

# MAR 19680069: NORTHERN ALBERTA

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REPORT ON FIELD EXAMINATION  
STALL LAKE MINES LIMITED  
SULPHUR PROSPECTING PERMIT NO. 75  
NORTHERN ALBERTA

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Stall Lake Mines Limited

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FILE REPORT No.  
S-AF-075(1)

REPORT ON FIELD EXAMINATION  
STALL LAKE MINES LIMITED  
SULPHUR PROSPECTING PERMIT NO. 75  
NORTHERN ALBERTA

Prepared For  
Stall Lake Mines Limited  
November, 1968

**J. C. SPROULE AND ASSOCIATES LTD.**  
OIL AND GAS ENGINEERING AND GEOLOGICAL CONSULTANTS

REPORT ON FIELD EXAMINATION  
STALL LAKE MINES LIMITED  
SULPHUR PROSPECTING PERMIT NO. 75  
NORTHERN ALBERTA

The field work on this Permit has been carried out at the request of Mr. G.B. White acting for Stall Lake Mines Limited. The work on this Permit was specifically authorized by your letter of June 1, 1968 to be performed in accordance with our letter proposal of May 28, 1968 and the request made was that J.C. Sproule and Associates Ltd. should investigate and sample representative locations as described in the pertinent paragraphs of our May 28th letter. We quote:

"Phase 2 - Field Geological and Sampling Program

We are prepared to place a party in the field beginning in June, to conduct a geological and sampling program. This program would include a limited amount of shallow auger testing, the results of which would influence our recommendations for a subsequent auger or drilling program. This party will move by helicopter in order to facilitate travel and to permit the geological party to land at points previously identified on the photomosaics.

"We propose that Phase 2 would be conducted in two steps. As a first step, the field party would check strategic and representative points as indicated by the photogeological study. This step could be done at an estimated cost of \$800 per Permit,...."

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

"Permit No. 75

Area No. 1

Hole No. 1 - Ctr. 13-113-3 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
75-1-1	4	Trace	Muskeg and lacustrine
75-1-1	8	23.13	Muskeg and lacustrine.

This hole is immediately west of Permit No. 75 and Permit No. 114.

Hole No. 1A - N.W. 18-113-2 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
75-1-1A	4	Trace	Grey clay
75-1-1A	8	Trace	Grey clay.

Area No. 2

Hole No. 1 - N.W. 15-113-2 W. 5 M. Depth, 7 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
75-2-1	4	4.28	Dark brown clay, <u>sulphurous odour.</u>
75-2-1	7	70.75	Dark brown clay, <u>sulphurous odour.</u>

Area No. 3

Hole No. 1 - S.E. 34-112-2 W. 5 M. Depth, 7 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
75-3-1	4	15.64	Yellowish brown sandy clay.
75-3-1	7	Trace	Yellowish brown sandy clay.

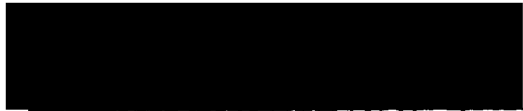
The sample locations are given on the accompanying Figure 1 and the related analyses by Chemical and Geological Laboratories Ltd. constitute Appendix I attached hereto.

Samples taken from Sulphur Permit No. 75 consist of clay and muskeg debris. Analyses of these varied from rather low in sulphur content up to 70.75 percent sulphur in one case. This sample, No. 75-2-1, was taken from a relatively small muskeg adjacent to the Pakwanutik River, and overlapping the Permit boundary. It is in line with a narrow elongate muskeg on the adjacent Permit (No. 114) and which may indicate a trend of high sulphur deposition. Another sample, No. 75-1-1, analysed 23.13 percent sulphur, but was collected from a muskeg lying just outside the western boundary of the Permit. These two relatively positive analyses suggest that Permit No. 75 should be considered for Step 2 of Phase II despite the fact that the Permit is not liberally endowed with numerous, large potential catchment basins.

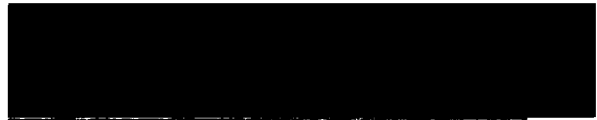
We quote from our letter proposal of May 28, 1968: "If the early field check should show the encouraging presence of sulphur, we would proceed with the second step of the field study, which would involve more extensive field studies and sampling of prospective areas. This second step of Phase II is estimated to cost an additional \$2,150 to \$2,500 per Permit,..... You would, of course, be advised of the preliminary results of Phase II before being required to authorize Step 2 of Phase II."

