CC 32-33-75 & RD 1

Schlumberger

DUAL INDUCTION-SFL 2" — 5"

CSU

```
COMPANY:    REICHHOLD ENERGY CORP.

WELL:       COLUMBIA COUNTY 32-33 REDRILL #1

FIELD:      MIST
COUNTY:     COLUMBIA
STATE:      OREGON

LOCATION:   244.5' NORTH & 6.77' WEST
            OF THE CENTER OF
   SEC:     33           TWP: 7N          RGE: 5W, WB&M


PERMANENT DATUM:        GL              ELEVATIONS-
ELEV. OF PERM. DATUM: 1092.8 '            KB: 1104.2 '
LOG MEASURED FROM:      KB                DF:
    11.4 '      ABOVE PERM. DATUM         GL: 1092.8 '
DRLG. MEASURED FROM:    KB


DATE:                 11 AUG 82
RUN NO:               1

DEPTH-DRILLER:         3030.0 '
DEPTH-LOGGER:          3030.0 '
BTM. LOG INTERVAL:     3024.0 '
TOP LOG INTERVAL:       481.0 '

CASING-DRILLER:         480 '
CASING-LOGGER:          481 '
CASING:               7"

BIT SIZE:             6.25
```

```
OTHER SERVICES-
  BHC
  HDT

PROGRAM
TAPE NO:
  22.2
SERVICE
ORDER NO:
  304031
```

```
TYPE FLUID IN HOLE:   LIGNOSULFONATE
DENSITY:              10.3 LB/G
VISCOSITY:            55.0 S
PH:                    9.0
FLUID LOSS:            4.4 C3
SOURCE OF SAMPLE:     FLOWLINE
RM:                    1.870 OHMM AT 70.0 DEGF
RMF:                   1.860 OHMM AT 64.0 DEGF
RMC:                   1.660 OHMM AT 63.0 DEGF
SOURCE RMF/RMC:       MEASURED/MEASURED
RM AT BHT:             1.384 OHMM AT 97.0 DEGF
RMF AT BHT:            1.269 OHMM AT 97.0 DEGF
RMC AT BHT:            1.117 OHMM AT 97.0 DEGF

TIME CIRC. STOPPED:   1000   8/11
TIME LOGGER ON BTM.:  1220   8/11

MAX. REC. TEMP:        97.0 DEGF
```

LOGGING UNIT NO: 8076
LOGGING UNIT LOC: SACRAMENTO
RECORDED BY: COLLINS
WITNESSED BY: WILLIAMS

REMARKS:

EQUIPMENT NUMBERS-

DIS 457 DIC 342 IEM 231

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.

