G02104

Bennight #2 21747

# CORNISH

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

## CEMENT BOND — VARIABLE DENSITY

FILING NO. _____

COMPANY CARMEL ENERGY, INC.
WELL LINNEMAN NO. N-16
FIELD
COUNTY VERNON STATE MISSOURI

FEB 14 1984
MO. OIL & GAS COUNCIL
CONFIDENTIAL

LOCATION 2125' FWL 792' FSL
Sec. 34 Twp. 36N Rge. 33W

OTHER SERVICES

Permanent Datum: G.L. Elev. 765.6'
Log Measured from G.L. Ft. Above Perm. Datum
Drilling Measured From G.L.

Elev.: K.B. _____ D.F. _____ G.L. 765.6'

| | | | |
|---|---|---|---|
| Date | 2-8-84 | Type Fluid in Hole | WATER |
| Run No. | 1 NW | Dens. / Visc. | |
| Depth—Driller | | Max. Rec. Temp. | |
| Depth—Logger | 159.1' | Est. Cement Top | |
| Btm. Log Interval | 150.5' | Equip. / Location | |
| Top Log Interval | 8' | Recorded By | CORMLEY, R. |
| Open Hole Size | | Witnessed By | YOUNG, V. |

| CASING REC. | Size | Wt/Ft | Grade | Type Joint | Top | Bottom |
|---|---|---|---|---|---|---|
| Surface String | 4½" | | | | 0 | 133.0' |
| Prot. String | | | | | | |
| Prod. String | | | | | | |
| 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 _____

| CASING BOND | DEPTH | TRANSIT TIME | VARIABLE DENSITY |
|---|---|---|---|
| BOND INCREASES ← 100% 0% | | 640 140 MICROSECONDS | 200 1000 MICROSECONDS |
| | | CASING COLLARS ↓ | |




LINNEMAN NO. N-16

CARMEL ENERGY, INC.

VERNON COUNTY, MISSOURI

FEBRUARY 8, 1984 34/36N/33W