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# DAVID A. BRIERLEY

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**GEOLOGICAL REPORT** 

OPERATOR:

James David Dixon

WELL NAME & NUMBER:

Bruner #2-A

LOCATION:

NE¼ 29-31S-10E Elk County, KS 4103' FSL; 685' FEL

**ELEVATION:** 

1180' Topo

**DRILLING CONTRACTOR:** 

**Dixon Drilling Company** 

Mud Rotary

SURFACE CASING:

8 5/8" @ 40'

41/2" casing set @ T.D.

**HOLE SIZE:** 

121/4" hole to 40'

7 7/8" hole to T.D.

**TOTAL DEPTH:** 

2478' logger

**DRILLING BEGAN:** 

12/17/06

**DRILLING COMPLETED:** 

12/27/06

STATUS:

Production casing set to test the

Arbuckle & Mississippi

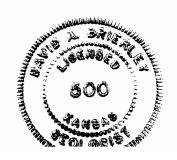
LOGGING PROGRAM:

Osage Wireline, Dual Induction, Microlog, Compensated Density Sidewall Neutron

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# James David Dixon Bruner #2-A Geological Report (continued):

E'log Tops	Elevation	1180' Topo
		400
Hoover Sand		400
Oread Lime		482
Heebner Shale		502
latan Lime		782
Stalneker Sand		834
Lansing Lime		957 12 <b>8</b> 2
Layton Sand		1202
Drum Lime		1458
Kansas City Lime Base/KC		1564
		1588
Lenepah Lime Wayside Sand		1600
Altamont Lime		1647
Weiser Sand Zone		1696
Pawnee Lime		1742
Fort Scott Lime		1790
Mulky Shale		1818
Breezy Hill Lime		1822
Cherokee		1830
Mineral Coal		1882
Cattleman Sand		1900
Mississippi Lime		2114
Caney Formation		2304
Kinderhook Formati	on	2356
Woodford Shale		2400
Arbuckle Dolomite		2428
Total Depth		2478



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James David Dixon
Bruner #2-A
Lithology of Prospective Formations:

Samples were examined from 500' to total depth. The first viable show observed in the samples was in the Kansas City Lime. However, possible gas is indicated in zones above the Kansas City and are described below.

Hoover Sand 400-412

Samples not examined, Sw 13%, possible gas

Hoover Sand 431-437

Samples not examined, Sw 26%, possible gas

Hoover Sand 440-444

Samples not examined, Sw 26%, possible gas

Hoover Sand 448-453

Samples not examined, Sw 26%, possible gas

Layton Sand 1284-1288

Sand, white, fine, slightly porous, trace dull fluorescence, odor, Sw 63%, possible gas with possible water

Kansas City Lime 1518-1521

Limestone, buff/gray crystalline with soft, mealy limestone, slightly porous, odor, Sw 42%, probable oil and gas with water

Kansas City Lime 1527-1529

Limestone as above, Sw 59%, probable water with possible oil and gas

Ft. Scott 1801-1806

Limestone, light gray/tan, firm crystalline and light tan/white, chalky, odor, 10% fluorescence, fair cut, Sw 50%, possible oil and gas

Cattleman Sand 1902-1907

Sand, gray, fine, clay-filled to slightly porous, 20% fluorescence, good oil cut on break, non-commercial show in tight sand

Mississippi Lime 2118-2122

Limestone, light tan/white, soft crystalline to firm, mealy limestone with stained chert, odor, 75% fluorescence, slight cut on break, Sw 35%, probable oil and gas

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James David Dixon

Bruner #2-A

Lithology of Prospective Formations (continued):

# Mississippi Lime 2122-2126

Limestone and chert as above with increase in soft stained limestone, with show oil, odor, 75% dull fluorescence, Sw 30%, probable oil and gas

# Mississippi Lime 2126-2132

Limestone and chert with shows as above, 50% fluorescence, Sw 50 to 53%, probable oil and gas with water

# Mississippi 2636-2643

Limestone and chert as above, 30% fluorescence, Sw 60%, probable water with possible oil and gas

# Caney Formation 2304-2356

Dolomitic, highly argillaceous (silty and sandy) limestone, dark brown, tight, good gas odor, no show oil, no fluorescence, non-commercial

#### Woodford Shale 2400-2428

Shale, dark brown/black, soft, organic, good gas odor, no show, no fluorescence, non-commercial

### Arbuckle Dolomite 2428-2432

Chert, milky, translucent, white terminated quartz crystals with stain and fluorescence and dolomite, tan, firm crystalline to porous, sandy, s.o., fluorescence, odor, Sw 37%, probable oil and gas

#### Arbuckle Dolomite 2440-2444

Dolomite, light gray/tan, firm crystalline with chert, scattered fluorescen ce in fractures and vugs, Sw 45%, possible oil and gas with water

#### Arbuckle Dolomite 2444-2447

Dolomite and chert as above, Sw 35%, possible oil and gas with water

#### Arbuckle Dolomite 2454-2460

Dolomite and chert as above with increase in soft, tan crystalline dolomite with NSO, Sw 58%, probable water

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James David Dixon Bruner #2-A SUMMARY:

Structural comparisons with other wells in the field can only be assumed because of lack of accurate well elevations. Using an estimated elevation of 1180', the Bruner #2-A is 4' high on the Mississippi and 7' high on the Arbuckle compared to the Bruner #1-A.

Based on shows observed in the Arbuckle, Mississippi Lime and Kansas City Lime, it was recommended that the well be production tested. Test the Arbuckle through perforations from 2428-2432. If fluid volumn is not adequated after an acid job, consider a small frac. job, 5,000 to 8,000# sand spearhead with a 50 bbl. fluid loss pad to help get into the low porosity formation with 10/20 sand. If water is not a production problem and more fluid volumn is needed, perforate 2128-2132 and re-treat. Expect more water with any additional oil recovered.

At some point in the life of the well, production test the Ft. Scott and Kansas City as described in the prospective formation descriptions above.

Before abandonment, consider the mineral coal 1882-1886 for coal bed methane. Other gas possibilities include the Layton and Hoover as described above.

Mike Mackey, through field experience, recommends treatment in the top 2' of Kansas City by dumping 250 gallon 15% Hcl. and let it soak. Do not pump to avoid fluid going vertical to water below.

Indicated gas shows in the Caney and Woodford are too limited for production testing in the vertical hole but are presently being produced in horizontal wells in Oklahoma. If gas prices continue to increase, these formations may be of value in the future horizontal producers.

Respectfully Submitted,

David A. Brierley

Certified Petroleum Geologis #1666

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Kansas Licence #500

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