

15-151-20104

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WICHITA, KANSAS 67202

1-28s-13w

February 11, 1969

GEOLOGICAL WELL REPORT

William Gruenerwald & Associates, Inc.
#1 Travis, C NE NE Section 1-T28S-R13W
Rolingson Pool, Pratt County, Kansas
Contractor: Garvey Drilling Co., Rig #11
Spud: January 29, 1969
13 3/8" Surface Casing @ 198
5 1/2" Production Casing @ 4344
Rotary Completion February 10, 1969
Total Depth 4345 Rotary, 4347 Elec. Log

T. G. WRIGHT DONATION

1996

Wm. Gruenerwald & Associates, Inc.
P. O. Box 909
Colorado Springs, Colorado 80901

Gentlemen:

Listed below are the pertinent geological tops, an evaluation of the porosities encountered below the top of the Lansing, and a record of all cores taken at the captioned well.

I arrived at the location at a depth of 4150 and witnessed the drilling from that point to TD 4345. Samples were examined from 3700 to 4345 TD. The hole was logged electrically before being cased, electric log data included herein.

Enclosed herewith is a copy of the plotted drilling time from 3500 to 4345 TD which also includes lithology, porous zones, tops and other pertinent data.

ELECTRIC LOG TOPS

ELEVATION	1839 KB	1840 L+S
HEEBNER	3516 (-1677)	(-1676)
BROWN LIME	3696 (-1857)	(-1856)
LANSING-KANSAS CITY	3716 (-1877)	(-1876)
3756-3761	Limestone, tan, oolitic, porous, scattered dark stains.	
BASE KANSAS CITY	4066 (-2227)	(-2220)
MISSISSIPPI CHERT	4143 (-2304)	(-2303)
VIOLA CHERT	4196 (-2357)	(-2350)

SIMPSON

4278 (-2439) (- 2438)

SAND

4310 ⁻²⁴⁷¹
(-2469) (-2468) -2470

See Cores below for Simpson lithology.

TOTAL DEPTH

4345 ROTARY
4347 ELECTRIC LOG

DIAMOND CORE #1

4272-4298

Recovery 26'/26'

- 4272-74 Coarsely crystalline, calcitic, limestone, gray, mottled to pinkish, pyritic.
- 4274-75 Limestone as above only bouldery, conglomeratic, intermingled gray-green, slickensided shale.
- 4275-76 Intermingled green shale and pebbles of dense gray to greenish limestone, in part with rounded sand grains.
- 4276-78 Bright green stratified shale, sandy, with thin lenses of white lime cemented, rounded, sandstone.
- 4278-79 Sandstone, dark gray, gilsonitic, medium grained, hard, almost quartzitic, grading into white calcareous sandstone.
- 4279-80 White, very calcareous, medium grained, rounded sandstone with gilsonitic streaks.
- 4280-81 Calcareous, cream dolomite, medium crystalline, scattered rounded sand grains.
- 4281-84 Medium fine, white, rounded sandstone, tight, calcareous cemented, thin, sandy, green shale partings.
- 4284-86 Calcareous, white to greenish, medium crystalline dolomite, slightly sandy.
- 4286-94 Sandstone, white, medium fine, rounded grains, tightly lime cemented, occasional paper-thin green shale. Sand becoming coarser toward base and Section 4291-94 containing thin, clean, sandstone lenses, bleeding minor live oil.
- 4294-97 Calcareous dolomite, finely crystalline to dense, buff to pinkish, vertically fractured, occasional thin sandy zone.
- 4297-98 Limestone, brown, dense, almost lithographic, paper-thin shales.

DIAMOND CORE #2

4298-4320

Recovery 21' / 22'

- 4298-99 1/2 Dolomite, calcareous, brown, dense, inclusions of buff finely crystalline dolomite.
- 4299 1/2-4301 1/2 Sandstone, light greenish, medium grained calcareous cemented, vertically fractured, bottom portion oil stained.
- 4301 1/2-02 Shale, dark green, fissile, crumbly.
- 4302-04 Black crumbly shale, thin gray, dirty sand lenses.
- 4304-05 Silty, green to maroon, twisted shale with thin lenses of fine sandstone.
- 4305-06 Silty gray-green fine, dirty sandstone, with gray-green twisted shale.
- 4306-08 Shale black fissile.
- 4308-10 Sandstone, medium fine, clean, compact, vertically fractured, fair porosity, completely oil stained with zones of heavy bleeding.
- 4310-13 Sandstone as above but more porous and friable, completely oil saturated. Bleeding zones restricted to 4308-13.
- 4313-20 Beautiful, clean, porous, friable (easily crumbles between fingers) sandstone somewhat coarser than sandstone above, completely oil saturated, no bleeding.

