

OIL FIELD RESEARCH LABORATORIES
CHANUTE, KANSAS

March 8, 1952

Mr. M. C. Colt
Iola, Kansas

Dear Sir:

Attached hereto are the results of effective permeability tests made on the 2 $\frac{1}{8}$ " Rotary core taken from the Henninger "A" Lease, Well No. WW-15, Allen County, Kansas, and submitted to our laboratory on February 28, 1952.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:pc
c.c.

3-24-21E

Henninger "A" WW-15

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. WW-15

<u>Depth Interval, Feet</u>	<u>Feet of Sand</u>	<u>Size of Shell Inches</u>	<u>Qts./Ft.</u>	<u>Total Quarts</u>
608.0 - 628.0	20.0	4.0	2.5	50.0

Recommended Packer Setting - 603.0 feet.

Note: Plug hole back to - - 629.0 feet.

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LOG

Company M.C. Colt - M.T. Project Lease Henninger "A" Well No. WW-15

<u>Depth Interval, Feet</u>	<u>Description</u>
565.00 - 572.30	- Soft gray shale.
572.30 - 576.60	- Gray shale.
576.60 - 577.80	- Gray sandy shale.
577.80 - 581.20	- Gray shale.
581.20 - 581.45	- Light brown fine grained micaceous shaley sandstone.
581.45 - 582.45	- Gray shale.
582.45 - 583.05	- Light brown fine grained micaceous sandstone.
583.05 - 583.70	- Gray shale.
583.70 - 591.78	- Light brown fine grained micaceous sandstone containing three gray shale breaks.
591.78 - 592.21	- Gray shale.
592.21 - 594.00	- Light brown fine grained micaceous sandstone.
594.00 - 595.65	- Light brown fine grained slightly laminated micaceous shaley sandstone.
595.65 - 598.00	- Light brown fine grained micaceous slightly shaley sandstone.
598.00 - 602.00	- Loss.
602.00 - 602.15	- Light brown fine grained micaceous slightly shaley sandstone.
602.15 - 603.50	- Brown fine grained micaceous sandstone.
603.50 - 603.70	- Brown fine grained slightly laminated micaceous shaley sandstone.
603.70 - 605.13	- Brown fine grained micaceous sandstone.
605.13 - 606.45	- Dark brown fine grained micaceous sandstone.
606.45 - 607.30	- Light brown fine grained finely laminated micaceous shaley sandstone.
607.30 - 608.00	- Brown fine grained slightly laminated micaceous shaley sandstone.

- 608.00 - 609.30 - Brown fine grained finely laminated micaceous shaley sandstone.
- 609.30 - 611.80 - Dark brown fine grained micaceous sandstone.
- 611.80 - 611.90 - Laminated sandy shale.
- 611.90 - 612.10 - Brown fine grained finely laminated micaceous shaley sandstone.
- 612.10 - 614.00 - Dark brown fine grained micaceous sandstone.
- 614.00 - 614.10 - Laminated sandy shale.
- 614.10 - 614.55 - Dark brown fine grained micaceous sandstone.
- 614.55 - 614.65 - Finely laminated micaceous carbonaceous sandstone.
- 614.65 - 617.90 - Dark brown fine grained micaceous sandstone.
- 617.90 - 618.35 - Gray shale.
- 618.35 - 618.60 - Dark brown fine grained micaceous sandstone.
- 618.60 - 618.95 - Gray sandy shale.
- 618.95 - 619.20 - Brown fine grained micaceous shaley sandstone.
- 619.20 - 620.00 - Laminated sandstone and shale.
- 620.00 - 620.45 - Brown fine grained slightly laminated micaceous shaley sandstone.
- 620.45 - 621.10 - Dark brown fine grained micaceous sandstone.
- 621.10 - 621.50 - Dark fine grained micaceous carbonaceous sandstone.
- 621.50 - 621.70 - Dark brown fine grained micaceous sandstone.
- 621.70 - 622.05 - Gray sandy shale.
- 622.05 - 622.50 - Dark fine grained micaceous carbonaceous sandstone.
- 622.50 - 622.75 - Laminated sandstone and shale.
- 622.75 - 623.00 - Dark fine grained micaceous carbonaceous slightly conglomeratic sandstone.
- 623.00 - 623.35 - Laminated sandy shale.
- 623.35 - 624.62 - Finely laminated shale and sandstone.
- 624.62 - 625.00 - Dark brown fine grained micaceous conglomeratic sandstone.
- 625.00 - 626.00 - Laminated sandy shale.

