

# OILFIELD RESEARCH LABORATORIES

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

May 20, 1981

Petroleum Production Corporation  
107 Crestview Drive  
Paola, Kansas 66071

Gentlemen:

Enclosed herewith are the results of tests run on the rotary cores taken from the Grandon Lease, Well No.8, located in Miami County, Kansas.

The cores were sampled and sealed in plastic bags by a representative of the client and were submitted to our laboratory on May 13, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

A handwritten signature in cursive script, reading "Sanford A. Michel".

Sanford A. Michel

SAM/kas

5 c to Paola, Kansas  
1 c to Yates Center, Kansas

- REGISTERED ENGINEERS -

CORE ANALYSIS - WATER ANALYSIS - REPRESSURING ENGINEERING - SURVEYING & MAPPING - PROPERTY EVALUATION & OPERATION

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## GENERAL INFORMATION & SUMMARY

Company Petroleum Production Corporation ~~Lease~~ Grandon Well No. 8  
 Location SW $\frac{1}{4}$   
 Section 9 Twp. 17S Rgs. 22E County Miami State Kansas

Elevation, Feet . . . . .		
Name of Sand . . . . .	Peru	Squirrel
Top of Core . . . . .	453.0	606.0
Bottom of Core . . . . .	460.8	630.0
Top of Sand . . . . .	453.0	606.0
Bottom of Sand . . . . .	460.8	623.7
Total Feet of Permeable Sand . . . . .	7.8	12.7

**Distribution of Permeable Sand:  
Permeability Range  
Millidarcys**

	Feet	Cum. Ft.
	<u>PERU SAND</u>	
0 - 3	1.1	1.1
60 - 65	0.9	2.0
100 - 200	4.8	6.8
270 - 275	1.0	7.8
	<u>UPPER SQUIRREL SAND</u>	
0 - 8	5.8	5.8
8 - 16	2.7	8.5
30 - 55	4.2	12.7

Average Permeability Millidarcys . . . . .	139.3	17.6
Average Percent Porosity . . . . .	20.4	16.2
Average Percent Oil Saturation . . . . .	48.0	35.8
Average Percent Water Saturation . . . . .	43.7	52.2
Average Oil Content, Bbls./A. Ft. . . . .	778.	467.
Total Oil Content, Bbls./Acre . . . . .	6,070.	6,867.

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LOGName Petroleum Production Corporation Lease Grandon Well No. 8

<u>Depth Interval, Feet</u>	<u>Description</u>
	<u>PERU SAND</u>
453.0 - 454.1	Grayish light brown slightly calcareous shaly sandstone.
454.1 - 456.0	Light brown slightly calcareous sandstone.
456.0 - 460.8	Dark brown slightly calcareous slightly carbonaceous sandstone.
	<u>UPPER SQUIRREL SAND</u>
606.0 - 607.0	Grayish light brown slightly calcareous shaly sandstone.
607.0 - 610.2	Light brown slightly calcareous sandstone.
610.2 - 612.0	Grayish light brown slightly calcareous shaly sandstone.
612.0 - 614.0	Dark brown slightly calcareous sandstone.
614.0 - 617.0	Grayish light brown slightly calcareous shaly sandstone.
618.0 - 619.0	Grayish light brown slightly calcareous shaly sandstone.
620.0 - 621.0	Grayish light brown slightly calcareous shaly sandstone.
622.0 - 623.7	Gray and brown laminated slightly calcareous shale and sandstone.
623.7 - 630.0	Gray shale.

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## RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Petroleum Production Corporation Lease Grandon Well No. 8

