### DAVID A. BRIERLEY

Certified Petroleum Geologist

Pawhuska, Oklahoma 74056

**GEOLOGICAL REPORT** 

**OPERATOR:** 

Mariah Exploration LLC

WELL NAME & NUMBER:

Floyd "B" #1-M

15-019-26782-00-00

LOCATION:

NE1/4 31-32S-11E

Chautauqua County, KS

3085' FSL; 1650' FEL of SE corner Sec. 31

**ELEVATION:** 

1103' Ground Level

TOTAL DEPTH:

2442' Driller; 2442' E'log

FORMATION @ TOTAL DEPTH

Arbuckle Dolomite

**CASING PROGRAM:** 

8 5/8" casing set at 42'

51/2" @ 2314'

DRILLING COMMENCED:

Feb. 19, 2007

DRILLING COMPLETED:

Feb. 24, 2007

DRILLING CONTRACTOR:

Dixon Drilling Co.

Mud Rotary

**METHOD & HOLE SIZE** 

121/4" hole to 42'

7 7/8" hole to T.D.

STATUS:

Casing set on top of Arbuckle for

open-hole SWD. Future consideration given to test Mississippi and numerous

coals

**SPECIAL TESTS:** 

None

RECEIVED KANSAS CORPORATION COMMISSION

DEC 0 3 2007

LOGGING PROGRAM:

Osage Wireline

**Dual Induction, Compensated Density** 

Side-wall Neutron, Microlog

CONSERVATION DIVISION WICHITA, KS

# Mariah Exploration LLC Floyd "B" #1-M Geological Report (continued):

## E'LOG TOPS:

# Elevation 1103' ground

Base Fresh Water	112
Salt Sand	990
Hogshooter Lime	1171
Layton Sand Zone	1208
Kansas City Lime	1277
Hushpuckney Shale	1336
Checkerboard Lime	1348
Lenapah Lime	1378
Wayside Sand	1396
Altamont Lime	1440
Weiser Sand Zone	1478
Pawnee Lime	1564
Oswego (Ft. Scott) Lime	1612
Summit Shale	1642
Mulky Shale	1657
Base/Oswego	1674
Bevier Coal	1698
Verdigris Coal	1714
Croweburg Coal	1717
Riverton Coal	1932
Mississippi Chat	1942
Mississippi Lime	1966
Woodford Shale	2300
Arbuckle Dolomite	2308
Total Depth Drlr. 2442	2442

RECEIVED KANSAS CORPORATION COMMISSION

DEC 0 3 2007

CONSERVATION DIVISION WICHITA, KS

Mariah Exploration LLC Floyd "B" #1-M Geological Report (continued):

#### LITHOLOGY OF PROSPECTIVE FORMATIONS

Samples were examined from 1000' to total depth. Shows observed are indicated below.

#### Unnamed Limestone 188-213'

Samples were not examined, but microlog permeability with 11% porosity and log Rt of 70 indicates possible gas. Due to old shallow gas wells present in the Salt Sand, this formation is probably affected by depletion.

#### Salt Sand 992-1018'

Sand, gray, fine, firm to porous, micaceous and carbonaceous, no show. Log calculates 38/42 Sw, probable gas. This well is located in an old salt sand gas field and is probably depleted.

## Salt Sand 1085-1094'

Sand, white, fine, micaceous and carbonaceous, firm to friable, porous, very s.s.o., slight cut on break, 30% fluorescence, Sw 52%, probable water with possible oil and gas.

## Oswego Lime 1616-1620'

Limestone, light tan, crystalline, calcitic, s.s.o., odor, 30% fluorescence, Sw 23%, possible oil and gas.

#### Mississippi Chat 1942-1950'

Chert, white, stained with limestone, tan, dense, cherty, stained and chat, vugular, bleeding oil and gas, odor, 80% fluorescence, Sw 26% probable oil and gas.

#### Mississippi Chat 1954-1966'

Chert, white, weathered, stained with stained chat and limestone as above, odor, 60% fluorescence, Sw 27%, probable oil and gas with possible water.

## Mississippi Chat 1975-1978'

Chert, white and white crystalline limestone with decrease in stain, Sw 26%, possible oil and gas and water.

RECEIVED KANSAS CORPORATION COMMISSION

DEC 0 3 2007

## Mariah Exploration LLC

Floyd "B" #1-M

Lithology of Prospective Formations (continued):

## Mississippi Lime 2009-2013'

Limestone, white crystalline to tan, firm with chalk and white chert, scattered fluorescence, Sw 24%, strong odor at pit, decreasing to slight odor in samples, possible gas and water with possible oil.

## Mississippi Lime 2038-2040'

Limestone and chert as above with decrease in chalk. Sw 19%, no odor, no fluorescence, probable water with possible gas.

## Mississippi Chert Break 2210-2242'

Chert, fresh, white to tan with limestone, white/tan, firm, fine crystalline, NSO, Sw/ 37%, probable water.

## Mississippi Dolomite 2242-2296'

Dolomite, dark buff, firm, sucrosic with calcite veins and chert, fresh, white to brown, fair odor, throughout with occasional trace of dull fluorescence in chert and dolomite, tight.

#### Arbuckle Dolomite 2308' to T. D.

Dolomite, white to tan, firm to soft, sucrosic and crytalline, vugular, porous with chert, no show, good microlog permeability for disposal.

Coal Beds and carbonaceous shales that may be considered in the future for coal bed methane are listed as follows:

Hushpuckney Shale	1336-1339'	
Summit Shale	1642-1648'	
Mulky Shale	1657-1662'	
Bevier Coal	1698-1701'	
Riverton Coal	1932-1936'	

RECEIVED KANSAS CORPORATION COMMISSION

DEC 0 3 2007

Mariah Exploration LLC Floyd "B" #1-M Geological Report (continued):

## SUMMARY:

The Floyd "B" #1-M was drilled as an Arbuckle Disposal Well close to the tank battery. Shows described above are for reference or to be tested in the future.

Respectfully Submitted,

David A. Brierley

Certified Petroleum Geologist 1668

Ks. Lic. 500

RECEIVED KANSAS CORPORATION COMMISSION

DEC 0 3 2007

CONSERVATION DIVISION WICHITA, KS