5" DUAL INDUCTION-SFL

CSU

COMPANY: ARCO EXPLORATION AND TECHNOLOGY COMPANY

WELL: COLUMBIA COUNTY 22-27

FIELD: MIST GAS FIELD
COUNTY: COLUMBIA
STATE: OREGON
NATION: USA
LOCATION: 2339.07'S 89 6' 27" &
1180.19'S 0 53' 33"W OF NW CORNER
SEC: 27 TWP: 6N RGE: 5W

PERMANENT DATUM: GL
ELEV. OF PERM. DATUM: 850.2 F
LOG MEASURED FROM: KB
12.0 F ABOVE PERM. DATUM
DRLG. MEASURED FROM: KB

ELEVATIONS-
KB: 862.2 F
DF:
GL: 850.2 F

DATE: 22 NOV 85
RUN NO: 1

OTHER SERVICES-
BHC
HDT
SAT
SWS

PROGRAM
TAPE NO:
20.2A
SERVICE
ORDER NO:
450898

DEPTH-DRILLER: 2532.0 F
DEPTH-LOGGER: 2512.0 F
BTM. LOG INTERVAL: 2506.0 F
TOP LOG INTERVAL: 416.0 F

CASING-DRILLER: 418.0 F
CASING-LOGGER: 418.0 F
CASING: 9.625
WEIGHT:
BIT SIZE: 8.75
DEPTH: 2532.0 F

RECEIVED
DEC 10 1985
DOGAMI
Portland

TYPE FLUID IN HOLE:	GEL-POLYMER
DENSITY:	10.20 LB/G
VISCOSITY:	52.0 S
PH:	8.5
FLUID LOSS:	5.2 C3
SOURCE OF SAMPLE:	FLOWLINE
RM:	3.830 OHMM AT 45.0 DEGF
RMF:	3.110 OHMM AT 45.0 DEGF
RMC:	3.950 OHMM AT 45.0 DEGF
SOURCE RMF/RMC:	MEASURED /MEASURED
RM AT BHT:	1.778 OHMM AT 105. DEGF
RMF AT BHT:	1.444 OHMM AT 105. DEGF
RMC AT BHT:	1.834 OHMM AT 105. DEGF
TIME CIRC. STOPPED:	0900 11-22
TIME LOGGER ON BTM.:	20:05 11-20
MAX. REC. TEMP:	105.0 DEGF
LOGGING UNIT NO:	8126
LOGGING UNIT LOC:	SACRAMENTO
RECORDED BY:	REINIG/PILCH
WITNESSED BY:	ANDERSON

REMARKS:

INDUCTION AND SONIC RUN IN COMBINATION.
TOOL STUCK AT 2230. SEE TENSION CURVE.
THE PULL CAUSED A DEPTH SHIFT IN LOG.
LOG IS DEPTH OFFSET TO MATCH THE DENSITY NEUTRON.
CENTRALIZERS WERE TORN FROM SONIC SONDE WHEN TOOL BROKE FREE
SONIC UNCENTRALIZED ABOVE 2200 FEET.

EQUIPMENT NUMBERS-

DIS-EC 1422 DIC-DA 1149 MCD-DA 1186 SLS-RC 375
SLC-FA 1261 SGC-JAA 466 SLM-DA 428 IEM-BD 685
NLM-BC 456

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.