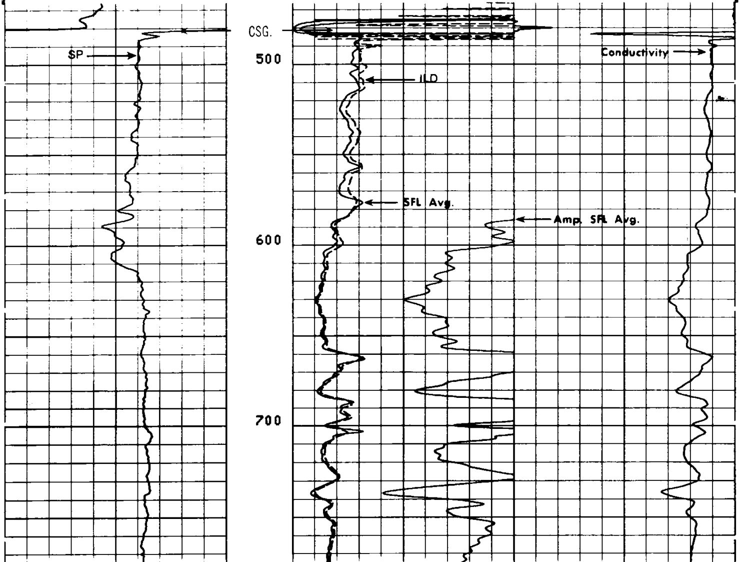
FILE

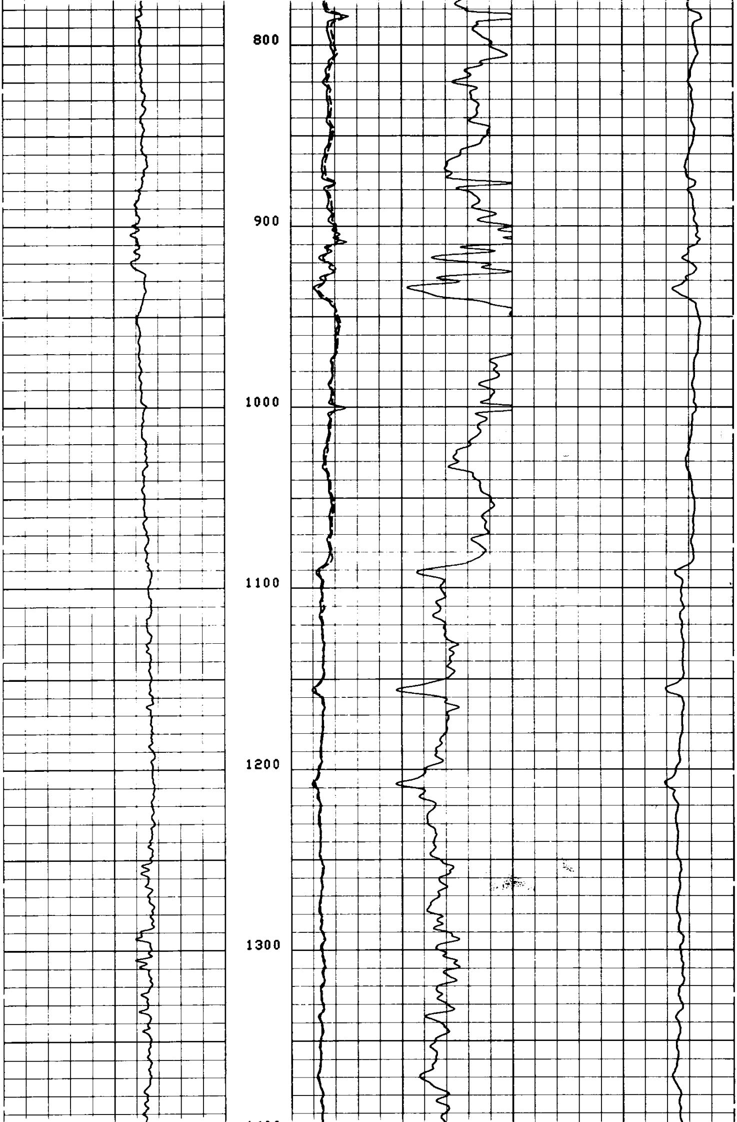
3

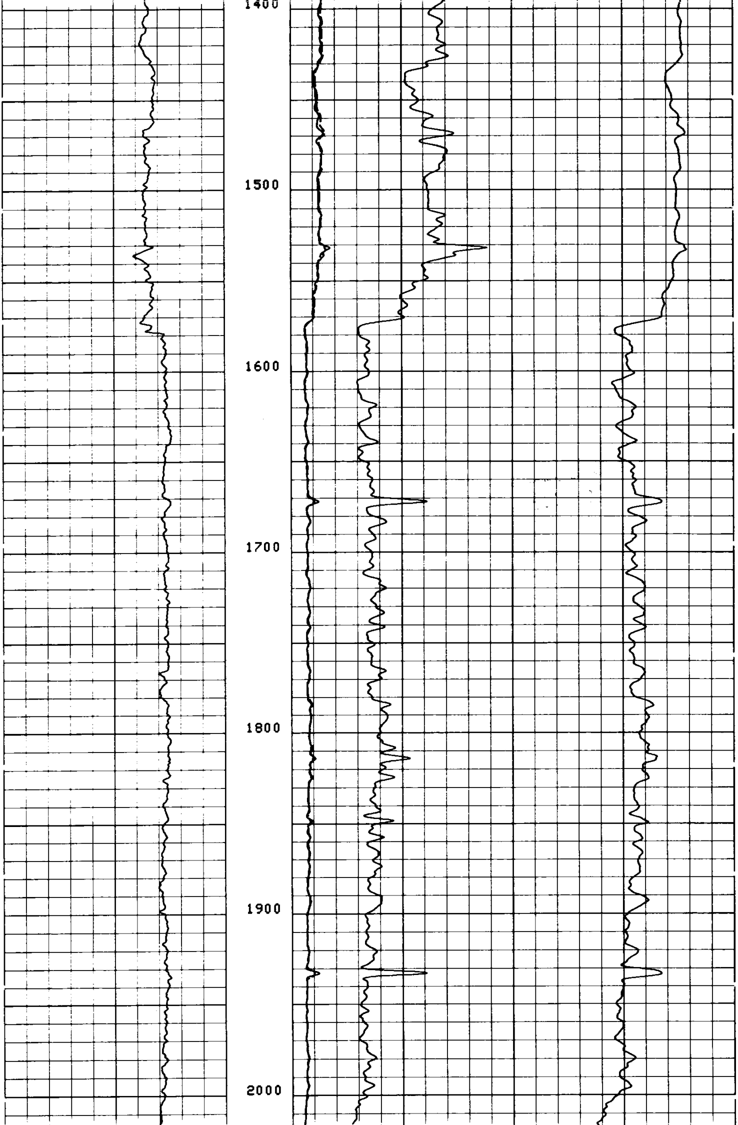
		ILD (OHMM)	
		0.0 30.000	
		SFLA(OHMM)	
		0.0 6.0000	
SP (MV)		SFLA(OHMM)	CILD(MMHO)
-100.0 0.0		0.0 30.000	1000.0 0.0