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation		Oil Content Bbbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water			Ft.	Cum. Ft.		
1	453.6	15.1	31	60	PERU SAND	2.1	1.1	399	2.31	
2	454.6	18.3	32	62	363	60.	0.9	409	54.00	
3	455.4	19.1	34	62	454	101.	1.0	504	101.00	
4	456.5	23.4	50	44	504	188.	1.0	908	188.00	
5	457.6	23.8	56	33	908	273.	1.0	1034	273.00	
6	458.6	22.6	59	22	1034	176.	1.0	1035	176.00	
7	459.5	19.0	67	30	988	160.	1.0	988	160.00	
8	460.5	22.4	57	35	991	165.	0.8	793	132.00	
<u>UPPER SQUIRREL SAND</u>										
9	606.4	16.0	47	43	583	1.0	1.0	583	1.00	
10	607.4	15.9	37	57	456	12.	1.0	456	12.00	
11	608.6	19.1	43	48	637	52.	1.0	637	52.00	
12	609.8	17.9	43	46	597	32.	1.2	716	38.40	
13	610.7	12.6	13	84	127	0.30	0.8	102	0.24	
14	611.6	15.0	41	53	477	5.2	1.0	477	5.20	
15	612.6	19.5	36	40	545	52.	1.0	545	52.00	
16	613.4	19.9	45	30	695	38.	1.0	695	38.00	
17	614.5	16.1	20	64	250	8.0	1.0	250	8.00	
18	615.4	15.8	52	42	637	2.5	1.0	637	2.50	
19	616.6	16.4	20	73	255	2.8	1.0	255	2.80	
20	618.6	13.0	30	61	303	Imp.	1.0	303	0.00	
21	620.5	8.4	18	76	117	Imp.	1.0	117	0.00	
22	622.5	16.8	47	36	613	2.3	1.0	613	2.30	
23	623.4	21.6	41	28	687	13.	0.7	481	9.10	

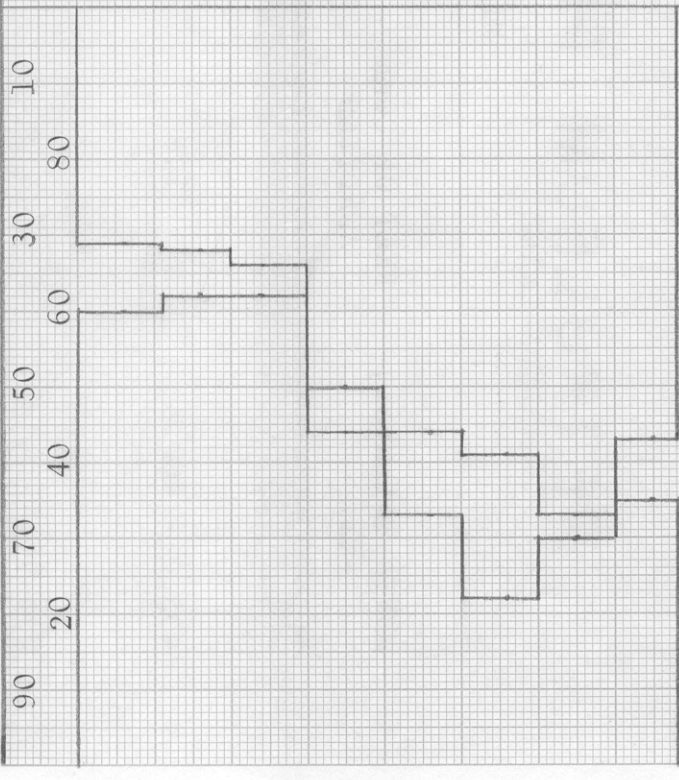
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## SUMMARY OF PERMEABILITY & SATURATION TESTS