DIAMOND CORE #3

4320-4345

Recovery 24 1/2' / 25

- 4320-23 Sandstone, clean, porous, medium fine, friable. Completely oil saturated, some vertical fracturing.
- 4323-31 Sandstone as directly above but becoming less porous and friable, completely oil saturated, perhaps slightly darker in color.
- 4331-35 Sandstone as above but more porous and friable and perhaps somewhat finer, lighter colored staining.

- 4335-37 Sandstone as above, definitely more compact and less friable and porous, dark staining.
- 4337-39 Sandstone as above but gilsonitic and appears water-bearing.
- 4339-40 White, compact, tight, very fine sandstone, pale green shale partings.
- 4340-42 Silty, pale green shale, thin lenses of white silty, sandstone.
- 4342-43 Coarse sub-rounded sandstone, thin interbedded pale green shale, dark oil stained.
- 4343-45 Dark green, compact shale.

Conclusions and Recommendations

The structural position of this well is best compared to the west offsetting Raymond Oil Company #3 Hillard. At the top of the Simpson Sand, the subject well is two feet higher than the #3 Hillard after having been six feet higher at the top of the Lansing.

Excellent reservoir conditions are evident in the Simpson Sand on the basis of the diamond cores taken. The sand is well developed, clean and porous and typically well saturated with oil. However, in the core the upper five feet of the sand carried a visible show of oil with relatively low porosity. The electric log in this zone indicates no appreciable porosity in the upper three feet of the sand. On the basis of cores and electric log it is my opinion that perforations in the sand should be restricted to 4317 as the deepest point of penetration. Possibly the Section 4313-17, electric log measurements, would be the best located.

It is my belief that this well has the most likely looking Lansing-Kansas City porosities of any observed thus far in the pool. One zone of interest is 3756-61, which is also represented on the electric log. The second zone 3962-72, carries no visible shows of oil in the cuttings, but should be considered a potential zone to be tested on the basis of the electric log.

It was recommended that the hole be cased to test the Simpson Sand.

Yours very truly,

T. G. Wright

TGW:bf
Enclosures

Log Analysis



COMPANY Wm. GRUENBERG & Assoc.		WELL TRAVIS #1	
FIELD ROLINGSON	COUNTY PRATT	STATE KANSAS	

DEPTH	m.	ρ_g	R_w	R_t	ϕ_D	ϕ_N	% POROSITY	% WATER	REMARKS
3055-27	2.0	2.71 2.71	.05				22	90	
3757-60	"	2.71	"				6.5	75	
60-62	"	"	"				5.5	90	
3836-38	"	"	"				13	70	
3930-35							16	45	
35-37							11	85	
3963-71							16	70	
4118-21							10	40	
21-29							6-8	60	
29-33							9	75	
4263-65				35	37	7	6	70	POROSITY FROM DENSITY- ELEMENTARY CROSS PLOT ↓
65-67				33	8	5	8	50	
4313-15				30	11	3	8	55	
15-17				17	14	7	11	50	
17-19				10	14	9	12	60	
19-21				7	17	9	13.5	65	
21-24				4.5	15	10	13	80	
24-27				4.5	19	10	15	68	
27-32				4.5	17	9	13.5	80	
32-34				4.5	16	8	12.5	85	
34-36				5	16	7	12	85	
36-38				8	15	6	11	80	
38-40				10	14	5	10.5	70	
40-42				11	13	5	10	70	

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DATE 2-9-69	LOCATION GREAT BEND	ENGINEER J. B. HALL
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BIT RECORD

