

OILFIELD RESEARCH LABORATORIES

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

December 3, 1979

Jim's Water Service, Incorporated
P.O. Box 3076
Inglewood, Colorado 80111

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Freeman Lease, Well No. 18, Bourbon County, Kansas, and submitted to our laboratory on November 19, 1979.

The core was sampled and sealed in plastic bags by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Benjamin R. Pearman

BRP/tem
4 c to Inglewood, Colorado
1 c to Erie, Kansas

OILFIELD RESEARCH LABORATORIES

LOG

Name Jim's Water Service, Inc. Lease Freeman Well No. 18

<u>Depth Interval, Feet</u>	<u>Description</u>
609.0 - 610.8	Light brown and gray laminated sandstone and shale.
610.8 - 613.6	Light brown sandstone.
613.6 - 619.5	Brown and gray laminated sandstone and shale, 90% sandstone.
619.5 - 620.0	Gray conglomeratic carbonaceous sandstone.
620.0 - 621.0	Gray laminated shale and sandstone.

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Jim's Water Service, Incorporated Lease Freeman

Well No. 18

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	609.5	14.4	40	49	89	447	1.4	1.0	447	1.40	
2	610.5	18.9	24	46	70	352	6.9	0.8	282	5.52	
3	611.5	18.7	21	56	77	305	26.	1.2	366	31.20	
4	612.5	22.2	24	47	71	413	51.	1.0	413	51.00	
5	613.5	14.9	18	56	74	208	103.	0.6	125	61.80	
6	614.5	18.3	43	38	81	611	18.	1.4	855	25.20	
7	615.5	19.3	55	24	79	824	42.	1.0	824	42.00	
8	616.5	20.6	40	31	71	639	68.	1.0	639	68.00	
9	617.5	20.5	35	33	68	557	77.	1.0	557	77.00	
10	618.5	17.2	41	31	72	547	8.5	1.5	821	12.75	

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Jim's Water Service, Incorporated Lease Freeman Well No. 18

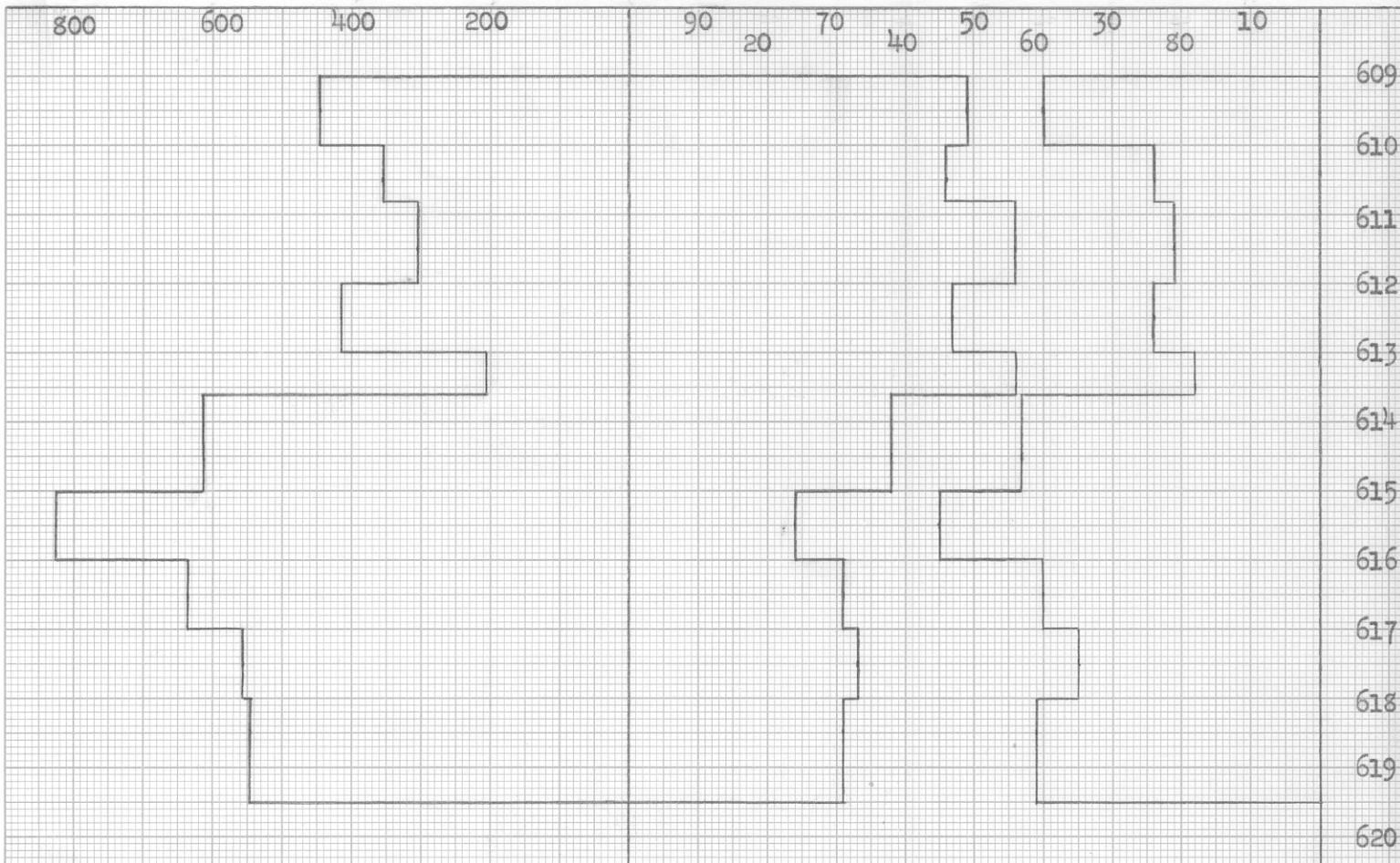
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
609.0 - 619.5	10.5	35.8	375.87	35.3	40.1	508	5,329

Depth Interval, Feet: 609.0 - 619.5
 Feet of Core Analyzed: 10.5
 Average Permeability, Millidarcys: 35.8
 Permeability Capacity Ft. x Md.: 375.87
 Average Percent Oil Saturation: 35.3
 Average Percent Water Saturation: 40.1
 Average Oil Content Bbl./A. Ft.: 508
 Total Oil Content Bbls./Acre: 5,329

OIL CONTENT
BBLs./A. FT.


