

MAR 19680105: NORTHERN ALBERTA

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ECONOMIC MINERALS

FILE REPORT No.

~~S-AF-116(1)~~

~~S-AF-117(1)~~

S-AF-118(1)

S-AF-119(1)

S-AF-120(1)

S-AF-121(1)

S-AF-122(1)

S-AF-123(1)

~~S-AF-124(1)~~

S-AF-125(1)

REPORT ON FIELD EXAMINATION

STALL LAKE MINES LIMITED

SULPHUR PERMITS NOS. 116 TO 125

NORTHERN ALBERTA

19680105

700480

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700482

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700487

700488

INDEXING DOCUMENT NOS. 700489

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Stall Lake Mines Limited

COPY NO: 1

REPORT ON FIELD EXAMINATION
STALL LAKE MINES LIMITED
SULPHUR PERMITS NOS. 116 TO 125
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 PERMITS NOS. 116 TO 125
NORTHERN ALBERTA

The field work on these permits has been carried out at the request of Mr. G.B. White acting for Stall Lake Mines Limited. The work was authorized under our letter agreement of May 28, 1968 and the request made was that J.C. Sproule & Associates Ltd. should investigate and sample representative locations as described in the pertinent paragraphs of our May 28th letter. We quote:

"Phase II - 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 II would be conducted in two steps. As a first step, the field party would check strategic and representative points as indicated on the photogeological study. This step could be done at an estimated cost of \$800 per permit, or \$8,000 for all ten permits."

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

Permit No. 116

Area No. 2

Hole No. 1 - S 1/2 9-103-10 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
116-2-1	8	15.64	Sandy organic clay.

Hole No. 2 - S.W. 29-103-10 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
116-2-2	8	Trace	Sandy organic clay.

Area No. 3

Hole No. 1 - W 1/2 22-104-10 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
116-3-1	8	Trace	Alluvium.

Permit No. 117

Area No. 1

Hole No. 1 - W 1/2 14-103-11 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
117-1-1	4	Trace	Brown sandy clay.
117-1-1	8	Trace	Brown sandy clay.

Hole No. 2 - S.E. 36-102-11 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
117-1-2	4	Trace	Wet muskeg.
117-1-2	8	Trace	Wet muskeg.

Permit No. 118

Area No. 1

Hole No. 1 - W 1/2 26-103-11 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
118-1-1	8	Trace	Sandy alluvium.

Hole No. 2 - N.E. 4-104-11 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
118-1-2	8	Trace	Muskeg and lacustrine.

Permit No. 119

Area No. 2

Hole No. 1 - E 1/2 28-104-11 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
119-2-1	8	Trace	Alluvium.

Permit No. 120

Area No. 5

Hole No. 1 - N.E. 30-104-12 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
120-5-1	4	Trace	Grey clay.
120-5-1	8	Trace	Grey clay.

Permit No. 121

Area No. 1

Hole No. 1 - Ctr. 34-104-22 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
121-1-1	4	Trace	Grey clay.
121-1-1	8	Trace	Grey clay.

Area No. 2

Hole No. 1 - S.W. 14-104-22 W. 4 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
121-2-1	8	2.11	Brown muck.

Permit No. 122

Area No. 4

Hole No. 1 - S.W. 9-102-1 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
122-4-1	4	10.35	Yellowish grey clay.
122-4-1	8	Trace	Yellowish grey clay.

Permit No. 123

Area No. 3

Hole No. 1 - Ctr. 4-103-1 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
123-3-1	4	4.10	Brown muck to five feet.
123-3-1	8	Trace	Grey clay.

Permit No. 124

Area No. 1

Hole No. 1 - N.W. 4-103-2 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
124-1-1	4	Trace	Brown clay, <u>strong</u> <u>sulphurous odour.</u>
124-1-1	8	22.94	Brown clay, <u>strong</u> <u>sulphurous odour.</u>

Permit No. 125

Area No. 1

Hole No. 1 - S.W. 26-102-3 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
125-1-1	4	Trace	Brown muck.
125-1-1	8	Trace	Greenish grey clay.

Area No. 2

Hole No. 1 - N.E. 7-102-2 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
125-2-1	4	3.96	Dry muskeg.
125-2-1	8	Trace	Dry muskeg.

