

# MAR 19680079: NORTHERN ALBERTA

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ECONOMIC MINERALS  
FILE REPORT No.  
S-AF-083(3)

REPORT ON FIELD EXAMINATION  
FIVE STAR PETROLEUM AND MINES LIMITED  
SULPHUR PROSPECTING PERMIT NO. 83  
NORTHERN ALBERTA 19680079

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Five Star Petroleum and Mines  
Limited

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REPORT ON FIELD EXAMINATION  
FIVE STAR PETROLEUM AND MINES LIMITED  
SULPHUR PROSPECTING PERMIT NO. 83  
NORTHERN ALBERTA

Prepared For  
Five Star Petroleum and Mines Limited  
November, 1968

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

REPORT ON FIELD EXAMINATION  
FIVE STAR PETROLEUM AND MINES LIMITED  
SULPHUR PROSPECTING PERMIT NO. 83  
NORTHERN ALBERTA

The field work on this Permit has been carried out at the request of Mr. J. Reyda acting for Five Star Petroleum and Mines Limited. The work was authorized under our letter agreement of June 8, 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 8th 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 and 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."

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

"Permit No. 83

Area No. 1

Hole No. 1 - Near Centre N. Side 31-106-9 W. 5 M. Depth, 7 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
83-1-1	4	Trace	Yellowish brown clay
83-1-1	7	Trace	Yellowish brown clay.

Hole No. 2 - S.W. 31-106-9 W. 5 M. Depth, 7 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
83-1-2	4	Trace	Clay
83-1-2	7	18.35	Clay.

Hole No. 3 - S.W. 29-106-9 W. 5 M. Depth, 7 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
83-1-3	4	Trace	Clay
83-1-3	7	12.72	Clay.

Area No. 2

Hole No. 1 - N.W. 16-106-9 W. 5 M. Depth, 7 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
82-1-1	4	Trace	Brownish grey clay
82-1-1	7	Trace	Brownish grey clay.

Area No. 3

Hole No. 1 - S.W. 7-106-9 W. 5 M. Depth, 7.5 feet.

<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
83-3-1	4	5.50	Brownish grey clay
83-3-1	7.5	Trace	Brownish grey clay.

Area No. 4

Hole No. 1 - N.W. 11-106-9 W. 5 M. Depth, 8 feet.

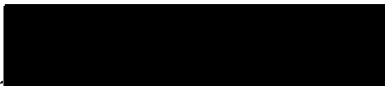
<u>Sample No.</u>	<u>Depth</u> Ft.	<u>Sulphur</u> %	<u>Sample</u>
83-4-1	4	0.53	Clay
83-4-1	8	Trace	Clay"

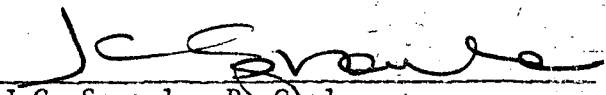
The sample locations are given on the accompanying Figure 1 and the related analyses by Chemical and Geological Laboratories Ltd. constitute Appendix I attached hereto.

Samples taken from Sulphur Prospecting Permit No. 83 consist of clay which, after analysis, proved to contain only small quantities of sulphur, except for three of the samples. The three anomalous values were for 18.35 percent sulphur (83-1-2, seven feet), 12.72 percent sulphur (83-1-3, seven feet), and 5.50 percent sulphur (83-3-1, four feet). These positive values were collected from the western portion of the Permit where additional untested but potentially attractive catchment basins exist. These are of sufficiently large dimensions for the possible development of sizable sulphur reserves. In consequence, therefore an area covering the western part of Sulphur Prospecting Permit No. 83, as outlined on Figure 1, is worthy of additional exploration.

Under the circumstances, we recommend that a portion of Sulphur Prospecting Permit No. 83 be retained, as shown on Figure 1, and that a second step in exploration be considered.

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.

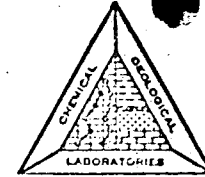
  
H.B. Lyall, P. Geol.

  
J.C. Sproule, P. Geol.

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



## CHEMICAL &amp; GEOLOGICAL LABORATORIES LTD.



OPERATOR: J. C. SPROULE AND ASSOCIATES LTD.

