

Martin K. Dubois

Consulting Geologist

432 State Bank Building • Winfield, Kansas 67156 • 316-221-0428

February 24, 1985

GEOLOGIC REPORT

S & V Oil Co., Inc. #B-1 Baumgartner

Appx. C. SE NW 32-8S-22E

Leavenworth County, Kansas

Daily Progress (7:00 a.m.):

2/20 Moved on, set 7" @ 40'
2/21 Drilled out beneath surface casing at 9:30 a.m.
2/22 532', drilling
2/23 1346', RTD 1355' reached at 10:30 a.m.

Service Companies:

Contractor: McGown Drilling Co., Inc.

Mud: Hughes Drilling Fluids

Formation Tops (E-Log):

| Formations | S & V # B-1 Bmgt | Structural Relation to |
|--------------------|------------------|------------------------|
| | Appx. SE NW | S & V #1 Bmgt |
| | 32-8S-22E | NW NW NW NW |
| | GL 915 | 32-8S-22E |
| Lansing | 161 (+754) | + 9 |
| B. Kansas City | 486 (+429) | +14 |
| Cherokee | 736 (+179) | +17 |
| Lower Bartlesville | 1058 (-143) | +21 |
| Coal Marker | 1119 (-204) | flat |
| Middle McLouth SS | 1228 (-313) | -- |
| Upper Burgess SS | 1263 (-348) | - 1 |
| Lower Burgess SS | 1290 (-375) | -13 |
| Miss. Unconformity | 1311 (-396) | -14 |
| Spergen | 1311 (-396) | - 8 |
| Warsaw | 1344 (-429) | - 3 |
| Total Depth | 1355 (-440) | |

Hydrocarbon Shows (E-Log Depths):

1228-34 Middle McLouth Sandstone
Sandstone, fine to medium grained, subrounded, well sorted, shaley,
fair porosity, faint odor, fair show of tarry oil (est. 19⁰ API
gravity).

1234-42 Sandstone, as above except with less shale.
Noncommercial show.

- 1263-74 Upper Burgess Sandstone
Sandstone, fine to medium grained, subrounded, well sorted, moderate amount of glauconite, fair porosity, slight to fair odor, dark oil stain, fair show of tarry oil and slight show of gas bubbles. Possibly gas productive in upper part.
- 1278-81 Sandstone, medium to coarse grained, moderately sorted, very light tan stain, light oil scum, very faint odor, fair show of gas bubbles. Possibly gas productive.
- 1290-95 Lower Burgess Sandstone
Sandstone, same as in 1278-81 except medium grained sand with same show. Possibly gas productive.
- 1295-1311 Sandstone, medium to coarse grained, subrounded, moderately sorted, mostly loose grains, good porosity, fair odor, fair show of gassy oil, show decreased downward. Probably noncommercial show.

E-Log Calculations:

| Depth | %Ø | Rt* | % Sw | Neutron-Density | |
|----------------|----|-----|------|-----------------|--------------|
| | | | | Gas Effect | Remarks |
| Middle McLouth | | | | | |
| 1236-40 | 20 | 10 | 60 | None | Wet |
| Upper Burgess | | | | | |
| 1264-66 | 21 | 24 | 37 | Convergence | Possible Gas |
| 1266-68 | 23 | 22 | 36 | Convergence | Possible Gas |
| 1270-74 | 20 | 13 | 53 | None | Wet |
| 1278-81 | 23 | 30 | 31 | Cross over | Possible Gas |
| Lower Burgess | | | | | |
| 1290-94 | 22 | 8 | 62 | Convergence | Possible Gas |
| 1294-96 | 18 | 7 | 79 | Cross over | Possible Gas |
| 1296-1302 | 20 | 7.5 | 70 | None | Wet |

* Due to thinness of sands, the short guard resistivity curve was used to determine Rt in the Upper Burgess Sandstone. Elsewhere the deep induction curve was used.

Summary

Production casing was run to further test the gas shows in the Burgess Sandstones. Three thin sand intervals in the Burgess section had some gas effect indicated on the neutron-density curves of the open hole porosity log run on this well. These intervals coincided with sample shows of gas. The medium and deep induction resistivity curves indicated relatively low resistivity across all these intervals suggesting they are all noncommercial, however, the short and deep guard resistivities were relatively high indicating they are potential pay zones.

It is recommended that the three zones be perforated and tested separately, starting at the bottom and working upward. The recommended perforation intervals are 1291-1293 (Lower Burgess), 1278-80 and 1263-1265 (Upper Burgess).

The B-1 Baumgartner well confirmed the presence of a surface structure mapped in the area and all shallow subsurface rocks from the top of the hole down to the Coal Marker were significantly high to the #1 Baumgartner well nearly 1/2 mile to the northwest. However, the Coal Marker (1119') was flat and all other formations below were low to the #1 Baumgartner well. The surface structural anomaly is caused by an abnormally thick Lower Bartlesville Sandstone found in the captioned well just above the Coal Marker at 1058 feet. In the B-1 Baumgartner this sand is 58 feet thick, 38 feet thicker than it was in the #1 Baumgartner. Differential compaction over this extremely thick sand resulted in the surface and near surface rocks being 10 to 15 feet higher than they were at the #1 Baumgartner location.