The sample locations are given on the accompanying Figures 1 and 2 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 analyses made of all samples taken from Sulphur Permits Nos. 116 to 121, 123 and 125 show only traces or very small percentages of sulphur. The material penetrated was mostly clay, but included muskeg debris and alluvium. These are normally rather high in

sulphur in lake or depressional areas where sulphur is known. That being the case, it is reasonably certain that Sulphur Permits Nos. 116 to 121, 123 and 125 do not contain occurrences of native sulphur in sufficient quantities to justify further exploratory activity, with exceptions as indicated below.

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, or \$0 to \$20,000 for ten Permits, depending upon the number studied. 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."

The samples collected from Hole No. 122-4-1, Permit No. 122, analysed trace to 10.35 percent sulphur. This showing occurs within a small muskeg adjacent to a few other slightly larger muskegs, which may provide large enough areas to develop encouraging reserves. In addition, a higher sulphur analysis has been recorded from the Permit immediately south of Permit No. 122. In consequence, therefore, a portion of this Permit, occupying the southeastern corner, has been outlined for further attention. The size and configuration of this recommended area allows for the possible northeastward extension of the large muskeg area that crosses the southern boundary of Permit No. 122.

On Permit No. 124, one sample analysed at 22.94 percent sulphur (Hole No. 124-1-1; depth, eight feet) and the test is located in an extensive muskeg. This particular muskeg is surrounded by abundant large and small muskeg areas which, it is believed, should be examined. Thus, we feel that Sulphur Prospecting Permit No. 124 should be retained and subjected to the second step of Phase II, as per our proposal of May 28, 1968. In order to retain control of potentially interesting 'basins' during this subsequent exploration period, it is recommended also that those portions of Sulphur Permits Nos. 122, 123 and 125 (outlined on Figure 2), which lie adjacent to Permit No. 124 and which contain likely looking catchment basins, be retained as partial Permits.

In consequence, therefore, we recommend retaining Sulphur Prospecting Permit No. 124 and portions of Sulphur Prospecting Permits Nos. 122, 123 and 125, as shown on Figure 2. Permits Nos. 116, 117, 118, 119, 120 and 121 should be abandoned and a request for return of deposits should be made by the Company.

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

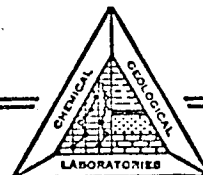

H.B. Lyall, P. Geol.


J.C. Sproule, P. Geol.

1009 Fourth Avenue S.W.,
Calgary 2, Alberta.
November 14, 1968.
HBL:JCS:ldl

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

14240-116 AVENUE, EDMONTON, ALBERTA



Date Reported: October 29, 1968

Laboratory Report Number: C68-4213-2

J. C. SPROULE & ASSOCIATES LTD.

Kind of Sample: Soil

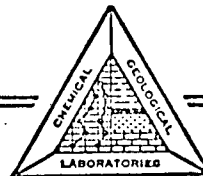
Date Received: October 18, 1968

<u>SAMPLE NUMBER</u>	<u>DEPTH IN FEET</u>	<u>ELEMENTAL SULFUR (% by Weight on Dry Sample)</u>
125-2-1	4	3.96
122-4-1	4	10.35
121-1-1	4	Trace
123-3-1	4	4.10
124-1-1	4	Trace
125-1-1	4	Trace

