## MAR 19680145: NORTHERN ALBERTA

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19680145

REPORT ON FIELD EXAMINATION

AZTEC OIL AND GAS COMPANY

SULPHUR PROSPECTING PERMIT NO. 178

NORTHERN ALBERTA

THIS REPORT HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF:

Aztec Oil and Gas Company

COPY NO: \_\_\_\_3

ECONOMIC MINERALS FILE REPORT No. S-AF-178(2)

REPORT ON FIELD EXAMINATION AZTEC OIL AND GAS COMPANY SULPHUR PROSPECTING PERMIT NO. 178 NORTHERN ALBERTA

> Prepared For Aztec Oil and Gas Company November, 1968

J. C. SPROULE AND ASSOCIATES LTD.

1009 FOURTH AVENUE S.W. CALGARY - ALBERTA

#### REPORT ON FIELD EXAMINATION

#### AZTEC OIL AND GAS COMPANY

#### SULPHUR PROSPECTING PERMIT NO. 178

#### NORTHERN ALBERTA

The field work on this Permit has been carried out at the request of Mr.

J.B. Duff acting for Aztec Oil and Gas Company. The work was authorized under our

letter agreement of July 5, 1968 and the request made was that J.C. Sproule &

Associates Ltd. should collect representative near-surface samples as described

in the pertinent section of our July 5th letter. We quote:

"We have already carried out a photogeological study on Permit No. 178 and our present plans would call for a field party to check those areas of indicated interest to collect hand specimens and/or auger samples to determine the presence or absence of sulphur. If this initial checking indicates that further geological field work including more detailed shallow auger testing should be carried out, you would be immediately apprised. A brief report on the results of the reconnaissance check would be submitted. You could then, if you so desired, authorize further detailed studies.

"Our charges for the initial field investigation of Permit No. 178 would be \$600."

The field work has been conducted by Mr. N. Soul. The field notes describing the samples taken are as follows. We quote:

#### "Permit No. 178

#### Area No. 1

Hole No. 1 - S.W. 17-125-18 W. 5 M. Depth, 4 feet.

Sample No.	Depth Ft.	Sulphur %	Sample
178-1-1	2	15.55	Muskeg
178-1-1	4	Trace	Muskeg

Hole No. 2 - S.W. 20-125-18 W. 5 M. Depth, 8 feet.

Sample No.	Depth Ft.	Sulphur %	Sample
178-1-2	4	0.65	Clay
178-1-2	8	0.15	Clay

Hole No. 3 - S.W. 19-125-18 W. 5 M. Depth, 4 feet.

Sample No.	Depth Ft.	Sulphur %	<u>Sample</u>
178-1-3	4	59.27	Muskeg

#### Area No. 2

Hole No. 1 - S.E. 31-125-18 W. 5 M. Depth, 2.5 feet.

No sample submitted.

Hole No. 2 - N.W. 32-125-18 W. 5 M. Depth, 7 feet.

Sample No.	Depth Ft.	Sulphur %	Sample
178-2-2	4	2.17	Clay
178-2-2	7	1.55	Clay"

The sample locations are given on the accompanying Figure 1 and the related analyses by Chemical and Geological Laboratories Ltd. constitute

Appendix I attached hereto.

With reference to these results, it will be observed that the majority of the analyses made on samples taken from Sulphur Permit No. 178 show only traces or small percentages of sulphur, with two notable exceptions. The material

penetrated was mostly clay, but included muskeg debris. These are normally rather high in sulphur in lake or depressional areas where sulphur is known.

Samples taken from Permit No. 94 consist of clay and muskeg debris.

Analyses of these were rather low in sulphur content with the exception of two, which contained 59.27 percent sulphur and 15.55 percent sulphur. These samples, Nos. 178-1-3 and 178-1-1, respectively, were taken from a large area of muskeg which, in other spots, proved to have a low sulphur content. Despite the disparity in the results obtained during this preliminary examination, we feel that the Permit is worthy of additional attention. Inasmuch as the Permit is dominated by broad muskeg areas, a second look is almost mandatory. This follow-up would involve more extensive field studies and sampling of prospective areas as well as to devoting time to the remainder of the Permit.

Under the circumstances, we recommend that Sulphur Prospecting Permit No. 178 be retained.

We will be pleased to submit an estimate of the cost of conducting an adequate exploration sampling program over the area recommended for retention at such time as a complete analysis of costs and performance of the past season's operations have been completed.

H.B. Lyall, P. Geol.

J.C. Sproule, P. Geol.

