RAU 18-14-64 + RD 1

Schlumberger

DUAL INDUCTION-SFL
WITH LINEAR CORRELATION LOG

COUNTY COLUMBIA
FIELD MIST
LOCATION 18-6N-5W
WELL RAU NO. 18-14 RD
COMPANY AMERICAN QUASAR

COMPANY AMERICAN QUASAR PETROLEUM COMPANY
WELL RAU NO. 18-14 RD
FIELD MIST NEHALEM BASIN
COUNTY COLUMBIA **STATE** OREGON

LOCATION 900'NORTH & 1099.41'EAST FROM THE SOUTHWEST CORNER OF:

API SERIAL NO.	SEC.	TWP	RANGE
	18	6N	5W

Other Services:
BHC
HDT
FDC/CNL/GR

Permanent Datum: GL ; Elev.: 583
Log Measured From KB10.5 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 593.5
D.F. --
G.L. 583.0

Date	9-15-80							
Run No.	ONE							
Depth—Driller	2440							
Depth—Logger (Schl.)	2441							
Btm. Log Interval	2435							
Top Log Interval	515							
Casing—Driller	7" @515		@		@		@	
Casing—Logger	515							
Bit Size	6¼"							
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	CIRCULATION							
Rm @ Meas. Temp.	2.23 @65 °F		@ °F		@ °F		@ °F	
Rmf @ Meas. Temp.	2.57 @48 °F		@ °F		@ °F		@ °F	
Rmc @ Meas. Temp.	3.39 @67 °F		@ °F		@ °F		@ °F	
Source: Rmf | Rmc	M	M						
Rm @ BHT	1.76 @ 84°F		@ °F		@ °F		@ °F	
TIME Circulation Stopped	2330 9/14							
TIME Logger on Bottom	0315							
Max. Rec. Temp.	84°F		°F		°F		°F	
Equip. | Location	8128	SAC						
Recorded By	LANGFORD							
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.	135729			
Fluid Level	FULL			
Salinity ppm. cl	-			
Speed F.P.M.	40			
EQUIPMENT DATA				
Panel No.	384			
Cartridge No.	217			
Sonde No.	195			
Mem. Panel No.	CSU			
G.R. Panel No.	443			
G.R. Cart No.	2087			
Tape Recorder - (TTR)	-			
Depth Encoder - (DRE)	-			
Pressure Wheel - (CPM)	-			
Type Centralizers	FIN			
Stand Off - Inches	1			
CALIBRATION DATA				
SBR	1.0			
Sonde Error - ILM	4.79			
Sonde Error - ILD	5.44			
G.R. BKG. - CPS.	55			
G.R. Source - CPS.	213			
S.E. Set In Hole - Depth	-			
S.E. Corr. - Hole Size	-			
LOGGING DATA				
SBR	1.0			
Sonde Error Log - ILM	4.79			
Sonde Error Log - ILD	5.44			
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 AT TOP DUE TO BOREHOLE 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.

