

Vitrinite reflectance data of cuttings (6160' - 11030') from the Arco Alaska Inc. W. Mikkelsen Unit No. 2 Well.

Received 27 September 1990

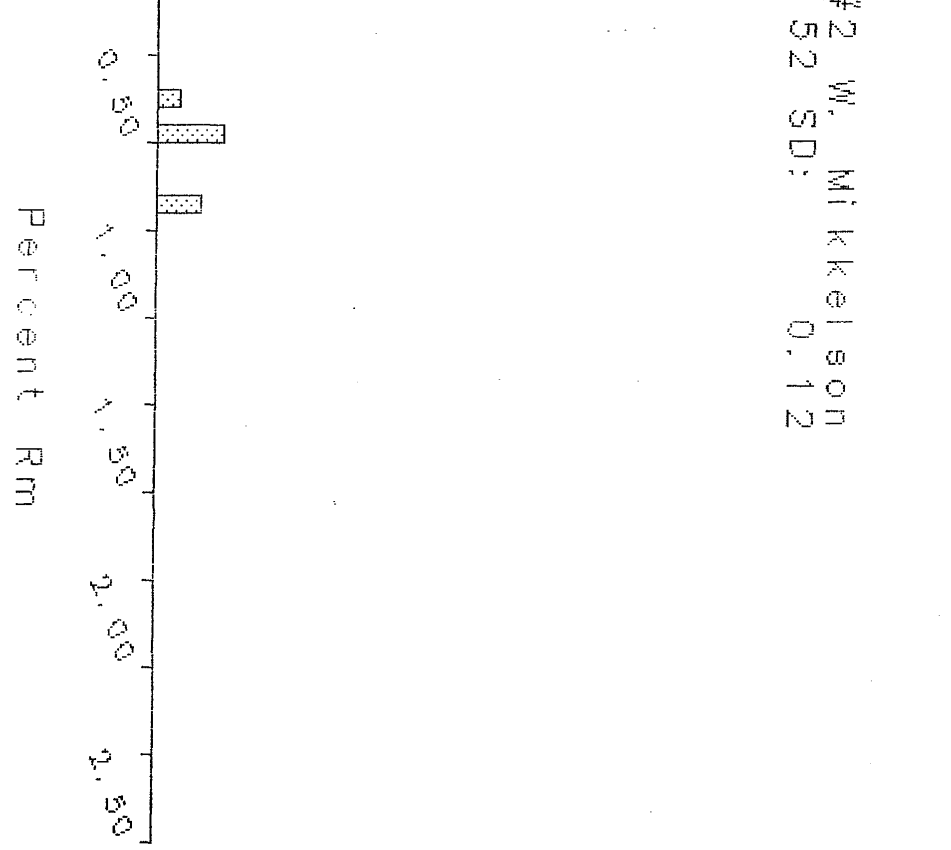
Total of 11 pages in report

Alaska Geologic Materials Center Data Report No. 167

File Name: 90016019
 Channel Name: Point 9
 Description: 90016019 #2 W. Mikkelson 6,160- 220' Alaska kerogen V9D

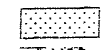
Min: 0.39
 Max: 0.69
 Mean: 0.52
 StDev: 0.12

Pt.	X-Pos	Y-Pos	Z-Pos	Meas1	Meas2	Ratio	Conc.
1				0.46			
2				0.45			
3			1	0.66	20		
4	0.00	4	2	0.49			
5				0.69			
6				0.39			