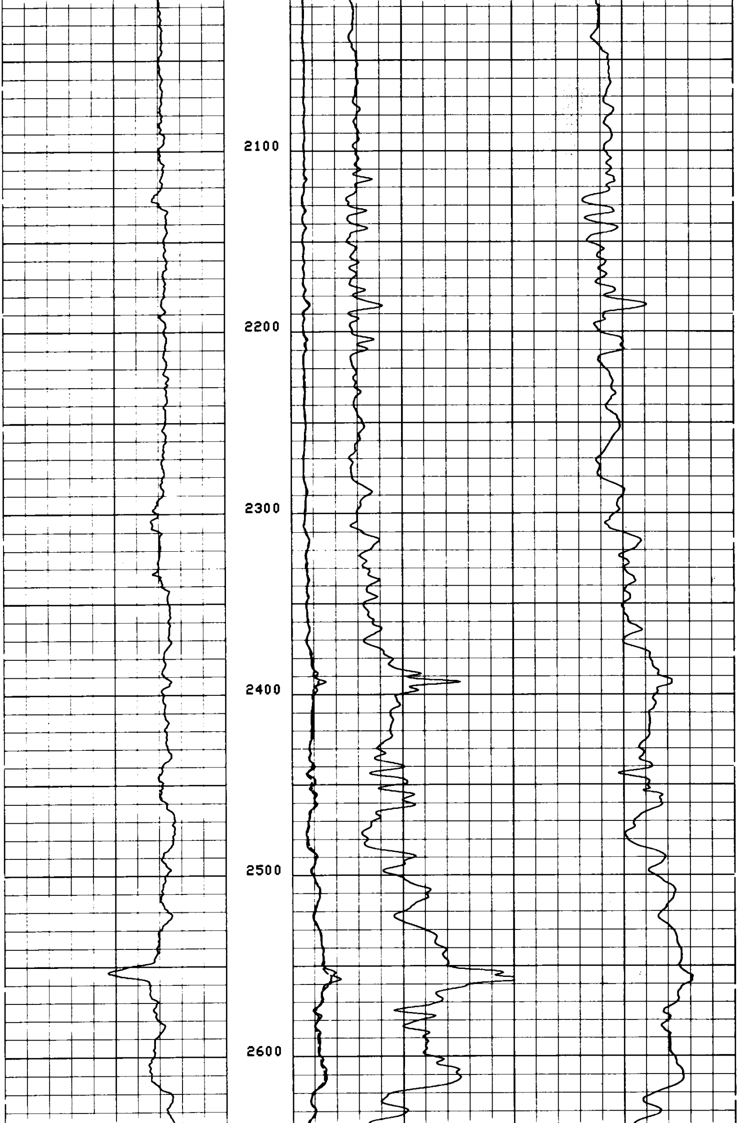
FILE

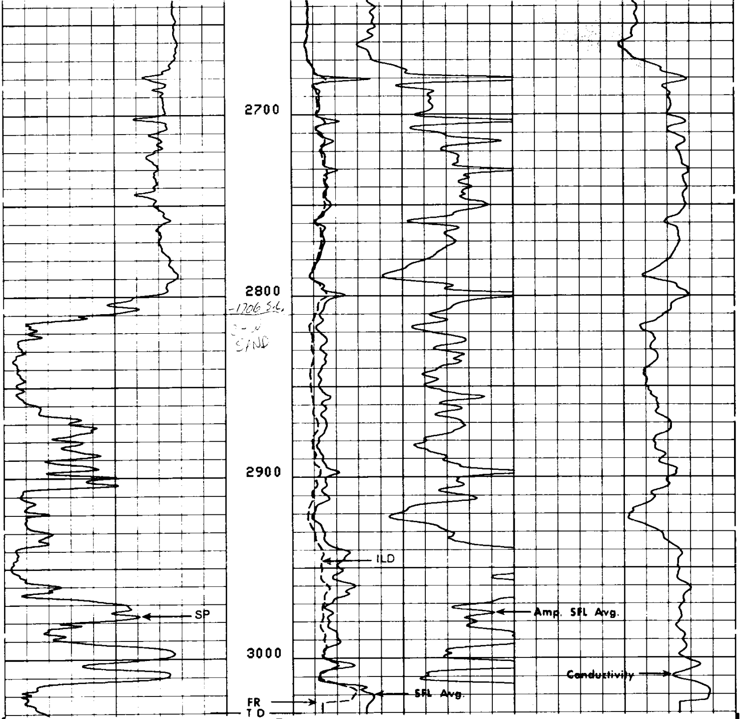
3











FILE

3

		ILD (OHMM) 0.0 30.000	
		SFLA(OHMM) 0.0 6.0000	
SP (MV) -100.0 0.0		SFLA(OHMM) 0.0 30.000	CILD(MMHO) 1000.0 0.0

SENSOR MEASURE POINT TO TENSION REFERENCE POINT

AMPL	41.4	FEET	DT	38.9	FEET
SRAT	38.9	FEET	CBL	41.4	FEET
CALI	29.3	FEET	TT	41.4	FEET
SFL	3.9	FEET	ILD	6.9	FEET
SP	.0	FEET	ILM	3.3	FEET
TENS	.0	FEET	SPAR	.0	FEET
NOIS	33.2	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT

CDTS	100.000		BS	6.25000	IN
DTF	189.000	US/F	DTM	56.0000	US/F
SBR	1.00000	OHMM	DSEC	10.2000	MMHO
FPHI	SPHI		MSEC	8.70000	MMHO
DO	0.0	F	BHS	OPEN	

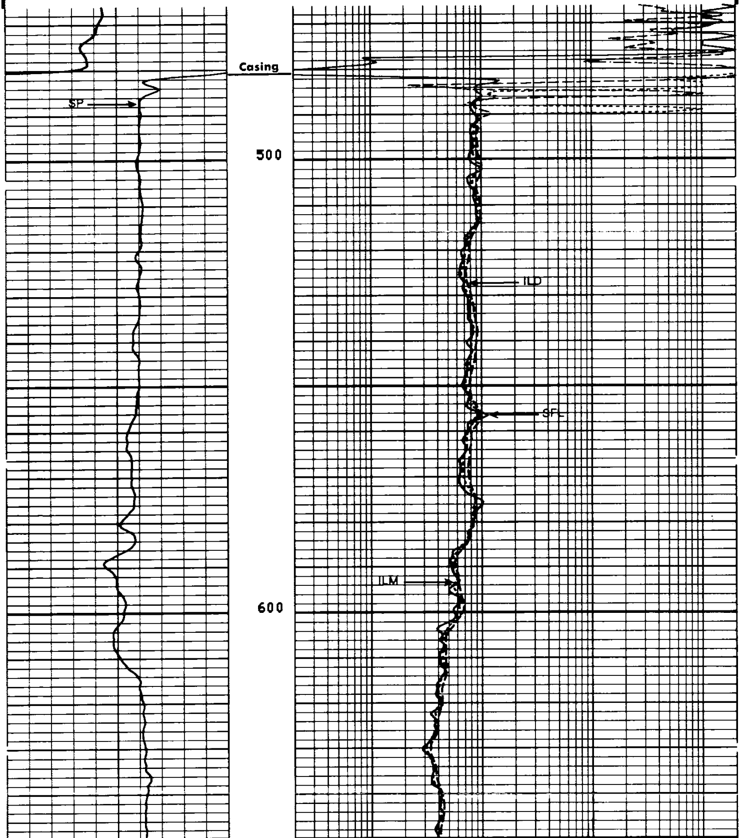
DETAIL LOG

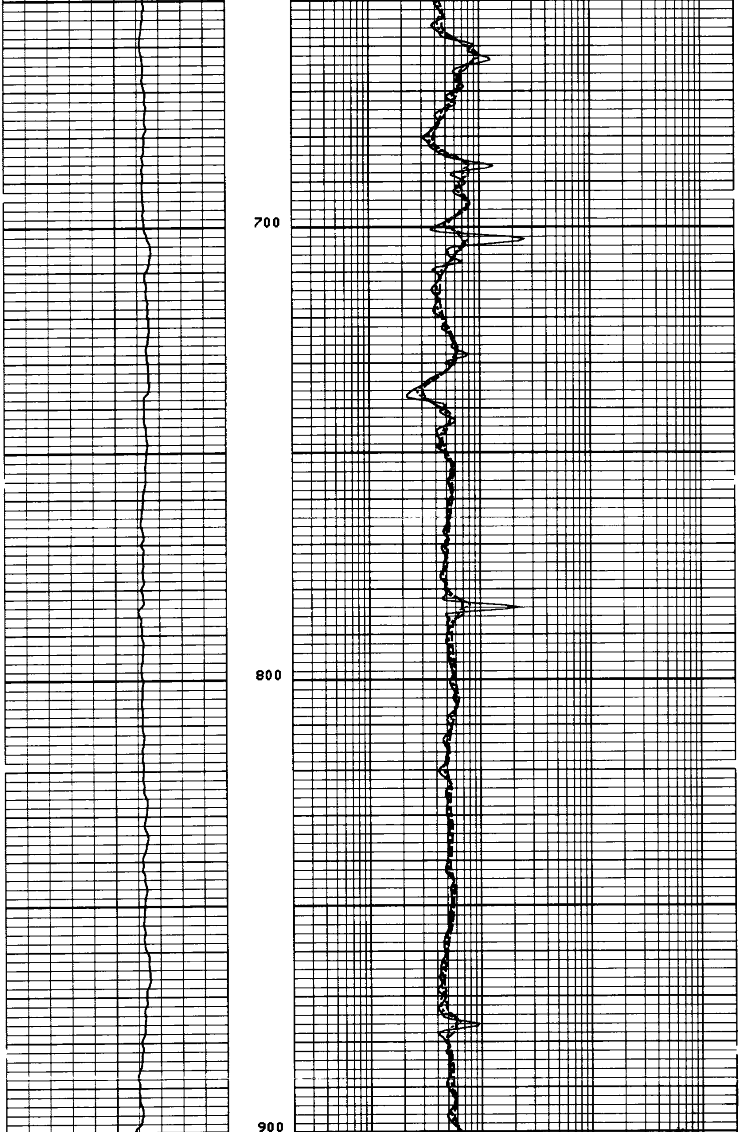
5" = 100'

