

OIL FIELD RESEARCH LABORATORIES
CHANUTE, KANSAS

March 20, 1951

Mr. M. C. Colt
Iola, Kansas

Dear Sir:

Attached hereto are the results of effective permeability tests made on the Cable Tool core taken from the Zimmerman Lease, Well No. 4-A, Allen County, Kansas, and submitted to our laboratory on March 11, 1951

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Clayton A. Nattier

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27-24-21E

4-A

Zimmerman

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Oil Field Research Laboratories

SHOT RECOMMENDATION

Company M. C. Colt Lease Zimmerman Well No. 4-A

Depth Interval, Feet	Feet of Sand	Size of Shell Inches	Qts./Ft.	Total Quarts
724.0 - 727.0	3.0	4½	3.1	9.3

Recommended Packer Setting 714.0 feet
Note: Plug hole back to 732.0 feet

LOG

Company M. C. Colt Lease Zimmerman Well No. 4-A

<u>Depth Interval, Feet</u>	<u>Description</u>
700.00 - 701.60	- Sandy limestone.
701.60 - 701.80	- Gray sandy shale.
701.80 - 704.35	- Cuttings.
704.35 - 709.00	- Gray shale.
709.00 - 711.70	- Cuttings.
711.70 - 712.00	- Gray shale.
712.00 - 714.55	- Brown medium grained micaceous sandstone.
714.55 - 714.75	- Gray medium grained sandstone.
714.75 - 723.10	- Brown medium grained micaceous sandstone containing shale breaks.
723.10 - 724.75	- Brown fine grained micaceous sandstone.
724.75 - 725.00	- Hard brown fine grained micaceous shaley sandstone.
725.00 - 726.65	- Brown medium grained micaceous sandstone.
726.65 - 727.00	- Hard brown fine grained micaceous shaley sandstone.
727.00 - 728.80	- Brown fine grained micaceous sandstone.
728.80 - 732.45	- Dark brown fine grained micaceous sandstone.
732.45 - 733.00	- Dark fine grained micaceous carbonaceous sandstone.
733.00 - 735.50	- Brown medium grained micaceous sandstone.
735.50 - 736.00	- Dark medium grained micaceous carbonaceous sandstone.
736.00 - 736.35	- Gray sandy shale.
736.35 - 737.00	- Dark medium grained micaceous carbonaceous sandstone.
737.00 - 737.37	- Gray sandy shale.
737.37 - 737.50	- Gray shale.
737.50 - 737.87	- Dark fine grained micaceous carbonaceous sandstone.
737.87 - 739.00	- Gray shale.

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RESULTS OF EFFECTIVE PERMEABILITY TESTS

TABLE I

Company M. C. Colt Lease Zimmerman Well No. 4-A

Sample No.	Depth Ft.	Effective Permeability Millidarcys	Feet of Sand	
			Ft.	Cum. Ft.
1	713.00	0.515	1.40	1.40
2	713.85	13.85	1.15	2.55
3	715.05	1.15	0.85	3.40
4	716.10	30.75	0.90	4.30
5	716.95	10.90	1.00	5.30
6	718.05	32.70	1.00	6.30
7	719.00	14.90	1.05	7.35
8	720.10	5.78	1.00	8.35
9	721.07	32.05	0.75	9.10
10	721.90	14.02	0.66	9.76
11	722.90	31.19	0.88	10.64
12	724.03	1.38	1.65	12.29
13	724.90	Imp.	0.25	12.54
14	725.70	3.99	1.65	14.19
15	726.90	Imp.	0.35	14.54
16	727.90	1.10	1.80	16.34
17	729.08	16.89	0.70	17.04
18	729.95	11.95	1.00	18.04
19	731.02	8.40	0.95	18.99
20	731.90	7.13	1.00	19.99
21	732.96	0.437	0.55	20.54
22	734.00	0.520	1.45	21.99
23	734.91	Imp.	1.05	23.04
24	735.85	Imp.	0.50	23.54
25	736.90	Imp.	0.65	24.19
26	737.80	Imp.	0.37	24.56

SUMMARY OF PERMEABILITY TESTS

TABLE II

Company <u>M. C. Colt</u>	Lease <u>Zimmerman</u>	Well No. <u>4-A</u>
<u>Depth Interval, Feet</u>	<u>Feet of Core Analyzed</u>	<u>Average Effective Permeability Millidarcys</u>
712.00 - 723.10	10.64	16.06
723.10 - 737.87	10.75	4.72
714.00 - 732.00	16.94	12.30