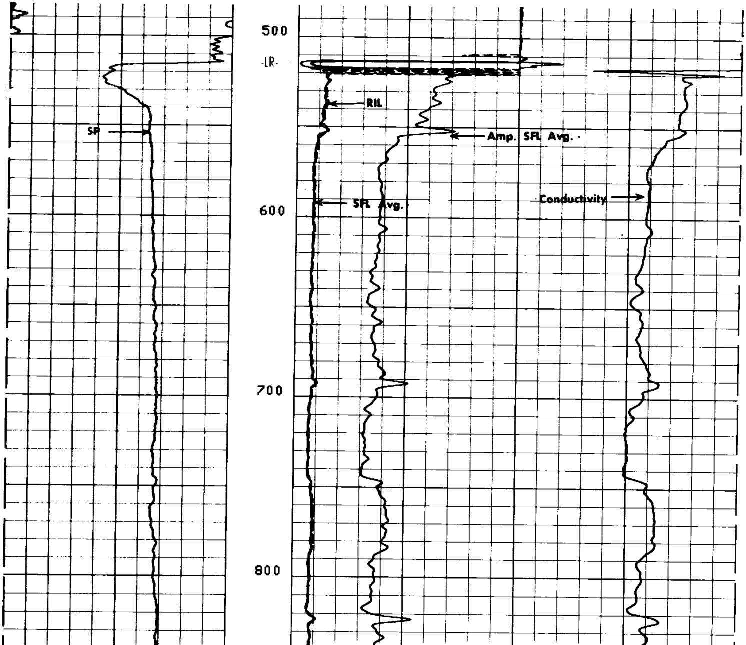
PARAMETERS

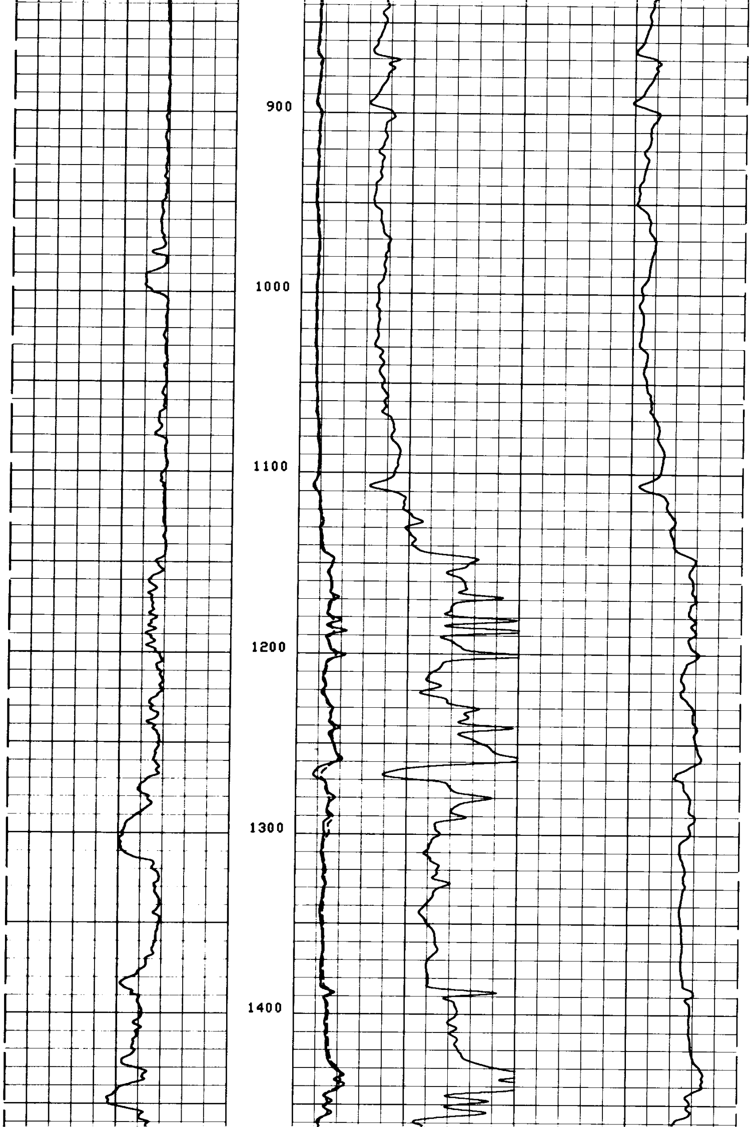
NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
DTM	US/F	56.00	CDTS		100.0	BS	INCH	6.250
SBR	OHMM	1.000	DSEC	MM/M	5.440	DTF	US/F	189.0
FPHI		SPHI	MSEC	MM/M	4.790			
DO		0.0	BHS		OPEN			

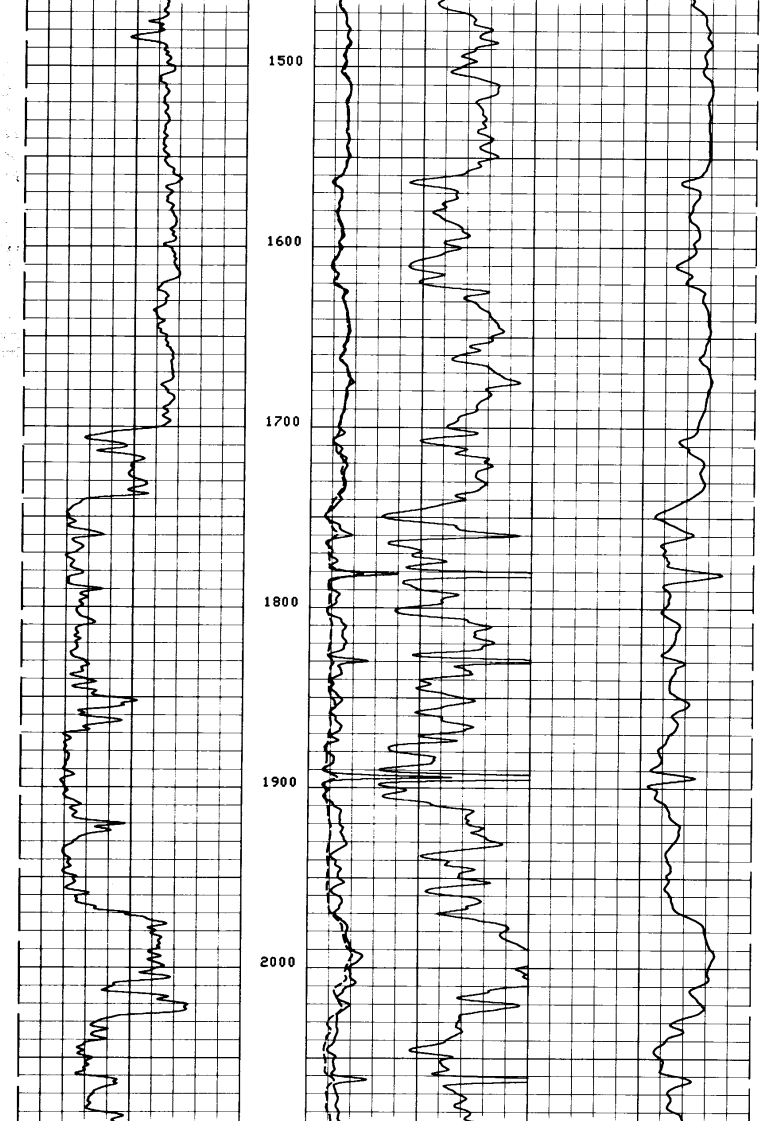
SP (MV)		ILD (OHMM) SFLA(OHMM) SFLA(OHMM)	CILD(MM/M)
-100.0 0.0		0.0 30.00 0.0 6.000 0.0 30.00	1000. 0.0

