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

May 24, 1982

McGinnis Enterprises, Inc.
R R # 1, Box 9
Rantoul, Kansas 66079

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary cores taken from the Reed Lease, Well No. 1, located in Franklin County, Kansas and submitted to our laboratory on May 14, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/kas

5 c to Rantoul, Kansas

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GENERAL INFORMATION & SUMMARY

Company McGinnis Enterprises, Inc. Lease Reed Well No. 1

Location 330' FWL & 330' FSL

Section 28 Twp. 17S Rge. 21E County Franklin State Kansas

	Second Squirrel	Bartlesville
Elevation, Feet		
Name of Sand		
Top of Core	569.0	707.0
Bottom of Core	574.2	712.0
Top of Sand	569.0	707.0
Bottom of Sand	574.2	712.0
Total Feet of Permeable Sand * (Tested)	1.8	3.5 *
Total Feet of Floodable Sand	0.	3.5

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
	SECOND SQUIRREL SAND	
1 - 5	1.8	1.8
	BARTLESVILLE SAND	
0 - 100	1.0	1.0
1000 - 1500	2.0	3.0
1500 - 2000	0.5	3.5

Average Permeability Millidarcys	2.8	1,067.4
Average Percent Porosity	16.5	24.9
Average Percent Oil Saturation	24.0	35.9
Average Percent Water Saturation	62.1	35.4
Average Oil Content, Bbls./A. Ft.	321.	669.
Total Oil Content, Bbls./Acre	1,282.	3,010.
Average Percent Oil Recovery by Laboratory Flooding Tests	0.	6.1
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	0.	108.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	0.	378.
Total Calculated Oil Recovery, Bbls./Acre	-	See "Cal. Rec." Section

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

In as much as only the Bartlesville sand responded to flooding susceptibility tests, a calculated recovery is given for the Bartlesville sand only.

FORMATION CORED

The detailed log of the formation cored is as follows:

Depth Interval, Feet	Description
	Second Squirrel Sand
569.0 - 570.8	Gray and brown laminated shale and sandstone.
570.8 - 571.5	Gray shale.
571.5 - 572.1	Gray very shaly sandstone.
572.1 - 572.9	Gray and brown laminated shale and sandstone.
572.9 - 573.4	Brown shaly sandstone.
573.4 - 574.2	Grayish brown very shaly sandstone.
	Bartlesville Sand
707.0 - 708.0	Brown micaceous sandstone.
708.0 - 708.5	Gray shale.
708.5 - 712.0	Brown sandstone.

LABORATORY FLOODING TESTS

BARTLESVILLE SAND

The Bartlesville sand in this core responded to laboratory flooding tests, as a total recovery of 378 barrels of oil per acre was obtained from 3.5 feet of sand. The weighted average percent oil saturation was reduced from 40.7 to 34.6, or represents an average recovery of 6.1 percent. The weighted average effective permeability of the samples is 29.35 millidarcys, while the average initial fluid production pressure is 11.3 pounds per square inch (See Table V).

By observing the data given in Table IV, you will note that of the 5 samples tested, 4 produced water and oil. This indicates that approximately 80 percent of the sand represented by these samples is floodable pay sand.

CALCULATED RECOVERY

BARTLESVILLE SAND

It would appear from a study of the core data, that efficient primary and waterflood operations in the vicinity of this well should recover approximately 1,130 barrels of oil per acre. This is an average recovery of 322 barrels per acre foot from 3.5 feet of floodable sand analyzed in this core.

These recovery values were calculated using the following data and assumptions:

Original formation volume factor, estimated	1.05
Reservoir water saturation, percent, estimated	30.0

Average porosity, percent	23.5
Oil saturation after flooding, percent	34.6
Performance factor, percent, estimated	55.0
Net floodable sand, feet	3.5

