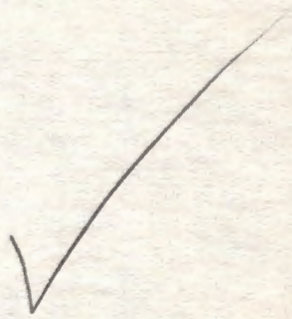


OIL FIELD RESEARCH LABORATORIES
CHANUTE, KANSAS

April 18, 1951



Berry & Eells
Newton, Kansas

Gentlemen:

Enclosed herewith is the report of the partial analysis of the Cable Tool core taken from the Reinhardt & Malson Lease, Well No. 28, Neosho County, Kansas, and submitted to our laboratory on April 13, 1951.

In calculating the recovery for the area represented by this core, an allowance was made for oil lost during coring and it was assumed that the true water saturation of the sand is 35 percent. The calculated value is only for that part of the sand section analyzed.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Clayton A. Nattier

CAN:eam
c.c. to Mr. L. C. McLaughlin

28-27-19E

REINHARDT & MALSON 28

BERRY & BILLS
CORE ANALYSIS REPORT
HEINHARDT & MALSON LEASE
WELL NO. 22
NEOHO COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORY
CHAMUTE, KANSAS
APRIL 10, 1951

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Berry & Eells Lease Reinhardt & Malson Well No. 28

Location _____

Section 28 Twp. 27S Rge. 19E County Neosho State Kansas

Name of Sand	Bartlesville
Top of Core	699.00
Bottom of Core	723.10
Top of Sand	708.95
Pay	
Bottom of Sand	713.30
Total Feet of Permeable Sand	1.70

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
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Average ^{Effective} Permeability Millidarcys	9.97
Average Percent Porosity	19.72
Average Percent Oil Saturation	45.03
Average Percent Water Saturation	-
Average Oil Content, Bbls./A. Ft.	685.
Total Oil Content, Bbls./Acre	2,192.
Average Percent Oil Recovery by Laboratory Flooding Tests	17.24
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	266.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	452.
Total Calculated Oil Recovery, Bbls./Acre	750.
Packer Setting, Feet	-
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	

OIL FIELD RESEARCH LABORATORIES
CHANUTE, KANSAS

LOG

Company Barry & Kelle Lease Reinhardt & Nelson Well No. 28

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
669.00 - 707.20	- According to log, gray shale (discarded at well).
707.20 - 708.95	- Soft gray shale.
708.95 - 709.20	- Brown fine grained micaceous sandstone.
709.20 - 711.00	- According to log, loss (probable sand).
711.00 - 711.60	- Cuttings.
711.60 - 711.85	- Brown fine grained micaceous sandstone.
711.85 - 713.30	- Dark brown fine grained micaceous sandstone.
713.30 - 714.80	- Dark fine grained micaceous carbonaceous slightly shaley sandstone.
714.80 - 723.10	- According to log, shale (discarded at well).

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SHOT RECOMMENDATION

Company Berry & Kells Lease Reinhardt & Nelson Well No. 30

<u>Depth Interval, Feet</u>	<u>Feet of Sand</u>	<u>Size of Shell Inches</u>	<u>Qts./Ft.</u>	<u>Total Quarts</u>
711.5 - 714.5	3.0	5.0	3.9	11.7

Note: Plug hole back to 715.0

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RESULTS OF SATURATION TESTS

TABLE III

Company **Harvey & Ellis** Lease **Reinhardt & Nelson** Well No. **26**

Sat. No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content, Bbls./A. Ft.	Feet of Core		Total Oil Content Bbls./Acre
			Oil	Water	Total		Ft.	Cum. Ft.	
1	709.11	15.7	49.6	-	-	604	0.25	0.25	151
2	711.91	20.4	38.2	-	-	604	0.65	0.90	393
3	712.97	21.4	40.7	-	-	677	0.80	1.70	542
4	714.36	19.2	49.5	-	-	737	1.50	3.20	1,102
							Total	- - - - -	2,192

Oil Field Research Laboratories

SUMMARY OF SATURATION TESTS

TABLE IV

Company **Derry & Hollis** Lease **Reinhardt & Nelson** Well No. **28**

Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbls./A. Ft.	Total Oil Content Bbls./Acre
708.95-714.80	3.50	19.72	45.03	-	685	2,132

Oil Field Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company Berry & Eells Lease Reinhardt & Malson Well No. 28

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation			Volume of Water Recovered cc*	Effective Permeability, Millidarcys**	Initial Fluid Production Pressure Lbs./Sq. In.
			Percent	Bbls./A. Ft.	Percent	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.			
1	709.11	15.7	49.6	604	24.3	296	25.3	66.2	308	92	3.21	15
2	711.91	20.4	38.2	604	14.1	223	24.1	65.5	381	97	10.05	15
3A	713.11	21.4	40.7	677	17.5	291	23.2	66.5	386	144	12.03	15
4	714.36	19.2	49.5	737	0.0	0	49.5	38.0	737	0	Imp.	50 ⁺

Notes: cc - cubic centimeter
 * - Volume of water recovered at the time of maximum oil recovery.
 ** - Determined by passing water through sample which still contains residual oil.
 "A" - Sample was taken from core after it was received in the laboratory

Oil Field Research Laboratories
SUMMARY OF LABORATORY FLOODING TESTS

TABLE VI

Company Berry & Kelle Lease Reinhardt & Nelson Well No. 28

Depth Interval, Feet	708.95 - 713.30
Feet of Core Analyzed	1.70
Average Percent Porosity	20.18
Average Percent Original Oil Saturation	41.12
Average Percent Oil Recovery	17.24
Average Percent Residual Oil Saturation	23.88
Average Percent Residual Water Saturation	66.12
Average Percent Total Residual Fluid Saturation	90.00
Average Original Oil Content, Bbls./A. Ft.	639.
Average Oil Recovery, Bbls./A. Ft.	110.
Average Residual Oil Content, Bbls./A. Ft.	529.
Total Original Oil Content, Bbls./Acre	1,086.
Total Oil Recovery, Bbls./Acre	192.
Total Residual Oil Content, Bbls./Acre	894.
Average Effective Permeability, Millidarcys	9.97
Average Initial Fluid Production Pressure, p.s.i.	15.0

NOTE: Only those samples which recovered oil were used in calculating the above averages.