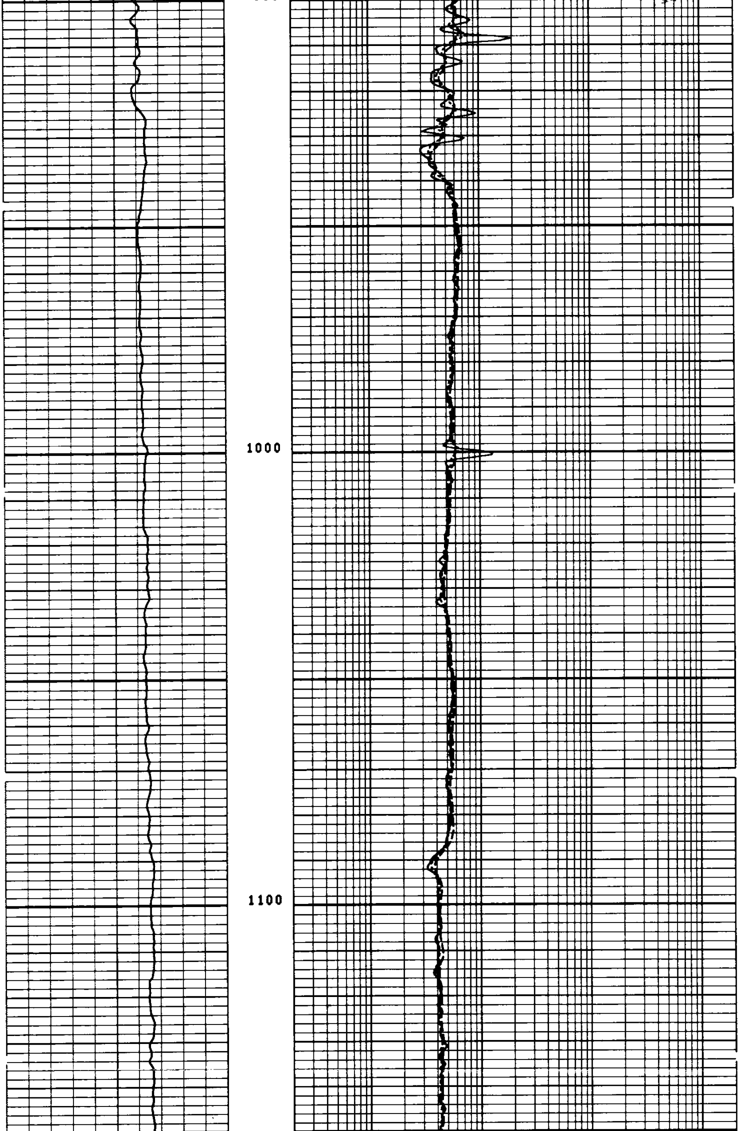
SP (MV)		ILD (OHMM)	
-100.0	0.0	0.2000	2000.0
		ILM (OHMM)	
		0.2000	2000.0
		SFLU(OHMM)	
		0.2000	2000.0

