

ORIGINAL

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**GEOLOGICAL REPORT**

Hertel Oil Company, LLC  
Pfeifer #2  
35'W -75'S - NW - SE - NE  
SEC. 17 TWP. 14s RGE. 17w  
Ellis County, Kansas

RECEIVED  
MAR 13 2006  
KCC WICHITA

COMMENCED: 1/14/06  
COMPLETED: 1/20/06  
CONTRACTOR: A & A Drilling  
SURFACE PIPE: 8 5/8" at 205'

15-051-25486-00-00

January 30, 2006



# JAN 1990 FORMATION Data

Elevation: (1993 G.L.) – (1998 K.B.)  
All top formations measured from 1998 K.B.

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>SEA-LEVEL DATUM</u>
Anhydrite	1186	+ 807
Base Anhydrite	1223	+ 775
Topeka	2968	- 970
Heebner	3238	-1240
Toronto	3254	-1256
Douglas	3272	-1274
Lansing-K.C.	3287	-1289
Base-K.C.	3509	-1511
Ero. Arbuckle	3522	-1524
R.T.D.	3605	-1607

All samples were examined and described by me on actual location and did not start until a depth of 3000' was reached. All zones and sample tops examined are all true and accurate according to drillers' depth.

One foot drilling time was logged from a depth of 2900' to 3605', and all zones were examined by ten foot samples at a rotary depth of 2950' to 3250'. Five foot samples were examined from a rotary depth of 3255' to 3605'.

## Sample Description

Following are the pertinent geological formations and all zones of subject well Pfeifer #2.

### THE FOLLOWING ZONES WERE NOTED:

TOPEKA	2968-2978	Limestone – buff to brownish, fine tight crystalline, poor inter porosity to a show of medium crystalline, with chalk embedded. No show of oil or odor.
	2986-2992	Limestone – buff to tan, fine to medium crystalline, tight. Poor inter porosity. No show of oil or odor.
	2992-3008	Limestone – buff, gray and tan, fine tight crystalline, poor inter porosity. No show of oil or odor.
	3010-3018	Limestone – same as above.
DEERCREEK	3025-3038	Limestone – buff fine crystalline, with chalk embedded, poor porosity. No show of oil or odor.
	3042-3056	Limestone – same as above.
	3057-3066	Limestone – buff and gray fine crystalline, chalky in part. No show of oil or odor.
	3067-3088	Limestone – same as above.
LECOMPTON	3105-3112	Limestone – buff to grayish, fine to medium crystalline, poor inter porosity, tight. No show of oil or odor.
	3115-3143	Limestone – buff to cream, fine crystalline to chalky in part, poor porosity to no inter crystalline porosity, dense cherty lime. No show of oil or odor.

	3152-3158	Limestone – buff, fine to medium crystalline, chalky in part, poor inter porosity. No show of oil or odor.
OREAD	3170-3188	Limestone – buff to cream, fine to medium crystalline, poor inter porosity, chalky in part. No show of oil or odor.
	3203-3207	Limestone – same as above.
	3212-3238	Limestone – cream, chalky with fine crystalline, to very dense, no inter porosity. No show of oil or odor.
TORONTO	3254-3260	Limestone – buff to cream, fine crystalline to dense and chalky lime, poor to no inter porosity. No show of oil or odor.
	3267-3272	Limestone – cream to white, very dense and cherty, rare show of spotted oil stain to heavy residual stain, poor to no inter porosity. No odor noted.
LANSING – K.C.		
(A-Zone)	3287-3295	Limestone – buff to cream, very dense and cherty, rare show of very heavy tar oil, no free oil or odor, no inter porosity.
(B-Zone)	3298-3304	Limestone – cream, dense to chalky, no visible porosity. No show of oil or odor.
(C-Zone)	3312-3315	Limestone – buff to cream, very dense to very fine crystalline, slight show of vuggy porosity, small show of oil stain to a show of free oil, slight odor when broken, poor inter porosity.
(D-Zone)	3330-3334	Limestone – cream, very slight show of saturated stain in a medium crystalline, with a vuggy porosity, slight show of free oil,. No odor noted.

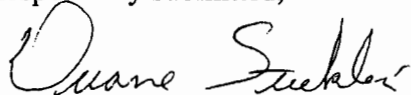
	3334-3348	Limestone – cream to whitish, dense to chalky, no visible porosity. No show of oil or odor.
(E-Zone)	3356-3358	Limestone – buff to cream, dense to chalky, slight show of fine crystalline, to medium crystalline, with a show of oil stain, fair to poor inter porosity. No odor.
(F-Zone)	3365-3369	Limestone – cream to off white, dense to chalky, no visible porosity. No show of oil or odor.
(G-Zone)	3374-3382	Limestone – same as above with a small show of fine crystalline, and a small show of oil stain to pinpoint oil. No odor.
(H-Zone)	3420-3426	Limestone – buff to cream, dense to cherty, no visible porosity. No show of oil or odor.
(I-Zone)	3446-3453	Limestone – cream, very dense to cherty, no visible porosity, very slight show of pinpoint oil stain. No odor.
(J-Zone)	3457-3470	Limestone – same as above with no show of oil.
(K-Zone)	3482-3487	Limestone – same as above.
CONGLOMERATE	3512-3522	Shale – red and gray shale, dense cherty lime, scattered show of black residual stain on cherty lime to a fine crystalline lime. No free oil or odor.
EROSIONAL ARBUCKLE		
(30 min. circulation)	3522-3528	Dolomite – buff to tan, fine to medium crystalline, tight, poor inter porosity, small show of oil stain. No odor.
(60 min. circulation)	3528-3535	Dolomite – same as above, fair show of oil stain and saturation. No odor.

- 3544-3547 Dolomite – tan and buff, fine tight crystalline, poor inter porosity, light even saturation stain, rhombohedra packing, very faint odor.
- 3548-3552 Dolomite and Chert – very tight porosity, poor inter porosity, scattered show of oil stain to pinpoint oil. No odor.
- 3553-3565 Shale – red and gray, chert and dolomite, very dense and tight, very scattered show of oil stain to saturated oil, no odor and poor inter porosity.
- 3565-3570 Dolomite, Chert and Shale – fine crystalline, poor to no inter porosity, slight show of oil stain, to black residual stain. No odor.
- 3580-3586 Dolomite, Chert and Shale – same as above.
- 3587-3605 Shales and Chert – with very scatter residual stain.

## Remarks and Conclusion

During the drilling of the Pfeifer #2 the subject well ran 14' low in the Lansing Kansas City and 10' low to the top of the Arbuckle. Due to the fact that the Pfeifer #2 had poor oil representation and that the fact that the Arbuckle was an eroded Arbuckle and was very poorly developed; it was recommended that the operator of Hertel Oil Co. decided to plug and abandoned subject well Pfeifer #2 as a dry hole.

Respectfully submitted,



Duane Stecklein, Geologist