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KCC WICHITA

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GEOLOGIST REPORT

OPERATOR: Larson Operating Co.

WELL NAME: Reed #1-16

CONTRACTOR: Vonfeldt Drilling Inc.

LOCATION: C W/2 SE of Section 16-T16S-R7W
(1300' FSL & 1840' FEL)

API#: 15-053-21120-00

COUNTY: Ellsworth

STATE: Kansas

ELEVATION: G.L. 1585 K.B. 1590

SPUD: October 31, 2003

COMPLETED: November 5, 2003

SURFACE CASING: 8 5/8" @ 280' w/ 160 sx class A w/ 2% gel & 3% CC

PRODUCTION CASING: 4 1/2" @ 2290' w/225 sx SMD

MUD SYSTEM: Mud-Co. (Chemical mud displaced at 1400')

SAMPLES: Wet and dry samples from 900' to RTD.

DRILL TIME: One (1) foot recorded from 900' to rotary total depth.

GAS DETECTOR: Earth Tech OGL, Inc. (manned unit) JW Holdge and Tim Hedrick

WELLSITE GEOLOGIST: Tom Fertal and Steve Davis

DRILL STEM: Trilobite Testing, Inc.

E-LOGS: Log-Tech, Inc.
Dual induction, Neutron density & Micro

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<u>FORMATIONS</u>	<u>SAMPLE</u>	<u>E-LOG</u>	<u>SUB-SEA (KB 1590)</u>
HUTCHINSON SALT	N.A.	591	+999
HERRINGTON	975	976	+614
WINFIELD	1025	1028	+562
TOWANDA	1095	1100	+490
FT. RILEY	1136	1137	+453
FLORENCE	1182	1184	+406
WREFORD	1278	1283	+307
CROUSE	1331	1338	+252
NEVA	1471	1479	+111
RED EAGLE	1561	1564	+26
FORAKER	1587	1592	-2
WABAUNSEE	1699	1704	-114
PONY CREEK	1738	1746	-156
GRAND HAVEN	1773	1775	-185
BASE ROOT SHALE	1865	1863	-273
TARKIO	1878	1878	-288
ELMONT	1925	1927	-337
CEDARVALE	2007	2008	-418
HOWARD	2076	2077	-487
SEVERY	2138	2141	-551
TOPEKA	2174	2176	-586
LE COMPTON	2305	2307	-717
HEEBNER SHALE	2441	2442	-852
DOUGLAS	2478	2475	-885
Total Depth	2580	2584	-994

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SAMPLE ANALYSIS AND DRILL STEM TEST DATA
(Correlated to sample depth)

HERRINGTON 975 (+615)

CFS@ 993 Dolomite, tan to light gray, fine to very fine crystalline. Slightly argillaceous with fair to poor inter-crystalline porosity and poor pinpoint porosity. Questionable few gas bubbles on break, no fluorescence and no cut. (21 unit gas kick)

WINFIELD 1025 (+565)

CFS@ 1065 Dolomite, tan to light gray, fine to very fine crystalline. Slightly argillaceous with few fossil fragments. Poor to fair inter-crystalline porosity with poor show of gas bubbles, no fluorescence and no cut. Fair percentage of sample containing limestone, cream to gray, fine crystalline with re-crystalline matrix. Chalky in part with fossil fragments. Poor to fair inter-crystalline and moldic porosity. Poor show of gas bubbles, no fluorescence and no cut. (25 unit gas kick)

DST #1 (1044 -1065)

15-30-10-30

Mis-run, packer released while attempting to close tool for initial shut in. Recovered 260' of drilling mud. All pressures invalid.

TOWANDA 1095 (+495)

CFS @ 1125 Limestone, off white to light gray, fine to medium crystalline with re-crystalline matrix. Chalky in part and fossiliferous. Fair moldic and poor to fair inter-crystalline porosity. Few gas bubbles on break, no fluorescence and no cut. Small percentage containing dolomite, off white to light gray. Fine crystalline with poor to fair inter-crystalline porosity. Questionable few gas bubbles on break, no fluorescence and no cut. Some chert, white, fresh. (25 unit gas kick)

DST #2 (1101 -1125)

10-60-45-90

BLOW

I.F. Good blow building to 6 in.
F.F. B.O.B. 20 min.
(no blow back on I.S.I. or F.S.I.)

RECOVERY 60' M with slight gas smell in tool.

