STERLING DRILLING COMPANY

BOX 129

STERLING, KANSAS 67579

July 22, 1991

OPERATOR: F.G.Holl Company

ROTARY DRILLING CONTRACTOR: Sterling Drilling Company

COMMENCED: July 13, 1991 COMPLETED: July 19, 1991

TOTAL DEPTH: 4470' Driller 4469' Log

LOG

0 '=	_	180'	Surface Soil & Sand
180'	_	400'	Red Bed & Shale
400'		1060'	Shale
1060'	_	1079'	Anhydrite
1079'	-	4470'	Lime & Shale

CASING RECORD

Spud at 7:45 a.m.
7-13-91, Drilled 400'
of 12 1/4" hole, ran 9 joints
of new 8 5/8" 23# casing 385.57'
Pipe set at 398' K.B. cemented
with 260 sack's of 60/40 pozmix,
with 2% gel. and 3% C.C. Plug
down at 2:45 p.m. 7-13-91 by
Howco, Inc. Good returns to surface

Ran 110 joints of 4½", 10.5# used, tested, and drifted casing 4457.59 ft. Pipe set at 4468' K.B. cemented with 20 BBL. of saltflush and 500 gallons of superflush, ahead of 100 sack's of Howco lite followed with 125 sack's of F.G.Holl mix. Plug down at 1:45 p.m. 7-19-91 by Howco, Inc. Centralizer's on joints 1-3-7 and 12, 4½" cement basket on joint #8, Shoe joint is 8.96'long

DEVIATION SURVEYS

3/4° at 4305' 3/4° at 4470'