602477 Permit #21580

RECEIVED

# CORNISH

WIRELINE SERVICES, INC.
P.O. DRAWER H
CHANUTE, KANSAS
PHONE 431-9308

## CEMENT BOND — VARIABLE DENSITY

FILING NO. _____

COMPANY CARMEL ENERGY, INC.

WELL LINNEMAN NO. N-18

FIELD _____

COUNTY VERNON STATE MISSOURI

LOCATION 792' FSL 1737' FWL

Sec. 34 Twp. 36N Rge. 33W

NOV 30 1984
MO. OIL & GAS COUNCIL

OTHER SERVICES: GR/N; 11-26-84

Elev.: K.B. _____ D.F. _____ G.L. 764.8'

Permanent Datum: GROUND LEVEL Elev. 764.8'
Log Measured from G.L. _____ Ft. Above Perm. Datum
Drilling Measured From G.L.

| | | | |
|---|---|---|---|
| Date | 11-26-84 | Type Fluid in Hole | WATER/FULL |
| Run No. | 1 NW | Dens. / Visc. | |
| Depth—Driller | 163.9' | Max. Rec. Temp. | |
| Depth—Logger | 154.9' | Est. Cement Top | |
| Btm. Log Interval | 154.9' | Equip. / Location | 106 C., KS |
| Top Log Interval | 8' | Recorded By | SANBORN, G. |
| Open Hole Size | | Witnessed By | SPERRY, J. |

| CASING REC. | Size | Wt/Ft | Grade | Type Joint | Top | Bottom |
|---|---|---|---|---|---|---|
| Surface String | | | | | | |
| Prot. String | | | | | | |
| Prod. String | 4½" | | | | 0 | T.D. |
| Liner | | | | | | |

PRIMARY CEMENTING DATA

| STRING | Surface | Protection | Production | Liner |
|---|---|---|---|---|
| Vol. of cement | | | | |
| Type of cement | | | | |
| Additive | | | | |
| Additive by % | | | | |
| Retarder | | | | |
| Retarder by % | | | | |
| Wt. of slurry | | | | |
| Water loss | | | | |
| Drill. mud type | | | | |
| Drilling mud wt. | | | | |

FOLD HERE

COMPRESSIVE STRENGTH (p.s.i. Curing Temp.)

| Time Elapsed | Surface | | Protective | | Production | | Liner | |
|---|---|---|---|---|---|---|---|---|
| 24 hrs. | | °F | | °F | | °F | | °F |
| 48 hrs. | | °F | | °F | | °F | | °F |
| 72 hrs. | | °F | | °F | | °F | | °F |
| | | | | | | | | |

PRIMARY CEMENTING PROCEDURE

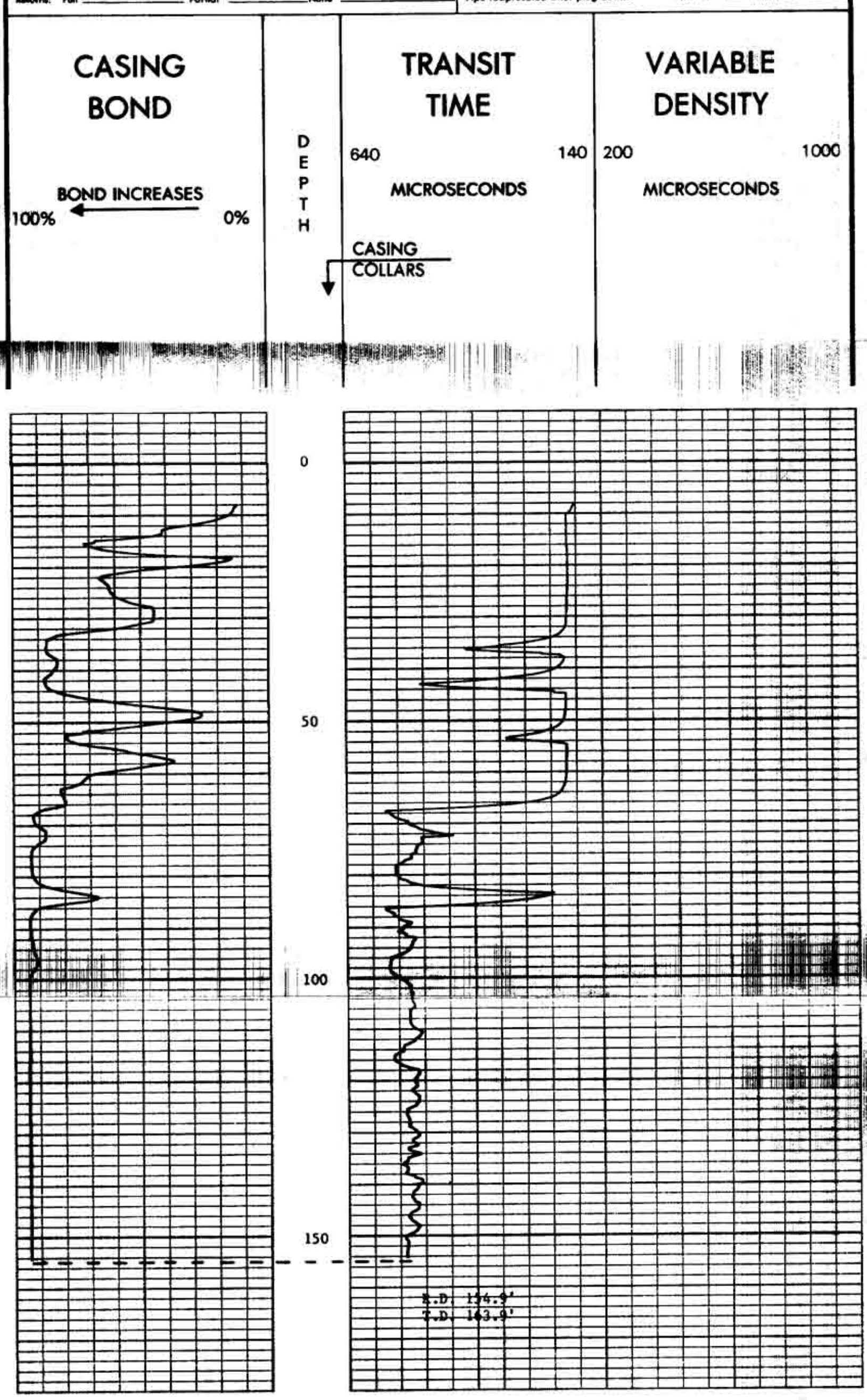
| | Hour — date | Hours from start of operation |
|---|---|---|
| Started pumping cement | | |
| Plug on bottom | | |
| Release pressure | | |
| Start Cement Bond Log | | |
| Finish Cement Bond Log | | |

Equipment Data

| | |
|---|---|
| Type standoff | |
| Logging speed | |
| Bias: Max. | |
| Cartridge No. | |
| Spacing | |

Preceding Fluid _____ Volume _____ bbls.
Returns: Full _____ Partial _____ None _____

Pipe reciprocated during Pumping: Yes _____ No _____
Pipe reciprocated after plug down: Yes _____ min., No _____




LINNEMAN NO. N-18

CARMEL ENERGY, INC.

VERNON COUNTY, MISSOURI

NOVEMBER 26, 1984

BOND LOG

34/36N/33W