ATLAS WIRELINE SERVICES

COMPENSATED DENSILOG®
COMPENSATED NEUTRON
GAMMA RAY

FILE NO.

API NO.

5" = 100'

COMPANY OREGON NATURAL GAS CORP

WELL IW 23B-3

FIELD MIST

COUNTY COLUMBIA STATE OR.

LOCATION:
615' S & 1591' E OF THE
W 1/4 CORNER OF

SEC3 TWP6N RGE5W

OTHER SERVICES
DIFL/BHC
DIP

PERMANENT DATUM GL ELEV. 1073.1
LOGGING MEASURED FROM KB 11.4 FT. ABOVE P.D.
DRILLING MEASURED FROM KB

ELEVATIONS
KB 1084.5
DF
GL 1073.1'

DATE	6/27/88		7/8/88	
RUN	1		2	
SERVICE ORDER	158840		158845	
DEPTH-DRILLER	2651'		2974'	
DEPTH-LOGGER	2646'		2966'	
BOTTOM LOGGED INTERVAL	2644'		2966'	
TOP LOGGED INTERVAL	571'		2614'	
CASING - DRILLER	13 3/8"	@ 571'	8 5/8"	@ 2620'
CASING - LOGGER	571'		2614'	
BIT SIZE	12.25		7 7/8"	
TYPE FLUID IN HOLE	GEL/DRISPAC		KCL POLYMER	
DENSITY / VISCOSITY	9.5	49	8.6	40
PH / FLUID LOSS	8.5	4.4	10.5	10.8
SOURCE OF SAMPLE	FLOWLINE		FLOWLINE	
RM AT MEAS. TEMP.	1.27	@ 64	.243	@ 88 F
RMF AT MEAS. TEMP.	0.98	@ 65	0.19	@ 88 F
RMC AT MEAS. TEMP.	1.64	@ 64	.282	@ 88 F
SOURCE OF RMF / RMC	MEAS	MEAS	MEAS	MEAS
RM AT BHT	0.75	@ 108 F	0.19	@ 112 F
TIME SINCE CIRCULATION	2 5 HRS		3 HRS	
MAX. REC. TEMP. DEG. F	108 F		112 F	
EQUIP. NO. / LOC.	HL 6406	SAC	HL 6406	SAC
RECORDED BY	B. WELCH		B. WELCH	
WITNESSED BY	MR. THOMAS;		MR. 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 MEASURMENTS, 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.

Western Atlas International
A Litton/Dresser Company

ATLAS WIRELINE SERVICES

REMARKS RUN (1)

BHV CALCULATED FOR 8 5/8" CSG
CN CORRECTED FOR BIT SIZE

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
1	1	CDL	57833	2212	DECENT
1	1	CAL	57833	2212	DECENT
1	1	CN	56094	2435	DECENT
1	1	GR	73467	1309	DECENT

REMARKS RUN (2)

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
2	1	CDL	57833	2212	DECENT
2	1	CAL	57833	2212	DECENT
2	1	CN	56094	2435	DECENT
2	1	GR	73467	1309	DECENT

PARAMETERS

NAME	DEPTH INTERVAL	VALUE	UNITS
A	2643 TO 568	0.000	
CAL CORR	2643 TO 568	12.250	INCH
CHI SMTH	2643 TO 568	ACTIVE	
M	2643 TO 568	0.000	
MATRIX	2643 TO 568	SANDSTONE	
O.D.	2643 TO 568	8.625	INCH
RHO F	2643 TO 568	0.980	G/CC
RHO M	2643 TO 568	2.650	G/CC
SALINITY	2643 TO 568	0.000	PPK

