

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

CENTURY GEOPHYSICAL CORPORATION
Tulsa, Oklahoma

BOREHOLE S-4 DATE 12-11-80
UNIT OPERATOR 16701 OWEN FIELD OFFICE GRANTS

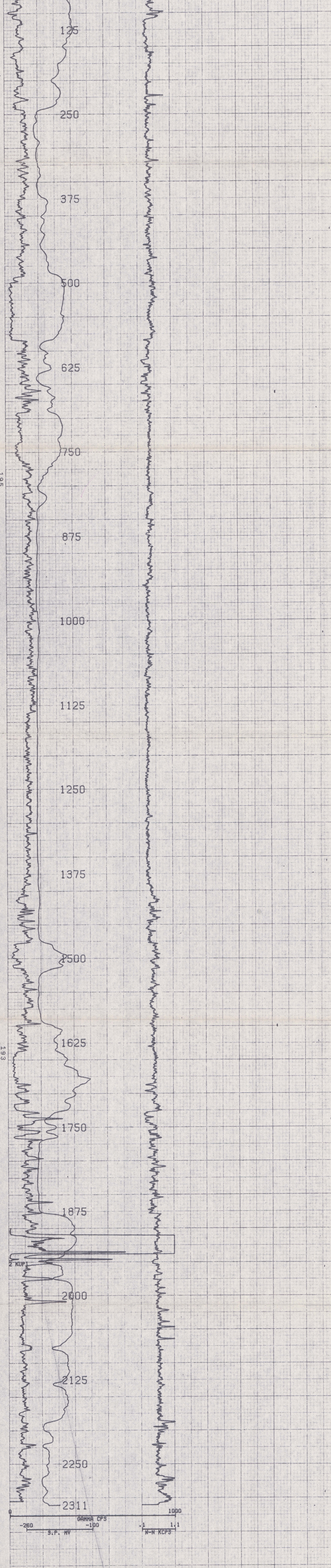
COMPANY U.S.G.S.

AREA MARIANO LAKE ELEVATION 6805'
COUNTY MCKINLEY STATE N. MEX.
SECTION 15 TOWNSHIP 17N RANGE 13W

HOLE DATA
TOTAL DEPTH - DRILLER 2312' BIT SIZE 6.25"
TOTAL DEPTH - LOGGER 2312' CASING - TYPE & SIZE N/A
TOTAL FOOTAGE LOGGED 2312' BOREHOLE DEPTH N/A
LOGGING SPEED 60'/MIN. BOREHOLE FLUID MUO @ 10'
REFERENCE LEVEL G.R.D. LVL. FLUID RESISTIVITY UNK.
PROBE NO. 9055A-46 SOFTWARE LEVEL V310 *A
RES. : .61-1.8 S.P. 40/180; NIN 0.5K/1K

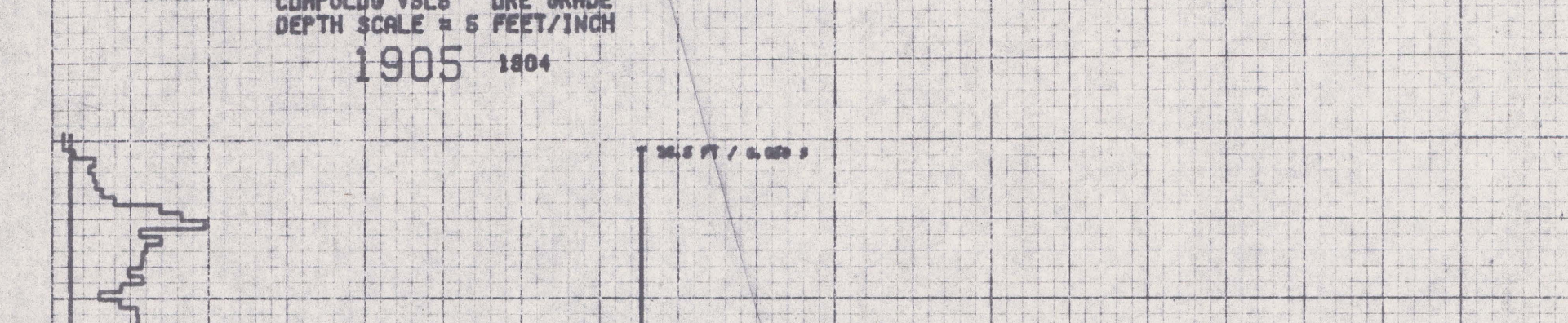
REMARKS:
TIME IN: 1300
TIME OUT: 1630
FOUR PARAMETER LOG: NATURAL GAMMA, S.P.,
RESISTANCE, NEUTRON
DEVIATION PRINT, GRAD3W

