



**Duane Stecklein**

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785-432-2477

## **GEOLOGICAL REPORT**

**Raney Oil Company, LLC  
Robertson #2**

**W/2 - E/2 - SW - SW/4  
SEC. 5 TWP. 10 RGE. 20w  
Rooks County, Kansas**

*15 - 163 - 23490 - 00 - 00*

**COMMENCED: 11/19/05**

**COMPLETED: 11/25/05**

**CONTRACTOR: American Eagle Drilling**

**SURFACE PIPE: 8 5/8 at 249'**

**PRODUCTION PIPE: 5 1/2 at 3856'**

**December 3, 2005**

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## Formation Data

Elevation: (2275 K.B.) – (2269 G.L.)  
All top formation measured from 2275 K.B.

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>SEA-LEVEL DATUM</u>
Anhydrite	1778	+497
Topeka	3303	-1028
Heebner	3505	-1230
Toronto	3527	-1252
Lansing-K.C.	3549	-1274
Base-K.C.	3762	-1487
Conglomerate	3801	-1526
Simpson	3820	-1545
Arbuckle	3855	-1580
R.T.D.	3861	-1586

<u>FORMATION</u>	<u>LOG TOPS</u>	<u>SEA-LEVEL DATUM</u>
Anhydrite	1780	+495
Topeka	3304	-1029
Heebner	3507	-1232
Toronto	3528	-1253
Lansing-K.C.	3546	-1271
Base-K.C.	3763	-1488
Conglomerate	3802	-1527
Simpson	3822	-1547
Arbuckle	3854	-1579
R.T.D.	3863	-1588

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All samples were examined and described by me on actual location and did not start until a depth of 3390' 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 3250' to 3861', and all zones were examined by ten foot samples at a rotary depth of 3300' to 3500'. Five foot samples were examined from a rotary depth of 3505' to 3860'.

## Sample Description

Following are the pertinent geological formation and all zones of subject well Robertson #2.

### THE FOLLOWING ZONES WERE NOTED:

TOPEKA	3303-3311	Limestone – cream to buff, fine crystalline, poor to no inter porosity, no show of oil or odor.
	3314-3324	Limestone – cream to white, fine tight crystalline to slightly oolitic, poorly developed, no show of oil or odor.
	3338-3342	Limestone – white, tan, and grayish, fine tight crystalline to scattered oolitic, poorly developed, no show of oil or odor.
DEER CREEK	3368-3374	Limestone – tan, fine crystalline, very tight to dense, poor to no inter porosity, no show of oil or odor.
LECOMPTON	3412-3420	Limestone – same as above.
	3423-3433	Limestone – same as above.
OREAD LIME	3440-3448	Limestone – cream to grayish fine tight crystalline, poor to no visible porosity, no show of oil or odor
	3458-3465	Limestone – cream, fine tight crystalline to dense lime, chalky in part, no visible porosity, no show of oil or odor.
	3478-3484	Limestone – white to cream, fine tight crystalline, poor to no inter porosity, slightly chalky, slight show of pin point oil, no odor.
TORONTO	3527-3530	Limestone – white and cream, very fine crystalline to dense lime, no visible porosity, no show of oil or odor, poorly developed.

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LANISING – K.C.

(A-Zone)	3549-3553	Limestone – white to cream, very fine crystalline to dense lime, chalky in part, no visible porosity, no show of oil or odor.
(A-Zone)	3555-3562	Limestone – white, dense to chalky, no visible porosity, no show of oil or odor.
(B-Zone)	3580-3583	Limestone – white, very fine crystalline, chalky in part, very scattered show of light stain, no free oil or odor.
(C-Zone)	3585-3590	Limestone – same as above, very poor inter porosity, very slight odor when broken.
(D-Zone)	3603-3612	Limestone – white to cream, very dense lime, chalky and shaly, no visible porosity, no show of oil or odor.
(E-Zone)	3619-3621	Limestone – same as above with a very slight show of pin point oil, no odor noted.
(F-Zone)	3627-3635	Limestone – white to cream, fine crystalline to a dense lime, show of vuggs, poor inter porosity, show of oil stain with a slight odor.
(G-Zone)	3641-3648	Limestone – white, dense to chalky, no visible porosity, poorly developed, no show of oil or odor.
(H-Zone)	3680-3685	Limestone – cream, very scattered show of fine crystalline, with a light even stain, odor noted when broken, sucrosic in part.
(I-Zone)	3699-3709	Limestone – same as above with a fair odor.
(J-Zone)	3718-3728	Limestone – white, dense to chalky, no visible porosity, poorly developed, no show of oil or odor.
(K-Zone)	3738-3745	Limestone – white to buff, fine crystalline, fair inter crystalline porosity, small show of even stain with free oil, odor noted, some sucrosic and friable crystalline.