DISPLAY SCALE CHANGES

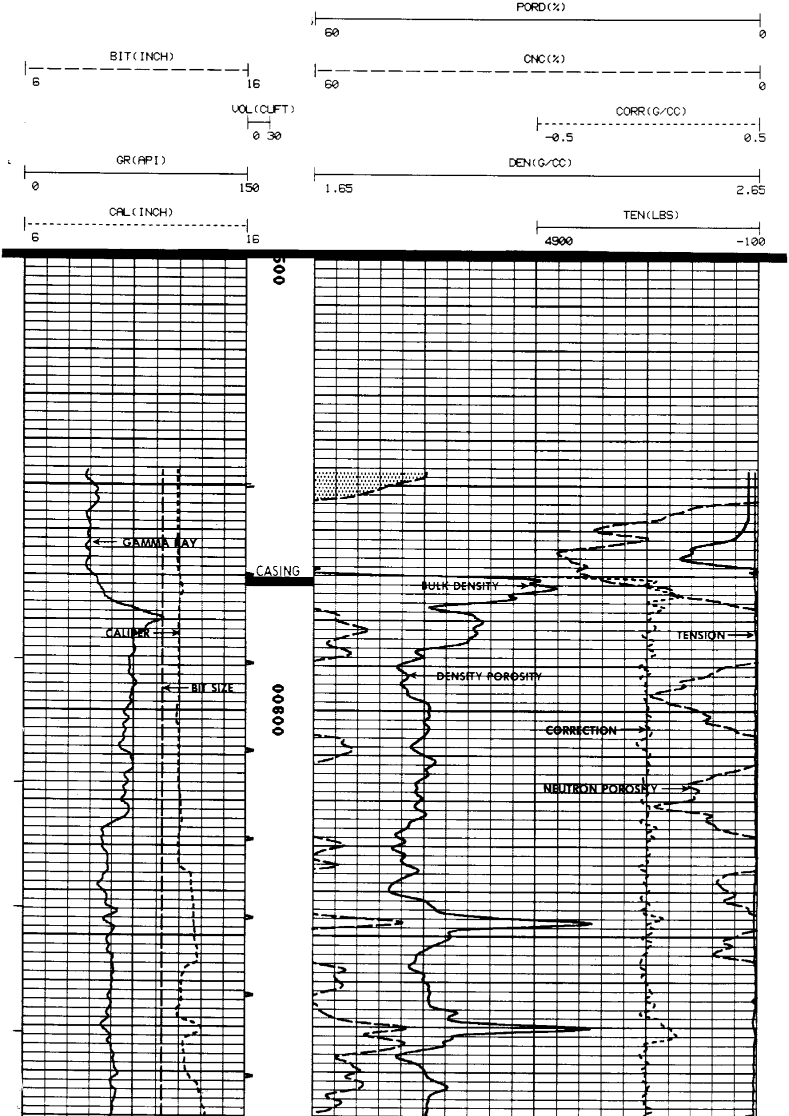
*** NONE ***

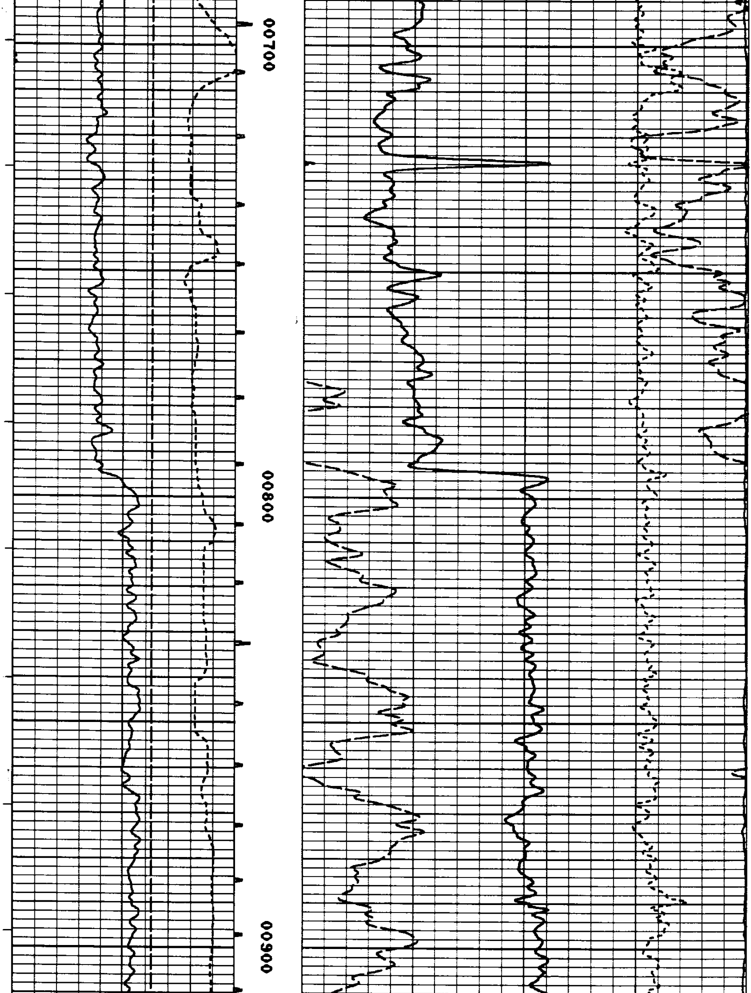
COMPANY: OREGON NATURAL GAS CORP. RUN: 1

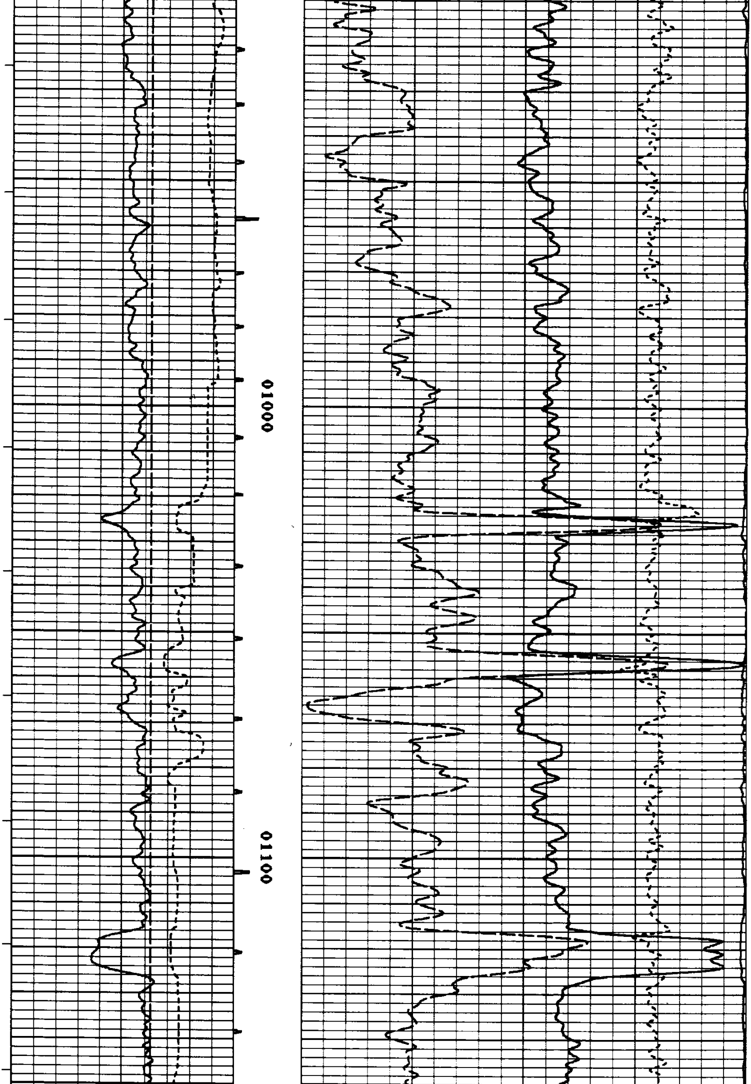
WELL NAME: IW 23B-3 TRIP: 1

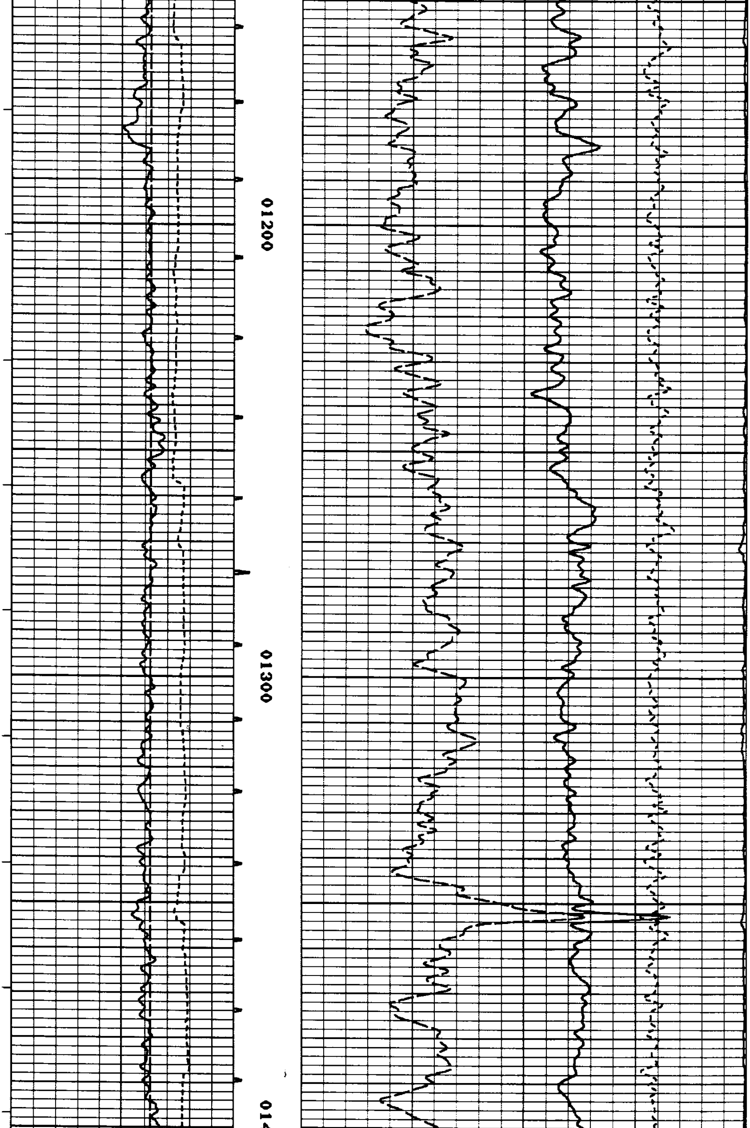
SERVICE: KC287B FILE: 4 DATE: 06/27/88 TIME: 06:23:06

