

OILFIELD RESEARCH LABORATORIES

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

December 6, 1977

GGL & Company
Box 67
Bronson, Kansas 66716

Gentlemen:

Enclosed herewith are the results of tests run on the Rotary core taken from the Lafferty Lease, Well No. 1, Bourbon County, Kansas, and submitted to our laboratory on December 3, 1977.

The core is from a semi-virgin territory, and had been exposed to air 16 hours before being sampled by a representative of Oilfield Research Laboratories after it was received in the laboratory.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman
Benjamin R. Pearman

BRP:vm
3 c to Bronson, Kansas

245 - 22E - 24

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company GGL & Company Lease Lafferty Well No. 1
 Location 330' NSL & 330' WEL, N $\frac{1}{2}$ SE $\frac{1}{4}$
 Section 24 Twp. 24S Rge. 22E County Bourbon State Kansas
 Name of Sand Bartlesville
 Top of Core (Received) 597.0
 Bottom of Core (Received) 615.0
 Top of Sand (Received) 597.0
 Bottom of Sand (Analyzed) 612.0
 Total Feet of Permeable Sand 14.6
 Total Feet of Floodable Sand
 Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 50	3.2	3.2
50 - 100	2.7	5.9
100 - 150	1.7	7.6
150 - 200	4.8	12.4
200 & above	2.2	14.6

 Average Permeability Millidarcys 115.7
 Average Percent Porosity 22.0
 Average Percent Oil Saturation 22.7
 Average Percent Water Saturation 45.4
 Average Oil Content, Bbls./A. Ft. 382.0
 Total Oil Content, Bbls./Acre 5,577.
 Average Percent Oil Recovery by Laboratory Flooding Tests
 Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.
 Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre
 Total Calculated Oil Recovery, Bbls./Acre
 Packer Setting, Feet
 Viscosity, Centipoises @
 A. P. I. Gravity, degrees @ 60 °F (Reported) 27.
 Elevation, Feet

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- LOG -

Company GGL & Company Lease Lafferty Well No. 1

<u>Depth Interval, Feet</u>	<u>Description</u>
597.0 - 598.2	Gray laminated slightly shaly sandstone.
598.2 - 604.2	Clean light brown sandstone.
604.2 - 605.2	Gray and brown laminated sandstone and shale.
605.2 - 607.2	Brown sandstone.
607.2 - 610.7	Dark brown sandstone.
610.7 - 611.1	Grayish light brown laminated shaly sandstone.
611.1 - 612.0	Dark brown sandstone.
612.0 - 612.3	Gray and brown laminated sandstone and shale.
612.3 - 614.0	Dark brown sandstone containing a vertical fracture.
614.0 - 615.0	Dark carbonaceous sandstone containing a vertical fracture.

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE I-B

Company GGL & Company Lease Lafferty Well No. 1

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	597.5	18.4	18	53	71	257	0.42	1.2	1.2	308	0.50
2	598.5	23.3	7	48	55	126	110.	0.8	2.0	101	88.00
3	599.5	22.8	3	58	61	53	156.	1.0	3.0	53	156.00
4	600.5	23.9	12	42	54	222	181.	1.0	4.0	222	181.00
5	601.5	23.8	8	55	63	148	166.	1.0	5.0	148	166.00
6	602.5	23.0	4	59	63	71	163.	1.0	6.0	71	163.00
7	603.5	24.0	5	66	71	93	203.	1.2	7.2	112	243.60
8	604.5	14.7	26	59	85	296	0.17	1.0	8.2	296	0.17
9	605.5	23.1	25	43	68	448	89.	0.8	9.0	358	71.20
10	606.5	22.6	31	33	64	543	68.	1.2	10.2	652	81.60
11	607.5	21.9	31	33	64	526	154.	0.8	11.0	421	123.20
12	608.5	22.0	46	29	75	785	34.	1.0	12.0	785	34.00
13	609.5	22.8	46	30	76	813	231.	1.0	13.0	813	231.00
14	610.5	21.3	46	31	77	759	77.	0.7	13.7	531	53.90
15	611.5	23.5	43	30	73	784	106.	0.9	14.6	706	95.40

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company GGL & Company Lease Lafferty Well No. 1

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
597.0 - 604.2	7.2	138.6	998.10
604.2 - 612.0	7.4	93.3	690.47
597.0 - 612.0	14.6	115.7	1,688.57

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
597.0 - 604.2	7.2	22.6	8.4	54.9	141	1,015
604.2 - 612.0	7.4	21.4	36.6	36.1	616	4,562
597.0 - 612.0	14.6	22.0	22.7	45.4	382	5,577

WILSON-WRIGHT, INC. PETROLEUM LABORATORIES

BOX 2626

TULSA, OKLA. 74101

(918) 684-8080

1427 E. ADMIRAL BLVD.

Bomb No. Their P.L. Sampled _____ a.m.-p.m. _____

File 5006

June 21, 1978

Field or Plant _____

Seko Gas Co., Inc.