CP.28.2A FILE 103 23-NOV-85 08:00
DATA ACQUIRED 22-NOV-85 20:55

TENS(LB)
10000. 0.0

GR (GAPI)
0.0 150.00

ILD (OHMM)
.20000 2000.0

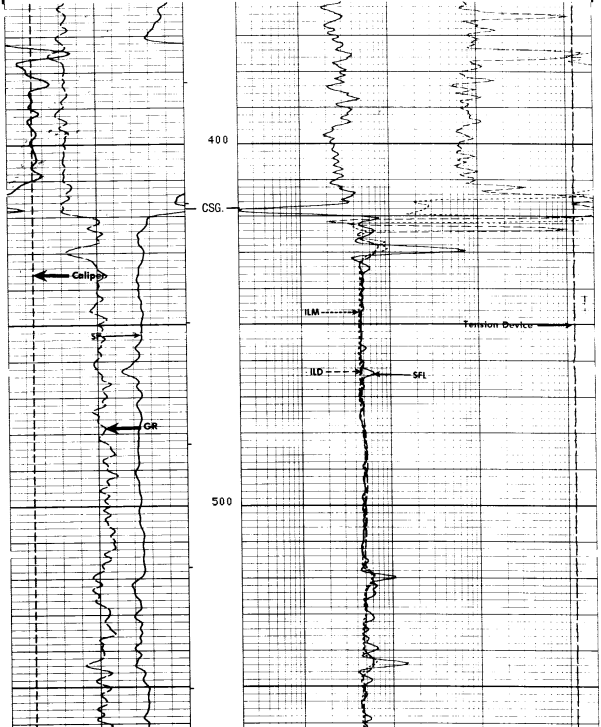
CALI(IN)
6.0000 16.000

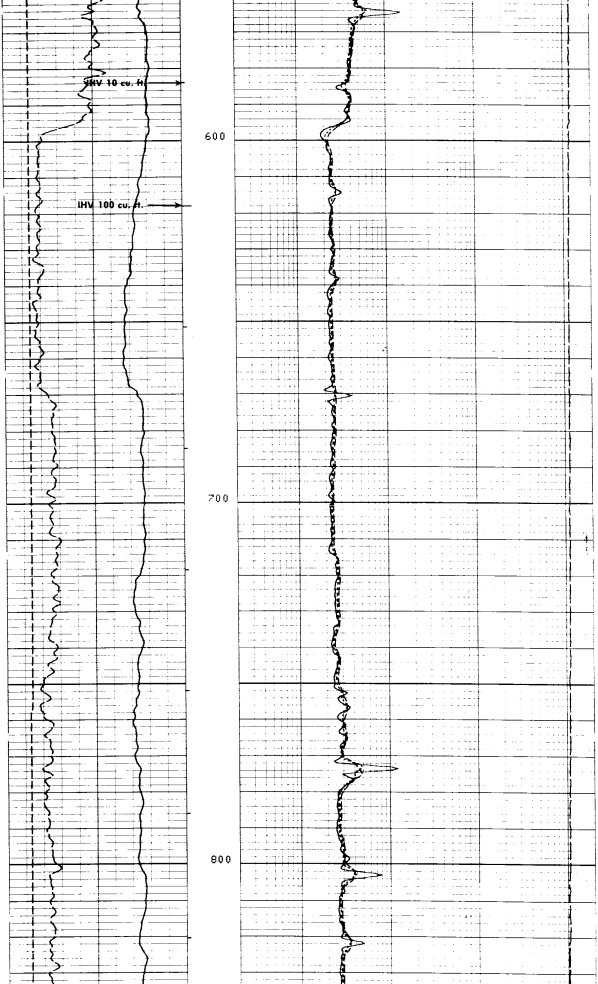
ILM (OHMM)
