



OILFIELD RESEARCH LABORATORIES

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March 3, 1980

H. Zander Corporation
P.O. Box 225
Paola, Kansas 66071

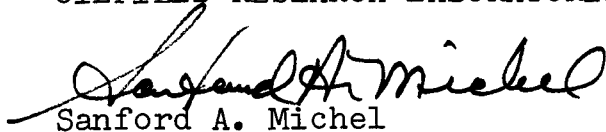
Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Day Lease, Well No. 2, Miami County, Kansas, and submitted to our laboratory on February 15, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES



Sanford A. Michel

SAM/tem

3 c to Paola, Kansas

- REGISTERED ENGINEERS -

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

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GENERAL INFORMATION & SUMMARY

Company H. Zander Lease Day Well No. 2

Location NW¹/₄

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

Elevation, Feet - - - - -

Name of Sand - - - - - Lower Squirrel

Top of Core - - - - - 507.0

Bottom of Core - - - - - 521.7

Top of Sand - - - - - 507.0

Bottom of Sand - - - - - 521.0

Total Feet of Permeable Sand - - - - - 5.8

Total Feet of Floodable Sand - - - - - 0.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 1	2.2	2.2
1 - 5	3.6	5.8

Average Permeability Millidarcys - - - - - 1.3

Average Percent Porosity - - - - - 13.7

Average Percent Oil Saturation - - - - - 23.7

Average Percent Water Saturation - - - - - 67.4

Average Oil Content, Bbls./A. Ft. - - - - - 256.

Total Oil Content, Bbls./Acre - - - - - 2,353.

Average Percent Oil Recovery by Laboratory Flooding Tests - - - - - 0

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - - 0

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - - - - - 0

Total Calculated Oil Recovery, Bbls./Acre - - - - - 0

-2-

The core was sampled and the samples sealed in plastic bags by a representative of the client. Fresh water mud was used as a drilling fluid. The core was reported to be from a virgin area.

Since the core did not respond to floodpot testing, no calculated recovery is given.

FORMATION CORED.

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
507.0 - 509.2	Grayish brown very shaly sandstone.
509.2 - 514.0	Gray sandy shale.
514.0 - 516.4	Brown and gray laminated sandstone and shale.
516.4 - 517.8	Brown shaly sandstone.
517.8 - 521.0	Brown and gray laminated sandstone and shale.
521.0 - 521.7	Gray sandy shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company H. Zander Corporation Lease _____ Day _____ Well No. 2

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	507.6	15.6	27	59	86	327	1.0	1.0	327	1.00	
2	508.6	14.9	31	64	95	358	0.36	1.2	430	0.43	
3	514.3	13.1	30	59	89	305	0.27	1.0	305	0.27	
4	515.5	12.1	18	75	93	169	Imp.	1.4	237	0.00	
5	516.7	11.4	38	56	94	336	3.7	0.6	202	2.22	
6	517.6	13.0	40	54	94	403	2.6	0.8	322	2.08	
7	518.5	16.6	27	54	81	348	1.3	1.2	418	1.56	
8	519.3	11.6	2	93	95	18	Imp.	1.0	18	0.00	
9	520.7	13.5	9	86	95	94	Imp.	1.0	94	0.00	

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

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.
			%	Bbbs./A. Ft.	%	Bbbs./A. Ft.	% Oil	% Water			
1	507.6	15.3	28	332	0	0	28	64	0	Imp.	-
2	508.6	15.2	31	365	0	0	31	66	0	Imp.	-
3	514.3	12.6	32	313	0	0	32	60	0	Imp.	-
4	515.5	12.2	18	171	0	0	18	76	0	Imp.	-
5	516.7	11.9	37	341	0	0	37	58	0	Imp.	-
6	517.6	13.0	40	403	0	0	40	55	0	Imp.	-
7	518.5	16.4	28	356	0	0	28	60	0	Imp.	-
8	519.3	12.0	2	19	0	0	2	94	0	Imp.	-
9	520.7	13.1	10	102	0	0	10	86	0	Imp.	-

Company H. Zander Corporation

Lease

Day

Well No.

2

Notes: cc—cubic centimeter.