Stall Lake

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

14240-115 AVENUE, EDMONTON, ALBERTA



Date Reported: October 11, 1968

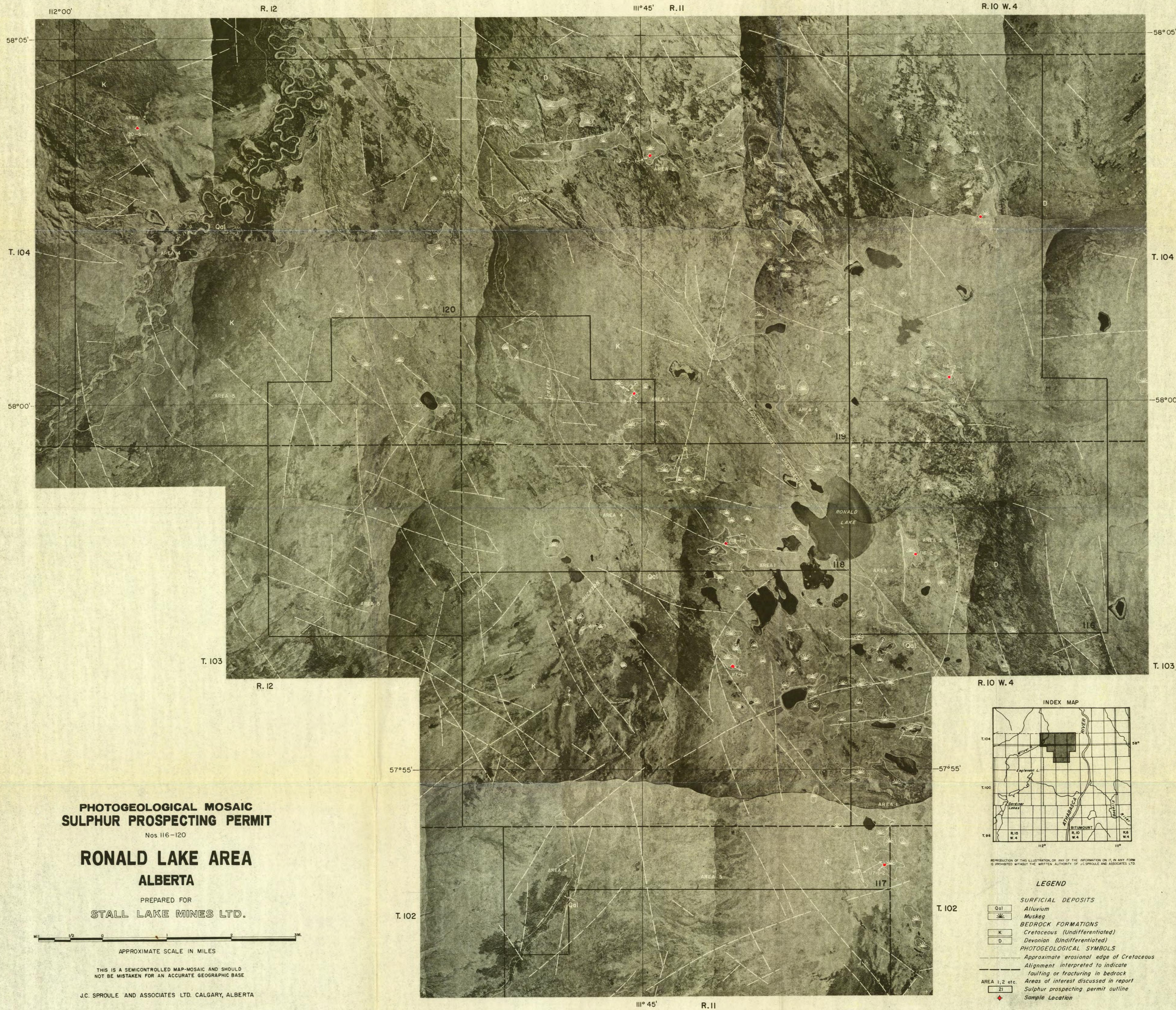
Laboratory Report Number: C68-4156

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>
116-2-1	8	15.64	8.42
116-2-2	8	Trace	Trace
116-3-1	8	Trace	Trace
117-1-1	4	Trace	Trace
117-1-1	8	Trace	Trace
117-1-2	4	Trace	Trace
117-1-2	8	Trace	Trace
118-1-1	8	Trace	Trace
118-1-2	8	Trace	Trace
119-2-1	8	Trace	Trace
120-5-1	4	Trace	Trace
120-5-1	8	Trace	Trace



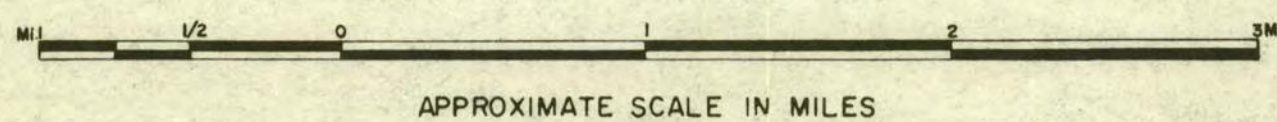
**PHOTOGEOLOGICAL MOSAIC
SULPHUR PROSPECTING PERMIT**

