
CP 89.1F
FILE: 121
DATE RECORDED: 19-JAN-89 11:08
DEVIATION MEASURED FROM RT TOOL ZERO
PARAMETERS
TAPE VERIFIED

# PSP

Pulsed Neutron Cased Hole Log

| | |
|---|---|
| COMPANY<br>WELL<br>FIELD<br>COUNTY<br>STATE<br>API SERIAL NO.<br>LOCATION<br>SEC<br>TWP<br>RGE<br>PERMANENT DATUM<br>LOG MEASURED FROM<br>DRILLING MEASURED FROM<br>ELEVATION<br>KB<br>DF<br>GL | BP EXPLORATION (ALASKA) INC.<br>F-39<br>PRUDHOE BAY<br>NORTH SLOPE<br>ALASKA<br>50-029-22109-00<br>2100' FSL & 2100' FWL<br>11<br>10N<br>15E<br>MEAN SEA LEVEL<br>KB<br>KB<br>82.27<br>81.27<br>40.87 |

| | |
|---|---|
| RUN NUMBER<br>DEPTH DRILLER<br>DEPTH LOGGER<br>BOTTOM LOG INTERVAL<br>TOP LOG INTERVAL<br>CASING SIZE<br>CASING WEIGHT<br>CASING GRADE<br>CASING DRIFT<br>CASING CONVEYANCE | ONE<br>11,600 FT.<br>11,600 FT.<br>11,600 FT.<br>10,900 FT.<br>7 IN.<br>26 LB/FT.<br>L-80<br>6.151 IN.<br>TUBING |

| | |
|---|---|
| TIME LOGGER ON BOTTOM<br>TIME LOGGER OFF BOTTOM | 0700 HRS<br>1100 HRS |
| MAX. REC. TEMP. | 195.0 DEGF |
| EQUIPMENT NUMBER<br>LOCATION<br>RECORDED BY<br>WITNESSED BY | 2307<br>PRUDHOE BAY<br>R. KRUWELL<br>D. MCCARTNEY |

REMARKS:

CORRELATED LOGGED RUN 1 TO 5-1/2" STRING CUT
PERFORM PRESSURE FLOWSTATION + 2 GAS SALT F

EQUIPMENT SUMMARY:

| | | | |
|---|---|---|---|
| GR-CCL-CAL | GR-CCL-CAL | GL-CCL-CAL | GL-CCL-CAL |
| GR-CCL-CAL | GR-CCL-CAL | GL-CCL-CAL | GL-CCL-CAL |

THE DATA GIVEN HEREIN IS PROVIDED AS A SERVICE. BP EXPLORATION (ALASKA) INC. AND ITS AFFILIATED COMPANIES AND THEIR OFFICERS, EMPLOYEES, AND AGENTS (COLLECTIVELY REFERRED TO HEREIN AS "BP") DO NOT WARRANT THE ACCURACY, CORRECTNESS OR RELIABILITY OF THE DATA, INTERPRETATIONS OR OPINIONS CONTAINED HEREIN IN ANY WAY, AND ARE NOT RESPONSIBLE FOR ANY LOSS OR DAMAGE OF WHATSOEVER NATURE RESULTING FROM THE USE OF OR RELIANCE UPON THE DATA, INTERPRETATIONS OR OPINIONS CONTAINED HEREIN. THE DATA, INTERPRETATIONS AND OPINIONS CONTAINED HEREIN ARE EXPRESSLY NOT TO BE USED IN CONNECTION WITH ANY SALE OR PURCHASE OF SECURITIES.

DF 69.26 TIED TO: 11-JAN-96 04:03
LOG MEASURED: 11-JAN-96

AFTER SURVEY TOOL CHECK SUMMARY:

CHECKPOINT: 11,600.00 FT
CHECKPOINT CALIBRATION: 40.00 API/10/1

DEPTH

TOOL CHECK

| TOOL | MEASURE | AFTER | BEFORE | AFTER | UNITS |
|---|---|---|---|---|---|
| GR | 40.00 | 40.00 | 40.00 | 40.00 | API |
| CCL | 0.0 | 0.0 | 0.0 | 0.0 | VOLTS |

DEPTH

TOOL CHECK

| TOOL | MEASURE | AFTER | BEFORE | AFTER | UNITS |
|---|---|---|---|---|---|
| GR | 40.00 | 40.00 | 40.00 | 40.00 | API |
| CCL | 0.0 | 0.0 | 0.0 | 0.0 | VOLTS |

CCL DEPTH ERROR CORRECTION = 4.7 FEET

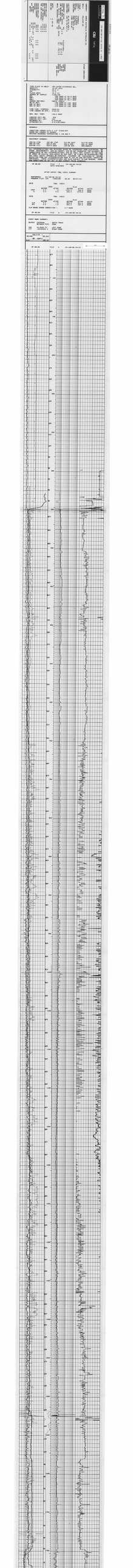
DF 69.26 TIED 11-JAN-96 04:03

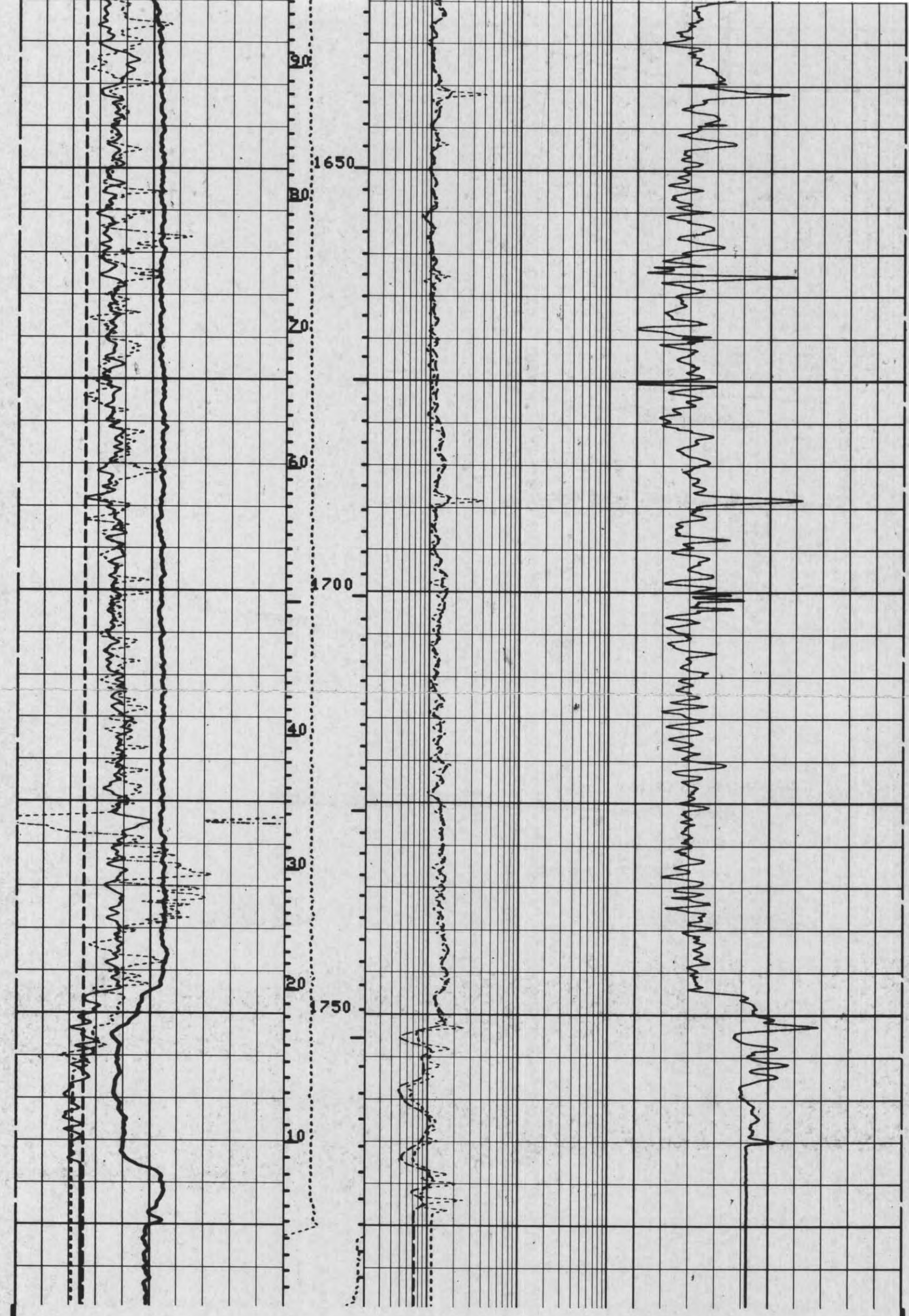
EVENT RUN SUMMARY:

BOTTOM INTERVAL 11,600 FEET
TOP INTERVAL 10,900 FEET

| | | |
|---|---|---|
| 1ST | 30 FEET/MIN | 1ST PASS |
| 2ND | 30 FEET/MIN | 2ND PASS |

PRESSURE 1,500 PSI
FLUID TYPE CRUDE
GAS-OIL RATIO 1,000 SCF






CP 28.2A FILE 3 04-JAN-86 01:22

| BS (IN ) | | | |
|---|---|---|---|
| 15.000 | 25.000 | | |
| CALI(IN ) | | | |
| 15.000 | 25.000 | | |
| GR (GAPI) | | ILD (OHMM) | |
| 0.0 | 150.00 | .20000 | 200.00 |
| SP (MV ) | | SFLU(OHMM) | DT (US/F) |
| -80.00 | 20.000 | .20000 200.00 | 140.00 40.000 |

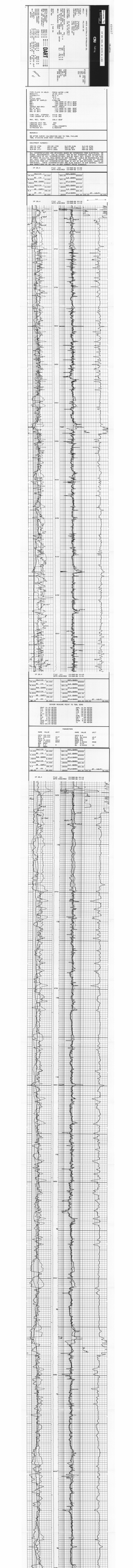
SENSOR MEASURE POINT TO TOOL ZERO

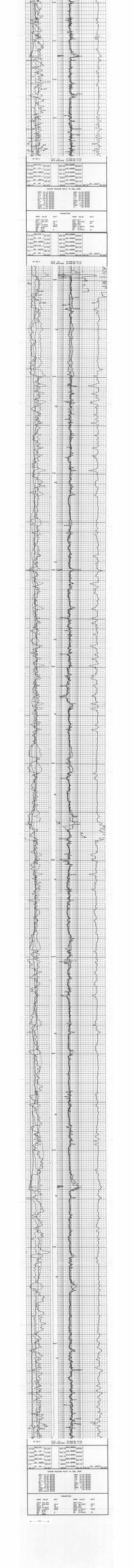
| | | | |
|---|---|---|---|
| SRAT | 9.52 METER | AMPL | 10.29 METER |
| TT1 | 9.98 METER | CBL | 10.29 METER |
| TT3 | 9.14 METER | TT2 | 10.29 METER |
| TO | 10.29 METER | TT4 | 8.84 METER |
| SLTT | 10.29 METER | TT | 10.29 METER |
| GR | 16.84 METER | SCBL | 10.29 METER |
| ILD | 2.08 METER | CALI | 18.01 METER |
| SP | .10 METER | SFL | 1.93 METER |
| TENS | .10 METER | SPAR | .10 METER |
| CMSF | 17.91 METER | I1 | 17.98 METER |
| NOIS | .10 METER | | |

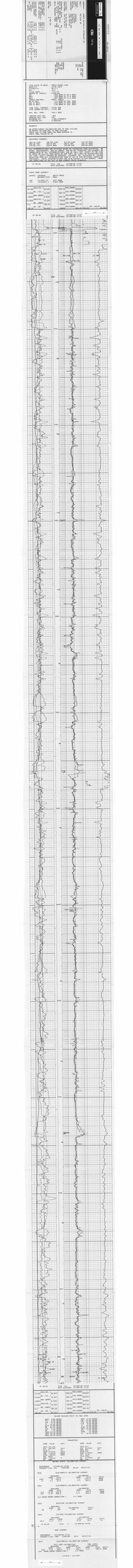
5 cm

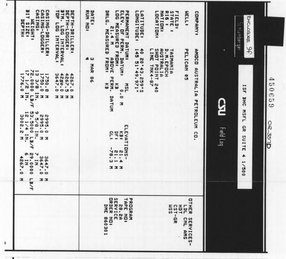
PARAMETERS

| 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 | 10.0000 | LB/G | DWCO | 512 | |
| SBR | 1.00000 | OHMM | DSEC | 4.70000 | MMHO |
| BHS | OPEN | | SPT | STAN | |
| BS | 17.5000 | IN | | | |









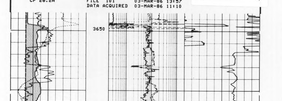

REMARKS:

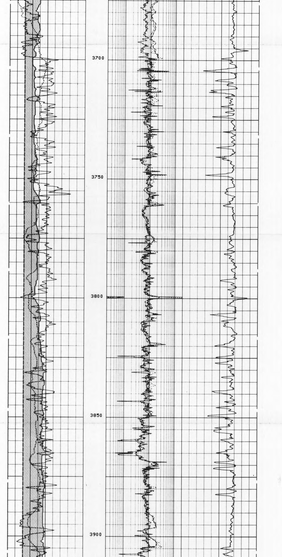
NO AFTER SURVEY CALIBRATION DUE TO TOOL FAILURE
NO REPEAT SECTION DUE TO TOOL FAILURE
SONIC TOOL FAILED AT 3300 M AND MADE RUNNING IN
SONIC TOOL FAILED AT TD

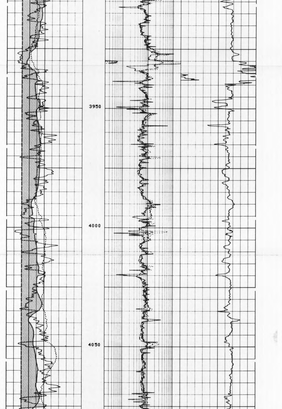
EQUIPMENT NUMBERS:

| | | | |
|---|---|---|---|
| IEC-HA 1738 | IEC-G9 1725 | SLS-K8 2104 | SLC-K8 8726 |
| IEC-C8 795 | SRS-3 956 | IRA-A 885 | ISC-J2 3562 |
| SLM-SH 1717 | MSM-A 2866 | ITM-SH 889 | MSM-A8 2874 |

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS MADE BY SCHLUMBERGER, AND SO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION, AND SO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION, AND SCHLUMBERGER 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.




SENSOR MEASURE POINT TO TOOL ZERO

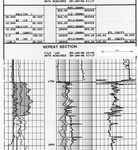
| | | | |
|---|---|---|---|
| SBAT 9.50 METER | | CBL 10.09 METER | |
| TT3 9.96 METER | | TT2 10.09 METER | |
| TT1 10.09 METER | | TT4 9.84 METER | |
| SLTT 10.09 METER | | CALI 16.40 METER | |
| GR 21.97 METER | | SP 21.49 METER | |
| ILD 8.68 METER | | CALI 16.40 METER | |
| ILM 8.68 METER | | RS 16.46 METER | |
| TEMP 23.49 METER | | IPAM | IM |
| CMSF 16.38 METER | | II 16.46 METER | |
| MSFL 23.49 METER | | | |

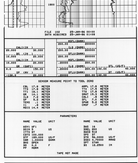
PARAMETERS

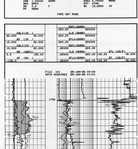
| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|---|---|---|---|---|---|
| CBTS | 100.000 | | TPT1 | R-W | |
| CBTD | 97.000 | US/F | TPT2 | 1.0000 | US/F |
| BSTM | 0 | US | SBSL | 200 | US |
| AMUB | 15.8000 | LB/G | SWCO | 512 | |
| AMUD | 10.0000 | LB/G | SWCD | 512 | MMHO |
| RMUD | .150000 | OHMM | IPT | CLIN | M |
| BHI | OPEN | | FPH1 | SPHI | |
| IDO | .750000 | M | RS | 6.00000 | IN |
| FF | HORN | | SG | 5.0 | M |

