

AUG 20 1971

10-21-24W
ELEVATION: 2268 KB

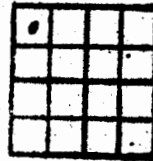
ROTARY DRILLING LOG

P 104 BOPD N/W /Miss
GR 39.5

Operator: Thunderbird Drilling, Inc.
#1 NELSON
C NW NW Section 10-21S-24W
Hodgeman County, Kansas

Contractor: Rains & Williamson
Oil Co., Inc.
Commenced: 7-9-71
Completed: 7-19-71

Casing: 8-5/8"/249'/150 sacks
5-1/2"/4360'/150 sacks



LOG TOPS:

Formations

Soil and Shale	195'	Anhydrite	1484
Shale	256'	Heebner	3691
Shale and Shells	1256'	Toronto	3709
Shale	1485'	LKC	3740
Anhydrite	1525'	BKC	4076
Shale	1970'	Mrm	4115
Shale and Lime	2340'	Pawnee	4195
Shale	2520'	Ft Scott	4258
Shale and Lime	3075'	Cher	4284
Lime and Shale	3275'	Conglomerate	4332
Shale and Lime	3515'	Mississippi	4354
Lime and Shale	3745'	DDTD	4378
Lime	3941'		
Lime and Chert	3965'		
Lime	4315'		
Lime and Chert	4349'		
Lime	4360'		
Lime and Chert	4370'		
Rotary Total Depth	4370'		
	4378'		

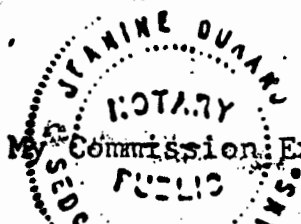
We certify the above log is true
and correct, to the best of our
knowledge and belief.

RAINS & WILLIAMSON OIL CO., INC.

Wilson Rains
Wilson Rains

Subscribed and sworn to before me, a Notary Public within and for the State of
Kansas, County of Sedgwick, this 22 day of July, 1971.

Jeanine Durand
Jeanine Durand Notary Public



My Commission Expires: 3-31-74