Nos. 121 and 122-125

FORT VERMILION AREA

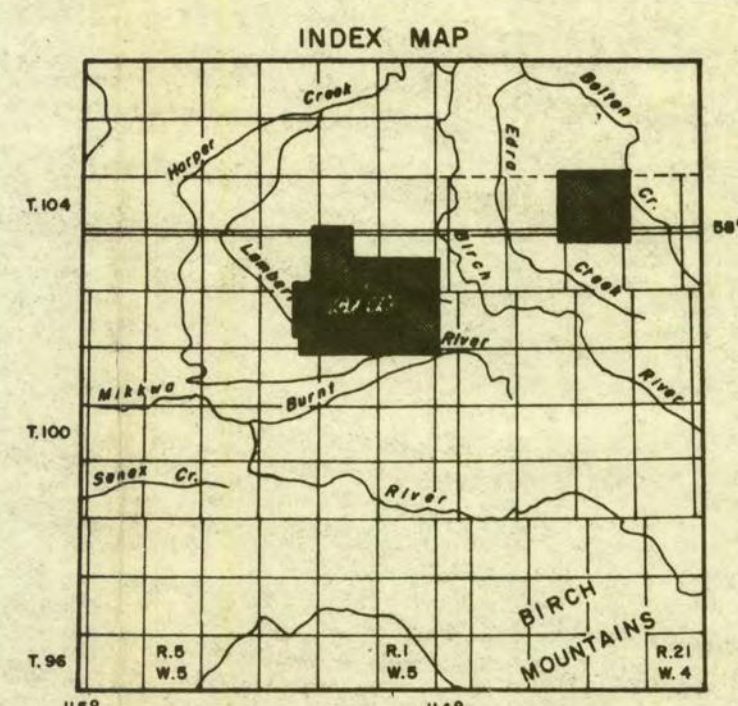
ALBERTA

PREPARED FOR
STALL LAKE MINES LTD



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



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LEGEND

SURFICIAL DEPOSITS

Alluvium

Muskeg

PHOTOGEOLOGICAL SYMBOLS

Alignment interpreted to indicate

faulting or fracturing in bedrock

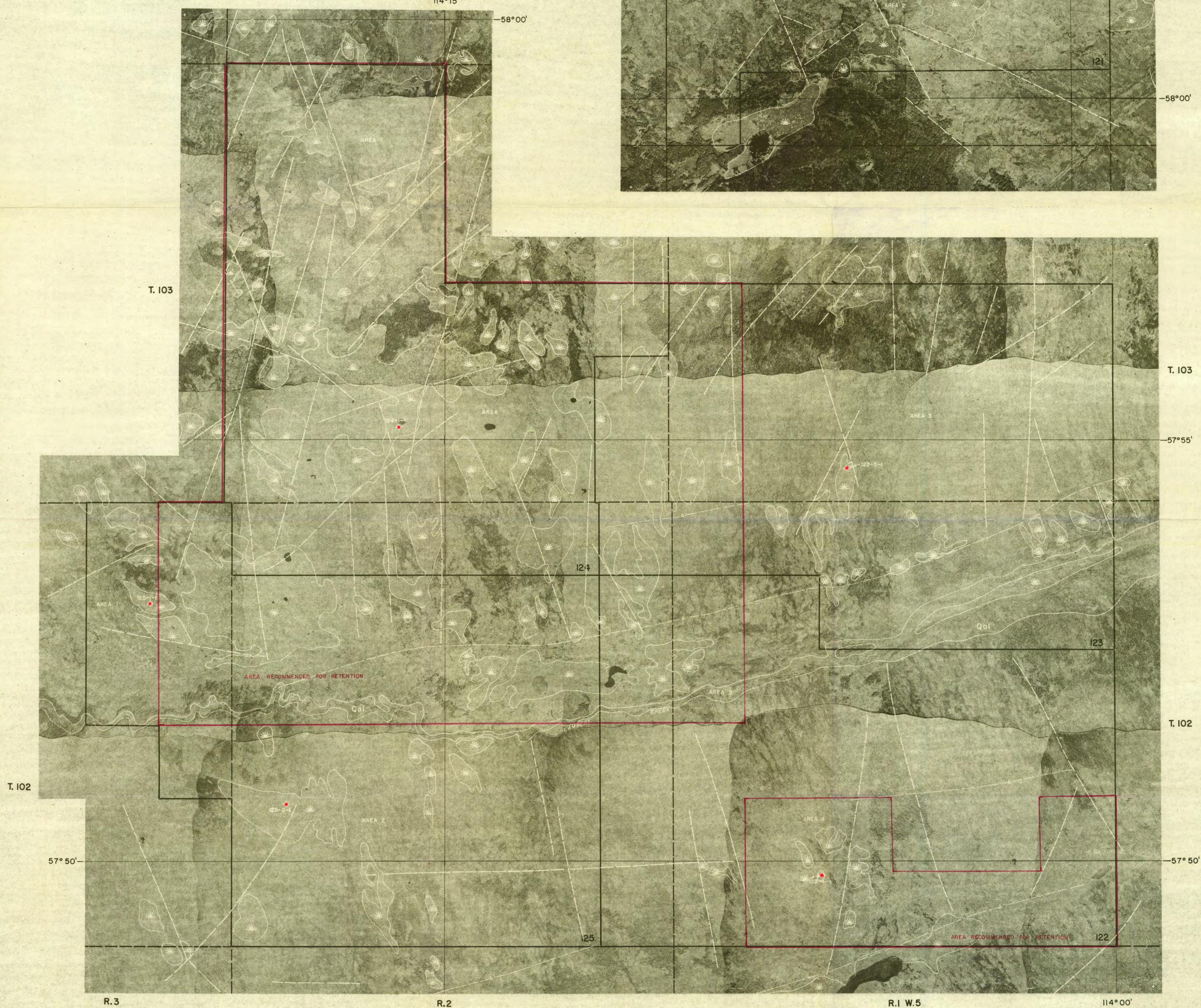
Alignment of probable geological

significance
Areas of interest discussed in 1999

AREA 1, 2, etc. *Areas of interest discussed in report*

21 Sulphur prospecting permit outline

Sample Location
114815'



R.3

R.2

R.I W.5

114° 00'

57° 50'—

—57° 50'

T. 102

T. 102

T. 103

-58°00'

T. 104

58° 05'