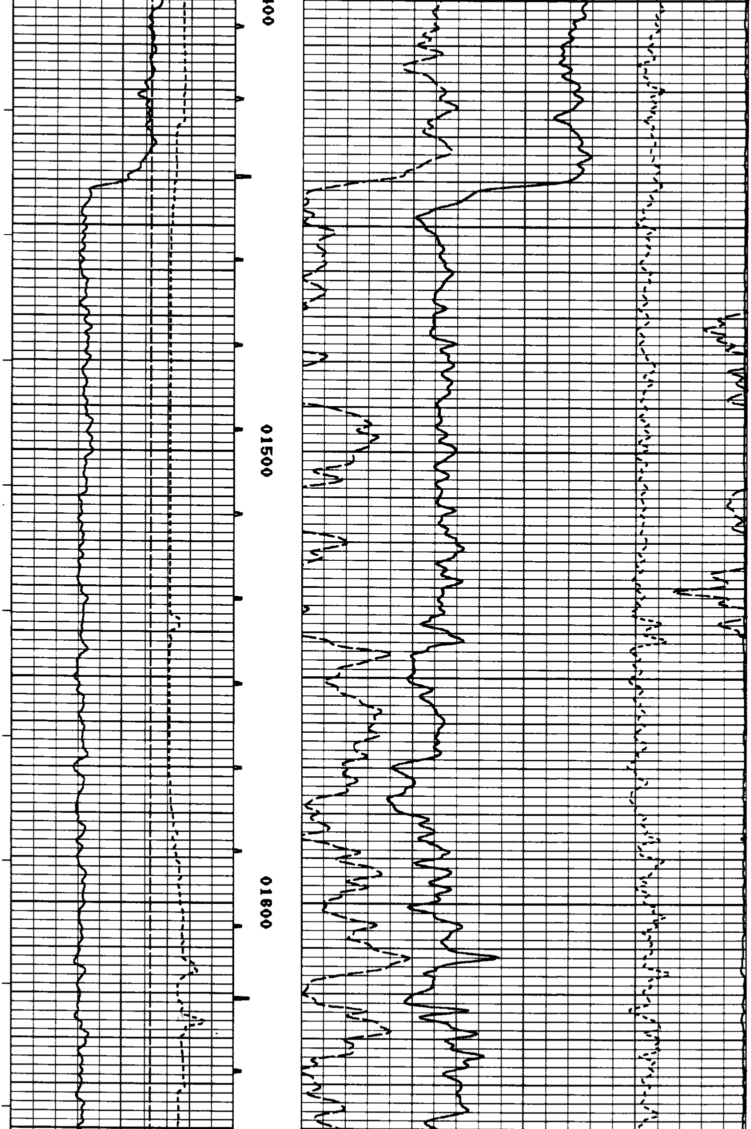
REVISION: FSYSAL REV GS08 VER+2 MODE: RECORD

