STERLING DRILLING CO.

BOX 129

STERLING, KANSAS 67579

WELL LOG - - - - - - DUTTON #4-17 Located: SE SW NE, Section 17-24S-16W, Edwards County, Kansas

OWNER: F. G. Holl

ROTARY DRILLING CONTRACTOR: Sterling Drilling Company

COMMENCED: November 14, 1984 COMPLETED: November 20, 1984

TOTAL DEPTH: 4384'

LOG

0 - 90 Surface Soil and Sand

90 - 301 Clay - Shale

301 - 680, Shale and Sands

680 - 1099 Shale

1099 - 1111 Anhydrite

1111 - 2089 Shale and Lime Stringers

2089 - 4384 Lime and Shale

CASING RECORD

Ran 7 joints new 8 5/8", 23# casing. 285.96' pipe set at 298' K.B. Cemented with 225 sacks 60/40 Pozmix with 3% cc. Plug down at 12:30 PM, 11-14-84, by Howco.

Ran 107 joints 4 1/2" OD casing. 4371.72' pipe set at 4382' K.B. Cemented with 100 sacks Howco Lite and 125 sacks 50/50 Pozmix plus our regular additives. Plugged rathole. Plug down at 5:15 AM, 11-20-84, by Howco.

Deviation Surveys: 1 1/2° at 2089' 1° at 4281'