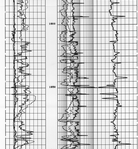


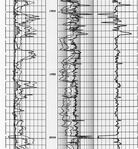




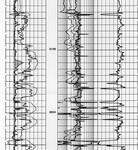


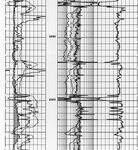


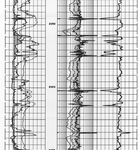


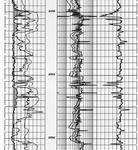


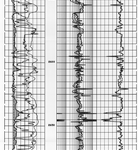




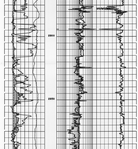




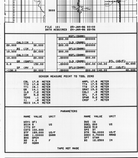


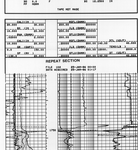


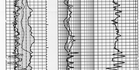


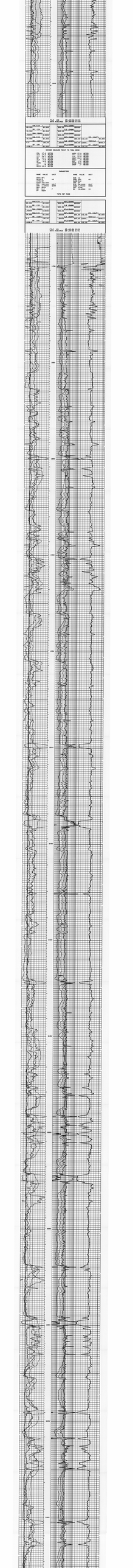


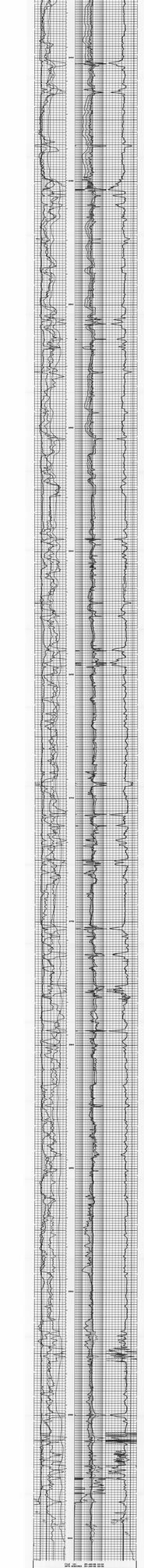


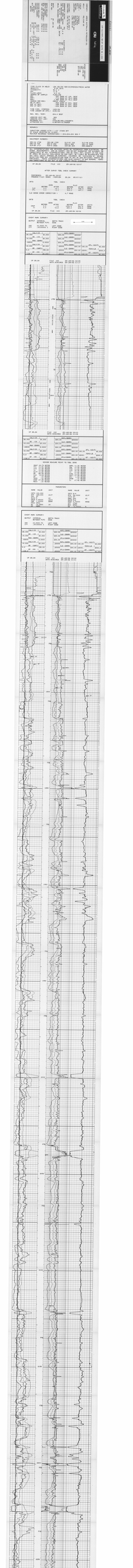


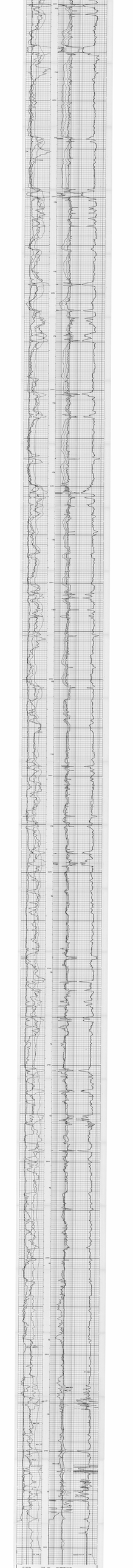


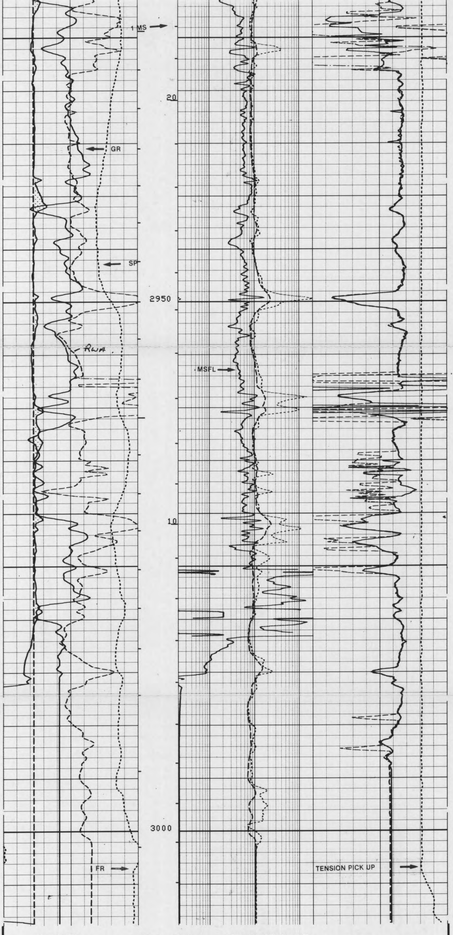













CP 28.2A FILE 101 25-JAN-86 01:47
DATA ACQUIRED 24-JAN-86 22:56

| | | | |
|---|---|---|---|
| CALI(IN) 30.000 | | MSFL(OHMM) 200000 | |
| BS (IN) 20.000 | | ILD (OHMM) 200000 | |
| 10.000 | | 200.00 | |
| RWA (OHMM) 2.0000 | | SFLU(OHMM) 200000 | |
| .02000 | | 200.00 | |
| CALI(IN) 20.000 | | MSFL(OHMM) 200.00 | DTL (US/F) 40.000 |
| 10.000 | | .20000 | 140.00 |
| GR (GAPI) 150.00 | | ILD (OHMM) 200.00 | TENS(LB) 2000.0 |
| 0.0 | | .20000 | 12000. |
| SP (MV) 20.000 | | SFLU(OHMM) 200.00 | DT (US/F) 40.000 |
| -130.0 | | .20000 | 140.00 |

SENSOR MEASURE POINT TO TOOL ZERO

| | | | |
|---|---|---|---|
| SRAT | 12.73 METER | AMPL | 11.20 METER |
| TT1 | 11.51 METER | CBL | 11.20 METER |
| TT3 | 11.20 METER | TT2 | 11.20 METER |
| T0 | 11.20 METER | TT4 | 10.90 METER |
| SLTT | 11.20 METER | TT | 11.20 METER |
| GR | 22.94 METER | SCBL | 11.20 METER |
| ILD | 2.08 METER | CALI | 17.45 METER |
| SP | .10 METER | SFL | 1.93 METER |
| TENS | .10 METER | SPAR | .10 METER |
| CMSF | 17.95 METER | I1 | 17.42 METER |
| NOIS | .10 METER | | |

PARAMETERS

| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|---|---|---|---|---|---|
| CDTS | 100.000 | | SPFS | R-W | |
| DTF | 189.000 | US/F | DTM | 56.0000 | US/F |
| SPS | DT | | ITTS | DT | |
| DSIN | 5 | US | DDEL | 200 | US |
| WNUD | 9.90000 | LB/G | DWCO | 512 | |
| SBR | 1.00000 | OHMM | DSEC | 4.70000 | MMHO |
| FPHI | SPHI | | SPT | STAN | |
| BS | 12.2500 | IN | BHS | OPEN | |
| PP | NORM | | DO | -3.00000 | M |

BEFORE SURVEY CALIBRATION SUMMARY

PERFORMED: 25-JAN-86 01:31
PROGRAM FILE: DDBHC (VERSION 28.2A 85/07/10)

IRTQ ELECTRONICS CALIBRATION SUMMARY

| | MEASURED ZERO | MEASURED PLUS | CALIBRATED ZERO | CALIBRATED PLUS | UNITS |
|---|---|---|---|---|---|
| ILD | -.25 | 493.4 | 0.0 | 502.8 | MMHO |
| SFL | .92 | 541.0 | 0.0 | 500.0 | MMHO |

ILD SONDE ERROR CORRECTION : 4.7 MMHO

SRTB ELECTRONICS CALIBRATION SUMMARY

| | MEASURED ZERO | MEASURED PLUS | CALIBRATED ZERO | CALIBRATED PLUS | UNITS |
|---|---|---|---|---|---|
| CMSF | .9 | 957.0 | 0.0 | 1000.0 | MMHO |
| I1 | 4.3 | 58.1 | 0.0 | 200.0 | MMHO |

SGTE DETECTOR CALIBRATION SUMMARY

| | MEASURED BKGD | MEASURED JIG | CALIBRATED | UNITS |
|---|---|---|---|---|
| GR | 4 | 154 | 165 | GAPI |

SRTB CALIPER CALIBRATION SUMMARY

| | MEASURED SMALL | MEASURED LARGE | CALIBRATED SMALL | CALIBRATED LARGE | UNITS |
|---|---|---|---|---|---|
| CALI | 4.46 | 6.8 | 8.06 | 12.1 | IN |

