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**GEOLOGICAL ANALYSIS & WELL REPORT**

**H & M Petroleum Corporation**

**OIL CREEK No. 2**

2,143' FNL & 725' FWL

~NW-SE-SW-NW

Section 3-Township 9 South-Range 25 West  
Graham County, Kansas

February 5, 2010

## GENERAL INFORMATION

Elevation: G.L. 2,505' K.B. 2,510'  
All measurements are from K.B.

Field: Wildcat

Drilling Contractor/Rig No.: WW Drilling/Rig 10

Total Depth: RTD: 4,080' LTD: 4,087'

Surface Casing: 8 5/8" @ 220'

Production Casing: None

Drill Time Kept: 3,500'-4,080' RTD

Samples Examined: 3,550'-4,080' RTD

Geological Supervision: 3,500'-4,080' RTD

Wellsite Geologist: Richard J. Hall  
Certified Petroleum Geologist No. 5820  
Consulting Wellsite Geologist

Drill Stem Tests: 1) Lansing "C"- "E" Zone's - Open hole test

Mud Company/Mud Type/Engineer: Morgan Mud/Chemical/Dave Lines

Electric Logging Company: Log-Tech

Log Suite: -Dual Induction  
-Micro Log  
-Neutron/Density Porosity  
-Sonic

Samples: To be sent to Kansas Geological Survey Sample  
Library-Wichita, Kansas as requested by the KGS

Total Depth Formation: Base/Kansas City

Well Status: Dry & Abandoned

## DAILY DRILLING CHRONOLOGY

<u>2010</u> <u>Date</u>	<u>7:00 A.M.</u> <u>Depth</u>	<u>24 Hour</u> <u>Footage</u>	<u>7:00 A.M. Operation; 24 Hour Activity</u>
01/27/10	0	0	MIRU; mix mud.
01/28/10	0	0	MIRU; spud @ 9:45 A.M., drilling to 221', circ., TOOH, run 5 jts of 8 5/8" surf. csg set @ 220', cement csg - plug down @ 2:15 P.M., WOC 8', drill out cement plug, drilling, jet, drilling.
01/29/10	950'	950'	Drilling ahead; jet, drilling, jet, drilling, jet, 15" work on pump, drilling, jet, drilling, jet, drilling, 15" work on pump, drilling, 15" work on pump, drilling.
01/30/10	2,660'	1,710'	Drilling ahead; jet, drilling, 15" wash suction/jet, drilling, 15" work on pump, drilling, 30" draw works repair, drilling, displace hole/mud up @ 2,859', drilling.
01/31/10	3,385'	725'	Drilling ahead; drilling, CFS @ 3,838', drilling, CFS @ 3,850', drilling.
02/01/10	3,875'	490'	Drilling ahead; CFS @ 3,877', drilling, CFS @ 3,887', short trip 35 stands (3.25'), circ. 90", TOOH strapping pipe, pick up test tool, TIH, run DST No. 1, TOOH, lay down test tool, draw works repair (1.75'), TIH w/bit, break circ. 15" let brakes cool, drilling, CFS @ 3,942'.
02/02/10	3,942'	67'	CFS; drilling, CFS @ 3,964', jet hole and add premix, drilling, CFS @ 3,986', drilling, CFS @ 4,006', drilling, reach 4,080' RTD, circ. 1', drop dev. survey, short trip 20 stands (1.25'), circ. 1', TOOH for logs, rig up and run Log-Tech logs, rig down loggers @ 3:30 A.M. (2/3/10), WOO.
02/03/10	4,080'	138'	Waiting on orders; trip in hole, TOOH laying down drill pipe, set cement plugs @ 2,190', 1,805' and 270' plus rat hole - plug down @ 7:30 P.M., rig released @ 9:30 P.M.