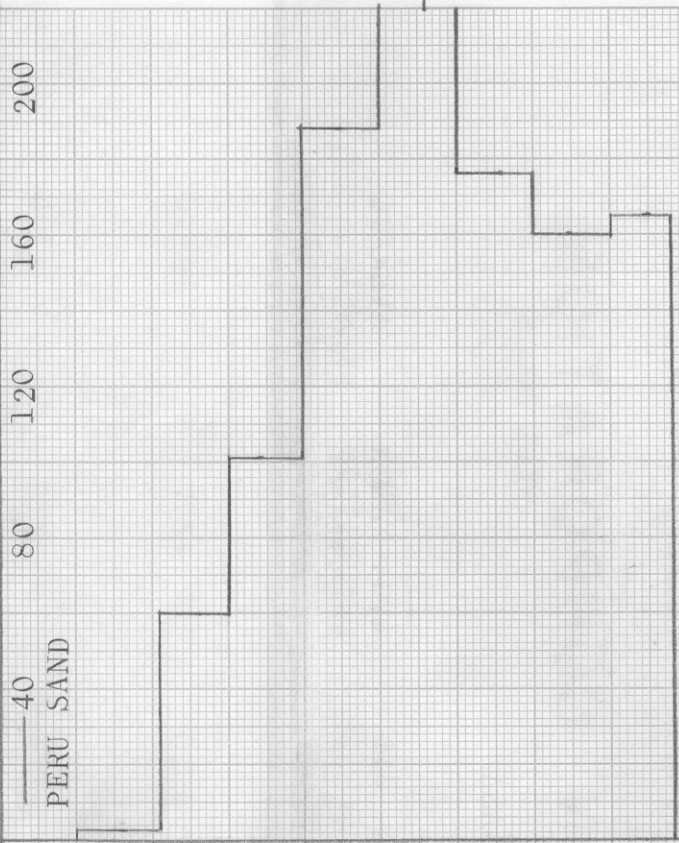
TABLE III

Company	Petroleum Production Corporation		Lease	Grandon	Well No.	8
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Permeability, Millidarcys	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
<u>PERU SAND</u>						
453.0 - 460.8	7.8	139.3	1086.31			
<u>UPPER SQUIRREL SAND</u>						
606.0 - 623.7	12.7	17.6	223.54			
<u>PERU SAND</u>						
453.0 - 460.8	7.8	20.4	778	48.0	43.7	6,070
<u>UPPER SQUIRREL SAND</u>						
606.0 - 623.7	14.7	16.2	467	35.8	52.2	6,867

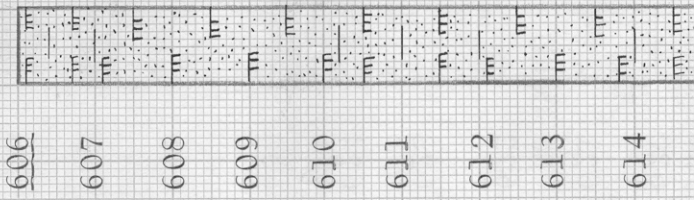
WATER SAT., PERCENT → ← OIL SAT., PERCENT



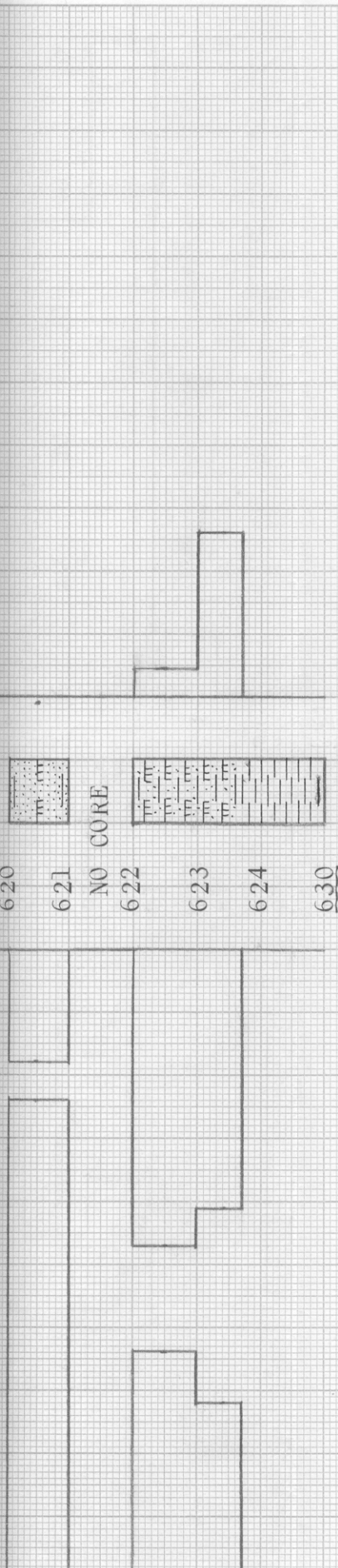
PERMEABILITY, IN MILLIDARCYS



NO CORE



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KEY:

SHALE

CALCAREOUS SANDSTONE

SHALY CALCAREOUS SANDSTONE

CARBONACEOUS CALCAREOUS SANDSTONE

LAMINATED CALCAREOUS SANDSTONE AND SHALE

# PETROLEUM PRODUCTION CORPORATION

GRANDON LEASE  
MIAMI COUNTY, KANSAS

WELL NO. 8

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE		AVG. OIL		AVG. WATER		AVERAGE	
		POROSITY PERCENT	SATURATION PERCENT	SATURATION PERCENT	SATURATION PERCENT	SATURATION PERCENT	PERMEABILITY, MILLIDARCYS		

453.0 - 460.8	7.8	20.4	48.0	43.7	139.3
PERU SAND					
UPPER SQUIRREL SAND					
606.0 - 623.7	14.7	16.2	35.8	52.2	17.6

OILFIELD RESEARCH LABORATORIES  
CHANUTE, KANSAS  
MAY, 1981  
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