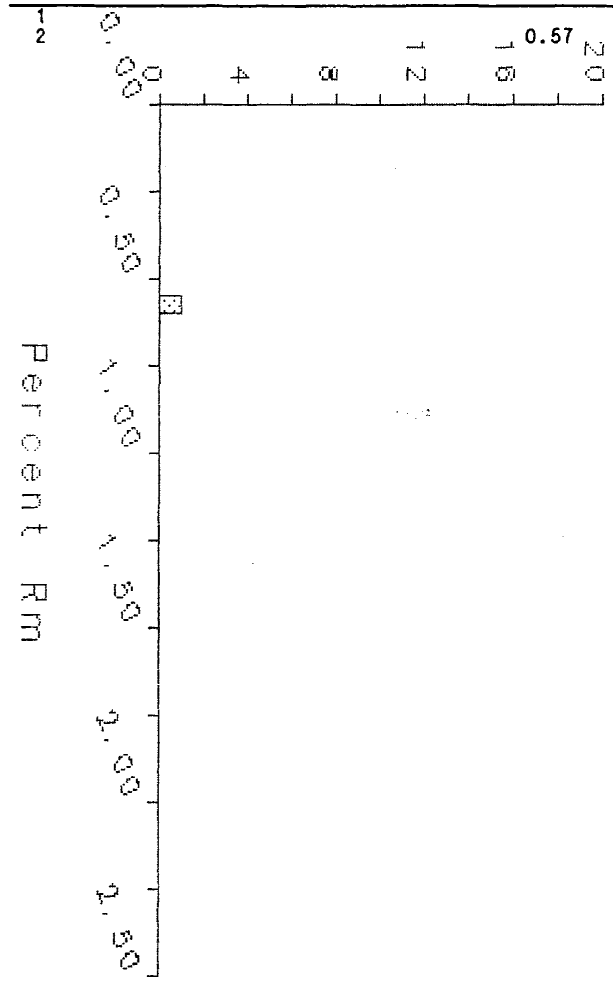
File Name: 90016020
 Channel Name: Point 9
 Description: 90016020 #2 W. Mikkelsen 7,210- 300' Alaska kerogen V90

Min: 0.57
 Max: 0.57
 Mean: 0.57
 StDev: 0.00



n: 0016020
 #2 W. Mikkelsen
 0.57 SD: 0.00

Pt.	X-Pos	Y-Pos	Z-Pos	Meas1	Meas2	Ratio	Conc.
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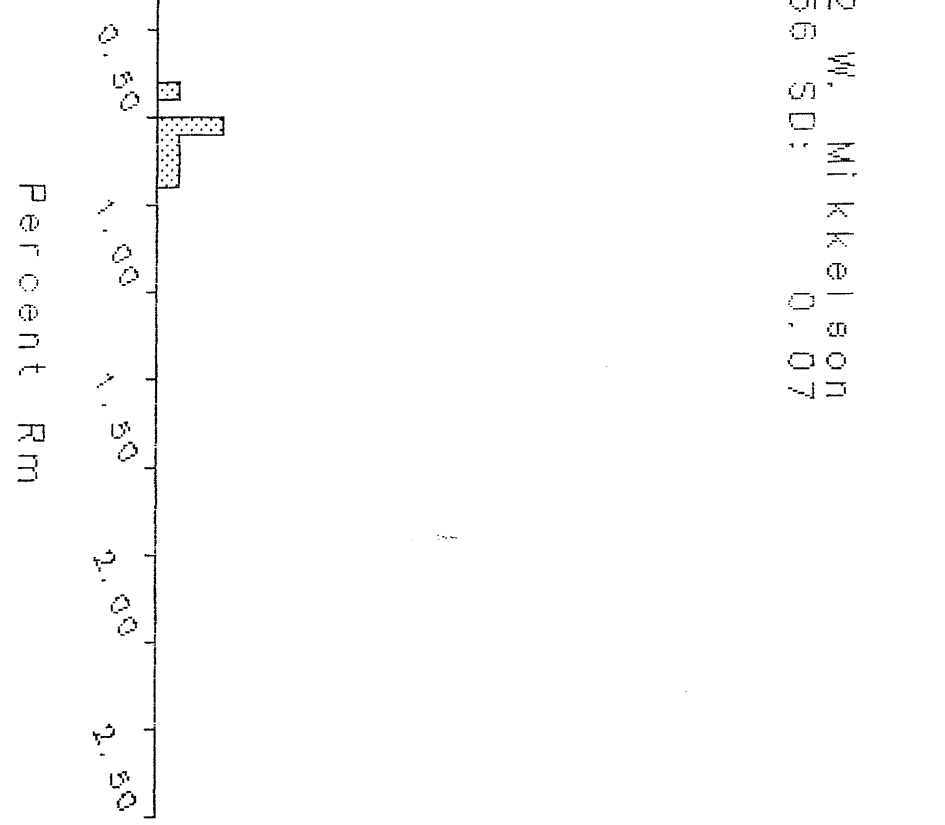
File Name: 90016021
 Channel Name: Point 9
 Description: 90016021 #2 W. Mikkelson 7,600- 90' Alaska kerogen

