CC 12-19-65

ATLAS
WIRELINE
SERVICES

# DUAL INDUCTION FOCUSED LOG

FILE NO.

API NO.

5" = 100'

COMPANY ARCO OIL & GAS COMPANY
WELL CC 12-19-65
FIELD MIST
COUNTY COLUMBIA STATE OR.

LOCATION:
1844.34' S & 1209.68' E OF
THE NW CORNER OF
SEC 19 TWP 6N RGE 5W

OTHER SERVICES
BHC/AL
CDLC/CN/GR

PERMANENT DATUM GL ELEV. 937'
LOGGING MEASURED FROM KB 10' FT. ABOVE P.D.
DRILLING MEASURED FROM KB

ELEVATIONS
KB 947'
DF -
GL 937'

| | | | | | |
|---|---|---|---|---|---|
| DATE | 9/25/88 | | | | |
| RUN | 1 | | | | |
| SERVICE ORDER | 159109 | | | | |
| DEPTH-DRILLER | 3211 | | | | |
| DEPTH-LOGGER | 3192' | | | | |
| BOTTOM LOGGED INTERVAL | 3190' | | | | |
| TOP LOGGED INTERVAL | 788' | | | | |
| CASING - DRILLER | 9 5/8" | @ 789' | @ | @ | @ |
| CASING - LOGGER | 788' | | | | |
| BIT SIZE | 6.25" | | | | |
| TYPE FLUID IN HOLE | E Z MUD | | | | |
| DENSITY / VISCOSITY | 9.9+ | 45 | | | |
| PH / FLUID LOSS | 8.0 | 5.6 | | | |
| SOURCE OF SAMPLE | FLOWLINE | | | | |
| RM AT MEAS. TEMP. | 2.47 | @ 72 F | @ | @ | @ |
| RMF AT MEAS. TEMP. | 2.38 | @ 72 F | @ | @ | @ |
| RMC AT MEAS. TEMP. | 2.58 | @ 72 F | @ | @ | @ |
| SOURCE OF RMF / RMC | MEAS | MEAS | | | |
| RM AT BHT | 1.71 | @ 104 F | @ | @ | @ |
| TIME SINCE CIRCULATION | 2 HRS | | | | |
| MAX. REC. TEMP. DEG. F | 104 F | | | | |
| EQUIP. NO. / LOC. | HL 6406 | SAC | | | |
| RECORDED BY | B. WELCH | | | | |
| WITNESSED BY | MR. MOOREFIELD | | | | |

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 COMPUTED FOR 3.5" CSG
ACOUSTIC DATA AT 2650 BAD DUE TO TOOL SWITCHING
SP SHOWS MAGNATIZED DRUM.

## EQUIPMENT DATA

| RUN | TRIP | TOOL | SERIAL NO. | SERIES NO. | POSITION |
|---|---|---|---|---|---|
| 1 | 1 | DIFL | 33304 | 1503 | FREE |
| 1 | 1 | AC | 79725 | 1603 | CENT |
| 1 | 1 | GR | 60484 | 1309 | FREE |
| 1 | 1 | CAL | 79090 | 4209 | CENT |

CURVE DELAYS

| CURVE | DELAY | UNITS |
|---|---|---|
| CFOC | 0 | FT,IN |
| CILM | 6,0 | FT.IN |
| CILD | 9,3 | FT,IN |
| SP | 9.3 | FT,IN |
| GR | 42,9 | FT,IN |
| CAL | 53,3 | FT.IN |
| ACQ | 27,0 | FT.IN |
| AC | 27,0 | FT,IN |

PARAMETERS

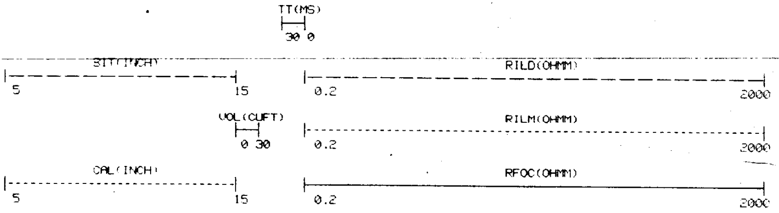
| NAME | DEPTH INTERVAL | VALUE | UNITS |
|---|---|---|---|
| A | 3206 TO 781 | 0.000 | |
| M | 3206 TO 781 | 0.000 | |
| C.D. | 3206 TO 781 | 3.500 | INCH |
| DEL-T F | 3206 TO 781 | 0.000 | MICS/FT |
| DEL-T M | 3206 TO 781 | 0.000 | MICS/FT |
| DEL-T S | 3206 TO 781 | 0.000 | MICS/FT |