SAMPLER 300 ML of M @ 25 psi

PRESSURES
I.H.P. 631 #
I.F.P. 23 -23 #
I.S.I.P 207 #
F.F.P. 34 - 46#
F.S.I.P. 276#
F.H.P. 563#
B.H.T.. N.A.

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CROUSE 1331(+259)

Limestone, off white to gray, fine to medium crystalline with re-crystalline matrix. Slightly fossiliferous, with loose fossil fragments in tray. Poor to fair fossil moldic and pinpoint porosity. No visible show.

RED EAGLE 1561(+29)

CFS @ 1585 Limestone, cream, dark brown and gray. Fine to very fine crystalline and slightly fossiliferous. Dense, with no visible porosity. Circulating sample included shale, black carbonaceous, with good show of gas bubbles. (14 unit gas kick)

PONY CREEK 1738(-148)

CFS @ 1760 Most shale, gray, black and rust with siltstone, gray and micaceous. Circulating sample included a few clusters of sandstone, light gray to tan, very fine crystalline with sub-round to sub-angular grains. Calcareous and slightly micaceous with no visible porosity. No visible show. (13 unit kick)

GRAND HAVEN

1773 (-183)

CFS @ 1803 Sandstone, gray to off white, fine to medium grained, sub-round to sub-angular and moderately sorted. Slightly glauconitic, feldspathic and micaceous. Friable to compact and moderately calcareous. Fair to good inter-granular porosity with fair show of gas bubbles. No fluorescence and no cut. (42 unit gas kick)

DST #3 (1776 - 1803)

10 - 70 - 30 - 90

BLOW

I. F. G.T.S. 1 min. Gauged 1.133 MCF/Day 5 min.
Gauged 1.223 MCG/Day 10 min.

F.F. G.T.S. Gauged 1.736 MCF/Day 5 min.
1.679 MCF/Day 20 min.
1.650 MCF/Day 30 min.

RECOVERY 63' M. **SAMPLER** 6.6 CFG @ 700 psi

PRESSURES
I.H.P. 896 #
I.F.P. 265 - 272 #
I.S.I.P. 558 #
F.F.P. 295 - 266 #
F.S.I.P. 542 #
F.H.P. 863 #
B.H.T 83° F

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TARKIO 1804 (-214)
#2 (?)

Most shale gray, black and green with siltstone gray. Few clusters of sandstone light gray to tan, fine grained and moderate to well sorted. Calcareous, friable to compact with poor to fair inter-granular porosity. No show of gas bubbles, no fluorescence and no cut. This sandstone appeared less glauconitic and feldspathic than Grand Haven.

CEDARVILLE 2007 (-417)

CFS @ 2071 Sandstone, off white to light gray, fine to very fine grained, sub-round to sub-angular and moderately sorted. Calcareous, slightly micaceous, and compact. Poor-inter-granular porosity, few gas bubbles on break, no fluorescence and no cut. (36 unit gas kick)

DST # 4 (2011 - 2071)
10 - 60 - 20 - 60

BLOW

I. F. weak building to 1 1/2 in.
F.F. weak died in 12 min.

RECOVERY 4' M. **SAMPLER** 650 ML of M @ 25 psi

PRESSURES I.H.P. 1031 #
I.F.P. 19 - 24 #
I.S.I.P. 732 #
I.F.P. 26 - 32 #
F.S.I.P. 653 #
F.H.P. 997 #
B.H.T. 88° F

SEVERY 2138 (-548)

Shale, gray, black and brown and siltstone gray, micaceous.

TOPEKA 2160 (-570)

Limestone, tan to gray, fine crystalline to very fine crystalline with re-crystalline matrix. Dense to chalky in part and slightly fossiliferous. Rare poor moldic porosity, most no visible porosity. No visible show.

LECOMPTON 2305 (-715)

Limestone, brown to gray, very fine to micro-crystalline. Chatty in part and slightly fossiliferous. Dense with no visible porosity.

DOUGLAS 2478 (-888)

Sandstone, gray to tan, very fine to fine grained, sub-round to sub-angular and moderately sorted. Calcareous and slightly micaceous, friable to compact with poor inter-granular porosity. No show of gas bubbles, no fluorescence and no cut.

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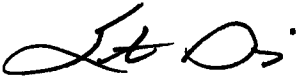
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Remarks,

Considering positive drill stem test results and electric log analysis, orders were issued by the operator to Run 4 1/2" production casing to further evaluate the Reed #1-16.

Respectfully,


Richard S. (Steve) Davis Jr.
Wellsite Geologist

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