

OILFIELD RESEARCH LABORATORIES

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

June 16, 1980

Tech American Kansas, Inc.
P.O. Box 467
Moran, Kansas 66755

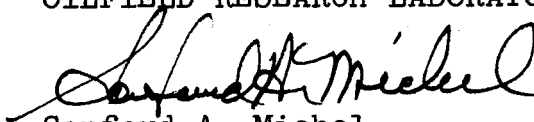
Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Keith Lease, Well No. 17, Wilson County, Kansas, and submitted to our laboratory on May 5, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES



Sanford A. Michel

SAM/kas
5 c to Moran, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Tech American Kansas, Inc. Lease Keith Well No. 17

Location ---

Section 14 Twp 28S Rge 15E County Wilson State Kansas

Elevation, Feet ---

Name of Sand	Bartlesville
Top of Core	1030.5
Bottom of Core	1042.2
Top of Sand	1032.9
Bottom of Sand	1042.2
Total Feet of Permeable Sand	7.9
Total Feet of Floodable Sand	0.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 5	4.1	4.1
10 - 20	1.6	5.7
40 - 50	2.2	7.9

Average Permeability Millidarcys	17.1
Average Percent Porosity	14.4
Average Percent Oil Saturation	16.1
Average Percent Water Saturation	56.5
Average Oil Content, Bbls./A. Ft.	200.
Total Oil Content, Bbls./Acre	1,721.
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

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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.

Since the core did not respond to flooding susceptibility tests, 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>
1030.5 - 1032.9	Gray sandy shale.
1032.9 - 1037.7	Grayish brown shaly sandstone.
1037.7 - 1038.4	Gray sandy shale.
1038.4 - 1042.2	Brown sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

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	1033.5	8.0	7	71	78	43	4.6	1.1	1.1	47	5.06
2	1034.6	11.4	9	69	78	80	2.5	1.0	2.1	80	2.50
3	1035.5	18.0	21	61	82	293	9.0	1.0	3.1	293	9.00
4	1036.4	14.1	3	59	62	33	1.3	1.0	4.1	33	1.30
5	1037.5	13.1	11	67	78	112	Imp.	0.7	4.8	78	0.00
6	1038.6	14.8	23	55	78	264	19.	0.6	5.4	158	11.40
7	1039.5	15.9	33	44	77	407	45.	1.0	6.4	407	45.00
8	1040.8	13.1	13	48	61	132	10.	1.0	7.4	132	10.00
9	1041.5	21.2	25	39	64	411	42.	1.2	8.6	493	50.40

Company Tech American Kansas, Inc.

Lease Keith

Well No. 17

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company		Tech American Kansas, Inc.		Lease	Keith	Well No.	
						17	
Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Total Oil Content Bbl./Acre
1032.9 - 1037.7	4.1	12.7	10.1	65.4	4.4	17.86	531
1038.4 - 1042.2	3.8	16.7	23.6	45.2	30.7	116.80	1,190
1032.9 - 1042.2	7.9	14.4	16.1	56.5	17.1	134.66	1,721

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Tech American Kansas, Inc. Lease Keith Well No. 17

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	1033.5	8.2	7	45	0	0	7	73	45	0	Imp.	-
2	1034.6	11.0	10	85	0	0	10	70	85	0	Imp.	-
3	1035.5	17.6	22	300	0	0	22	63	300	0	Imp.	-
4	1036.4	14.1	3	33	0	0	3	59	33	0	Imp.	-
5	1037.5	13.6	9	95	0	0	9	70	95	0	Imp.	-
6	1038.6	14.6	23	261	0	0	23	56	261	0	Imp.	-
7	1039.5	16.0	33	410	0	0	33	50	410	0	Imp.	-
8	1040.8	13.5	12	126	0	0	12	70	126	9	0.15	50
9	1041.5	21.0	25	407	0	0	25	41	407	44	0.60	30