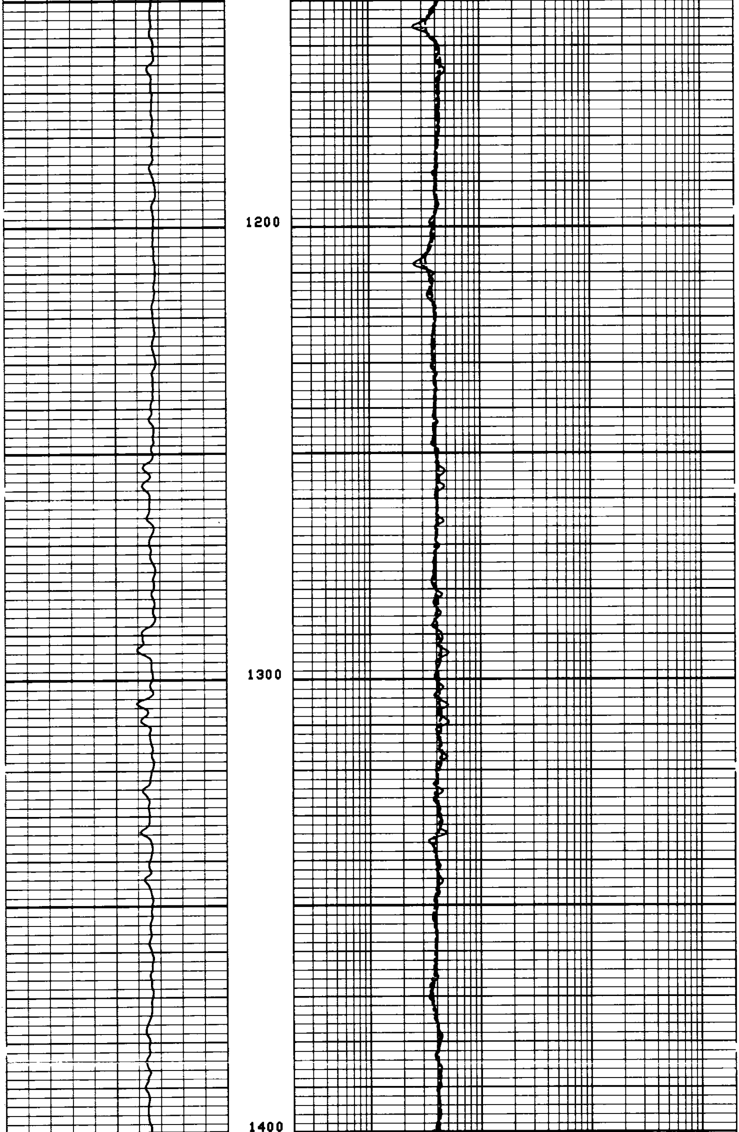
FILE

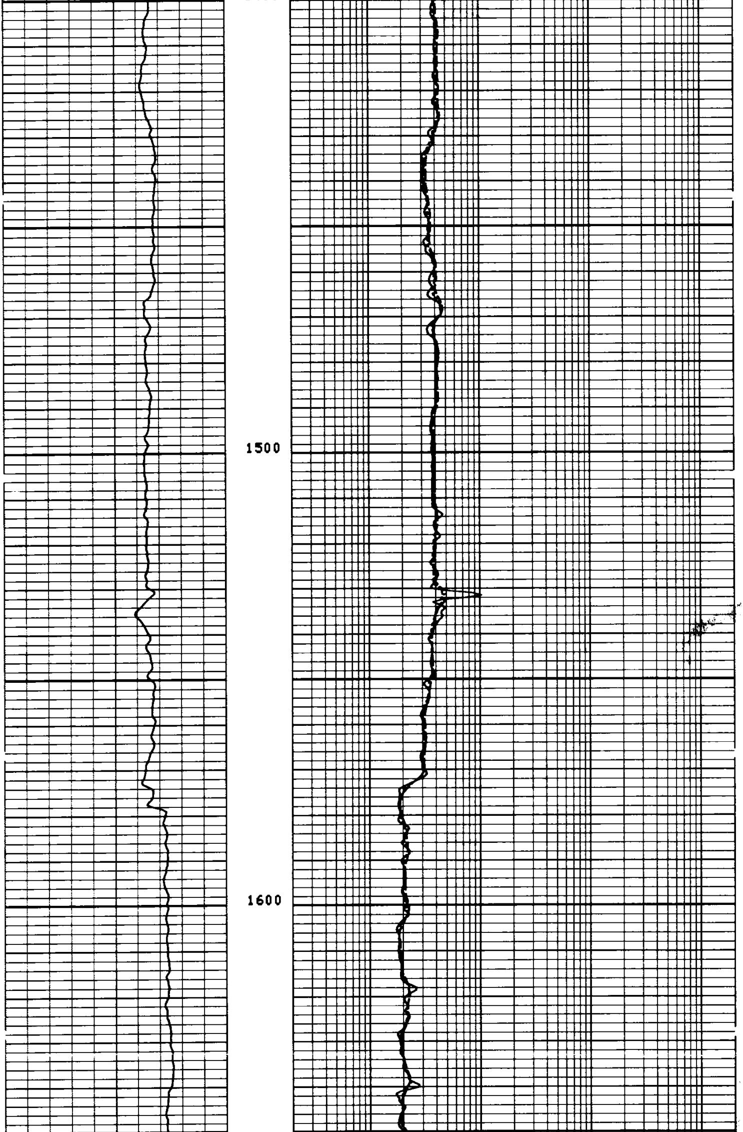
3

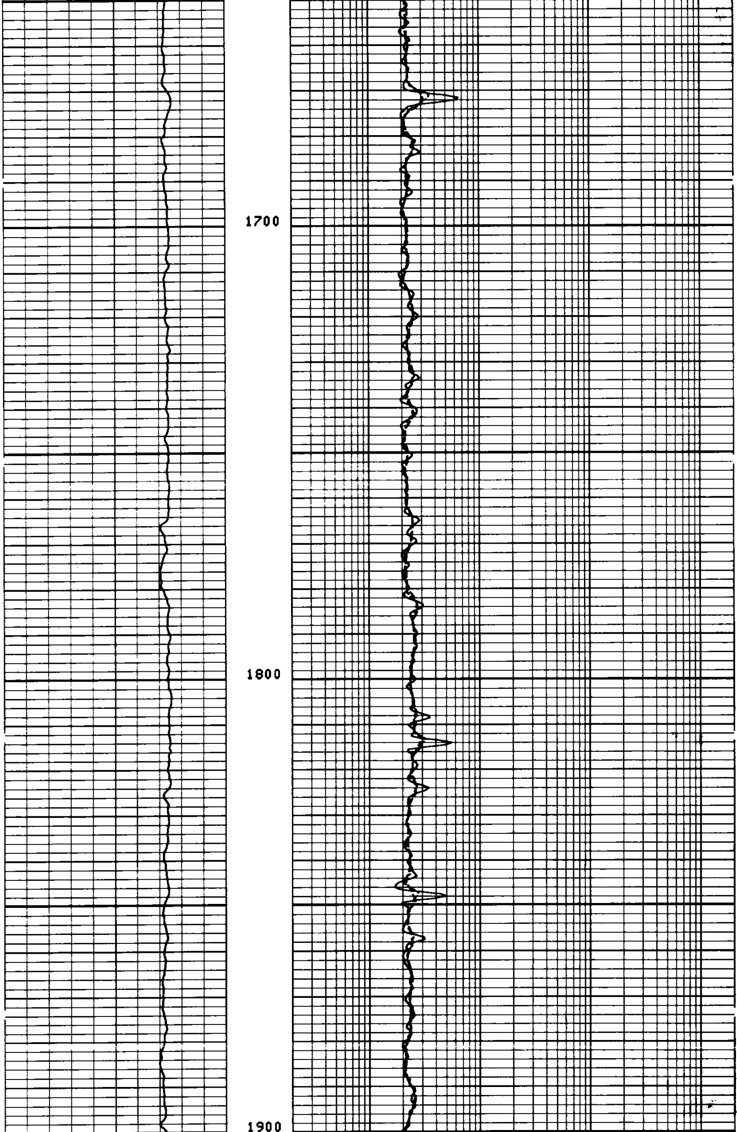


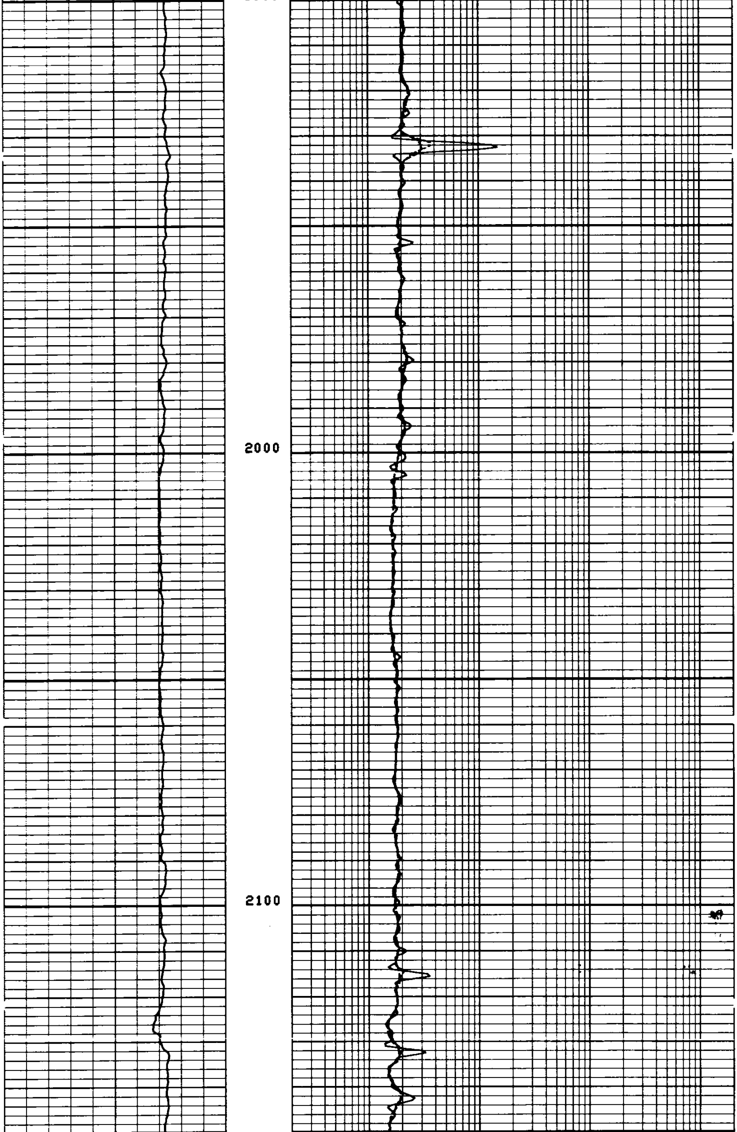


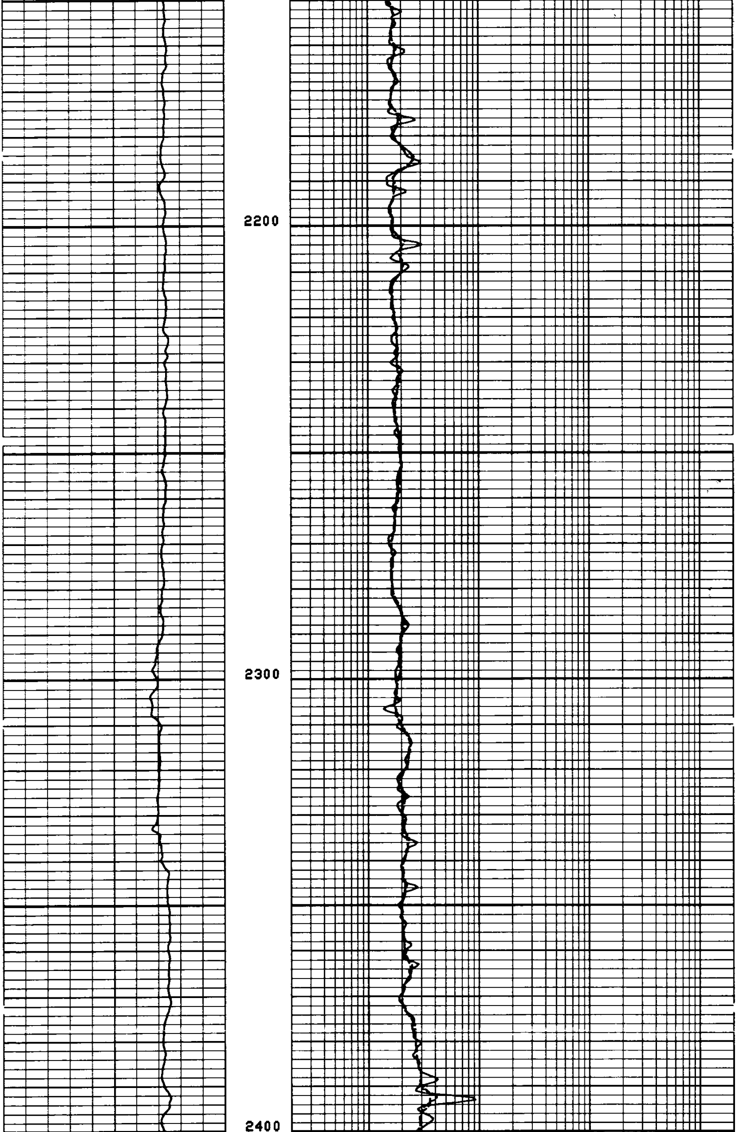


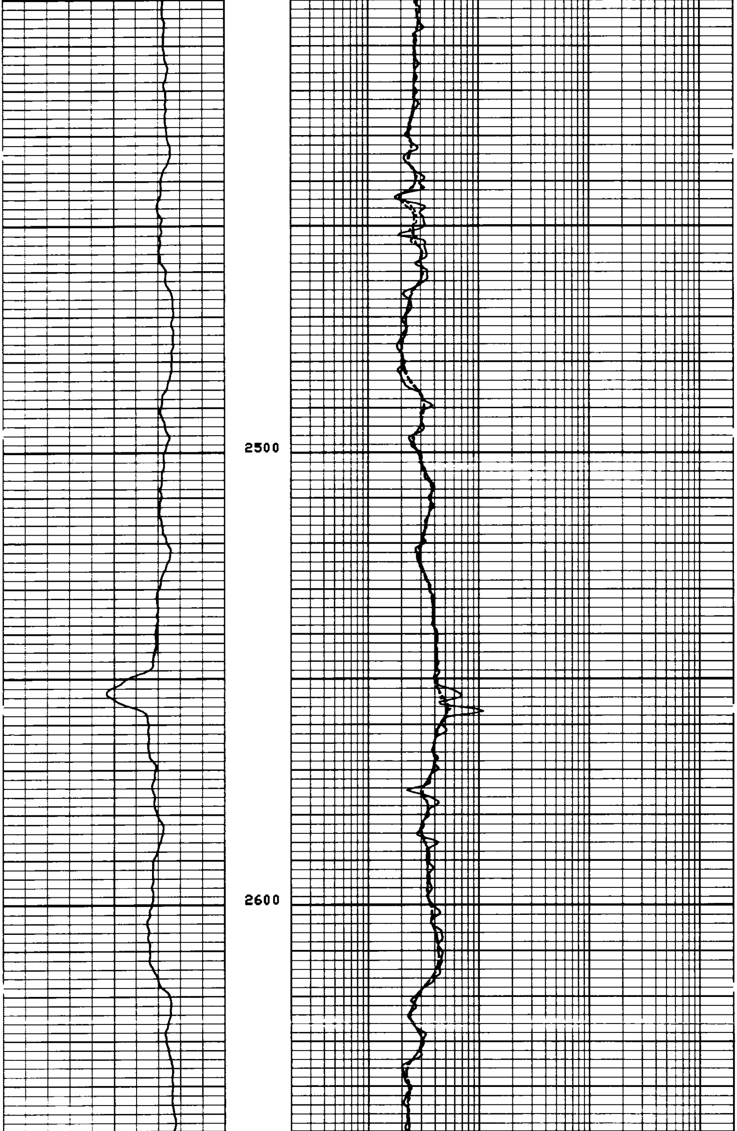


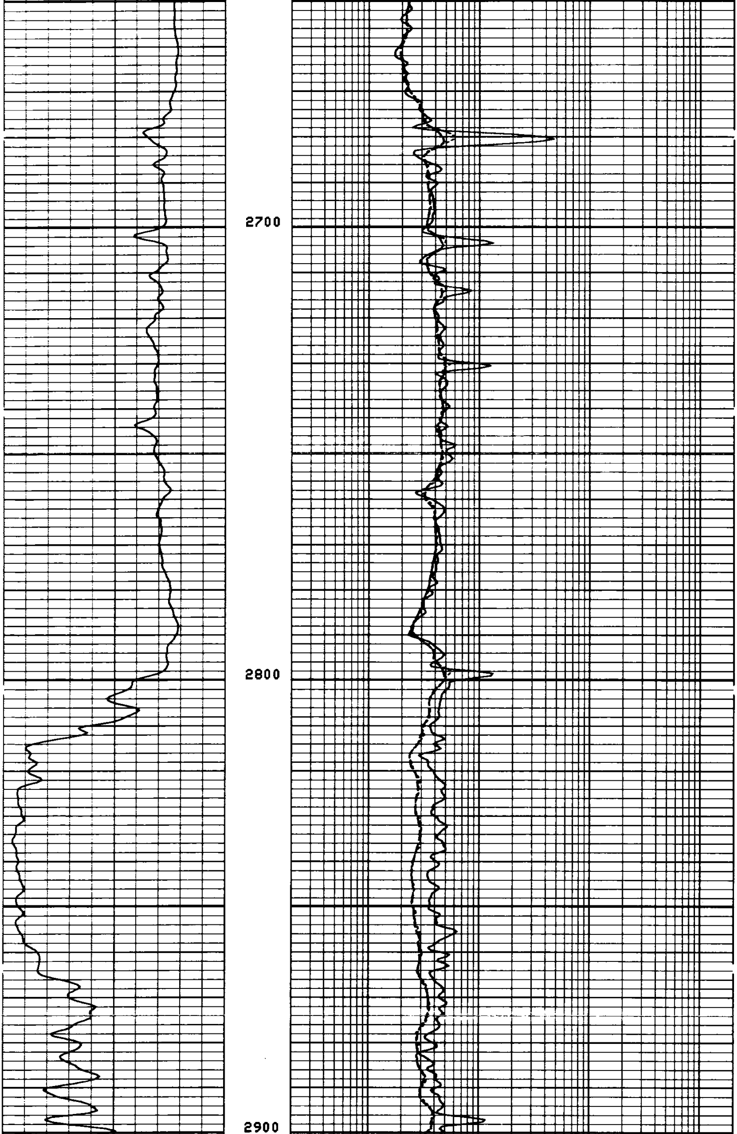


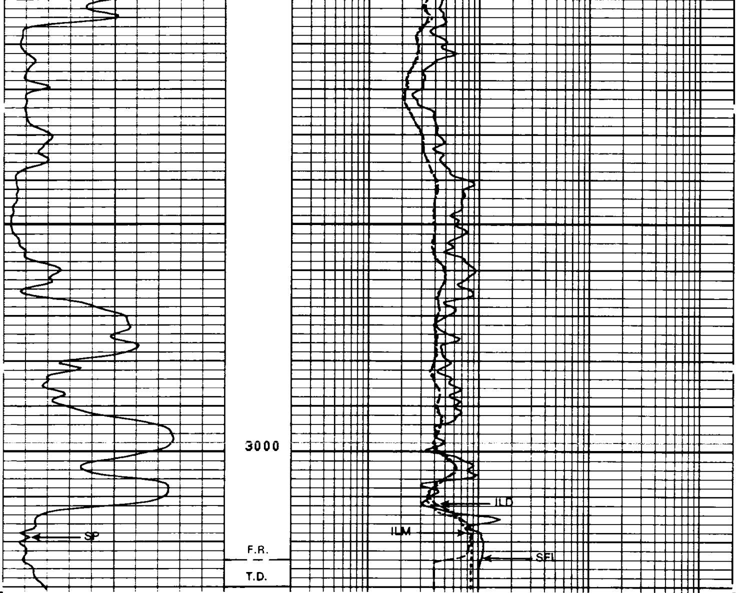












FILE

3

SP (MV)		ILD (OHMM)	
-100.0	0.0	0.2000	2000.0
		ILM (OHMM)	
		0.2000	2000.0
		SFLU(OHMM)	
		0.2000	2000.0

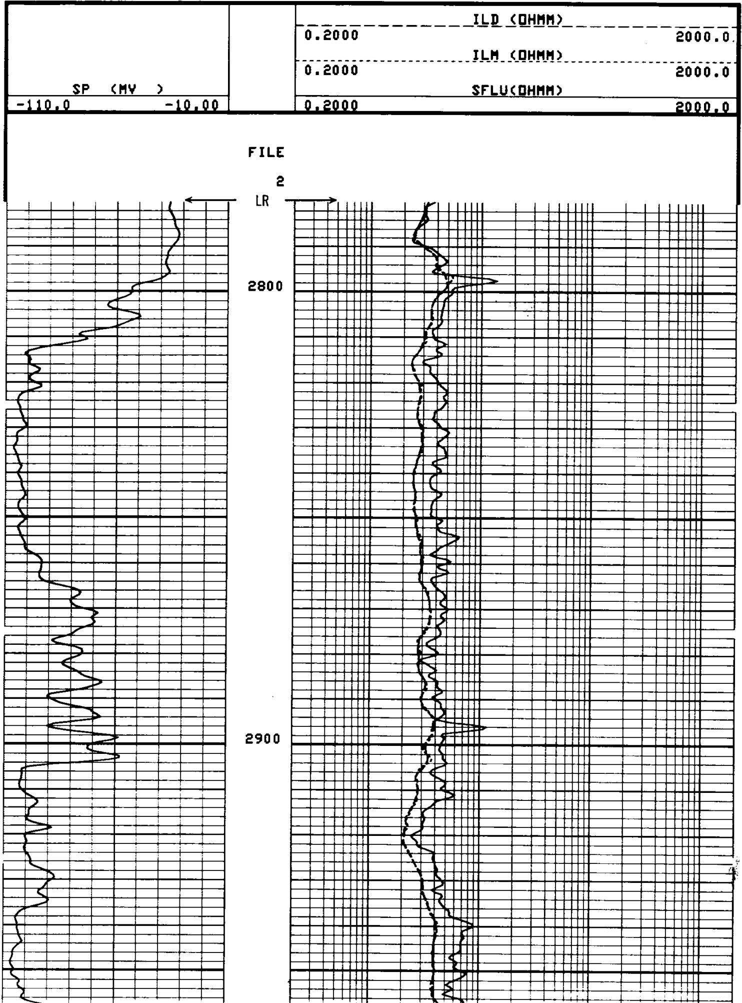
SENSOR MEASURE POINT TO TENSION REFERENCE POINT

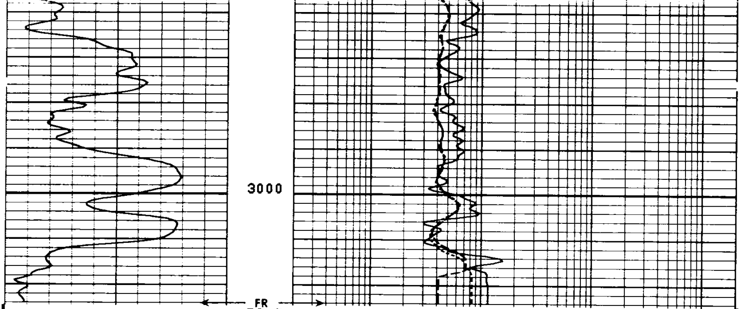
AMPL	41.4	FEET	DT	38.9	FEET
SRAT	38.9	FEET	CBL	41.4	FEET
CALI	29.3	FEET	TT	41.4	FEET
SFL	3.9	FEET	ILD	6.9	FEET
SP	.0	FEET	ILM	3.3	FEET
TENS	.0	FEET	SPAR	.0	FEET
NOIS	33.2	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
CDTS	100.000		BS	6.25000	IN
