

19-16-22E ✓

OILFIELD RESEARCH LABORATORIES

536 NORTH HIGHLAND - CHANUTE, KANSAS - PHONE HE1-2650

October 30, 1968

Partners Production Company
Box 192
Wellsville, Kansas 66092

Gentlemen:

Enclosed herewith are the results of tests run on the Rotary core taken from the Tarr Lease, Well No. 3, Miami County, Kansas, and submitted to our laboratory on October 26, 1968.

This core is from a virgin territory and was sampled and submitted to our laboratory by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES



Carl L. Pate

CLP:dp

5 c. - Wellsville, Kansas

- REGISTERED ENGINEERS -

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

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GENERAL INFORMATION & SUMMARY

Company Partners Production Company Lease Tarr Well No. 3

Location SE/4

Section 19 Twp. 16S Rge. 22E County Miami State Kansas

Name of Sand	- - - - -	Peru
Top of Core	(Received) - - - - -	418.5
Bottom of Core	(Received) - - - - -	427.0
Top of Sand	- - - - -	419.5
Bottom of Sand	(Received) - - - - -	427.0
Total Feet of Permeable Sand	- - - - -	6.5

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 5	2.5	2.5
5 - 10	1.0	3.5
10 & above	3.0	6.5

Average Permeability Millidarcys	- - - - -	11.6
Average Percent Porosity	- - - - -	21.6
Average Percent Oil Saturation	- - - - -	28.4
Average Percent Water Saturation	- - - - -	57.6
Average Oil Content, Bbls./A. Ft.	- - - - -	484.
Total Oil Content, Bbls./Acre	- - - - -	4,110.
Average Percent Oil Recovery by Laboratory Flooding Tests	- - - - -	
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	- - - - -	
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	- - - - -	
Total Calculated Oil Recovery, Bbls./Acre	- - - - -	
Packer Setting, Feet	- - - - -	
Viscosity, Centipoises @	- - - - -	
A. P. I. Gravity, degrees @ 60 °F	- - - - -	
Elevation, Feet	- - - - -	

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GENERAL INFORMATION & SUMMARY

Company Partners Production Company Lease Tarr Well No. 3

Location SE/4

Section 19 Twp. 16S Rge. 22E County Miami State Kansas

Name of Sand - - - - - Upper Squirrel

Top of Core - - (Received) - - - - - 605.5

Bottom of Core - - (Received) - - - - - 611.5

Top of Sand - - (Received) - - - - - 605.5

Bottom of Sand - - (Received) - - - - - 611.5

Total Feet of Permeable Sand - - - - - 6.0

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 1 3.0 3.0

1 & above 3.0 6.0

Average Permeability Millidarcys - - - - - 0.92

Average Percent Porosity - - - - - 17.9

Average Percent Oil Saturation - - - - - 34.5

Average Percent Water Saturation - - - - - 46.8

Average Oil Content, Bbls./A. Ft. - - - - - 453.

Total Oil Content, Bbls./Acre - - - - - 2,714.

Average Percent Oil Recovery by Laboratory Flooding Tests - - - - -

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - -

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - - - - -

Total Calculated Oil Recovery, Bbls./Acre - - - - -

Packer Setting, Feet - - - - -

Viscosity, Centipoises @ - - - - -

A. P. I. Gravity, degrees @ 60 °F - - - - -

Elevation, Feet - - - - -

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GENERAL INFORMATION & SUMMARY

Company Partners Production Co. Lease Tarr Well No. 3

Location SE/4

Section 19 Twp. 16S Rge. 22E County Miami State Kansas

Name of Sand - - - - - Lower Squirrel

Top of Core - - - - - 679.0

Bottom of Core - - - - - 696.0

Top of Sand - - - (Received) - - - - - 679.0

Bottom of Sand - - - (Received) - - - - - 696.0

Total Feet of Permeable Sand - - - - - 9.0

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 5 4.0 4.0

5 - 10 2.0 6.0

10 & above 3.0 9.0

Average Permeability Millidarcys - - - - - 10.3

Average Percent Porosity - - - - - 19.9

Average Percent Oil Saturation - - - - - 47.5

Average Percent Water Saturation - - - - - 39.2

Average Oil Content, Bbls./A. Ft. - - - - - 738.

Total Oil Content, Bbls./Acre - - - - - 6,646.

Average Percent Oil Recovery by Laboratory Flooding Tests - - - - -

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - -

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - - - - -

Total Calculated Oil Recovery, Bbls./Acre - - - - -

Packer Setting, Feet - - - - -

Viscosity, Centipoises @ - - - - -

A. P. I. Gravity, degrees @ 60 °F - - - - -

Elevation, Feet - - - - -

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-LOG-

Company Partners Production Company Lease Tarr Well No. 3PERU SAND

<u>Depth Interval, Feet</u>	<u>Description</u>
418.5 - 419.5	Light brown laminated shaly sandstone.
419.5 - 420.5	Light brown fine grained micaceous sandstone.
420.5 - 421.5	Gray laminated shaly sandstone.
421.5 - 423.5	Brown fine grained micaceous slightly laminated shaly sandstone.
423.5 - 424.5	Gray finely laminated shaly sandstone.
424.5 - 427.0	Brown fine grained micaceous laminated carbonaceous shaly sandstone.

