Western Atlas International

ATLAS WIRELINE SERVICES

5" = 100'

COMPENSATED
DENSILOG®
COMPENSATED
NEUTRON
GAMMA RAY

FILE NO.

API NO.

COMPANY NORTHWEST NATURAL GAS ~~OREGON NATURAL GAS DEVELOPMENT CORP.~~

WELL IW 32C-10

FIELD MIST

COUNTY COLUMBIA STATE OR.

LOCATION:
1500.05' N & 2519.6' W
FROM E/4 CORNER OF:

SEC10 TWP6N RGE5W

OTHER SERVICES
DIFL/BHC-AC/GR
DIPLOG

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	12-28-90				
RUN	2				
SERVICE ORDER	65511				
DEPTH-DRILLER	2749'				
DEPTH-LOGGER	2750'				
BOTTOM LOGGED INTERVAL	2748'				
TOP LOGGED INTERVAL	2100'				
CASING - DRILLER	8 5/8"	@ 2100'	@	@	@
CASING - LOGGER	2100				
BIT SIZE	7 7/8"				
TYPE FLUID IN HOLE	GEL				
DENSITY / VISCOSITY	9.6	41			
PH / FLUID LOSS	8.7	5.2			
SOURCE OF SAMPLE	FLOWLINE				
RM AT MEAS. TEMP.	1.05	@ 65 DEG. F	@	@	@
RMF AT MEAS. TEMP.	.75	@ 65 DEG. F	@	@	@
RMC AT MEAS. TEMP.	1.35	@ 65 DEG. F	@	@	@
SOURCE OF RMF / RMC	M	M			
RM AT BHT	.65	@ 106 DEG. F	@	@	@
TIME SINCE CIRCULATION	6 HRS				
MAX. REC. TEMP. DEG. F	106 DEG. F				
EQUIP. NO. / LOC.	6399	BAK.			
RECORDED BY	M.HINDS				
WITNESSED BY	MR. ROTH/THOMAS				

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.

REMARKS RUN (2)

VOL COMPUTED FOR 5.5" CASING.

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
2	2	CDL	74178	2227XA	DE-CENT
2	2	CAL	74178	2227XA	1/ARM
2	2	CN	52364	2435XA	DE-CENT
2	2	GR	60484	1309XA	DE-CENT
2	2	TEMP			
2	2	PCM	73003	3506XA	DE-CENT

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FILE: 3

CURVE DELAY REPORT

CURVE	PHYS. DELAY	UNITS
SSD	0.3	FT,IN
LSD	0	FT,IN
CAL	0.3	FT,IN
SSN	10.0	FT,IN
LSN	10.8	FT,IN
GR	16.6	FT,IN
TEMP	27.6	FT,IN
DTEM	27.6	FT,IN

PARAMETERS

NAME	DEPTH INTERVAL	VALUE	UNITS
A	2755 TO 3083	0.000	
CAL TYPE	2755 TO 3083	CAL	
CASING ON	2755 TO 3083	NOT ACTIVE	
CHISM ON	2755 TO 3083	NOT ACTIVE	
CHISM OFF	[illegible]	NOT ACTIVE	
M	2755 TO 3083	0.000	
MATRIX	2755 TO 3083	SANDSTONE	
B.S.	2755 TO 3083	8.500	INCH
BAL F	2755 TO 3083	0.850	[illegible]
BAL M	2755 TO 3083	1.850	[illegible]
BALINIT	2755 TO 3083	0.000	FE.

