60203

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-14
FIELD
COUNTY VERNON STATE MISSOURI
LOCATION 2318' FWL, 1128' FSL
Sec. 34 Twp. 36N Rge. 33W

FEB 14 1984
W/O OIL & GAS COUNCIL
CON
2-7-85

OTHER SERVICES

Permanent Datum: GROUND LEVEL Elev. 766.2' Elev. K.B.
Log Measured from G.L. Ft. Above Perm. Datum D.F.
Drilling Measured from G.L. G.L. 766.2'

Date	2-9-84	Type Fluid in Hole	WATER
Run No.	1 NW	Dens. / Visc.	
Depth—Driller	152.9'	Max. Rec. Temp.	
Depth—Logger	144.3'	Est. Cement Top	
Btm. Log Interval	144.3'	Equip. / Location	
Top Log Interval	9.0'	Recorded By	GORMLEY, R.
Open Hole Size		Witnessed By	YOUNG, V.

CASING REC.	Size	Wt/Ft	Grade	Type Joint	Top	Bottom
Surface String						
Prot. String						
Prod. String	4½"				0	145.5'
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-14

CARMEL ENERGY, INC.

VERNON, MISSOURI

FEBRUARY 9, 1984

BOND LOG

34/36N/33W