

15-165-20742

9-16-19W

NW SE NW

CONTRACTOR'S WELL LOG

OPERATOR: F & M Oil Company
 CONTRACTOR: Abercrombie Drilling, Inc.
 WELL NAME: Townsend #1
 LOCATION: NW SE NW, Section 9-16S-19W
 Rush County, Kansas
 SPUD DATE: November 07, 1979
 COMPLETION DATE: November 16, 1979

0	492	Sand and clay
492	731	Sand and shale
731	964	Sand
964	1298	Shale
1298	1336	Anhydrite
1336	2227	Shale
2227	3240	Shale and lime
3240	3712	Lime
	3712	Rotary Total Depth

Spud hole at 1:30 p.m., November 07, 1979. Drilled 492' of 12 $\frac{1}{4}$ " hole. Ran 16 joints of 8-5/8" casing; 14 joints of 28# used casing and 2 joints of 20# new casing. (Overall tally 486.01') Set at 489' K.B. with 280 sacks of common cement, 3% Ca.Cl., 2% gel. Cement did circulate. Pumped plug to 275' K.B. Plug was down at 1:00 a.m., November 08, 1979.

T.D. 3712'. Set 1st plug at 625' with 70 sacks, 2nd plug at 475' with 20 sacks, 3rd plug at 40' solid bridge with 10 sacks, rathole with 3 sacks and 2 sacks in the mousehole. Cemented with 50/50 posmix, 4% gel. Job was complete at 9:30 a.m., 11-16-79.

SAMPLE TOPS:

Anhydrite 1298'
 B/Anhydrite 1336'

STATE OF KANSAS)
)ss
 COUNTY OF SEDGWICK)

Jack L. Partridge, Assistant Secretary-Treasurer of Abercrombie Drilling, Inc., does hereby state that the above and foregoing is a true and correct copy of the log of the Townsend #1, NW SE NW, Section 9-16S-19W, Rush County, Kansas.

ABERCROMBIE DRILLING, INC.