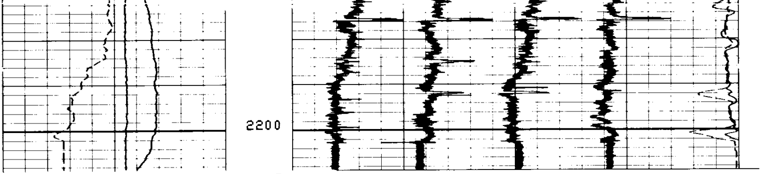












FILE

6

DEVI(DEG)		
-1.000		9.000
RB (DEG)		
-40.00		360.0
AZIM(DEG)		
-40.00		360.0

C2 (INCH)		
26.00		6.000
C1 (INCH)		
26.00		6.000

PARAMETERS

NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
STYP		STAN	MCT	DEG	72	BS	INCH	6.250
DO		0.0	BHS		OPEN	FPHI		PHIX

REPEAT SECTION REPEAT SECTION REPEAT SECTION

PARAMETERS

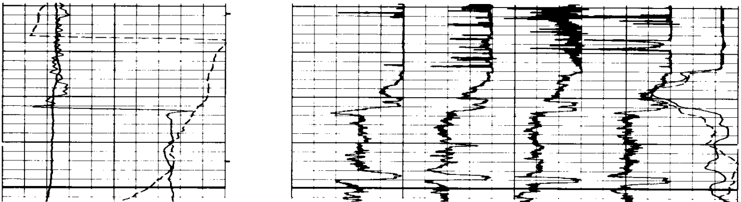
NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
STYP		STAN	MCT	DEG	72	BS	INCH	6.250
DO		0.0	BHS		OPEN	FPHI		PHIX

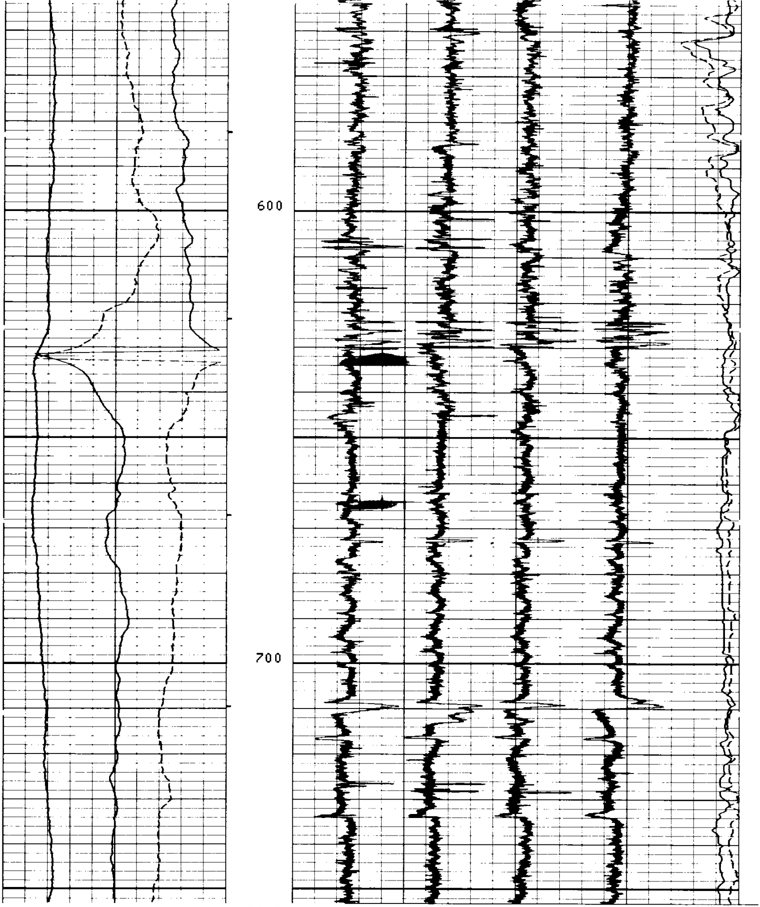
DEVI(DEG)		
-1.000		9.000
RB (DEG)		
-40.00		360.0
AZIM(DEG)		
-40.00		360.0