## DEVIATION SURVEYS

<u>Depth</u>	<u>Deviation (Degrees)</u>	<u>Method</u>
221'	0.875	dropped
3,887'	1.25	dropped
4,080'	1.0	dropped

## REFERENCE WELLS

Reference Well "A": H & M Petroleum Corp.  
Oil Creek No. 1  
E/2-W/2-W/2-NE  
1,320' FNL & 2,100' FEL  
Section 3-T9S-R25W  
Graham County, KS  
KB: 2,501'  
LTD: 4,068'  
Date Drilled: December, 2009  
TD Formation: Base/Kansas City  
Status: Lansing/Kansas City Oil Well - awaiting completion

Reference Well "B": Empire Drilling Co.  
Knobel No. 1  
C-NE-SW  
Section 3-T9S-R25W  
Graham County, KS  
KB: 2,531'  
LTD: 4,070'  
Date Drilled: August, 1962  
TD Formation: Base/Kansas City  
Status: Dry and Abandoned

Reference Well "C": John Roy Evans  
Keith No. 1  
C-SE-NW  
Section 3-T9S-R25W  
Graham County, KS  
KB: 2,509'  
RTD: 4,030' (No Log Run)  
Date Drilled: December, 1980  
TD Formation: Base/Kansas City  
Status: Dry and Abandoned

**FORMATION TOPS**

FORMATION	Oil Creek No. 2				Keith #1	Knobel #1	Oil Creek #1	DIFFERENCE TO				
	SAMPLE	LOG		REFERENCE				WELL "A"	WELL "B"	WELL "C"		
		TOPS	DATUM								WELL "A"	WELL "B"
PERMIAN												
Stone Corral Anhydrite	2179	2179	+331	+314	+310	+311	+314	+310	+17	+20	+21	
PENNSYLVANIAN												
Topeka	3555	3559	-1049	-1045	-1044	-1048	-1045	-1044	-4	-1	-5	
Heebner Shale	3766	3768	-1258	-1258	-1255	-1259	-1258	-1255	Flat	+1	-3	
Lansing "A"	3801	3808	-1298	-1293	-1298	-1289	-1293	-1298	-5	-9	Flat	
Lansing "F"	3881	3893	-1383	-1371	NDE	-1377	-1371	NDE	-12	-6	NA	
Muncie Creek Shale	3929	3931	-1421	-1411	NDE	-1417	-1411	NDE	-10	-4	NA	
Kansas City "J"	3982	3988	-1478	-1471	NDE	-1476	-1471	NDE	-7	-2	NA	
Base/Kansas City	4031	4036	-1526	-1520	NDE	-1527	-1520	NDE	-6	+1	NA	

## ZONES OF INTEREST

<u>Formation</u>	<u>Log Depth</u>	<u>Lithologic &amp; Show Descriptions, Remarks</u>
Lansing "C"	3,839'-3,844'	<p>Limestone, buff, very fine crystalline, hard, rare very large vug with medium crystalline/calcite, generally tight, fair-intermediate crystalline porosity/vug porosity with off white very chalky pieces, FAIR SHOW: fair yellowish fluorescence in part, dark brown spotty uneven oil stain with some heavy black oil stain in part, fair show free brown oil/break;</p> <p>Limestone, light-medium gray very fine crystalline-cherty in part, mostly tight, generally no visual porosity, very pyritic; spotty dull fluorescence in part, uneven brown oil stain, no show free oil; very good immediate and slow streaming live cut, very good yellow dried residual cut.</p> <p>The Lansing "C" Zone was included on DST No. 1 with the Lansing "D", and "E" Zones and tested very tight recovering 5 feet of mud with shut in pressures of 892-594 p.s.i.</p> <p>Log-Tech logs show this formation has a very clean gamma ray, fair SP development, one foot of microlog development, maximum 8% neutron porosity, maximum 5% density porosity, 3-7% sonic porosity and has a maximum 18 ohms deep resistivity.</p>
Lansing "E"	3,878'-3,884'	<p>Limestone, tan, very fine crystalline, hard, slightly chalky, generally tight, scattered minor vugs, poor inter-crystalline porosity, FAIR SHOW: no fluorescence, spotty dark brown oil stain, slight-fair show free oil/break, fair slow streaming cut, intermediate yellowish milky cut, good yellow residual cut.</p> <p>The Lansing "E" Zone was included on DST No. 1 with the Lansing "C", and "D" Zones and tested very tight recovering 5 feet of mud with shut in pressures of 892-594 p.s.i.</p> <p>Log-Tech logs show this formation has a clean to very clean gamma ray, and is tight with slight SP development, no microlog development, 7% neutron porosity, 2-3% density porosity, maximum 8% sonic porosity, and a maximum 25 ohms deep resistivity.</p>



