

**T. G. WRIGHT**  
**CONSULTING GEOLOGIST**  
335 FIRST NATIONAL BANK BUILDING  
WICHITA 2, KANSAS

September 26, 1957

GEOLOGICAL WELL REPORT

Wm. Gruenerwald /1 Gano  
C SE SW Sec. 17-T. 31S.-R. 29W.,  
Hockett Area, Meade County, Kansas

Spud: August 23, 1957

Contractor: Graham-Michaels Drilg. Co.

8 5/8" Surface Casing at 1714 w/800 Sax

Rotary Completion: September 19, 1957

Mr. Wm. Gruenerwald  
35 East Wacker Drive  
Chicago 1, Illinois

Dear Sir:

Following are the pertinent geological tops, an evaluation of the porosities encountered in the Morrow and Mississippian Sections, and a record of all cores and tests made at the captioned well. We arrived at the location at a depth of 5390 and witnessed the coring and testing from that point to total depth 5550. Samples were examined from 5350-total depth.

Enclosed herewith is a copy of the plotted drilling time log which also includes notes on lithology, electric log tops, cores, tests, and other pertinent data.

**ELECTRIC LOG TOPS**

Elevation 2752 HB

Reebner Shale 4292 (-1360)

Toronto Limestone 4312 (-1537)

Lansing-Kansas City 4415 (-1683)

Maryland 5009 (-2277)

Cherokee 5278 (-2546)

Morrow Sand 5404 (-2672)

Mississippian (Chester) 5450 (-2718)

Total Depth 5550

**POROSITIES**

Morrow Sand

5404-12 As evidenced by the electric log a sand similar in appearance to that found in the /1 Dierking and /1 Hockett exists. The nature of the fluid content if any is not known. The sample determinations do not reflect this sand although a drilling break 5406-12 was noted and coring was commenced at 5412. In the upper

### Gruenerwald #1 Gano

few feet of core #1 a sand has been described, however it carried no evidence of a "show of oil or gas". It is deemed advisable to test this sand section 5404-12 before abandonment of this well. It is possible that the sand is oil or gas bearing.

### Chester

By electric log interpretation a porous section 5454-77 is indicated in the Chester gas pay. This is not entirely borne out by an examination of the core. From a visual core analysis we have indicated favorable porosity from 5457-57½ considerably thinner than by electric log interpretation.

### DIAMOND CORES

#### Core #1 5412-5451 Recovered 35/39

5412-12½ Shale, dark gray to greenish.  
5412½-14 Shale, silty and calcareous, gray, glauconitic.  
5414-15½ Sandstone, light greenish to gray, medium grained, clean, with thin shale seams. Good porosity, no show of oil or gas.  
5415½-20 Limestone, gray, earthy, finely crystalline, thin gray-green shales.  
5420-22 Shale, gray-green crumbly.  
5422-25 Shale, dark gray, crumbly with thin compact calcareous streaks.  
5425-26 Limestone, brown, medium crystalline.  
5426-29 Shale, dark gray, compact, hard, fossiliferous with calcareous streaks.  
5429-31 Limestone, gray to brown, very coarsely crystalline and fossiliferous.  
5431-37½ Shale, dark gray, fissile with several thin dark gray limestone streaks.  
5437½-49 Limestone, dark gray to brown, medium to coarsely crystalline, very fossiliferous with two streaks of dark crumbly shale 43-44 and 47-48.  
5449-51 Shale, dark gray, fissile, crumbly.

#### Core #2 5453-5498 Recovered 37/45

5453-57 Limestone, buff to gray, crystalline, very fossiliferous and oolitic. Doubtful porosity.  
5457-57½ Limestone, buff to gray, crystalline, primarily oolitic with chalky fill. Fair cavernous and interoolitic porosity, no staining.  
5457½-79 Limestone, buff to gray, medium to coarsely crystalline, very fossiliferous, no apparent porosity.  
5479-88 Limestone, gray, medium to coarsely crystalline, very fossiliferous with occasional gray, fissile shale seam.  
5488-90 Limestone, dark brown to dark gray, very coarsely crystalline and fossiliferous. On cored surface the limestone had a spotted appearance.  
5490-98 This section assumed lost and considered to be a shale break. The electric log bears this out.

### DRILL STEM TESTS

Test #1 5457-98, open 1½ hr., shut in 20 mins. Good blow increasing somewhat by gas to surface in 1 hr. 20 mins. volume too small to measure. Drilled 20 feet of mud. Initial flow pressure 10%, final flow pressure 10%, bottom-hole pressure 3560# still building.

Gruenerwald #1 Cano

CONCLUSIONS AND RECOMMENDATIONS

On the top of the Chester this well is more than 70 feet lower than the Northern Natural #1 Smith 1/2 mile north, and slightly more than 30 feet higher than the Northern Natural #1 Flegler about 1/2 mile south. Compared to your #1 Dierking this well is about 30 feet lower on the top of the Chester. Although considerably lower than anticipated, the quality of the reservoir appears relatively good and there was no evidence of water in the drill stem test. It is felt that the well will prove commercial as a gas well in the Chester, it at least appeared encouraging enough to warrant casing the hole. This was recommended.

Yours very truly

T. G. Wright

RECEIVED  
JAN 10 1950  
GAS & OIL  
DEPARTMENT  
WASHINGTON

Cruenerwald #1 Cano

DAILY DRILLING PROGRESS  
As of 8AM each day

|             |               |
|-------------|---------------|
| August 23   | Spud          |
| 26          | 8 5/8 at 1714 |
| 28          | 1926          |
| 29          | 2046          |
| 30          | 2552          |
| September 3 | 3278          |
| 4           | 3525          |
| 5           | 3825          |
| 6           | 4030          |
| 9           | 4593          |
| 10          | 4772          |
| 11          | 4926          |
| 12          | 5068          |
| 13          | 5200          |
| 16          | 5450          |
| 17          | 5498          |
| 18          | 5548          |
| 19          | 5550 T. D.    |

BIT RECORD

|              |                 |
|--------------|-----------------|
| Reed T       | 0-1638          |
| Reed T       | 1638-1715       |
| Hughes OSCJ  | 1715-2394       |
| Hughes OWTJ  | 2394-2723       |
| Smith 3C5V2  | 2723-3014       |
| Smith 3C5V2  | 3014-3278       |
| CP EMV       | 3278-3525       |
| CP EMV       | 3525-3860       |
| Security MAN | 3860-4115       |
| Security MAN | 4115-4383       |
| Smith 3C5V2  | 4383-4592       |
| Smith 3C5V2  | 4592-4772       |
| Security MAN | 4772-4950       |
| CP EMV       | 4950-4980       |
| Hughes W7    | 4980-5169       |
| Hughes W7    | 5169-5318       |
| Smith 304    | 5318-5412       |
| Hughes W7    | 5412-5550 T. D. |

N. G. WRIGHT DONATION

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