

OILFIELD RESEARCH LABORATORIES

536 NORTH HIGHLAND - CHANUTE, KANSAS 66720 - PHONE (316) 431-2650

September 18, 1980

Tutcher Oil & Gas Company
Box 308
Overbrook, Kansas 66524

Gentlemen:

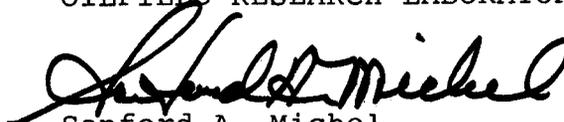
Enclosed herewith are the results of tests run on the rotary core taken from the Edwards Lease, Well No. 4, Coffey County, Kansas and submitted to our laboratory on July 24, 1980.

The core was sampled and sealed in plastic bags by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Sanford A. Michel

SAM/ks

4 c to Overbrook, Kansas
1 c to Topeka, Kansas

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GENERAL INFORMATION & SUMMARY

Company Tutcher Oil & Gas Co. Lease Edwards Well No. 4
 Location NW NE NW
 Section 3 Twp. 23S Rge. 16E County Coffey State Kansas

Elevation, Feet	-
Name of Sand	Squirrel
Top of Core	995.0
Bottom of Core	1004.1
Top of Sand	997.1
Bottom of Sand	1003.4
Total Feet of Permeable Sand	5.1

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 10	1.2	1.2
10 - 20	2.0	3.2
30 & Above	1.9	5.1

Average Permeability Millidarcys	23.4
Average Percent Porosity	18.8
Average Percent Oil Saturation	60.3
Average Percent Water Saturation	18.2
Average Oil Content, Bbls./A. Ft.	880.
Total Oil Content, Bbls./Acre	5,277.

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LOGName Tutcher Oil & Gas Co. Lease Edwards Well No. 4

<u>Depth Interval, Feet</u>	<u>Description</u>
995.0 - 997.1	Gray sandy shale.
997.1 - 998.0	Grayish brown very shaly sandstone.
998.0 - 999.0	Brown sandstone.
999.0 - 999.3	Gray sandy shale.
999.3 - 1002.2	Brown slightly calcareous sandstone.
1002.2 - 1003.4	Brown slightly shaly slightly calcareous sandstone.
1003.4 - 1004.1	Gray sandy shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Tutcher Oil & Gas Co. Lease Edwards Well No. 4

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water	Total			Ft.	Cum. Ft.		
1	997.3	19.0	46	36	82	678	Imp.	0.9	0.9	610	0.00
2	998.3	19.3	59	15	74	883	19.	1.0	1.9	883	19.00
3	999.8	17.8	63	28	91	870	15.	1.0	2.9	870	15.00
4	1000.7	19.5	59	16	75	893	31.	1.0	3.9	893	31.00
5	1001.6	19.6	68	8	76	1034	52.	0.9	4.8	931	46.80
6	1002.5	18.0	65	9	74	908	6.1	1.2	6.0	1090	7.32

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Tutcher Oil & Gas Co.	Lease	Edwards	Well No.			
	997.1 - 1003.4		23.4	119.12			
Depth Interval, Feet	997.1 - 1003.4	Feet of Core Analyzed	5.1	Permeability Capacity Ft. x Md.			
		Average Permeability, Millidarcys		Average Oil Content Bbl./A. Ft.	Average Water Saturation	Average Oil Saturation	Total Oil Content Bbls./Acre
Depth Interval, Feet	997.1 - 1003.4	6.0	18.8	60.3	18.2	880	5,277

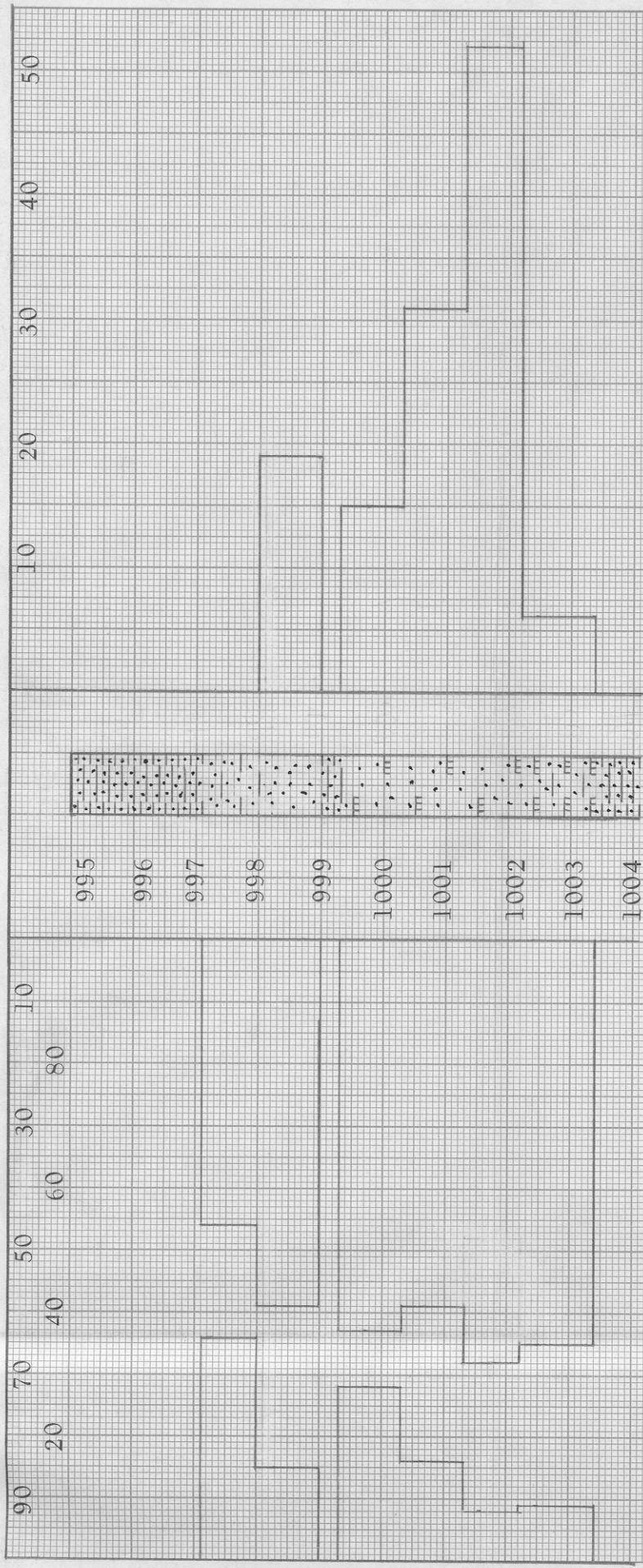
WATER SAT.,
PERCENT

→

OIL SAT.,
PERCENT

←

PERMEABILITY, IN MILLIDARCYS



KEY:



SANDSTONE



SHALY SANDSTONE



CALCAREOUS SANDSTONE



SHALY CALCAREOUS SANDSTONE



SANDY SHALE

TUTCHER OIL AND GAS COMPANY

EDWARDS LEASE

COFFEY COUNTY, KANSAS

WELL NO. 4

CALCAREOUS SANDSTONE

TUTCHER OIL AND GAS COMPANY

EDWARDS LEASE

COFFEY COUNTY, KANSAS

WELL NO. 4

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY MILLIDARCYS
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997.1 - 1003.4

6.0

18.8

60.3

18.2

523.4

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CHANUTE, KANSAS
SEPTEMBER, 1980