## SUMMARY

The 640 acre Oil Creek Prospect is located in southwestern Graham County, Kansas where commercial oil production occurs from the multiple pay zone Pennsylvanian aged Lansing/Kansas City Group. A one square mile 3-D seismic survey was shot over the leasehold which defined two separate structural closures. A small structural closure located in the NE/4 of Section 3-T9S-R25W, was tested by the H & M Petroleum Corp. Oil Creek No. 1 well located in the E/2-W/2-W/2-NE (December 2009) and recovered 945 feet of gas in pipe and 1,436 feet of gassy oil and gassy muddy oil (SIP's of 1,174-1,172 p.s.i.) on a drill stem test of the Lansing "C"- "F" Zone's, and is currently awaiting completion. The Oil Creek No. 2 well tested the second structural closure, a very small pop up structural feature located along the southern edge of the survey, located in the NW/4 of Section 3-T9S-R25W, and resulted in a dry hole due to a lower structural position than predicted by the 3-D seismic interpretation and tight rocks in the primary objective Lansing/Kansas City Group.

Several dry and abandoned wells surround the Oil Creek No. 2 location and are used for correlation as Reference Well's for this report. Compared to Reference Well "A"/H & M Petroleum Oil Creek No. 1 (E/2-W/2-NW-Section 3-T9S-R25W) and Reference Well "B"/Empire Drilling Co. Knobel No. 1 (C-NE-SW-Section 3-T9S-R25W), the Oil Creek No. 2 runs flat and +1 foot high, respectively, at the Heebner Shale, but thickening of the shale between the Toronto Limestone and the Top/Lansing "A" from 0 feet in Reference Well's "A" and "B" to 8 feet thick in the Oil Creek No. 2, pushed the Top/Lansing down resulting in a structural position of -5 feet and -9 feet low, respectively, to Reference Well's "A" and "B".

A similar thickening of the shale between the Lansing "E" Zone and the Lansing "F" Zone from 3 feet thick in Reference Well "A" and 4 feet thick In Reference Well "B", to 9 feet thick in the Oil Creek No. 2, pushed the Lansing "F" Zone lower structurally.

The primary objectives in the Oil Creek Prospect included the Lansing "C" and "F" Zone's and the Kansas City "J" and "K" Zone's. Secondary objectives included the Lansing "A", "D", and "E" Zone's and the Kansas City "H" and "I" Zone's. In general, all of the Lansing/Kansas City Group formations are tight and very poorly developed.

Only one (1) open hole drill stem test was run in the Oil Creek No. 2. DST No. 1 covered the Lansing "C"- "E" Zone's, based on fair sample oil shows in the Lansing "C" and "E" Zone's, and tested very tight recovering 5 feet of mud with shut in pressures of 892-594 p.s.i.

The Oil Creek No. 2 test well is located approximately 3 miles east of the Graham/Sheridan County line, and approximately 4 miles south and 13.5 miles west of Hill City, Kansas.

The Oil Creek No. 1 well was spudded on January 28, 2010, and the well was plugged and abandoned on February 3, 2010. No significant drilling problems were encountered during the drilling of this well.

The well was under 24-hour geological supervision from 3,500 feet to 4,080 feet RTD. Wet and dry drilling samples were caught by the drilling crews from 3,550 feet to 4,080 feet RTD at 10-foot intervals. All lithologic descriptions were lagged to true depth by the consulting wellsite geologist.

### Hydrocarbon Shows

Several significant oil sample shows were observed and recorded in the samples during the drilling of the Oil Creek No. 2 in the primary and secondary objective Lansing/Kansas City Group:

-Lansing "C" Zone:	Fair Show:	spotty-fair yellowish fluorescence in part, spotty-uneven dark brown oil stain with some heavy black oil stain in part, fair show free oil on break, very good immediate and slow streaming live cut grading to milky cut, very good yellow dried residual halo cut fluorescence (included on DST No. 1)
-Lansing "D" Zone:	Slight Show:	spotty yellow fluorescence, spotty brown oil stain, trace show free oil/break, good immediate blue/white cut, good milky cut, good yellow dried halo cut (included on DST No. 1)
-Lansing "E" Zone:	Fair Show:	no fluorescence, spotty in part dark brown oil stain, slight - fair brown show free oil/break, fair slow streaming cut, intermediate yellowish milky cut, good yellow dried residual cut (included on DST No.1)
-Kansas City "H" Zone:	Trace Show:	no fluorescence, minor spotty dark brown oil stain in part, no show free oil (this zone was not drill stem tested)
-Kansas City "I" Zone:	Slight Show:	spotty dull fluorescence in part, near saturated dark brown oil stain, no show free oil, weak slow streaming live cut to very good pale yellow-white milky cut, medium yellowish

dried halo cut fluorescence (this zone was not drill stem tested)

-Kansas City "J" Zone: Fair Show: slight spotty fluorescence, uneven-saturated dark brown oil stain, trace show free brown oil/broken, medium very slow streaming cut, very good yellow dried residual halo cut (this zone was not drill stem tested)

There were no observed sample hydrocarbon shows recorded in the Topeka or Toronto Formations, Lansing "A", "F", or "G" Zones, or the Kansas City "K" and "L" Zones.

Complete lithologic descriptions and hydrocarbon sample shows can be found in the detailed "Zones of Interest" portion of this geologic report. Complete Drill Stem Test fluid recovery results and pressures can be found in this report under "Drill Stem Tests".

### **Structural Position**

The Oil Creek No. 2 runs structurally mixed in relation to the three Reference Wells, and runs mostly structurally low throughout the Lansing/Kansas City Group.

Compared to Reference Well "A"/H & M Petroleum Corp. Oil Creek No. 1 (E/2-W/2-W/2-NE-Section 3-T9S-R25W), the Oil Creek No. 2 runs: +17 feet high at the Stone Corral Anhydrite, flat at the Heebner Shale, -5 feet low at the Top/Lansing "A", -12 feet low at the Lansing "F" Zone, -7 feet low at the Kansas City "J" Zone, and -6 feet low at the Base/Kansas City.

Compared to Reference Well "B"/Empire Drilling Co. Knobel No. 1 (C-NE-SW-Section 3-T9S-R25W), the Oil Creek No. 2 runs: +20 feet high at the Stone Corral Anhydrite, +1 foot high at the Heebner Shale, -9 feet low at the Top/Lansing "A", -6 feet low at the Lansing "F" Zone, -2 feet low at the Kansas City "J" Zone, and +1 foot high at the Base/Kansas City.

Compared to Reference Well "C"/John Roy Evans Keith No. 1 (C-SE-NW-Section 3-T9S-R25W), the Oil Creek No. 2 runs: +21 feet high at the Stone Corral Anhydrite, -3 feet low at the Heebner Shale, and flat at the Top/Lansing "A" (this well reached total depth in the Upper Lansing).

A complete structural comparison of the Formation Tops in this well, in relation to the Reference Wells, can be found in the detailed "Formation Tops" table in this geologic report.

### **Conclusion**

The Oil Creek No. 2 wildcat test was based on a 3-D seismic survey which indicated a small pop up structural closure was located in the NW/4-3-T9S-R25W. Log-Tech logs confirm

the Oil Creek No. 2 did not gain any structure relative to the Reference Well's running flat to mostly structurally low through the Lansing/Kansas City Group.

Numerous oil sample shows were observed in the Lansing "C", "D", and "E" Zone's and the Kansas City "H", "I", and "J" Zone's, however, all these formation's were confirmed to be tight through sample examination, DST No. 1 fluid and pressure results, and logs.

DST No. 1, which tested the Lansing "C" through "E" Zone's, tested very tight recovering 5 feet of mud, with shut in pressures of 892-594 p.s.i.

Therefore, based on the negative fluid and pressure recovery on Drill Stem Test No. 1 (Lansing "C"- "F" Zone's), the low structural position of the primary objective Lansing/Kansas City Group, and Log-Tech logs evaluation and analysis confirming the lack of any reservoir development within the Lansing/Kansas City Group, the Oil Creek No. 2 was plugged and abandoned as a dry hole.

Respectfully Submitted,



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