

15-051-25857

31-13s-17w

# DUANE STECKLEIN

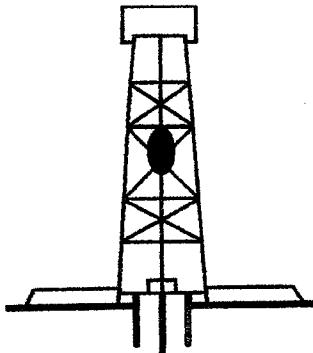
PETROLEUM GEOLOGIST

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HAYS, KANSAS 67601  
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## GEOLOGICAL REPORT

Hertel Oil Company, LLC  
Wiesner #6  
1410' FNL & 835' FEL  
E/2 of NE/4  
SEC. 31 TWP. 13s RGE. 17w  
Ellis County, Kansas

**COMMENCED: 2/23/09**

**COMPLETED: 2/28/09**

**CONTRACTOR: Discovery Drilling**

**SURFACE PIPE: 8 ½ at 208'**

**PRODUCTION PIPE: 5 ½ at 3630'**

**March 14, 2009**

## Formation Data

Elevation: (2040 K.B.) – (2032 G.L.)  
All top formations measured from 2040 K.B.

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>SEA-LEVEL DATUM</u>
Anhydrite	1260	+ 780
Topeka	3018	- 978
Heebner	3286	-1246
Toronto	3304	-1264
Lansing-K.C.	3329	-1289
Base-K.C.	3562	-1522
Conglomerate	3564	-1524
Arbuckle	3572	-1532
R.T.D.	3634	-1594

<u>FORMATION</u>	<u>LOG TOPS</u>	<u>SEA-LEVEL DATUM</u>
Anhydrite	1260	+780
Topeka	3017	-977
Heebner	3286	-1246
Toronto	3305	-1265
Lansing-K.C.	3328	-1288
Base-K.C.	3563	-1523
Conglomerate	3564	-1524
Arbuckle	3570	-1530
R.T.D.	3632	-1592

All samples were examined and described by me on actual location and did not start until a depth of 3100' 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 2950' to 3634', and all zones were examined by ten foot samples at a rotary depth of 2950' to 3630'.

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## Sample Description

Following are the pertinent geological formations and all zones of subject well  
Wiesner #6.

### THE FOLLOWING ZONES WERE NOTED:

TOPEKA	3032-3063	Limestone – tan, cream and gray, fine crystalline to very dense lime, poor inter porosity, no show of oil.
	3064-3075	Limestone – gray, fine crystalline to dense lime, poor to no inter porosity, no show of oil.
DEERCREEK	3090-3102	Limestone – buff and gray, fine crystalline to very dense lime, poor to no inter porosity, no show of oil.
	3103-3139	Limestone – cream, buff and gray, fine crystalline to very dense lime, no inter porosity, no show of oil.
LECOMPTON	3160-3166	Limestone – tan and gray, fine crystalline to very dense lime, no inter porosity, no show of oil.
	3170-3206	Limestone – off white to cream, fine crystalline to dense and chalky in part, no show of oil.
OREAD	3210-3242	Limestone – off white, cream and buff, fine crystalline to dense and chalky in part, no show of oil.
	3256-3260	Limestone – tan to buff, fine crystalline to dense lime, poor to fair inter porosity with a show of oil stain to free oil in pin point, odor note.

	3272-3286	Limestone – cream to buff, fine crystalline to dense lime, poor inter porosity, no show of oil.
TORONTO	3304-3309	Limestone – buff to cream, fine crystalline to dense lime, poor inter porosity with a slight show of oil stain to free oil in pin point, no odor.
<b>LANSING – K.C.</b>		
(A-Zone)	3329-3337	Limestone – buff to cream, fine crystalline, tight porosity, slight show of oil stain to free oil when broken, poor inter porosity, no odor.
(C-Zone)	3355-3360	Limestone – buff to cream, fine crystalline, poor to fair inter porosity, very small show of oil stain, no odor.
(D-Zone)	3374-3379	Limestone – white, oolits and oolicastic, show of oil stain, no free oil or odor, fair to poor inter porosity.
(E-Zone)	3400-3403	Limestone – off white, fine crystalline with oolits, slight show of oil stain, poor inter porosity, no odor.
(F-Zone)	3412-3415	Limestone – off white, fine crystalline, sucrosic, poor inter porosity in part, no odor.
(G-Zone)	3422-3430	Limestone – cream, oolicastic, fair oolicastic porosity with a fair show of oil stain to free oil in pin point, show of black residual stain, no odor.
(H-Zone)	3468-3473	Limestone – cream to buff, fine to medium crystalline, tight, poor inter porosity, slight show of oil stain, no odor, cherty.
(I-Zone)	3490-3500	Limestone – cream to off white, fine crystalline to very dense lime, poor inter porosity, no show of oil.

(J-Zone)	3511-3516	Limestone – cream, very dense lime, cherty, poor to no inter porosity, very slight show of black residual stain, no odor.
(K-Zone)	3532-3537	Limestone – cream to off white, dense and cherty lime, no visible porosity, no show of oil.
(L-Zone)	3553-3562	Limestone – same as above.
<b>BASE – K.C.</b>		
ARBUCKLE	3572-3580	Dolomite – cream and tan, fine crystalline, sucrosic and friable in part with a show of saturated stain to a show of free oil in pin point, no odor.
	3581-3590	Dolomite – same as above with chert and cherty dolomite, very slight odor.
	3591-3596	Dolomite – tan and cream, fine to medium crystalline, very tight porosity to sucrosic in part, fair show of oil stain, cherty dolomite in part, very slight odor.
RECEIVED APR 17 2009 KCC WICHITA	3597-3606	Dolomite – cream, fine to medium crystalline, sucrosic, friable in part with a show of vuggs, good saturation of oil.
	3610-3616	Dolomite – same as above with fair odor.
	3617-3622	Dolomite – cream, fine crystalline to very tight porosity, slight show of oil, fair odor.
	3623-3628	Dolomite – cream, fine crystalline to very tight porosity, show of oil stain.
	3629-3634	Dolomite – cream to white, fine to medium crystalline, tight to poor inter porosity, show of oil stain, slight odor, barren dolomite.

## **Remarks and Conclusion**

The operator of Hertel Oil Co. decided to set production casing to further test the Arbuckle structure on the Wiesner #6.

Zone of Interest: Arbuckle 3597-3603

Respectfully submitted,

Duane Stecklein, Geologist