

OILFIELD RESEARCH LABORATORIES

536 NORTH HIGHLAND - CHANUTE, KANSAS - PHONE HE1-2650

April 24, 1968

6-25-16E

Mr. E. J. Dunigan, Jr.
Box 261
Pampa, Texas 79065

Gentlemen:

Enclosed herewith are the results of tests run on the Rotary core taken from the Earl Davidson Lease, Well No. 4, Woodson County, Kansas, and submitted to our laboratory on April 20, 1968.

This core is from a virgin territory and was sampled and the samples were sealed in tin cans by a representative of Oilfield Research Laboratories.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:bjo

3 c. - Pampa, Texas
2 c. - Chanute, Kansas

Earl Davidson 4

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company E. J. Dunigan, Jr. Lease Earl Davidson Well No. 4

Location CEL, SE, SE

Section 6 Twp. 25S Rge. 16E County Woodson State Kansas

Name of Sand - - - - - Lower Squirrel

Top of Core - - - - - 962.0

Bottom of Core - - - - - 985.0

Top of Sand - (Analyzed) - - - - - 962.0

Bottom of Sand - - - - - 977.5

Total Feet of Permeable Sand - (Analyzed) - - - - - 10.1

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 50	2.1	2.1
50 - 75	5.0	7.1
75 - 100	1.7	8.8
100 & above	1.3	10.0

Average Permeability Millidarcys - - - - - 70.2

Average Percent Porosity - - - - - 21.4

Average Percent Oil Saturation - - - - - 59.2

Average Percent Water Saturation - - - - - 17.6

Average Oil Content, Bbls./A. Ft. - - - - - 986.

Total Oil Content, Bbls./Acre - - - - - 9,954.

Average Percent Oil Recovery by Laboratory Flooding Tests - - - - -

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - -

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - - - - -

Total Calculated Oil Recovery, Bbls./Acre - - - - -

Packer Setting, Feet - - - - -

Viscosity, Centipoises @ - - - - -

A. P. I. Gravity, degrees @ 60 °F - - - - -

Elevation, Feet - - - - -

OILFIELD RESEARCH LABORATORIES

- LOG -

Company E. J. Dunigan, Jr. Lease Earl Davidson Well No. 4

<u>Depth Interval,</u>	<u>Description</u>
<u>Feet</u>	<u>_____</u>

962.0 - 962.5	- Dark brown slightly laminated shaly sandstone.
962.5 - 963.5	- Gray & brown finely laminated shaly sandstone.
963.5 - 964.5	- Brown & gray finely laminated sandy shale.
964.5 - 965.7	- Gray & brown finely laminated shaly sandstone.
965.7 - 972.0	- Dark brown slightly laminated shaly sandstone.
972.0 - 973.2	- Dark brown laminated shaly sandstone.
973.2 - 973.8	- Dark brown sandstone.
973.8 - 975.3	- Dark brown slightly carbonaceous sandstone with alternate layers of shale.
975.3 - 977.5	- Carbonaceous shaly sandstone.
977.5 - 985.0	- Sandy shale.

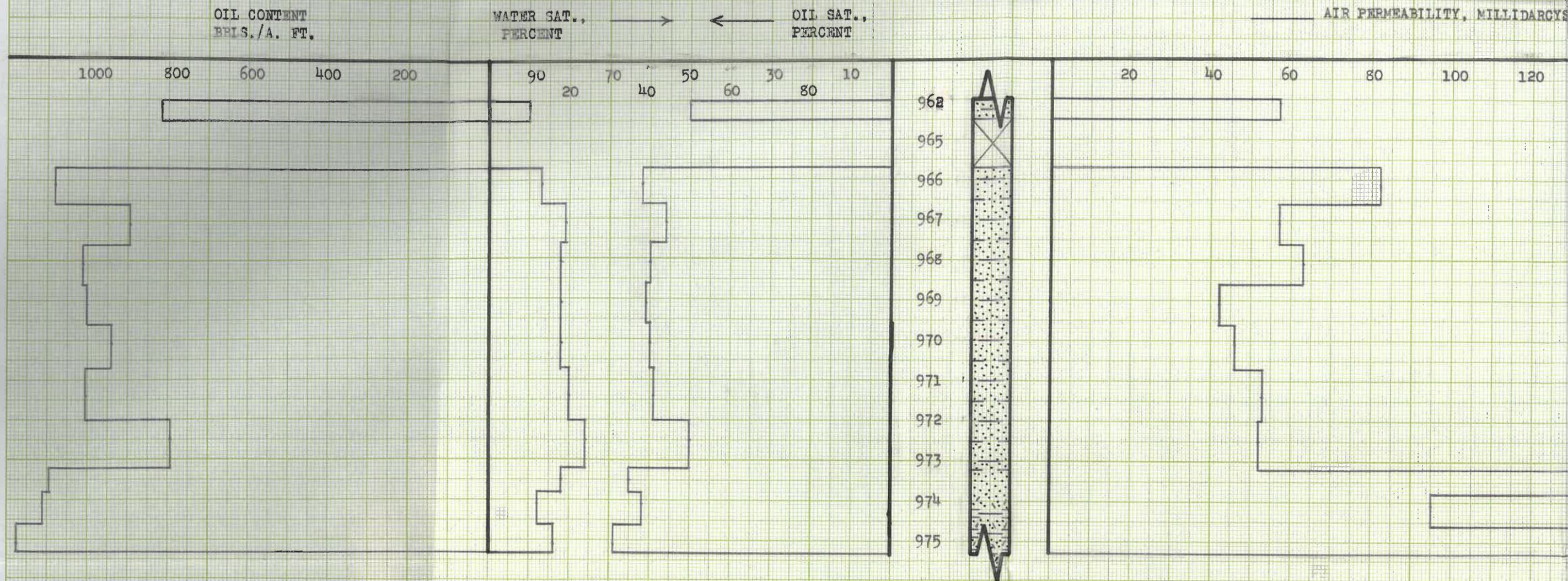
Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company E. J. Dunigan, Jr. Lease Earl Davidson 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			Ft.	Cum. Ft.		
1	962.1	21.0	50	10	815	57.	0.5	0.5	407	28.50
2	966.1	22.4	62	13	1082	82.	0.9	1.4	974	73.80
3	967.1	20.6	56	19	895	57.	1.0	2.4	895	57.00
4	968.1	21.7	60	18	1011	63.	1.0	3.4	1011	63.00
5	969.1	21.2	61	18	1003	42.	1.0	4.4	1003	42.00
6	970.1	20.2	60	18	940	46.	1.1	5.5	1034	50.60
7	971.4	22.0	59	20	1007	53.	1.3	6.8	1308	68.90
8	972.5	20.5	50	24	796	52.	1.2	8.0	955	62.40
9	973.5	21.7	65	18	1094	149.	0.6	8.6	656	89.40
10	974.1	23.1	62	12	1112	95.	0.8	9.4	889	76.00
11	975.1	22.0	69	16	1178	139.	0.7	10.1	822	97.30



