Western Atlas International

ATLAS WIRELINE SERVICES

5"/100'

VERTILOG®

FILE NO.

API NO.
-

COMPANY NORTHWEST NATURAL GAS ~~OREGON NATURAL GAS DEVELOPEMENT CORP.~~
WELL IW 32C-10
FIELD MIST
COUNTY COLUMBIA STATE OR.

LOCATION:
1500.05' N & 2519.6' W
FIELD COPY

SEC 10 TWP 6N RGE 5W

OTHER SERVICES
CBL/GR/CCL

PERMANENT DATUM GL ELEV. 790.25
LOGGING MEASURED FROM KB 11.4 FT. ABOVE P.D.
DRILLING MEASURED FROM KB

ELEVATIONS
KB 801.65'
DF -
GL 790.25'

DATE	12-19-90	
RUN	1	
SERVICE ORDER	65510	
DEPTH-DRILLER	2100'	
DEPTH-LOGGER	2095'	
BOTTOM LOGGED INTERVAL	2091'	
TOP LOGGED INTERVAL	30'	
TYPE FLUID IN HOLE	WATER	
SALINITY PPM CL.	-	
DENSITY LB/GAL.	--	
LEVEL	FULL	
MAX. REC. TEMP. DEG. F	-	
OPR. RIG TIME	2.5 HRS	
EQUIP. NO. / LOC.	6399 / BAK.	
RECORDED BY	M. HINDS	
WITNESSED BY	MR. THOMAS	

FINAL PRINT

BOREHOLE RECORD

NO.	BIT	FROM	TO

FOLD HERE

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE CUSTOMER THE BENEFIT OF THEIR BEST JUDGEMENT, BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

CASING RECORD

SIZE	WGT	FROM	TO
13 5/8"	?	SURF.	531
8 5/8"	32K55	SURF.	2100'

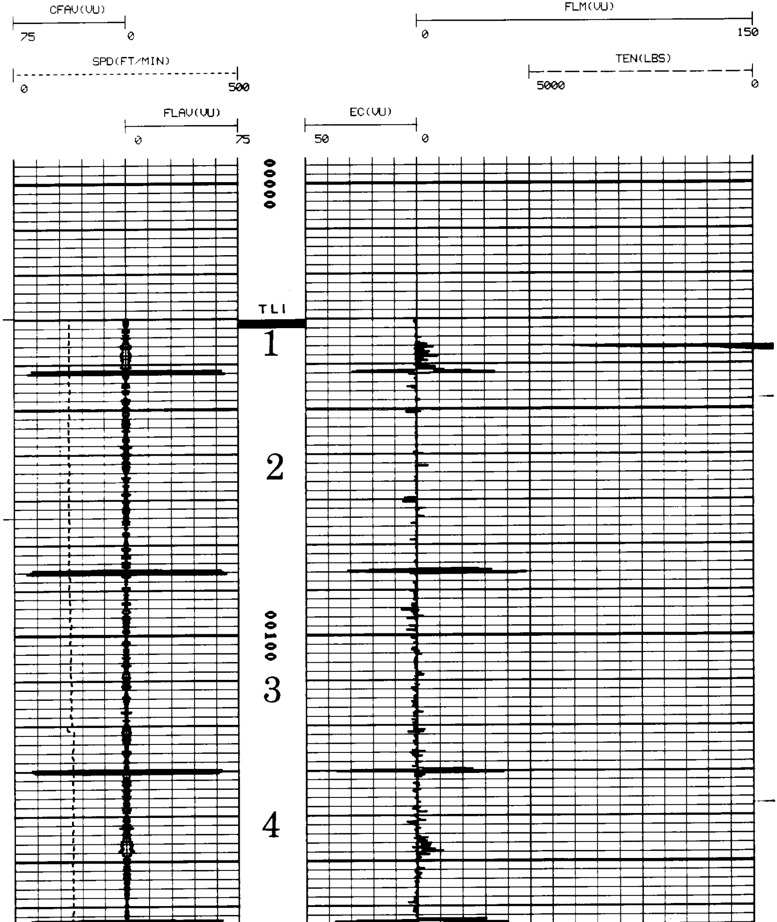
REMARKS RUN (1)