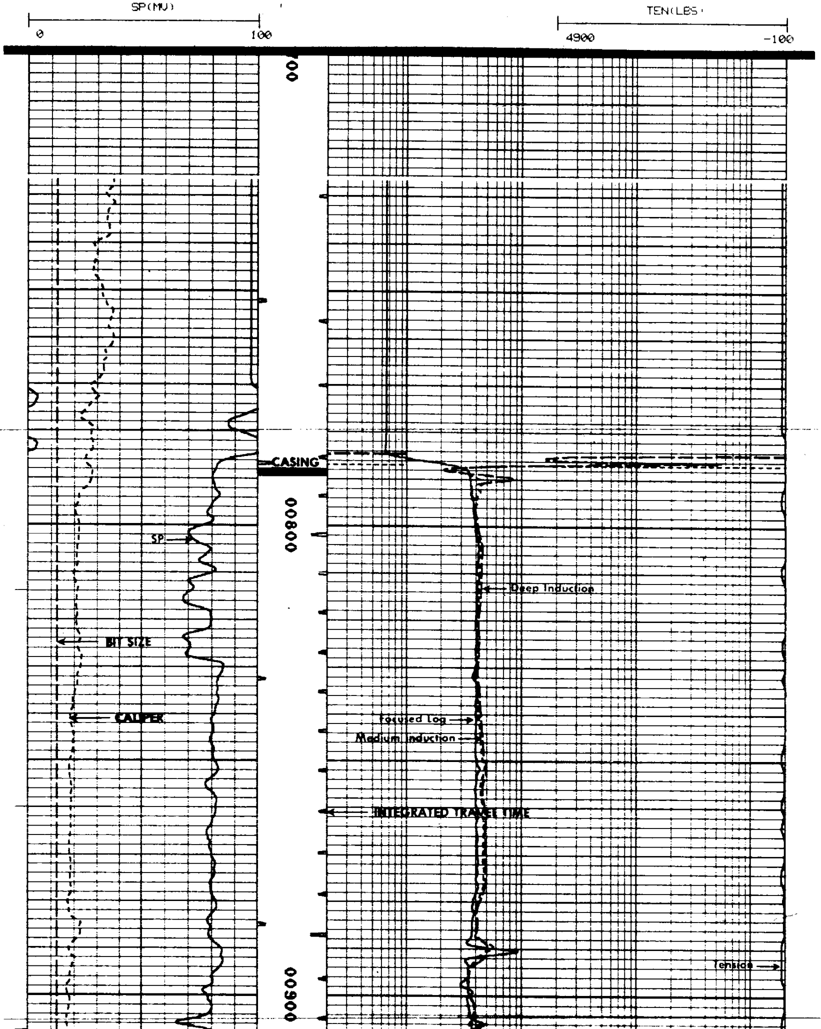
DISPLAY SCALE CHANGES

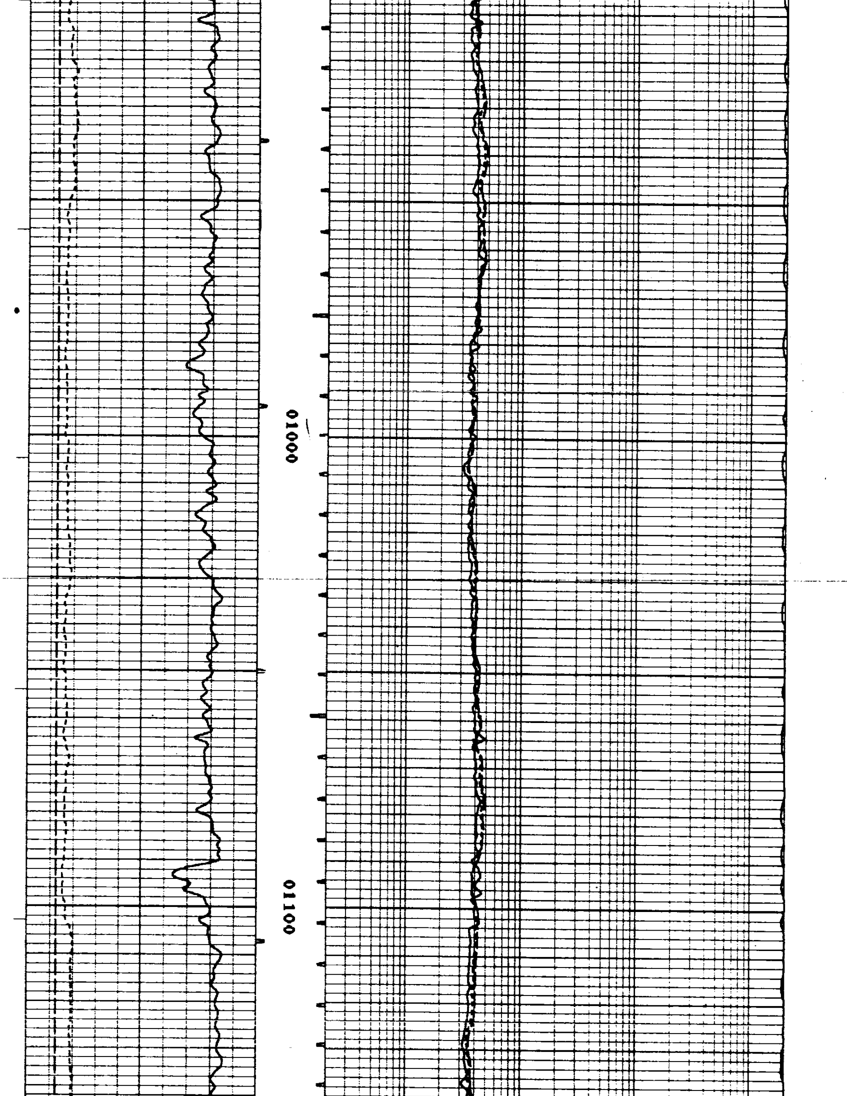
*** NONE ***

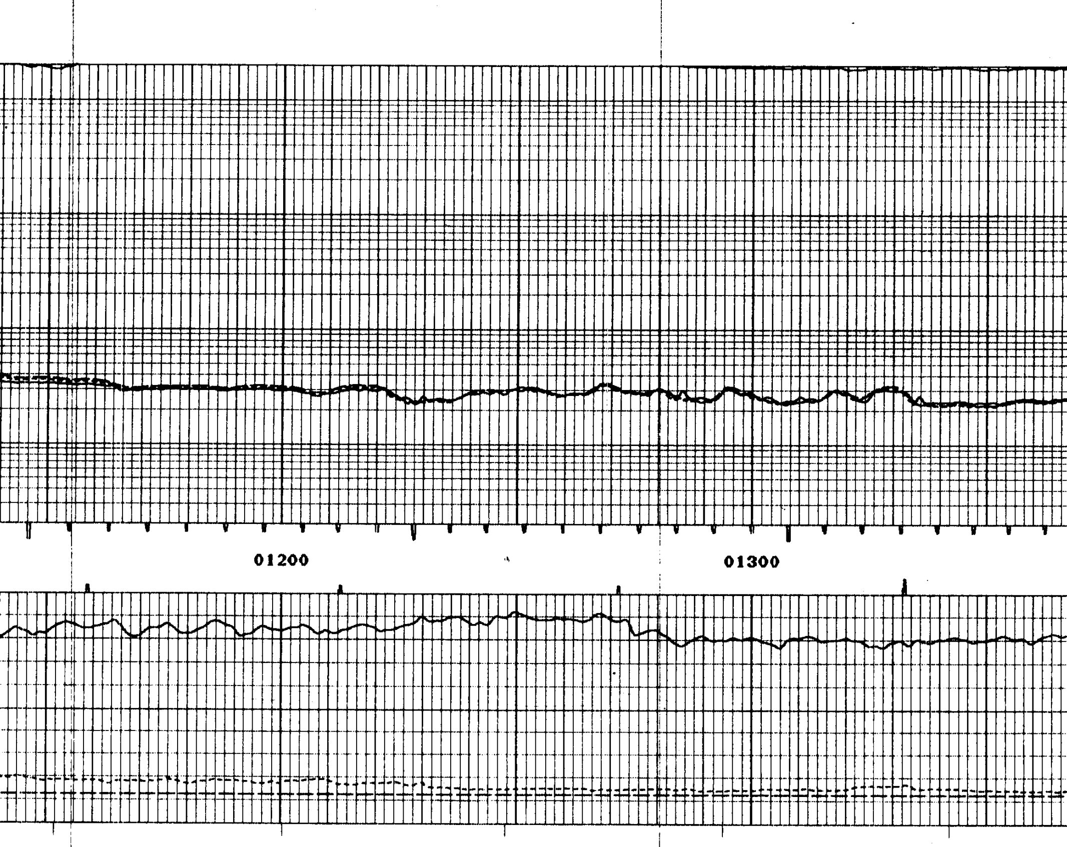
COMPANY: ARCO OIL & GAS COMPANY
WELL NAME: CC 12-13-65
SERVICE: KC214N FILE: 3 DATE: 09/24/88
REVISION: FSYSAL REV GS08 VER 2