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company McGinnis Enterprises, Inc. Lease Reed 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.		
						SECOND SQUIRREL SAND					
1	569.3	17.9	34	50	84	412	4.0	1.0	1.0	472	4.00
2	570.6	13.2	17	74	91	174	Imp.	0.8	1.8	139	0.00
3	571.6	14.8	3	84	87	34	Imp.	0.6	2.4	20	0.00
4	572.4	19.7	34	38	72	520	1.2	0.8	3.2	416	0.96
5	573.8	15.8	24	73	97	294	Imp.	0.8	4.0	235	0.00
						BARTLESVILLE SAND					
6	707.4	29.8	19	28	47	439	*	1.0	1.0	439	*
7	708.7	25.4	35	31	66	690	1916.	0.5	1.5	345	958.00
8	709.5	25.1	41	31	72	798	1277.	1.0	2.5	798	1277.00
9	710.5	25.6	37	41	78	735	1460.	1.0	3.5	735	1460.00
10	711.4	19.0	47	44	91	693	41.	1.0	4.5	693	41.00

NOTE: * PERMEABILITY SAMPLE UNOBTAINABLE.

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company McGinnis Enterprises, Inc. Lease Reed Well No. 1

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
		SECOND SQUIRREL SAND	
569.0 - 574.2	1.8	2.8	4.96
		BARTLESVILLE SAND	
707.0 - 712.0	3.5	1067.4	3736.00

Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
			SECOND SQUIRREL SAND			
569.0 - 574.2	4.0	16.5	24.0	62.1	321	1,282
			BARTLESVILLE SAND			
707.0 - 712.0	4.5	24.9	35.9	35.4	669	3,010

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company McGinnis Enterprises, Inc. Lease Reed 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	Bbls./A. Ft.			
						SECOND SQUIRREL SAND						
1	569.3	18.0	34	475	0	0	34	51	475	0	Imp.	-
2	570.6	13.7	16	170	0	0	16	75	170	0	Imp.	-
3	571.6	14.6	3	34	0	0	3	83	34	0	Imp.	-
4	572.4	19.8	34	522	0	0	34	39	522	0	Imp.	-
5	573.8	15.3	25	297	0	0	25	72	297	0	Imp.	-
						BARTLESVILLE SAND						
6	707.4	29.6	19	436	0	0	19	30	436	0	Imp.	-
7	708.7	25.5	35	692	3	59	32	55	633	580	48.33	10
8	709.5	24.9	41	792	6	116	35	48	676	173	27.49	10
9	710.5	25.6	37	735	5	99	32	50	636	374	48.68	10
10	711.4	19.1	47	696	9	133	38	56	563	165	2.40	15

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.

