

# MAR 19690021: OLD FORT

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19690021

ECONOMIC MINERALS

FILE REPORT No.

U-AF-033(2)

GEOLOGICAL REPORT

ON

QUARTZ PERMIT #74  
(Old Fort Permit)

LAKE ATHABASKA AREA

ALBERTA

FOR

FORT RELIANCE MINERALS LIMITED

ENSIGN OILS LIMITED

BY

P. E. HIRST & ASSOCIATES LTD.

P. E. HIRST, P. Eng.

December 8, 1969

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MAPS IN FOLDER

		<u>Scale</u>
Fig. 1.	LOCATION MAP	As shown
Fig. 2.	AIR PHOTO MOSAIC ( <i>Geological Map</i> )	1" = 1 mile

\* \* \* \* \*

SUMMARY:

The Old Fort Permit is believed to be underlain by several hundred feet of Athabaska formation, and is considered to be of potential interest for uranium possibilities.

Almost complete till cover precludes any surficial evaluation of these possibilities.

INTRODUCTION:

Fort Reliance Minerals Limited and Ensign Oils Limited jointly hold, on a 50-50 basis, mineral exploration rights on Quartz Permit No. 74, also referred to as the Old Fort Permit. This permit is believed to be of principal interest for possible uranium mineralization.

The writer examined this property on September 28, 1969 by lower level helicopter traverses and ground checking for outcrops. An airborne radiometric survey of the property had been completed prior to the writer's examination of the property, but completed data were not available at the time.

PROPERTY AND OWNERSHIP:

The Old Fort Permit (Quartz Permit #74) is a rectangular shaped area with approximate dimensions of  $6\frac{1}{2}$  miles by  $12\frac{1}{2}$  miles, situated in the Lake Athabaska area of northeastern Alberta. The Permit is jointly held on a 50-50 basis by Fort Reliance Minerals Limited and Ensign Oils Limited.

LOCATION, ACCESS, PHYSIOGRAPHY:

The permit area is situated in the vicinity of Old Fort Bay near the southwest corner of Lake Athabaska in northeastern Alberta. Specific Coordinates are latitude  $58^{\circ} 40'$  North, longitude  $110^{\circ} 15'$  West. Access to the permit is by shallow draft boat, float plane, or helicopter from Fort Chipewyan or Uranium City.

The permit area is one of very low relief with no elevations exceeding 200 feet above the level of Lake Athabaska. A large proportion of the area is covered by swamp, and there are numerous northwest trending sand and boulder ridges interspersed with smaller swamps.

GEOLOGY:

The property is situated near the western margin of the Athabaska sandstone basin (See Fig. 1). Helicopter traverses of the area and limited ground checking indicates that the permit is almost completely drift-covered. Only one small outcrop of Athabaska sandstone (locally buff to reddish coloured) was observed by the writer near the northern boundary of the Permit. Extensive northwest trending boulders and gravel ridges are principally composed of Athabaska sandstones.

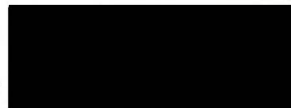
Reconnaissance seismic surveys by the Geological Survey indicate that the permit may be underlain by several hundred feet of Athabaska sandstone.

CONCLUSIONS:

The permit area is considered to be primarily of interest for uranium possibilities which could exist in either the Athabaska sandstone or underlying rocks. The results of the airborne radiometric survey may provide some further elucidation of these possibilities, but no conclusions can be drawn from the meagre outcrop data.

Further work in this area will of necessity be determined by results obtained elsewhere in similar environments and may require additional evaluation by other methods, including possibly geochemistry.

Respectfully submitted,



P. E. Hirst, P. Eng.

December 8, 1969.

