

OILFIELD RESEARCH LABORATORIES

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

April 3, 1981

Don McGinnis
Rural Route
Rantoul, Kansas 66079

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary cores taken from the Burgoon Lease, Well No. 1, located in Miami County, Kansas and submitted to our laboratory on March 6, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/kas

5 c to Rantoul, Kansas

- REGISTERED ENGINEERS -

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

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Don McGinnis Lease Burgoon Well No. 1

Location _____

Section 13 Twp. 19S Rge. 21E County Miami State Kansas

Elevation, Feet - - - - -

Name of Sand	Wiser	1st Squirrel
Top of Core	431.0	570.0
Bottom of Core	436.5	584.6
Top of Sand	431.0	571.3
Bottom of Sand	436.5	583.8
Total Feet of Permeable Sand	4.1	7.3
Total Feet of Floodable Sand	0.0	0.0

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

WISER SAND

1 - 25	2.2	2.2
68 - 204	1.9	4.1

1st SQUIRREL SAND

1 - 5	5.6	5.6
5 - 10	1.7	7.3

Average Permeability Millidarcys	70.0	3.0
Average Percent Porosity	21.0	17.6
Average Percent Oil Saturation	22.7	33.3
Average Percent Water Saturation	47.2	47.1
Average Oil Content, Bbls./A. Ft.	354.	449.
Total Oil Content, Bbls./Acre	1,453.	3,947.
Average Percent Oil Recovery by Laboratory Flooding Tests	0.	0.
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	0.	0.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	0.	0.
Total Calculated Oil Recovery, Bbls./Acre	0.	0.

The cores were sampled and the samples sealed in plastic bags by a representative of the client. Fresh water mud was used as a drilling fluid.

Since neither the Wisser sand nor the First Squirrel sand responded to flooding susceptibility tests, no calculated recovery is given for these sands.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
<u>WISER SAND</u>	
431.0 - 432.9	Very light brown slightly calcareous sandstone.
432.9 - 435.3	Brown slightly calcareous sandstone.
435.3 - 436.5	Grayish light brown shaly sandstone.
<u>FIRST SQUIRREL SAND</u>	
570.0 - 571.3	Hard gray fossiliferous calcareous sandy shale.
571.3 - 577.1	Light brown slightly calcareous shaly sandstone.
577.1 - 580.0	Brown and gray laminated sandstone and shale.
580.0 - 581.7	Grayish brown shaly sandstone.
581.7 - 583.3	Gray sandy shale.
583.3 - 583.8	Brown and gray laminated sandstone and shale.
583. - 584.6	Gray sandy shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Don McGinnis Lease Burgoon Well No. 1

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	431.5	18.5	15	37	52	<u>WISER SAND</u>	215	1.0	215	21.00	
2	432.5	27.5	15	46	61		320	0.9	288	61.20	
3	434.4	24.5	26	43	69		494	1.0	494	203.00	
4	436.4	15.3	32	60	92		380	1.2	456	1.92	
<u>FIRST SQUIRREL SAND</u>											
5	571.7	21.6	25	36	61	419	0.7	0.7	293	4.20	
6	572.4	18.7	26	46	72	377	1.0	1.7	377	1.60	
7	573.4	16.3	31	52	83	392	1.0	2.7	392	1.20	
8	574.5	21.4	29	30	59	482	1.0	3.7	482	7.40	
9	577.4	18.0	34	46	80	475	0.9	4.6	428	1.08	
10	578.5	16.7	49	41	90	635	1.0	5.6	635	1.90	
11	579.7	15.3	48	40	88	570	Imp.	6.6	570	0.00	
12	581.4	15.7	26	68	94	317	1.7	8.3	539	4.25	
13	583.5	17.0	35	47	82	462	0.5	8.8	231	0.00	

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Don McGinnis Lease Burgoon Well No. 1

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
<u>WISER SAND</u>			
431.0 - 436.5	4.1	70.0	287.12
<u>FIRST SQUIRREL SAND</u>			
571.3 - 583.8	7.3	3.0	21.63

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>WISER SAND</u>					
431.0 - 436.5	4.1	22.7	47.2	354	1,453
<u>FIRST SQUIRREL SAND</u>					
571.3 - 583.8	8.8	33.3	47.1	449	3,947

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Don McGinnis Lease Burgoon Well No. 1

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation		Volume of Water Recovered cc*	Effective Permeability Millidarcys**	Initial Fluid Production Pressure Lbs./Sq./In.
			%	Bbls./A. Ft.	%	Bbls./A. Ft.	% Oil	% Water			
1	431.5	18.6	15	216	0	0	15	71	100	1.80	25
2	432.5	27.4	15	319	0	0	15	75	244	11.25	10
3	434.4	24.3	26	490	0	0	26	65	132	2.70	25
4	436.4	15.8	31	380	0	0	31	61	0	Imp.	-
<u>WISER SAND</u>											
5	571.7	21.1	26	426	0	0	26	37	0	Imp.	-
6	572.4	18.8	26	379	0	0	26	50	17	0.54	35
7	573.4	16.3	31	392	0	0	31	52	0	Imp.	-
8	574.5	21.9	28	476	0	0	28	31	0	Imp.	-
9	577.4	17.6	35	478	0	0	35	48	0	Imp.	-
10	578.5	17.0	48	633	0	0	48	43	0	Imp.	-
11	579.7	15.2	48	566	0	0	48	42	0	Imp.	-
12	581.4	15.3	27	320	0	0	27	67	0	Imp.	-
13	583.5	17.5	34	462	0	0	34	48	0	Imp.	-
<u>FIRST SQUIRREL SAND</u>											