EQUIPMENT DATA
PROBE MODEL 18T 2T 18T 18T
DETECTOR TYPE Na Na Na Na
DETECTOR SIZE 18" x 18" 18" x 18" 18" x 18" 18" x 18"
STO. FACTOR 1.00 1.00 1.00 1.00
STO. DEADTIME 1.00 1.00 1.00 1.00
CALIB. MODEL LOG. GR.
CALIB. DATE 12-1-80
COUNT RATE 1500
DEVIATION 1.80
TEST READING 1.65
CALIB. FACTOR 1.00
DETECTOR TYPE Na Na Na Na
DETECTOR SIZE 18" x 18" 18" x 18" 18" x 18" 18" x 18"
SOURCE TYPE Na Na Na Na
SOURCE NO. 1.00 1.00 1.00 1.00
SOURCE STRENGTH 1.00 1.00 1.00 1.00
SOURCE SPACING 1.00 1.00 1.00 1.00
DETECTOR TYPE Na Na Na Na
DETECTOR SIZE 18" x 18" 18" x 18" 18" x 18" 18" x 18"
SOURCE TYPE Na Na Na Na
SOURCE NO. 1.00 1.00 1.00 1.00
SOURCE STRENGTH 1.00 1.00 1.00 1.00
SOURCE SPACING 1.00 1.00 1.00 1.00
SOL. PT. RESISTANCE 1.00 x 1.00 1.00 x 1.00 1.00 x 1.00 1.00 x 1.00
RESISTIVITY 1.00 1.00 1.00 1.00
SELF POTENTIAL YES YES YES YES
TEMPERATURE 1.00 1.00 1.00 1.00
QUALITY 1.00 1.00 1.00 1.00
CALIB. YES YES YES YES



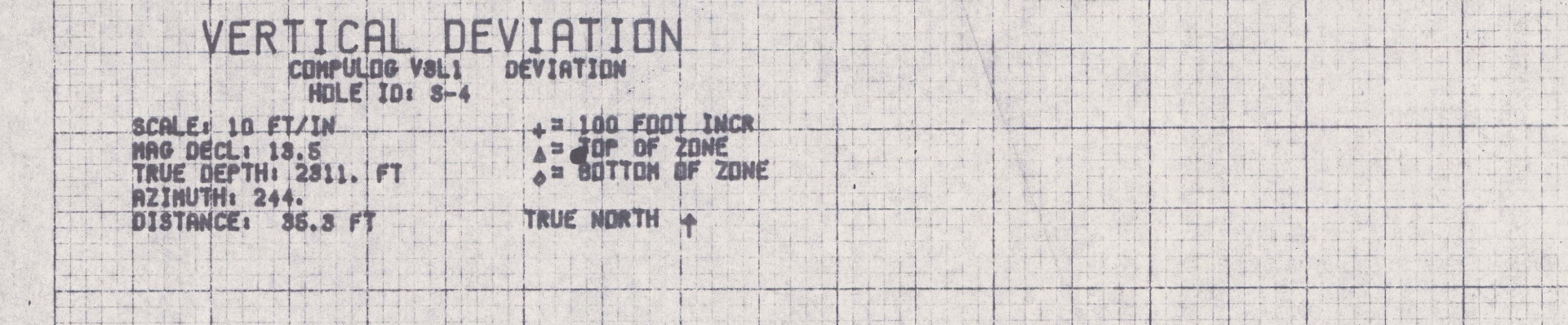
COMPU-LOG V31.0 PLOT 12-11-80
S-4
U.S.G.S.
MARIANO LAKE
HOLE DIAMETER: 06.2
CAL STD CPS = 0181 CAL RUN CPS = 0186
PROBE # 9055A-046 PROBE CAL BIAS = +00000
TRUCK # 7670 DATA: V31.0
APPL.#5 E
C. OWEN

ORE GRADE CALCULATION
COMPU-LOG V31.0 ORE GRADE
DEPTH SCALE = 5 FEET/INCH
1905 1804



1950 1840
0.05 % 4.00/INCH
CONVERGENCE FACTOR = 0.977
THRESHOLD = 0.005

VERTICAL DEVIATION
COMPU-LOG V31.0 DEVIATION
SCALE: 10 FT/IN
HOLE DEPTH: 18.5
TRUE DEPTH: 2811. FT
AZIMUTHAL: 244
DISTANCE: 36.5 FT
TRUE NORTH



BEST 6.0 FOOT INTERVAL 0.99 % AVERAGE GRADE
532 GTP

CONVERGENCE FACTOR = .979

PRINTOUT SUPPRESSED -- CUTOFF'S TOO HIGH--

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