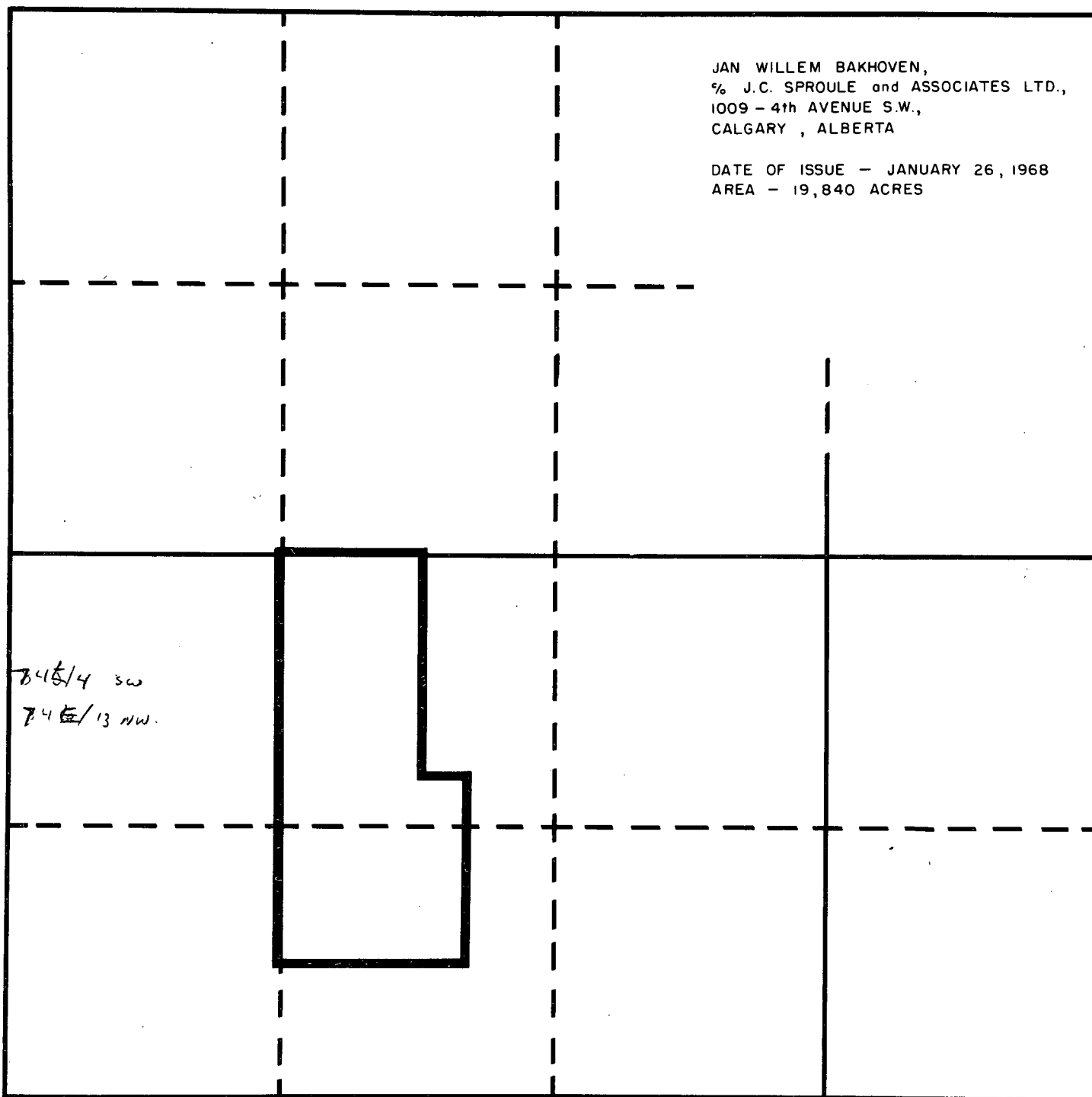
R. 22 W. 4

113° 30'

SULPHUR PROSPECTING PERMIT No. 116

JAN WILLEM BAKHOVEN,
% J.C. SPROULE and ASSOCIATES LTD.,
1009 - 4th AVENUE S.W.,
CALGARY , ALBERTA

DATE OF ISSUE - JANUARY 26, 1968
AREA - 19,840 ACRES



TP. 104

TP. 103

R. 10

R. 9

R. 8 W. 4 M.

SULPHUR PROSPECTING PERMIT No. 117

JAN WILLEM BAKHOVEN,
% J.C. SPROULE and ASSOCIATES LTD.,
1009 - 4th AVENUE S.W.,
CALGARY, ALBERTA

DATE OF ISSUE - JANUARY 26, 1968
AREA - 19,840 ACRES

TP. 103

74E/13
NW

TP. 102

R. 12

R. 11

R. 10 W. 4 M.

SULPHUR PROSPECTING PERMIT No. 118

JAN WILLEM BAKHOVEN
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1009 - 4th AVENUE S.W.,
CALGARY, ALBERTA

DATE OF ISSUE - JANUARY 26, 1968
AREA - 19,840 ACRES

TP. 104

742/4 SE

74E/13 NW

TP. 103

TP. 102

R. 12

R. 11

R. 10 W. 4 M.

SULPHUR PROSPECTING PERMIT No. 119

JAN WILLEM BAKHOVEN,
% J. C. SPROULE and ASSOCIATES, LTD.,
1009 - 4th AVENUE S.W.,
CALGARY, ALBERTA

DATE OF ISSUE - JANUARY 26, 1968
AREA - 19,840 ACRES

TP. 104

842/4
SE

TP. 103

R. 11

R. 10 W. 4 M.

SULPHUR PROSPECTING PERMIT No. 120

JAN WILLEM BAKHOVEN,
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74L/4