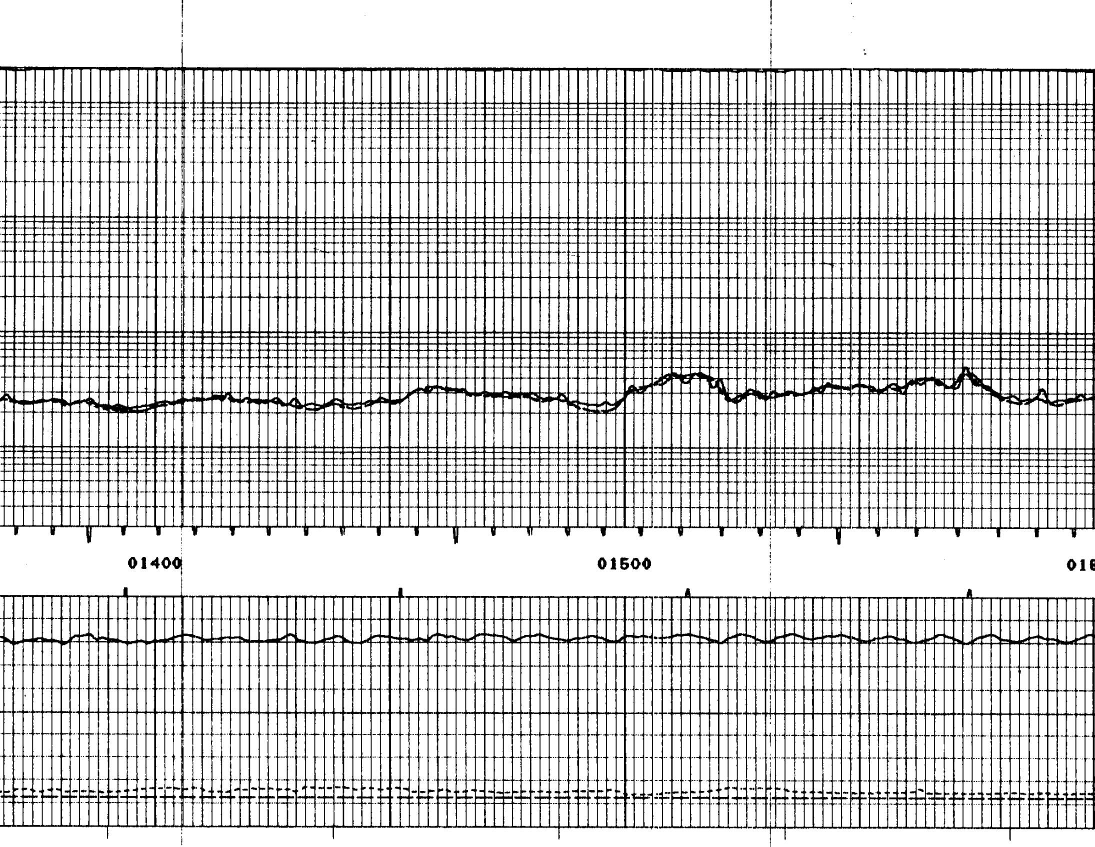
RUN: 1
TRIP: 1
TIME: 12:11:14
MODE: RECORD

