

OILFIELD RESEARCH LABORATORIES

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

March 22, 1978

Lance E. Ballard
820 Meadowbrook Road West
Iola, Kansas 66749

Dear Mr. Ballard:

Enclosed herewith are the results of tests run on the rotary core taken from the Cummings "B" Lease, Well No. 11, Woodson County, Kansas, and submitted to our laboratory on March 15, 1978.

The core is from virgin territory and was sampled by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman
Benjamin R. Pearman

BRP:vm
5 c to Iola, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Lance E. Ballard Lease Cummings "B" Well No. 11

Location 1935' NSL & 540' WEL, NE $\frac{1}{4}$

Section 18 Twp. 25S Rge. 16E County Woodson State Kansas

Name of Sand - - - - - Lower Squirrel

Top of Core - - - - - (Received) - - - - - 978.0

Bottom of Core - - - - - (Received) - - - - - 996.0

Top of Sand - - - - - (Received) - - - - - 978.2

Bottom of Sand - - - - - 990.2

Total Feet of Permeable Sand - - - - - 12.0

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 10	4.6	4.6
10 - 30	4.0	8.6
30 - 50	1.4	10.0
50 & above	2.0	12.0

Average Permeability Millidarcys - - - - - 42.8

Average Percent Porosity - - - - - 19.6

Average Percent Oil Saturation - - - - - 68.1

Average Percent Water Saturation - - - - - 16.9

Average Oil Content, Bbls./A. Ft. - - - - - 1,048.

Total Oil Content, Bbls./Acre - - - - - 7,021.

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 - - - - -

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- LOG -

Company Lance E. Ballard Lease Cummings "B" Well No. 11

<u>Depth Interval, Feet</u>	<u>Description</u>
978.0 - 978.2	Gray sandy shale.
978.2 - 982.8	Brown sandstone.
982.8 - 983.5	Gray sandy shale.
983.5 - 984.0	Brown slightly shaly sandstone.
984.0 - 985.1	Gray sandy shale.
985.1 - 985.7	Brown sandstone.
985.7 - 989.2	Grayish brown shaly sandstone.
989.2 - 990.2	Brown sandstone.
990.2 - 994.2	Grayish brown sandy shale.
994.2 - 996.0	Gray barren sandy shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