Min: 0.45
 Max: 0.66
 Mean: 0.56
 StDev: 0.07



90016021
 #2 W. Mikkelson
 0.56 SD: 0.07

Pt.	X-Pos	Y-Pos	Z-Pos	Meas1	Meas2	Ratio	Conc.
1				0.51			
2				0.64			
3			12	0.45			
4	0.00	4	12	0.54			
5				0.66			
6				0.57			
7				0.54			



File Name: 90016022
 Channel Name: Point 9
 Description: 90016022 #2 W. Mikkelsen 8,140- 230' Alaska kerogen V90

Min: 0.86
 Max: 1.11
 Mean: 1.02
 StDev: 0.09

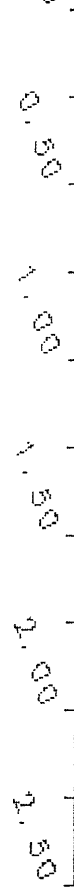


0016022
 #2 W. Mikkelsen
 1.02 SD: 0.09

Pt.	X-Pos	Y-Pos	Z-Pos	Meas1	Meas2	Ratio	Conc.
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1				1.11			
2				0.86			
3			12	0.93			
4	4	0		0.97			
5				1.08			
6				1.08			
7				1.11			
8				1.09			
9				0.95			
10				1.04			
11							

Percent Rm

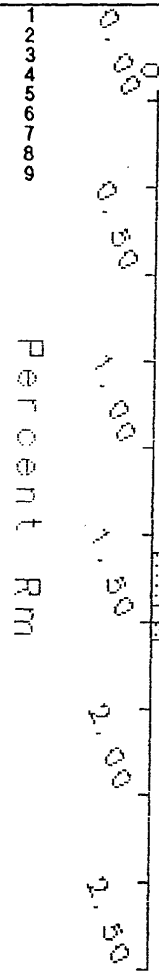


File Name: 90016023
 Channel Name: Point 9
 Description: 90016023 #2 W. Mikkelsen 8,410- 470' Alaska kerogen V90

Min: 1.32
 Max: 1.52
 Mean: 1.40
 StDev: 0.06

Pt. X-Pos Y-Pos Z-Pos Meas1 Meas2 Ratio Conc.

Pt.	X-Pos	Y-Pos	Z-Pos	Meas1	Meas2	Ratio	Conc.
1				1.35			
2				1.45			
3			1	1.45			
4	0.00	4	00	1.37			
5				1.42			
6				1.32			
7				1.43			
8				1.33			
9				1.52			

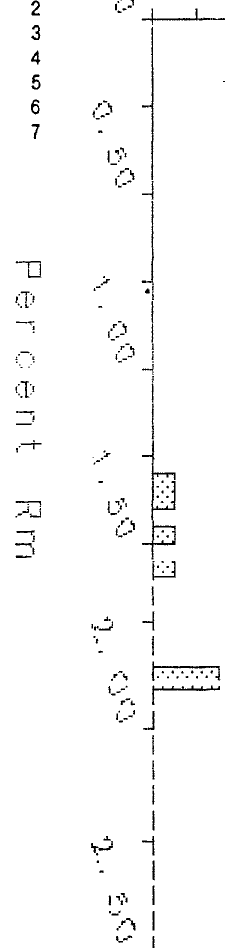


90016023
 #2 W. Mikkelsen
 1.40 SD: 0.06

File Name: 90016024
 Channel Name: Point 9
 Description: 90016024 #2 W. Mikkelson 9,020- 80' Alaska kerogen-V90