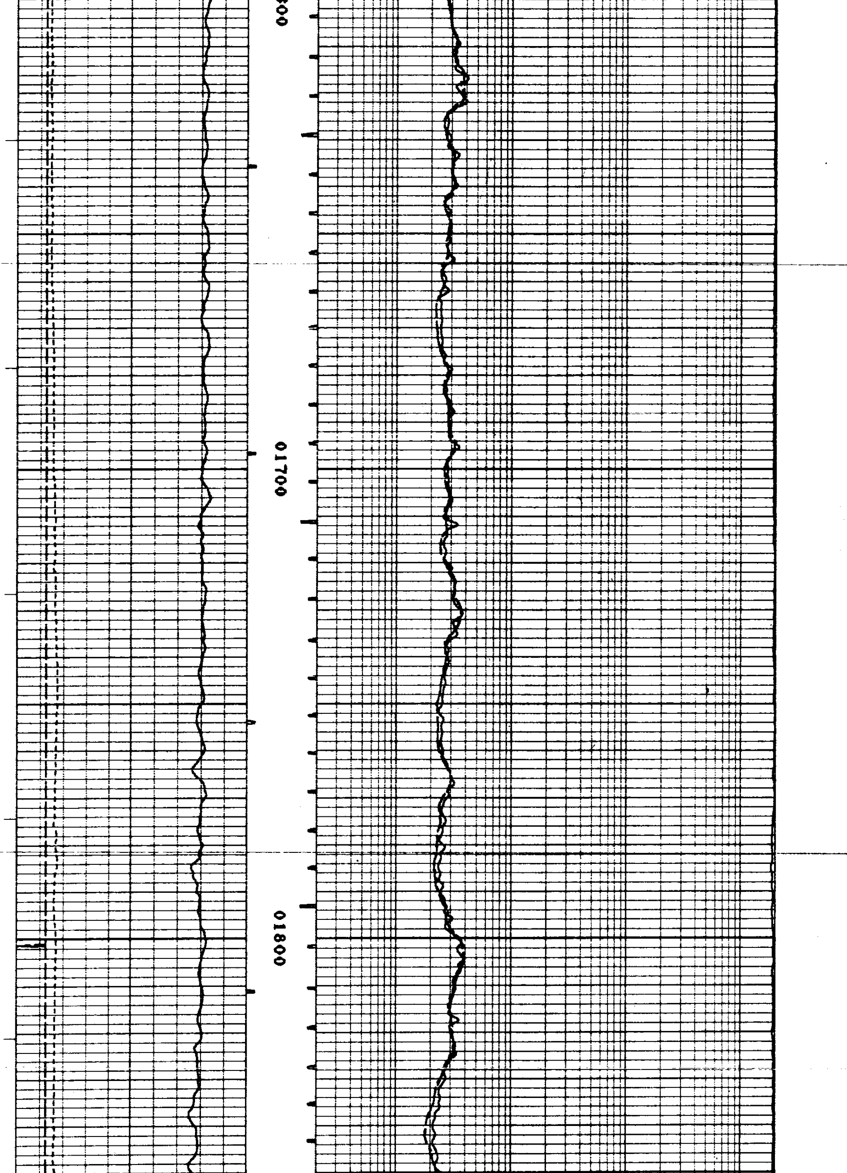


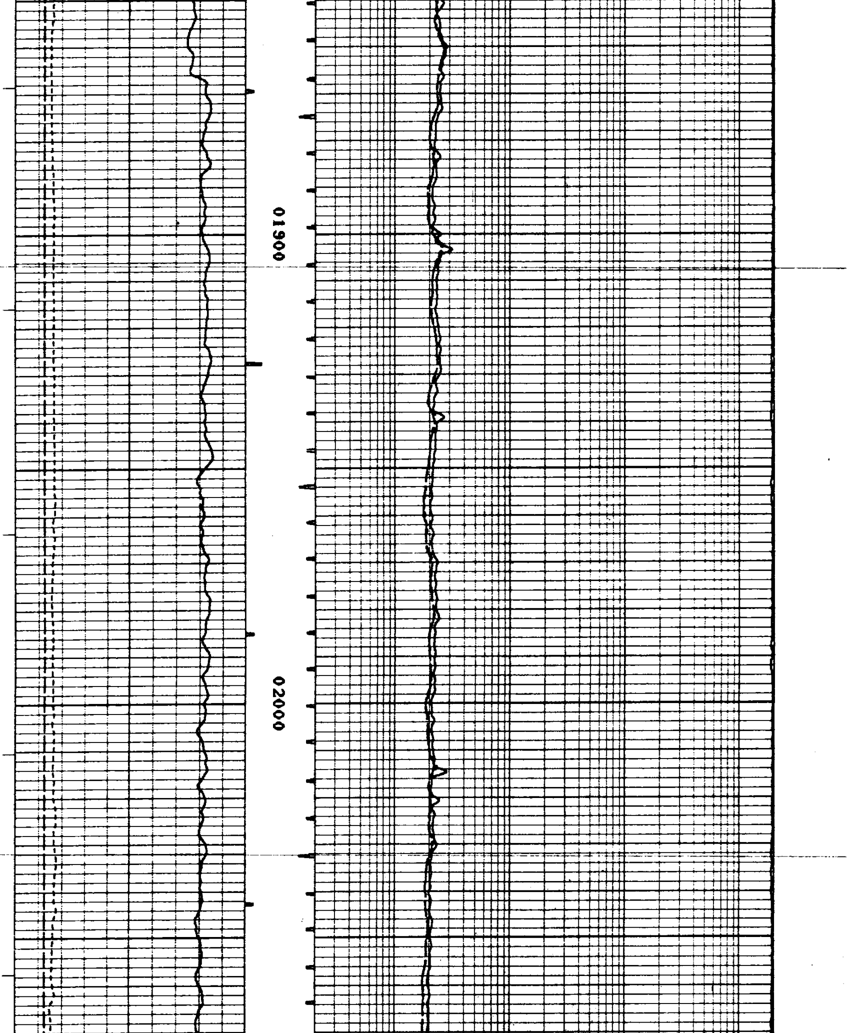


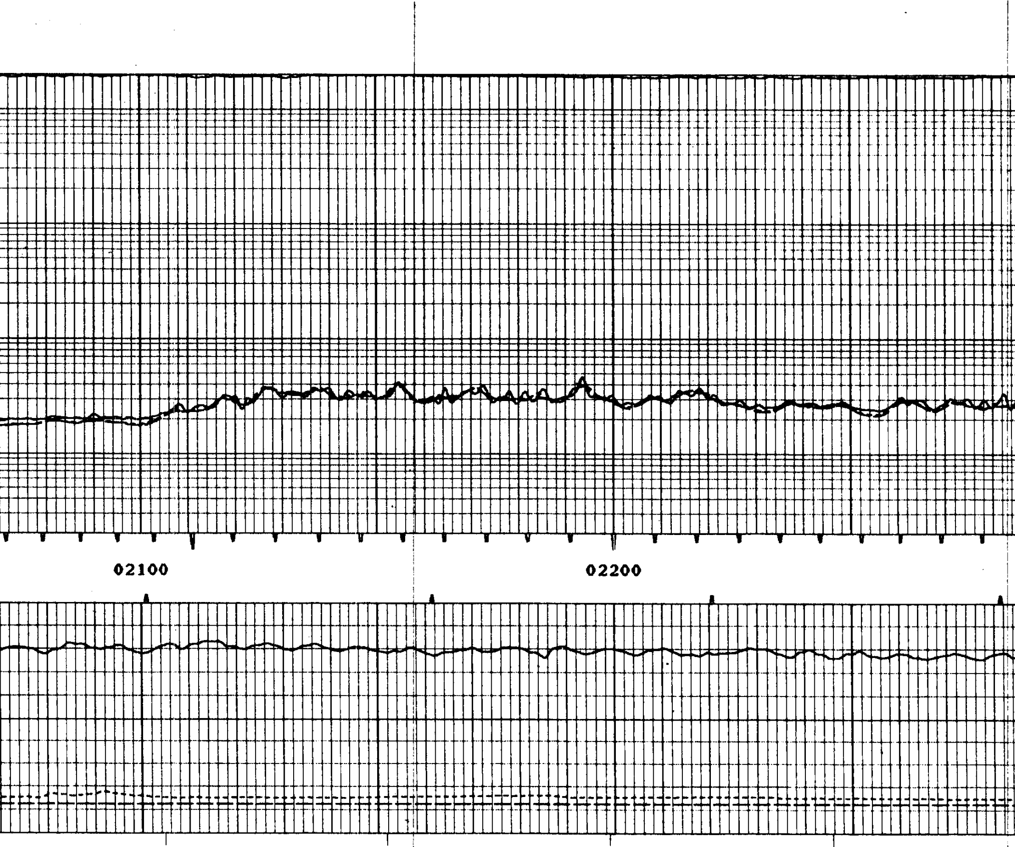


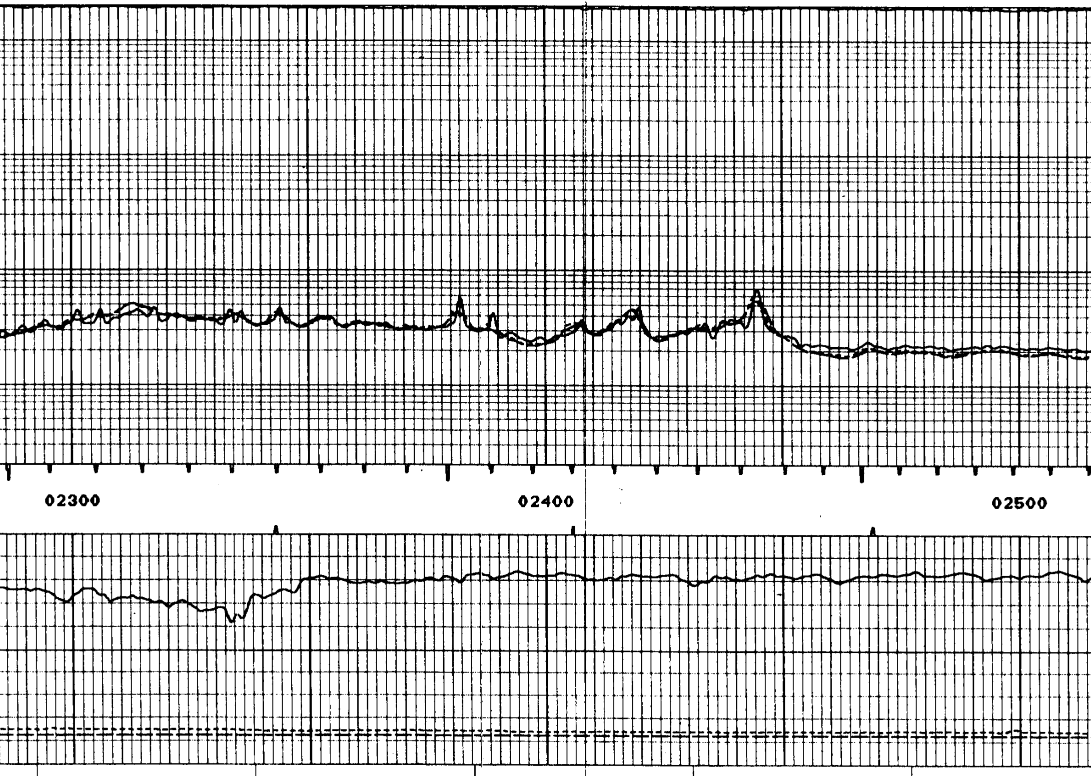


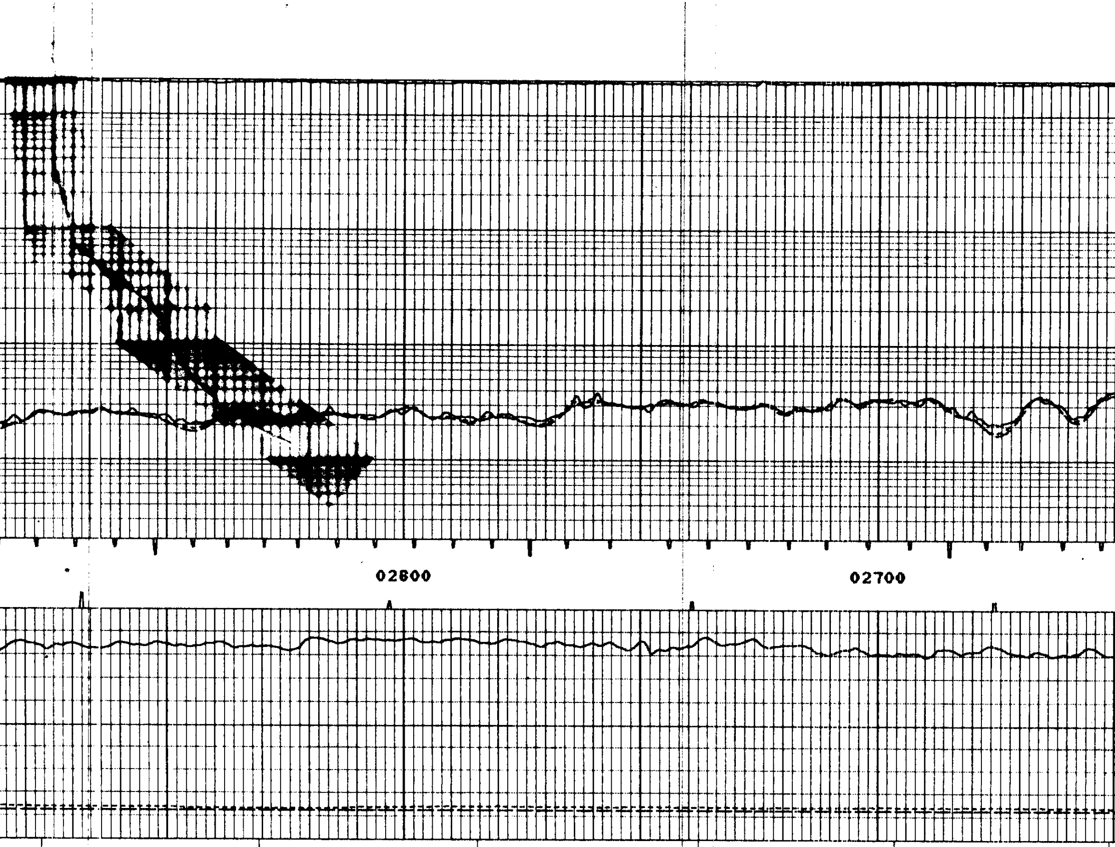