DISPLAY SCALE CHANGES

*** NONE ***

COMPANY: kOxvO zIAp@@(hOxI-IApzH OH0HpwTJ0@pwTr RUN: 2

WELL NAME: GT##jOx@#/h GX##jO<''OHBnOH!<O

SERVICE: X20013 FILE: 3 DATE: 10 23 90 TIME: 00:00:51

REVISION: FSYS256 REV:G002 VER:3.0 MODE: RECORD

RK(MIN)
0 1

PORO(%)
60 0

EIT(INCH)
6 16

CNCF
60 0

VOL(CUFT)
0 30

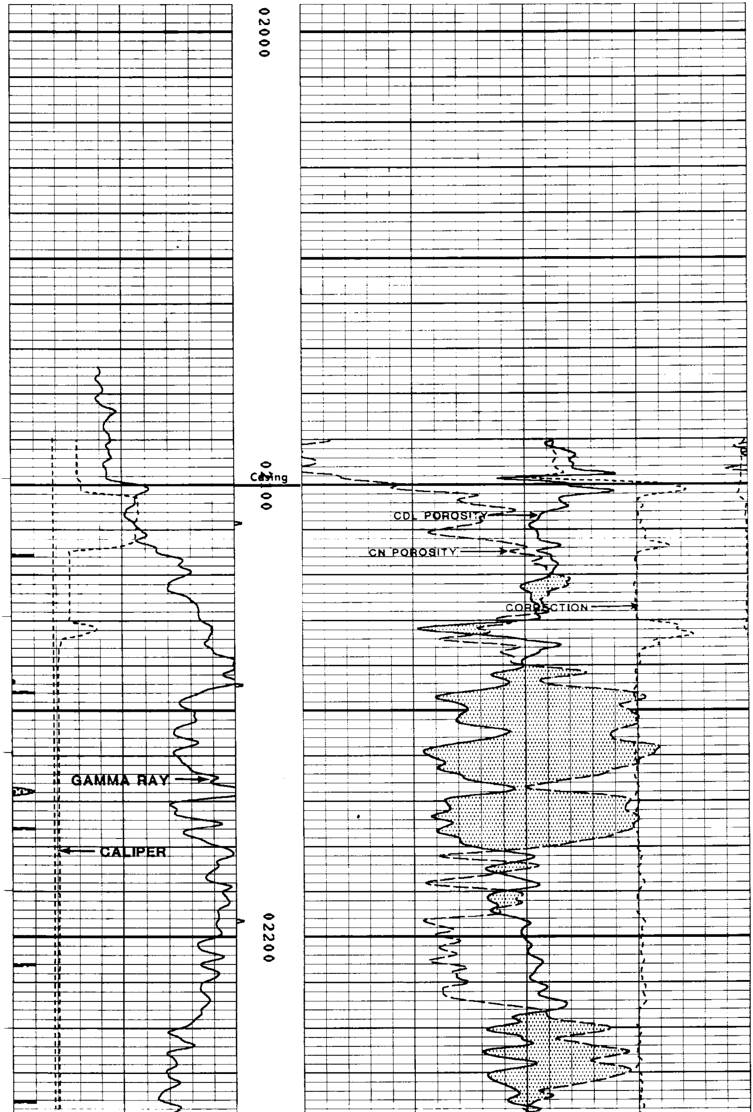
CORR(G/CC)
-0.5 0.5

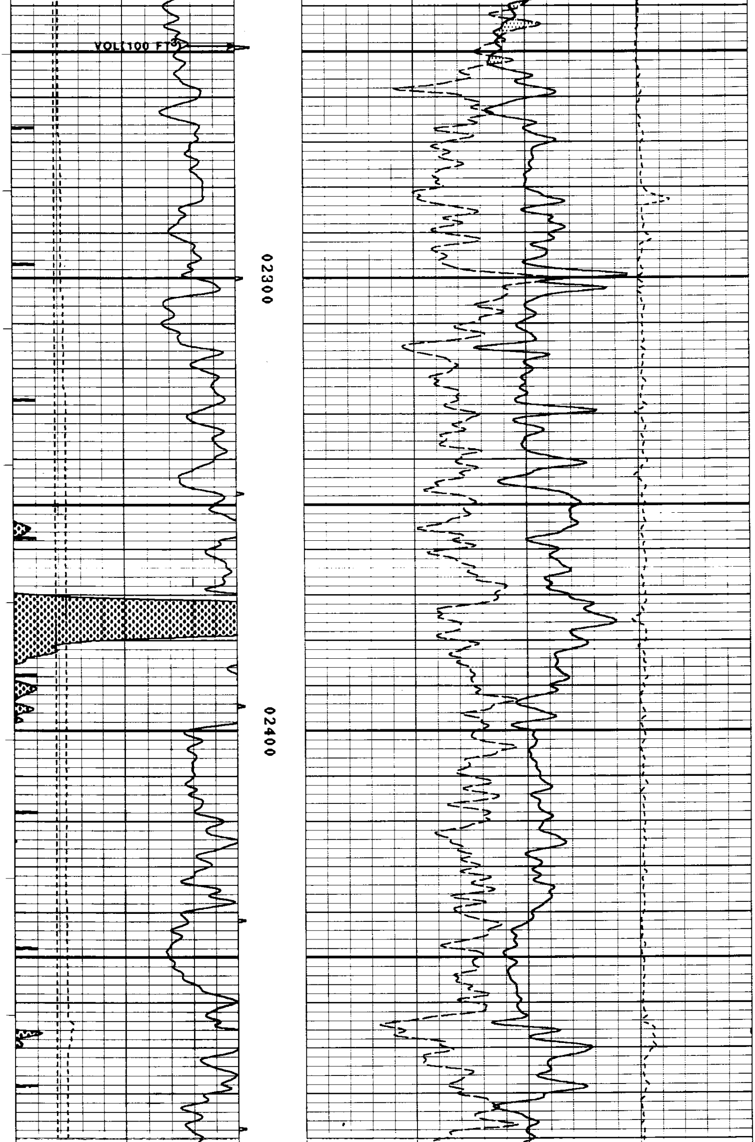
