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

April 29, 1982

Inco Resources, Incorporated
8100 Marty, Suite 117
Overland Park, Kanas 66204

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Davis Lease, Well No. 14, Franklin County, Kansas, and submitted to our laboratory on April 23, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/tem

3 c to Overland Park, KS
2 c to Larry Brown, Hutchinson, KS

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Inco Resources, Incorporated Lease Davis Well No. 14

Location -

Section 33 Twp. 17S Rge. 21E County Franklin State Kansas

Elevation, Feet	
Name of Sand	Cattleman
Top of Core	710.0
Bottom of Core	727.3
Top of Sand	717.0
Bottom of Sand	726.9
Total Feet of Permeable Sand	9.4
Total Feet of Floodable Sand	8.7

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 18	2.6	2.6
27 - 49	5.8	8.4
73 - 75	1.0	9.4

Average Permeability Millidarcys	35.7
Average Percent Porosity	20.2
Average Percent Oil Saturation	46.0
Average Percent Water Saturation	24.7
Average Oil Content, Bbls./A. Ft.	718.
Total Oil Content, Bbls./Acre	6,748.
Average Percent Oil Recovery by Laboratory Flooding Tests	14.0
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	219.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	1,902.
Total Calculated Oil Recovery, Bbls./Acre	See "Calculated Recovery" Section.

The core was sampled by a representative of Oilfield Research Laboratories. Air and KCI were used as drilling fluids. The core was reported to be from a non-virgin area.

FORMATION CORED

The detailed log of the formation cored is as follows:

Depth Interval, Feet	Description
710.0 - 710.6	Gray slightly calcareous shale.
710.6 - 717.0	Gray shale.
717.0 - 718.0	Brown slightly shaly sandstone.
718.0 - 718.9	Brown sandstone.
718.9 - 719.4	Gray shale.
719.4 - 726.9	Brown sandstone.
726.9 - 727.3	Gray shale.

LABORATORY FLOODING TESTS

The sand in this core responded to laboratory flooding tests, as a total recovery of 1,902 barrels of oil per acre was obtained from 8.7 feet of sand. The weighted average percent oil saturation was reduced from 47.2 to 33.2, or represents an average recovery of 14.0 percent. The weighted average effective permeability of the samples is 1.24 millidarcys, while the average initial fluid production pressure is 16.7 pounds per square inch (See Table V).

By observing the data given in Table IV, you will note that of the 10 samples tested, 9 produced water and oil. This indicates that approximately 90 percent of the sand represented by these samples is floodable pay sand.

CALCULATED RECOVERY

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 3,580 barrels of oil per acre. This is an average recovery of 412 barrels per acre foot from 8.7 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	15.0
Average porosity, percent	20.2
Oil saturation after flooding, percent	33.2
Performance factor, percent, estimated	55.0
Net floodable sand, feet	8.7

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Inco Resources, Inc. Lease Davis Well No. 14

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	717.6	17.3	58	36	94	778	8.7	1.0	1.0	778	8.70
2	718.3	19.8	46	28	74	707	13.	0.9	1.9	636	11.70
3	719.5	20.1	32	36	68	499	17.	0.7	2.6	349	11.90
4	720.4	20.4	40	27	67	633	48.	0.8	3.4	506	38.40
5	721.3	19.4	49	24	73	738	33.	1.0	4.4	738	33.00
6	722.4	20.2	51	20	71	799	27.	1.0	5.4	799	27.00
7	723.4	21.1	38	23	61	622	44.	1.0	6.4	622	44.00
8	724.5	22.4	46	15	61	799	74.	1.0	7.4	799	74.00
9	725.4	20.9	59	16	75	957	48.	1.0	8.4	957	48.00
10	726.5	20.2	36	26	62	564	39.	1.0	9.4	564	39.00

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Inco Resources, Incorporated Lease Davis Well No. 14

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
717.0 - 726.9	9.4	35.7	335.70

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
717.0 - 726.9	9.4	20.2	46.0	24.7	718	6,748

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Inco Resources, Inc. Lease Davis Well No. 14

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.			
1	717.6	17.4	58	783	16	216	42	54	567	24	0.37	25
2	718.3	19.9	46	710	10	154	36	52	556	38	0.50	20
3	719.5	20.6	31	495	0	0	31	38	495	0	Imp.	-
4	720.4	20.3	40	630	8	126	32	64	504	50	0.75	15
5	721.3	19.5	49	741	16	242	33	65	499	66	1.12	15
6	722.4	20.3	51	803	14	220	37	53	583	102	1.95	20
7	723.4	21.0	38	619	11	179	27	59	440	32	0.52	15
8	724.5	22.3	46	796	14	242	32	57	554	194	2.77	10
9	725.4	21.0	59	961	25	407	34	51	554	150	2.32	10
10	726.5	20.1	36	561	10	156	26	62	405	40	0.67	20