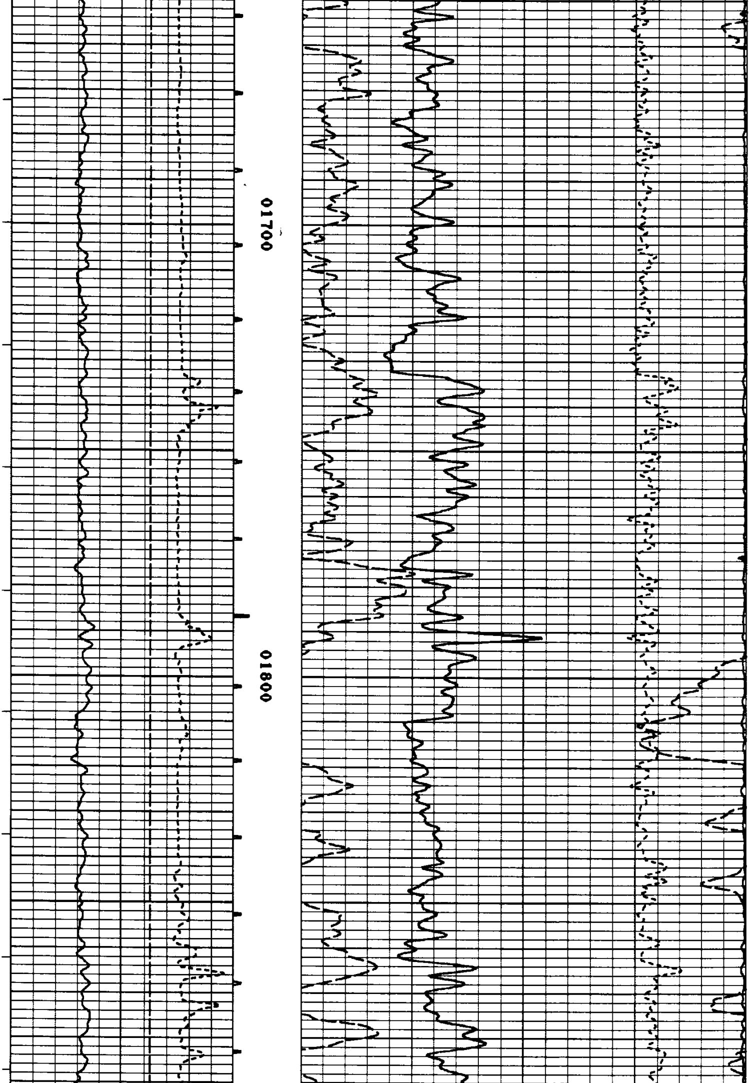


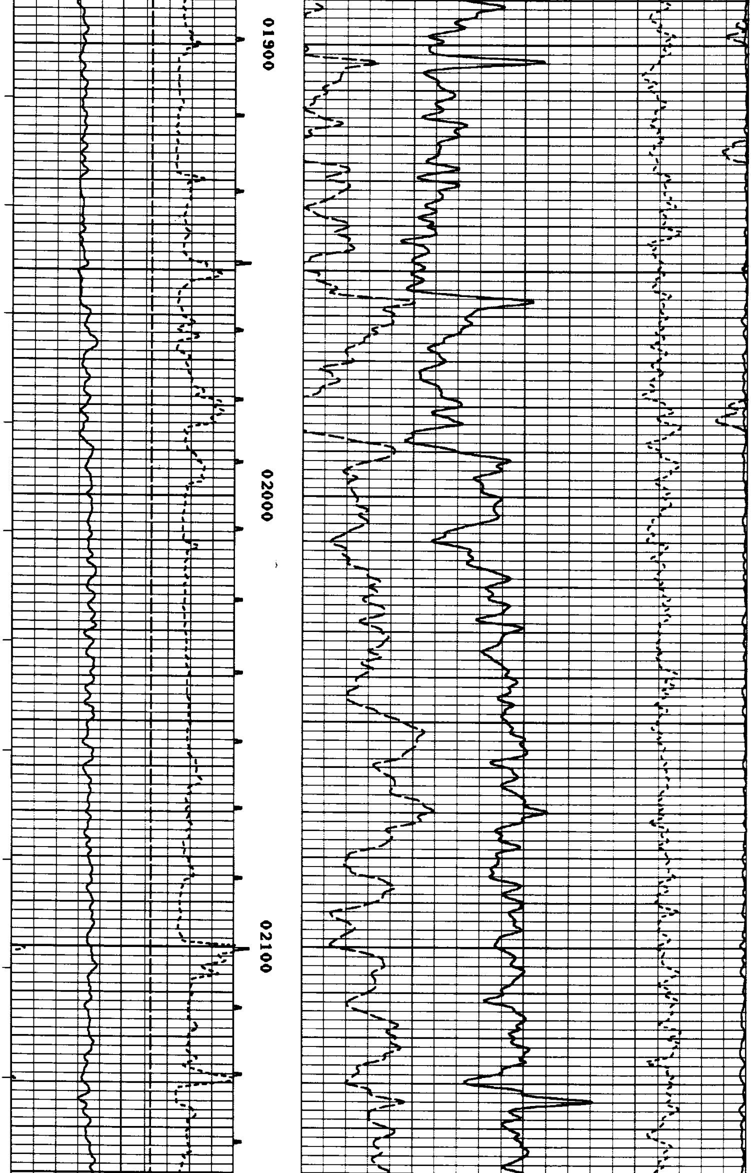


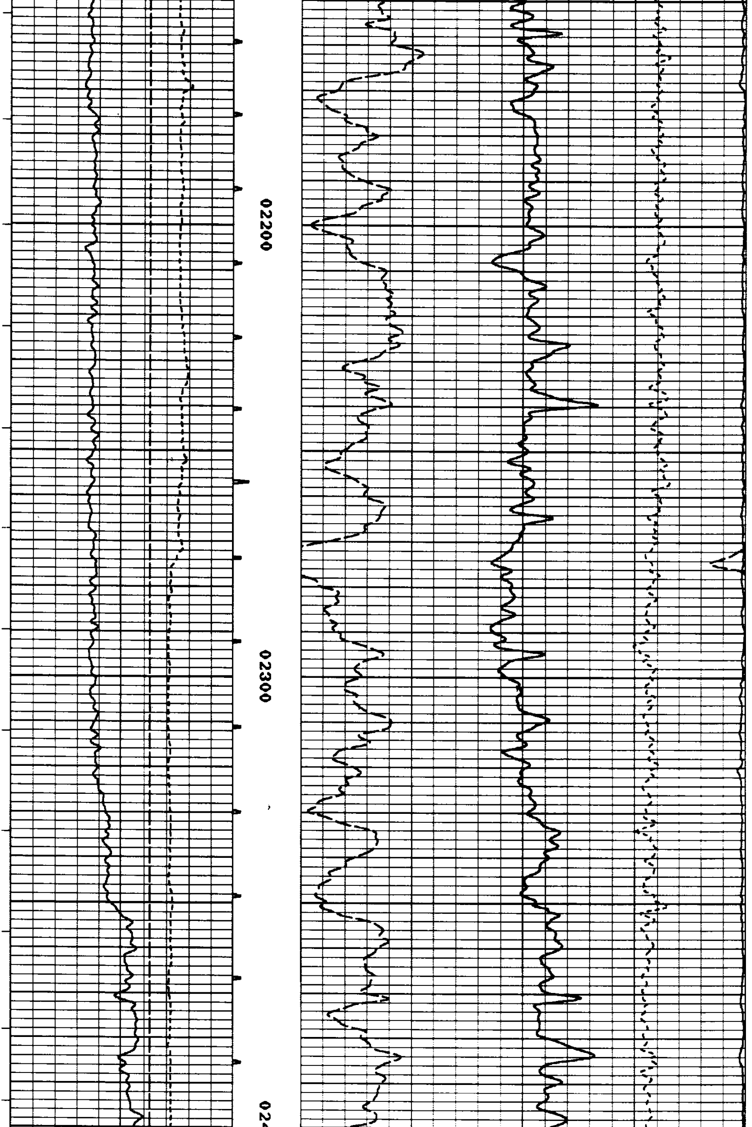


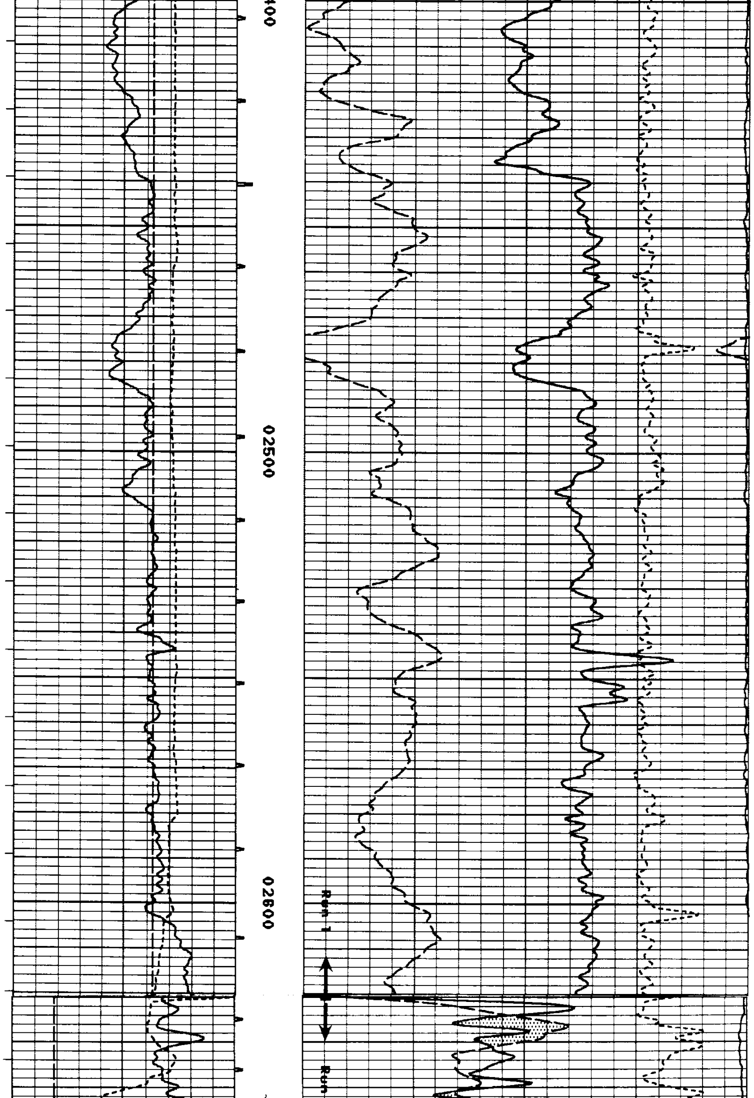


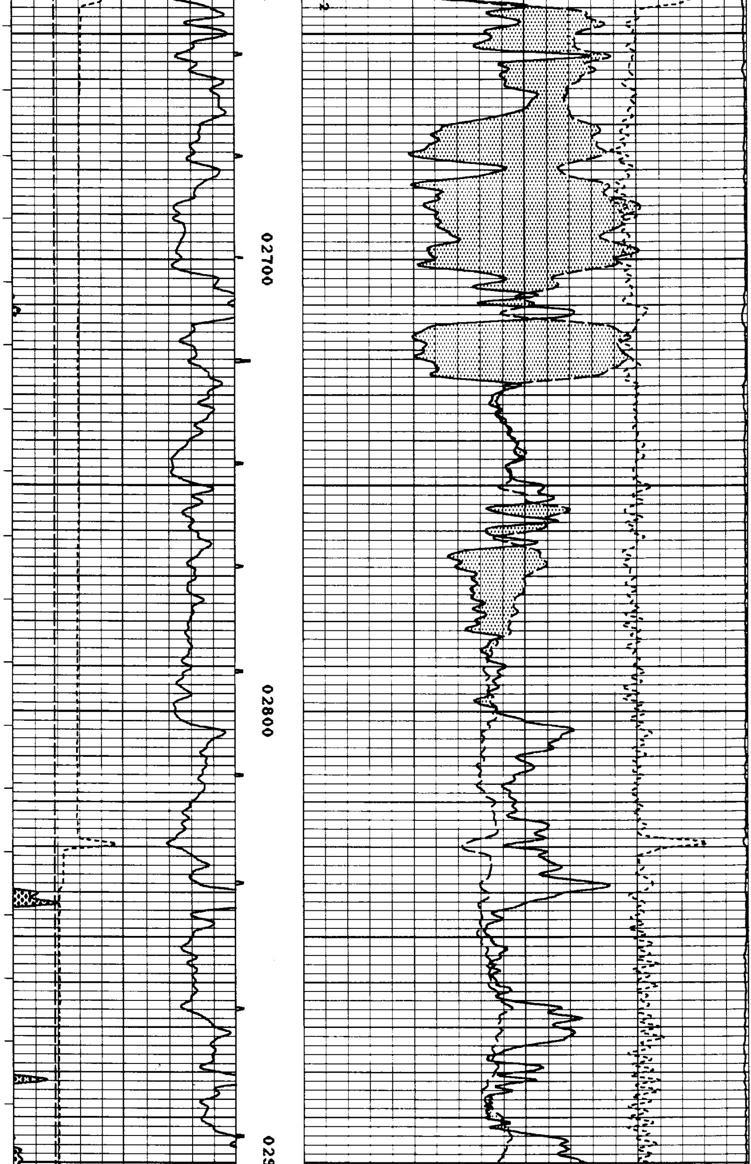


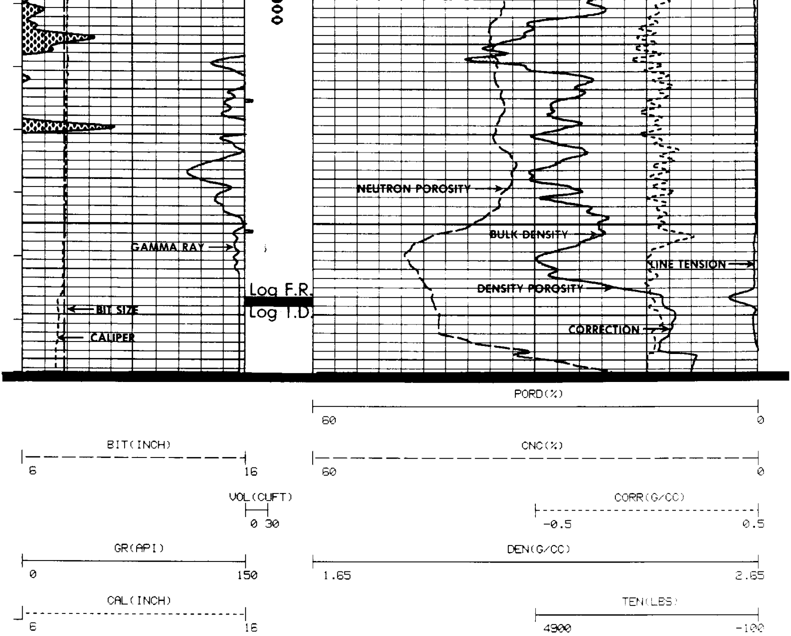












CURVE DELAYS

CURVE	DELAY	UNITS
SSD	0,3	FT,IN
LSD	0	FT,IN
CAL	2,0	FT,IN