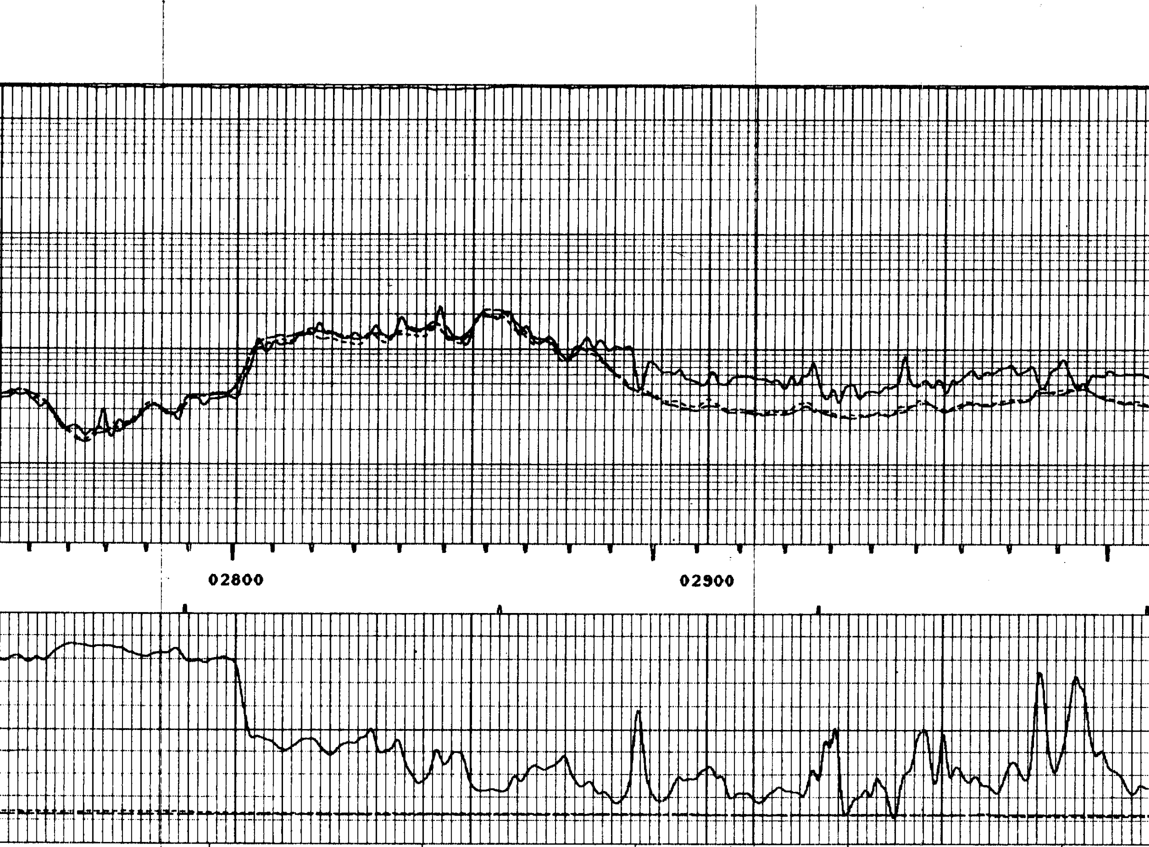


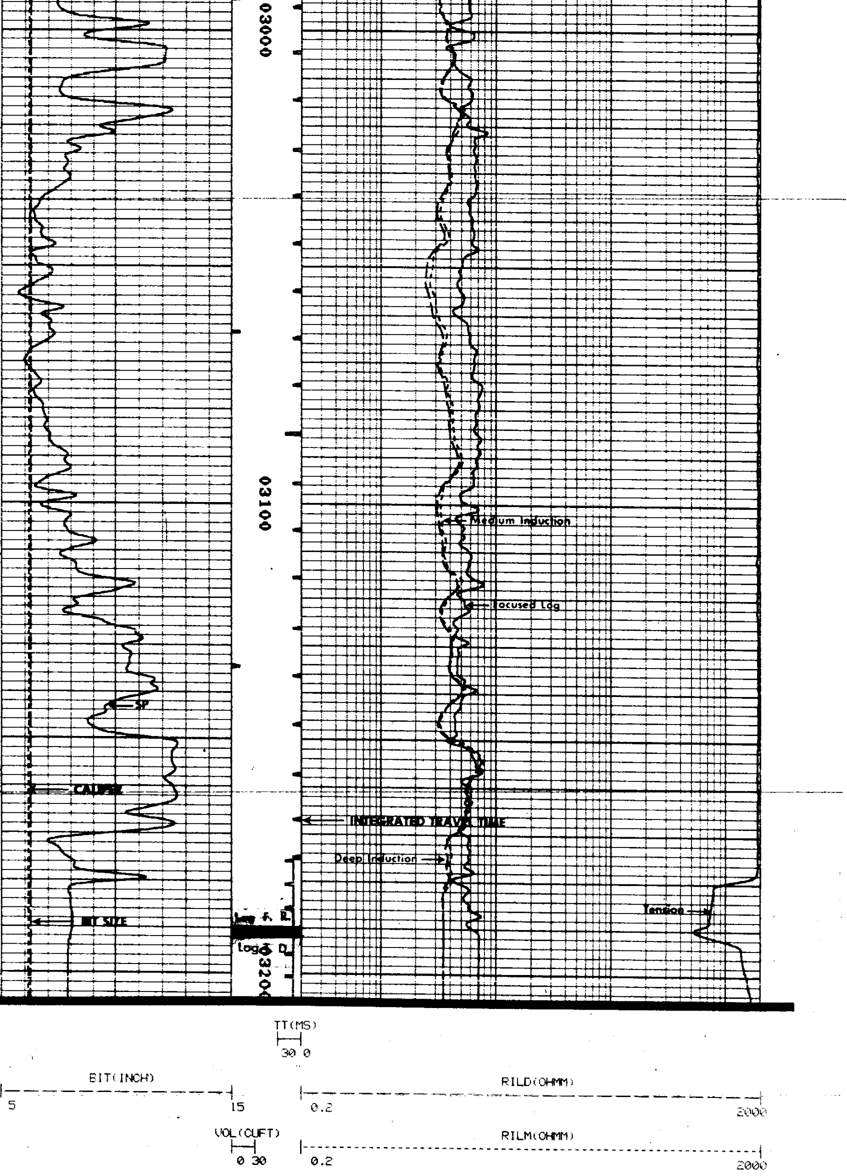












CAL(INCH) 5 — 15

RFOC(OHMM) 0.2 — 2000

SP(MV) 0 — 100

TEN(LBS) 4900 — -100

PARAMETERS

| NAME | DEPTH INTERVAL | VALUE | UNITS |
|---|---|---|---|
| A | 3207 TO 2712 | 0.000 | |
| M | 3207 TO 2712 | 0.000 | |
| O.D. | 3207 TO 2712 | 3.500 | INCH |
| DEL-T F | 3207 TO 2712 | 0.000 | MICS/FT |
| DEL-T M | 3207 TO 2712 | 0.000 | MICS/FT |
| DEL-T S | 3207 TO 2712 | 0.000 | MICS/FT |

