

OIL FIELD RESEARCH LABORATORIES
CHANUTE, KANSAS

March 1, 1952

Mr. M. C. Colt
Iola, Kansas

Dear Sir:

Attached hereto are the results of effective permeability tests made on the 2 $\frac{1}{2}$ " Rotary core taken from the Henninger "A" Lease, Well No. WW-14, Allen County, Kansas, and submitted to our laboratory on February 21, 1952.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:pc
c.c.

3-24-21E

WW-14

Henninger "A"

TWP 24 S RGE 21 E SEC 3

Oil Field Research Laboratories

SHOT RECOMMENDATION

Company M.C. Colt - M.T. Project Lease Henninger "A" Well No. NW-14

<u>Depth Interval, Feet</u>	<u>Feet of Sand</u>	<u>Size of Shell Inches</u>	<u>Qts./Ft.</u>	<u>Total Quarts</u>
609.5 - 614.5	5.0	3	1½	7.5
614.5 - 648.0	33.5	3½	2	67.0
Total	38.5			74.5

Recommended Packer Setting - 604.5 feet.

Note: Plug hole back to - - -649.0 feet.

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LOG

Company M.C. COLT - M.T. Project Lease Henninger "A" Well No. WW-14

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
578.00 - 593.10	- Gray shale.
593.10 - 593.55	- Hard light brown fine grained micaceous shaley sandstone.
593.55 - 596.30	- Gray shale.
596.30 - 596.50	- Light brown fine grained micaceous slightly shaley sandstone.
596.50 - 597.55	- Finely laminated sandy shale.
597.55 - 599.00	- Light brown fine grained micaceous sandstone.
599.00 - 599.70	- Gray shale.
599.70 - 599.90	- Light brown fine grained micaceous shaley sandstone.
599.90 - 600.10	- Laminated shale and sandstone.
600.10 - 600.30	- Light brown fine grained micaceous sandstone.
600.30 - 600.45	- Gray shale.
600.45 - 602.25	- Brown fine grained micaceous sandstone.
602.25 - 602.85	- Brown fine grained laminated micaceous shaley sandstone.
602.85 - 603.00	- Gray sandy shale.
603.00 - 604.00	- Brown fine grained micaceous sandstone.
604.00 - 604.55	- Brown fine grained micaceous shaley sandstone.
604.55 - 610.10	- Brown fine grained micaceous sandstone.
610.10 - 613.40	- Dark brown fine grained micaceous sandstone.
613.40 - 614.00	- Gray shale.
614.00 - 617.75	- Dark brown fine grained micaceous sandstone.
617.75 - 618.35	- Gray sandy shale.
618.35 - 618.60	- Dark brown fine grained slightly conglomeratic micaceous sandstone.
618.60 - 621.05	- Gray sandy shale.

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- 621.05 - 622.23 - Finely laminated sandy shale containing a sand streak.
622.23 - 623.00 - Brown fine grained micaceous shaley sandstone.
623.00 - 623.15 - Finely laminated sandy shale.
623.15 - 623.60 - Dark brown fine grained micaceous sandstone.
623.60 - 625.40 - Finely laminated sandy shale.
625.40 - 626.00 - Dark brown fine grained micaceous sandstone.
626.00 - 626.50 - Brown fine grained micaceous carbonaceous sandstone.
626.50 - 627.10 - Brown fine grained micaceous sandstone.
627.10 - 628.10 - Dark fine grained micaceous sandstone.
628.10 - 629.00 - Finely laminated shaley sandstone.
629.00 - 636.00 - Loss.
636.00 - 636.15 - Dark fine grained micaceous sandstone.
636.15 - 637.45 - Gray sandy shale.
637.45 - 637.80 - Dark fine grained micaceous sandstone.
637.80 - 638.10 - Laminated sandstone and shale.
638.10 - 638.40 - Dark fine grained micaceous shaley sandstone.
638.40 - 641.20 - Finely laminated sandy shale.
641.20 - 641.55 - Dark brown fine grained slightly conglomeratic sandstone.
641.55 - 642.35 - Dark fine grained micaceous conglomeratic sandstone.
642.35 - 642.55 - Dark fine grained micaceous conglomeratic carbonaceous sandstone.
642.55 - 643.65 - Gray shale.
643.65 - 644.55 - Finely laminated shaley sandstone.
644.55 - 646.60 - Dark brown fine grained slightly conglomeratic sandstone.
646.60 - 647.15 - Dark fine grained micaceous sandstone.
647.15 - 648.75 - Finely laminated micaceous shaley sandstone.
648.75 - 648.90 - Dark brown fine grained micaceous sandstone.
648.90 - 649.25 - Finely laminated micaceous shaley sandstone.
649.25 - 651.40 - Dark fine grained micaceous carbonaceous sandstone.