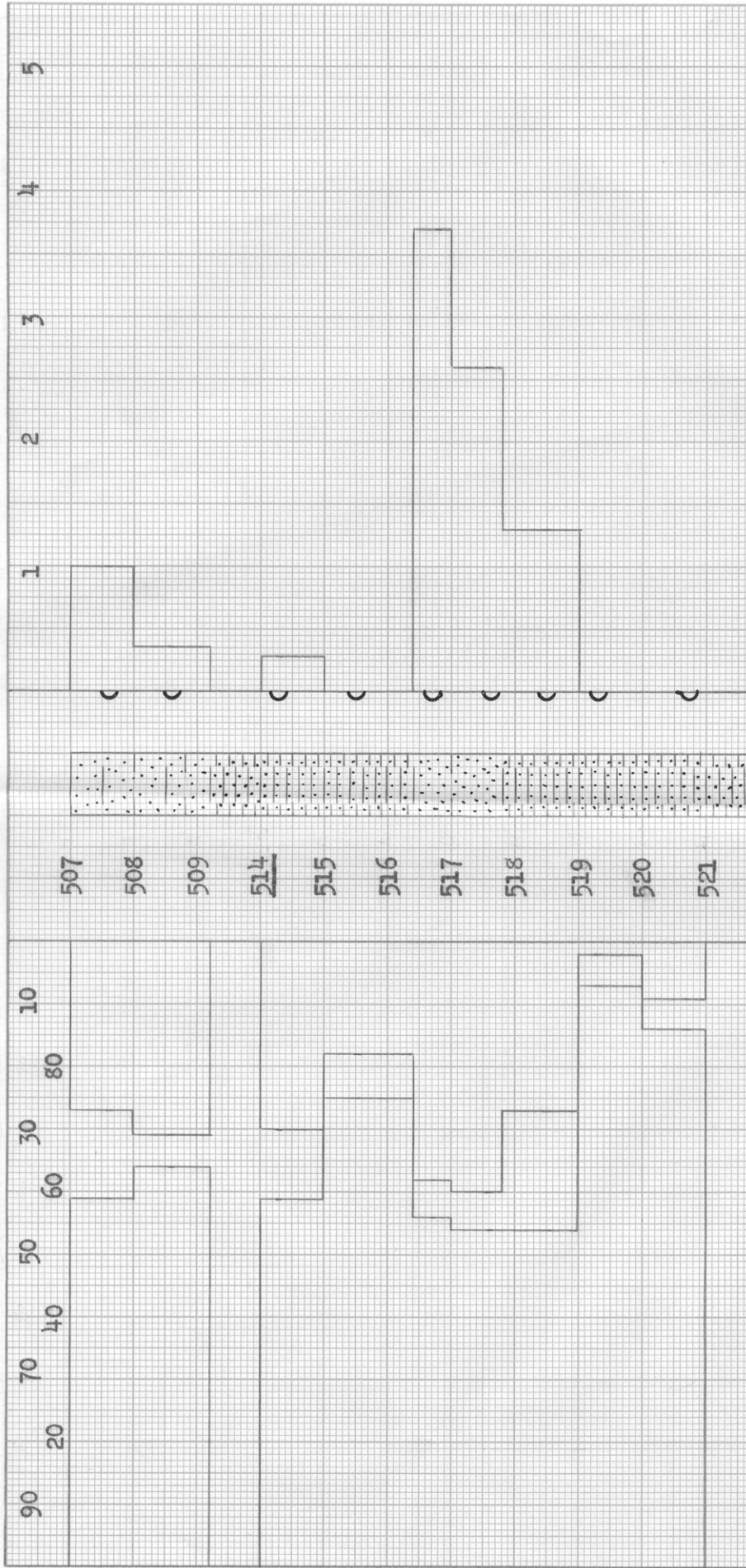
*—Volume of water recovered at the time of maximum oil recovery.

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

WATER SAT.,
PERCENT

OIL SAT.,
PERCENT

PERMEABILITY, IN MILLIDARCYS



KEY:

SHALY SANDSTONE

LAMINATED SANDSTONE AND SHALE

SANDY SHALE

IMPERMEABLE TO WATER

H. ZANDER

DAY LEASE WELL NO. 2

MIAMI COUNTY, KANSAS

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
507.0 - 521.0	9.2	13.7	23.7	67.4	1.3	---

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 CHANUTE, KANSAS
 MARCH, 1980. HR