

# MAR 19680113: NORTHERN ALBERTA

Received date: Dec 31, 1968

Public release date: Jan 01, 1970

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REPORT ON FIELD EXAMINATION

HAROLD P. KILLORAN

SULPHUR PROSPECTING PERMITS

NOS. 131, 132, 143 AND 149

NORTHERN ALBERTA 19680113

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Harold P. Killoran

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ECONOMIC MINERALS

FILE REPORT No.

S-AF-131(2)

S-AF-132(2)

S-AF-143(2)

S-AF-149(2)

19680113.

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HAROLD P. KILLORAN

SULPHUR PROSPECTING PERMITS

NOS. 131, 132, 143 AND 149

NORTHERN ALBERTA

Prepared For

Harold P. Killoran

November, 1968

J. C. SPROULE AND ASSOCIATES LTD.

OIL AND GAS ENGINEERING AND GEOLOGICAL CONSULTANTS

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INDEXING DOCUMENT NOS. 700524

REPORT ON FIELD EXAMINATION

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NOS. 131, 132, 143 AND 149

NORTHERN ALBERTA

The field work on these Permits has been carried out at the request of Mr. H.P. Killoran on his own behalf. The work was authorized verbally to be performed according to our letter agreement of June 15, 1968 and the request made was that J.C. Sproule and Associates Ltd. should collect representative near-surface samples as described in the pertinent paragraph of our June 15th letter. We quote:

"The field party conducting Phase II would, upon arrival in the field, immediately check those points of indicated interest that had become evident from the photogeological study. More specifically, we think that the preliminary study will give you a good idea of all those areas that are likely to contain sulphur. All areas where sulphur is likely to occur will be checked by the helicopter reconnaissance crew. Hand specimens and/or auger samples will be taken to determine the presence or absence of sulphur. We might call this preliminary part of the field program Step 1 of Phase II. The total cost of Step 1 would be \$800 per permit-unit."

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

"Permit No. 131

Area No. 1

Hole No. 1 - N.E. 36-112-5 W. 5 M. Depth, 7 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
131-1-1	4	0.11	Greenish clay
131-1-1	7	0.94	Greenish clay.

Area No. 2

Hole No. 1 - Ctr. W. side 7-113-5 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
131-2-1	4	Trace	Brown sandy clay
131-2-1	8	2.24	Brown sandy clay.

Permit No. 132

Area No. 1

Hole No. 1 - S.E. 24-97-9 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
132-1-1	4	2.30	Muskeg and lacustrine
132-1-1	8	Trace	Muskeg and lacustrine

Area No. 2

Hole No. 1 - S.W. 28-97-9 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
132-2-1	4	Trace	Grey clay
132-2-1	8	Trace	Grey clay

Area No. 4

Hole No. 1 - N.E. 17-97-9 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
132-4-1	4	Trace	Yellowish grey clay
132-4-1	8	Trace	Yellowish grey clay

Permit No. 143

Area No. 4

Hole No. 1 - N.W. 11-113-4 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
143-4-1	4	1.76	Black muck
143-4-1	8	Trace	Black muck

Area No. 6

Hole No. 1 - S.E. 19-113-3 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
143-6-1	4	Trace	Muskeg and lacustrine
143-6-1	8	13.53	Muskeg and lacustrine.

Area No. 7

Hole No. 1 - S.W. 29-113-3 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
143-7-1	4	Trace	Black muck
143-7-1	8	Trace	Black muck

Permit No. 149

Area No. 2

Hole No. 1 - N.W. 35-98-11 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
149-2-1	4	Trace	Grey clay
149-2-1	8	Trace	Grey clay

Area No. 3

Hole No. 1 - S.W. 14-99-11 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
149-3-1	4	6.00	Black muck
149-3-1	8	18.08	Black muck

Permit No. 149 (Continued)

Area No. 5

Hole No. 1 - N.W. 24-99-11 W. 5 M. Depth, 8 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
149-5-1	4	15.92	Muskeg and lacustrine
149-5-1	8	11.82	Muskeg and lacustrine."

The sample locations are given on the accompanying Figures 1, 2 and 3, and the related analyses by Chemical and Geological Laboratories Ltd. constitutes Appendix I attached hereto.