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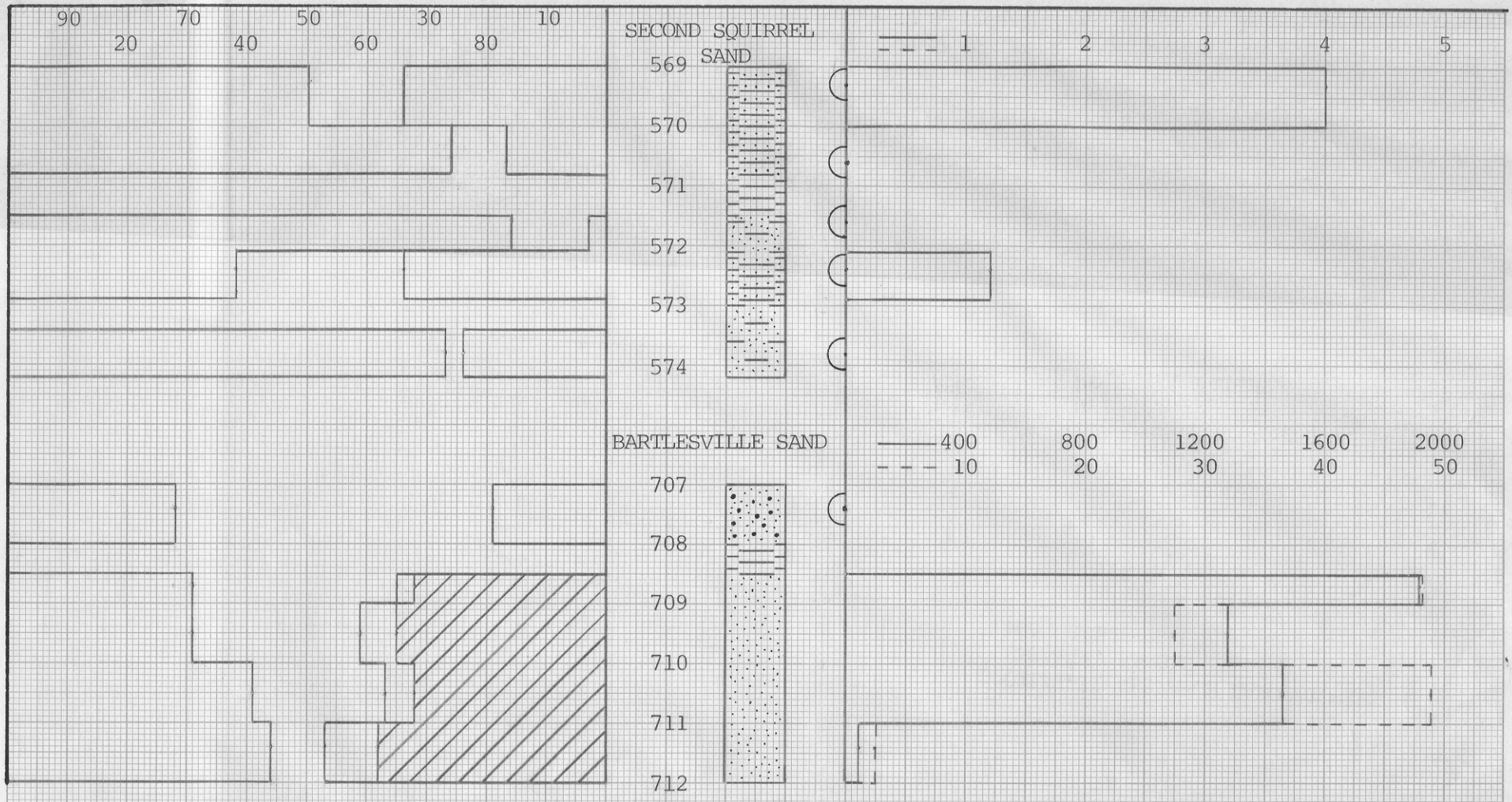
SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

Company McGinnis Enterprises, Inc. Lease Reed Well No. 1

	BARTLESVILLE SAND
Depth Interval, Feet	707.0 - 712.0
Feet of Core Analyzed	3.5
Average Percent Porosity	23.5
Average Percent Original Oil Saturation	40.7
Average Percent Oil Recovery	6.1
Average Percent Residual Oil Saturation	34.6
Average Percent Residual Water Saturation	51.9
Average Percent Total Residual Fluid Saturation	86.5
Average Original Oil Content, Bbls./A. Ft.	734.
Average Oil Recovery, Bbls./A. Ft.	108.
Average Residual Oil Content, Bbls./A. Ft.	626.
Total Original Oil Content, Bbls./Acre	2,570.
Total Oil Recovery, Bbls./Acre	378.
Total Residual Oil Content, Bbls./Acre	2,192.
Average Effective Permeability, Millidarcys	29.35
Average Initial Fluid Production Pressure, p.s.i.	11.3

NOTE: Only those samples which recovered oil were used in calculating the above averages.



KEY:

- SANDSTONE
- LAMINATED SHALE AND SANDSTONE
- SHALE
- SHALY SANDSTONE
- MICACEOUS SANDSTONE
- FLOODPOT RESIDUAL OIL SATURATION
- IMPERMEABLE TO WATER


LAMINATED SHALE AND SANDSTONE


SHALE


FLOODPOT RESIDUAL OIL SATURATION


IMPERMEABLE TO WATER

MC GINNIS ENTERPRISES INC.

REED LEASE WELL NO. 1

FRANKLIN COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY MILLIDARCYS	CALCULATED OIL RECOVERY BBLS. / ACRE
			SECOND SQUIRREL SAND			
569.0 - 574.2	4.0	16.5	24.0	62.1	2.8	-
			BARTLESVILLE SAND			
707.0 - 712.0	4.5	24.9	35.9	35.4	1067.4	1130 (PRIMARY AND WATERFLOODING)

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
MAY, 1982

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