SSN	9,9	FT,IN
LSN	10,3	FT,IN
GR	16,6	FT,IN
TTEN	0,0	FT,IN
TEN	0,0	FT,IN
SPD	0,0	FT,IN

PARAMETERS

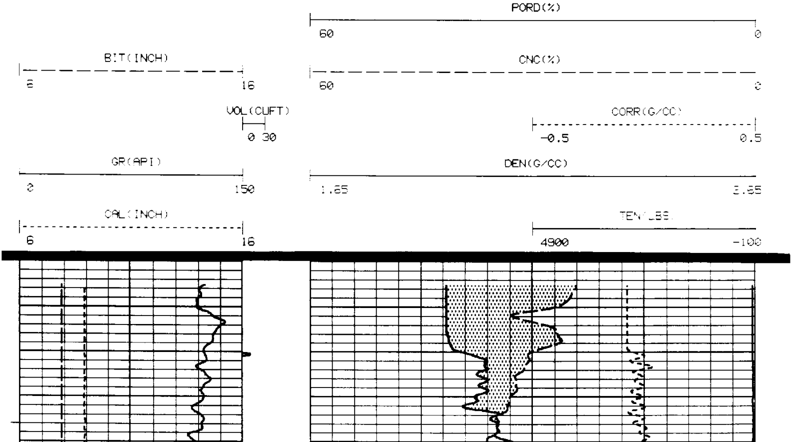
NAME	DEPTH INTERVAL	VALUE	UNITS
A	2987 TO 2777	0.000	
CAL CORR	2987 TO 2777	CAL	
CHI SMTH	2987 TO 2777	ACTIVE	
M	2987 TO 2777	0.000	
MATRIX	2987 TO 2777	SANDSTONE	
O.D.	2987 TO 2777	0.000	INCH