Min: 1.31
 Max: 1.89
 Mean: 1.63
 StDev: 0.26

Pt.	X-Pos	Y-Pos	Z-Pos	Meas1	Meas2	Ratio	Conc.
1				1.88			
2				1.88			
3				1.36			
4				1.89			
5				1.62			
6				1.45			
7				1.31			



90016024
 #2 W. Mikkelson
 SD: 0.26

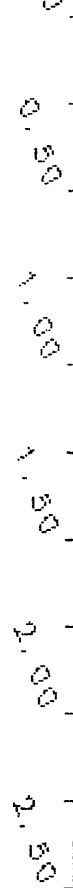
File Name: 90016025
 Channel Name: Point 9
 Description: 90016025 #2 W. Mikkelsen 9,920- 80' Alaska kerogen

Min: 1.76
 Max: 2.01
 Mean: 1.88
 StDev: 0.09

Pt. X-Pos Y-Pos Z-Pos Meas1 Meas2 Ratio Conc.

Pt.	X-Pos	Y-Pos	Z-Pos	Meas1	Meas2	Ratio	Conc.
1	0.00	0.00	1.2	1.96			
2	0.00	0.00	1.0	1.99			
3	0.00	0.00	1.0	1.80			
4	0.00	0.00	1.0	1.82			
5	0.00	0.00	1.0	1.87			
6	0.00	0.00	1.0	1.83			
7	0.00	0.00	1.0	1.76			
8	0.00	0.00	1.0	2.01			