GR(API)
0 150

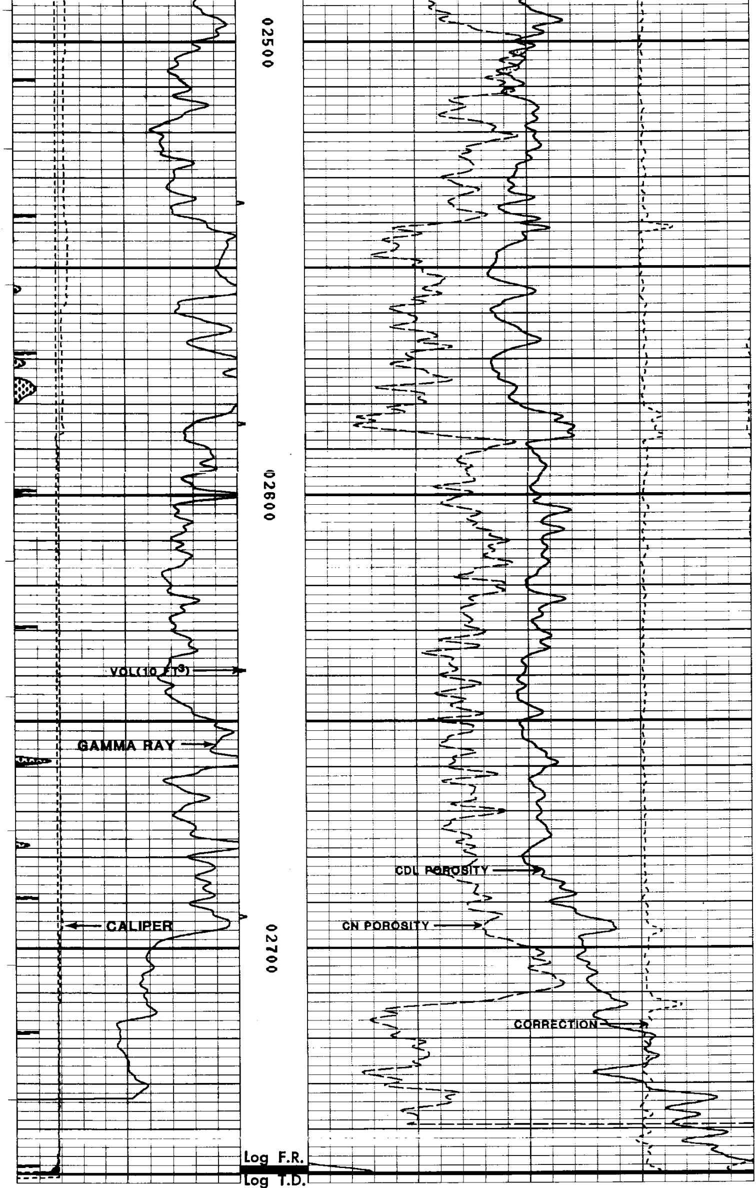
DEN(G/CC)
1.65 2.65

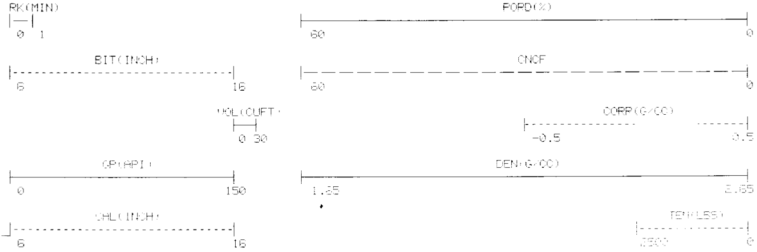
CAL(INCH)
6 16

TEN(LBS)
2500 0









FILE: 2

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REPEAT SECTION

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FILE: 1

CURVE DELAY REPORT

CURVE	[illegible] DELAY	UNITS
SSD	0,3	FT,IN
LSD	0	FT,IN
CAL	0,3	FT,IN
SSN	10,3	FT.IN
LSN	10,9	FT,IN
GR	18,6	FT,IN
TEMP	27,6	FT,IN
DTEM	27,6	FT,IN

PARAMETERS

NAME	DEPTH INTERVAL	VALUE	UNITS
A	2753 TO 2523	0.000	
CAL COR	2753 TO 2523	CAL	
CASING CNC	2753 TO 2523	NOT ACTIVE	
CHISM CN	2753 TO 2523	NOT ACTIVE	
CHISM DEN	2753 TO 2523	NOT ACTIVE	
M	2753 TO 2523	0.000	
MATRIX	2753 TO 2523	SANDSTONE	
O.D.	2753 TO 2523	5.500	INCH
RHO F	2753 TO 2523	0.330	G/CC
RHO M	2753 TO 2523	2.650	G/CC
SALINITY	2753 TO 2523	0.000	PPK