With reference to these results, it will be observed that analyses made of all samples taken from Sulphur Permits Nos. 131, 132 and 143 show only traces or very small percentages of sulphur. There was one sample in Permit No. 143 that analyzed 13.53 percent sulphur, but the catchment basin concerned was very small and not worthy of further detailed work. 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. 131, 132 and 143 do not contain occurrences of native sulphur in sufficient quantities to justify further exploratory activity.

Samples taken from Sulphur Permit No. 149 consist of clay, muskeg debris and black muck. Analyses of these ranged from traces up to 18.08 percent. Two samples from the north end of the Permit analyzed as follows: 18.08 percent sulphur (149-3-1), and 15.92 percent sulphur (149-5-1). Inasmuch as a number of muskegs have not been tested in this area, it is felt that part of the northern portion of Sulphur Prospecting Permit No. 149, as shown in red outline on Figure 2, should be further investigated in the manner proposed for Step 2 of Phase II in our letter of June 15, 1968.



Under the circumstances, we recommend that Sulphur Prospecting Permits Nos. 131, 132 and 143 be abandoned and that the Company request a return of their deposits. The northern portion of Sulphur Prospecting Permit No. 149 (Figure 2) should be retained and the renewal fee paid.

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.



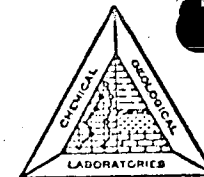
H.B. Lyall, P. Géol.

A handwritten signature in cursive script, appearing to read "J.C. Sproule", written over a horizontal line.

J.C. Sproule, P. Geol.

1009 Fourth Avenue S.W.,  
Calgary 2, Alberta.  
November 15, 1968.  
HBL:JCS:ldl

## CHEMICAL &amp; GEOLOGICAL LABORATORIES LTD.



OPERATOR: J. C. SPROULE AND ASSOCIATES LTD.

REPORT NUMBER: C68-4066

DATE SAMPLED: ---

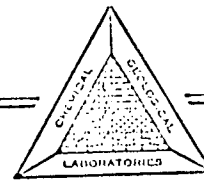
DATE RECEIVED September 18, 1968

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>
C68-4066-1	143-4-1	8	Trace	Trace
C68-4066-2	143-6-1	8	13.53	1.94
C68-4066-3	143-7-1	8	Trace	Trace
C68-4066-4	131-1-1	7	0.94	0.20
C68-4066-5	131-2-1	8	2.24	0.58

CHEMICAL & GEOLOGICAL LABORATORIES LTD.



14240-115 AVENUE, EDMONTON, ALBERTA

Date Reported: October 7, 1968

Laboratory Report Number: C68-4118

J. C. SPROULE & ASSOCIATES LTD.

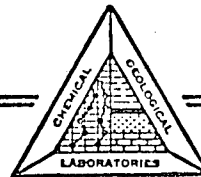
Kind of Sample: Soil

Date Received: September 30, 1968

SAMPLE NUMBER	DEPTH IN FEET	ELEMENTAL SULFUR	
		(% by Weight on Dry Sample)	(% by Weight on Wet Sample)
132-1-1	8	Trace	Trace
132-2-1	8	Trace	Trace
132-4-1	8	Trace	Trace
149-2-1	8	Trace	Trace
149-3-1	8	18.08	4.44
149-5-1	8	11.82	3.84

