Schlumberger

DUAL INDUCTION-SFL
WITH LINEAR CORRELATION LOG

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

COMPANY AMERICAN QUASAR PETROLEUM COMPANY

WELL INVESTMENT MANAGEMENT NO. 20-21 RD

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:
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
NOV 24 1980
DEPT OF GEOLOGY & MINERAL [illegible]

Date	10-20-80			
Run No.	ONE			
Depth—Driller	2145			
Depth—Logger (Schl.)	2140			
Btm. Log Interval	2134			
Top Log Interval	522			
Casing—Driller	7" @ 521	@	@	@
Casing—Logger	522			
Bit Size	6¼"			
Type Fluid in Hole	LIGNOSULFONATE			
Dens. | Visc.	73.0 | 41.0			
pH | Fluid Loss	10.0 | 6.0 ml	ml	ml	ml
Source of Sample	CIRCULATION			
Rm @ Meas. Temp.	2.85 @ 59 °F	@ °F	@ °F	@ °F
Rmf @ Meas. Temp.	2.53 @ 50 °F	@ °F	@ °F	@ °F
Rmc @ Meas. Temp.	3.20 @ 58 °F	@ °F	@ °F	@ °F
Source: Rmf | Rmc	M | M			
Rm @ BHT	1.93 @ 87 °F	@ °F	@ °F	@ °F
TIME Circulation Stopped	0130			
TIME Logger on Bottom	0300			
Max. Rec. Temp.	87 °F	°F	°F	°F
Equip. | Location	8128 | SAC			
Recorded By	LANGFORD/SCANLAN			
Witnessed By	T. SMITH			

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

Run No.	ONE			
Service Order No.	135737			
Fluid Level	FULL			
Salinity ppm. cl	-			
Speed F.P.M.	-			
EQUIPMENT DATA				
Panel No.	IEM-BB-36			
Cartridge No.	DIC-100			
Sonde No.	DIS-83			
Mem. Panel No.	-			
G.R. Panel No.	-			
G.R. Cart No.	-			
Tape Recorder - (TTR)	-			
Depth Encoder - (DRE)	-			
Pressure Wheel - (CPM)	-			
Type Centralizers	1" FIN			
Stand Off - Inches	1"			
CALIBRATION DATA				
SBR	1.0			
Sonde Error - ILM	16.53			
Sonde Error - ILD	4.82			
G.R. BKG. - CPS.	-			
G.R. Source - CPS.	-			
S.E. Set In Hole - Depth	-			
S.E. Corr. - Hole Size	-			
LOGGING DATA				
SBR	1.0			
Sonde Error Log - ILM	16.53			
Sonde Error Log - ILD	4.82			
G.R. Scale per 100 Div.	-			
G.R. - T.C. Log	-			
	°F	°F	°F	°F
	°F	°F	°F	°F
	°F	°F	°F	°F

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

REMARKS

REPEAT @ TOP DUE TO HOLE CONDITIONS.

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 our General Terms and Conditions as set out in our current Price Schedule.

PARAMETERS

NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
DTM	US/F	55.60	CDTS		150.0	BS	INCH	6.250
SBR	OHMM	1.000	DSEC	MM/M	4.820	DTF	US/F	189.0
FPHI		SPHI	MSEC	MM/M	16.53			
DO		0.0	BHS		OPEN			