CP 28.2A FILE 7 25-JAN-86 01:30

SHOP SUMMARY

PERFORMED: 02-JAN-86 11:08
PROGRAM FILE: SHOP (VERSION 28.2 85/07/10)

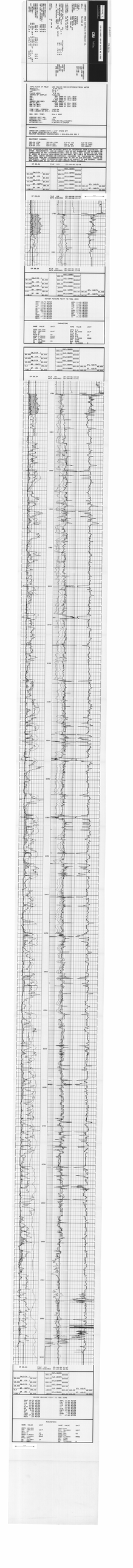
IRTQ ELECTRONICS CALIBRATION SUMMARY

| | TEST LOOP CALIBRATION MEASURED ZERO | MEASURED PLUS | CALIBRATED ZERO | CALIBRATED PLUS | TOOL CHECK CALIBRATED ZERO | CALIBRATED PLUS | UNITS |
|---|---|---|---|---|---|---|---|
| ILD | -6.2 | 480.6 | 0.0 | 500.1 | 0.0 | 502.7 | MMHO |

ILD SONDE ERROR CORRECTION : 4.7 MMHO

(IS:1738, IC:1725)

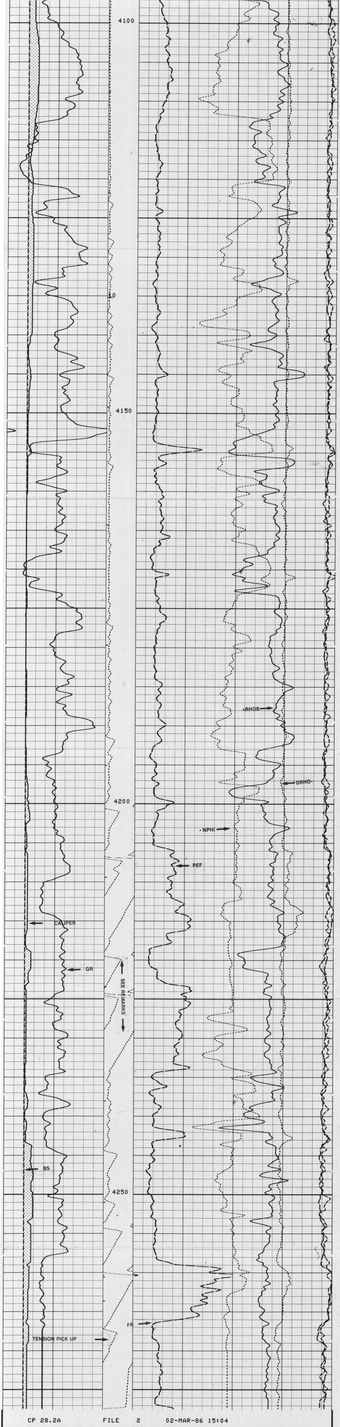













CP 28.2A FILE 2 02-MAR-86 15:04

| | | | |
|---|---|---|---|
| | | 91% | |
| | | -.9000 | .1000 |
| | | 0&% | |
| | | .9000 | -.1000 |
| BS (IN ) | | | DRHO(G/C3) |
| 4.0000 14.000 | PEF | 0.0 20.000 | -.2500 .2500 |
| CALI(IN ) | | NPHI | |
| 4.0000 14.000 | | .45000 | -.1500 |
| GR (GAPI) | | RHOB(G/C3) | |
| 0.0 150.00 | | 1.9500 | 2.9500 |

SENSOR MEASURE POINT TO TOOL ZERO

| | | | |
|---|---|---|---|
| MTEM | 12.00 METER | MRES | 12.00 METER |
| STSG | -.28 METER | GR | 7.93 METER |
| MCML | 7.24 METER | FCML | 7.24 METER |
| LITH | .79 METER | SCNL | .28 METER |
| LS | .79 METER | LL | .79 METER |
| SS1 | .64 METER | LU | .79 METER |
| CALI | .81 METER | SS2 | .64 METER |
| MRAT | 7.24 METER | TENS | -.28 METER |

PARAMETERS

| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|---|---|---|---|---|---|
| BHT | 300.000 | DEGF | TD | 4267.00 | M |
| PSMR | 2.31300 | | SHT | 85.9800 | DEGF |
| MATR | LIME | | MC | BS | |
| MDEN | 2.71000 | G/C3 | FD | 1.00000 | G/C3 |
| BFM | LIQ | | MMUD | 15.8000 | LB/G |
| RMS | OPEN | | DMC | EC | |
| BS | 8.00000 | IN | | | |

BEFORE SURVEY CALIBRATION SUMMARY

PERFORMED: 02-MAR-86 14:09
PROGRAM FILE: LEP (VERSION 28.2A 85/07/10)

SGTL DETECTOR CALIBRATION SUMMARY

| | MEASURED BKGD | JIG | CALIBRATED | UNITS |
|---|---|---|---|---|
| GR | 0 | 160 | 165 | GAPI |

LDTC DETECTOR CALIBRATION SUMMARY

| | |
|---|---|
| DRS SONDE NUMBER | : 2952 |
| NUCLEAR SERVICE CARTRIDGE NUMBER | : 1735 |
| POWERED DETECTOR HOUSING NUMBER | : 1927 |
| POWERED GAMMA-GAMMA DETECTOR NUMBER | : 1966 |
| LDT LOGGING SOURCE NUMBER | : 6892 |
| LDT CALIBRATION MODE | : WATE |
| MUD DENSITY | : 15.8000 LB/G |

| | MEASURED BKGD | AL+FE | AL | UNITS |
|---|---|---|---|---|
| LL | 77.8 | 82.8 | 94. | CPS |
| LU | 77.8 | 82.8 | 193.6 | CPS |
| LS | 55.1 | 142.5 | 160.5 | CPS |
| LITH | 5.5 | 30.3 | 46.9 | CPS |
| SS1 | 13.8 | 159.0 | 180.0 | CPS |
| SS2 | 9.5 | 243.0 | 279.0 | CPS |

CNTH DETECTOR CALIBRATION SUMMARY

| TANK | | JIG | |
|---|---|---|---|
| INPUT | CALIBRATED | MEASURED | CALIBRATED |
| MRAT 2.31300 | 2.158 | 2.269 | 2.118 |

LDTC CALIPER CALIBRATION SUMMARY

| | MEASURED SMALL | LARGE | CALIBRATED SMALL | LARGE | UNITS |
|---|---|---|---|---|---|
| CALI | 6.70 | 11.1 | 8.00 | 12.0 | IN |

CP 28.2A FILE 1 02-MAR-86 14:09

SHOP SUMMARY

PERFORMED: 11-DEC-85 23:08
PROGRAM FILE: CCSHOP (VERSION 28.2 85/07/10)

CNTH DETECTOR CALIBRATION SUMMARY

| TANK | | JIG | |
|---|---|---|---|
| MEASURED | CALIBRATED | MEASURED | CALIBRATED |
| MRAT 2.319 | 2.158 | 2.289 | 2.136 |

(CNC=360 + CNB=3021)

SHOP SUMMARY

PERFORMED: 03-FEB-86 17:54
PROGRAM FILE: CCSHOP (VERSION 28.2 85/07/10)

LDTC DETECTOR CALIBRATION SUMMARY

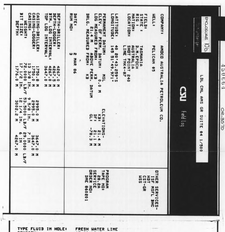
| | |
|---|---|
| DRS SONDE NUMBER | : 2952 |
| NUCLEAR SERVICE CARTRIDGE NUMBER | : 1735 |
| POWERED DETECTOR HOUSING NUMBER | : 1927 |
| POWERED GAMMA-GAMMA DETECTOR NUMBER | : 1966 |
| LDT LOGGING SOURCE NUMBER | : 6892 |
| LDT CALIBRATION MODE | : WATE |
| MUD DENSITY | : 8.80000 LB/G |

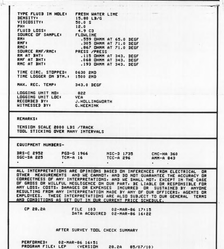
| | MASTER BKGD | CALIBRATED AL+FE | AL | UNITS |
|---|---|---|---|---|
| LL | 19.1 | 81.1 | 91.1 | CPS |
| LU | 19.1 | 81.1 | 193.4 | CPS |
| LS | 55.2 | 142.5 | 160.5 | CPS |
| LITH | 5.5 | 30.3 | 46.9 | CPS |
| SS1 | 13.8 | 159.0 | 180.1 | CPS |
| SS2 | 9.5 | 243.1 | 270.2 | CPS |