.20000 2000.0

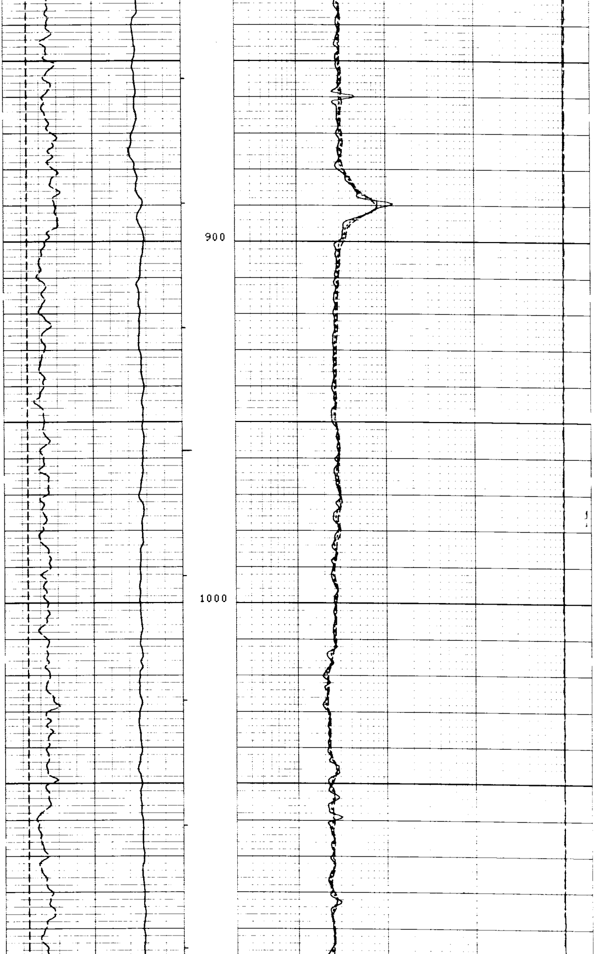
SP (MV)
-100.0 0.0

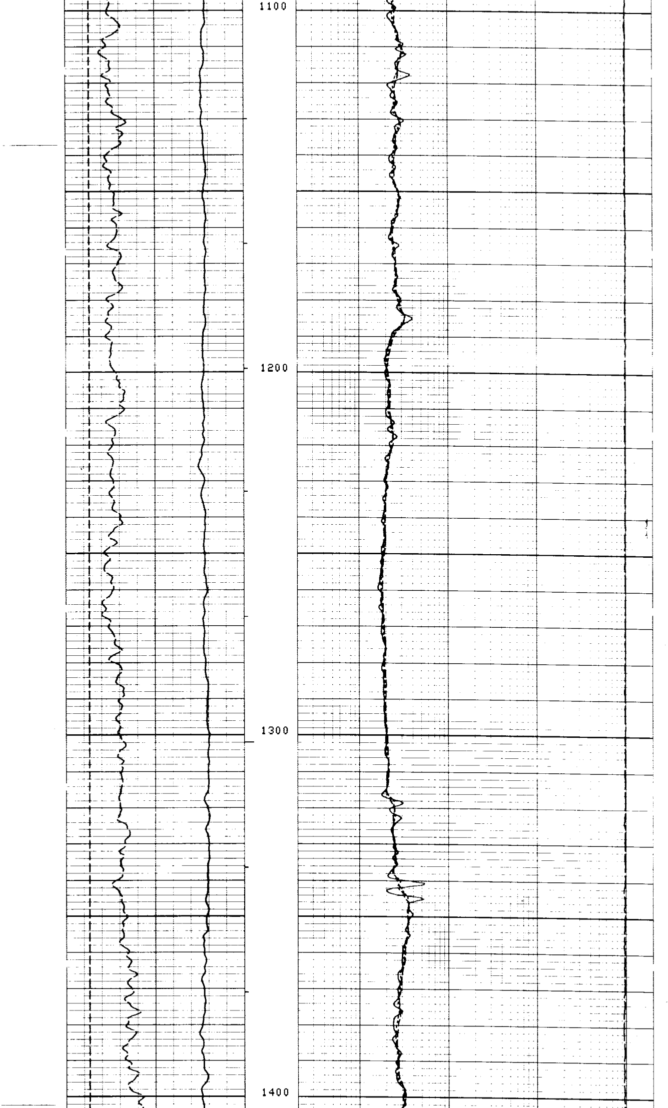
SFLU(OHMM)
.20000 2000.0

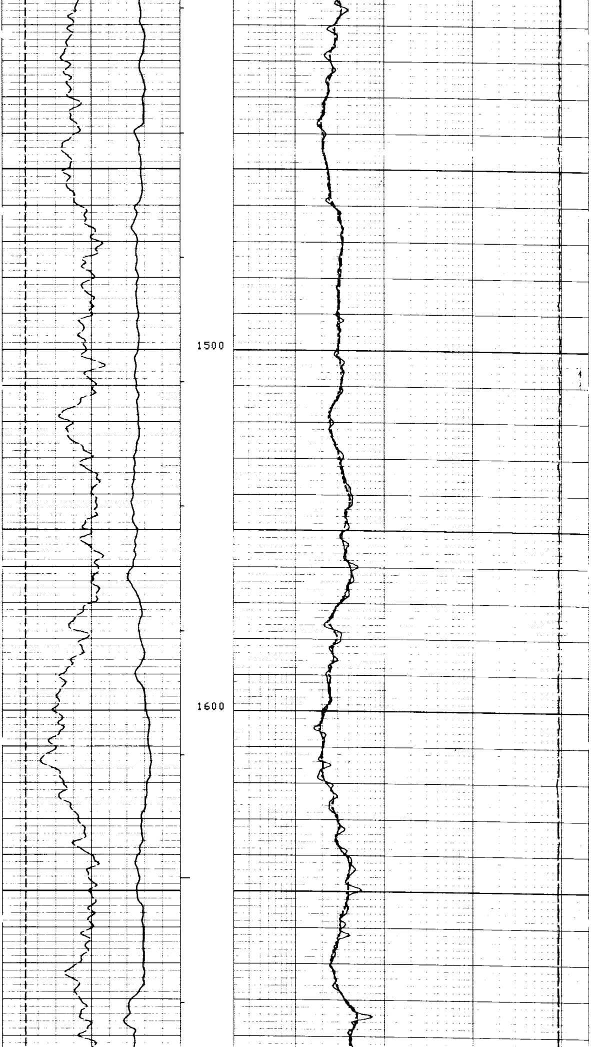
CP 28.2A FILE 102 23-NOV-85 09:28
DATA ACQUIRED 22-NOV-85 20:55