SP (MV)
-100.0 0.0

ILD (OHMM)
0.0 30.00

SFLA(OHMM)
0.0 6.000

SFLA(OHMM)
0.0 30.00

CILD(MM/M)
1000. 0.0

FILE

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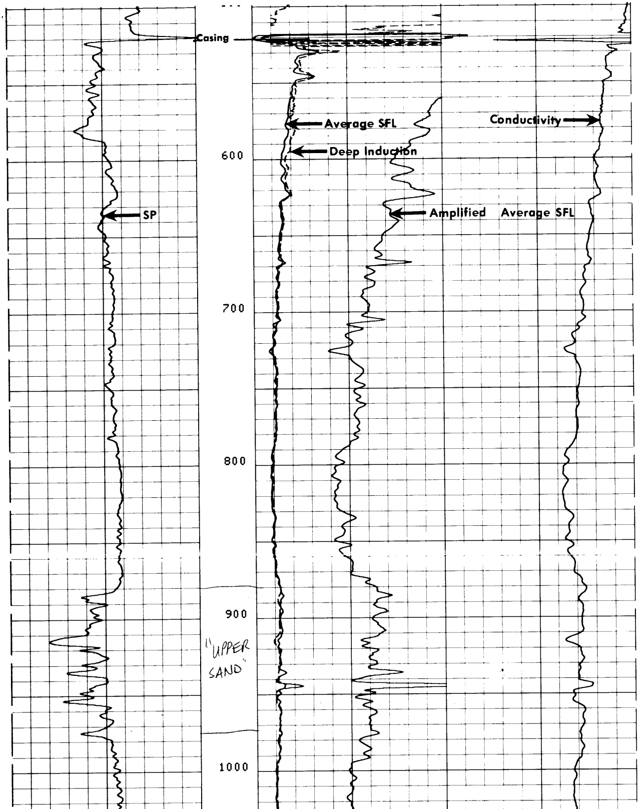

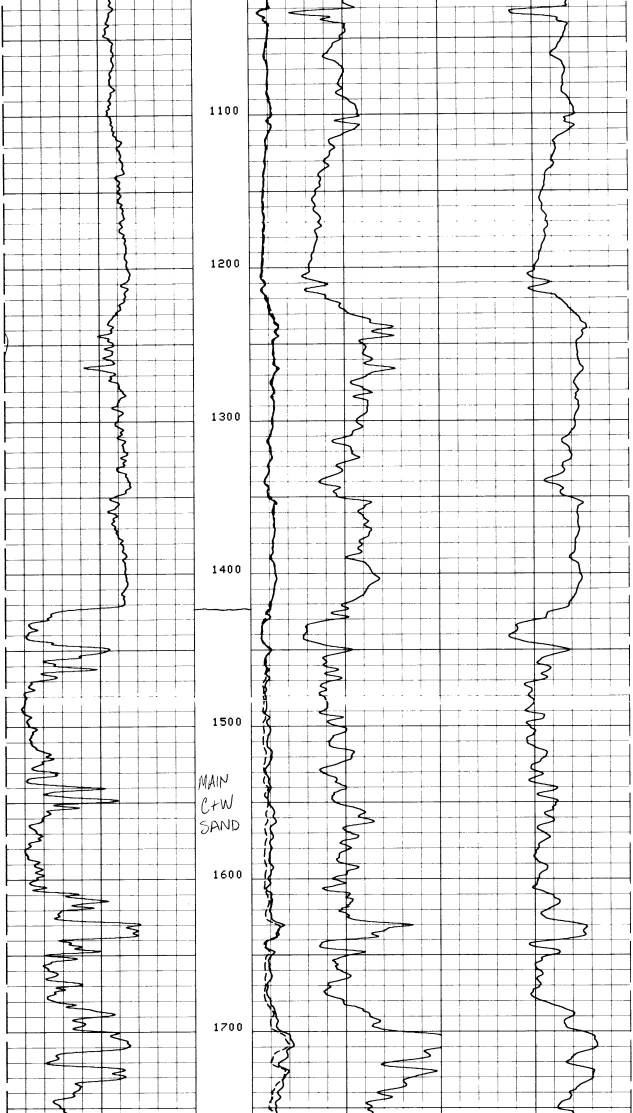

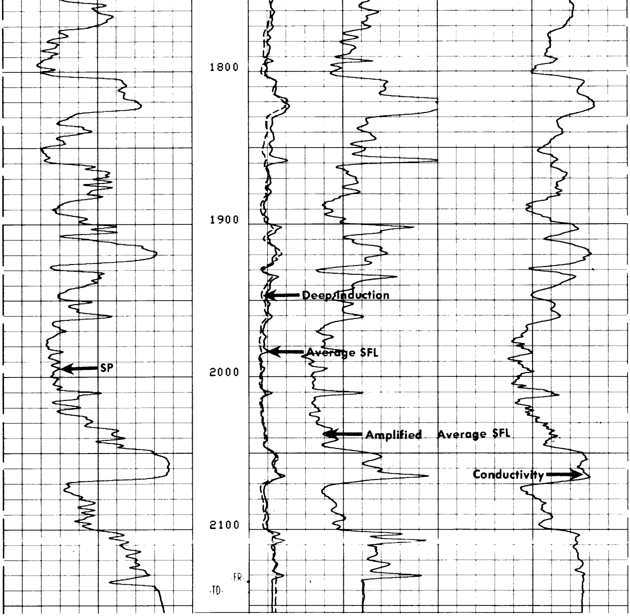

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		ILD (OHMM) 0.0 30.00	
		SFLA(OHMM) 0.0 6.000	
SP (MV) -100.0 0.0		SFLA(OHMM) 0.0 30.00	CILD(MM/M) 1000. 0.0