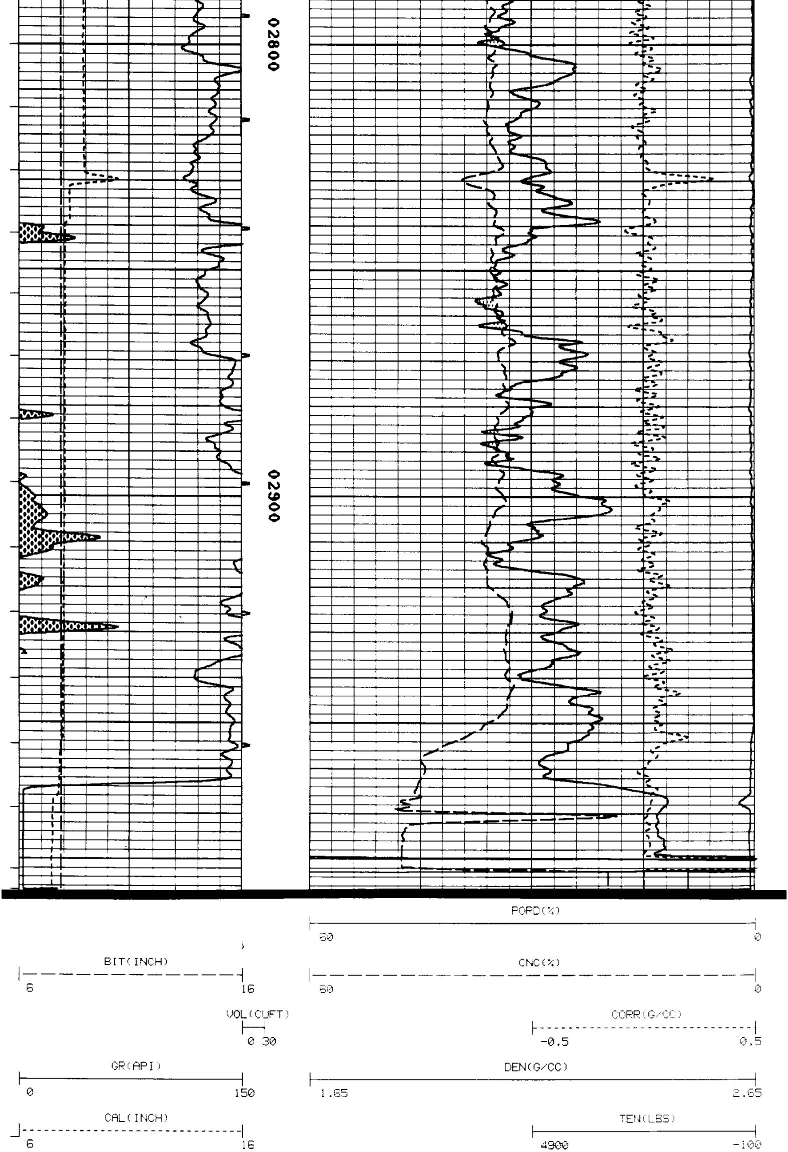
RHO F	2987	TO	2777	0.980	G/CC
RHO M	2987	TO	2777	2.650	G/CC
SALINITY	2987	TO	2777	0.000	PPK

DISPLAY SCALE CHANGES

*** NONE ***

COMPANY: OREGON NATURAL GAS CORP RUN: 2
WELL NAME: IW 23B-3 TRIP: 1
SERVICE: KC287B FILE: 4 DATE: 07/08/88 TIME: 12:52:02
REVISION: FSYSAL REV GS08 VER+2 **REPEAT SECTION** MODE: RECORD





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             *****************************************
             *                                       *
             *  CALIBRATION/VERIFICATION SUMMARIES   *
             *  DATE 07/08/88       TIME 14:16:56    *
             *  RUN  2              TRIP 1           *
             *                                       *
             *****************************************


      LOG NAME CDL    ASSET NO. 57833    UNIT NO. HL 6406
  CALIBRATION ENTERED ON  07/08/88 AT 12:36:57        LARGE TOOL
                       SOURCE NUMBER 767

CURVE   COUNTS/SEC.    SCALING FACTORS    RATIO    ENG. VALUE  UNITS
       BLOCK  VALUE    ADD.    MULT.     MG/AL
----    --------      ------------------ --------  ----------  ----

     DATE 05/18/88        CALIBRATION          TIME 12:43:36

LSD     MG      265.6
SSD             404.1
DEN                                                      2.200  G/CC
CORR                                                     0.000  G/CC
LSD     AL       93.3    0.000     1.0000   2.8469
SSD             271.5    0.000     1.0000   1.4885
DEN                                                      2.800  G/CC
CORR                                                     0.000  G/CC
LSD     MGRV    246.5
SSD             435.3
DEN                                                      2.480  G/CC
CORR                                                     0.236  G/CC

     DATE 06/02/88    PRIMARY VERIFICATION      TIME 21:15:00

LSD     JIG      90.1    0.000     1.0000
SSD             267.3    0.000     1.0000
DEN                                                      2.816  G/CC
CORR                                                    -0.004  G/CC

     DATE 07/08/88   BEFORE LOG VERIFICATION    TIME 12:37:40

LSD     JIG      91.1    0.000     1.0000
SSD             270.1    0.000     1.0000
DEN                                                      2.822  G/CC
CORR                                                     0.008  G/CC

     DATE 07/08/88    AFTER LOG VERIFICATION    TIME 14:12:44

LSD     JIG      90.8    0.000     1.0000
SSD             268.3    0.000     1.0000
DEN                                                      2.813  G/CC
CORR                                                    -0.002  G/CC



      LOG NAME CAL    ASSET NO. 57833    UNIT NO. HL 6406
  CALIBRATION ENTERED ON  07/08/88 AT 12:46:12

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

     DATE 06/02/88        CALIBRATION          TIME 20:54:29

CAL    1353.8  3735.5    2.589    0.0185      6.000      12.000 INCH

                      PRIMARY VERIFICATION            NOT DONE

     DATE 07/08/88   BEFORE LOG VERIFICATION    TIME 12:47:06

CAL       E    2123.8    2.589    0.0185      E           7.940 INCH

     DATE 07/08/88    AFTER LOG VERIFICATION    TIME 13:42:34

CAL       E    2572.9    1.589    0.0185      E           8.071 INCH



      LOG NAME CN     ASSET NO. 56094    UNIT NO. VENT/TP
  CALIBRATION ENTERED ON  07/08/88 AT 12:26:27           2435
                       SOURCE NUMBER S17S20
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CURVE   COUNTS/SEC.     SCALING FACTORS      RATIO      ENG. VALUE   UNITS
                          ADD.      MULT.  LSN/(SSN*4)
----    ---------      ------------------- ---------  -----------  ----

         DATE 05/18/88          CALIBRATION           TIME 15:02:35

LSN          78.6        0.000     1.0000
SSN         165.9        0.000     1.0000
CN                                          0.1185        24.558  %

         DATE 06/02/88     PRIMARY VERIFICATION       TIME 21:37:12

LSN          71.9        0.000     1.0000
SSN         121.2        0.000     1.0000
CN                                          0.1484        16.572  %

         DATE 07/08/88    BEFORE LOG VERIFICATION     TIME 12:28:13

LSN          72.4        0.000     1.0000
SSN         123.8        0.000     1.0000
CN                                          0.1461        17.164  %