SMITH DTJ	198-1981
SMITH V1	1981-2440
SMITH DTJ	2440-3170
SMITH V1J	3170-3646
SMITH V1J	3646-3890
SMITH V2H	3890-4115
SMITH V2H	4115-4186
SMITH V2H	4186-4246
SMITH L4H	4246-4272
DIAMOND CORE	4272-4345 TD

DRILLING PROGRESS

1-29	Spud
1-30	188
1-31	1981
2- 1	2895
2- 2	3525
2- 3	3865
2- 4	4115
2- 5	4246
2- 6	4284 Coring
2- 7	4313 Coring
2- 8	4320 Coring
2- 9	4345 TD Logging
2-10	4345 TD WOC

CORE ANALYSIS RESULTS

Company WILLIAM GRUENERWALD & ASSO. Formation SIMPSON File CP-1-6882
 Well TRAVIS NO. 1 Core Type DIAMOND Date Report 2-11-69
 Field ROLLINGSON Drilling Fluid WATER BASE MUD Analysts BOYLE
 County PRATT State KANSAS Elev. 1839'KB Location C NE NE SECTION 1-28S-13W

Lithological Abbreviations

SAND-SD SHALE-SH LIME-LM	DOLOMITE-DOL CHERT-CH GYPSUM-GYP	ANHYDRITE-ANHY CONGLOMERATE-CONG FOSSILIFEROUS-FOSS	SANDY-SDY SANDY-SHY LIMY-LMY	FINE-FN MEDIUM-MED COARSE-CSE	CRYSTALLINE-ELN GRAIN-GRN GRANULAR-GRNL	BROWN-BRN GRAY-GY VUGGY-VGY	FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY	SLIGHTLY-SL VERY-V/ WITH-W/
SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY		POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS	
		PERM. MAX.	PERM. 90°		OIL	TOTAL WATER		

CONVENTIONAL ANALYSIS

	4272-76						Lm (VIOLA)
	76-78						Sh, lm nods
	78-94						Sd, calc
	94-98						Dol
	98-02						Sd, dol
	4302-06						Sh, sdy
	06-08						Sh, blk
1	08-09	1.9		6.1	18.5	8.2	Sd
2	09-10	26		7.2	15.4	6.8	Sd
3	10-11	94		13.2	26.6	21.3	Sd
4	11-12	39		11.0	27.4	19.7	Sd
5	12-13	25		13.5	19.1	17.3	Sd
6	13-14	102		12.9	31.0	18.3	Sd
7	14-15	70		11.7	36.4	24.3	Sd
8	15-16	43		13.4	29.7	17.5	Sd
9	16-17	108		13.1	30.4	23.2	Sd
10	17-18	81		14.2	31.5	29.9	Sd, sl/dol
11	18-19	100		14.1	33.4	30.0	Sd, sl/dol
12	19-20	157		14.9	34.9	31.7	Sd, sl/dol
13	20-21	184		15.4	32.1	53.4	Sd, sl/dol
14	21-22	234		18.4	23.8	47.6	Sd
15	22-23	310		15.2	29.3	52.5	Sd
16	23-24	219		18.4	26.4	33.9	Sd
17	24-25	221		14.6	33.6	35.2	Sd
18	25-26	133		16.0	26.0	24.6	Sd
19	26-27	188		14.6	33.4	27.0	Sd
20	27-28	184		14.1	31.5	26.6	Sd
21	28-29	177		15.3	27.5	24.4	Sd
22	29-30	68		14.1	34.9	29.9	Sd
23	30-31	35		15.3	29.0	29.0	Sd
24	31-32	50		21.2	20.5	25.4	Sd
25	32-33	94		14.6	23.6	25.2	Sd, sl/dol
26	33-34	50		14.0	19.1	23.3	Sd, sl/dol
27	34-35	55		11.8	21.1	16.1	Sd
28	35-36	53		11.3	22.0	12.6	Sd
29	36-37	44		10.4	20.7	16.1	Sd, sl/dol
30	37-38	21		13.9	11.9	32.3	Sd, sl/silty, vert frac
31	38-39	8.7		9.3	15.8	28.9	Sd, sl/silty, vert frac
	39-43						Sd, w/few scatt sh stks
	43-44						Sh, blk
	4344-45						Sh, sdy

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