DTF	189.000	US/F	DTM	56.0000	US/F
SBR	1.00000	OHMM	DSEC	10.2000	MMHO
FPHI	SPHI		MSEC	8.70000	MMHO
DO	0.0	F	BHS	OPEN	

REPEAT SECTION





FILE

2

	ILD (OHMM)	
0.2000		2000.0
	ILM (OHMM)	
0.2000		2000.0
	SFLU(OHMM)	
0.2000		2000.0

	SP (MV)	
-110.0		-10.00

SENSOR MEASURE POINT TO TENSION REFERENCE POINT

AMPL	41.4	FEET	DT	38.9	FEET
SRAT	38.9	FEET	CBL	41.4	FEET
CALI	29.3	FEET	TT	41.4	FEET
SFL	3.9	FEET	ILD	6.9	FEET
SP	.0	FEET	ILM	3.3	FEET
TENS	.0	FEET	SPAR	.0	FEET
NOIS	33.2	FEET			

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
CDTS	100.000		BS	6.25000	IN
DTF	189.000	US/F	DTM	56.0000	US/F
SBR	1.00000	OHMM	DSEC	10.2000	MMHO
FPHI	SPHI		MSEC	8.70000	MMHO
DO	0.0	F	BHS	OPEN	

CALIBRATION RECORD

AFTER SURVEY TOOL CHECK SUMMARY

PERFORMED: 82/08/11
PROGRAM FILE: ISN (VERSION 22.2 82/06/24)

DITD TOOL CHECK

	ZERO		PLUS		
	BEFORE	AFTER	BEFORE	AFTER	UNITS
ILD	0.0	0.6	504.1	502.4	MMHO