Well or Line LAFFERTY # 1

P. O. Box 437

24 24S 22E County Bourbon, Ks.

Noran Ks. 66755

Sepr. or Line Pressure _____ Psig. Temp _____

Attn: Mr. William Weatherbie

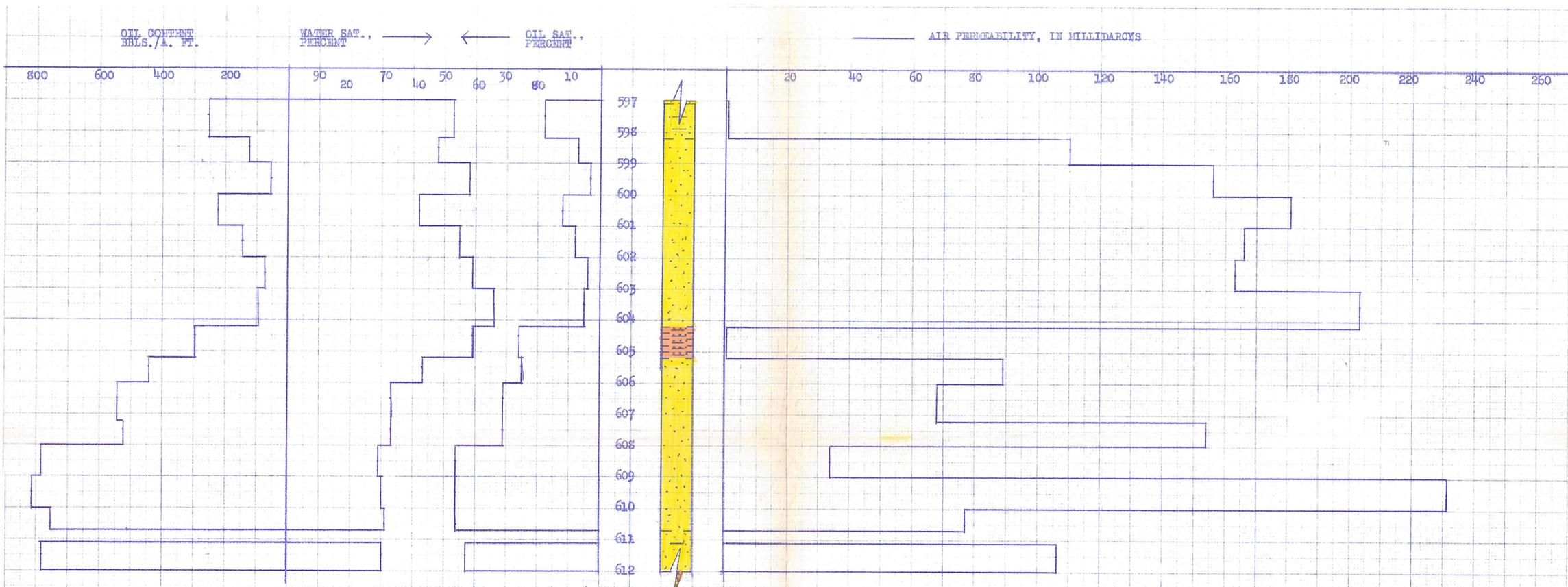
Our Invoice No. _____ Our Lab.No. 7976

HYDROCARBON COMPOSITION BY GAS CHROMATOGRAPH

<u>Components</u>	<u>Mol. %</u>	<u>Gals/MCF</u>
Helium	.11	
Nitrogen	2.85	
Carbon Dioxide	.73	
Methane	94.30	
Ethane	.38	
Propane	.53	.1458
Iso-Butane	.18	.0588
N-Butane	.31	.0976
Iso-Pentane	.11	.0401
N-Pentane	.11	.0397
Hexane	.18	.0738
Heptane Plus	.21	.1020
Oxygen	.00	
Gasoline Content: Gal. per 1000 Cu.Ft.	100.00	.5580
26# R.V.P. = 27.5 Psia True		.4085
14# R.V.P. = 15. Psia True		.2932
Heating Value, Gross BTU/CF of Gas		
Bone Dry at 14.7 Psia, 60°F.		1018
Water Saturated at 30" Hg, 60°F.		1003
Specific Gravity of Gas (Air = 1.000)		0
		.6016

Clair C. Wilson
Clair C. Wilson

H.M.



KEY:

SHALY SANDSTONE

SANDSTONE

LAMINATED SANDSTONE AND SHALE

G G L & COMPANY

LAFFERTY LEASE WELL NO. 1
BOURBON COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVG. OIL CONTENT BBLs./A. FT.	TOTAL OIL CONTENT BBLs./ACRE	AVG. AIR PERMEABILITY MILLIDARCS
597.0 - 604.2	7.2	22.6	8.4	54.9	141	1,015	134.6
604.2 - 612.0	7.4	21.4	36.6	36.1	616	4,562	93.3
597.0 - 612.0	14.6	22.0	22.7	45.4	382	5,577	115.7

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
DECEMBER, 1977.