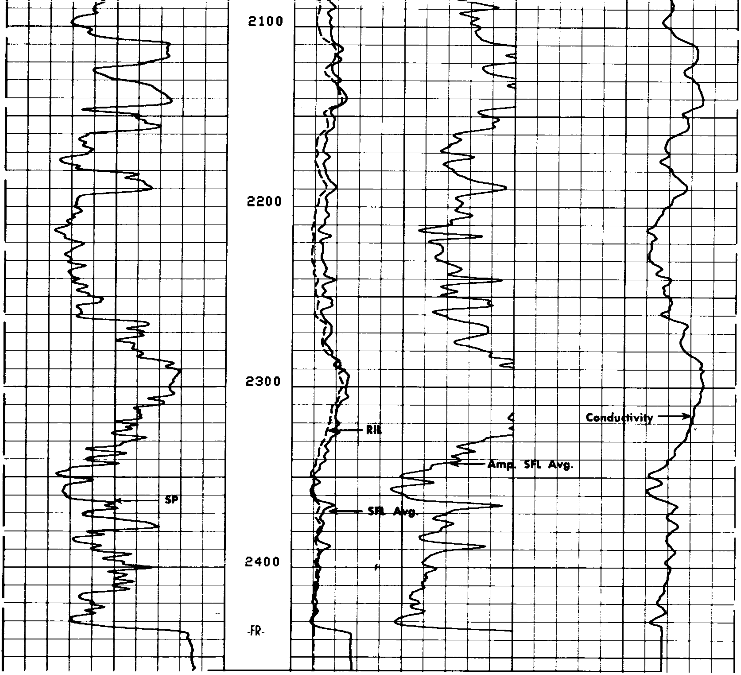
FILE

10









FILE

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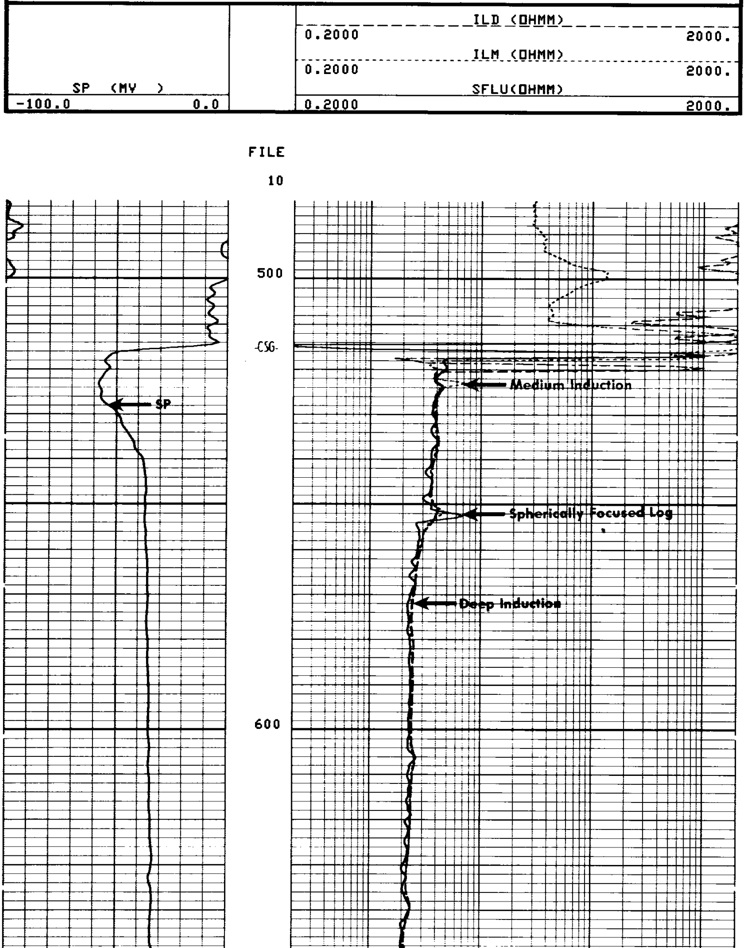
SP (MV)		ILD (OHMM) / SFLA(OHMM) / SFLA(OHMM)	CILD(MM/M)
		ILD (OHMM): 0.0 — 30.00	
		SFLA(OHMM): 0.0 — 6.000	
-100.0 — 0.0		SFLA(OHMM): 0.0 — 30.00	1000. — 0.0