An alternative solution is stated in our letter of May 28, 1968, the pertinent statement is herein quoted: "On the other hand, your promising Permits might also be turned over to any other party who may wish to own same, by returning costs to Stall Lake Mines."

Under the circumstances, we recommend that Sulphur Prospecting Permit No. 75 be retained and that the renewal fee be paid by the Company prior to January 2, 1969.



H.B. Lyall, P. Geol.

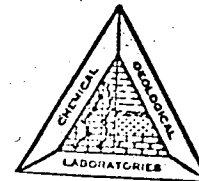


J.C. Sproule, P. Geol.

1009 Fourth Avenue S.W.,  
Calgary 2, Alberta.  
November 12, 1968.  
HBL:JCS:ld1



# CHEMICAL & GEOLOGICAL LABORATORIES LTD.



OPERATOR: J. C. SPROULE AND ASSOCIATES LTD.

REPORT NUMBER: C68-4067

DATE SAMPLED: ---

DATE RECEIVED September 18, 1968

DATE REPORTED September 27, 1968

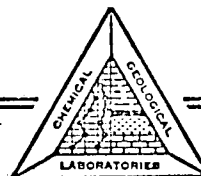
Kind of Sample: Soil for Sulphur Analysis.

<u>LABORATORY NUMBER</u>	<u>SAMPLE NUMBER</u>	<u>DEPTH (Feet)</u>	<u>SULPHUR</u>	
			<u>(% by Weight) Dry Sample</u>	<u>(% by Weight) Wet Sample</u>
C68-4067-1	75-1-1	8	23.13	2.37
C68-4067-2	75-1-1A	8	Trace	Trace
C68-4067-3	75-2-1	7	70.75	32.94
C68-4067-4	75-3-1	7	Trace	Trace

# CHEMICAL & GEOLOGICAL LABORATORIES LTD.

APPENDIX I

14240-115 AVENUE, EDMONTON, ALBERTA



Date Reported: October 11, 1968

Laboratory Report Number: C68-4156

J. C. SPROULE & ASSOCIATES LTD.

Kind of Sample: Soil

Date Received: October 3, 1968

<u>SAMPLE NUMBER</u>	<u>DEPTH IN FEET</u>	<u>ELEMENTAL SULFUR</u>	
		<u>(% by Weight on Dry Sample)</u>	<u>(% by Weight on Wet Sample)</u>
75-1-1	4	Trace	Trace
75-1-1A	4	Trace	Trace
75-2-1	4	4.28	2.47
75-3-1	4	1.63	0.97

REPORT ON FIELD EXAMINATION

STALL LAKE MINES LIMITED

SULPHUR PROSPECTING PERMIT NO. 75

NORTHERN ALBERTA

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"We propose that Phase 2 would be conducted in two steps. As a first step, the field party would check strategic and representative points as indicated by the photogeological study. This step could be done at an estimated cost of \$300 per Permit,...."

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

Permit No. 75

Area No. 1

Hole No. 1 - Ctr. 13-113-3 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
75-1-1	4	Trace	Nuskeg and lacustrine
75-1-1	8	23.13	Muskeg and lacustrine.

This hole is immediately west of Permit No. 75 and Permit No. 114.

Hole No. 1A - N.W. 18-113-2 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
75-1-1A	4	Trace	Grey clay
75-1-1A	8	Trace	Grey clay.

Area No. 2

Hole No. 1 - N.W. 15-113-2 W. 5 M. Depth, 7 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
75-2-1	4	4.28	Dark brown clay, <u>sulphurous odour.</u>
75-2-1	7	70.75	Dark brown clay, <u>sulphurous odour.</u>

Area No. 3

Hole No. 1 - S.E. 34-112-2 W. 5 M. Depth, 7 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
75-3-1	4	15.64	Yellowish brown sandy clay.
75-3-1	7	Trace	Yellowish brown sandy 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.

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We quote from our letter proposal of May 28, 1968: "If the early field check should show the encouraging presence of sulphur, we would proceed with the second step of the field study, which would involve more extensive field studies and sampling of prospective areas. This second step of Phase II is estimated to cost an additional \$2,150 to \$2,500 per Permit,..... You would, of course, be advised of the preliminary results of Phase II before being required to authorize Step 2 of Phase II."

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Under the circumstances, we recommend that Sulphur Prospecting Permit No. 75 be retained and that the renewal fee be paid by the Company prior to January 2, 1969.