DISPLAY SCALE CHANGES

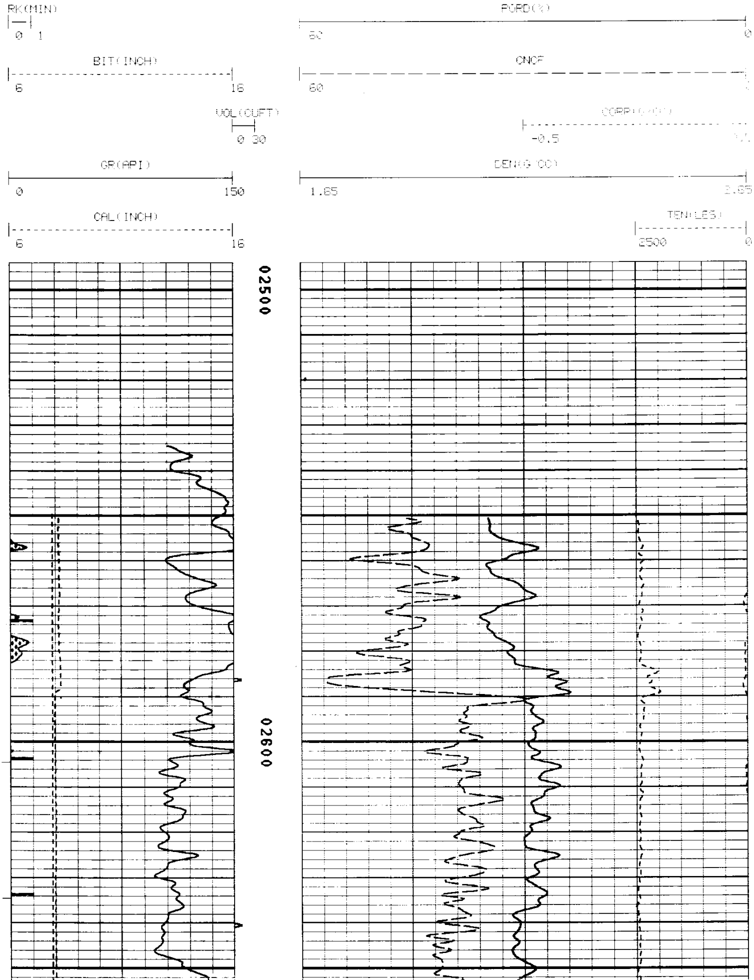
*** NONE ***

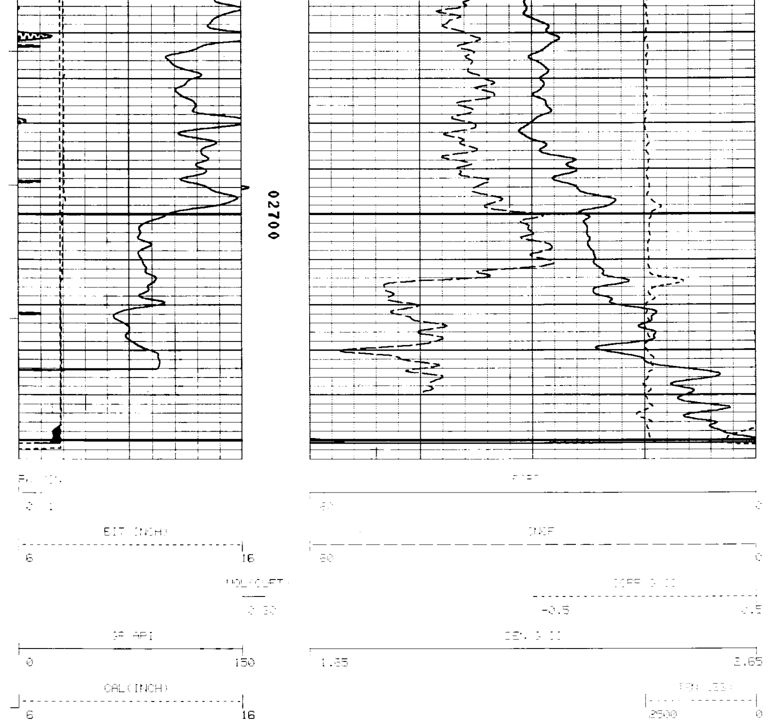
COMPANY: kD: /C z1Ap@@(hDx1-1ApzH`DH0HpwTJ0@pwTh RUN: 2

WELL NAME: GT#$jD/@#/h GX##jDx^`DH8hDH$:C.

SERVICE: X20013 FILE: 1 DATE: 12/27/90 TIME: 23:50:27

REVISION: FSYS256 REV:G002 VER:3.0 MODE: RECORD





FILE: 1

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

        ****************************************
        *                                      *
        *  CALIBRATION/VERIFICATION SUMMARIES  *
        *  DATE 12/28/90          TIME 01:13:28 *
        *  RUN  2                 TRIP 2        *
        *                                      *
        ****************************************

        LOG NAME CDL     ASSET NO. 74178     UNIT NO. B⊠B0A=B⌂@⊡
    CALIBRATION ENTERED ON   12/27/90 AT 18:53:45      2227 DUAL SCINT.
                     SOURCE NUMBER    845

  CURVE    COUNTS/SEC.     SCALING FACTORS     RATIO     ENG. VALUE   UNITS
           BLOCK  VALUE    ADD.     MULT.      MG/AL
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          DATE 11/21/90          CALIBRATION          TIME 17:46:37
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LSD     MG      349.9
SSD             212.0
DEN                                                         1.706   G/CC
CORR                                                       -0.007   G/CC
DENP                                                        1.685   G/CC
CORP                                                       -0.041   G/CC
LSD     AL       33.8     0.000     1.0000   10.3663
SSD              97.4     0.000     1.0000    2.1762
DEN                                                         2.697   G/CC
CORR                                                       -0.006   G/CC
DENP                                                        2.682   G/CC
CORP                                                       -0.039   G/CC
LSD     RIBL     63.5
SSD             142.7
DEN                                                         2.591   G/CC
CORR                                                        0.138   G/CC
LSD     RIBH    148.2
SSD              97.7
DEN                                                         1.731   G/CC
CORR                                                       -0.324   G/CC

