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805 WICHITA PLAZA
WICHITA, KANSAS 67202

April 29, 1969

GEOLOGICAL WELL REPORT

William Gruenerwald & Associates, Inc.
#1 Penrod, C NW NW
Section 6 - T28S- R12W.,
Rolingson Pool, Pratt County, Kansas
Contractor: Garvey Drilling Co. Rig #11
Spud: April 15, 1969
13-3/8" Surface Casing @ 213'.
8-5/8" Intermediate Casing @ 1767'
Completed as dry hole: April 27, 1969.
Total Depth 4441 (Rotary) 4439' (E. Log)

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

Gentlemen:

Listed below are the pertinent geological tops and an evaluation of the porosities below the top of the Lansing-Kansas City. No drill stem tests were taken. The hole was logged electrically before abandonment, electric log data included herein.

I witnessed the drilling from 4225' to 4441' T.D., after a previous trip to the well to observe the Lansing-Kansas City section. Samples were examined from 3700 - 4441' T.D.

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

ELECTRIC LOG TOPS

ELEVATION	1839 KB
HEEBNER SHALE	3520 (-1681)
BROWN LIME	3707 (-1868)
LANSING-KANSAS CITY	3726 (-1885)
BASE OF KANSAS CITY	4084 (-2245)

DRILLING PROGRESS

4-15		Spud		
4-16		208		
4-17		1610		
4-18		2290		
4-19	Reaming	930		
4-20	Reaming	1690		
4-21		2475		
4-22		3145		
4-23		3670		
4-24		3905		
4-25		4170		
4-26		4375		
4-27		4441	TD	D&A

BIT RECORD

Smith	DTJ	213-1892		
Smith	V1	1892-2317		
Smith	OGJ	2317-2970		
Smith	DGTJ	2970-3557		
Security	S88	3557-3820		
Smith	V2H	3820-4025		
Smith	V2H	4025-4225		
Reed	YHG	4225-4285		
Smith	L4H	4285-4386		
Smith	L4H	4386-4441	TD	

Log Analysis



COMPANY: William Gruenerwald & Associates, Inc. WELL: Perrod 1
 FIELD: Rolingson COUNTY: Pratt STATE: Kansas

DEPTH	Rw	Re	Pg	Pf	% POROSITY Density	% WATER	REMARKS
4398-4400	.06	9-17	2.68	1.00	4-6	100	Simpson
4400-4401		15			5	100	Sand
4401-4403		15-11			6-8.5	73-100	
03-04		11			5.5	100	
04-08		12-18			4.5-5.5	100	
08-10		15-8			4.5-6	100	
10-12		7-5			6-7	100	shaley
4258-60	.06	10-16	2.71	1.00	11	60-70	Miss Chert
60-64		17-22			7-9	60-80	
64-70		20-14			9-14.5	38-60	
70-74		14			13.5-16.5	40-50	
74-81		14-16			10-15	43-65	
					Φ _N		
4175-80	.06	13-17	Lime Liquid		9-11	60-75	
90-94		15			8-10	65-75	
94-4215		16-21			6-8	68-80	
4215-23		17-9			8-13	50-75	
					Φ _D		
3726-28	.05	7-20			7-12	40-60	Lansing
28-30		20-65			11-13	21-45	Chalky Lime

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Clause 7 of our General Terms and Conditions as set out in our current Price Schedule.

DATE: 4-27-69 LOCATION: Wichita 3101 ENGINEER: E. J. Schauk