# CHEMICAL & GEOLOGICAL LABORATORIES LTD.

14240-115 AVENUE, EDMONTON, ALBERTA



Date Reported: October 29, 1968      Laboratory Report Number: C68-4213-6

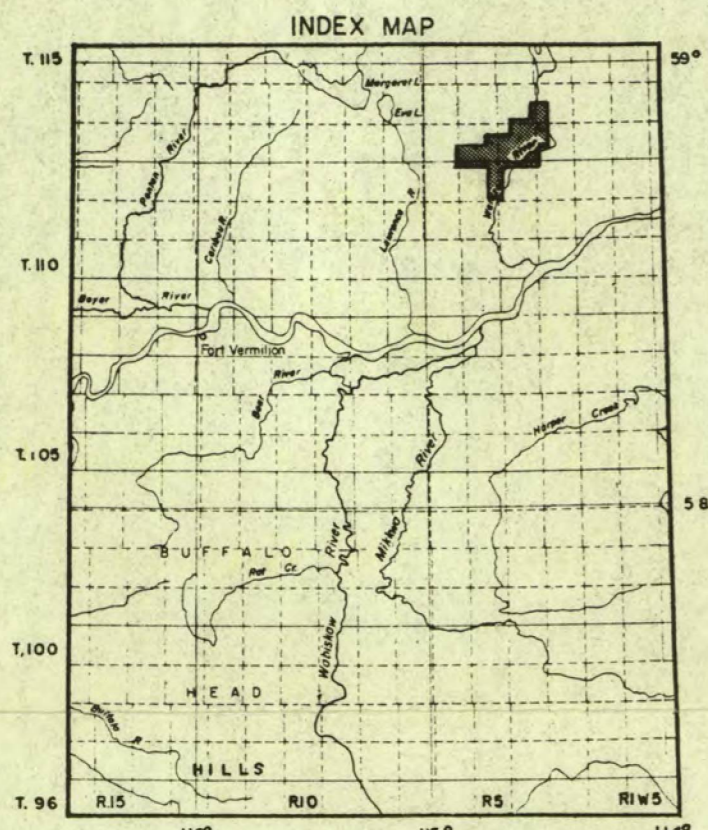
## J. C. SPROULE & ASSOCIATES LTD.