H.B. Lyall, P. Geol.



J.C. Sproule, P. Geol.

1009 Fourth Avenue S.W.,  
Calgary 2, Alberta.  
November 12, 1968.  
IBL:JCS:ldl

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

OPERATOR: J. C. SPROULE AND ASSOCIATES LTD.

DATE SAMPLED: ----- REPORT NUMBER: C68-4067

Kind of Sample: Soil for Sulphur Analysis.

DATE RECEIVED: September 18, 1968

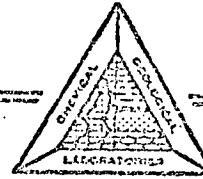
DATE REPORTED: September 27, 1968

LABORATORY NUMBER	SAMPLE NUMBER	DEPTH (Feet)	SULPHUR	
			(% by Weight) Dry Sample	(% by Weight) Wet Sample
C68-4067-1	75-1-1	8	23.13	2.37
C68-4067-2	75-1-1A	8	Trace	Trace
C68-4067-3	75-2-1	7	70.75	32.94
C68-4067-4	75-3-1	7	Trace	Trace

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

APPENDIX I

16250-118 AVENUE, EDMONTON, ALBERTA



Date Reported: October 11, 1968

Laboratory Report Number: C68-4156

J. C. SPROULE & ASSOCIATES LTD.

Kind of Sample: Soil

Date Received: October 3, 1968

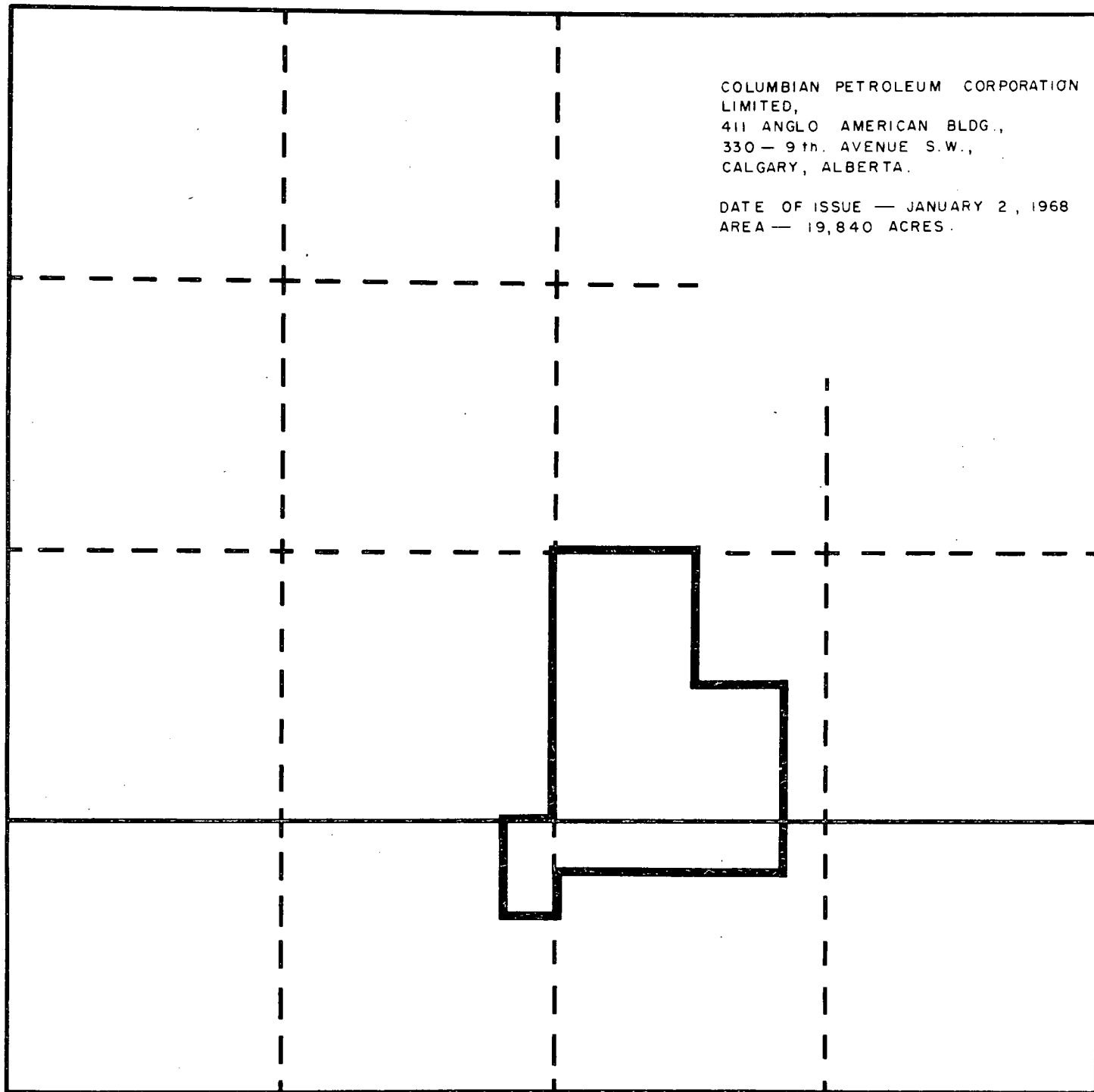
SAMPLE NUMBER	DEPTH IN FEET	ELEMENTAL SULFUR	
		(% by Weight on Dry Sample)	(% by Weight on Wet Sample)
75-1-1	4	Trace	Trace
75-1-1A	4	Trace	Trace
75-2-1	4	4.28	2.47
75-3-1	4	1.63	0.97