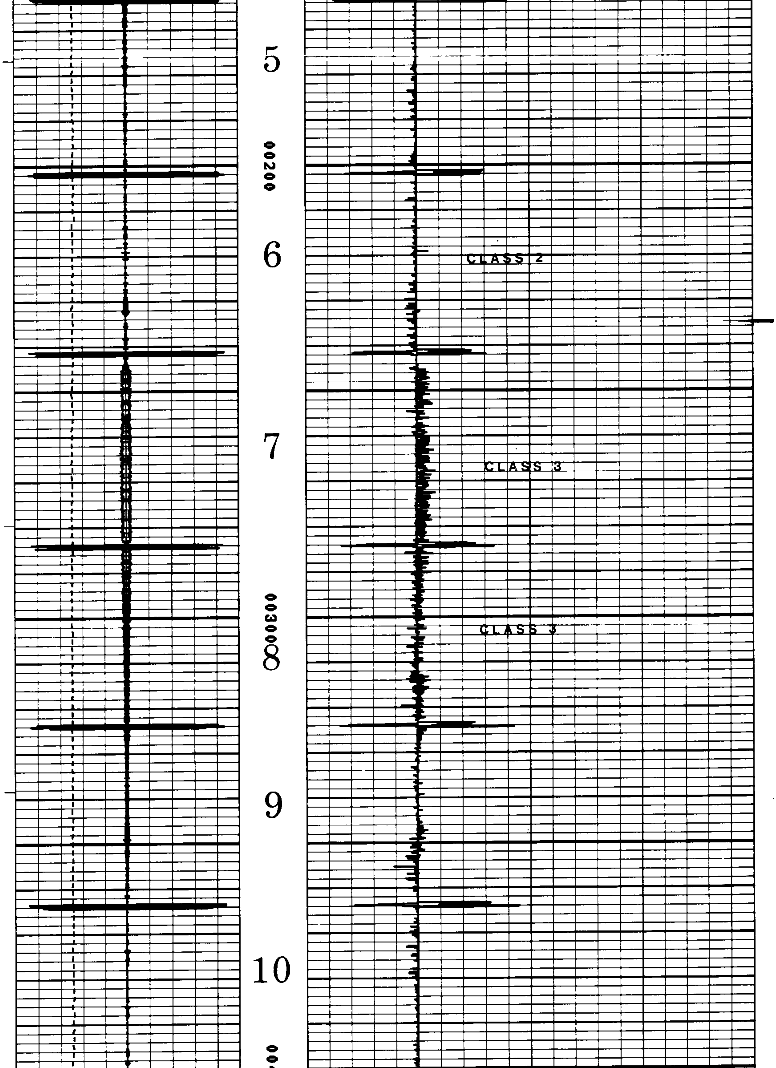
EQUIPMENT DATA

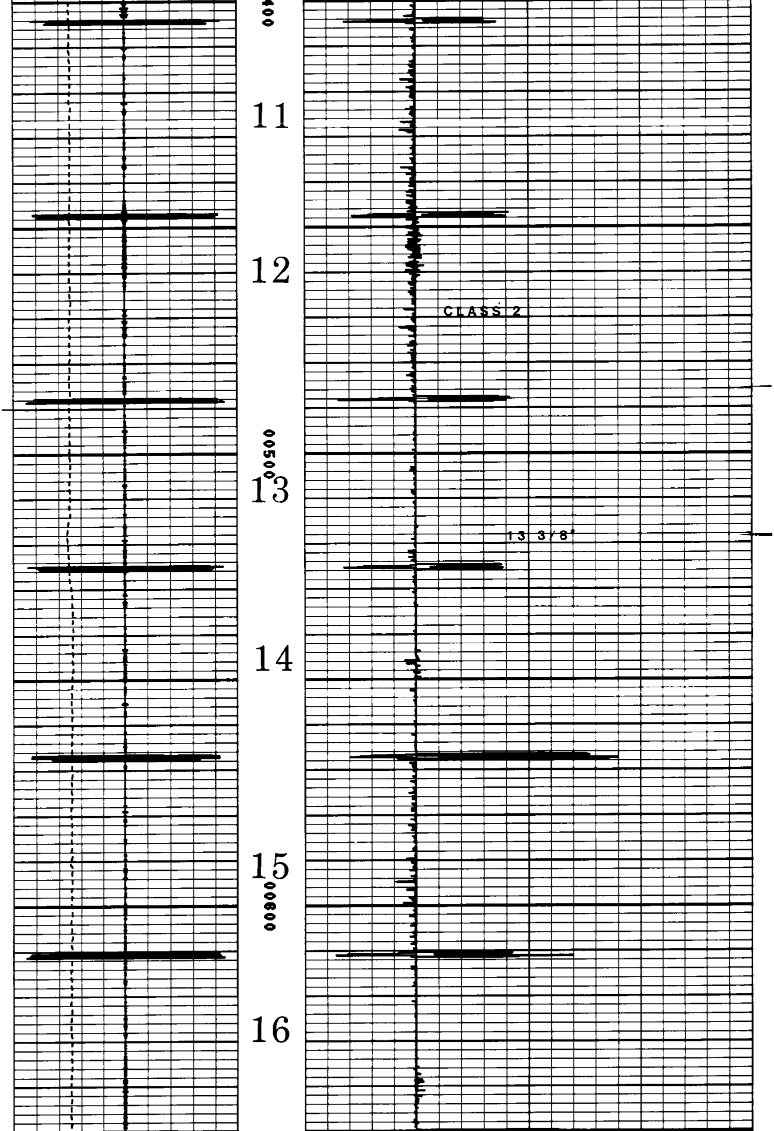
RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