Kind of Sample: Soil

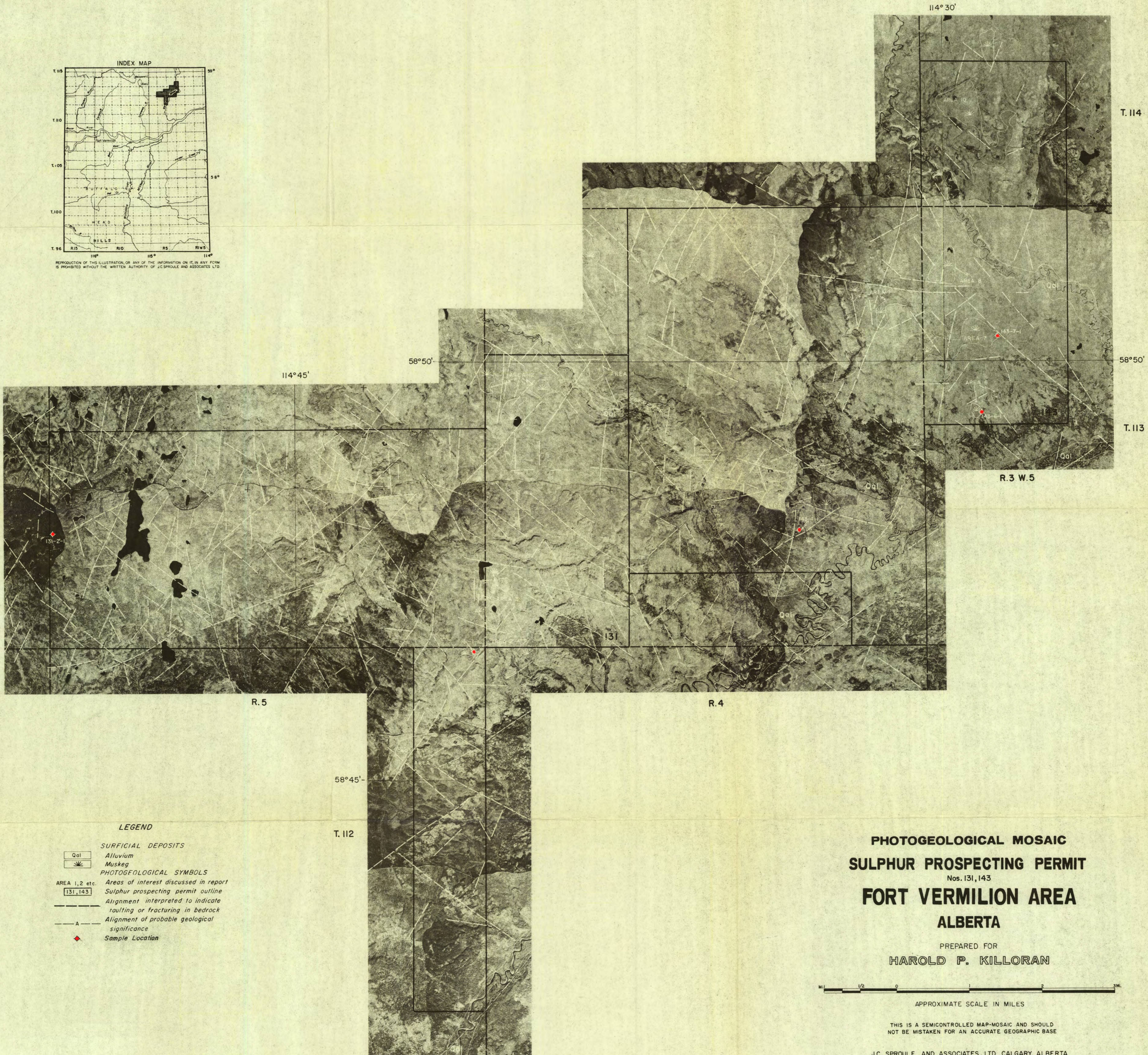
Date Received: October 18, 1968

<u>SAMPLE NUMBER</u>	<u>DEPTH IN FEET</u>	<u>ELEMENTAL SULFUR (% by Weight on Dry Sample)</u>
143-4-1	4	1.76
143-6-1	4	Trace
143-7-1	4	Trace
131-1-1	4	0.11
131-2-1	4	Trace
132-1-1	4	2.30
132-2-1	4	Trace
132-4-1	4	Trace
149-2-1	4	Trace
149-3-1	4	6.00
149-5-1	4	15.92

*W. J. Sproule*



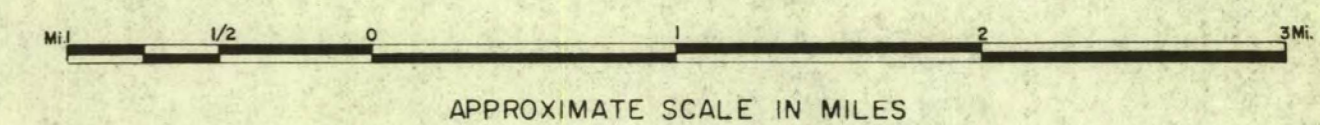
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- LEGEND**
- SURFICIAL DEPOSITS**
- Qal Alluvium
  - Muskeg
- PHOTOGEOLOGICAL SYMBOLS**
- AREA 1, 2 etc. Areas of interest discussed in report
  - 131, 143 Sulphur prospecting permit outline
  - Alignment interpreted to indicate faulting or fracturing in bedrock
  - Alignment of probable geological significance
  - Sample Location