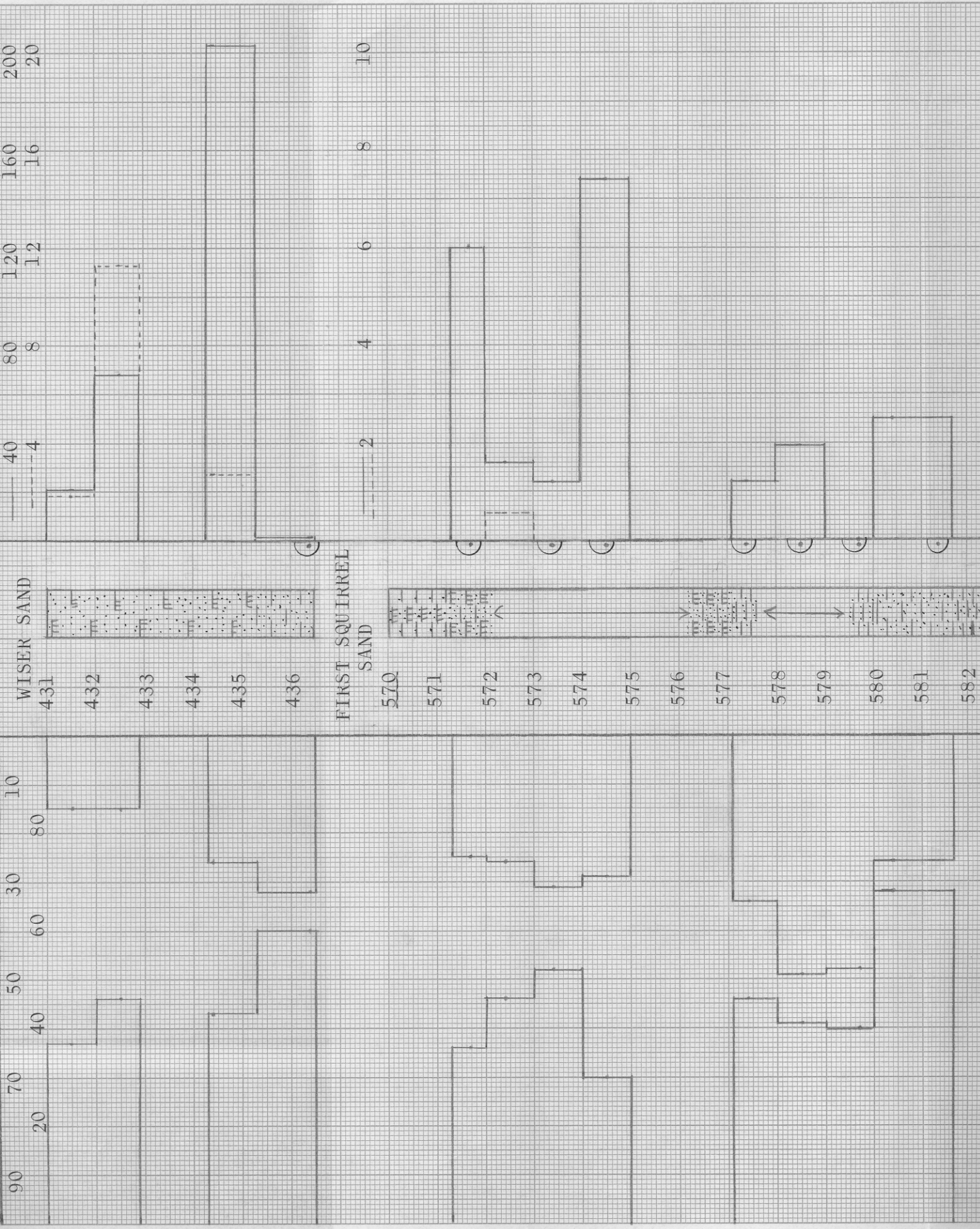
Notes: cc—cubic centimeter.

*—Volume of water recovered at the time of maximum oil recovery.

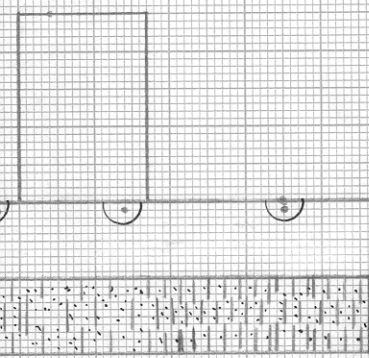
**—Determined by passing water through sample which still contains residual oil.

WATER SAT., PERCENT





OIL SAT., PERCENT



580
581
582
583
584



KEY:

-  CALCAREOUS SANDSTONE
-  SANDY SHALE
-  SHALY SANDSTONE
-  IMPERMEABLE TO WATER

-  SHALY CALCAREOUS SANDSTONE
-  LAMINATED SANDSTONE AND SHALE
-  FOSSILIFEROUS SANDY CALCAREOUS SHALE

DON MCGINNIS

BURGOON LEASE
MIAMI COUNTY, KANSAS
WELL NO. 1

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCS	CALCULATED OIL RECOVERY BBLs. / ACRE
431.0 - 436.5	4.1	21.0	22.7	47.2	70.0	-
571.3 - 583.8	8.8	17.6	33.3	47.1	3.0	-

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CHANUTE, KANSAS
MARCH, 1981