

September 2, 1977

GEOLOGICAL WELL REPORT

- ✓ Brunson-Spines, Inc. & Magnum Land Corp.
- ✓ #4 W. Jones SE NW NW Sec. 6-T19S-R15E
- Last Chance Pool, Coffey County, Kansas
- Alco Drilling Co., Inc. - Contractor
- Spud: August 24, 1977 ✓
- 7" Surface Casing @ 47'
- 4½" Production Casing @ 1695'
- Rotary Completion: August 27, 1977
- Total Depth: Rotary 1700' ✓

COPY

BRUNSON-SPINES, INC.  
615 Fourth Financial Center  
Wichita, Kansas 67202

Gentlemen:

Listed below are the pertinent geological tops and an evaluation of the porosities encountered. No drill stem tests were taken and the hole was not logged mechanically before being cased.

I arrived at the location at a depth of 975' and witnessed the drilling from that point to TD 1700'. Samples were examined from 900-1700' TD.

Enclosed herewith is a copy of the plotted drilling time log from 600-1700' TD which also includes lithology, porous zones, tops, and other pertinent data. A diamond core was cut in the Bartlesville Sand, core description included below.

GRN LOG TOPS (From cased hole log)

ELEVATION	1117	(Private Elevation) ✓
HEEBNER	266	(+ 851)
DOUGLAS	299	(+ 818)
LANSING	600	(+ 517)
KANSAS CITY	784	(+ 333)
BASE OF KANSAS CITY	1005	(+ 112)
PAWNEE	1160	(- 43)

1996

T. G. WRIGHT DONATION

CHEROKEE 1282 (- 165)  
CATTLEMEN ZONE 1374 (- 257)  
1419-1426 Sandstone, fine, gray, fairly clean. Some good porosity,  
no show, no fluorescence.

BARTLESVILLE SANDSTONE 1481 - 364  
1473 (- 356)

DIAMOND CORE #1

1470-96 100% recovery.

1470-74½ Shale, gray-green, compact, micaceous.  
1474½-75 Shale as above becoming sandy with minor streaks of oil  
staining, slightly bleeding oil.  
1475-76 Gray-green, silty shale.  
1476-77 Gray-green compact, clay shale.  
1477-78 Shale, greenish, in calcaceous, fine sandy, minor oil stains  
in poor porosity.  
1478-81 Silty, micaceous, gray-green shale.  
\*1481-83 Sandstone, fine, clean, porous, oil stained, good golden  
fluorescence.  
1483-83½ Dirty greenish, very fine sandstone, streaked oil stain-  
ing.  
1483½-85 Hard, gray, sandy limestone.  
1485-87 Gray-green, micaceous, calcareous shale.  
1487-88 Silty, gray-green shale - minor oil staining  
1488-89 Gray-green compact shale, streaks of dirty, gray-green  
sand, no show.  
1489-90 Shale, gray-green, compact, hard.  
1490-91 Sandy, gray-green shale.  
1491-93 Compact gray-green shale.  
\*1493-94 Sandstone, medium fine, oil stained completely, fair  
porosity, good fluorescence, bleeding 93-93½.  
1494-95½ Compact gray-green shale.  
1495½-96 Sandstone, fine, fairly clean, well oil stained, fair  
porosity and fluorescence.

1496-1506 Sandstone, clean, white, medium fine, porous, scattered  
oil stain, considerable golden fluorescence.

1506-1592 Sandstone, clean, white, medium fine, porous, no show.

BASE OF BARTLESVILLE: 1592

BURGESS SANDSTONE (Sample Top) 1695 (- 558)

COPY

MISSISSIPPIAN LIMESTONE (Sample Top) 1685 (- 568)

1692-1700 Cherty, finely sucrosic to medium crystalline,  
solomitic limestone and dolomite. Good cavernous  
porosity, no show.

TOTAL DEPTH: 1700'

Conclusions and Recommendations

C  
O  
P  
This well followed very closely the structure position of your #3 well,  
one location west. At the Base of the Kansas City this well is 2 feet lower than  
the #3. Due to the change in lithology within the Bartlesville Sand zone, the #4  
well is <sup>14</sup> feet lower than the #3 and the sand is not as well developed - having  
only two feet of good sand in diamond core as described above. However, after  
resuming drilling below the core a definite "show of oil" was observed in a good  
sand body covering about 10 feet of section. This zone is recommended for testing  
in the casing.

Y  
An up-the-hole correction of 6 feet on casing tally and further verified  
by cased hole log complicates the rotary measurement on the enclosed drilling time  
and sample analysis.

The hole was recommended cased to test the Bartlesville Section.

Yours very truly,

T. G. Wright

TGW:wlr

BIT RECORD

SMITH SF2 38

DRILLING PROGRESS

8/24/77	Spud		
8/25	738		
8/26	1384		
8/27	1700'	TD	WOC 4 1/2"

C  
O  
P  
Y