**PHOTOGEOLOGICAL MOSAIC**  
**SULPHUR PROSPECTING PERMIT**  
 Nos. 131, 143  
**FORT VERMILION AREA**  
**ALBERTA**

PREPARED FOR  
**HAROLD P. KILLORAN**



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

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

# PHOTOGEOLOGICAL MOSAIC SULPHUR PROSPECTING PERMIT No. 149 FORT VERMILION AREA ALBERTA

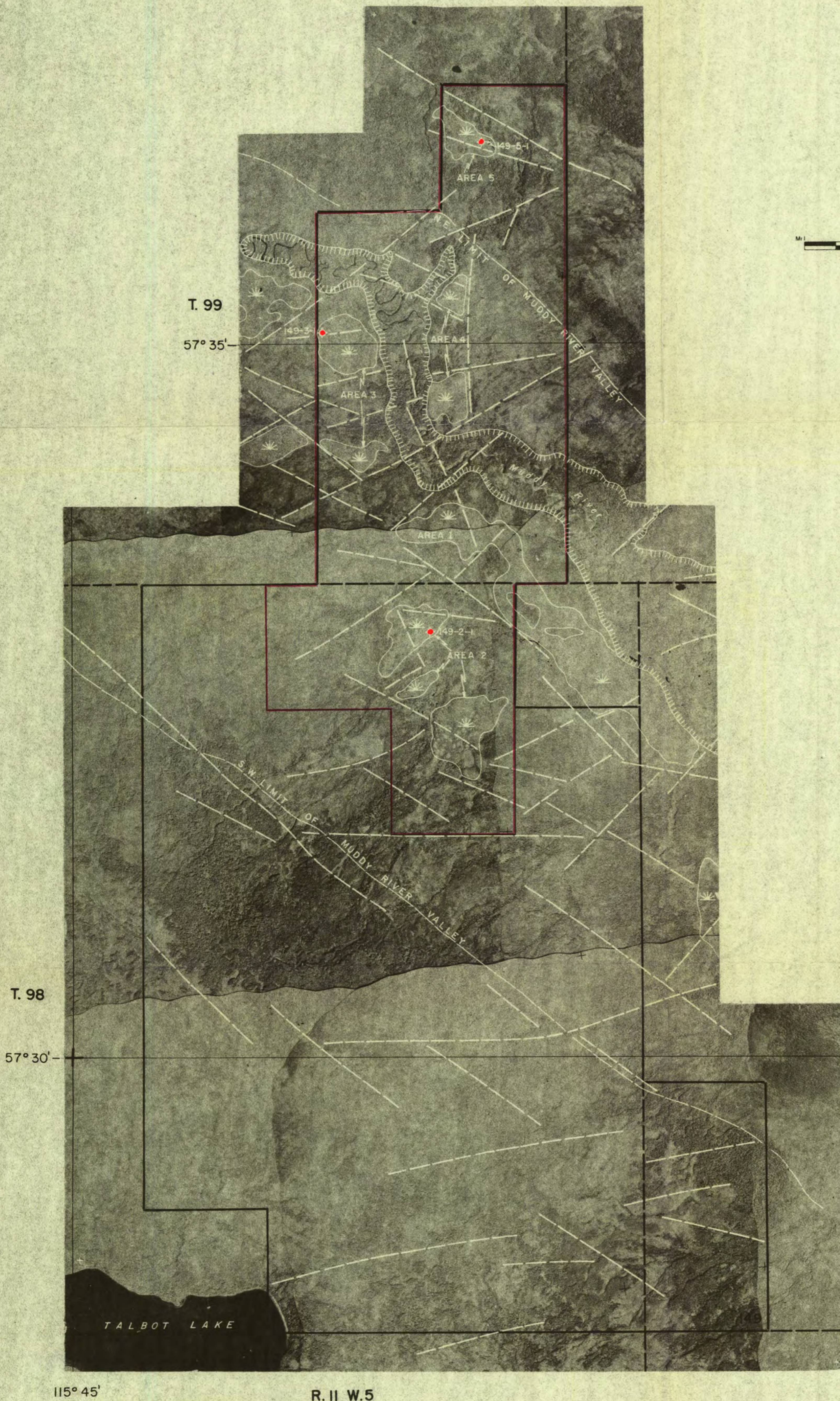
PREPARED FOR  
**HAROLD P. KILLORAN**



APPROXIMATE SCALE IN MILES

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

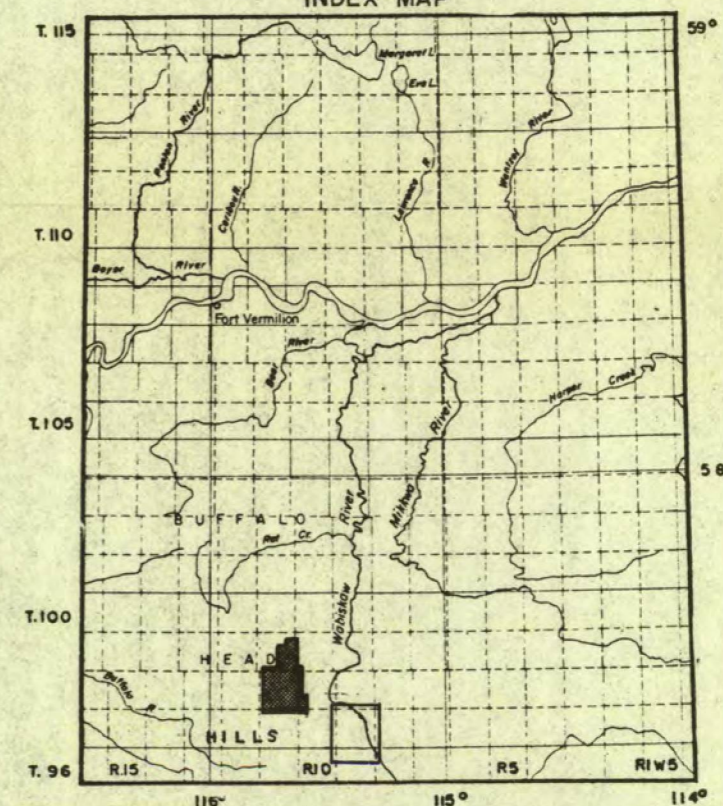
J.C. SPROULE AND ASSOCIATES LTD. CALGARY, ALBERTA



