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

July 29, 1981

Richard-Parco
Box 814
Chanute, Kansas 66720

Attached hereto are the results of tests run on the rotary corestaken from the Humboldt Shale Mining Lease, Well No. 4, located 165' out of the Northwest Corner in Section 34, T-25S, R-18E, in Allen County, Kansas.

The cores were sampled and sealed in plastic bags by a representative of the client and was submitted to our laboratory on July 20 and July 23, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel by B.L.

Sanford A. Michel

SAM/kas/pdc

5 c to Chanute, Kansas

1 c to Oklahoma City, Oklahoma

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LOG

Name Parco-Richard Lease Humboldt Shale Mining Well No. 4

Depth Interval, Feet	Description
	SQUIRREL SAND
652.0 - 652.8	Grayish light brown shaly sandstone.
652.8 - 653.8	Grayish light brown slightly shaly sandstone.
653.8 - 655.3	Brown sandstone.
655.3 - 658.0	Gray and brown laminated shale and sandstone.
658.0 - 661.7	Brown slightly calcareous sandstone.
661.7 - 664.0	Gray shale.
	CATTLEMAN SAND
796.0 - 798.0	Brown slightly calcareous sandstone.
798.0 - 799.0	Grayish very light brown very shaly sandstone.
799.0 - 800.5	Dark brown slightly calcareous sandstone.
800.5 - 804.7	Very dark brown slightly carbonaceous sandstone with fine shale partings.
804.7 - 812.8	Gray shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1

Company Parco-Richard Lease Humboldt Shale Mining Well No. 4

Sample No.	Depth, Feet	Porosity Percent	Percent Saturation			Oil Content Bbls. / A Ft.	Perm., Mill.
			Oil	Water	Total		
		SQUIRREL SAND					
1	652.6	17.9	35	46	81	486	0.84
2	653.2	18.6	23	44	67	332	7.7
3	654.1	18.6	28	43	71	404	11.
4	655.1	18.4	21	43	64	300	12.
5	656.2	16.1	38	42	80	475	3.8
6	657.4	16.7	37	29	66	479	7.8
7	658.2	19.6	27	41	68	411	13.
8	659.1	16.9	41	36	77	538	10.
9	660.2	16.4	35	40	75	445	11.
10	661.3	17.1	43	45	88	570	9.6
		CATTLEMAN SAND					
1	796.1	21.9	36	26	62	612	67.
2	797.2	17.2	50	29	79	667	49.
3	798.4	10.9	15	65	80	127	Imp.
4	799.4	17.1	56	29	85	743	60.
5	800.2	19.0	60	22	82	884	29.
6	801.3	10.0	55	38	93	427	0.60
7	802.1	12.9	50	25	75	500	Imp.
8	803.3	13.8	60	28	88	642	0.33
9	804.4	14.0	64	26	90	695	Imp.