UPPER SQUIRREL

605.5 - 608.5	Light brown fine grained micaceous slightly shaly calcareous sandstone.
608.5 - 611.5	Light brown fine grained micaceous laminated shaly sandstone.

LOWER SQUIRREL

679.0 - 680.0	Light brown fine grained micaceous sandstone.
680.0 - 681.0	Core not received.
681.0 - 682.0	Light brown fine grained micaceous shaly sandstone.
682.0 - 683.0	Core not received.
683.0 - 684.0	Light brown fine grained micaceous shaly sandstone.
684.0 - 685.0	Core not received.
685.0 - 686.0	Light brown fine grained micaceous slightly shaly sandstone.
686.0 - 687.0	Core not received.
687.0 - 688.0	Brown fine grained micaceous sandstone.
688.0 - 689.0	Core not received.
689.0 - 690.0	Brown fine grained micaceous slightly shaly sandstone.

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-LOG-

Company Partners Production Company Lease Tarr Well No. 3

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
690.0 - 691.0	Core not received.
691.0 - 692.0	Brown fine grained micaceous laminated shaly sandstone.
692.0 - 693.0	Core not received.
693.0 - 694.0	Brown fine grained micaceous laminated shaly sandstone.
694.0 - 695.0	Core not received.
695.0 - 696.0	Brown fine grained micaceous sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Partners Production Company Lease Tarr Well No. 3

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	419.0	21.3	36	53	89	PERU SAND	Imp.	1.0	1.0	595	0.00
2	420.0	23.1	44	44	88		40.	1.0	2.0	789	40.00
3	421.0	18.9	11	86	97		10.	1.0	3.0	161	10.00
4	422.0	19.9	25	57	82		3.0	1.0	4.0	386	3.00
5	423.0	22.8	40	49	89		13.	1.0	5.0	708	13.00
6	424.0	21.9	17	62	79		Imp.	1.0	6.0	289	0.00
7	425.0	22.9	22	54	76		7.5	1.0	7.0	391	7.50
8	426.0	22.7	33	51	84		0.76	1.0	8.0	581	0.76
9	426.8	20.1	27	66	93		2.9	0.5	8.0	210	1.45
10	606.0	14.9	38	37	75	UPPER SQUIRREL SAND	1.3	1.0	9.5	439	1.30
11	607.0	19.8	48	40	88		1.3	1.0	10.5	738	1.30
12	608.0	16.5	18	79	97		0.69	1.0	11.5	231	0.69
13	609.0	19.2	42	40	82		0.61	1.0	12.5	432	0.61
14	610.0	19.1	29	52	81		0.24	1.0	13.5	430	0.24
15	611.0	17.9	32	33	65		1.4	1.0	14.5	444	1.40
16	679.5	19.3	33	38	71	LOWER SQUIRREL SAND	13.	1.0	15.5	494	13.00
17	681.5	19.6	31	42	73		0.96	1.0	16.5	473	0.96
18	683.5	20.2	31	39	70		2.8	1.0	17.5	488	2.80
19	685.5	18.6	55	42	97		3.7	1.0	18.5	794	3.70
20	687.5	23.2	66	30	96		19.	1.0	19.5	1,188	19.00
21	689.5	19.0	49	44	93		6.3	1.0	20.5	723	6.30
22	691.5	20.1	61	37	98		7.2	1.0	21.5	952	7.20
23	693.5	19.2	46	48	92		4.7	1.0	22.5	685	4.70
24	695.5	19.9	55	33	88		35.	1.0	23.5	849	35.00

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Partners Production Company	Lease	Tarr	Well No.	3
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
		<u>PERU SAND</u>			
418.5 - 427.0	6.5	11.6	75.71		
		<u>UPPER SQUIRREL SAND</u>			
605.5 - 611.5	6.0	0.92	5.54		
		<u>LOWER SQUIRREL SAND</u>			
679.0 - 696.0	9.0	10.3	92.66		
Depth Interval, Feet	Feet of Core Analyzed	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
		<u>PERU SAND</u>			
418.5 - 427.0	8.5	21.6	57.6	484	4,110
		<u>UPPER SQUIRREL SAND</u>			
605.5 - 611.5	6.0	17.9	46.8	453	2,714
		<u>LOWER SQUIRREL SAND</u>			
679.0 - 696.0	9.0	19.9	39.2	738	6,646