### LEGEND

- SURFICIAL DEPOSITS**
- Muskeg
- PHOTOGEOLOGICAL SYMBOLS**
- Scarp
- Alignment interpreted to indicate faulting or fracturing in bedrock
- AREA 1, 2 etc. Areas of interest discussed in report
- Sulphur prospecting permit outline
- Sample Location
- Outline of area recommended for retention

### INDEX MAP



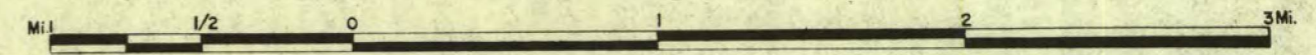
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115° 45'

R. 11 W. 5

**PHOTOGEOLOGICAL MOSAIC  
SULPHUR PROSPECTING PERMIT  
No. 132  
FORT VERMILION AREA  
ALBERTA**

PREPARED FOR  
**HAROLD P. KILLORAN**



APPROXIMATE SCALE IN MILES

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

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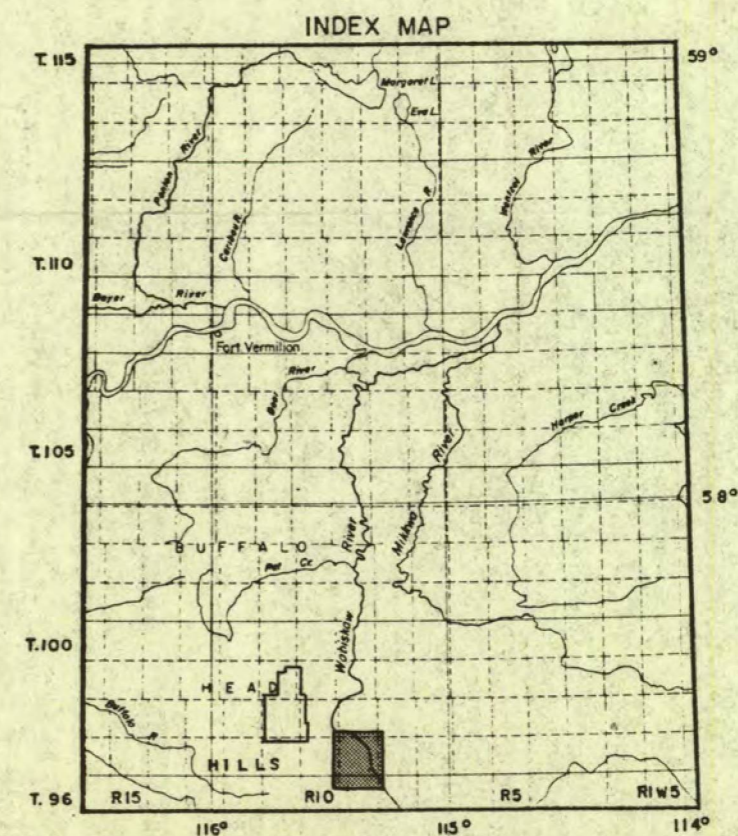
**LEGEND**