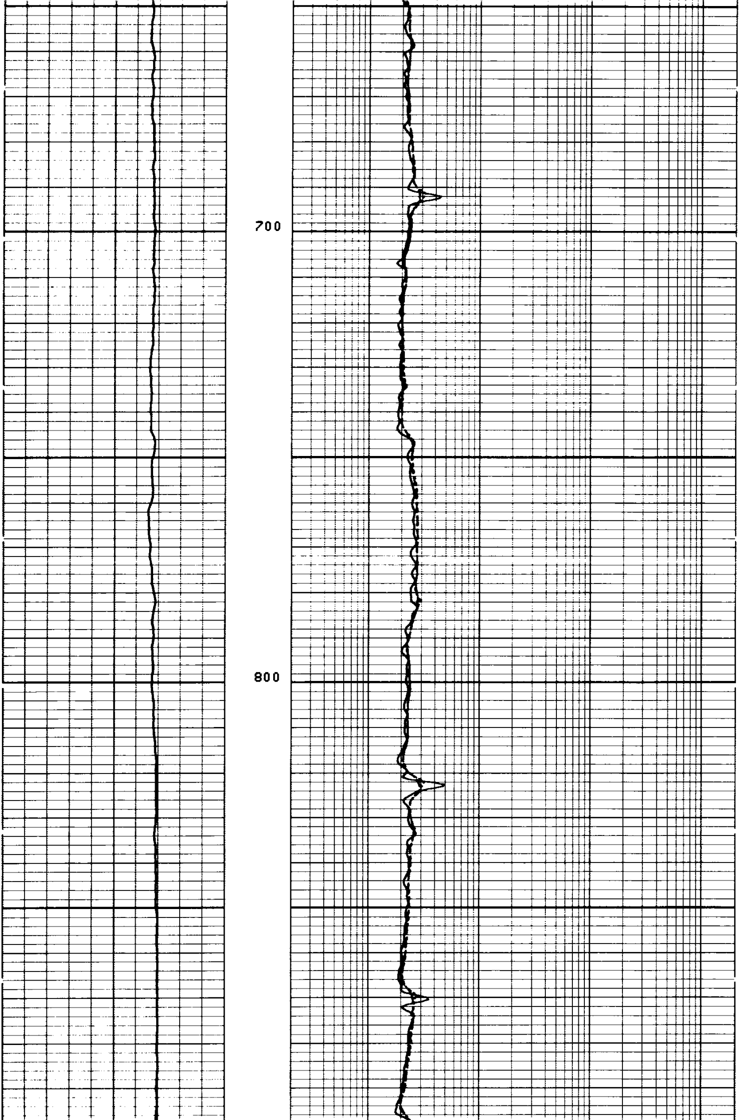
PARAMETERS

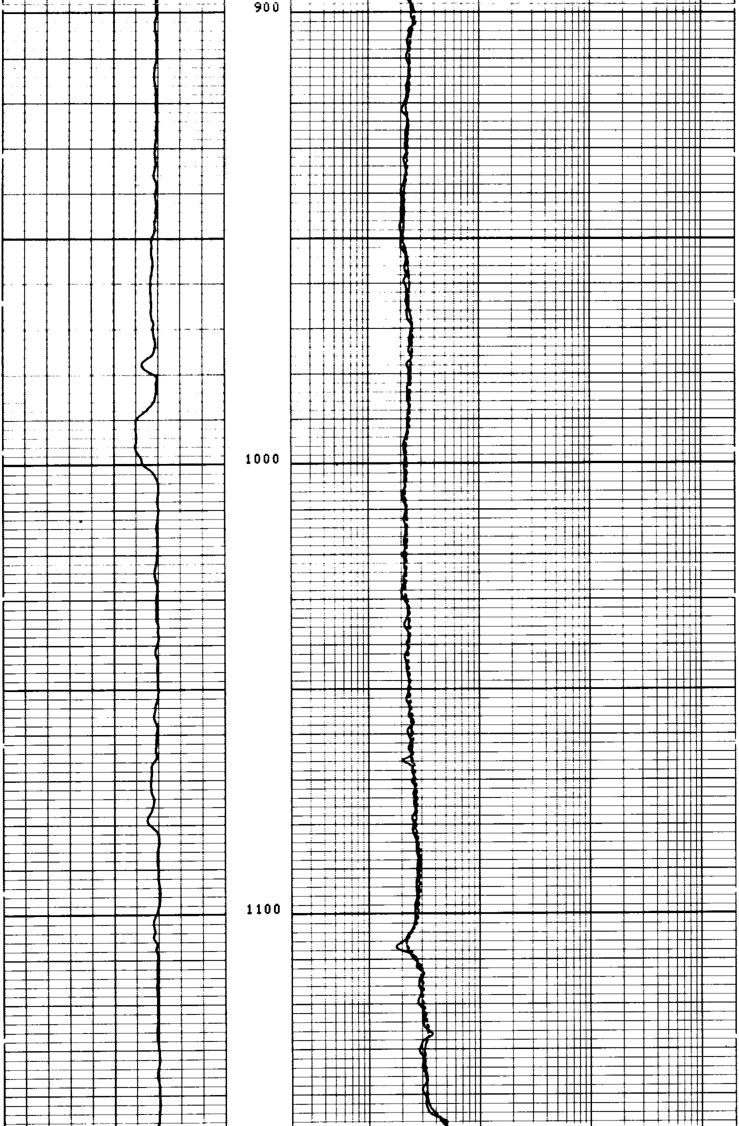
NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
DTM	US/F	56.00	CDTS		100.0	BS	INCH	6.250
SBR	OHMM	1.000	DSEC	MM/M	5.440	DTF	US/F	189.0
FPHI		SPHI	MSEC	MM/M	4.790			
DO		0.0	BHS		OPEN			