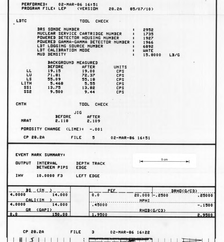
SPECTRUM QUALITY RATIOS

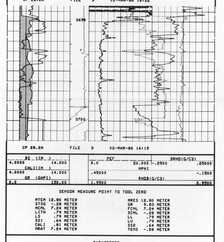
| | |
|---|---|
| QRLS | .6615 |
| QRSS | .6665 |
| QRLI | .0924 |
| QLIR | 1.3741 |
| QR | .9942 |

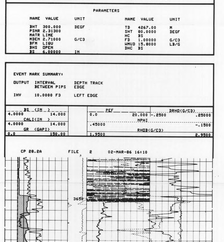
5 cm

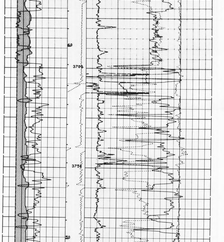

CSU
CSU
CSU
CSU

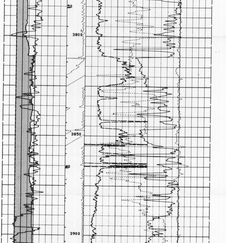


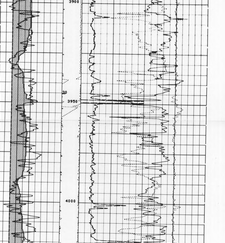


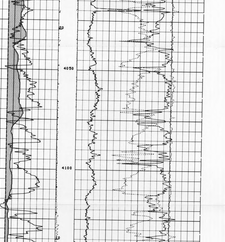


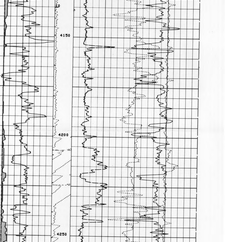


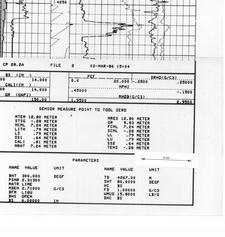








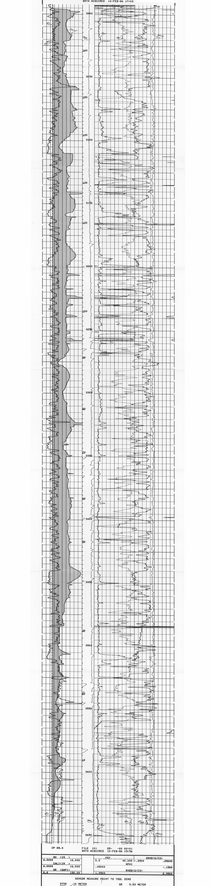


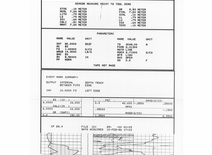


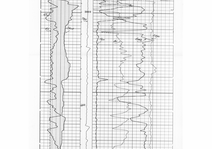


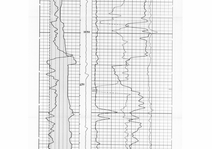


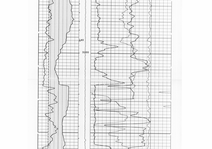


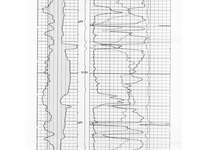


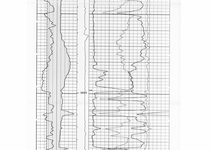


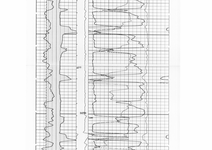


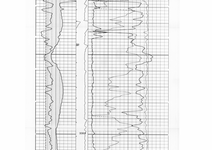


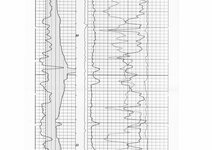




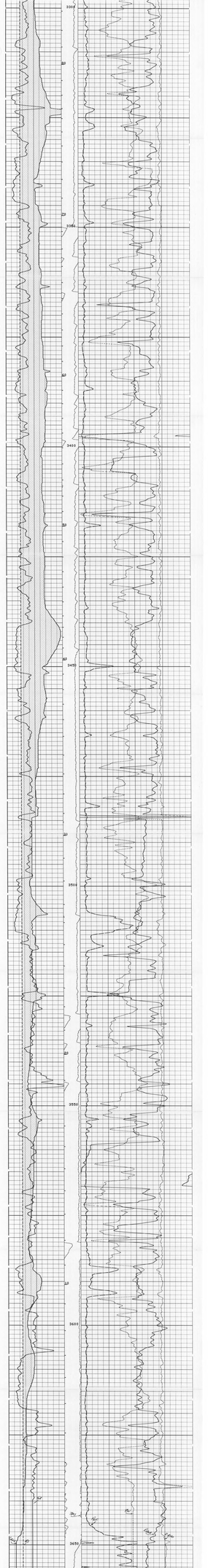













CP 28.4

FILE 101 25- -30 09:01
DATA ACQUIRED 15-FEB-86 15:54

| | | |
|---|---|---|
| BS (IN ) | PAD | DRHO(G/C3) |
| 6.0000 16.000 | 8.0 40.000 -.2500 | .25000 |
| CALI(IN ) | NPHI | |
| 6.0000 16.000 | .45000 -.1500 | |
| GR (GAPI) | | RHOB(G/C3) |
| 0.0 150.00 | 1.6900 | 2.9500 |

SENSOR MEASURE POINT TO TOOL ZERO

| | | | |
|---|---|---|---|
| STSG | .10 METER | GR | 9.93 METER |
| HCNL | 7.04 METER | FCNL | 7.04 METER |
| LITH | .79 METER | ICNL | .10 METER |
| SS | .64 METER | LS | .64 METER |
| SD | .64 METER | LSD | .79 METER |
| CALI | .81 METER | SSD | .64 METER |
| HHAT | 7.04 METER | TCNS | .10 METER |

PARAMETERS

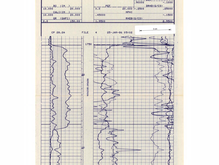
| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|---|---|---|---|---|---|
| SHT | 90.0000 | DEGF | TD | 3648.00 | M |
| PD | RM | | #SHE | 2.31300 | |
| FD | 1.49000 | G/C3 | MATR | LIME | |
| XMUD | 1.70000 | LB/G | MDEN | 2.71000 | G/C3 |
| INC | 84 | | BPR | 1.000 | |
| BS | 9.50000 | IN | SHC | OPEN | |
| PP | MORN | | 2D | 9.0 | F |