ILM	0.0	-0.0	503.3	501.7	MMHO
SFL	0.0	0.0	500.0	494.7	MMHO

```
 ILD   SONDE ERROR CORRECTION :       10.2 MMHO
 ILM   SONDE ERROR CORRECTION :        8.7 MMHO


                  BEFORE SURVEY CALIBRATION SUMMARY


   PERFORMED:      82/08/11
   PROGRAM FILE: ISN    (VERSION    22.2    82/06/24)


 DITD                 ELECTRONICS CALIBRATION SUMMARY

              MEASURED                        CALIBRATED
           ZERO     PLUS                  ZERO        PLUS          UNITS
    ILD     3.2    554.0                  0.0        504.1          MMHO
    ILM     4.2    526.9                  0.0        503.3          MMHO
    SFL     1.0    497.2                  0.0        500.0          MMHO

 ILD   SONDE ERROR CORRECTION :       10.2 MMHO
 ILM   SONDE ERROR CORRECTION :        8.7 MMHO


                   SHOP SUMMARY


   PERFORMED:      82/08/09
   PROGRAM FILE: SHOP   (VERSION    22.2    82/06/08)


 DITD                 ELECTRONICS CALIBRATION SUMMARY

               TEST LOOP CALIBRATION             TOOL CHECK
            MEASURED         CALIBRATED          CALIBRATED
          ZERO    PLUS      ZERO       PLUS      ZERO       PLUS    UNITS
    ILD   -7.8    530.5     0.0       500.0      0.0       504.2   MMHO
    ILM   -6.5    509.8     0.0       500.0      0.0       503.2   MMHO
 ILD   SONDE ERROR CORRECTION :       10.2 MMHO
 ILM   SONDE ERROR CORRECTION :        8.7 MMHO

                           (IS:457 , IC:342 )
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CALIBRATION RECORD

COMPANY REICHHOLD ENERGY CORP.

WELL COLUMBIA COUNTY 32-33 REDRILL #1

FIELD MIST

COUNTY COLUMBIA **STATE** OREGON

SCHL. FR 3024.0'

SCHL. TD 3030.0'

DRLR. TD 3030.0'

Elev: KB 1104.2'

DF N/A

GL 1092.8'

-end-