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- 626.00 - 626.60 - Laminated sandstone and shale.
- 626.60 - 626.95 - Brown fine grained laminated micaceous shaley sandstone.
- 626.95 - 627.30 - Laminated shale and sandstone.
- 627.30 - 629.55 - Dark fine grained micaceous sandstone.
- 629.55 - 632.50 - Dark fine grained micaceous carbonaceous sandstone.
- 632.50 - 633.20 - Dark fine grained micaceous carbonaceous slightly
conglomeratic sandstone.
- 633.20 - 638.50 - Dark fine grained micaceous sandstone.
- 638.50 - 641.30 - Gray shale.
- 641.30 - 641.97 - Limestone.
- 641.97 - 643.25 - Gray shale.
- 643.25 - 650.00 - Dark gray shale.

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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-15

Sample No.	Depth Ft.	Effective Permeability Millidarcys	Feet of Sand Ft.	Cum. Ft.
1	582.70	8.07	0.60	0.60
2	583.84	21.20	1.00	1.60
3	584.87	19.05	1.00	2.60
4	588.70	14.45	1.00	3.60
5	590.95	8.53	1.00	4.60
6	592.30	11.92	1.09	5.69
7	594.25	7.60	1.30	6.99
8	594.90	5.64	1.05	8.04
9	595.72	3.63	0.70	8.74
10	596.94	9.25	0.90	9.64
11	597.57	1.68	0.75	10.39
12	602.07	6.10	0.15	10.54
13	603.25	4.74	1.35	11.89
14	604.18	1.12	1.43	13.32
15	606.27	5.42	1.32	14.64
16	608.77	0.169	1.30	15.94
17	609.70	7.16	0.85	16.79
18	610.60	2.27	0.95	17.74
19	611.75	0.560	0.70	18.44
20	612.58	3.20	0.95	19.39
21	613.55	1.53	0.95	20.34
23	615.20	3.30	1.05	21.39
24	616.18	0.370	0.95	22.34
25	617.15	10.39	0.75	23.09
26	617.65	1.90	0.50	23.59
27	619.10	0.526	0.25	23.84
28	620.34	0.800	0.45	24.29
29	621.27	Imp.	0.40	24.69
30	622.17	Imp.	0.45	25.14
31	622.89	Imp.	0.25	25.39
32	623.90	Imp.	1.27	26.66
33	624.77	0.880	0.38	27.04
34	626.80	Imp.	0.35	27.39
35	627.72	0.152	0.80	28.19
36	628.52	Imp.	0.90	29.09
37	629.48	Imp.	1.00	30.09
38	630.48	Imp.	1.00	31.09
39	631.50	Imp.	1.50	32.59
40	632.78	Imp.	0.70	33.29
41	633.75	0.204	1.00	34.29
42	634.75	Imp.	1.00	35.29
43	635.73	Imp.	1.00	36.29
44	636.72	Imp.	1.00	37.29
45	637.73	Imp.	1.30	38.59

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SUMMARY OF PERMEABILITY & POROSITY TESTS

TABLE II A

Company	M. C. Colt - M. T. Project		Lease	Henninger "A"		Well No.	WW-15
Depth Interval, Feet	Feet of Core Analyzed	Average Air Permeability, Millidarcys	Average Effective Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Porosity		
582.45 - 598.00	10.39	-	10.49	-	-		
602.00 - 617.90	13.20	-	3.18	-	-		
618.95 - 638.50	2.88	-	0.400	-	-		
603.00 - 629.00	14.08	-	2.70	-	-		