*SURFICIAL DEPOSITS*

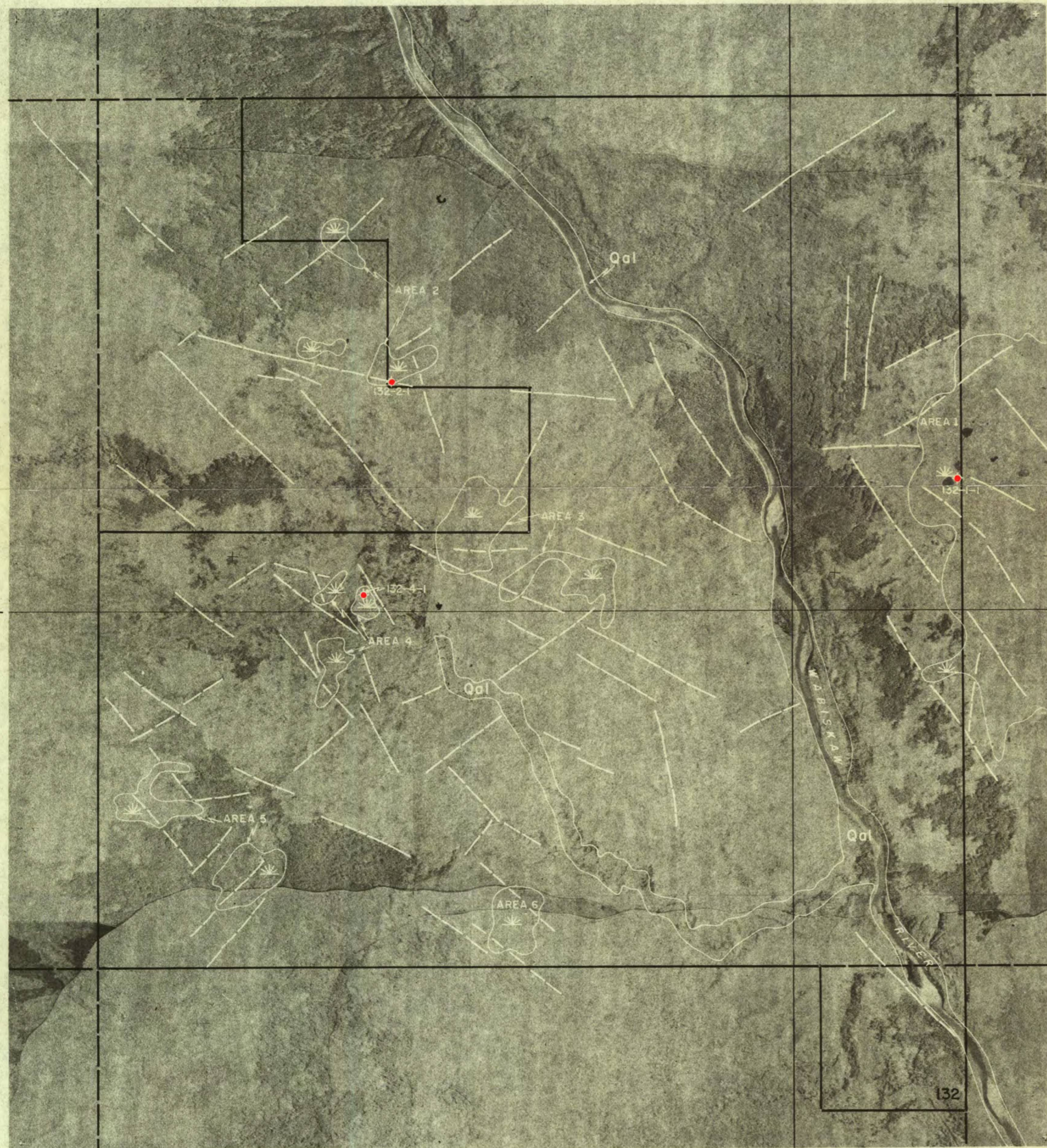
- Qal Alluvium
- Muskeg

*PHOTOGEOLOGICAL SYMBOLS*

- Alignment interpreted to indicate faulting or fracturing in bedrock
- AREA 1,2 etc. Areas of interest discussed in report
- 132 Sulphur prospecting permit outline
- Sample Location



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T. 97

57° 25'

R. 9 W.5

115° 20'

132