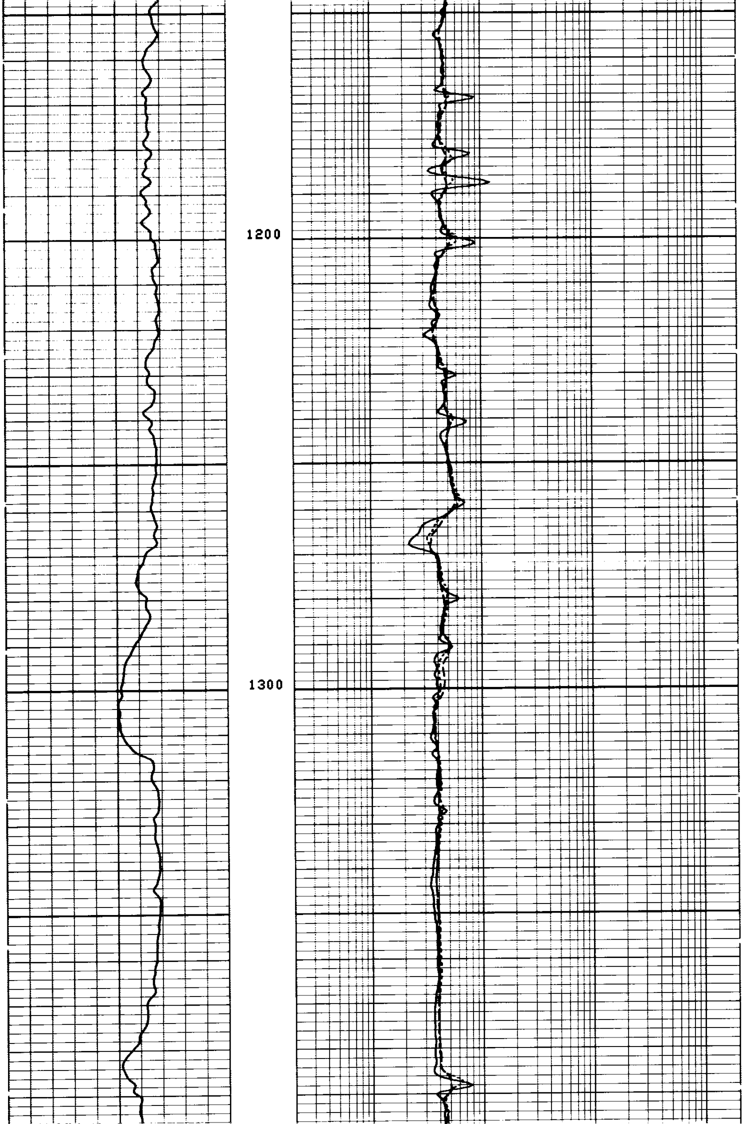
PARAMETERS

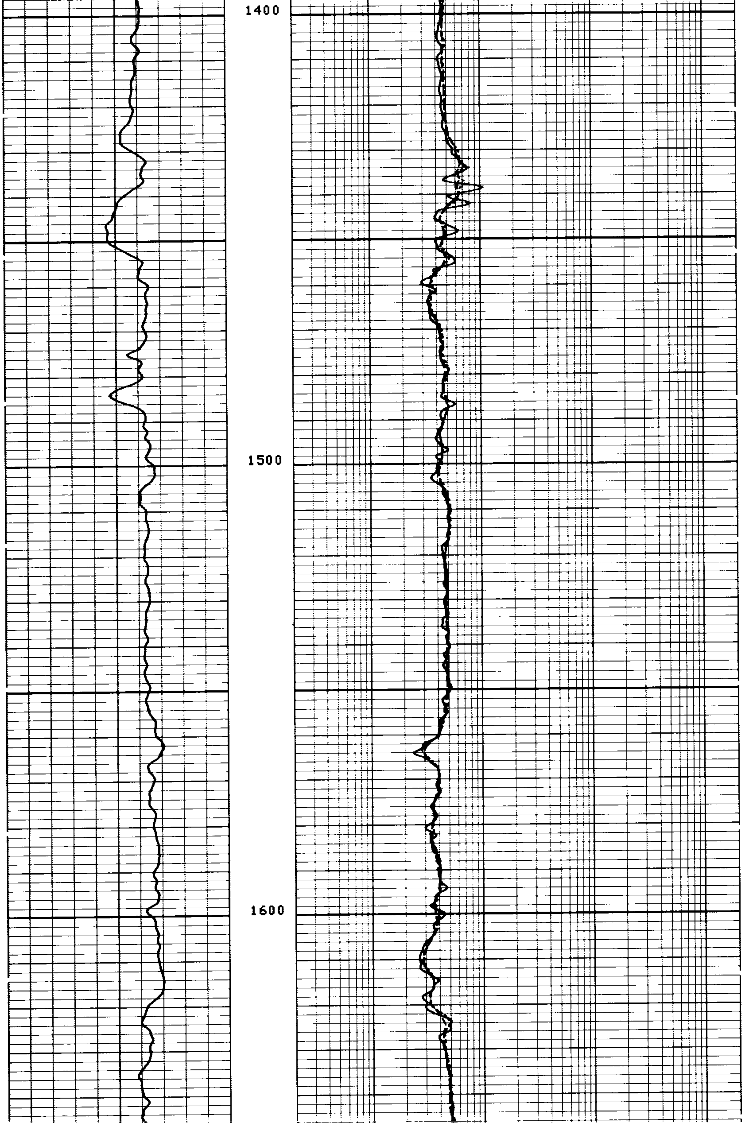
NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
DTM	US/F	56.00	CDTS		100.0	BS	INCH	6.250
SBR	OHMM	1.000	DSEC	MM/M	5.440	DTF	US/F	189.0
FPHI		SPHI	MSEC	MM/M	4.790			
DO		0.0	BHS		OPEN			