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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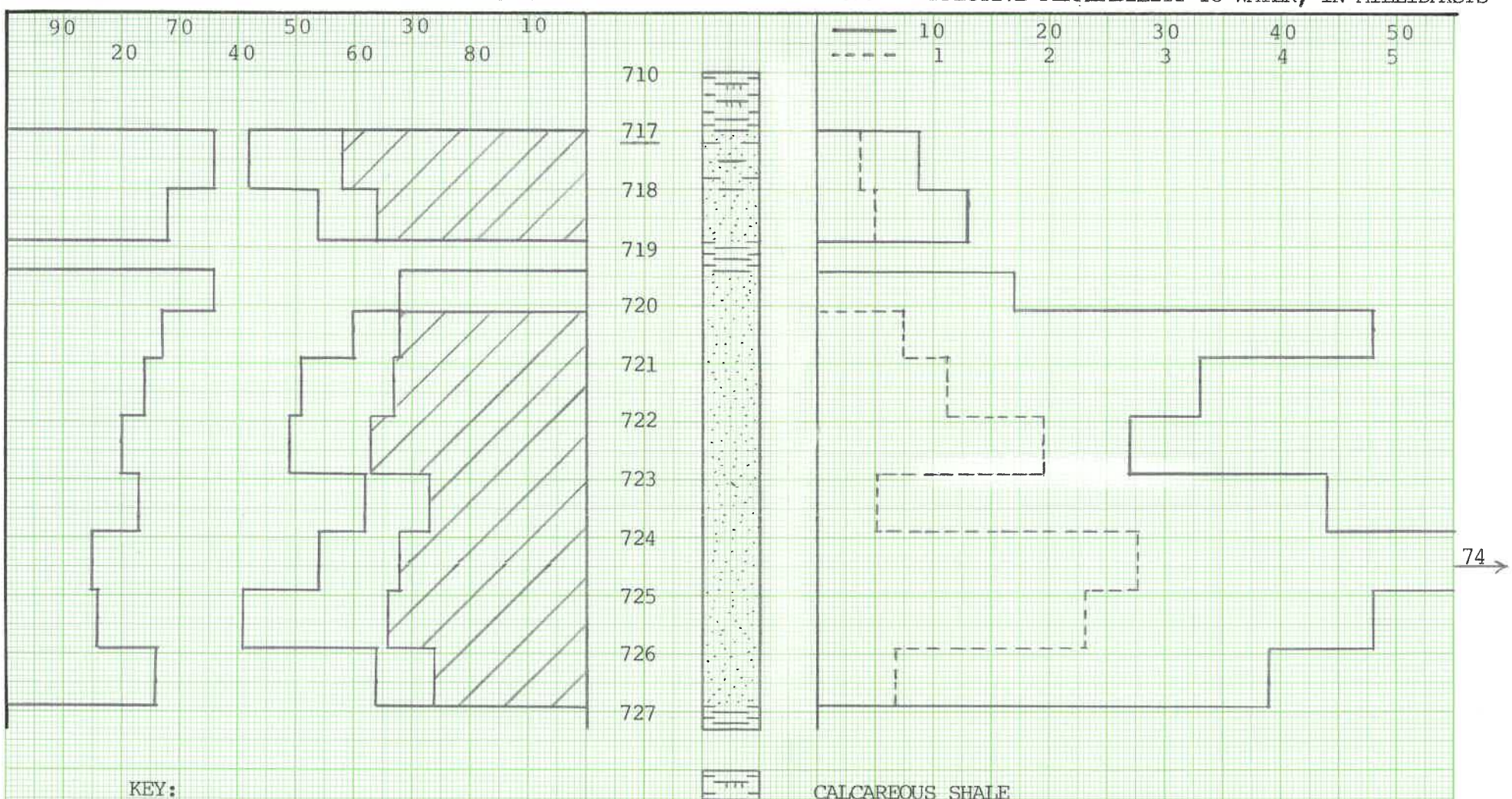
SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

Company Inco Resources, Incorporated Lease Davis Well No. 14

Depth Interval, Feet	717.0 - 726.9
Feet of Core Analyzed	8.7
Average Percent Porosity	20.2
Average Percent Original Oil Saturation	47.2
Average Percent Oil Recovery	14.0
Average Percent Residual Oil Saturation	33.2
Average Percent Residual Water Saturation	57.4
Average Percent Total Residual Fluid Saturation	90.6
Average Original Oil Content, Bbls./A. Ft.	737.
Average Oil Recovery, Bbls./A. Ft.	219.
Average Residual Oil Content, Bbls./A. Ft.	518.
Total Original Oil Content, Bbls./Acre	6,407.
Total Oil Recovery, Bbls./Acre	1,902.
Total Residual Oil Content, Bbls./Acre	4,505.
Average Effective Permeability, Millidarcys	1.24
Average Initial Fluid Production Pressure, p.s.i.	16.7

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



KEY:

- SANDSTONE
- SHALE
- IMPERMEABLE TO WATER
- CALCAREOUS SHALE
- SHALY SANDSTONE
- FLOODPOT RESIDUAL OIL SATURATION

INCO RESOURCES, INC.

DAVIS LEASE WELL NO. 14

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
717.0 - 726.9	9.4	20.2	46.0	24.7	35.7	3580 (PRIMARY AND WATERFLOODING)

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
APRIL, 1982 PDC