KEY:
 SANDSTONE
 CARBONACEOUS SANDSTONE WITH ALTERNATE LAYERS OF SHALE
 CARBONACEOUS SHALY SANDSTONE

 SHALY SANDSTONE
 BREAK

E. J. DUNIGAN, JR.

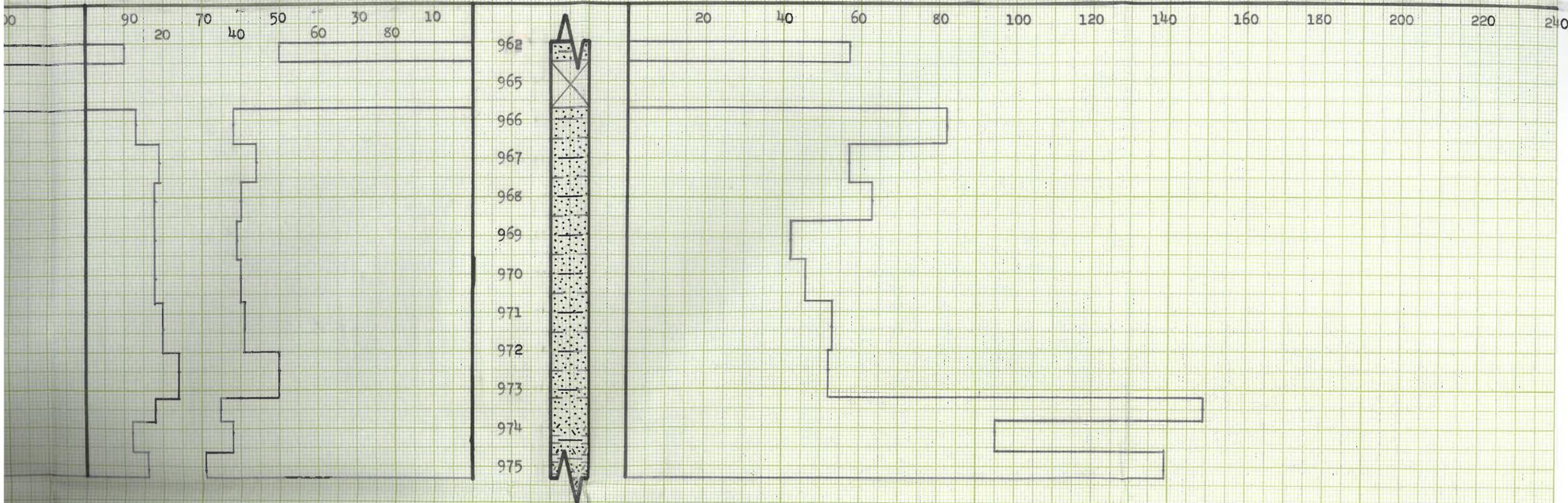
EARL DAVIDSON LEASE WELL NO. 4
 WOODSON COUNTY, KANSAS

DEPTH INTERVAL FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVG. OIL CONTENT BBLs./A. FT.	TOTAL OIL CONTENT BBLs./ACRE	AVG. AIR PERMEABILITY MILLIDARCYS
962.0 - 975.3	10.1	21.4	59.2	17.6	986.	9,954.	70.2

WATER SAT.,
PERCENT

OIL SAT.,
PERCENT

AIR PERMEABILITY, MILLIDARCYS



E LAYERS OF SHALE

SHALY SANDSTONE
BREAK

E. J. DUNIGAN, JR.

EARL DAVIDSON LEASE WELL NO. 4
WOODSON COUNTY, KANSAS

DEPTH INTERVAL FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVG. OIL CONTENT BBLs./A. FT.	TOTAL OIL CONTENT BBLs./ACRE	AVG. AIR PERMEABILITY MILLIDARCYS
962.0 - 975.3	10.1	21.4	59.2	17.6	986.	9,954.	70.2

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
APRIL, 1968

KEUFFEL & ESSER CO.
MADE IN U.S.A.

ARD © CROSS SECTION
ETER