Percent Rm

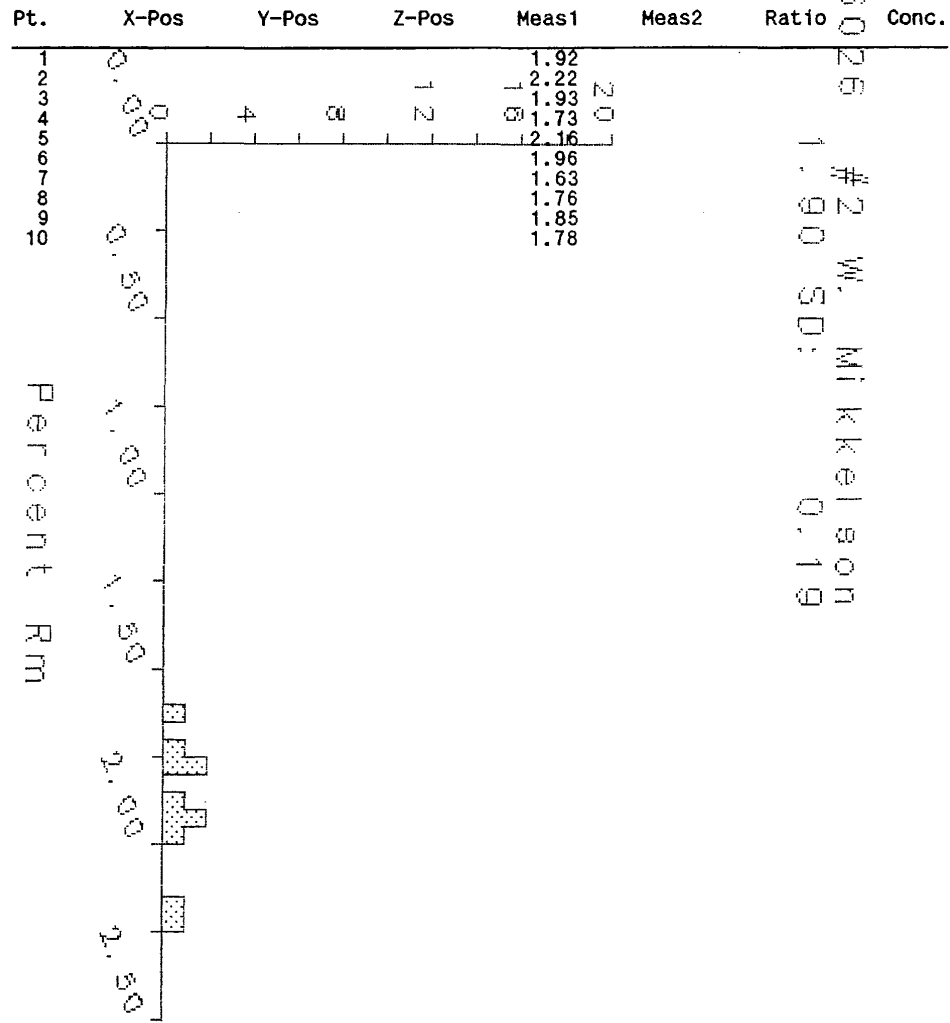


#2 W. Mikkelsen
 SD: 0.09

File Name: 90016026
 Channel Name: Point 9
 Description: 90016026 #2 W. Mikkelsen 10,430- 90' Alaska kerogen_V90