REPORT NUMBER: C68-4063

DATE SAMPLED: ---

DATE RECEIVED September 18, 1968

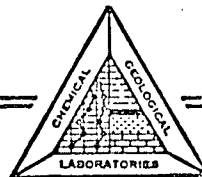
DATE REPORTED September 27, 1968

Kind of Sample: Soil for Sulphur Analysis.

LABORATORY NUMBER	SAMPLE NUMBER	DEPTH (Feet)	SULPHUR	
			(% by Weight) Dry Sample	(% by Weight) Wet Sample
C68-4063-1	83-1-1	7	Trace	Trace
C68-4063-2	83-1-2	7	18.35	6.62
C68-4063-3	83-1-3	7	12.72	8.56
C68-4063-4	83-2-1	7	Trace	Trace
C68-4063-5	83-3-1	7 1/2	Trace	Trace
C68-4063-6	83-4-1	7 1/2	Trace	Trace

# CHEMICAL & GEOLOGICAL LABORATORIES LTD.

14240-115 AVENUE, EDMONTON, ALBERTA



Date Reported: October 29, 1968

Laboratory Report Number: C68-4213-7

J. C. SPROULE & ASSOCIATES LTD.

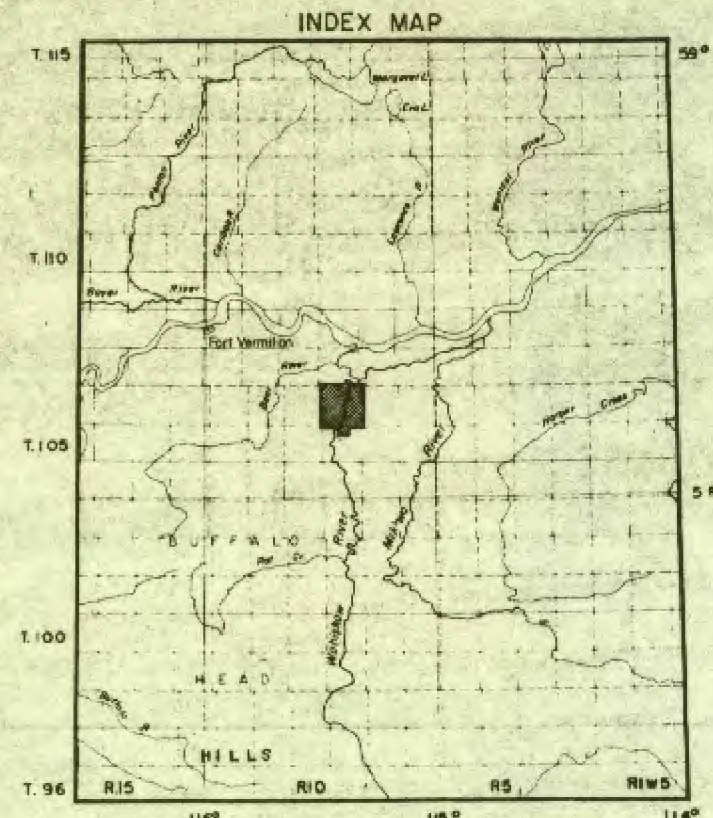
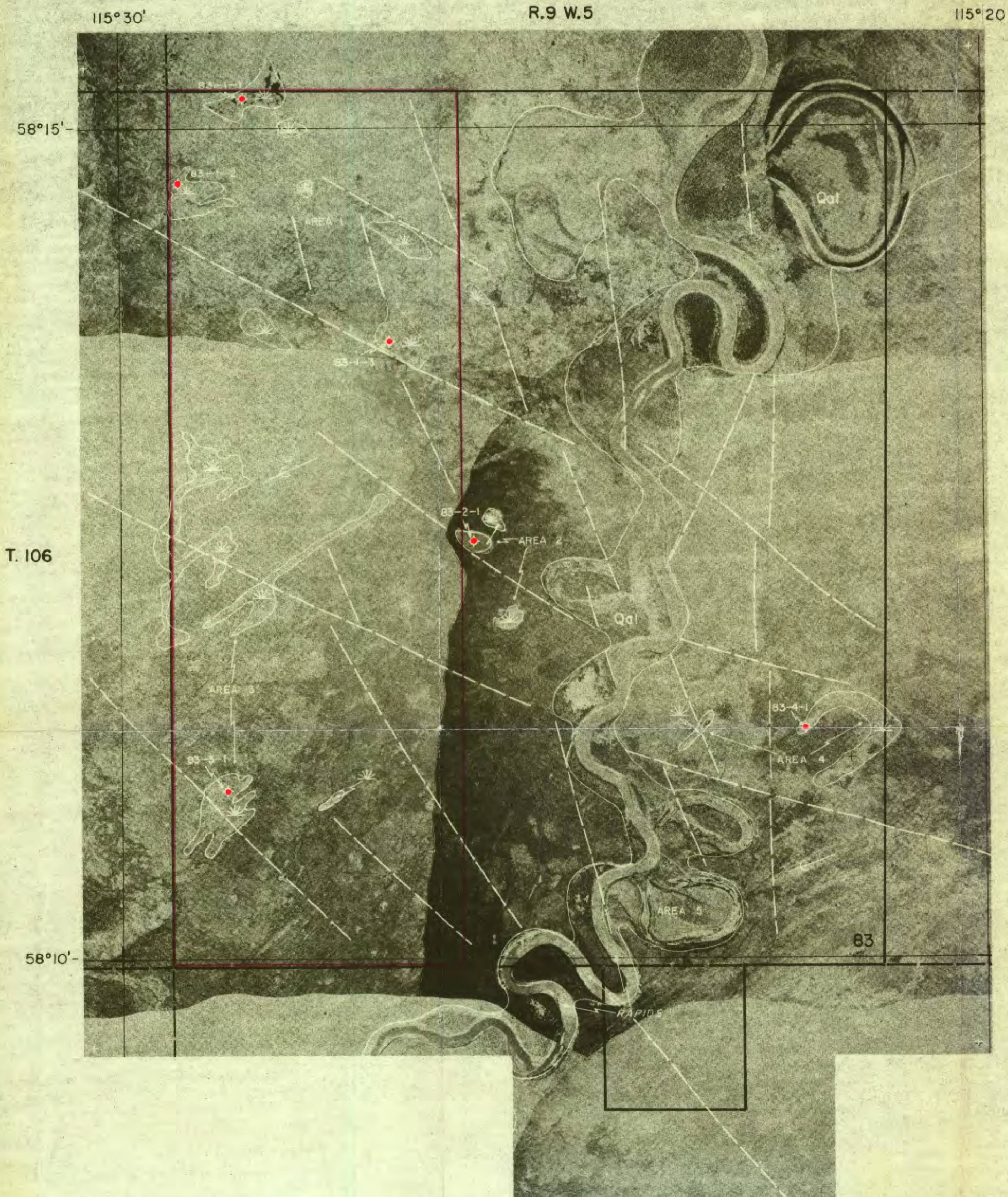
Kind of Sample: Soil