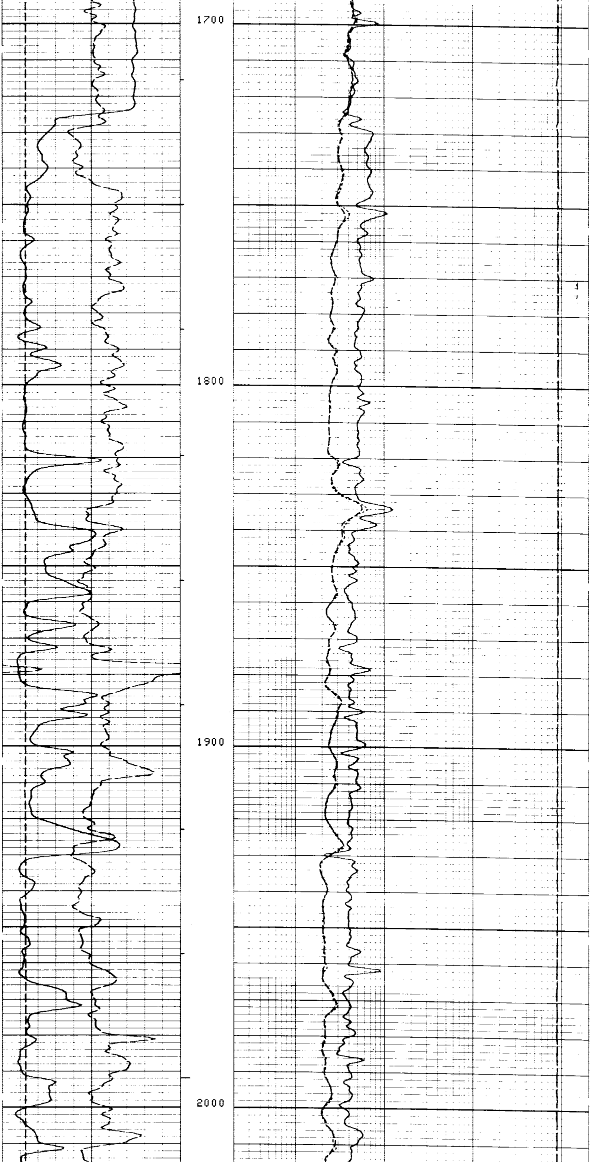


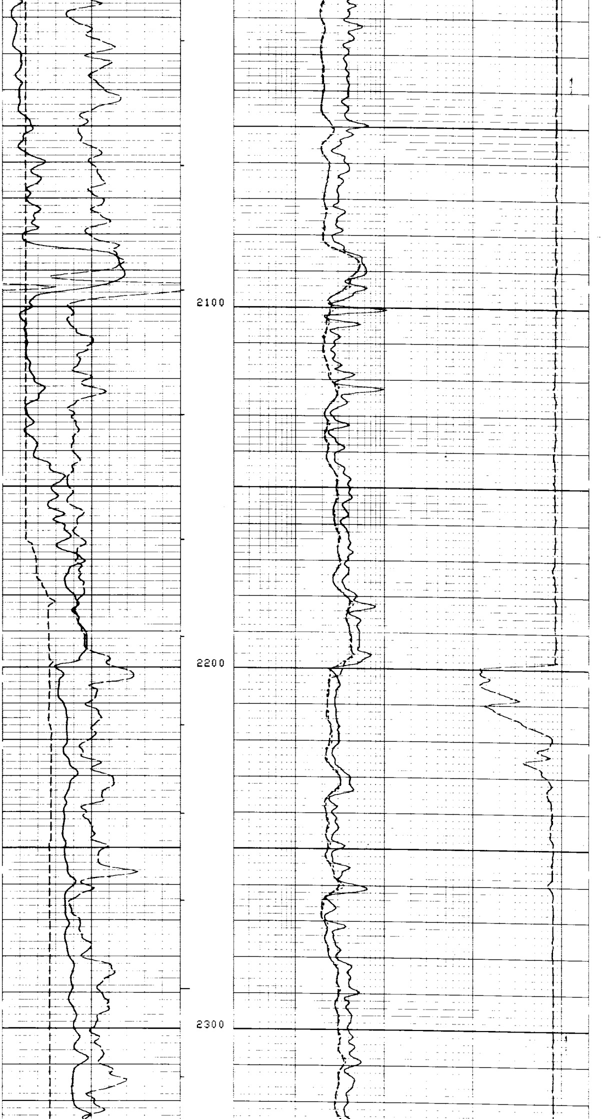


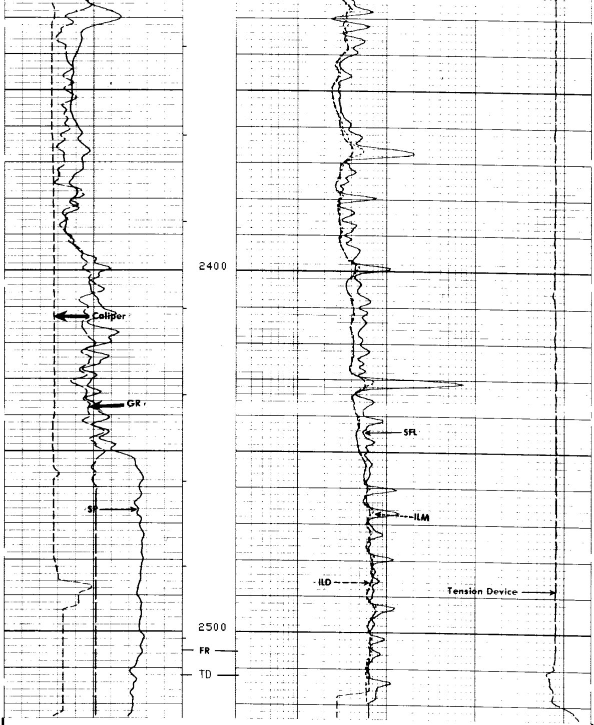












CP 28.2A

FILE 102 23-NOV-85 09:22
DATA ACQUIRED 22-NOV-85 20:01

TENS(LB)
10000. 0.0

GR (GAPI)
0.0 150.00
CALI(IN)
6.0000 16.000
SP (MV)
-100.0 0.0

ILD (OHMM)
.20000 2000.0
ILM (OHMM)
.20000 2000.0
SFLU(OHMM)
.20000 2000.0

SENSOR MEASURE POINT TO TOOL ZERO

SRAT	41.4	FEET	AMPL	43.9	FEET
TT1	42.9	FEET	CBL	43.9	FEET
TT3	40.2	FEET	TT2	43.9	FEET
TO	43.9	FEET	TT4	39.2	FEET
SLTT	43.9	FEET	TT	43.9	FEET
GR	64.1	FEET	SCBL	43.9	FEET
ILD	9.4	FEET	CALI	31.8	FEET
SFL	6.4	FEET	ILM	5.8	FEET
SPAR	2.5	FEET	SP	2.5	FEET
NOIS	2.5	FEET	TENS	2.5	FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT

CDTS	100.000		SPFS	R-H	
DTF	189.000	US/F	DTM	56.0000	US/F
DSIN	5	US	DDEL	200	US
WMUD	10.2000	LB/G	DWCO	512	
SBR	1.00000	OHMM	DSEC	3.70000	MMHO
FPHI	SPHI		MSEC	6.40000	MMHO
FNUM	.620000		FEXP	2.15000	
BHS	OPEN		CSIZ	9.62500	IN
DO	0.0	F	BS	8.75000	IN
PP	NORM				

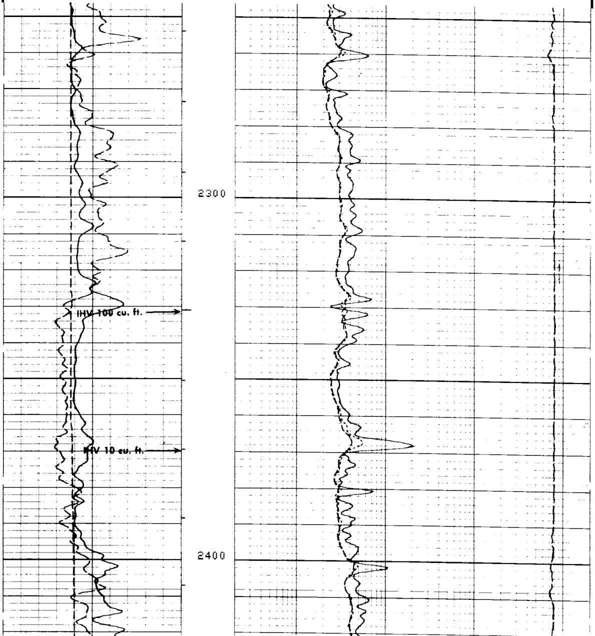
EVENT MARK SUMMARY:

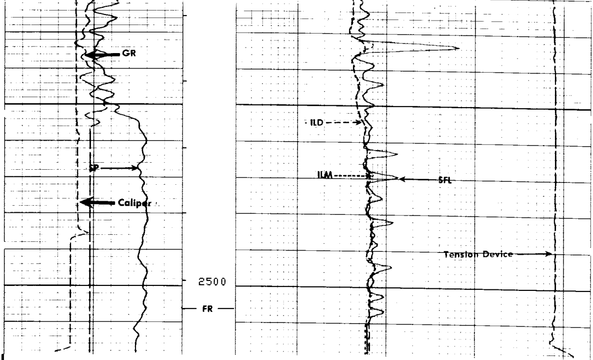
OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
IHV	10.0000 F3	LEFT EDGE

Curve	Left	Right
TENS(LB)	10000.	0.0
GR (GAPI)	0.0	150.00
CALI(IN)	6.0000	16.000
SP (MV)	-100.0	0.0
ILD (OHMM)	.20000	2000.0
ILM (OHMM)	.20000	2000.0
SFLU(OHMM)	.20000	2000.0

REPEAT SECTION

CP 28.2A FILE 101 23-NOV-85 09:21
DATA ACQUIRED 22-NOV-85 20:00





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CP 28.2A          FILE  101       23-NOV-85 09:20
                  DATA ACQUIRED   22-NOV-85 19:51
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```
                                                      TENS(LB  )
                                                  10000.          0.0
      GR   (GAPI)                                 ILD (OHMM)
0.0              150.00       .20000                              2000.0
      CALI(IN  )                                  ILM (OHMM)
6.0000           16.000       .20000                              2000.0
      SP   (MV  )                                 SFLU(OHMM)
-100.0             0.0        .20000                              2000.0
```