SE

TP. 104

TP. 103

R. 13

R. 12

R. 11 W. 4 M.

SULPHUR PROSPECTING PERMIT No. 121

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TP. 104

84I/4
SW.

TP. 103

R. 22

R. 21 W. 4 M.

SULPHUR PROSPECTING PERMIT No. 122

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AREA - 19,840 ACRES

846/16
N12

TP. 102

TP. 101

R. 2

R. 1 W. 5 M.

SULPHUR PROSPECTING PERMIT No. 123

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CALGARY, ALBERTA

DATE OF ISSUE - JANUARY 26, 1968
AREA - 19,840 ACRES

CORRECTION LINE

TP. 103

TP. 102

TP. 101

84 6/16
NE

R. 2

R. 1 W. 5 M.

SULPHUR PROSPECTING PERMIT No. 124

JAN WILLEM BAKHOVEN
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1009 - 4th AVENUE S.W.,
CALGARY, ALBERTA

DATE OF ISSUE - JANUARY 26, 1968
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CORRECTION LINE

TP. 103

84 6/14
NE

TP. 102

R. 2

R. 1 W. 5 M.

SULPHUR PROSPECTING PERMIT No. 125

JAN WILLEM BAKHOVEN
% J.C. SPROULE and ASSOCIATES LTD.,
1009 - 4th AVENUE S.W.,
CALGARY, ALBERTA

DATE OF ISSUE - JANUARY 26, 1968
AREA - 19,840 ACRES

CORRECTION LINE

84G/16
NE

TP. 102

TP. 101

R. 3

R. 2

R. 1 W. 5 M.