PARAMETERS

NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
DTM	US/F	55.60	CDTS		150.0	BS	INCH	6.250
SBR	OHMM	1.000	DSEC	MM/M	4.820	DTF	US/F	189.0
FPHI		SPHI	MSEC	MM/M	16.53			
DO		0.0	BHS		OPEN			

PARAMETERS

NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
DTM	US/F	55.60	CDTS		150.0	BS	INCH	6.250
SBR	OHMM	1.000	DSEC	MM/M	4.820	DTF	US/F	189.0
FPHI		SPHI	MSEC	MM/M	16.53			
DO		0.0	BHS		OPEN			

RWA (OHMM)		ILD (OHMM)
0.0 3.000		0.2000 2000.
SP (MV)		ILM (OHMM)
-100.0 0.0		0.2000 2000.
		SFLU(OHMM)
		0.2000 2000.

FILE

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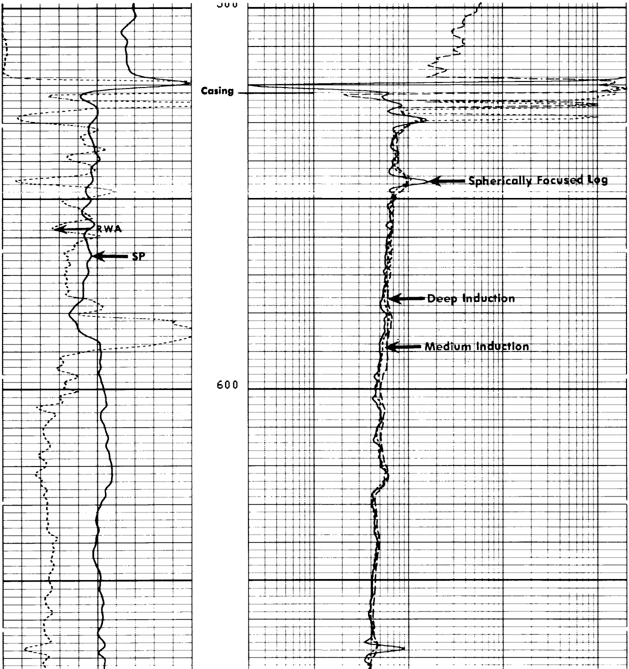