WATER SAT.,
PERCENT

OIL SAT.,
PERCENT



KEY:

 SANDSTONE

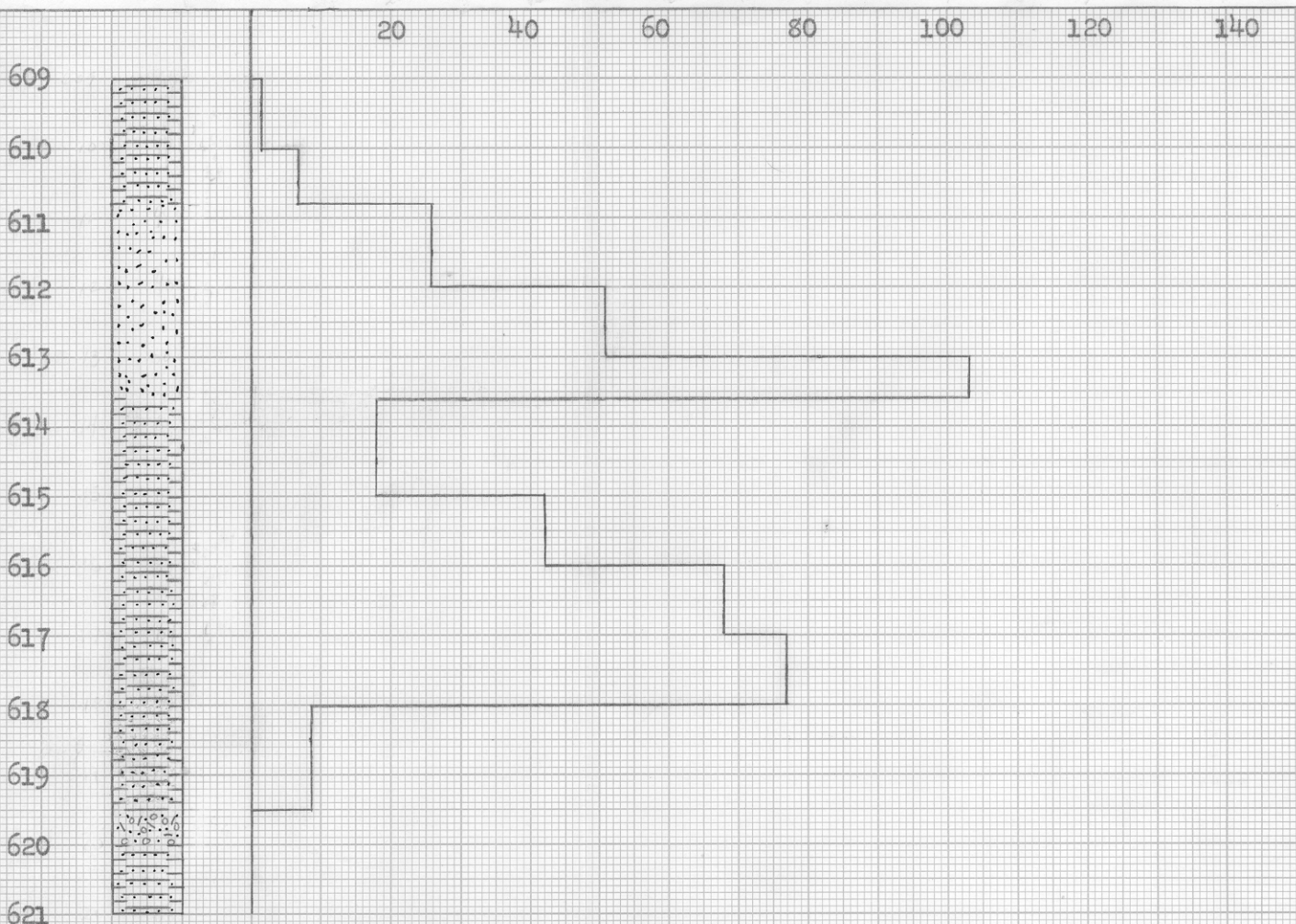
 CONGLOMERATE

JIM'S WATER

FREEMAN LEASE

BOURBON COUNTY

DEPTH INTERVAL FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. SATURA PERCENT
609.0 - 619.5	10.5	18.6	35.3	40.



CONGLOMERATIC CARBONACEOUS SANDSTONE

LAMINATED SANDSTONE AND SHALE

R SERVICE, INC.

WELL NO. 18

COUNTY, KANSAS

AVG. WATER SATURATION PERCENT	AVG. OIL CONTENT BBLs./A.FT.	TOTAL OIL CONTENT BBLs./ACRE	AVG. AIR PERMEABILITY, MILLIDARCYS
40.1	508	5,329	35.8

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 CHANUTE, KANSAS
 DECEMBER, 1979. HR