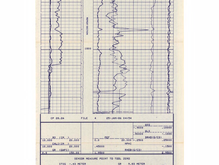
TAPE HOT MADE

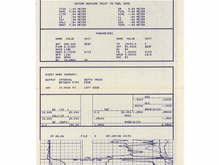


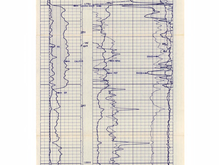


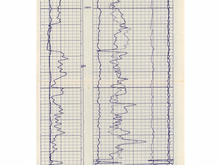


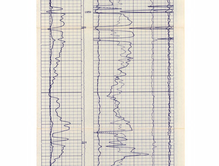




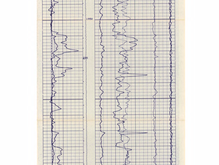


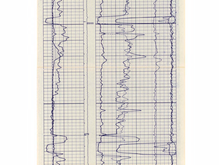


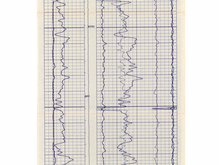


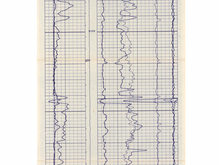


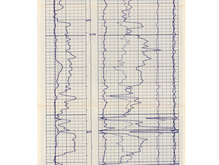


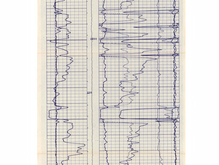


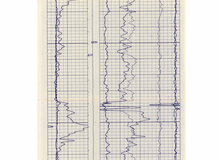


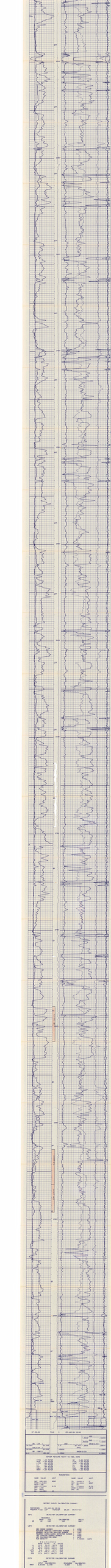


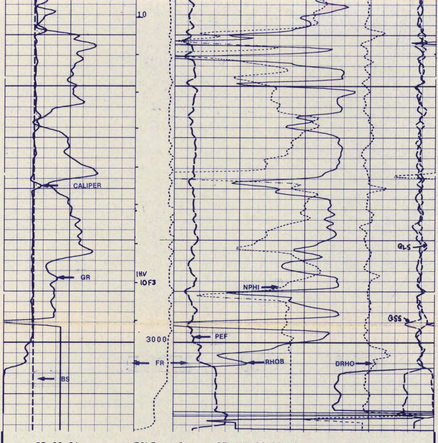













CP 28.2A FILE 3 25-JAN-86 02:40

| BS (IN) | | QSS | |
|---|---|---|---|
| 10.000 | 20.000 | -.9000 | .10000 |
| CALI(IN) | | QLS | |
| 10.000 | 20.000 | .90000 | -.1000 |
| GR (GAPI) | | PEF | DRHO(G/C3) |
| 0.0 | 150.00 | 0.0 20.000 | -.2500 .25000 |
| | | NPHI | |
| | | .45000 | -.1500 |
| | | RHOB(G/C3) | |
| | | 1.9500 | 2.9500 |

SENSOR MEASURE POINT TO TOOL ZERO

| | | | |
|---|---|---|---|
| STSG | -.43 METER | GR | 9.83 METER |
| NCNL | 7.24 METER | FCNL | 7.24 METER |
| LITH | .64 METER | SCNL | -.43 METER |
| LS | .64 METER | LL | .64 METER |
| SS1 | .48 METER | LU | .64 METER |
| CALI | .81 METER | SS2 | .48 METER |
| NRAT | 7.24 METER | TENS | -.43 METER |

PARAMETERS

| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|---|---|---|---|---|---|
| BHT | 220.000 | DEGF | TD | 10000.0 | F |
| PSNR | 2.31300 | | SHT | 80.0000 | DEGF |
| MATR | LIME | | HC | BS | |
| MDEN | 2.71000 | G/C3 | FD | 1.00000 | G/C3 |
| BFM | LIQU | | WMUD | 9.90000 | LB/G |
| BHS | OPEN | | DMC | BS | |
| BS | 12.8500 | IN | | | |

BEFORE SURVEY CALIBRATION SUMMARY

PERFORMED: 25-JAN-86 02:06
PROGRAM FILE: LEP (VERSION 28.2A 85/07/10)

SGTL DETECTOR CALIBRATION SUMMARY

| | MEASURED BKGD | JIG | CALIBRATED | UNITS |
|---|---|---|---|---|
| GR | 12 | 168 | 165 | GAPI |

LDTC DETECTOR CALIBRATION SUMMARY

| | |
|---|---|
| DRS SONDE NUMBER | : 2952 |
| NUCLEAR SERVICE CARTRIDGE NUMBER | : 1735 |
| POWERED DETECTOR HOUSING NUMBER | : 1927 |
| POWERED GAMMA-GAMMA DETECTOR NUMBER | : 1966 |
| LDT LOGGING SOURCE NUMBER | : 6892 |
| LDT CALIBRATION MODE | : WATE |
| MUD DENSITY | : 9.90000 LB/G |

| | MEASURED BKGD | AL+FE | AL | UNITS |
|---|---|---|---|---|
| LL | 19.0 | 81.8 | 92.3 | CPS |
| LU | 78.3 | 123.2 | 139.1 | CPS |
| LS | 55.2 | 143.5 | 162.0 | CPS |
| LITH | 5.6 | 30.9 | 47.7 | CPS |
| SS1 | 15.7 | 156.0 | 176.1 | CPS |
| SS2 | 11.0 | 241.1 | 267.0 | CPS |

CNTH DETECTOR CALIBRATION SUMMARY

| | TANK INPUT | CALIBRATED | JIG MEASURED | CALIBRATED |
|---|---|---|---|---|
| NRAT | 2.31300 | 2.158 | 2.230 | 2.081 |

LDTC CALIPER CALIBRATION SUMMARY

| | MEASURED SMALL | LARGE | CALIBRATED SMALL | LARGE | UNITS |
|---|---|---|---|---|---|
| CALI | 11.09 | 15.7 | 12.00 | 16.0 | IN |

CP 28.2A FILE 1 25-JAN-86 02:06

SHOP SUMMARY

PERFORMED: 11-JAN-86 14:39
PROGRAM FILE: CCSHOP (VERSION 28.2 85/07/10)

LDTC DETECTOR CALIBRATION SUMMARY

| | |
|---|---|
| DRS SONDE NUMBER | : 2952 |
| NUCLEAR SERVICE CARTRIDGE NUMBER | : 1735 |
| POWERED DETECTOR HOUSING NUMBER | : 1927 |
| POWERED GAMMA-GAMMA DETECTOR NUMBER | : 1966 |
| LDT LOGGING SOURCE NUMBER | : 6892 |
| LDT CALIBRATION MODE | : WATE |
| MUD DENSITY | : 8.00000 LB/G |

| | MASTER BKGD | CALIBRATED AL+FE | AL | UNITS |
|---|---|---|---|---|
| LL | 19.3 | 81.8 | 92.3 | CPS |
| LU | 78.4 | 123.3 | 139.2 | CPS |
| LS | 55.5 | 143.5 | 162.0 | CPS |
| LITH | 5.6 | 30.9 | 47.7 | CPS |
| SS1 | 15.8 | 156.1 | 176.2 | CPS |
| SS2 | 11.0 | 241.2 | 267.2 | CPS |

SPECTRUM QUALITY RATIOS

| | |
|---|---|
| QRLS | .6625 |
| QRSS | .6595 |
| QRLI | .8946 |
| QLIR | 1.3663 |
| QR | 1.0000 |

SHOP SUMMARY

PERFORMED: 11-DEC-85 23:08
PROGRAM FILE: CCSHOP (VERSION 28.2 85/07/10)

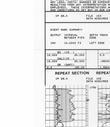
CNTH DETECTOR CALIBRATION SUMMARY

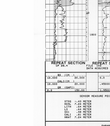
| | TANK MEASURED | CALIBRATED | JIG MEASURED | CALIBRATED |
|---|---|---|---|---|
| NRAT | 2.313 | 2.158 | 2.289 | 2.136 |

(CNC:360 , CNB:3021)

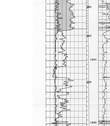


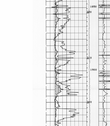


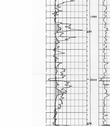




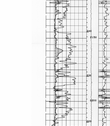


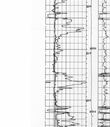


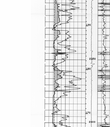


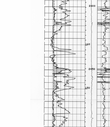


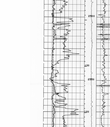


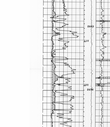


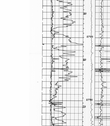


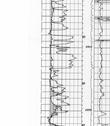


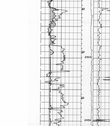


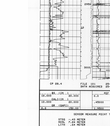


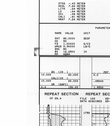




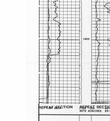


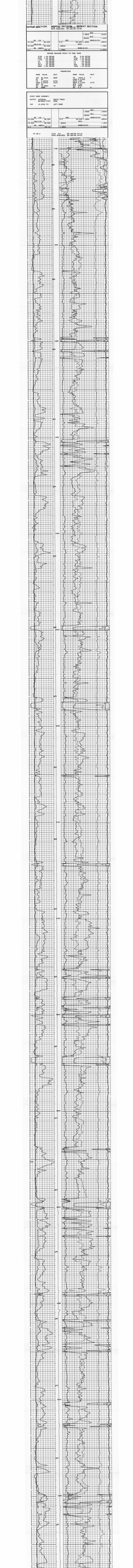


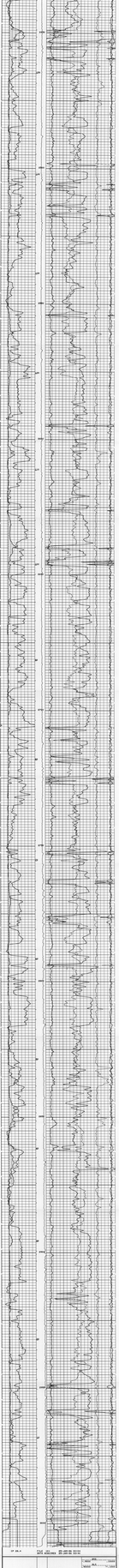









REPEAT SECTION
REPEAT SECTION
REPEAT SECTION



| | | | |
|---|---|---|---|
| 1st Rig Up | 09:00 | 09:00 | |
| 1st Rig Down | 14:00 | 14:00 | |
| 1st Logging Job | 10:00 | 10:00 | |
| 1st Off Bottom | 12:00 | 12:00 | |

| | | | |
|---|---|---|---|
| Max Temp | 0.0 | degF | |
| Max Speed | 0.0 | ft/min | |
| Max Tension | 0.0 | lbf | |
| Min Tension | 0.0 | lbf | |

| | | | |
|---|---|---|---|
| Tool Length | 0.00 | ft | |
| Weight | 0.00 | lbf | |
| Diameter | 0.00 | in | |
| Max Pressure | 0.00 | psi | |

