



MAP EXPLORATION, INC.

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GEOLOGICAL REPORT

SW BUCKLIN PROSPECT

McCAUSTLAND 1-24

24 - T29S - R22W

FORD, KANSAS

SUMMARY

The captioned well was drilled to a total depth of 5,500 feet on October 24, 1999. A one-man mud-logging unit was on location from 2,500 feet to TD. The undersigned was on location from approximately 3,000 feet to TD. A drill stem test was run at the top of the Mississippian, with a suite of Baker Atlas logs consisting of Dual Induction Shallow Focused, Compensated Density-Neutron and Mini-Resistivity (Micro-log) being run at TD.

The McCaustland 1-24 was an exploratory test for the sub-crop of the Mississippian St. Louis Dolomite. Shows were recorded in the Oswego Limestone, Pennsylvanian Conglomerate, Mississippian Solid and through the Mississippian St. Louis Dolomite interval. The drill stem test produced a small amount of gas at non-economic rates. After all data acquired had been analyzed, the decision was made to plug and abandon the McCaustland 1-24 as a dry hole.

GEOLOGY

The Oswego Limestone was topped at 5,022 (-2591) feet. Samples were described as cream to buff, very fine to fine crystalline slightly sucrosic limestone, with a trace of intercrystalline porosity observed. A dull yellow fluorescence was observed along with a forty-unit gas increase from the gas chromatograph. No visible stain, cut or odor was recorded. Electric logs indicate this zone to be "ratty" and non-productive.

A conglomerate zone was encountered at 5,184 (-2753) feet. Samples consisted of off-white, clear sandstone, slightly angular to slightly rounded and consolidated. Dolomite was observed that was light tan, sucrosic and very fine crystalline. Milky chert was also seen in samples. A scattered bright greenish yellow fluorescence

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was seen along with a fair streaming cut and trace of live oil staining, through a four-foot interval that produced a 140-unit gas kick from the gas chromatograph. Electric logs indicate a four-foot interval of 19% cross-plot porosity with seven ohms of resistivity and approximately one foot of positive micro-log separation. This interval was further evaluated and included with the drill stem test.

The top of the Mississippian was at 5,200 (-2769) feet. It was described as off-white to white, very fine to microcrystalline limestone that was slightly mottled and chalky. A 160-unit gas kick was recorded through this interval. Electric logs indicate this zone to be "tight".

The top of the St. Louis Dolomite interval was at 5,224 (-2793) feet. Three porosity packages developed through a thirty foot gross interval. These three zones each averaged four foot thick with porosity being 26, 34, and 18% respectively. Resistivities were 1.5 .5 and 1.2 ohms. Samples were described as cream buff to tan very fine to fine crystalline dolomite, with a trace if intercrystalline, pinpoint and vugular porosity being observed. A good bright yellow fluorescence, with good streaming cut, fair odor and light brown live oil staining was recorded through this interval. The gas chromatograph recorded 100, 90, and 182 unit gas kicks through these three zones. A drill stem test was run to further evaluate this zone as well as the Mississippian solid and Conglomerate zone. The test was run from 5,202 - 5,267 feet with results as follows:

Gas to surface on final flow at maximum rate of 5.2 MCFGPD
 Flowing pressures: 36-44/27-47
 Shut-in pressures: 1062/1523
 Recovery: 120' of gas cut watery mud (chlorides 10,000 PPM)

(Discussion with tester indicated water came from rig crew washing down drill pipe)

ELECTRIC LOG TOPS

	CORONADO MCCAUSTINE 24-T29S-R22W E/2 W/2 NW/4	FALCON MCCOLM 18-T29S-R21W SE SE NW	MURFIN VANATTA 22-T29S-R22W SE NE
Stone Corral (subsea)	1,360 (+1071)	1,323 (+1077)	1,413 (+1042)
Chase Group (subsea)	2,690 (-259)	2,670 (-270)	2,740 (-285)
Top Penn. (subsea)	3,630 (-1199)	3,620 (-1220)	3,688 (-1233)

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Base Heebner (subsea)	4,314 (-1883)	4,298 (-1898)	4,366 (-1911)
Lansing (subsea)	4,472 (-2041)	4,460 (-2060)	4,522 (-2067)
Stark Sh. (subsea)	4,810 (-2379)	4,794 (-2394)	4,865 (-2410)
Cherokee (subsea)	5,070 (-2639)	5,048 (-2648)	5,120 (-2665)
Mississippian (subsea)	5,200 (-2769)	5,174 (-2774)	5,252 (-2797)
St. Louis Dol. (subsea)	5,224 (-2793)	eroded	5,320 (-2865)

CONCLUSION

The McCaustland 1-24 was drilled as an exploratory test for the Mississippian St. Louis Dolomite truncation trap. A small amount of gas was recovered from the drill stem test, and shut-in pressures were increasing. The test illustrated that the zone had low permeability. After all data was gathered and analyzed, the decision was made to plug the McCaustland 1-24 as a dry hole.

Respectfully submitted,



Mike Pollok
11/17/99

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