

**Lilley & Company**

817 South Holly St., #408  
Centennial, Colorado 80122  
303-771-9626

KCC  
OCT 20 2006  
CONFIDENTIAL

**Geological and Drilling Report**

Drilling Time and Sample Log

**OPERATOR:** H&C Oil Operating, Inc.

**LEASE:** Ernest Soukup

**API #:** 15-053-21188-0000

**FIELD:** Wildcat

**LOCATION:** C-NE-SE-SE (330' FEL & 990' FSL)

**SEC.** 10

**TOWNSHIP** 14 South

**RANGE** 10 West

**LOCATION by GPS:** LAT. 38degrees 50.660'NORTH; LONG. 98degrees 24.787'WEST @  $\pm 17$  ft.

**COUNTY:** Ellsworth

**STATE:** Kansas

**ELEVATIONS:** GL= 1735'

**KB=** 1743'

MEASUREMENTS ARE ALL FROM KB.

**CONTRACTOR:** Discovery Drilling Company, Rig 2

**COMMENCED DRILLING:** Spud 12:30 P.M. 08/25/2006 **COMPLETED DRILLING:** 9:05 A.M. 08/29/2006

**RTD =** 3000'

**LTD =** 3001'

**SAMPLES SAVED FROM** Surface Casing **TO RTD**

**DRILLING TIMES KEPT FROM** 2000' to 2400' (5 ft. drilling times) & 2400' to 3000' (1 ft. drilling times)

**SAMPLES EXAMINED FROM** 2050' to 2200' & 2350' to 3000'

**GEOLOGICAL SUPERVISION FROM** **TO**

**MUD UP:** 2400'

**TYPE OF MUD:** Chemical Pac

**WELLSITE GEOLOGIST:** Wes Lilley

**CASING RECORD:** Surface Casing @ 436.20 KB

Production Casing @ 3001.31' KB

**ELECTRICAL SURVEYS:** ELI Wireline Services

**TYPE OF ELECTRICAL SURVEYS:** DIL/CDL/CNL/PE/MEL

**DAILY DRILLING REPORTS & STATUS: 7:00 A.M. CDT**

August 24 & 25, 2006: MIRU

August 26, 2006: RU, Spud @ 12:30 P.M. 08/25/2006. Drlg @ 525' @ 7 AM. RN 10 jts., 20# LS, 8 5/8" Surface Csg. Tally 426.20', Set @ 436.20 KB. CMNT by Allied w/225 sks Common, 2% gel, 3% CC. Did Circulate. Completed @ 9:45 PM 08/25/2006. Drilled Plug @ 5:45 AM 08/26/2006. Anhydrite 544 to 559.

August 27, 2006: Drlg @ 1792'.

August 28, 2006: TOC for DST #1 @ 2503. Tstg good 100 unit HW show from sand above Howard. No mudlog show from Topeka Wilson Ck Porosity. Had water flow back while mudding up @ 2424'. In future, should MU @  $\pm 2000$  to 2100'. Flow back at  $\pm 2300$ '.

August 29, 2006: Drlg @ 2938'. Lost 30 bbls of mud from 2834 to 2866. RN DST #1 2350' to 2503'.

August 30, 2006: Reached RTD of 3000' at 9:05 A.M. 08/29/2006. ELI Wireline Services RN DIL/CDL/CNL/PE/MEL. RN 5 1/2" Production Csg as Follows:

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**Production Casing Report**

**RN 72 jts of 5 1/2" New, 14# L.S. csg. Total Tally of 3001.31'**

**Set @ 2998.31'. Shoe Jt 20.64'**

**Centralizer & Basket @ 2978.67'**

**Centralizer @ 2934.71'**

**Centralizer & Basket @ 2857.14'**

**Rn 500 gallons WFR-2 Mud Flush ahead of cement;**

**Plug Mouse hole with 10 sacks**

**Plug Rat hole with 15 sacks**

**Cement with 150 sacks of ASC cement with 10% salt. Plug landed @ 12:45 A.M. 08/30/2006. Float held @ 1000#. 20.50' of cement left in casing. Set slips in head. Released Discovery Rig #2**

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<b>FORMATIONS:</b>	<b>REFERENCE WELL DATUM</b>	<b>SAMPLE TOP</b>	<b>SAMPLE DATUM</b>	<b>LOG TOP</b>	<b>LOG DATUM</b>	<b>STRUCTURAL COMPARISON</b>
Anhydrite	1199	544	1199	542	1201	2
Base Anhydrite	1166			574	1169	3
Grand Haven	-378	2120	-377	2126	-383	-5
Tarkio Lime	-457	2205	-462	2206	-463	-6
Elmont	-523	2270	-527	2272	-529	-6
Howard	-667	2413	-670	2416	-673	-6
Topeka	-706	2450	-707	2454	-711	-5
Wilson Ck Porosity	-749	2483	-740	2498	-755	-6
Heebner	-996	2738	-995	2746	-1003	-7
Toronto	-1013	2759	-1016	2764	-1021	-8
Brown Lime	-1091	2837	-1094	2841	-1098	-7
Lansing	-1111	2856	-1113	2860	-1117	-6
Lansing 30' Zone	-1135	2877	-1134	2880	-1137	-2
Lansing 90' Zone	-1201	2944	-1201	2946	-1203	-2
T.D.	-1702	3000	-1257	3001	-1258	444