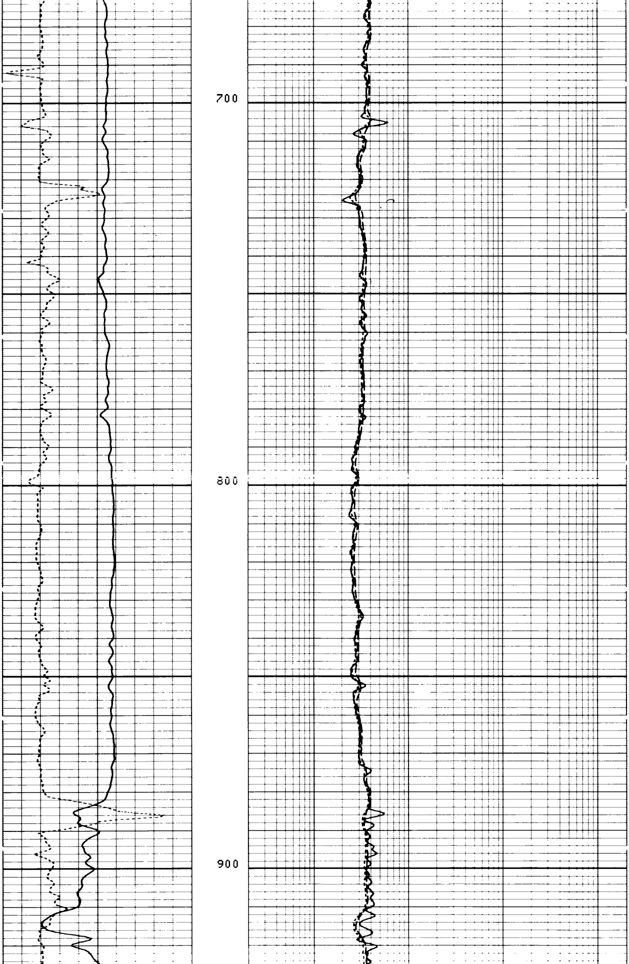

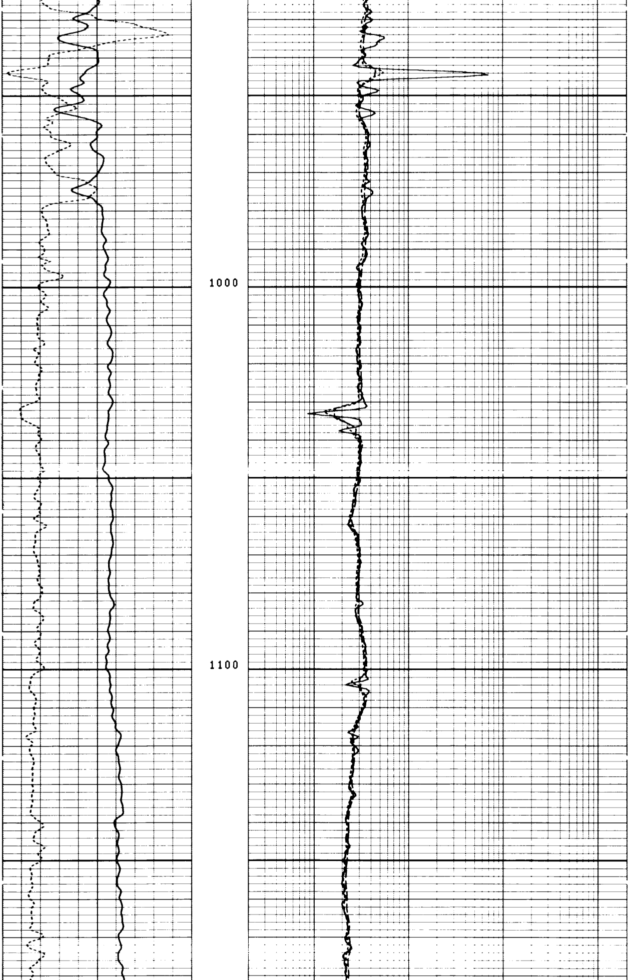

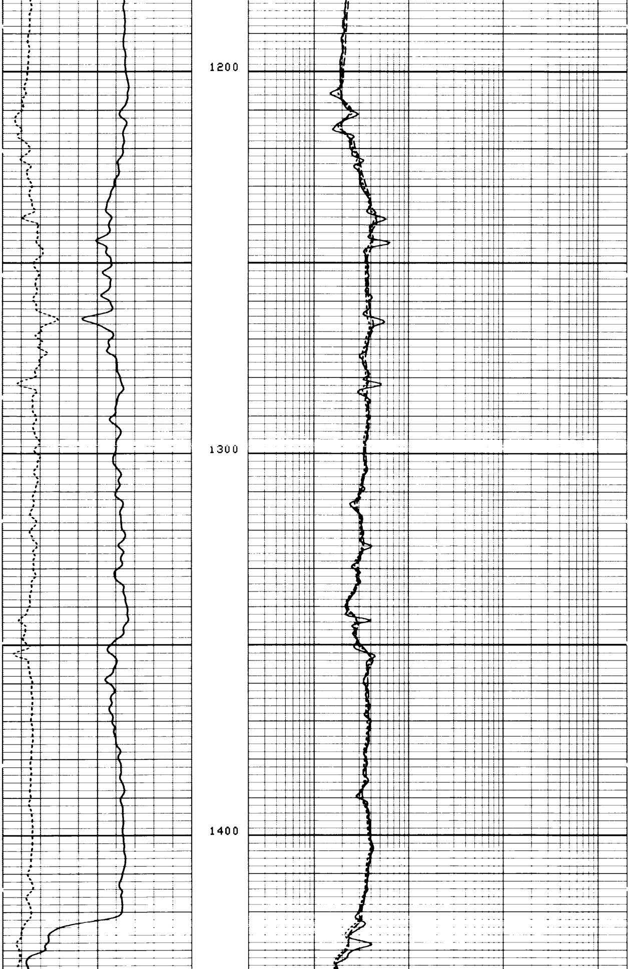

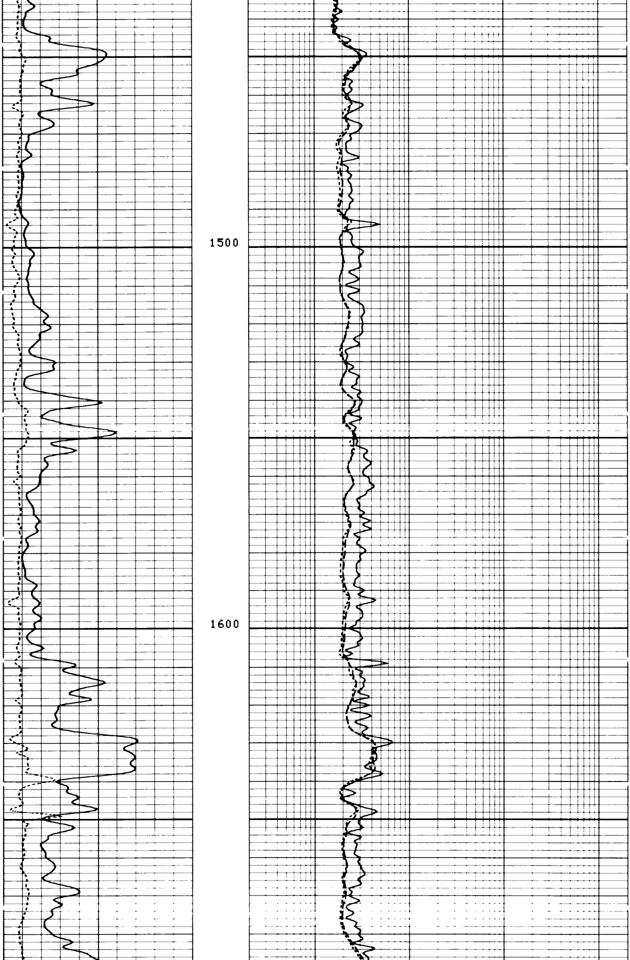