         DATE 07/08/88     AFTER LOG VERIFICATION     TIME 14:08:46

LSN          74.2        0.000     1.0000
SSN         125.0        0.000     1.0000
CN                                          0.1483        16.593  %



          LOG NAME GR       ASSET NO. 73467     UNIT NO. HL 6406
   CALIBRATION ENTERED ON  07/08/88 AT 12:22:32

CURVE    MILLIVOLTS       SCALING FACTORS     ENGINEERING VALUES    UNITS
          LOW     HIGH     ADD.     MULT.        LOW         HIGH
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         DATE 07/08/88          CALIBRATION           TIME 12:22:32

GR      2196.3  6310.6    0.000     0.0890       0.000     150.000 API

                           PRIMARY VERIFICATION            NOT DONE

         DATE 07/08/88    BEFORE LOG VERIFICATION     TIME 12:18:47

GR      2195.4  5917.0    0.000     0.1099      98.865     266.459 API

         DATE 07/08/88     AFTER LOG VERIFICATION     TIME 14:04:23

GR      1366.9  5426.7    0.000     0.0890      49.835     197.846 API
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COMPANY: OREGON NATURAL GAS CORP. RUN: 1

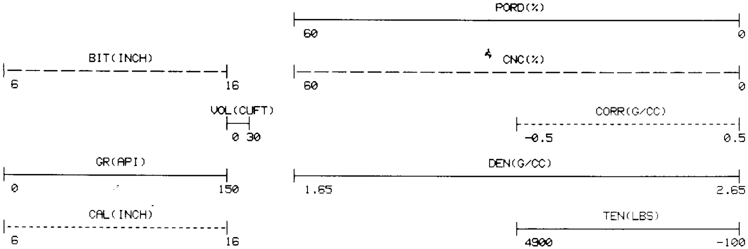
WELL NAME: IW 23B-3 TRIP: 1

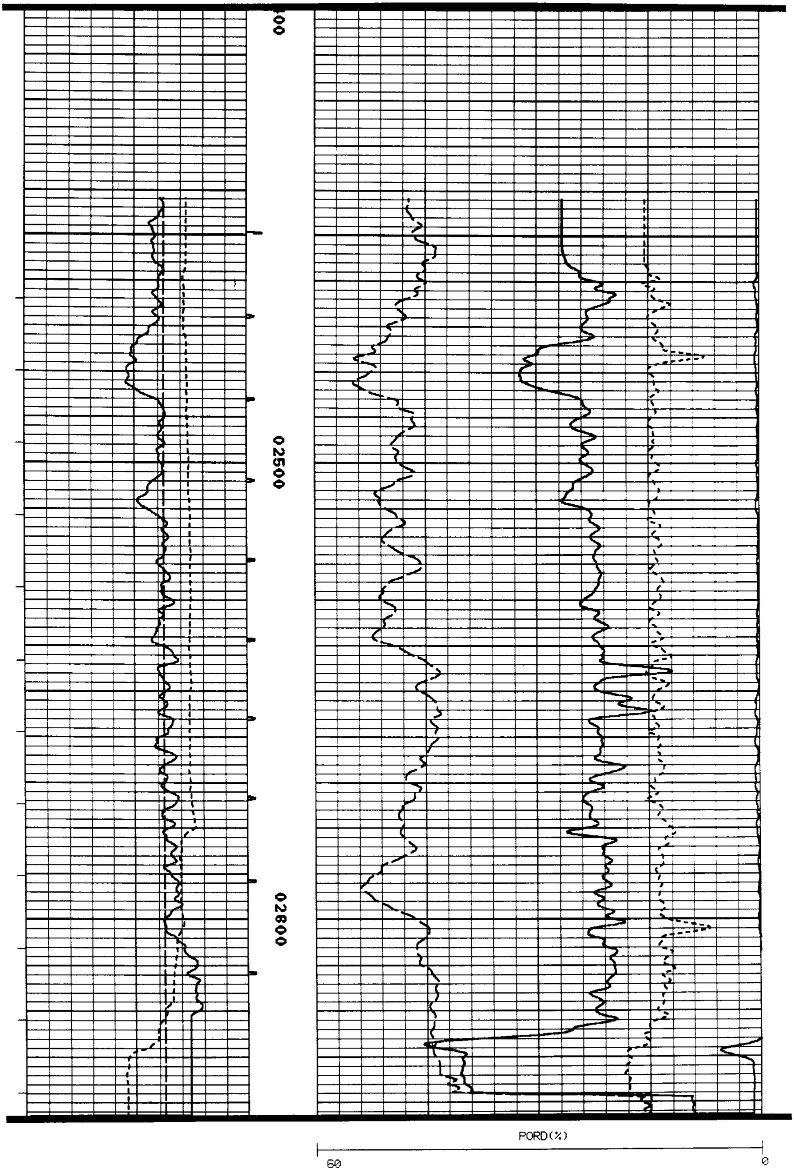
SERVICE: KC287B FILE: 3 DATE: 06/27/88 TIME: 06:06:02

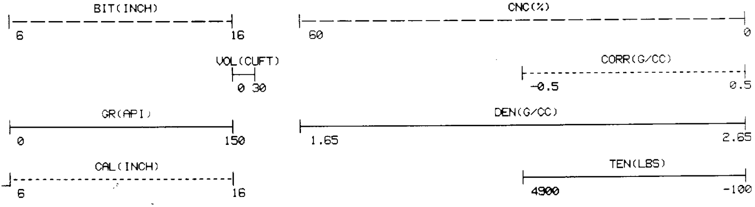
REVISION: FSYSAL REV GS08 VER+2

REPEAT SECTION

MODE: RECORD







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                    *******************************************
                    *                                         *
                    *  CALIBRATION/VERIFICATION SUMMARIES     *
                    *  DATE 06/27/88          TIME 08:26:32   *
                    *  RUN   1                TRIP 1          *
                    *                                         *
                    *******************************************


         LOG NAME CDL     ASSET NO. 57833    UNIT NO. HL 6406
     CALIBRATION ENTERED ON  06/27/88 AT 05:02:56         LARGE TOOL
                              SOURCE NUMBER 767

 CURVE    COUNTS/SEC.     SCALING FACTORS     RATIO    ENG. VALUE  UNITS
         BLOCK  VALUE     ADD.     MULT.      MG/AL
 ----    --------        ----------------   -------   ---------   ----

       DATE 05/18/88    ,    CALIBRATION          TIME 12:43:36

 LSD      MG        265.6
 SSD                404.1
 DEN                                                     2.200  G/CC
 CORR                                                    0.000  G/CC
 LSD      AL         93.3    0.000     1.0000   2.8469
 SSD                271.5    0.000     1.0000   1.4885
 DEN                                                     2.800  G/CC
 CORR                                                    0.000  G/CC
 LSD      MGRV      246.5
 SSD                435.3
 DEN                                                     2.480  G/CC
 CORR                                                    0.236  G/CC

       DATE 06/02/88     PRIMARY VERIFICATION      TIME 21:15:00

 LSD      JIG        90.1    0.000     1.0000
 SSD                267.3    0.000     1.0000
 DEN                                                     2.816  G/CC
 CORR                                                   -0.004  G/CC