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- 651.40 - 654.00 - Dark fine grained micaceous conglomeratic sandstone.
- 654.00 - 655.70 - Dark fine grained micaceous sandstone.
- 655.70 - 656.20 - Dark fine grained micaceous conglomeratic sandstone.
- 656.20 - 657.00 - Dark fine grained micaceous sandstone.
- 657.00 - 657.70 - Dark fine grained micaceous conglomeratic sandstone.
- 657.70 - 658.10 - Dark fine grained micaceous shaley sandstone.
- 658.10 - 658.50 - Gray shale.
- 658.50 - 660.00 - Loss.

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RESULTS OF EFFECTIVE PERMEABILITY TESTS

TABLE I A

Company M.C. Colt - M.T. Project Lease Henninger "A" Well No. WW-14

Sample No.	Depth Ft.	Effective Permeability Millidarcys	Feet of Sand Ft.	Cum. Ft.
1	596.35	0.166	0.20	0.20
2	597.82	6.62	0.70	0.90
3	598.70	2.56	0.75	1.65
4	599.83	0.133	0.20	1.85
5	600.64	19.40	0.65	2.50
6	601.60	38.43	1.15	3.65
7	603.14	10.00	1.00	4.65
8	604.62	6.16	0.55	5.20
9	605.47	2.43	0.90	6.10
10	606.49	8.50	0.90	7.00
11	607.40	11.80	1.05	8.05
12	608.50	9.86	1.05	9.10
13	609.50	6.40	1.10	10.20
14	610.45	3.20	0.85	11.05
15	611.45	5.91	0.95	12.00
16	612.46	6.90	0.90	12.90
17	613.22	16.40	0.60	13.50
18	614.12	20.00	0.60	14.10
19	615.02	2.72	1.00	15.10
20	616.16	7.10	0.90	16.00
21	616.95	0.723	0.80	16.80
22	617.67	3.34	0.45	17.25
23	618.56	5.65	0.25	17.50
24	621.45	3.52	0.10	17.60
25	622.34	Imp.	0.77	18.37
26	623.56	1.88	0.45	18.82
27	625.60	4.68	0.60	19.42
28	626.85	2.16	0.60	20.02
29	628.00	Imp.	1.00	21.02
30	636.08	Imp.	0.15	21.17
31	637.75	2.22	0.35	21.52
32	641.34	13.30	0.35	21.87
33	642.40	4.41	0.20	22.07
34	644.84	3.83	0.95	23.02
35	646.05	1.04	1.10	24.12
36	647.10	Imp.	0.55	24.67

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RESULTS OF EFFECTIVE PERMEABILITY TESTS
(Continued)

TABLE IA

<u>Sample No.</u>	<u>Depth Ft.</u>	<u>Effective Permeability Millidarcys</u>	<u>Feet of Sand</u>	
			<u>Ft.</u>	<u>Cum. Ft.</u>
37	648.85	0.404	0.15	24.82
38	649.90	Imp.	1.05	25.87
39	650.84	Imp.	1.10	26.97
40	652.00	Imp.	1.00	27.97
41	652.84	Imp.	1.60	29.57
42	654.20	0.167	0.70	30.27
43	655.20	0.340	1.00	31.27
44	656.10	Imp.	0.50	31.77
45	657.94	Imp.	0.40	32.17

SUMMARY OF PERMEABILITY TESTS

TABLE II A

Company M.C. Colt - M.T. Project Lease Henninger "A" Well No. WW-14

<u>Depth Interval, Feet</u>	<u>Feet of Core Analyzed</u>	<u>Average Effective Permeability Millidarcys</u>
596.30 - 614.60	14.10	10.84
614.60 - 655.70	9.95	2.96
604.50 - 649.00	17.70	6.12