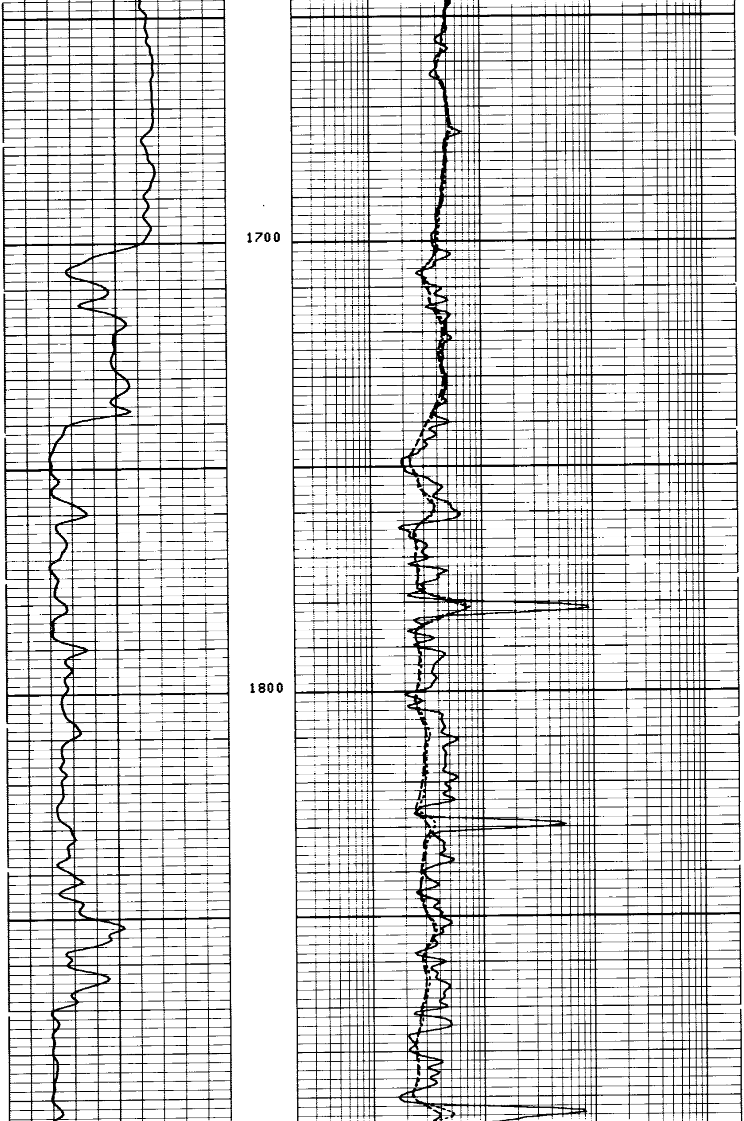


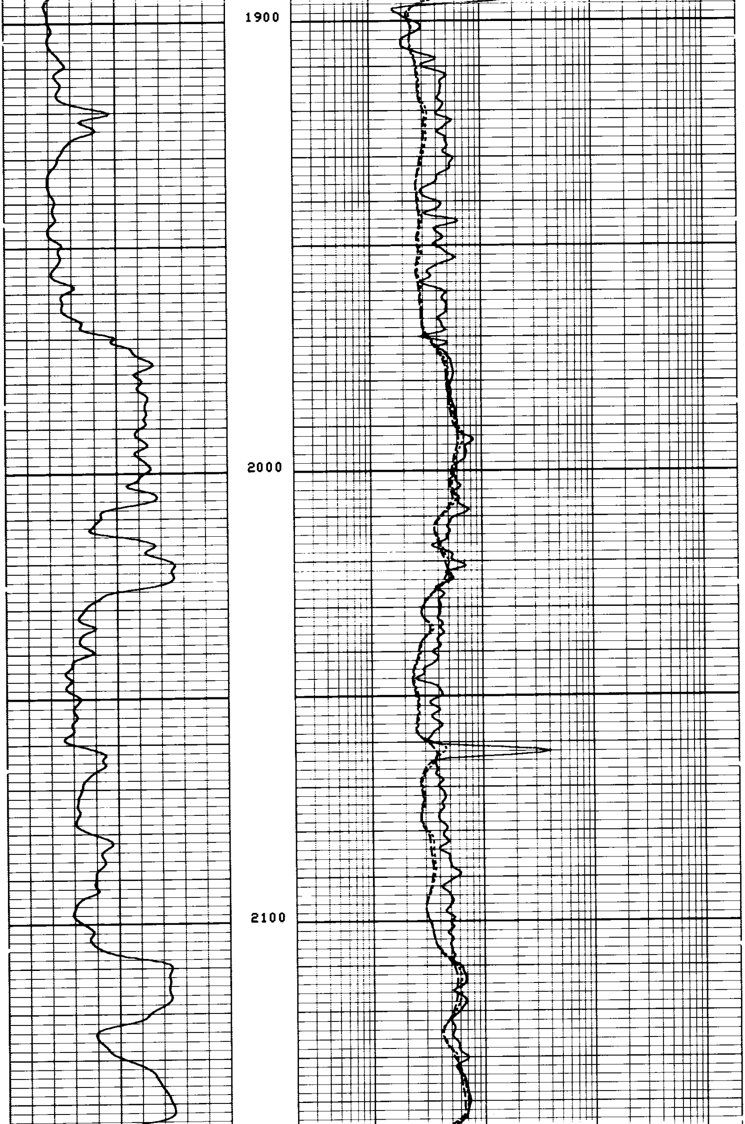


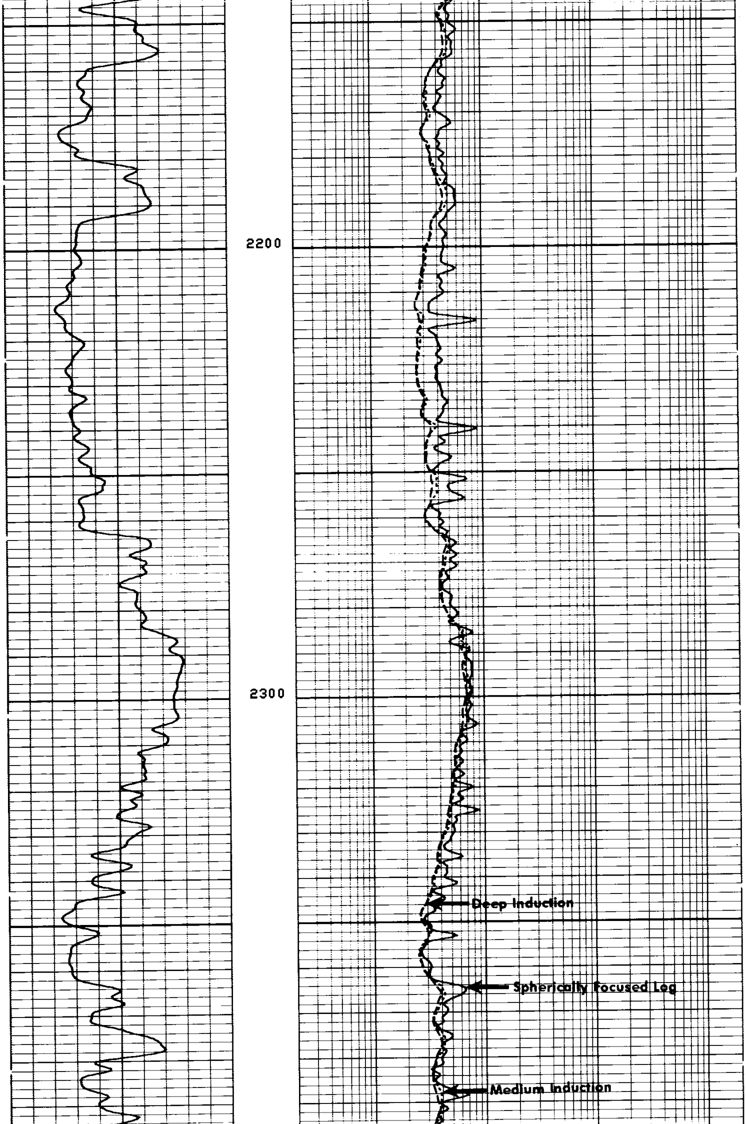


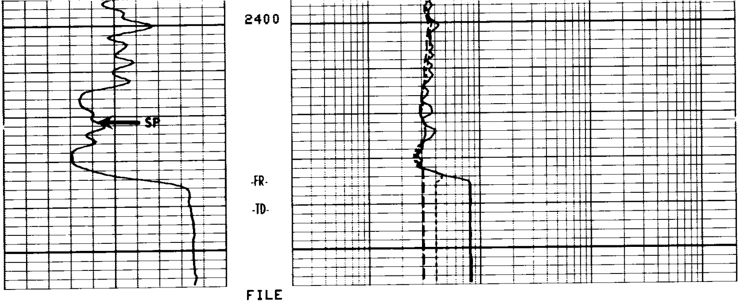












FILE

10

ILD (OHMM)

0.2000 2000.

ILM (OHMM)

0.2000 2000.

SFLU(OHMM)

0.2000 2000.

SP (MV)

-100.0 0.0

PARAMETERS

NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
DTM	US/F	56.00	CDTS		100.0	BS	INCH	6.250
SBR	OHMM	1.000	DSEC	MM/M	5.440	DTF	US/F	189.0
FPHI		SPHI	MSEC	MM/M	4.790			
DO		0.0	BHS		OPEN			

REPEAT SECTION REPEAT SECTION REPEAT SECTION REPEAT SECTION

13

PARAMETERS

NAME	UNIT	VALUE	NAME	UNIT	VALUE	NAME	UNIT	VALUE
DTM	US/F	56.00	CDTS		100.0	BS	INCH	6.250
SBR	OHMM	1.000	DSEC	MM/M	5.440	DTF	US/F	189.0
FPHI		SPHI	MSEC	MM/M	4.790			
DO		0.0	BHS		OPEN			

ILD (OHMM)

0.2000 2000.

ILM (OHMM)

0.2000 2000.

SFLU(OHMM)

0.2000 2000.