                        BEFORE LOG VERIFICATION          NOT DONE

       DATE 06/27/88     AFTER LOG VERIFICATION    TIME 07:57:39

 LSD      JIG        89.5    0.000     1.0000
 SSD                268.8    0.000     1.0000
 DEN                                                     2.836  G/CC
 CORR                                                    0.013  G/CC


         LOG NAME CAL     ASSET NO. 57833    UNIT NO. HL 6406
     CALIBRATION ENTERED ON  06/27/88 AT 05:02:33

 CURVE   MILLIVOLTS       SCALING FACTORS    ENGINEERING VALUES   UNITS
          LOW     HIGH    ADD.     MULT.        LOW        HIGH
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       DATE 06/02/88        CALIBRATION           TIME 20:54:29

 CAL     1353.8  3735.5    2.589    0.0185      6.000      12.000 INCH

                         PRIMARY VERIFICATION            NOT DONE

       DATE 06/27/88    BEFORE LOG VERIFICATION    TIME 05:25:28

 CAL       E     4014.6    2.589    0.0185      E          12.703 INCH

       DATE 06/27/88    AFTER LOG VERIFICATION     TIME 07:51:03
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CAL     E    4108.4   2.589   0.0185      E          12.939 INCH


       LOG NAME CN      ASSET NO. 56094    UNIT NO. VENT/TP
   CALIBRATION ENTERED ON  06/27/88 AT 05:20:43             2435
                           SOURCE NUMBER S17S20

CURVE   COUNTS/SEC.     SCALING FACTORS     RATIO    ENG. VALUE  UNITS
                         ADD.      MULT.  LSN/(SSN*4)
----    --------      ------------------ --------   ----------  ----

      DATE 05/18/88          CALIBRATION           TIME 15:02:35

LSN          78.6         0.000     1.0000
SSN         165.9         0.000     1.0000
CN                                          0.1185       24.558  %

      DATE 06/02/88     PRIMARY VERIFICATION       TIME 21:37:12

LSN          71.9         0.000     1.0000
SSN         121.2         0.000     1.0000
CN                                          0.1484       16.572  %

                      BEFORE LOG VERIFICATION           NOT DONE

      DATE 06/27/88     AFTER LOG VERIFICATION     TIME 07:52:18

LSN          72.0         0.000     1.0000
SSN         121.0         0.000     1.0000
CN                                          0.1487       16.503  %


       LOG NAME GR      ASSET NO. 73467    UNIT NO. HL 6406
   CALIBRATION ENTERED ON  06/27/88 AT 05:04:02

CURVE   MILLIVOLTS      SCALING FACTORS    ENGINEERING VALUES   UNITS
         LOW    HIGH     ADD.     MULT.        LOW        HIGH
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      DATE 06/02/88          CALIBRATION           TIME 20:44:50

GR     1411.7  4742.6    0.000    0.1099      0.000     150.000 API

                        PRIMARY VERIFICATION            NOT DONE

                      BEFORE LOG VERIFICATION           NOT DONE

      DATE 06/27/88     AFTER LOG VERIFICATION     TIME 08:22:17

GR     1068.3  4320.5    0.000    0.1099     48.110     194.564 API
               ******************************************
               *                                        *
               *  CALIBRATION/VERIFICATION SUMMARIES    *
               *  DATE 06/27/88         TIME 02:06:57   *
               *  RUN  1                TRIP 1          *
               *                                        *
               ******************************************


       LOG NAME CDL     ASSET NO. 57833    UNIT NO. HL 6406
   CALIBRATION ENTERED ON  06/27/88 AT 01:27:43          LARGE TOOL
                           SOURCE NUMBER 767

CURVE   COUNTS/SEC.     SCALING FACTORS     RATIO    ENG. VALUE  UNITS
       BLOCK  VALUE      ADD.     MULT.     MG/AL
----    --------      ------------------ --------   ----------  ----

      DATE 05/18/88          CALIBRATION           TIME 13:43:38

LSD     MG     265.6
SSD            404.1
DEN                                                   1.700  G/CC
CORR                                                  0.000  G/CC
LSD     AL      93.3     0.000    1.0000   2.8468
SSD            271.5     0.000    1.0000   1.4885
DEN                                                   2.600  G/CC
CORR                                                  0.000  G/CC
LSD     MGRU   246.5
SSD            435.3
DEN                                                   2.480  G/CC
CORR                                                  0.236  G/CC

      DATE 06/02/88     PRIMARY VERIFICATION       TIME 21:15:00
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```
LSD     JIG        90.1     0.000      1.0000
SSD               267.3     0.000      1.0000
DEN                                                          2.[illegible]  G/CC
CORR                                                        -0.004  G/CC

     DATE 06/27/88   BEFORE LOG VERIFICATION     TIME 01:52:13

LSD     JIG        89.6     0.000      1.0000
SSD               264.2     0.000      1.0000
DEN                                                          2.798  G/CC
CORR                                                        -0.024  G/CC

                       AFTER LOG VERIFICATION          NOT DONE



       LOG NAME CN    . ASSET NO. 56094    UNIT NO. [illegible]
   CALIBRATION ENTERED ON  06/27/88 AT 01:27:10            2435
                        SOURCE NUMBER S17520

CURVE   COUNTS/SEC.     SCALING FACTORS    RATIO     ENG. VALUE  UNITS
                         ADD.      MULT.  LSN/(SSN*4)
----    --------      ------------------ --------   ----------  ----

     DATE 05/18/88         CALIBRATION          TIME 15:02:35

LSN          78.6       0.000     1.0000
SSN         165.9       0.000     1.0000
CN                                       0.1185        34.553  %

     DATE 06/02/88    PRIMARY VERIFICATION      TIME 21:37:13

LSN          71.9       0.000     1.0000
SSN         121.2       0.000     1.0000
CN                                       0.1484        18.572  %

     DATE 06/27/88   BEFORE LOG VERIFICATION    TIME 01:44:05

LSN          74.2       0.000     1.0000
SSN         120.7       0.000     1.0000
CN                                       0.1537        15.479  %

                      AFTER LOG VERIFICATION         NOT DONE



       LOG NAME GR      ASSET NO. [illegible]    UNIT NO. [illegible]
   CALIBRATION ENTERED ON [illegible]

CURVE    COUNTS/SEC.     SCALING FACTORS     ENGINEERING VALUES    UNITS
          LOW     HIGH    ADD.      MULT.        LOW         HIGH
----  --------------- ------------------- ----------- ---------- ----

     DATE 06/02/88         CALIBRATION          TIME 20:44:50

GR      1411.7  4742.6    0.000    0.[illegible]      0.000     150.000 API

                      PRIMARY VERIFICATION          NOT DONE

     DATE 06/27/88   BEFORE LOG VERIFICATION    TIME [illegible]

GR      1337.0  5318.4    0.000    [illegible]

                      AFTER LOG VERIFICATION         NOT DONE
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