1	1	VRT	55001	2709XA	CENT

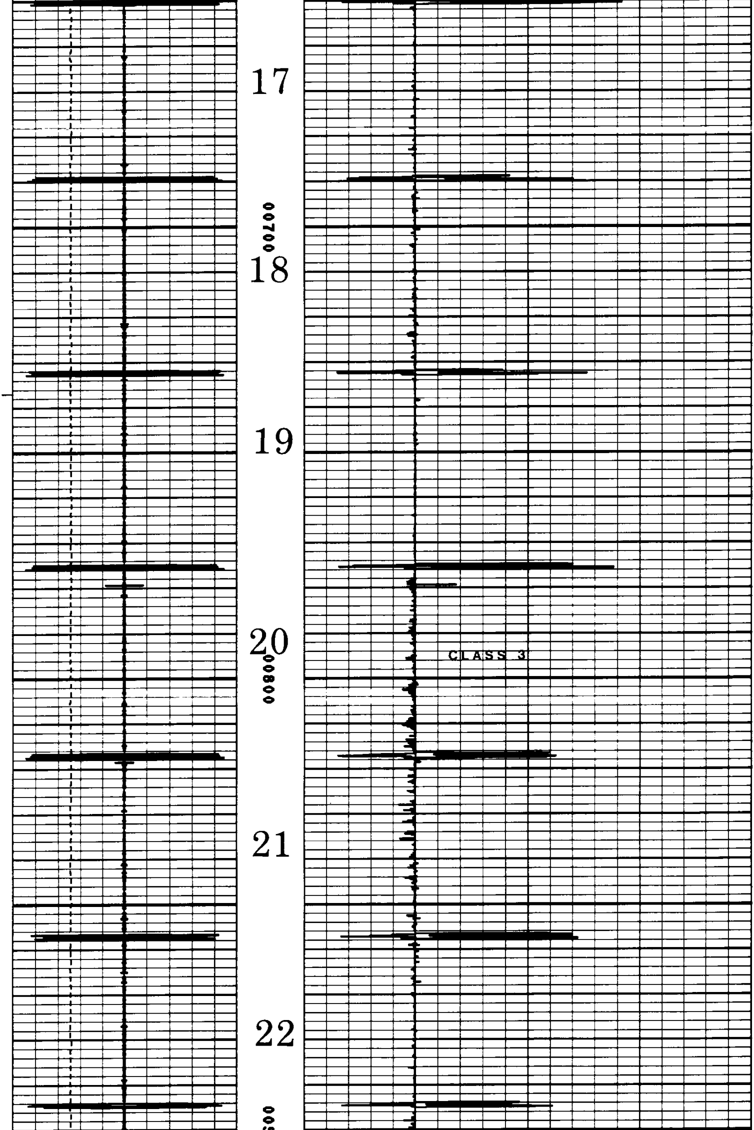
SERVICE: G2V003 FILE: 6 DATE: 12/18/90 TIME: 21:01:49

