602558 Permit #21804

CORNISH

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

CEMENT BOND — VARIABLE DENSITY

RECEIVED
MAY 16 1985
MO. OIL & GAS COUNCIL

FILING NO. _____

COMPANY CARMEL ENERGY, INC.
WELL K-N60M
FIELD Lamonds
COUNTY VERNON STATE MISSOURI
LOCATION 1538.28' FSL + 906.53' FWL
Sec. 28 Twp. 35N Rge. 33W

OTHER SERVICES: 5-10-85: GR/N

Permanent Datum: GROUND LEVEL Elev. _____
Log Measured from TOP OF FLANGE Ft. Above Perm. Datum
Drilling Measured From G.L.

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

Date	5-10-85	Type Fluid in Hole	WATER
Run No.	1 NW	Dens. / Visc.	
Depth—Driller	168.0'	Max. Rec. Temp.	
Depth—Logger	161.4'	Est. Cement Top	
Btm. Log Interval	161.4'	Equip. / Location	105 C., KS
Top Log Interval	7.0'	Recorded By	LYNCH, L.
Open Hole Size		Witnessed By	STUESSE, G.

CASING REC.	Size	Wt/Ft	Grade	Type Joint	Top	Bottom
Surface String						
Prot. String						
Prod. String	4½"			COLLAR	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

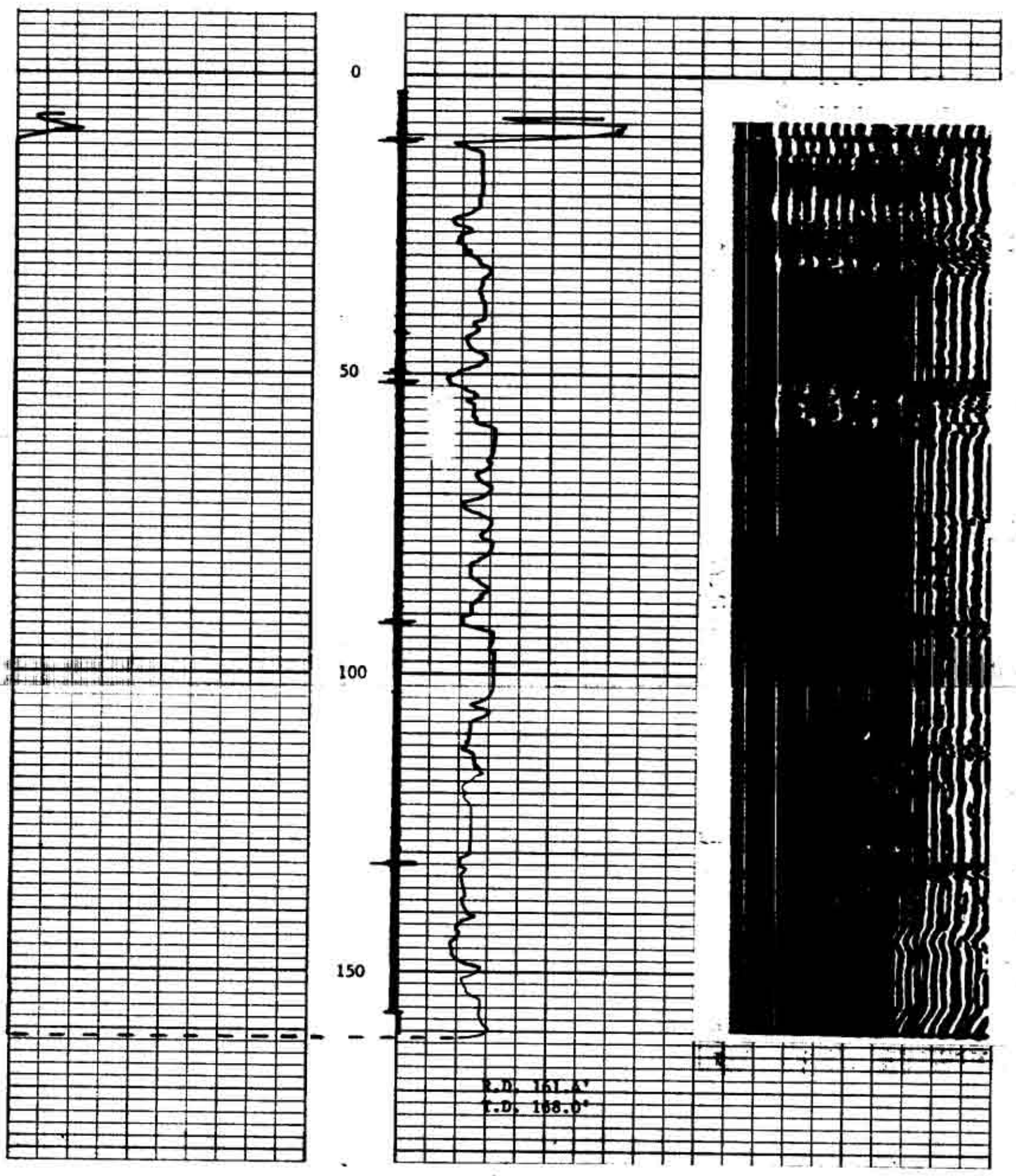
	Hour — date	Hours from start of operation
Started pumping cement		
Plug on bottom		
Release pressure		
Start Cement Bond Log		
Finish Cement Bond Log		

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 _____

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



K-N60M

CARMEL ENERGY, INC.

VERNON COUNTY, MISSOURI

MAY 10, 1985

BOND LOG WITH MSG

28/35N/33W