SENSOR MEASURE POINT TO TOOL ZERO

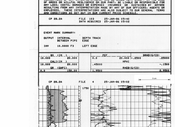
| | | | |
|---|---|---|---|
| ACCL | 0.00 ft | Mag | 0.00 ft |
| CCL | 0.00 ft | Neu | 0.00 ft |
| GR | 0.00 ft | Tem | 0.00 ft |
| Ind | 0.00 ft | Ten | 0.00 ft |

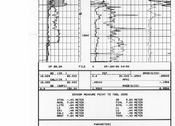
FUNCTIONS

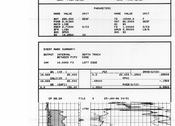
| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|---|---|---|---|---|---|
| ACC Mx Enable | ACCM | | Acc Z Offset | 0 | |
| ACC Offset | 0 | | Acc Z Scale | 1 | |
| Acc X Offset | 0 | | Mag X Offset | 0.000 | |
| Acc X Scale | 1 | | Mag X Scale | 1 | |
| Acc Y Offset | 0 | | Mag Y Offset | 0 | |
| Acc Y Scale | 1 | | Mag Y Scale | 1 | |
| ACC Mx Enable | ON | | Mag Z Offset | 0 | |
| ACC Offset | 0 | | Mag Z Scale | 1 | |

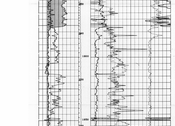


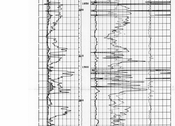


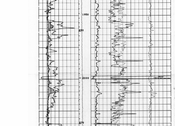


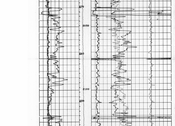


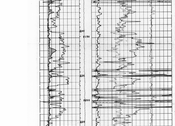


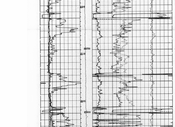


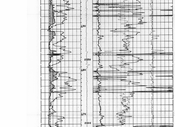




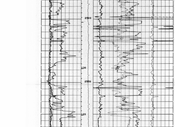


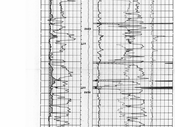


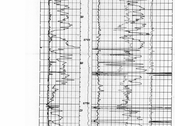


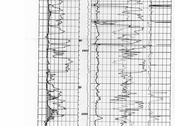


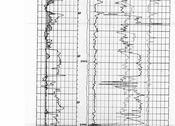


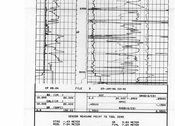


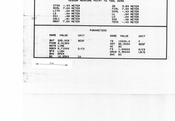


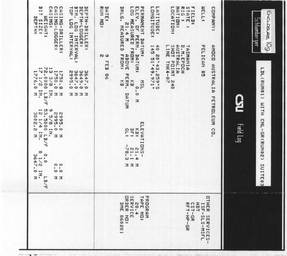













TYPE FLUID IN HOLE: FRESH WATER LIME
DENSITY: 14.40 LB/G
VISCOSITY: 49.0 S
PH: 10.0
FLUID LOSS: 4.0 C3
SOURCE OF SAMPLE: FLOWLINE
RM @ MEAS TEMP: .821 OHMM AT 68.0 DEGF
RMF @ MEAS TEMP: .974 OHMM AT 71.0 DEGF
RMC @ MEAS TEMP: .974 OHMM AT 71.0 DEGF
SOURCE RMF/RMC: PRESS /PRESS
RM @ BHT: .554 OHMM AT 268. DEGF
RMF AT BHT: .554 OHMM AT 268. DEGF
RMC AT BHT: .075 OHMM AT 268. DEGF

TIME CIRC. STOPPED: 1700/08
TIME LOGGER ON BTM: 0400/09

MAX. REC. TEMP: 268.0 DEGF

LOGGING UNIT NO: 822
LOGGING UNIT LOC: VCA
RECORDED BY: MILNOE
WITNESSED BY: MCCULLOUGH/MOIMESS

REMARKS:

LDL (RHOB/PEF/RHOB) WAS RECORDED ON 9 TH FEB.
CNL-GR WAS RECORDED ON 10 TH FEB. USING 1 1/2 IN. STANDOFF.
THE CNL WAS RECORDED IN COMBINATION WITH THE LDL. THE DEPTH TRACK
TENSION CURVE FOR CNL IS A SOLID LINE AND WAS RECORDED ON
DEPTH WITH THE LDL.
TENSION CURVE FOR CNL IS DOTTED AND WAS RECORDED 14 METRES
DEEPER THAN RHOB; AND 14.3 METRES DEEPER THAN THE GR,
INCREASING TENSION ENDED WHERE TOOL IS STICKING.

EQUIPMENT NUMBERS-

| | | | |
|---|---|---|---|
| DIC-C 2052 | PGS-G 1966 | MIC-B 1735 | GSR-J 4892 |
| CNC-A 1547 | SGC-SA 225 | TCC-B 417 | TCH-AB 16 |

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 WILFUL 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 20.4 FILE 101 09-FEB-86 01:07
DATA ACQUIRED 09-FEB-86 05:05