Respectfully submitted,

Martin K. Dubois

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MKD:md

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October 8, 1985

GEOLOGIC REPORT

S & V Oil Company B-1 Baumgartner

NE NE NE 32-8S-22E

Leavenworth County, Kansas

Daily Progress:

- 10-2 Moved on, lost circulation in surface hole
10-3 Skidded rig, set 8 5/8" casing at 44', plug down at 1:00 p.m., drilled out beneath surface casing at 9:00 p.m.
10-4 553' and tripping bit at 7:00 a.m.
10-5 1426' and drilling at 7:00 a.m., RTD of 1520' reached at 11:50 a.m., ran 4 1/2" production casing

Service Companies:

Contractor: Caney Valley Drilling
Cement: Consolidated Oilfield Services
E-Logs: Great Guns
Drilling Mud: Hughes Drilling Fluids

Formation Tops:

| | B-1 Baumgartner NE NE NE 32 GL 1060 | Structural Relation to | |
|----------------|---|---------------------------------------|---|
| | | Wykoma #1 Unmessing NW NW NW 33 | S & V Oil #2 Baumgartner SE NW 32 |
| Heebner | 20 (+1040) | NA | |
| Lansing | 317 (+743) | NA | -11 |
| B. Kansas City | 643 (+417) | NA | -12 |
| Cherokee | 895 (+165) | NA | -14 |
| Coal Marker | 1276 (-216) | -7 | -12 |
| McLouth | 1355 (-295) | -5 | --- |
| Lower Burgess | 1433 (-373) | flat | +2 |
| Miss. Spergen | 1478 (-418) | NA | -22 |
| Warsaw | 1482 (-422) | NA | +7 |
| Total Depth | 1519 (-459) | --- | --- |

Shows (E-Log Depths):

- 1433-50 Lower Burgess Sandstone
Sandstone, gray, fine grained, subrounded, well sorted, glauconitic, tight at top, otherwise fair to good porosity, good odor, good show of free gassy oil decreasing in lower portion, circulated a slight scum of oil to pit while drilling and good scum of frothy oil and gas cut mud after connections. E-Log calculations average 18% porosity, 16-18 ohms resistivity, 48 to 51% water saturation, and neutron - density crossover indicating presence of gas. Possible gas and oil pay.

1450-70

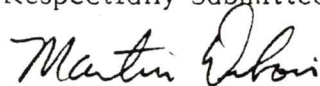
Sandstone, gray, medium grained with some coarse grained, subangular, moderately sorted, glauconitic, pyritic, fair odor, fair show of heavy oil decreased downward to no show at base. E-Log calculations average 18-20% porosity, 9-16 ohms resistivity, and 51 to 60% water saturation with no gas effect. Probable water bearing zone.

Summary:

Production casing was run to further test the oil and gas shows in the Lower Burgess Sandstone. It is recommended that the 37 foot sand be perforated at the very top, from 1434 to 1436 in order to avoid excessive water production.

Good shows of oil were noted in the top 17 feet of the Lower Burgess Sandstone whereas only slight shows of oil were noted in the top few feet of the same sandstone in the #2 Baumgartner well located one half mile to the southwest. Since the subsea datums of the sands in both wells are nearly identical, it is apparent there is a separation of reservoir between the two wells. No shows were observed in the 10 foot McLouth Sandstone encountered at 1355' and the electric logs indicated this zone is water bearing. No other zones of interest were encountered in the B-1 Baumgartner well.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read "Martin K. Dubois".

Martin K. Dubois

MKD:gt

| | | | |
|------------|-----------|-------------|---------------|
| STATE | OKLAHOMA | COMPANY | S. V. Oil Co. |
| COUNTY | McMurtre | FARM | Baumgartner |
| CHECK | | WELL NO. | B-1 |
| | | SURVEY | NE NE NE |
| 32 | | | |
| | R. 22 1/2 | TOTAL DEPTH | 1520 |
| | | CONTRACTOR | Cancy Valley |
| | | COMMENCED | 10-3-85 |
| | | COMPLETED | 10-5-85 |
| ALTITUDE | 60 | REMARKS | |
| PRODUCTION | | | |

| | |
|---------------|-------------------------|
| CASING RECORD | |
| 5/8" @ 44' | Bits |
| 1/2" | Grout Rock 0-553 |
| | " " 553-1071 |
| | Verbal Bottom 1071-1520 |

| | | |
|---|--------|---------|
| SHOT | QUARTS | BETWEEN |
| TIME RATE SCALE: 1/10" = MINUTES | | |
| 450 TULSA, OKLAHOMA 74101 PRINTED IN U.S.A. | | |