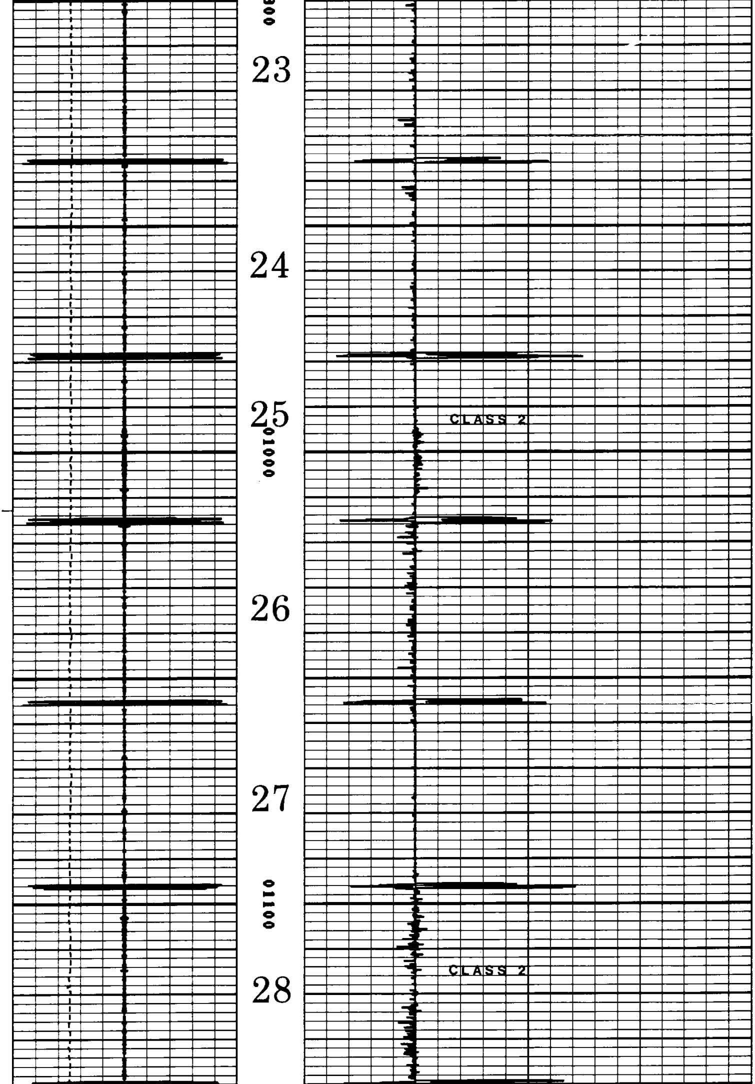
REVISION: FSYS256 REV:G002 VER:2.0 MODE: PLAYBACK