REFERENCE WELL: FMP Operating Company; Schneider #1-11; C SW SW 11 14S 10W

**BIT RECORD:**

<b>NUMBER</b>	<b>SIZE</b>	<b>MAKE</b>	<b>TYPE</b>	<b>DEPTH OUT</b>	<b>FEET</b>	<b>HOURS</b>
1	12 1/4"	HTC	MX03DX	437	437	2 1/2
2	7 7/8"	HTC	GX20C	3000	2563	

**HOLE DEVIATION:**

<b>DEPTH</b>	<b>DEVIATION</b>
250'	1/4 degree
437'	1/4 degree
2503'	3/4 degree
3000'	1 1/4 degree

**PIPE STRAP:**

Strap 0.54' long to board at 2503'

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**MUD CHECKS:**

<b>DEPTH</b>	<b>WEIGHT</b>	<b>VISCOSITY</b>	<b>pH</b>	<b>Water Loss</b>	<b>Chlorides</b>
2424'	8.7	70	10.5	10.4	2000
2503'	8.7	52	11	8.8	3000
3000'	8.9	48	10.5	9.8	4500

**LOST CIRCULATION:**

Approximately 2300' (see drilling report)  
2834' to 2866' (see drilling report)

CORES: None

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**CONFIDENTIAL****SHOWS:**

<b><u>FORMATION</u></b>	<b><u>INTERVAL</u></b>	<b><u>DESCRIPTION:</u></b>
Permian (Council Grove)	1796 to 1807	15 unit hotwire show.
Grand Haven	2130 to 2135	12 unit hotwire show. Ss: vfg, qtz, lt gy, salt & pepper.
Howard	2400 to 2416	100 unit hotwire show included in DST 1. Ss: fg-vfg qtz, clear, sub ang, well sorted, poor - fair porosity.
Lansing 30' Zone	2870 to 2902	36 unit hotwire show. Ls: tan, xln w/fair-gd xln & oomoldic porosity. Fair to good odor, fair-good show of free oil & gas.
Lansing 90' Zone	2950 to 2964	68 unit hotwire show. Ls: tan, xln, oolitic, fair - good xln & oomoldic porosity, some suggestion of fracture porosity (coarse, euhedral, oil stained, calcite crystals), strong odor, good show of free oil & gas.

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**DRILL STEM TESTS:**

<b><u>NUMBER</u></b>	<b><u>INTERVAL</u></b>	<b><u>IET/TIME</u></b>	<b><u>ISIP/TIME</u></b>	<b><u>FFP/TIME</u></b>	<b><u>FSIP/TIME</u></b>	<b><u>IHP/FHP</u></b>
DST 1	2350 to 2503	15.25/15.4	228.55	18.8/18.14	50.52	1106.63/1073.12
		30"	60"	60"	60"	

RECOVERY: 10' Mud

DST 2

RECOVERY:

DST 3

RECOVERY:

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## LOG ANALYSIS

<u>INTERVAL:</u>	<u>NEUTRON POROSITY</u>	<u>DENSITY POROSITY</u>	<u>AVERAGE POROSITY</u>	<u>Rt</u>	<u>Sw</u>	<u>REMARKS</u>
2960-2962	19.5	19.5	19.5	16	28	Oil
2962-2964	18	18	18	17	28	Oil
2952-2954	16	16	16	4.7	64	Oil & Gas
2954-2956	24	26	25	6	37	Oil & Gas
2956-2958	17	17	17	7.5	47	Oil & Gas
2898-2901	20	16	18	16	31	Oil
2891-2895	20.5	17.5	19	27	25	Oil
2881-2890	27	25	26	8.5	30	Oil

Rw = .05

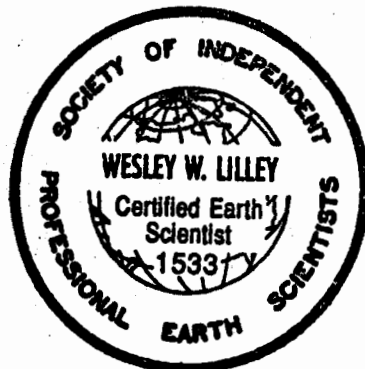
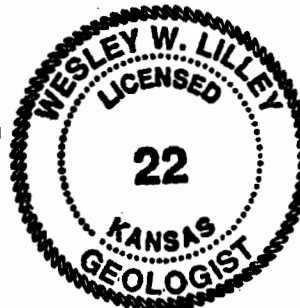
Lansing 90' Zone (2952 to 2964) 10 feet of apparent pay  
Lansing 30' Zone (2881 to 2901) 16 feet of apparent pay

## REMARKS & RECOMMENDATIONS:

Based upon sample shows, mudlog shows, structural position to offset well, and log analysis, it was decided that a completion attempt would be made in the Lansing Zones describe above for the subject well.



*Wesley W. Lilley*  
09/05/2006



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