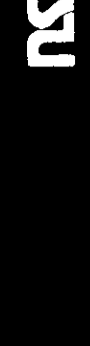


2" DENSITY NEUTRON GR



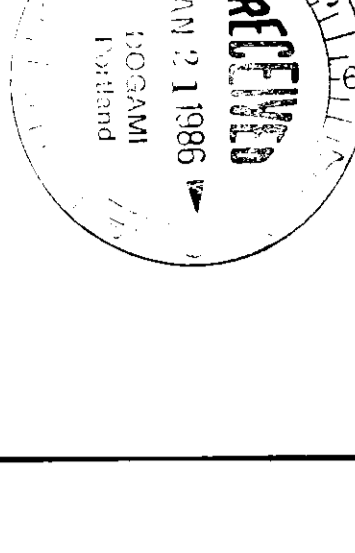
COMPANY: ARCO EXPLORATION AND TECH.
WELL: CROWN ZELLEBRACH 23-15

FIELD: PITTSBURG
COUNTY: CLATSOP
STATE: OREGON
NATION: USA
LOCATION: OF N 1/4 CDR
SEC: 15 TWP: 5N RGE: 5W

PERMANENT DATUM: GL
ELEVATION: 720.9 F
ELEV. OF PERM. DATUM: KB
DFI: 740.9 F
LOG MEASURED FROM: KB
GL: 720.9 F
DRLG. MEASURED FROM: KB

DATE: 7 DEC 85
RUN NO: 1

DEPTH-DRILLER: 2770.0 F
DEPTH-LOGGER: 2751.0 F
BIT LOG INTERVAL: 2749.0 F
TOP LOG INTERVAL: 420.0 F
CASING-DRILLER: 420.0 F
CASING-LOGGER: 420.0 F
CASING: 420.0 F
HEIGHT: 8.75
BIT SIZE: 8.75
DEPTH: 8.75



OTHER SERVICES-
DIL
SLT
HDT

PROGRAM
TAPR NDI
28.2A
SERVICE
DRRER NDI
432263

TYPE FLUID IN HOLE: MULTI DESC
DENSITY: 9.00 LB/G
VISCOSITY: 40.0 S
PH: 8.5
FLUID LOSS: 8.0 C3
SOURCE OF SAMPLE: FLOWLINE
RM: 2.330 OHMM AT 60.0 DEGF
RMF: 2.950 OHMM AT 44.0 DEGF
RMC: 3.090 OHMM AT 49.0 DEGF
SOURCE RMF/RMC: MEAS/MEAS
RM AT BHT: 1.593 OHMM AT 91.0 DEGF
RMC AT BHT: 1.535 OHMM AT 91.0 DEGF
RMC AT BHT: 1.766 OHMM AT 91.0 DEGF

TIME CIRC. STOPPED: 21:00 12/6
TIME LOGGER ON BTM.: 06:00 12/7
MAX. REC. TEMP: 91.0 DEGF

LOGGING UNIT NO: 8126
LOGGING UNIT LOC: SACRAMENTO
RECORDED BY: KUNKLER
WITNESSED BY: ANDERSON

REMARKS:
CHLORIDES: 300 PPM

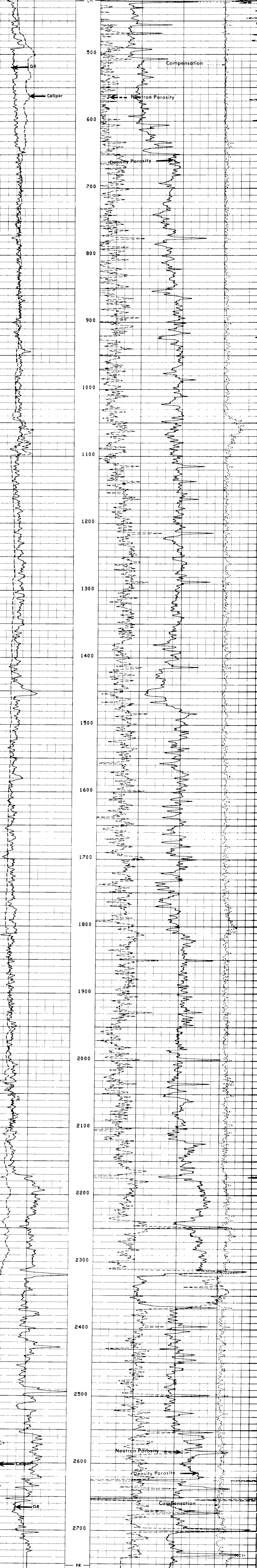
EQUIPMENT NUMBERS-

PGS 542 PDH 1244 CNC 1132 SGT JAA 466

ALL INTERPRETATIONS ARE OPINIONS, BASED ON INFERENCE 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 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.

CP 28.2A FILE 8 07-DEC-85 07:20
DATA ACQUIRED 00- -00 00:00

| | | | | | |
|-----------|--------|---------|-------------|--------|--------|
| CALI (IN) | 6.0000 | 16.0000 | DRHO (G/C3) | -.2500 | .25000 |
| GR (GAPI) | 0.0 | 150.00 | DPHI | .60000 | 0.0 |
| | | | NPHI | .60000 | 0.0 |



CP 28.2A FILE 5 07-DEC-85 05:55

| | | | | | |
|-----------|--------|---------|-------------|--------|--------|
| CALI (IN) | 6.0000 | 16.0000 | DRHO (G/C3) | -.2500 | .25000 |
| GR (GAPI) | 0.0 | 150.00 | DPHI | .60000 | 0.0 |
| | | | NPHI | .60000 | 0.0 |

SENSOR MEASURE POINT TO TOOL ZERO
 FCNL 18.1 FEET
 FFDC 2.7 FEET
 CALI 2.7 FEET
 NRAT 18.1 FEET
 NCN 26.6 FEET
 NFDC 2.7 FEET
 TENS - .3 FEET

| NAME | VALUE | UNIT | NAME | VALUE | UNIT |
|------|---------|------|------|---------|------|
| HC | CALI | | PSNR | 2.30000 | |
| FD | 1.00000 | G/C3 | MATR | SAND | |
| FMDC | ALLO | | MEEN | 0.00000 | G/C3 |
| HMUD | 8.00000 | LB/G | BHF | HATE | |
| BS | 8.75000 | IN | BHS | OPEN | |