```
                 SENSOR MEASURE POINT TO TOOL ZERO

      SRAT 41.4  FEET                       AMPL 43.9  FEET
      TT1  42.9  FEET                       CBL  43.9  FEET
      TT3  40.2  FEET                       TT2  43.9  FEET
      T0   43.9  FEET                       TT4  39.2  FEET
      SLTT 43.9  FEET                       TT   43.9  FEET
      GR   64.1  FEET                       SCBL 43.9  FEET
      ILD   9.4  FEET                       CALI 31.8  FEET
      SFL   6.4  FEET                       ILM   5.8  FEET
      SPAR  2.5  FEET                       SP    2.5  FEET
      NOIS  2.5  FEET                       TENS  2.5  FEET
```

```
                            PARAMETERS

    NAME  VALUE       UNIT                NAME  VALUE       UNIT

    CDTS 100.000                          SPFS R-H
    DTF  189.000      US/F                DTM  56.0000      US/F
    DSIN 5            US                  DDEL 200          US
    WMUD 10.2000      LB/G                DWCO 512
    SBR  1.00000      OHMM                DSEC 3.70000      MMHO
    FPHI SPHI                             MSEC 6.40000      MMHO
    FNUM .620000                          FEXP 2.15000
    BHS  OPEN                             CSIZ 9.62500      IN
    DO   0.0          F                   BS   8.75000      IN
    PP   NORM
```

```
                 BEFORE SURVEY CALIBRATION SUMMARY


  PERFORMED:     22-NOV-85 19:29
  PROGRAM FILE: DUSO   (VERSION     28.2A    85/10/26)


DITD                 ELECTRONICS CALIBRATION SUMMARY
```

```
                MEASURED                           CALIBRATED
              ZERO     PLUS                     ZERO        PLUS         UNITS
      ILD    -1.11    546.1                     0.0         502.7         MMHO
      ILM    -1.23    521.9                     0.0         500.6         MMHO
      SFL    -2.03    511.8                     0.0         500.0         MMHO

   ILD SONDE ERROR CORRECTION :          3.7 MMHO
   ILM SONDE ERROR CORRECTION :          6.4 MMHO


   SGTE                 DETECTOR CALIBRATION SUMMARY

                MEASURED
              BKGD     JIG          CALIBRATED           UNITS
       GR      32      199             164               GAPI


    DTT                 CALIPER CALIBRATION SUMMARY

                MEASURED                          CALIBRATED
              SMALL    LARGE                   SMALL        LARGE         UNITS
     CALI     9.37     15.7                    6.00         12.0           IN

      CP 28.2A            FILE     1       22-NOV-85 19:29


                    AFTER SURVEY TOOL CHECK SUMMARY


     PERFORMED:     22-NOV-85 20:58
     PROGRAM FILE:  DUSO   (VERSION    28.2A   85/10/26)


   DITD                          TOOL  CHECK

                          ZERO                        PLUS
                BEFORE          AFTER          BEFORE       AFTER      UNITS
      ILD         0.0             -.4          502.7        497.8      MMHO
      ILM         0.0             -.2          500.6        494.7      MMHO
      SFL         0.0             -.6          500.0        487.6      MMHO

   ILD SONDE ERROR CORRECTION :          3.7 MMHO
   ILM SONDE ERROR CORRECTION :          6.4 MMHO

      CP 28.2A            FILE     6       22-NOV-85 20:58


                       SHOP SUMMARY


     PERFORMED:     20-NOV-85 04:21
     PROGRAM FILE:  SHOP   (VERSION    28.2A   85/07/10)


   DITD                 ELECTRONICS CALIBRATION SUMMARY

                   TEST LOOP CALIBRATION                 TOOL CHECK
                MEASURED          CALIBRATED             CALIBRATED
              ZERO      PLUS      ZERO       PLUS      ZERO        PLUS     UNITS
      ILD     -4.4      534.2     0.0        500.0     0.0         503.2    MMHO
      ILM     -6.6      513.5     0.0        500.0     0.0         500.5    MMHO
   ILD  SONDE ERROR CORRECTION :           3.7 MMHO
   ILM  SONDE ERROR CORRECTION :           6.4 MMHO

                            (IS:1422, IC:1149)
```