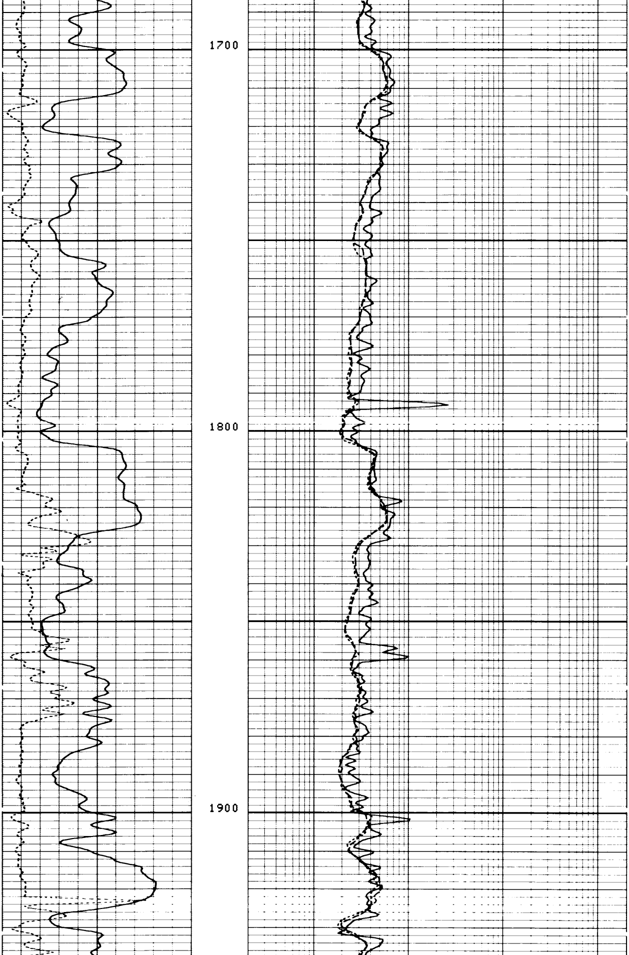

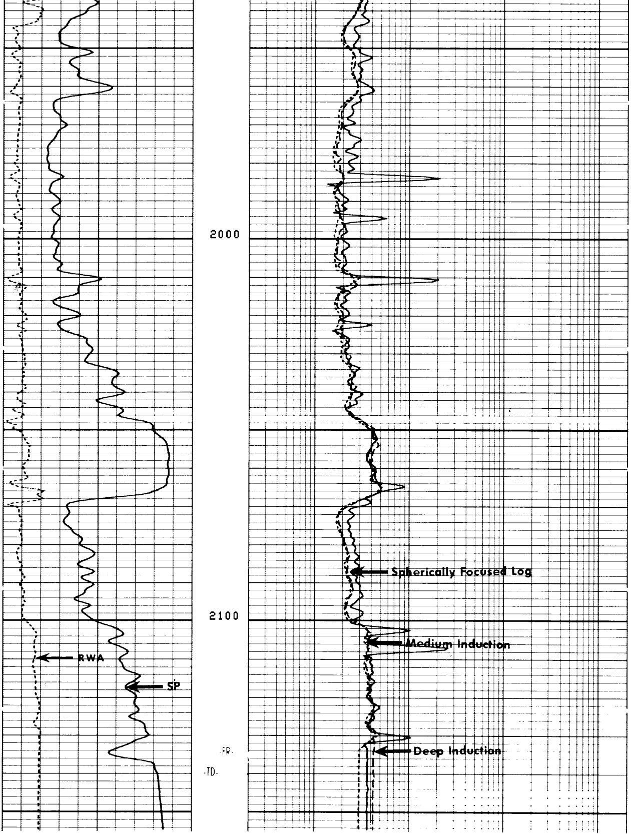

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