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(L-Zone)	3759-3762	Limestone – buff to tan, dense lime, no visible porosity, no show of oil or odor.
BASE – K.C.		
CONGLOMERATE	3801-3820	Red, green, and gray shale, chert and chalk, no show of oil or odor.
SIMPSON	3820-3824	Sand and sandy dolomite, sub rounded to a crystalline, tight to friable in part, fair show of saturated stain to a free oil with odor noted.
SAND		
(30 & 60 min. circulation)	3850-3855	Sand and sandy dolomite, glassy in part, tight, well cemented, poor inter porosity, saturated staining to free oil, slightly sucrosic in part, slight odor noted, fair odor when broken.
ARBUCKLE		
(30 & 60 min. circulation)	3855-3861	Dolomite – fine to medium crystalline, tight to sucrosic and friable in part, show of tight packing to a loose packing with vuggs, good dark even saturated stain and free oil, good strong odor.
Drill Stem Test #1 Arbuckle interval	3846-3861	Results of drill stem test are on the next page.

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**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Raney Oil Company LLC

3425 Tam O'Shanter Dr  
Lawrence Ks 66047

ATTN: Tom Raney

**Robertson #2**

**6-10s-20w Rocks**

Job Ticket: 22735

DST#: 1

Test Start: 2005.11.25 @ 02:15:40

### GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock ft (KB)

Time Tool Opened: 05:40:39

Time Test Ended: 11:02:39

Interval: **3846.00 ft (KB) To 3861.00 ft (KB) (TVD)**

Total Depth: **3861.00 ft (KB) (TVD)**

Hole Diameter: 7.85 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole

Tester: Ray Schwager

Unit No: 28

Reference Elevations: 2277.00 ft (KB)

2269.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8167**

**Inside**

Press@RunDepth: 678.90 psig @ 3847.01 ft (KB)

Start Date: 2005.11.25

End Date:

2005.11.25

Start Time: 02:15:40

End Time:

11:02:39

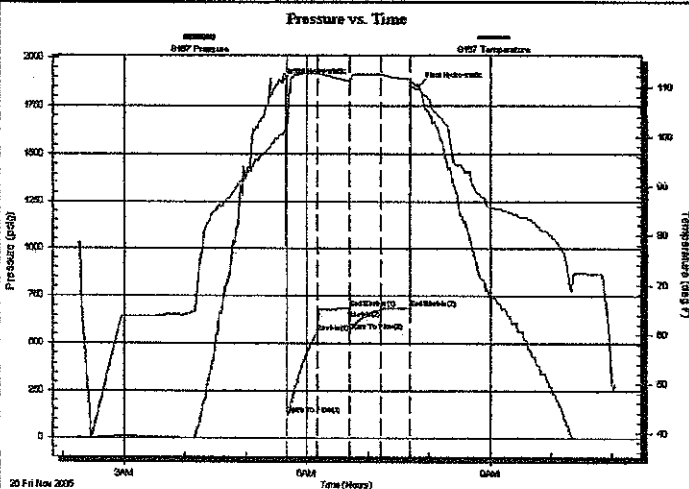
Capacity: 7000.00 psig

Last Calib.: 2005.11.25

Time On Btmr: 2005.11.25 @ 05:35:09

Time Off Btmr: 2005.11.25 @ 07:49:39

**TEST COMMENT:** IFP-strg bl in 1 min  
FFP-strg bl in 7 min  
Times 30-30-30-30  
ISIP- no bl on shut-in FSIP-surface bl bk



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1869.22	100.46	Initial Hydro-static
6	124.35	100.89	Open To Flow (1)
35	557.73	112.56	Shut-In (1)
67	684.59	111.21	End Shut-In (1)
67	565.22	111.21	Open To Flow (2)
98	678.90	112.35	Shut-In (2)
127	686.59	111.48	End Shut-In (2)
135	1853.37	109.55	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
80.00	CO	1.12
250.00	HO&GCMV 10G40%O45%W5%M	3.51
280.00	HO&GCMV 10G30%O55%W5%M	3.93
960.00	water RW .4@37F	13.47

### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DST Test Number: 1

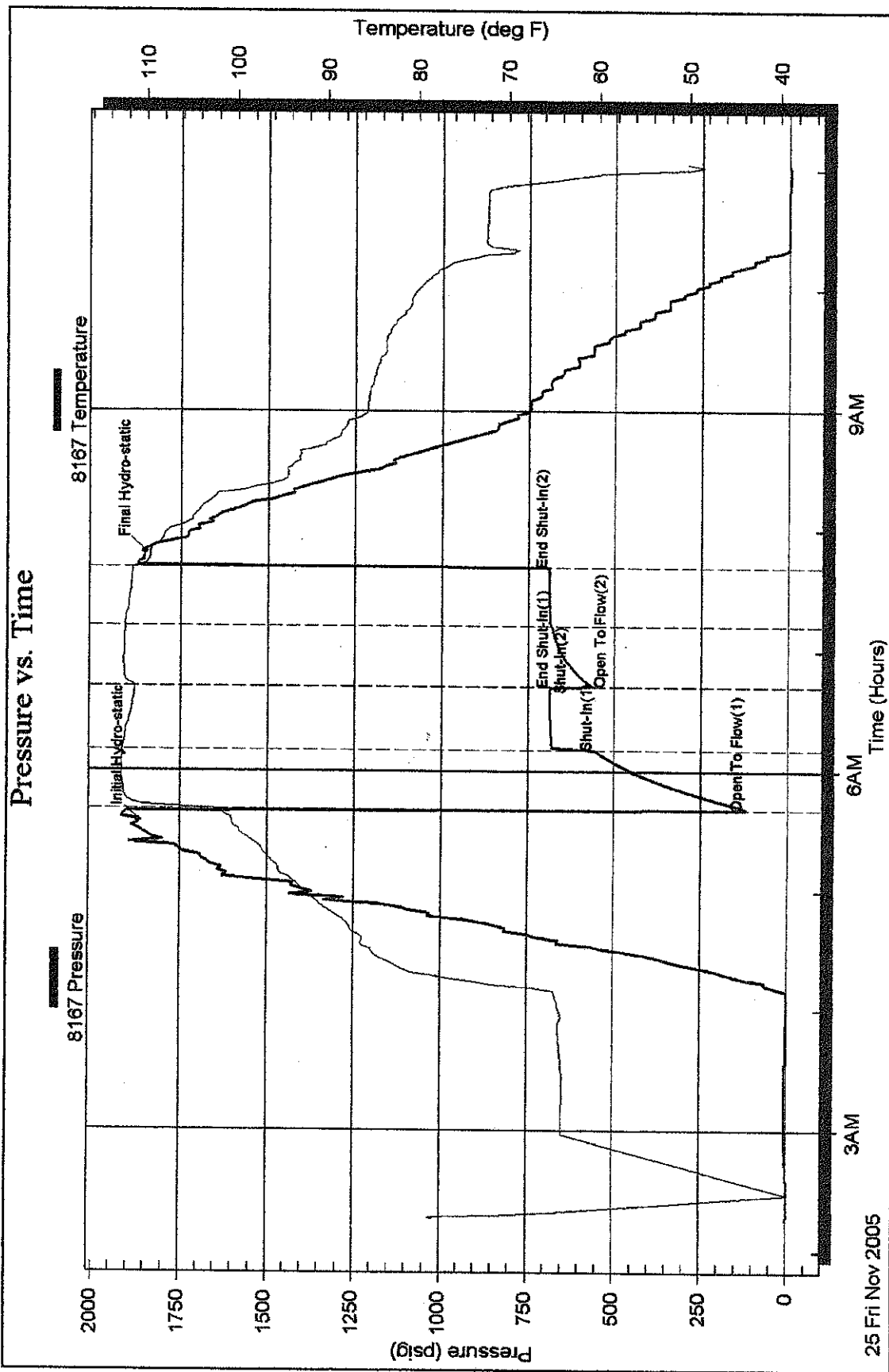
5-10s-20w Rocks

Raney Oil Company LLC

Inside

Serial #: 8167

# Pressure vs. Time



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Ref. No: 22735

Tribble Testing, Inc

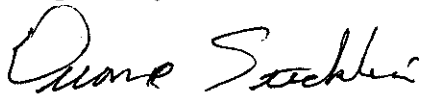
## Remarks and Conclusion

During the drilling of the Robertson #2 the subject well ran 4' low to the well west of the location and 2' low to the northwest location and 37' high to the disposal well northwest of the location. The Robertson #2 had fair to good show of oil in the Arbuckle formation. Due to the fact that the drill stem test had a fair amount of oil recovery it was recommended by the operator of Raney Oil Company to set production casing to further test the Robertson #2.

The Robertson #2 was open hole logged by Log-Tech. The type of logs that were run on the Robertson #2 are as follows:

- Radiation Guard Log
- Dual Induction Log
- Dual Compensated Porosity Log

Respectfully submitted,



Duane Stecklein, Geologist

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