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Osage Resources
Osage #4
C-NW-SW; Section 6-22s-14e
Coffey County, Kansas
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5 ~~4~~ 1/2" Production Casing Set

- Contractor:** Three Rivers Exploration
- Commenced:** December 5, 2003
- Completed:** December 10, 2003
- Elevation:** 1155' G. L.
- Casing Program:** Surface; 8 5/8" @ 42'
Production; ~~4~~ 1/2" @ 1807'
- Samples:** Samples saved and examined 650' to the Rotary Total Depth.
- Drilling Time:** One (1) foot drilling time recorded and kept 650' to the Rotary Total Depth.
- Measurements:** All depths measured from Ground Level.
- Formation Testing:** None
- Electric Log:** By Rosel Company; Compensated Neutron/Density Micro Log and Dual Induction Log.
- Gas Detector:** By MBC Well Logging

COPY

TIGHT HOLE

<u>Formation</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Lansing	668	+487
Kansas City	956	+119
Stark Shale	1043	+112
Hush Puckney Shale	1074	+81
Base Kansas City	1093	+62
South Mound Coal	1229	-74
Altamont	1267	-112
Pawnee	1320	-165
Summett Shale	1385	-230
Upper Squirrel Sand	1401	-246
Middle Squirrel Sand	1421	-266
Lower Squirrel Sand	1438	-283
Crowburg Coal	1489	-334
Fleming Coal	1498	-343
Seville Coal	1594	-439
Neutral Coal	1727	-572
AW Coal	1736	-581
Riverton Coal	1753	-598
Mississippian	1770	-615
Rotary Total Depth	1808	-653
Log Total Depth	1800	-645

(All tops and zones are corrected to Electric Log measurements.)

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SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.
LANSING/KANSAS CITY SECTION

668-1092' Several zones of well developed porosity encountered through the Lansing/Kansas City Section but no show of oil and/or gas was noted. (see attached Drilling Time and Sample Log).

SOUTH MOUND SECTION

1229-1240' Black carboniferous shale. Trace white gray silty micaceous sand, trace black limey coal.

ALTAMONT SECTION

1267-1272' Limestone, white and cream, chalky, poor porosity, no shows.

MULBERRY SECTION

1278-1271' Coal; black, trace black carboniferous shale, bleeding gas.

BJ-1 SECTION

1287-1290' Coal, as above, bleeding gas, trace iron pyrite.

PAWNEE SECTION

1320-1326' Limestone; tan and gray, fossiliferous, slightly cherty, poor porosity, no shows.

SUMMITT SECTION

1385-1387' Black carboniferous shale, and black coal, trace iron pyrite.

FORT SCOTT SECTION

1387-191' Limestone; cream and white, chalky, dull gray and brown stain, no show of free oil, no cut, and no odor in fresh samples.

SQUIRREL SAND SECTION

1401-1418' Sand; gray and tan, very fine grained, sub angular and sub rounded, calcareous, friable in part, fair golden brown stain, show of free oil and questionable odor in fresh samples.

MIDDLE SQUIRREL SECTION

1421-1436' Sand; tan and gray, medium grained, sub angular and sub rounded, friable, 100% dark brown stain and saturation, good show of free oil, questionable odor, trace iron pyrite and coal stringers

LOWER SQUIRREL SECTION

1438-1463' Sand; as above, black carboniferous shale laminations and coal stringers, good stain, good show of free oil.

Sand as above.

CROWBERG SECTION

1489-1493' Coal black, iron pyrite laminations, bleeding gas.

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FLEMING SECTION

1498-1503' Coal as above, bleeding gas.

ROWE SECTION

1706-1713' Coal

NEUTRAL SECTION

1728-1730' Coal, black carboniferous shale.

AW SECTION

1736-1741' Coal; iron pyrite.

CW SECTION

1746-1749' Coal; black carboniferous shale, trace iron pyrite.

RIVERTON SECTION

1753-1764' Coal; as above, trace white medium grained, calcareous sand.

MISSISSIPPIAN SECTION

1770-1780' Limestone; tan and yellow, medium crystalline, chalky, trace white and gray chert.

1780-1790' Limestone; and chert as above.

1790-1802' Limestone; white and gray, chalky, sandy, trace white chert, plus limestone, as above, fossiliferous, granular.

1802-1808' Black green gray shale, few sand clusters, no shows.

**Rotary Total Depth 1808 (-653)
Log Total Depth 1800 (-645)**


Remarks:

See attached geologist/sample log for all gas kicks (coal/shale descriptions).

Recommendations:

Perforations and treatment(s) to be recommended by Osage Resources, geological/engineering department.

Respectfully submitted


James C. Musgrave
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