Min: 1.63
 Max: 2.22
 Mean: 1.90
 StDev: 0.19

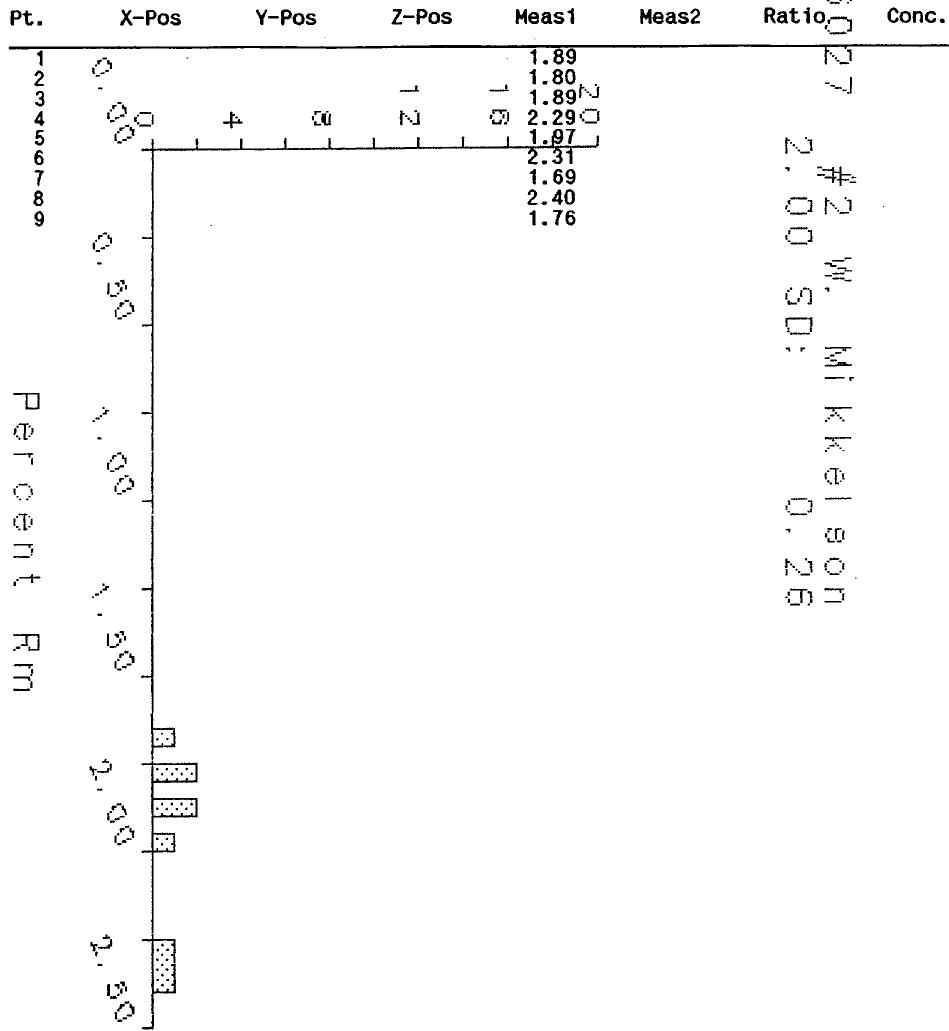
0016026
 #2 W. Mikkelsen
 1.90 SD: 0.19



File Name: 90016027
 Channel Name: Point 9
 Description: 90016027 #2 W. Mikkelsen 10,550- 80' Alaska kerogen V90

Min: 1.69
 Max: 2.40
 Mean: 2.00
 StDev: 0.26

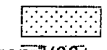
Pt.	X-Pos	Y-Pos	Z-Pos	Meas1	Meas2	Ratio	Conc.
1				1.89			
2				1.80			
3				1.89			
4				2.29			
5				1.97			
6				2.31			
7				1.69			
8				2.40			
9				1.76			



File Name: 90016031
 Channel Name: Point 9
 Description: 90016031 #2 W. Mikkelsen 11,000- 30' Alaska kerogen V90

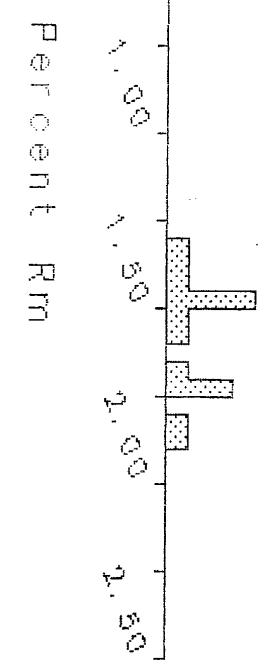
Min: 1.33
 Max: 1.89
 Mean: 1.58
 StDev: 0.17

Frequency



0016031
 #2 W. Mikkelsen
 1.58 SD: 0.17

Pt.	X-Pos	Y-Pos	Z-Pos	Meas1	Meas2	Ratio	Conc.
1				1.48			
2				1.71			
3				1.47			
4				1.66			
5				1.58			
6				1.89			
7				1.45			
8				1.72			
9				1.40			
10				1.56			
11				1.49			
12				1.41			
13				1.74			
14				1.80			
15				1.33			





United States Department of the Interior



GEOLOGICAL SURVEY
BOX 25046 M.S. 940
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DENVER, COLORADO 80225

IN REPLY REFER TO:

17 September, 1990

John Reeder
P.O. Box 772116
Eagle River, AK
99577-2116

John:

I am returning the prepared samples I borrowed from the state back in January. Enclosed, also, you will find data and histogram sheets for almost all the samples.

Some samples did have organic material I deemed good enough to measure. For the most part, the samples were good and the results are evident, at least individually. Taken on a well-by-well basis several were difficult to make good sense out of from an organic petrology point of view. The shape of the histograms is a good general indicator of consistency of the organics contained within and in the confidence I had while examining the samples. My technique was to measure at least 50 organic grains, while trying to stay within a narrow range. This becomes difficult with increased vitrinite reflectance, and the histogram spread increases. With adequate material and consistent rank (contamination from uphole cavings can introduce diverse groups of organics) the histogram will have some kind of a bell curve shape. Gaps in the histogram, relating to multiple populations of organics, are a problem and dilute the strength of the mean value as a good measure of the thermal maturity. These gaps are more common at the higher ranks, (> 1.5% reflectance), but occur at lower ranks when insufficient material exists or there is contamination in the sample. I admit to certain biases against samples prepared by people other than myself, and these samples were made by several different companies. I feel I lose too much control over the processing of the cuttings and do not have the confidence in other people's dedication to the work.

I hope these data can be of some use to you. If I can help by providing additional information, please let me know.

Thank you for providing the samples, and for your assistance while I was visiting.

Mark Pawlewicz
Mark Pawlewicz