     DATE 12/03/90    PRIMARY VERIFICATION       TIME 08:43:18

LSD     JIG     129.3     0.000     1.0000
SSD             163.3     0.000     1.0000
DEN                                                         2.187   G/CC
CORR                                                        0.052   G/CC

     DATE 12/27/90   BEFORE LOG VERIFICATION     TIME 19:38:13

LSD     JIG     128.3     0.000     1.0000
SSD             161.3     0.000     1.0000
DEN                                                         2.180   G/CC
CORR                                                        0.042   G/CC

     DATE 12/28/90    AFTER LOG VERIFICATION     TIME 01:10:48

LSD     JIG     129.3     0.000     1.0000
SSD             163.3     0.000     1.0000
DEN                                                         2.187   G/CC
CORR                                                        0.052   G/CC


       LOG NAME CAL     ASSET NO. 74178    UNIT NO. 6399
   CALIBRATION ENTERED ON  12/27/90 AT 18:54:56

CURVE   MILLIVOLTS       SCALING FACTORS    ENGINEERING VALUES    UNITS
          LOW    HIGH    ADD.     MULT.        LOW         HIGH
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     DATE 11/29/90          CALIBRATION           TIME 09:18:42

CAL     3661.2  4269.6   -3.327   0.0273       6.000      12.000 INCH

                        PRIMARY VERIFICATION             NOT DONE

                       BEFORE LOG VERIFICATION           NOT DONE

     DATE 12/28/90    AFTER LOG VERIFICATION     TIME 00:26:13

CAL     3446.9     E      -4.527    0.0273       8.331        E      INCH


       LOG NAME CN       ASSET NO. 52364    UNIT NO. B⊠B0A=B.@D
   CALIBRATION ENTERED ON  12/27/90 AT 18:55:57               2435
                  SOURCE NUMBER   117836

CURVE   COUNTS/SEC.    SCALING FACTORS     RATIO     ENG. VALUE  UNITS
                        ADD.      MULT.   [illegible]
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     DATE 11/21/90          CALIBRATION          TIME 15:41:07

LSN          76.9        0.000    1.0000
SSN         153.0        0.000    1.0000
CN                                        0.1257        25.738  %

     DATE 11/21/90    PRIMARY VERIFICATION      TIME 16:03:24

LSN          91.4        0.000    1.0000
SSN         144.9        0.000    1.0000
CN                                        0.1576        16.108  %

     DATE 12/27/90   BEFORE LOG VERIFICATION   TIME 19:47:19

LSN          87.0        0.000    1.0000
SSN         140.9        0.000    1.0000
CN                                        0.1544        16.834  %

     DATE 12/28/90    AFTER LOG VERIFICATION   TIME 01:04:59
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LSN        87.1          0.000   1.0000
SSN       141.4          0.000   1.0000
CN                                              0.1541       16.899  %


        LOG NAME GR      ASSET NO. 60484    UNIT NO. XP$ΓC□XX□□
     CALIBRATION ENTERED ON  12/27/90 AT 18:55:27

CURVE    COUNTS/SEC.     SCALING FACTORS     ENGINEERING VALUES    UNITS
          LOW     HIGH     ADD.     MULT.         LOW         HIGH
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      DATE 11/21/90           CALIBRATION            TIME 11:42:19

GR          63.1   268.1    0.000    0.7497     0.000     150.000 API

                          PRIMARY VERIFICATION              NOT DONE

      DATE 12/27/90   BEFORE LOG VERIFICATION    TIME 19:40:57

GR          40.9   234.5    0.000    0.7497    30.626     175.828 API

      DATE 12/28/90    AFTER LOG VERIFICATION    TIME 01:07:15

GR          82.0   268.2    0.000    0.7497    61.458     201.112 API
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