1009 Fourth Avenue S.W., Calgary, Alberta. November 15, 1968. HBL:JCS:ld1

# CHEMICAL & GEOLOGICAL LABORATORIES LTD.





Date Reported: October 11, 1968 Laboratory Report Number: C68-4157

### J. C. SPROULE & ASSOCIATES LTD.

Kind of Sample: Soil

Date Received: October 3, 1968

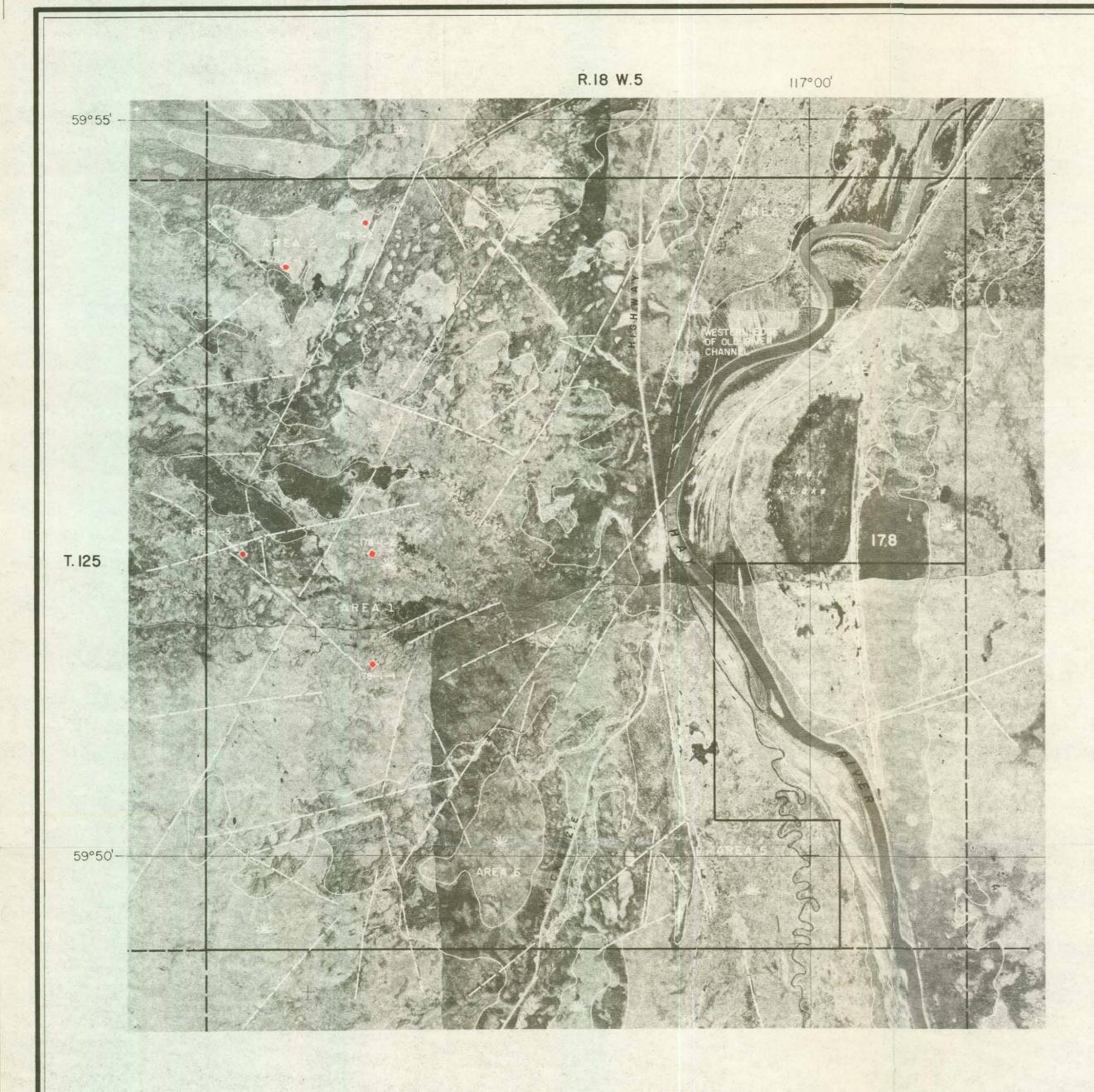
		ELEMENTAL SULFUR		
SAMPLE NUMBER	DEPTH IN FEET		by Weight Dry Sample)	(% by Weight on Wet Sample)
178-1-1	4		Trace	Trace
178-1-2	4		0.65	0.16

REPORT NUMBER: C63-2993 and

C60-3994

Date Received: August 29th., 1963 Date Received: August 22nd., 1963

SAUR.E NUMBER	DEFTH IN FREE	(% by Wtdry
170-1-1	2	15.55
170-2-2	4	2,17
173-2-2	7	1.55
170-1-2 173-1-3	8 4	0.15 59.27



LEGEND

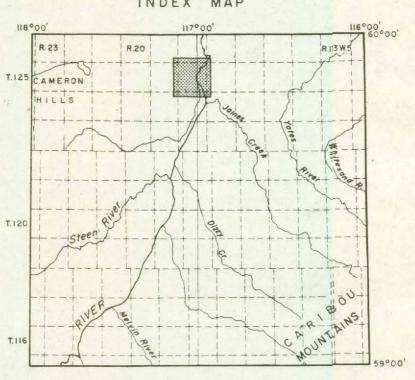
bedrock fracturing

Sample Location

Muskeg AREA 1, 2 etc. General areas of interest Permit Outline

Alignments interpreted to indicate faulting or

INDEX MAP



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PHOTOGEOLOGICAL MOSAIC SULPHUR PROSPECTING PERMIT

No. 178

# RAT LAKE AREA ALBERTA

PREPARED FOR

AZTEC OIL & GAS CO. LTD.

APPROXIMATE SCALE IN MILES

THIS IS A SEMICONTROLLED MAP-MOSAIC AND SHOULD NOT BE MISTAKEN FOR AN ACCURATE GEOGRAPHIC BASE

J.C. SPROULE AND ASSOCIATES LTD. CALGARY, ALBERTA

19680145 FIGURE