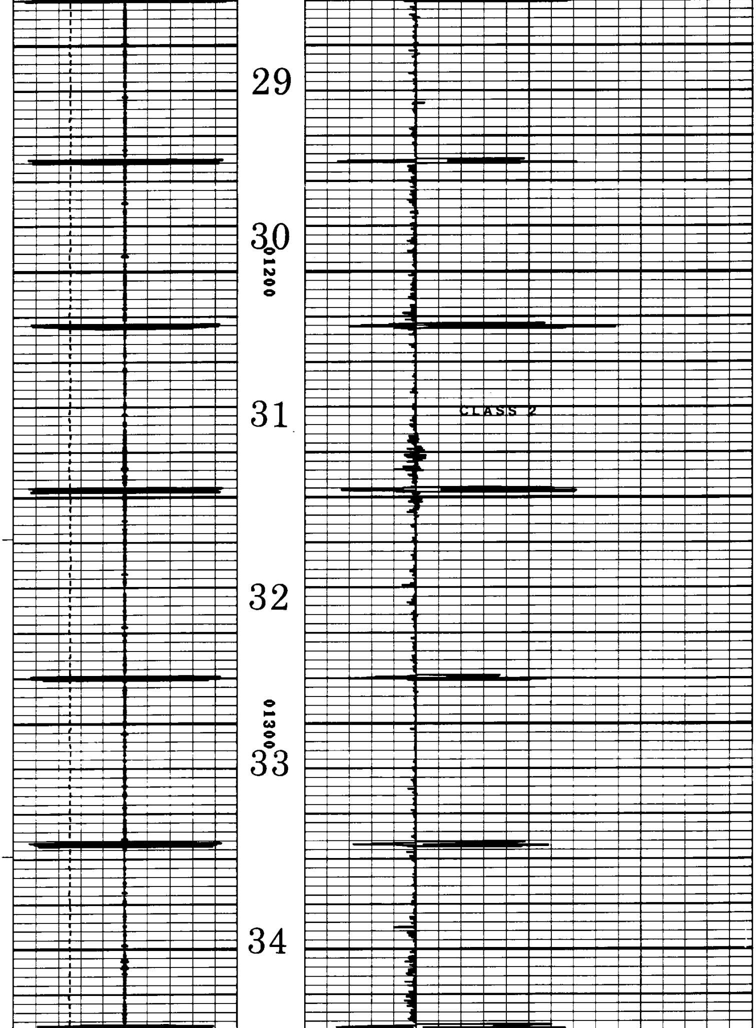


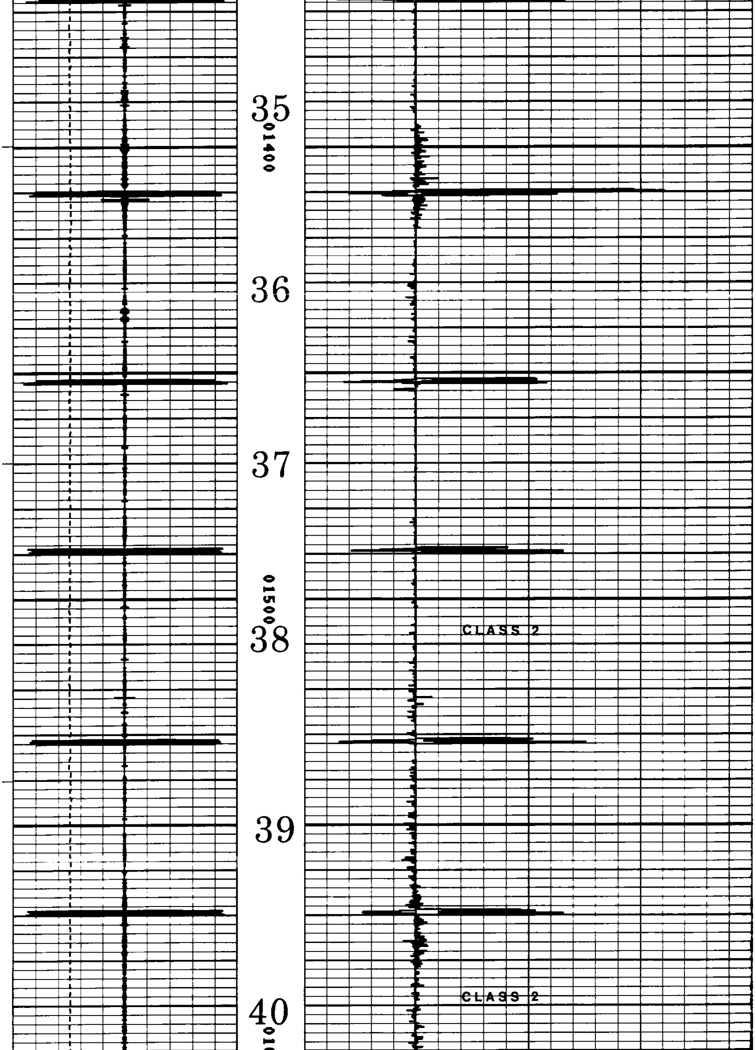


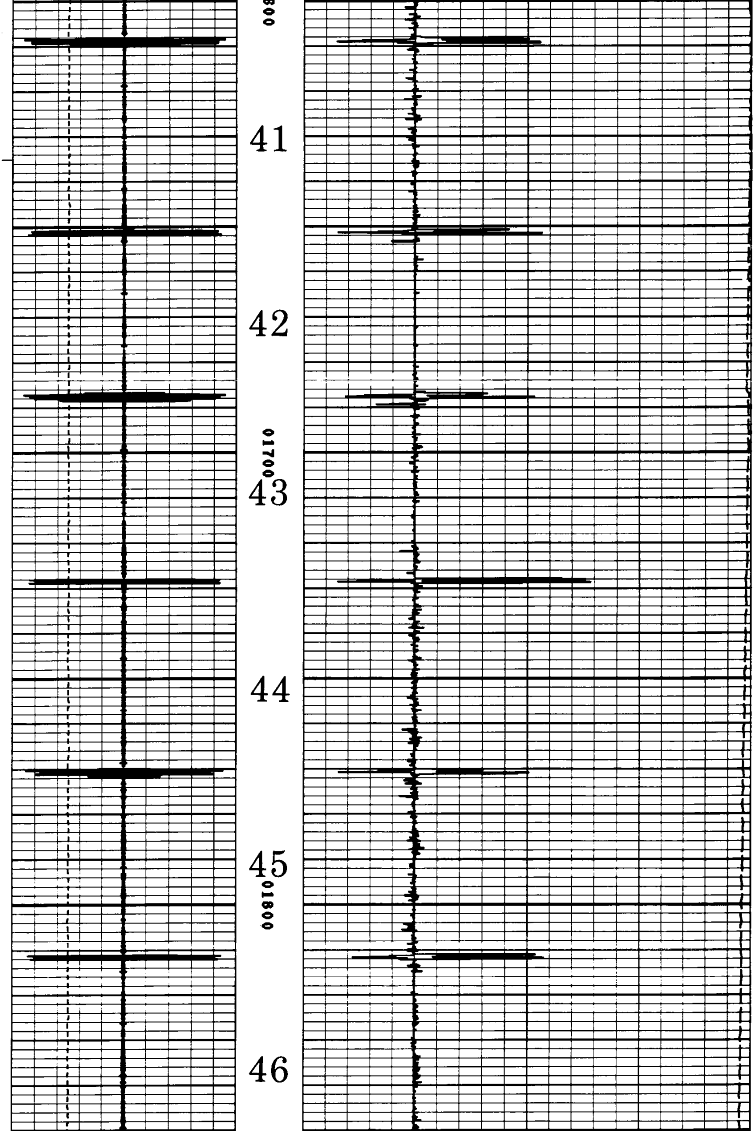


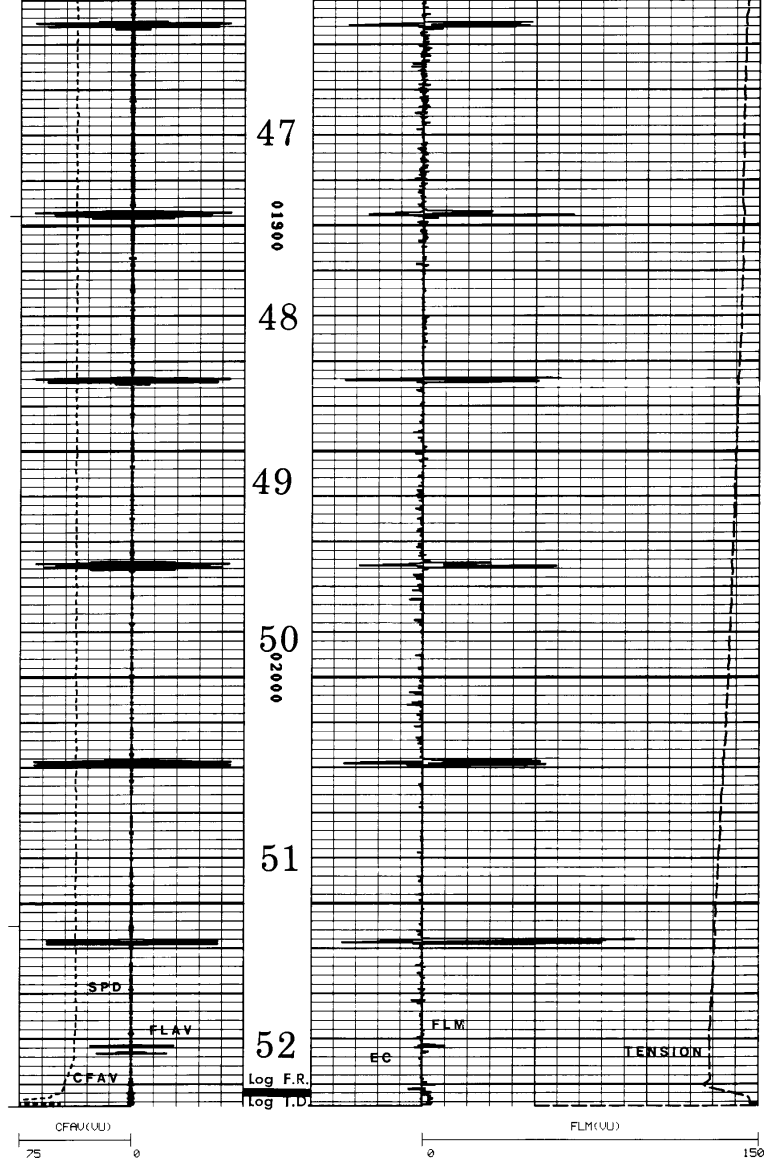












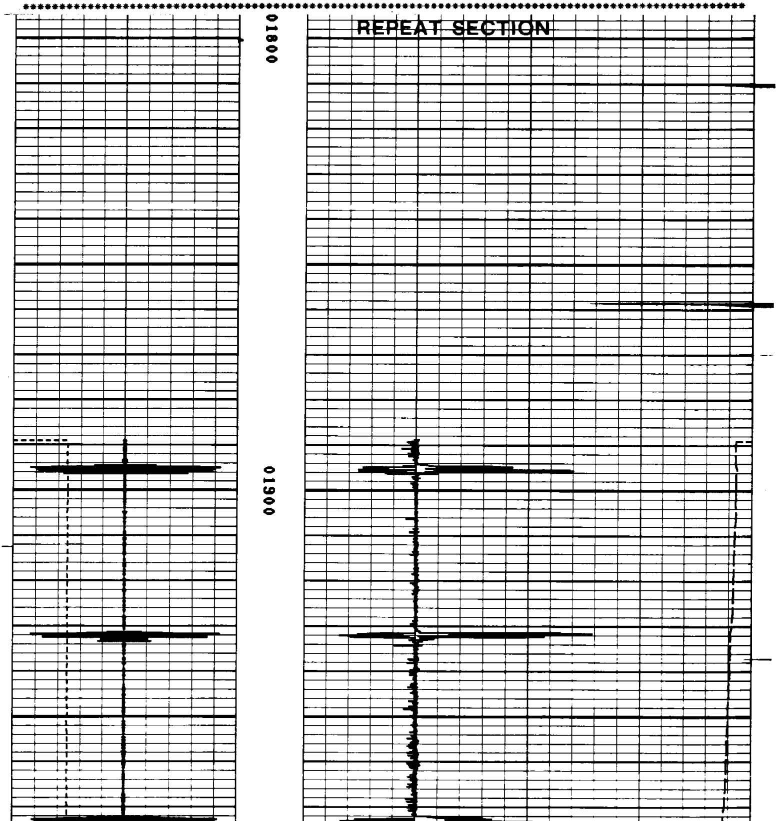
SPD(FT/MIN) 0 500

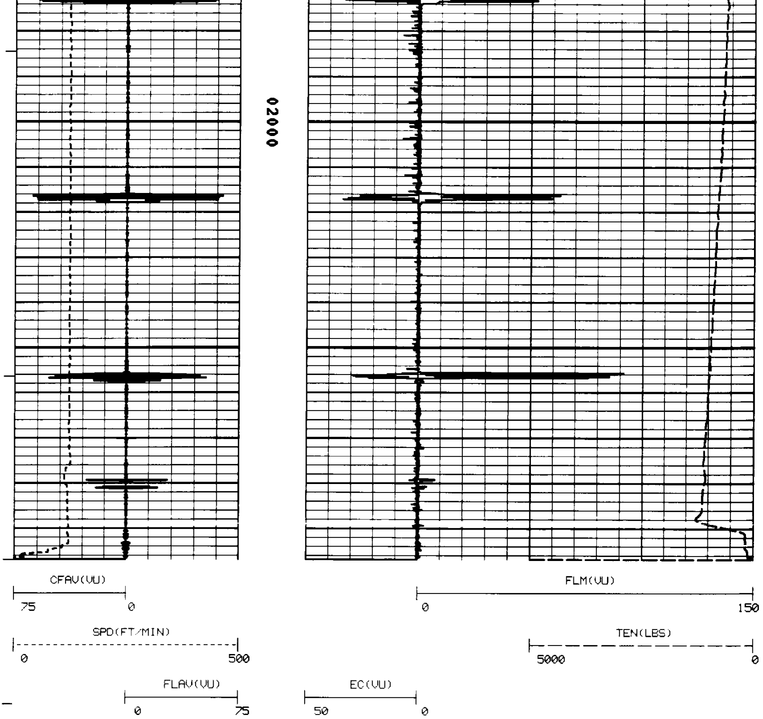
TEN(LBS) 5000 0

FLAV(VU) 0 75

EC(VU) 50 0

FILE: 6





```
                                    FILE:   3

*****************************************************************************************************

                        ****************************************
                        *                                      *
                        *          CALIBRATION SUMMARY         *
                        *  DATE 12/18/90         TIME 21:23:53 *
                        *  RUN   1               TRIP 1        *
                        *                                      *
                        ****************************************