SP (MV)

-100.0 0.0

FILE

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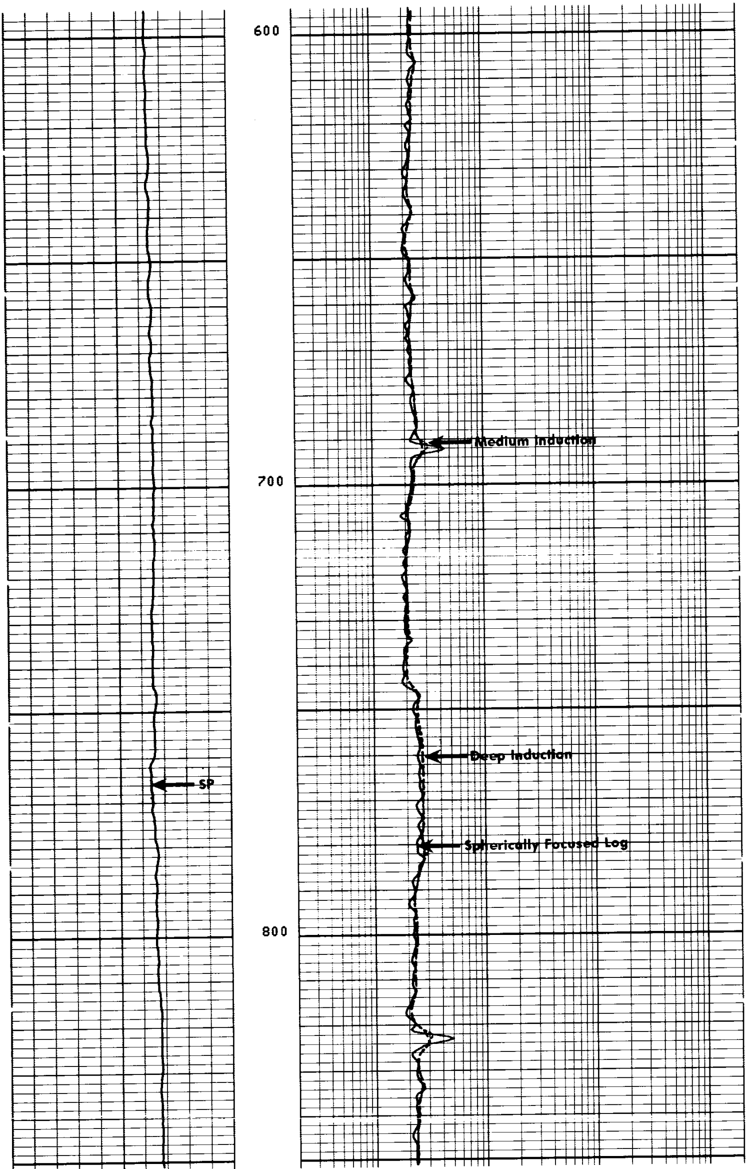

FILE

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

```
                              PARAMETERS

 NAME   UNIT   VALUE        NAME   UNIT   VALUE        NAME   UNIT   VALUE


 DTM    US/F   56.00        CDTS          100.0        BS     INCH   6.250
 SBR    OHMM   1.000        DSEC   MM/M   5.440        DTF    US/F   189.0
 FPHI          SPHI         MSEC   MM/M   4.790
 DO            0.0          BHS           OPEN
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CALIBRATION RECORD

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                   BEFORE SURVEY CALIBRATION SUMMARY


   PERFORMED:     80/09/14
   PROGRAM FILE: ISN    (VERSION    18.2    80/ 4/29)


 DITD                ELECTRONICS CALIBRATION SUMMARY

            MEASURED                         CALIBRATED
          ZERO    PLUS                  ZERO         PLUS          UNITS
    ILD    2.1    570.4                  0.0         499.8          MM/M
    ILM    1.5    552.2                  0.0         499.9          MM/M
    SFL   -5.7    514.0                  0.0         499.9          MM/M

 ILM  SONDE ERROR CORRECTION :        4.7    MM/M
 ILD  SONDE ERROR CORRECTION :        5.4    MM/M


 SGTE                DETECTOR CALIBRATION SUMMARY

            MEASURED
          BKGD    JIG          CALIBRATED          UNITS
     GR    54     213             165              GAPI


 MCDB                CALIPER CALIBRATION SUMMARY

            MEASURED                         CALIBRATED
          SMALL   LARGE                 SMALL        LARGE         UNITS
   CALI    7.5    11.5                   8.0         12.0           IN
                     FILE



                   AFTER SURVEY TOOL CHECK SUMMARY


   PERFORMED:     80/09/14
   PROGRAM FILE: ISN    (VERSION    18.2    80/ 4/29)


 DITD                          TOOL  CHECK

                   ZERO                           PLUS
           BEFORE        AFTER           BEFORE        AFTER       UNITS
    ILD     0.0           0.0            499.8         498.8       MM/M
    ILM     0.0           0.0            499.9         498.7       MM/M
    SFL     0.0           0.1            499.9         500.9       MM/M
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   ILM  SONDE ERROR CORRECTION :          4.7    MM/M
   ILD  SONDE ERROR CORRECTION :          5.4    MM/M
                                   FILE

                    SHOP SUMMARY


    PERFORMED:     80/09/09
    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      2.6     563.1     0.0       499.8   5.44      495.9     MM/M
     ILM      1.7     543.5     0.0       500.0   4.79      479.5     MM/M

                           (IS:195  , IC:217  )
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COMPANY AMERICAN QUASAR PETROLEUM COMPANY

WELL RAU NO. 18-14 RD

FIELD MIST NEHALEM BASIN

COUNTY COLUMBIA STATE OREGON

SCHL. FR 2435
SCHL. TD 2441
DRLR. TD 2440

Elev: KB 593.5
DF --
GL 583.0