G004316

**ENERGY RESOURCES, INC.**

Paola, Kansas 66071
P. O. Box 487
913-294-5080

Lawrence, Kansas 66044
1203 Nine
913-841-5880

FILING NO. [redacted]

COMPANY: CARMEL ENERGY INC. [redacted]

WELL: NO. 1

FIELD: D. KOOPMAN LEASE

COUNTY: VERNON - MISSOURI

LOCATION: 1155.0 FNL, 2401.0 FEL

SEC 21 TWP 35N RGE 33W

OTHER SERVICES:

PERMANENT DATUM: G.L. ELEV. 814.5
LOG MEASURED FROM: G.L. FT. ABOVE PERM. DATUM
DRILLING MEASURED FROM: G.L.

ELEV.: K.B. D.F. G.L. 814.5

| | | |
|---|---|---|
| DATE | 8-21-80 | 8-21-80 |
| RUN NO. | 1 NW | 1 NW |
| TYPE LOG | GAMMA RAY | NEUTRON |
| DEPTH—DRILLER | 155.0 | 155.0 |
| DEPTH—LOGGER | 143.0 | 143.0 |
| BOTTOM LOGGED INTERVAL | 137.5 | 142.0 |
| TOP LOGGED INTERVAL | 0.0 | 4.5 |
| TYPE FLUID IN HOLE | WATER | WATER |
| SALINITY, PPM CL | | |
| DENSITY | | |
| LEVEL | FULL | FULL |
| MAX. REC. TEMP., DEG F. | | |
| OPERATING RIG TIME | | |
| RECORDED BY | R. PRATT | R. PRATT |
| WITNESSED BY | V. YOUNG | V. YOUNG |

| RUN NO. | BORE-HOLE RECORD BIT | FROM | TO | CASING RECORD SIZE | WGT. | FROM | TO |
|---|---|---|---|---|---|---|---|
| | | | | O/H | | 0 | T.D. |

OCT 0 6 1980
MO. OIL & GAS COUNCIL

FOLD HERE

THIS HEADING AND LOG CONFORMS TO API RP 33

EQUIPMENT DATA

| | GAMMA RAY | NEUTRON |
|---|---|---|
| RUN NO. | 1 NW | 1 NW |
| TOOL MODEL NO. | 805 | 705 |
| DIAMETER | 1 11/16" | |
| DETECTOR MODEL NO. | 705-05 | |
| TYPE | GEIGER | |
| LENGTH | 1 3/8" | 18" |
| DISTANCE TO N. SOURCE | 4.5 | |
| SOURCE MODEL NO. | | |
| SERIAL NO. | | |
| SPACING | | |
| TYPE | | |
| STRENGTH | | |
| GENERAL | 0020 | |
| HOIST TRUCK NO. | 0020 | |
| INSTRUMENT TRUCK NO. | 0002 | |
| TOOL SERIAL NO. | | |

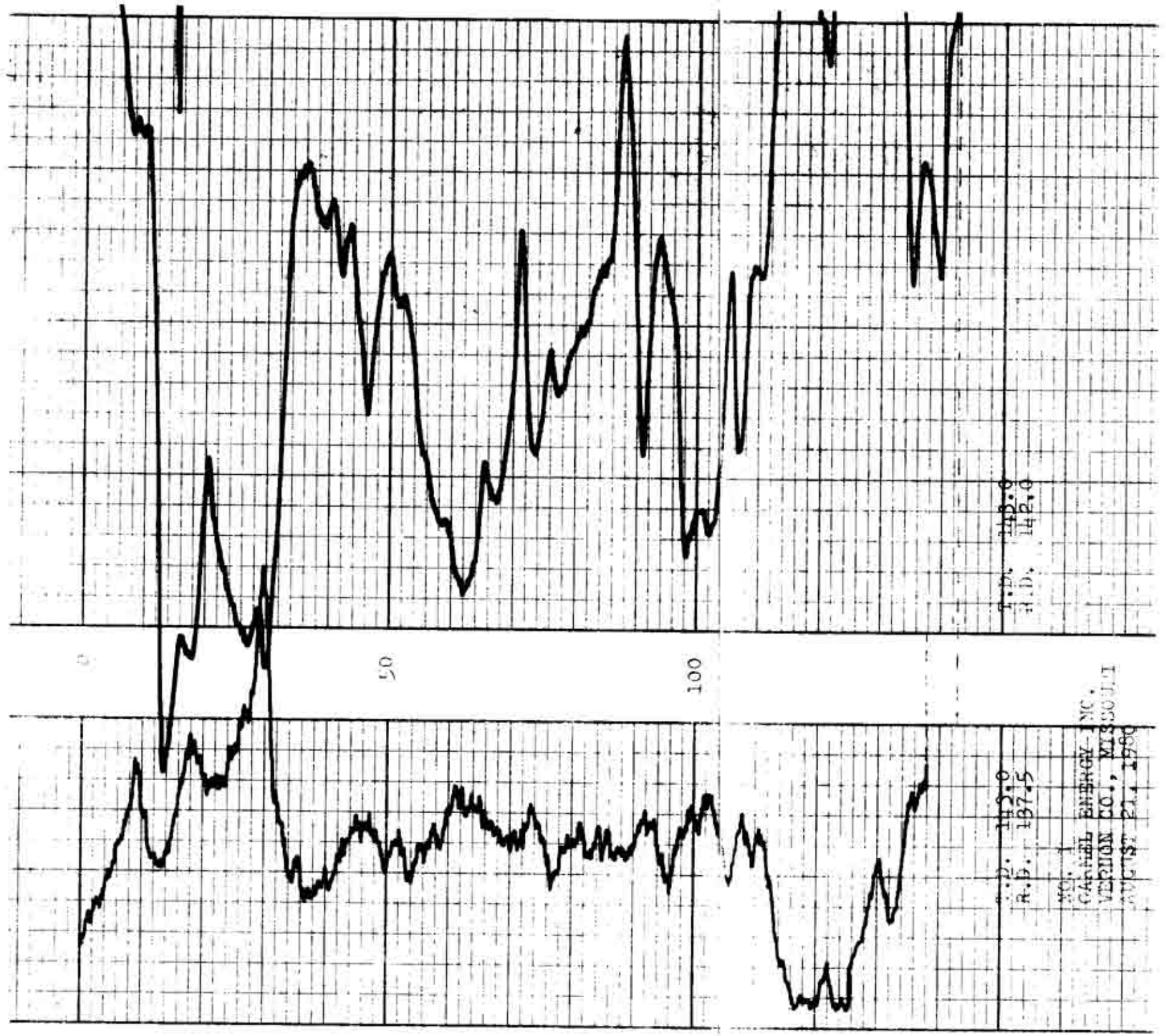
LOGGING DATA

| GENERAL RUN NO. | DEPTHS FROM | TO | SPEED FT/MIN. | T.C. SEC. | SENS. SETTINGS | GAMMA RAY ZERO DIV. | API G.R. UNITS PER LOG DIV. | T.C. SEC. | SENS. SETTINGS | NEUTRON ZERO DIV. | API N. UNITS PER LOG DIV. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | T.D. | 20 | 4.0 | 100/085 | 2 L | 10 | 4.0 | 560/160 | 2 L | 20 |

REFERENCE LITERATURE: OPEN HOLE - CEMENTED

REMARKS: DRILLING CONTRACTOR: LAYNE-WESTERN COMPANY

MO-D-1624

GAMMA RAY NEUTRON CASING

DEPTH