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WICHITA 2, KANSAS

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GEOLOGICAL WELL REPORT

BRUNSON-SPINES

No. 42 JOHNSON

C NE SW, SECTION 23-T24S-R12E

VIRGIL WEST POOL

GREENWOOD COUNTY, KANSAS

By

T. G. WRIGHT

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February 3, 1962

BRUNSON-SPINES, No. 42 Johnson
C NE SW, Section 23-T24S-R12E
Virgil West Pool
Greenwood County, Kansas

Contractor: H & C Drilling Co.
Spud: 1-23-62
8-5/8" Surface Casing @ 107'
5-1/2" Oil String @ 1665'
Total Depth: 1715'
Rotary Completion: 1-31-62

Brunson-Spines
302 Union Center
Wichita 2, Kansas

Gentlemen:

Following are the pertinent geological tops, an evaluation of the porosities encountered and a record of diamond cores taken on the captioned well. No drill stem tests were run and the hole was not logged electrically before being cased.

I arrived at the location at a depth of approximately 1350 feet, and witnessed the drilling from that point to total depth of 1715. Samples were examined 950-1100 and 1400 to T.D.

Enclosed, herewith, is a copy of the plotted drilling time log which includes lithology, geological tops, porous zones, and other pertinent data.

ELEVATION: 1111 R.B. (Est.)

971-973	Limestone, tan, finely crystalline, soft, poor porosity, oil stained.
994-997	Limestone, tan, oolitic, good porosity well stained with oil.

Base KANSAS CITY 999 (+112)

CHEROKEE SAND 1416 (-305)

1417-1421	Sandstone, fine, clustered, clean, well oil stained, good fluorescence.
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BARTLESVILLE SAND 1550 (-439)

1550-1556 Sandstone, medium fine, clean, clustered, porous, well oil stained, good fluorescence, fair odor, no free oil observed.

MISSISSIPPIAN LIMESTONE 1653 (-542)

1653-1665 Limestone, tan to white calcitic, fossiliferous, chert white to gray, vitreous. Scattered cavernous porosity, good oil stain and fluorescence.

1665-1715 T.D. Described below under Diamond Core.

DIAMOND CORES

CORE #1, 1165-91½. 100% recovery.

1665-66 Limestone, tan, coarsely crystalline, fossiliferous, minor cavernous porosity bleeding live oil.

1666-68 Limestone, tan, coarsely crystalline, nodules of gray marly limestone, tight, barren.

1668-70 Limestone, tan to gray, dense to finely crystalline, fossiliferous, fair cavernous porosity, bleeding oil, well saturated.

1670-71 Limestone, buff, coarsely crystalline, only minor cavernous porosity, bleeding oil.

1671-72½ Dolomite, buff, finely crystalline to sucrosic, fair sucrosic porosity, bleeding oil freely.

1672½-73 Dolomite, buff to gray, finely crystalline, tight, barren, slightly glauconitic.

1673-79 Dolomite, buff, sucrosic, fair to good sucrosic and finely, wormy, porosity - good saturation, minor light blue-gray vitreous chert nodules and glauconitic zones.

1679-80 Dolomite, gray, finely crystalline, tight, barren.

1680-82 Dolomite, gray, finely crystalline to sucrosic-disseminated blue-gray chert, minor sucrosic porosity, bleeding oil.

Core #1 (Cont.)

- 1682-83 Dolomite, buff to gray, sucrosic, fair sucrosic porosity, bleeding oil freely.
- 1683-84 Dolomite, buff to gray, sucrosic, disseminated chert, fair sucrosic porosity and saturation.
- 1684-90 Dolomite, gray, finely crystalline, tight, barren, zones of glauconite.
- 1690-91½ Dolomite, dark gray, dense to finely crystalline, hard; fair, finely wormy, cavernous porosity, bleeding oil, some gray fossiliferous chert.

CORE #2, 1691½-1715 T.D. 100% recovery.

- 1691½-92 Dolomite, dark gray, finely crystalline, hard, tight, except for minor fractures and fine porosity - spotted bleeding of oil.
- 1692-93 Dolomite, gray, slightly glauconitic, hard, intermingled coarse, white, calcite crystals. Scattered fair, cavernous porosity, bleeding oil.
- 1693-96 Dolomite, gray-brown, micro-crystalline, hard, tight. Gray fossiliferous chert nodules 1695-96.
- 1696-98 Dolomite, gray, finely crystalline, tight, except for streaks of minor, fine, cavernous porosity - bleeding oil.
- 1698-99 Dolomite, gray, hard, finely crystalline, tight, laminated silicious zones.
- 1699-1700 Dolomitic limestone, tan, finely crystalline, barren, to coarsely crystalline, buff, fossiliferous limestone.
- 1700-1702 Dolomite, gray, hard, micro-crystalline - thin dark argillaceous seams.
- 1702-04 Dolomitic limestone, gray, medium crystalline, included gray fossiliferous chert.
- 1704-05 Dolomite, gray-brown, micro-crystalline, hard, tight, disseminated gray chert.

Core #2 (Cont.)

- 1705-07 Dolomite, gray, finely crystalline, occasional coarse, included calcite crystals, minor fine cavernous porosity, no show.
- 1707-09 Dolomite, gray, micro-crystalline, hard, occasional thin, dark, argillaceous seams, silicious.
- 1709-10 Dolomite, gray, hard, finely crystalline with about 6" streak carrying extremely coarse cavernous porosity with vein deposits of coarse calcite, pyrite and chert, dark oil stain in caverns, but more residual type oil than seen above. This is a possible water bearing zone.
- 1710-12 Dolomite, dark gray, hard, finely crystalline, considerable fine cavernous porosity and fracturing - bleeding oil.
- 1712-13 Dolomitic limestone, gray mottled, medium crystalline, tight.
- 1713-14 Dolomite, dark gray, micro-crystalline with laminated argillaceous dolomite.
- 1714-15 Dolomitic limestone, gray mottled, hard, tight.

Summary of Cores:

Best Zones: 1673-79 and 1709-12.
Fair Zones: 1668-70, 1671-72½, 1682-84, 1690-93.
Minor Zones: 1665-66, 1670-71, 1680-82, 1696-98.

CONCLUSIONS and RECOMMENDATION

Assuming surface elevations as correct, or nearly so, the subject well is the highest in the area. The primary objective of the hole being the Mississippian Lime, this horizon carried good shows as evidenced by the above core descriptions. In addition, the Bartlesville Sand warrants testing in what appears to be about six feet of good sand section. A Cherokee Sand at 1416 also carried a show in an estimated 5 to 6 feet of sand.

Brunson-Spines
No. 42 Johnson (Cont.)

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Both this sand and the Bartlesville warrant testing before abandonment of the hole.

It was recommended that casing be set to test the Mississippian Lime.

Yours very truly,

T. G. WRIGHT
Consulting Geologist

DRILLING PROGRESS

1-24-62	Spud
1-25-62	WOC
1-26-62	WOC
1-27-62	140
1-28-62	950
1-29-62	1475
1-30-62	1691
1-31-62	1715 T.D.

BIT RECORD

Hughes	OWS Rerun	0-116
CP	EM Retip	116-635
Security	M4N Retip	635-1093
CP	EMIV Retip	1093-1304
Security	M4N Retip	1304-1665