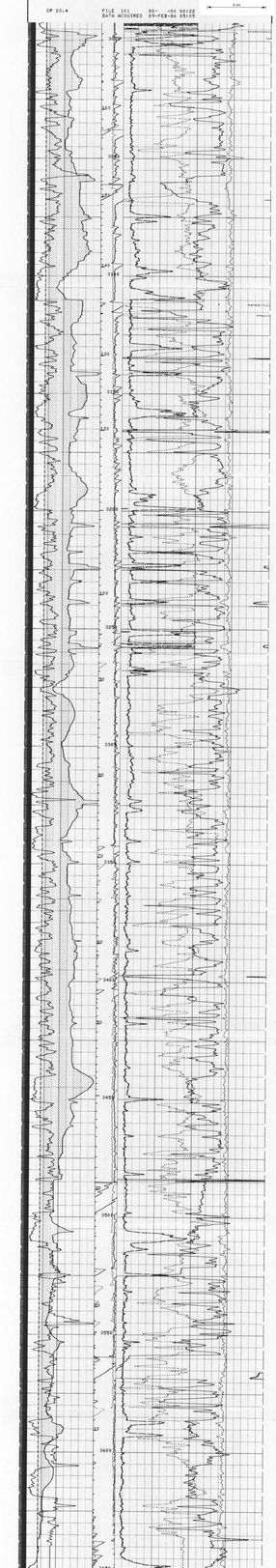
EVENT MARK SUMMARY

| OUTPUT | INTERVAL BETWEEN PIPS | DEPTH TRACK EDGE |
|---|---|---|
| INV | 10.0000 F3 | LEFT EDGE |

BS (IN ) 6.0000 16.000
CALI(IN ) 6.0000 16.000
GR (GAPI) 0.0 150.00

PEF 0.0 40.000 RHOB(G/C3) -.2500 .25000
RPHI -.45000 -.1500
RHOB(G/C3) 1.9502 2.9502

CP 20.4 FILE 101 00- -00 00:00
DATA ACQUIRED 09-FEB-86 05:05



CP 20.4 FILE 101 00- -00 00:19
DATA ACQUIRED 10-FEB-86 15:56

BS (IN ) 6.0000 16.000
CALI(IN ) 6.0000 16.000
GR (GAPI) 0.0 150.00

PEF 0.0 40.000 RHOB(G/C3) -.2500 .25000
RPHI -.45000 -.1500
RHOB(G/C3) 1.9502 2.9502

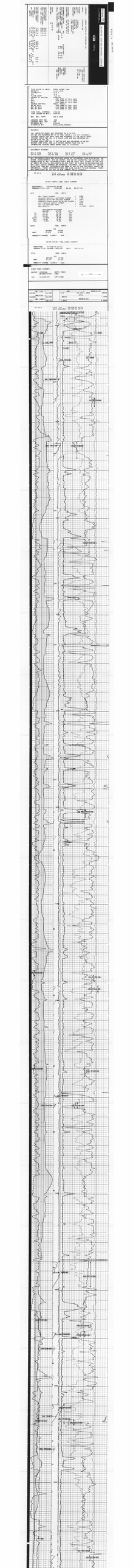
ZENDEN MEASURE POINT TO TOOL ZERO

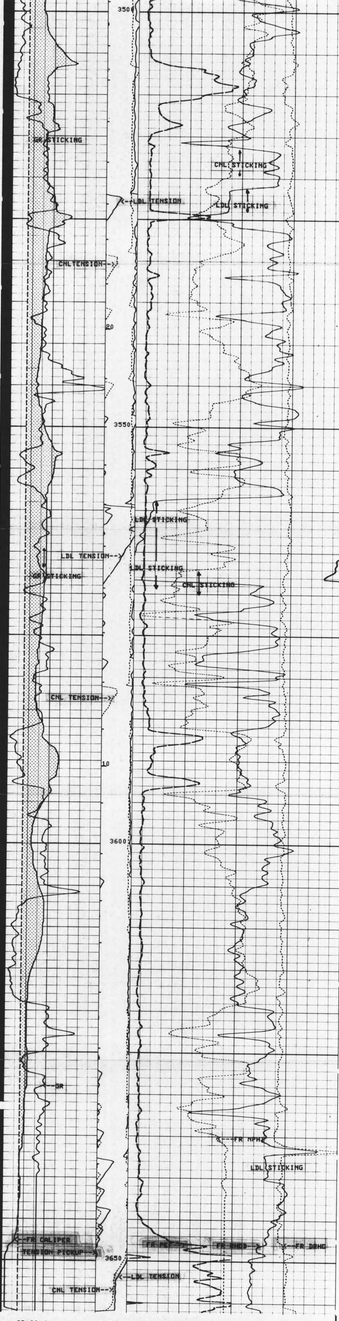
| | | | | | |
|---|---|---|---|---|---|
| STGG | .10 METER | | GR | 14.2 METER |
| SCNL | 14.0 METER | | FCNL | 14.0 METER |
| LITH | .79 METER | | SCNL | .10 METER |
| SS1 | .79 METER | | LS | .79 METER |
| SS2 | .79 METER | | SS1 | .04 METER |
| CALI | .01 METER | | SS2 | .04 METER |
| HBHT | 14.0 METER | | TENS | .10 METER |

PARAMETERS

| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|---|---|---|---|---|---|
| INT | 80.0000 | DEGF | TD | 3646.80 | M |
| MC | 81 | | PSHE | 2.3193 | |
| FD | 1.0000 | G/C3 | MATR | LIME | |
| MD | 2.7100 | G/C3 | DFD | 1.5000 | G/C3 |
| DMC | 81 | | RFS | 1.000 | |
| SI | 0.50000 | IN | BHC | OPEN | |
| DSEP | 14 | M | DGS | 0.0 | M |
| PF | HORN | | | | |

TAPE NOT MADE






CP 28.4 FILE 101 09-FEB-86 00:18
DATA ACQUIRED 10-FEB-86 15:56

| BS (IN) | | PEF | | DRHO(G/C3) | |
|---|---|---|---|---|---|
| 6.0000 | 16.000 | 0.0 | 40.000 | -.2500 | .25000 |
| CALI(IN) | | | MPHI | | |
| 6.0000 | 16.000 | .45000 | | | -.1500 |
| GR (GAPI) | | | RHOB(G/C3) | | |
| 0.0 | 150.00 | 1.9500 | | | 2.9500 |

SENSOR MEASURE POINT TO TOOL ZERO

| | | | | | |
|---|---|---|---|---|---|
| STSG | .10 | METER | GR | 16.3 | METER |
| NCNL | 14.00 | METER | FCNL | 14.0 | METER |
| LITH | .79 | METER | SCNL | .10 | METER |
| LS | .79 | METER | LL | .79 | METER |
| SS1 | .64 | METER | LU | .79 | METER |
| CALI | .81 | METER | SS2 | .64 | METER |
| MRAT | 4.00 | METER | TENS | .10 | METER |

PARAMETERS

| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|---|---|---|---|---|---|
| SHT | 80.0000 | DEGF | TD | 3040.00 | M |
| MC | 85 | | PSNR | 2.31300 | |
| FD | 1.00000 | G/C3 | MATR | LIME | |
| MWUB | 14.3000 | LB/G | MDEN | 2.71000 | G/C3 |
| SHC | 85 | | BFM | LIQU | |
| BI | 8.50000 | IN | SHC | DPEN | |
| DI | 0.0 | M | DOZ | 0.0 | M |
| PP | NORM | | | | |

TAPE NOT MADE

BEFORE SURVEY CALIBRATION SUMMARY

PERFORMED: 09-FEB-86 03:45
PROGRAM FILE: LEP (VERSION 28.2A 85/07/10)

LDTC DETECTOR CALIBRATION SUMMARY

| | |
|---|---|
| DRS SONDE NUMBER | : 2952 |
| NUCLEAR SERVICE CARTRIDGE NUMBER | : 1725 |
| POWERED DETECTOR HOUSING NUMBER | : 1927 |
| POWERED GAMMA-GAMMA DETECTOR NUMBER | : 1966 |
| LDT LOGGING SOURCE NUMBER | : 6892 |
| LDT CALIBRATION MODE | : WATE |
| MUD DENSITY | : 14.3000 LB/G |

| | MEASURED BKGD | AL+FE | AL | UNITS |
|---|---|---|---|---|
| LL | 19.2 | 81.0 | 91.3 | CPS |
| LU | 72.3 | 122.9 | 138.0 | CPS |
| LS | 55.3 | 142.5 | 160.5 | CPS |
| LITH | 5.4 | 130.3 | 46.9 | CPS |
| SS1 | 13.8 | 159.0 | 180.0 | CPS |
| SS2 | 9.5 | 243.0 | 270.0 | CPS |

6 cm

LDTC CALIPER CALIBRATION SUMMARY

| | MEASURED SMALL | LARGE | CALIBRATED SMALL | LARGE | UNITS |
|---|---|---|---|---|---|
| CALI | 6.70 | 11.1 | 8.00 | 12.9 | IN |

CP 28.2A FILE 1 09-FEB-86 03:44

SGTE DETECTOR CALIBRATION SUMMARY

| MEASURED BKGD | JIG | CALIBRATED | UNITS |
|---|---|---|---|
| GR 7 | 173 | 165 | GAPI |

CHTA DETECTOR CALIBRATION SUMMARY

| TANK IMPUT | CALIBRATED | JIG MEASURED | CALIBRATED |
|---|---|---|---|
| MRAT 2.35500 | 2.158 | 2.335 | 2.141 |

SHOP SUMMARY

PERFORMED: 03-FEB-86 17:53
PROGRAM FILE: CCSHOP (VERSION 28.2 85/07/10)

LDTC DETECTOR CALIBRATION SUMMARY

| | |
|---|---|
| DRS SONDE NUMBER | : 2952 |
| NUCLEAR SERVICE CARTRIDGE NUMBER | : 1725 |
| POWERED DETECTOR HOUSING NUMBER | : 1927 |
| POWERED GAMMA-GAMMA DETECTOR NUMBER | : 1966 |
| LDT LOGGING SOURCE NUMBER | : 6892 |
| LDT CALIBRATION MODE | : WATE |
| MUD DENSITY | : 8.00000 LB/G |

| | MASTER CALIBRATED BKGD | AL+FE | AL | UNITS |
|---|---|---|---|---|
| LL | 19.1 | 81.1 | 91.4 | CPS |
| LU | 72.3 | 122.9 | 138.1 | CPS |
| LS | 55.3 | 142.5 | 160.5 | CPS |
| LITH | 5.5 | 39.3 | 46.9 | CPS |
| SS1 | 13.8 | 159.0 | 180.1 | CPS |
| SS2 | 9.5 | 243.1 | 270.2 | CPS |

SPECTRUM QUALITY RATIOS

| | |
|---|---|
| QRLS | .6615 |
| QRSS | .6665 |
| QRLI | .2924 |
| QLIR | 1.3741 |
| QR | .9942 |

CP 28.2 FILE 0 03-FEB-86 17:53

SHOP SUMMARY

PERFORMED: 13-DEC-85 21:09
PROGRAM FILE: SHOP (VERSION 28.2 85/07/10)

CHTA DETECTOR CALIBRATION SUMMARY

| TANK MEASURED | CALIBRATED | JIG MEASURED | CALIBRATED |
|---|---|---|---|
| MRAT 2.355 | 2.158 | 2.337 | 2.143 |

(CNC:1547, CNB:3021)