                LOG NAME VRT     ASSET NO. 55001     UNIT NO. 6320
            CALIBRATION ENTERED ON  12/18/90 AT 20:16:42            2907
                                PIPE O.D.   =  8.6

         CURVE    MILLIVOLTS       SCALING FACTORS      ENGINEERING VALUES  UNITS
                  LOW     HIGH     ADD.      MULT.        LOW          HIGH
         ----   --------------- ----------------- --------------------- ----

                DATE 12/10/90          CALIBRATION           TIME 11:23:48

         FL1        -15.   1021.    0.000     0.0732     -0.146       10.210 VU
         FL2          9.   1010.    0.000     0.0732      0.088       10.102 VU
         EC           0.   1986.    0.000     0.0366      0.000        9.928 VU
         FLAV         1.      3.    0.000     1.2451      0.747        1.639 VU

                DATE 12/10/90       CHANNEL SUMMARY          TIME 11:23:48

      CH. NO.            FL1 (MV)        FL2 (MV)        EC (MV)        FLAV (MV)
         1                 996.             E             1994.               3.
         2                 998.             E             1987.               1.
         3                1004.             E             2010.               4.
         4                1006.             E             2000.               3.
         5                1020.             E             2006.               5.
         6                1019.             E             1982.               3.
         7                1017.             E             2000.               3.
         8                1023.             E             2004.               2.
         9                1029.             E             1991.               2.
         10               1050.             E             2012.               5.
         11               1056.             E             2007.               2.
         12               1034.             E             2164.               3.
         13                 E             1020.           2009.            E
         14                 E             1026.           1843.            E
         15                 E             1012.           1897.            E
         16                 E              981.           1829.            E
         17                 E             1057.           1966.            E
         18                 E             1019.           2036.            E
         19                 E             1007.           2009.            E
         20                 E             1009.           1997.            E
         21                 E              978.           1991.            E
         22                 E             1001.           1973.            E
         23                 E             1009.           1966.            E
         24                 E             1003.           1984.            E
```