# SULPHUR PROSPECTING PERMIT NO 75

COLUMBIAN PETROLEUM CORPORATION  
LIMITED,  
411 ANGLO AMERICAN BLDG.,  
330 - 9th. AVENUE S.W.,  
CALGARY, ALBERTA.

DATE OF ISSUE — JANUARY 2, 1968  
AREA — 19,840 ACRES.



845/9

TP. 113

TP. 112

R. 3

R. 2

R. 1 W. 5 M.

114°15'

58°50'

T. 113

T. 112

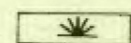
58°45'

R. 3

R. 2. W. 5 114°15'

**LEGEND**

**SURFICIAL DEPOSITS**

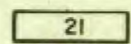


Muskeg

**PHOTOGEOLOGICAL SYMBOLS**

— — — — — Alignment interpreted to indicate faulting or fracturing in bedrock

— A — — — — — Alignment of probable geological significance

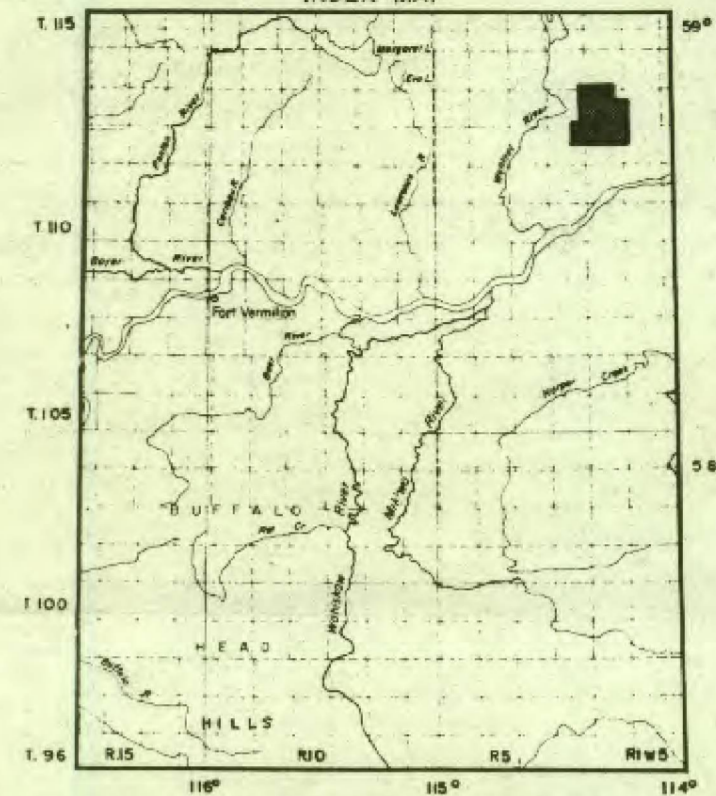


Sulphur prospecting permit outline



Sample Location

**INDEX MAP**

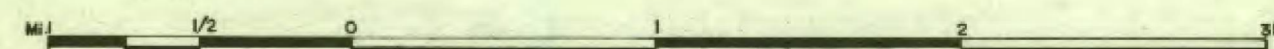


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**PHOTOGEOLOGICAL MOSAIC  
SULPHUR PROSPECTING PERMIT  
No. 75**

**FORT VERMILION AREA  
ALBERTA**

PREPARED FOR  
**STALL LAKE MINES 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