Date Received: October 18, 1968

<u>SAMPLE NUMBER</u>	<u>DEPTH IN FEET</u>	<u>ELEMENTAL SULFUR (% by Weight on Dry Sample)</u>
83-1-1	4	Trace
83-1-2	4	Trace
83-1-3	4	Trace
83-2-1	4	Trace
83-3-1	4	5.50
83-4-1	4	0.53







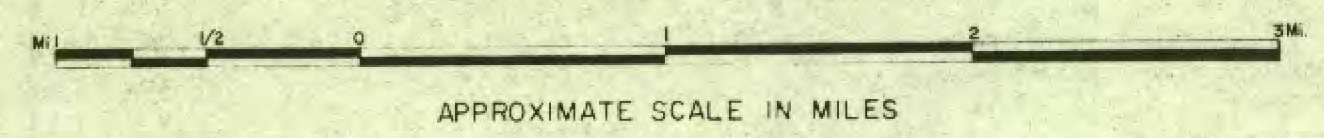
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**LEGEND**

- SURFICIAL DEPOSITS**
- Qol Alluvium
  - ✶ Muskeg
- PHOTOGEOLOGICAL SYMBOLS**
- — — — — Alignment interpreted to indicate faulting or fracturing in bedrock
  - Direction of glacial movement
  - AREA 1, 2 etc. Areas of interest discussed in report
  - 83 Sulphur prospecting permit outline
  - ◆ Sample Location
  - — — — — Outline of area recommended for retention

**PHOTOGEOLOGICAL MOSAIC  
SULPHUR PROSPECTING PERMIT  
No. 83  
FORT VERMILION AREA  
ALBERTA**

PREPARED FOR  
**FIVE STAR PETROLEUM & MINES LTD.**



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