C2 (INCH)		
26.00		6.000
C1 (INCH)		
26.00		6.000

FILE

7





FILE

7

DEVI(DEG)	
-1.000	9.000
RB (DEG)	
-40.00	360.0
AZIM(DEG)	
-40.00	360.0

C2 (INCH)	
26.00	6.000
C1 (INCH)	
26.00	6.000

PARAMETERS

NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
STYP		STAN	MCT	DEG	72	BS	INCH	6.250
DO		0.0	BHS		OPEN	FPHI		PHIX

CALIBRATION RECORD

PARAMETERS

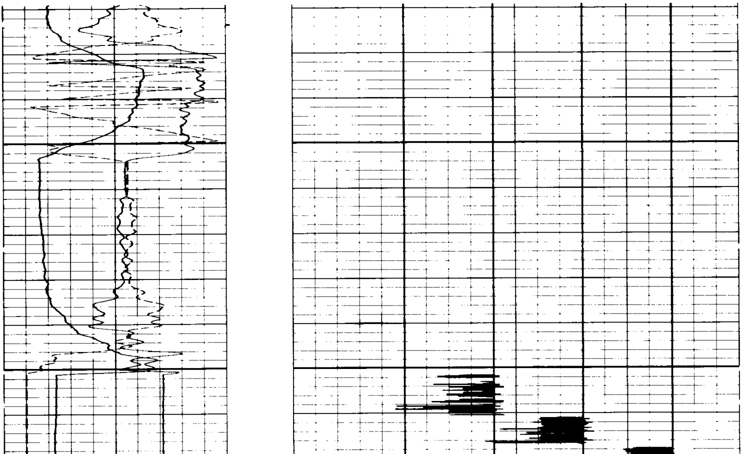
NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
STYP		STAN	MCT	DEG	72	BS	INCH	6.250
DO		0.0	BHS		OPEN	FPHI		PHIX

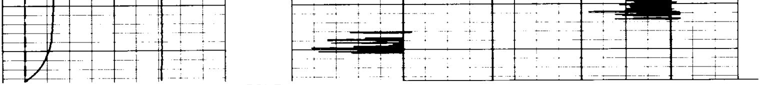
DEVI(DEG)	
-1.000	9.000
RB (DEG)	
-40.00	360.0
AZIM(DEG)	
-40.00	360.0

C2 (INCH)	
26.00	6.000
C1 (INCH)	
26.00	6.000

FILE

3





FILE

3

DEVI(DEG)		
-1.000	9.000	
RB (DEG)		C2 (INCH)
-40.00	360.0	26.00 6.000
AZIM(DEG)		C1 (INCH)
-40.00	360.0	26.00 6.000

PARAMETERS

NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
STYP		STAN	MCT	DEG	72	BS	INCH	6.250
DO		0.0	BHS		OPEN	FPHI		PHIX

BEFORE SURVEY CALIBRATION SUMMARY

PERFORMED: 80/10/16
PROGRAM FILE: HDT (VERSION 18.2 80/ 4/29)

HDT CALIPER CALIBRATION SUMMARY

	MEASURED		CALIBRATED		
	SMALL	LARGE	SMALL	LARGE	UNITS
C1	8.6	13.3	8.0	12.0	IN
C2	8.5	13.2	8.0	12.0	IN

FILE

2

ORIENTATION	DEPTHS	CORRELATION CURVES ←CONDUCTIVITY

COMPANY AMERICAN QUASAR PETROLUFM COMPANY

WELL INVESTMENT MANAGEMENT NO. 20-21

FIELD MIST NEHALEM BASIN

COUNTY COLUMBIA STATE OREGON

HIGH RESOLUTION DIPMETER CALIBRATION CODING

1. MECHANICAL ZERO
2. ELECTRICAL ZERO
3. FULL SCALE ADJUST
4. CALIPER ADJUST AT 6" AND 16" CALIPER 1-3 IS CODED
5. CALIPER ADJUST AT 6" AND 16" CALIPER 2-4 IS SOLID
6. PAD #1 RESPONSE CHECK
7. PAD #2 RESPONSE CHECK
8. PAD #3 RESPONSE CHECK
9. PAD #4 RESPONSE CHECK
10. SONDE HANGING VERTICALLY
11. TOOL AND PAD #1 POINTED NORTH
12. TOOL ROTATING