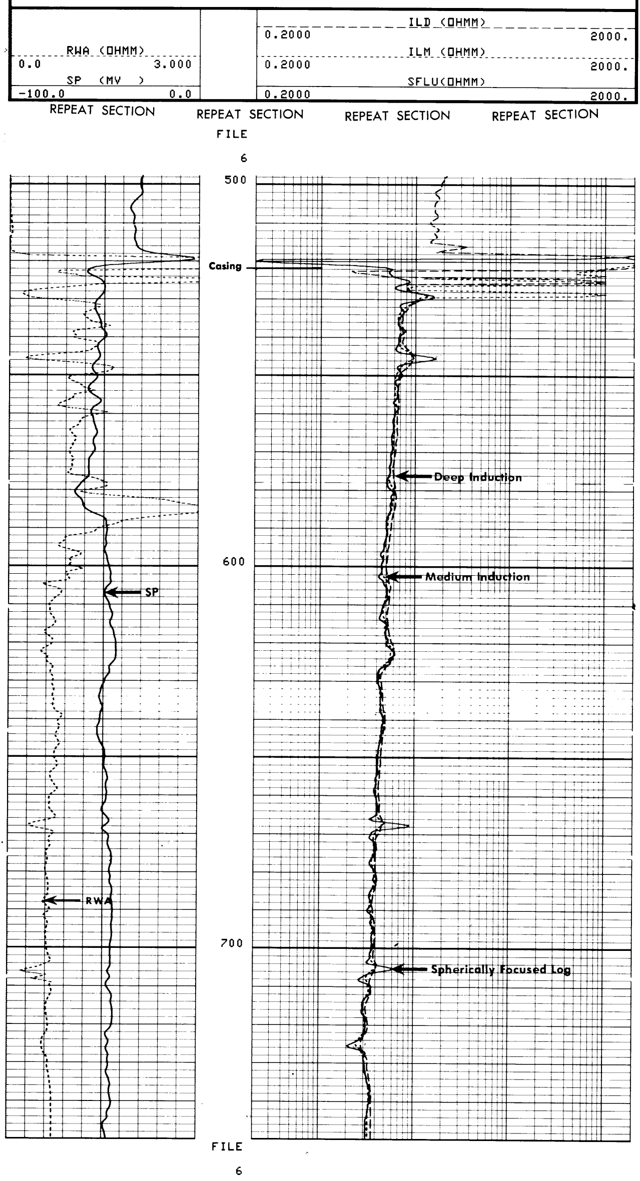
RWA (OHMM)			ILD (OHMM)	
0.0	3.000		0.2000	2000.
SP (MV)			ILM (OHMM)	
-100.0	0.0		0.2000	2000.
			SFLU(OHMM)	
			0.2000	2000.