DISPLAY SCALE CHANGES

*** NONE ***

COMPANY: ARCO OIL & GAS COMPANY
WELL NAME: CC 12-19-65
SERVICE: KC214N FILE: 2
REVISION: FSYSAL REV GS08 VER 2

DATE: 9/24/88

# REPEAT SECTION

RUN: 1
TRIP: 1
TIME: 11:50:55
MODE: PLAYBACK

TT(MS) 30 — 0

BIT(INCH) 5 — 15

RILD(OHMM) 0.2 — 2000

VOL(CUFT) 0 — 30

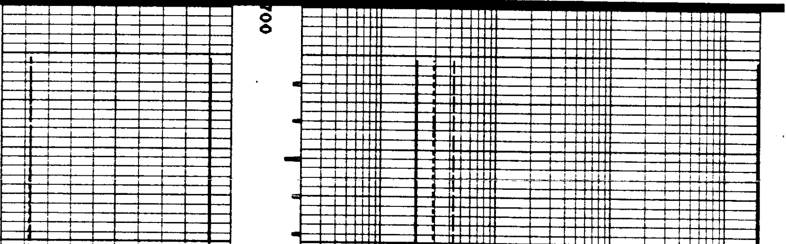
RILM(OHMM) 0.2 — 2000

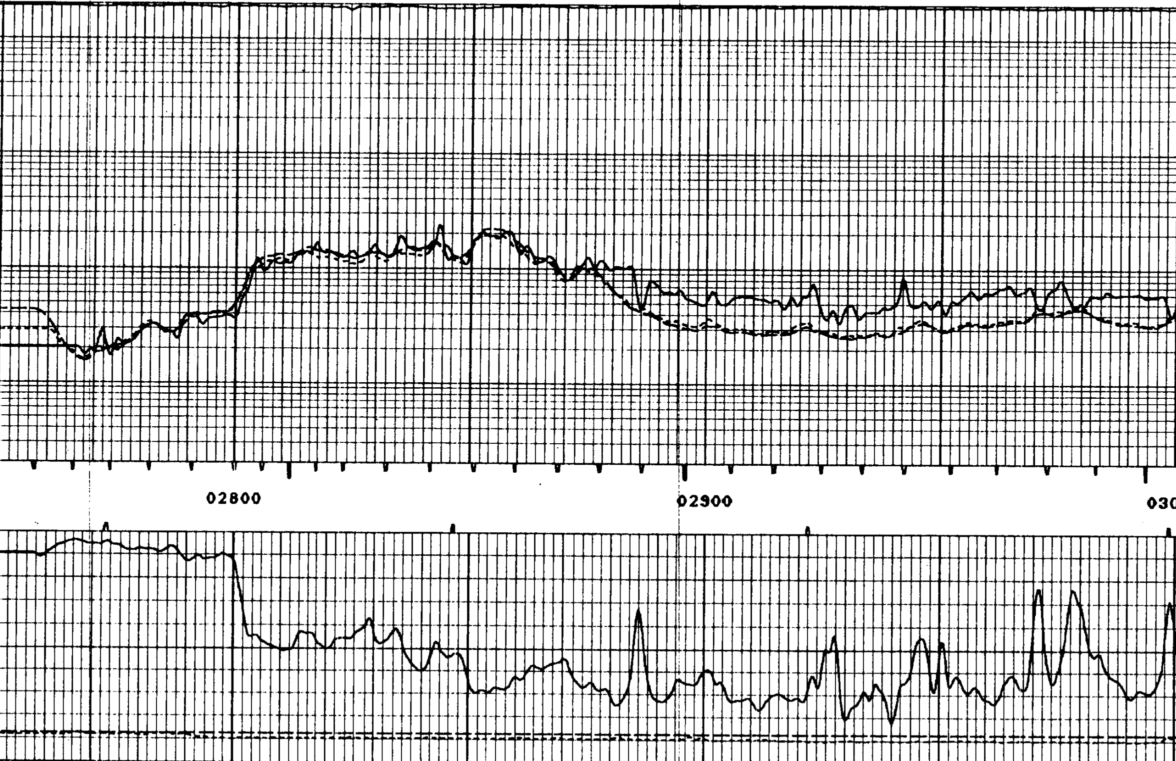
CAL(INCH) 5 — 15

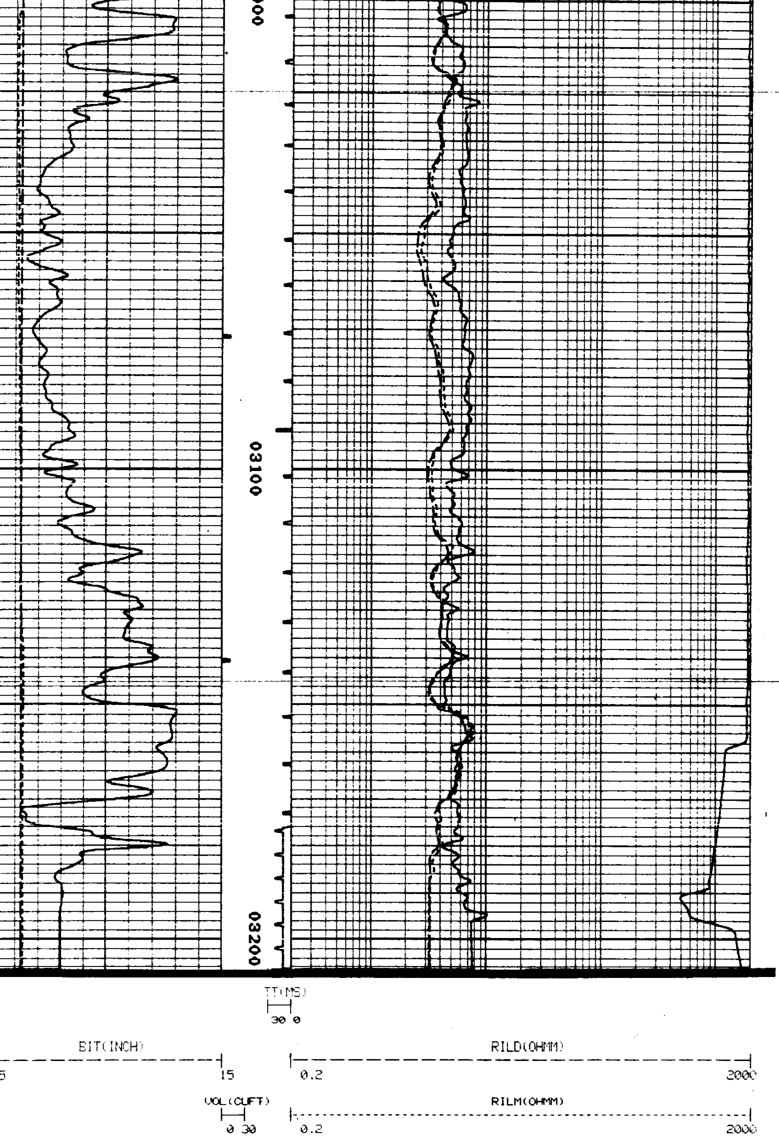
RFOC(OHMM) 0.2 — 2000

SP(MV) 0 — 100

TEN(LBS) 4900 — -100







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              CAL(INCH)                                                        RFOC(OHMM)
 ----------------------------------|          |------------------------------------------------------|
5                                   15          0.2                                                 2000

                SP(MV)                                                            TEN(LBS)
 ----------------------------------|                                     |---------------------------|
0                                 100                                     4900                      -100

                 *****************************************
                 *                                       *
                 *  CALIBRATION/VERIFICATION SUMMARIES   *
                 *  DATE 09/24/88           TIME 14:03:16 *
                 *  RUN  1                  TRIP 1       *
                 *                                       *
                 *****************************************


        LOG NAME DIFL     ASSET NO. 33304     UNIT NO. HL 6406
    CALIBRATION ENTERED ON  09/24/88 AT 06:21:39

  CURVE   MILLIVOLTS      SCALING FACTORS     ENGINEERING VALUES    UNITS
            LOW    HIGH    ADD.     MULT.        LOW        HIGH
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       DATE 08/16/88           CALIBRATION            TIME 14:02:34

  CILD      -0.3   492.7    1.250     1.9747       1.000     500.000 MMHO
  CILM      -2.3   509.0    3.079     2.2026       1.000     500.000 MMHO
  CFOC       2.5   497.0   -1.559     2.4625       1.000     500.000 MMHO

       DATE 08/16/88     PRIMARY VERIFICATION         TIME 14:03:57