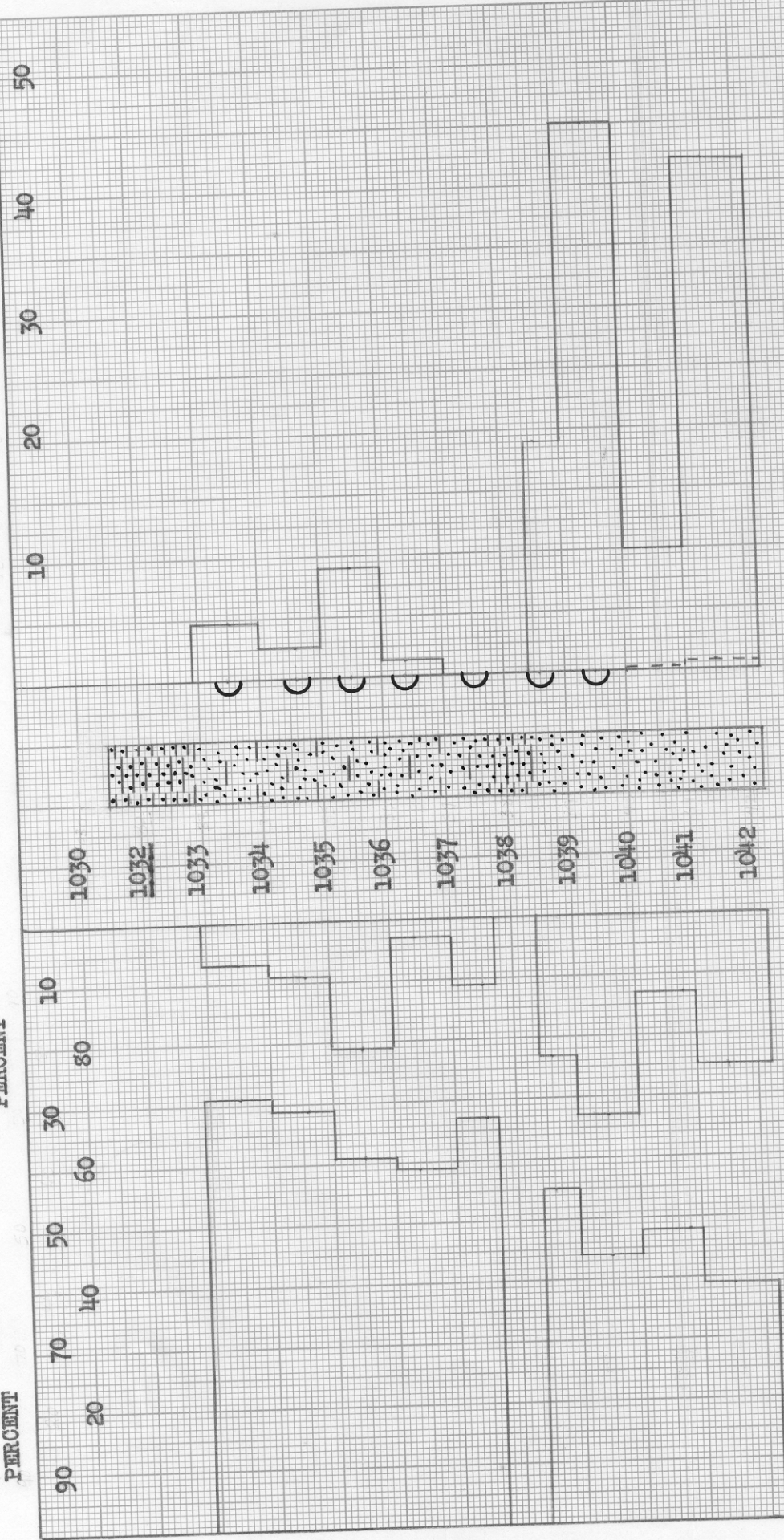
Notes: cc—cubic centimeter.

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

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

PERMEABILITY, IN MILLIDARCY
EFFECTIVE PERMEABILITY TO WATER, IN MILLIDARCY

WATER SAT., PERCENT
OIL SAT., PERCENT



KEY:

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

TECH AMERICAN KANSAS, INC.

KEITH LEASE

WELL NO. 17

WILSON 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
1032.9 - 1037.7	4.8	12.7	10.1	65.4	4.4	
1038.4 - 1042.2	3.8	16.7	23.6	45.2	30.7	
1032.9 - 1042.2	8.6	14.4	16.1	56.5	17.1	—

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CHANUTE, KANSAS
JUNE, 1980
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