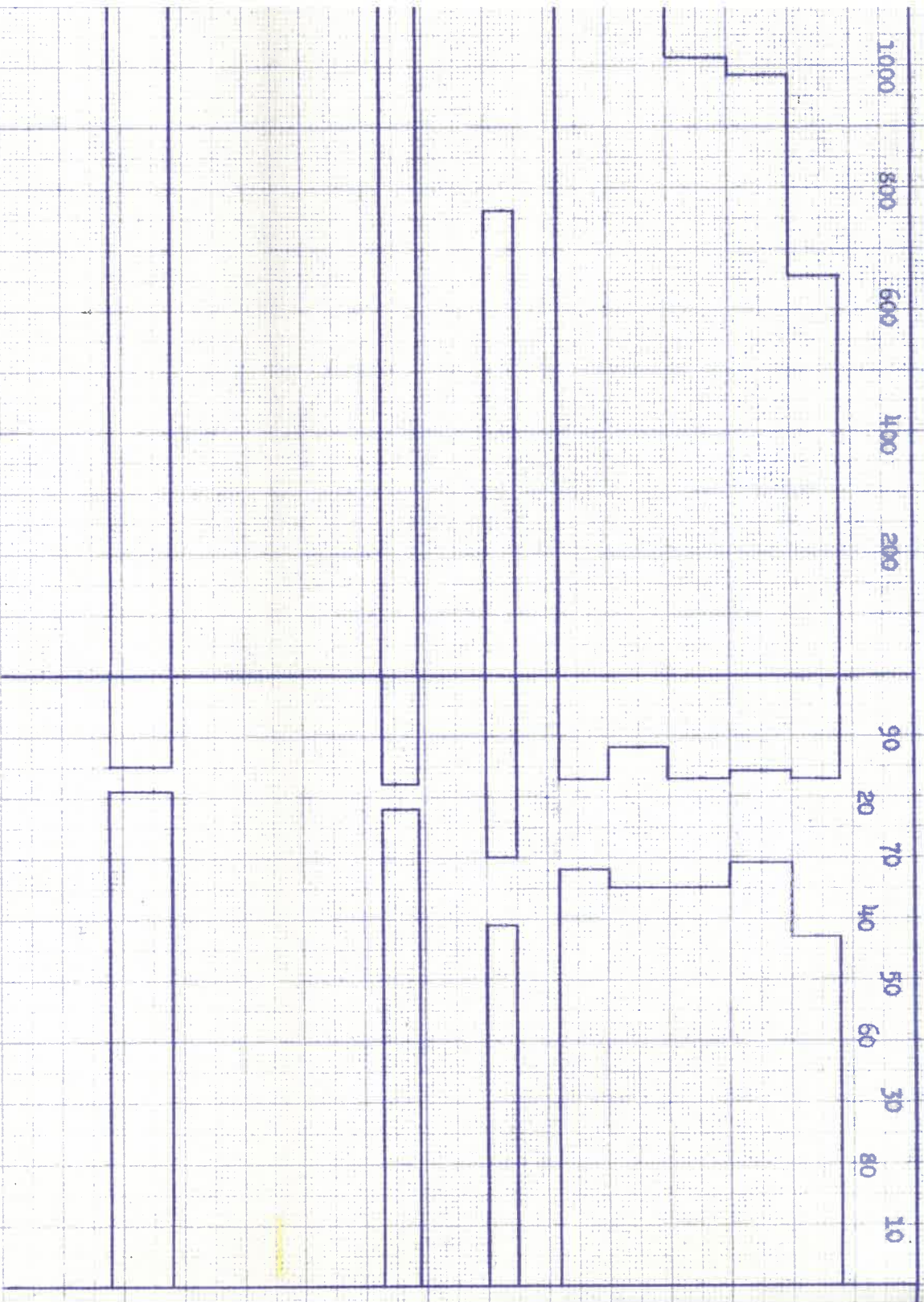
Company Lance E. Ballard Lease Cummings "B" Well No. 11

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	978.6	14.8	57	17	74	656	15.	0.8	0.8	525	12.00
2	979.5	18.3	69	16	85	982	20.	1.0	1.8	982	20.00
3	980.5	20.1	65	17	82	1,016	188.	1.0	2.8	1,016	188.00
4	981.5	23.4	65	12	77	1,183	178.	1.0	3.8	1,183	178.00
5	982.5	21.1	68	17	85	1,116	39.	0.8	4.6	893	31.20
6	983.7	16.6	59	30	89	762	9.7	0.5	5.1	381	4.85
7	985.5	18.2	78	18	96	1,104	41.	0.6	5.7	662	24.60
8	986.5						4.3	1.3	7.0		5.59
9	987.5						8.7	1.0	8.0		8.70
10	988.5						10.	1.2	9.2		12.00
11	989.5	21.9	81	15	96	1,379	26.	1.0	10.2	1,379	26.00
12	990.5						3.3	0.8	11.0		2.64
13	991.5						0.47	1.0	12.0		0.47

OIL CONTENT,
HBIS./A. TP.

WATER SAT.,
PERCENT

OIL SAT.,
PERCENT



KEY:



SANDY SHALE



LANC
CUMINGS 'B

DEEP INTERVAL,
FEET

FEET OF CORE
AVAILABLE

AVERAGE
PERCENT
POROSITY

AVG. OIL
SATURATION,
PERCENT

978.2 - 992.0

12.0

19.6

68.1

AIR PERMEABILITY, IN MILLIDARCYs

20 40 60 80 100 120 140 160 180 200 220



SEALY SANDSTONE

CLARD

WELL NO. 11

AS

1. OIL TOTAL OIL
CONTENT,
%./A. FT. RES./ACRE
AVG. AIR
PERMEABILITY,
MILLIDARCYs

248

7.021

42.8

OILFIELD RESEARCH LABORATORIES
CHANDLER, KANSAS
MARCH, 1973
V. M.