  CILD      -0.1   491.7    1.250     1.9747       1.191     498.200 MMHO
  CILM      -0.0   506.4    3.079     2.2026       3.133     497.327 MMHO
  CFOC       4.7   503.8   -1.559     2.4625       3.186     506.895 MMHO

       DATE 09/24/88    BEFORE LOG VERIFICATION       TIME 10:56:29

  CILD      -0.0   494.7    1.204     1.9628       1.191     498.201 MMHO
  CILM       0.0   506.8    3.020     2.2008       3.133     497.327 MMHO
  CFOC       4.5   483.1   -1.577     2.5680       3.186     506.895 MMHO

       DATE 09/24/88     AFTER LOG VERIFICATION       TIME 13:05:15

  CILD       0.0   496.0    1.204     1.9628       1.217     499.586 MMHO
  CILM       0.1   507.1    3.020     2.2008       3.157     497.570 MMHO
  CFOC       4.6   482.1   -1.577     2.5680       3.262     505.868 MMHO



        LOG NAME GR       ASSET NO. 60484P    UNIT NO. HL6406
    CALIBRATION ENTERED ON  09/24/88 AT 06:23:21

  CURVE   COUNTS/SEC.     SCALING FACTORS     ENGINEERING VALUES    UNITS
            LOW    HIGH    ADD.     MULT.        LOW        HIGH
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       DATE 09/02/88           CALIBRATION            TIME 17:18:30

  GR        73.8   295.5    0.000     0.6766       0.000     150.000 API

                         PRIMARY VERIFICATION               NOT DONE

       DATE 09/24/88    BEFORE LOG VERIFICATION       TIME 06:27:11

  GR        74.2   290.1    0.000     0.6766      50.220     196.245 API

       DATE 09/24/88     AFTER LOG VERIFICATION       TIME 13:29:02

  GR        44.9   263.6    0.000     0.6766      30.413     178.315 API



        LOG NAME CAL      ASSET NO. 79090     UNIT NO. HL 6406
    CALIBRATION ENTERED ON  09/24/88 AT 05:38:04

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

       DATE 09/02/88           CALIBRATION            TIME 17:17:18

  CAL     3442.5  8350.9    1.792     0.0090       6.000      12.000 INCH

                         PRIMARY VERIFICATION               NOT DONE

       DATE 09/24/88    BEFORE LOG VERIFICATION       TIME 11:29:25

  CAL        E    5792.7    1.792     0.0090       E           8.873 INCH

       DATE 09/24/88     AFTER LOG VERIFICATION       TIME 13:15:02

  CAL        E    5886.4    1.792     0.0090       E           8.987 INCH
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