



OILFIELD RESEARCH LABORATORIES

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

September 10, 1982

Zoandra Petroleum, Inc.
8126 E. Long Place
Englewood, Colorado 80112

Gentlemen:

Attached hereto are the results of tests run on the rotary cores taken from the Harder Lease, Well No. 4, located in Section 22, T-25S, R-15E, in Woodson County, Kansas.

The cores were sampled and sealed in plastic bags by a representative of the client and were submitted to our laboratory on September 8, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/rmc

5 c to Englewood, Colorado

- REGISTERED ENGINEERS -

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

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LOG

Company Zoandra Petroleum, Inc. Lease Harder Well No. 4

<u>Depth Interval, Feet</u>	<u>Description</u>
	<u>UPPER SQUIRREL SANDSTONE</u>
1092.0 - 1093.0	Grayish brown shaly sandstone.
1093.0 - 1094.5	Grayish brown very shaly sandstone.
1094.5 - 1094.7	Brown sandstone.
1094.7 - 1095.2	Grayish brown very shaly sandstone.
1095.2 - 1096.0	Brown sandstone.
1096.0 - 1097.0	Brown slightly shaly sandstone.
1097.0 - 1097.3	Gray shale.
	<u>LOWER SQUIRREL SANDSTONE</u>
1140.0 - 1140.5	Grayish brown very shaly sandstone.
1140.5 - 1145.1	Dark brown sandstone.
1145.1 - 1145.8	Grayish black very shaly micaceous sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1

Company Zoandra Petroleum, Inc. - Lease Harder Well No. 4

Sample No.	Depth, Feet	Porosity Percent	Percent Saturation			Oil Content Bbls. / A Ft.	Perm., Mill.
			Oil	Water	Total		
<u>Upper Squirrel Sandstone</u>							
1	1092.7	15.4	29	50	79	346	1.7
2	1093.5	13.3	25	56	81	258	0.66
3	1094.6	15.4	36	51	87	430	13.
4	1095.5	16.7	33	24	57	428	22.
5	1096.5	16.4	32	33	65	407	7.2
<u>Lower Squirrel Sandstone</u>							
6	1140.6	21.5	34	32	66	567	120.
7	1141.4	21.7	42	24	66	707	90.
8	1142.5	21.9	37	31	68	629	87.
9	1143.5	21.5	55	20	75	917	68.
10	1144.5	21.8	61	16	77	1,032	13.
11	1145.4	20.2	54	16	70	846	0.36