7-31-29W

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WICHITA 2, KANSAS

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GEOLOGICAL WELL REPORT

Wm. Gruenerwald #1 Miles
C SE SE Sec. 7-T. 31S.-R. 29W.,
Hockett Area, Meade County, Kansas
Spud: March 21, 1958
8 5/8" surface casing at 1673
Rotary completion: April 12, 1958

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

Dear Sir:

Following are the electric log geological tops, and an evaluation of the Morrow Sand and Chester sections. All core descriptions and a record of all tests is also included.

We arrived at the location at a depth of 5301, and witnessed the drilling from that point to total depth 5485. Samples were examined from 5100 to total depth, and the hole was logged electrically before being cased.

Enclosed herewith is a copy of the plotted drilling time log which also includes lithology from 5100 to total depth, electric log tops, and other pertinent data.

Elevation 2735 RB

Heebner Shale 4278 (-1543)

Toronto Lime 4305 (-1570)

Lansing-Kansas City 4405 (-1670)

Morrow Sand 5374 (-2639)

5374-79 Sandstone, very fine, grey, dirty, glauconitic, minor porosity, bleeding small amount of oil in core 5374-76.

Mississippian (Chester) 5393 (-2658)

See Core Description

Total depth 5485 Schlumberger T. D. 5489

Gruenerwald #1 Miles

DIAMOND CORES

Core #1 5370-5400, 100% recovery

5370-75 Shale, dark gray to black, calcareous, compact. Vertically fractured with vertical calcareous veins.

5375-80 Sandstone, very fine, glauconitic, dirty, poor visible porosity and oil stained, slight bleeding oil 5375-77, odor of oil on fresh fracture.

5380-82 Shale, gray green fissile with thin stringers of coarsely crystalline, gray, fossiliferous limestone.

5382-85 Limestone, buff to gray, dense to coarsely crystalline, fossiliferous with thin shale partings.

5385-86 Limestone, buff to pinkish, coarsely crystalline, calcitic, and fossiliferous.

5386-89 Limestone, buff, dense to calcitic with thiin gray green fissile shale seams.

5389-89½ Shale, dark gray, crumbly, fissile.

5389½- 93 Limestone, dark gray to black dense to finely crystalline, in part very fossiliferous with thin interbedded gray shales.

5393-96 Limestone, buff dense to calcitic becoming in part extremely coarsely crystalline and fossiliferous.

5396-97 Limestone, dark gray, finely crystalline with thin dark gray fissile shale skams.

5397-5400 Limestone, buff, dense, calcitic, fossiliferous.

Core #2 5400-5422, 100% recovery

5400-03 Interbedded gray to gray-green shales, and gray, calcitic, fossiliferous to gray, marly, limestone.

5403-04½ Shale, gray, crumbly.

5404½-10 Limestone, tan to buff, fossiliferous and oolitic with oolites in crystalline matrix. Fair to poor intercrystalline porosity, slight odor on fresh fracture.

5410-14 Limestone, buff, medium crystalline, fossiliferous, scattered oolites, and fair intercrystalline porosity. Slight odor.

5414-15 Limestone, buff, dense, fossiliferous, no visible porosity.

5415-17 Limestone, buff, medium crystalline, fossiliferous, in part oolitic. Fair porosity in streaks, slight odor.

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5417-22 Limestone, tan, medium crystalline, very fossiliferous, granular appearance, possible minor porosity.

DRILL STEM TESTS

Test #1 5365-5485, open 1½ hr., shut in 20 mins. Good blow throughout test. Recovered 120 feet of mud, no show of oil, gas, or water. Initial bottom hole pressure 150#, initial flow pressure 50#, final flow pressure 75#, final bottom hole pressure 175#.

CONCLUSIONS AND RECOMMENDATION

Comparing the subject well with the #1 Hockett, producing Chester gas well 1/4 mile east, this well is 8 feet higher on the Morrow Sand and Mississippian. Although structurally the subject well is in good shape the Morrow Sand development is poor, being very shaley sand, very fine, and of low porosity and permeability in addition to the sand body being too thin. The Chester Limestone section which produces gas in the #1 Hockett is well represented in this test, however the porosity and permeability is low as evidenced by core analysis by "Core Lab". Electric log data on both the Morrow sand and Chester indicate low porosities. The drill stem test taken at total depth yeilded nothing of interest although past experience in the area proves drill stem testing not too conclusive.

With the exception of the favorable structural position and the existence of the comparable "pay section" of the Hockett, our evidence is rather discouraging, however it was felt that the well had sufficient merit to warrant further testing. It was therefore recommended that the hole be cased to test the Chester primarily and in the event of Chester failure the Morrow Sand be tested before abandonment.

Chester perforations recommended: 5412-26.

Morrow perforations recommended: 5376-78.

Yours very truly
Original Signed
T. G. WRIGHT
T. G. Wright

Gruenerwald #1 Miles

DAILY DRILLING PROGRESS

March	21	Spud
	24	8 5/8" @ 1673
	25	WOC
	26	1933
	27	2693
	28	3083
	31	4006
April	1	4285
	2	4507
	3	4712
	4	4849
	7	5266
	8	5370
	9	5400
	10	5463
	11	5485 T. D.

BIT RECORD

Hughes OSCJ	0-1675
OSC1G Hughes	1675-2606
Hughes OSC1G	2606-2910
Hughes OWVJ	2910-3279
Hughes OSC1G	3279-3486
Hughes OSC1G	3486-3820
Smith SV2	3820-4003
Smith SV2J	4003-4182
Smith SV2J	4182-4411
OWVJ Hughes	4411-4569
Smith SV2	4569-4722
Smith 3C2	4722-4849
Smith 3C2	4849-4981
Reed YH	4981-5076
Hughes OWC	5076-5201
Hughes OWC	5201-5301
Security H7	5301-5370
Reed YH	5370-5400
Security H7	5400-5485 T. D.