PARAMETERS

NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
DTM	US/F	55.60	CDTS		150.0	BS	INCH	6.250
SBR	OHMM	1.000	DSEC	MM/M	4.820	DTF	US/F	189.0
FPHI		SPHI	MSEC	MM/M	16.53			
DO		0.0	BHS		OPEN			



```
                                                  ____________ILD (OHMM)_____________
                                                  0.2000                        2000.
         RWA (OHMM)
0.0                     3.000                     ____________ILM (OHMM)_____________
                                                  0.2000                        2000.
         SP   (MV   )                                         SFLU(OHMM)
-100.0                  0.0                       0.2000                        2000.
```

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                              PARAMETERS

NAME   UNIT   VALUE        NAME   UNIT   VALUE        NAME   UNIT   VALUE


DTM    US/F   55.60        CDTS          150.0        BS     INCH   6.250
SBR    OHMM   1.000        DSEC   MM/M   4.820        DTF    US/F   189.0
FPHI          SPHI         MSEC   MM/M   16.53
DO            0.0          BHS           OPEN
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CALIBRATION RECORD

```
                 SHOP SUMMARY


  PERFORMED:      80/10/07
  PROGRAM FILE: SHOP   (VERSION    18.2    80/ 4/29)


DITD               ELECTRONICS CALIBRATION SUMMARY

                  ELECTRONICS CALIBRATION          SONDE
               MEASURED           CALIBRATED       ERROR     TEST
            ZERO     PLUS      ZERO       PLUS     CORR.     LOOP      UNITS
    ILD      2.8     563.8      0.0       499.8     4.82     481.3     MM/M
    ILM      2.5     628.8      0.0       499.9    16.53     502.0     MM/M

                          (IS:83    , IC:100   )
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                  AFTER SURVEY TOOL CHECK SUMMARY


  PERFORMED:      80/10/20
  PROGRAM FILE: ISN    (VERSION    18.2    80/ 4/29)


DITD                       TOOL   CHECK

                    ZERO                       PLUS
            BEFORE         AFTER         BEFORE       AFTER      UNITS
    ILD       0.0           -1.3         499.8        495.3      MM/M
    ILM       0.0           -2.3         499.9        495.0      MM/M
    SFL       0.0           -0.2         499.9        499.0      MM/M

ILM   SONDE ERROR CORRECTION :        16.5    MM/M
ILD   SONDE ERROR CORRECTION :         4.8    MM/M
                        FILE

                          9
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                  BEFORE SURVEY CALIBRATION SUMMARY


  PERFORMED:      80/10/20
  PROGRAM FILE: ISN    (VERSION    18.2    80/ 4/29)


DITD               ELECTRONICS CALIBRATION SUMMARY

               MEASURED                        CALIBRATED
            ZERO     PLUS                   ZERO        PLUS          UNITS
    ILD      1.6     567.1                   0.0        499.8          MM/M
    ILM      0.5     632.8                   0.0        499.9          MM/M
    SFL     -6.7     531.5                   0.0        499.9          MM/M

ILM   SONDE ERROR CORRECTION :        16.5    MM/M
ILD   SONDE ERROR CORRECTION :         4.8    MM/M
```

CALIBRATION RECORD

COMPANY	AMERICAN QUASAR PETROLEUM COMPANY	SCHL. FR	2134
		SCHL. TD	2140
WELL	INVESTMENT MANAGEMENT NO. 20-21 RD	DRLR. TD	2145
FIELD	MIST NEHALEM BASIN	Elev: KB	628.66
		DF	--
COUNTY	COLUMBIA STATE OREGON	GL	618.16

SWS-2517