REFERENCES

Fehrig, W. F.,  
1961:

The Geology of the Athabaska Formation,  
Geological Survey of Canada, Bulletin 68

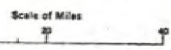
Hobson, G.D. &  
MacAuley, H.A.  
1969:

A Seismic Reconnaissance Survey of the  
Athabaska Formation, Alberta and Saskat-  
chewan, Geological Survey of Canada,  
Paper 69-18



GEOLOGICAL SURVEY OF CANADA  
DEPARTMENT OF MINES AND TECHNICAL SURVEYS

Figure 1  
Lithofacies of the Athabasca Formation  
and the distribution of the Martin Formation,  
Saskatchewan and Alberta



LEGEND

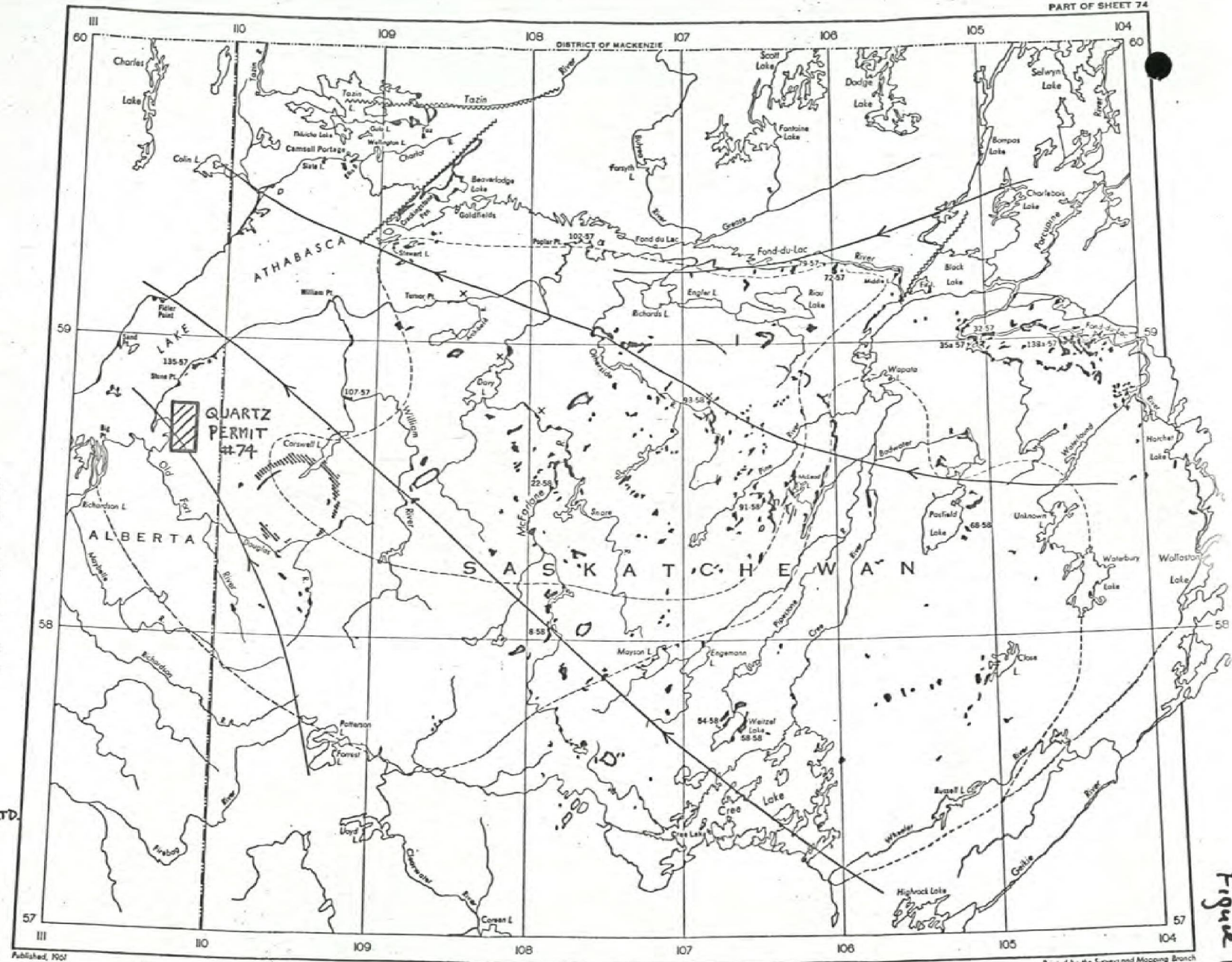
- MARTIN FORMATION
- REGIONAL SIZE DISTRIBUTION OF CLASTIC GRAINS  
IN THE ATHABASCA FORMATION
- Coarsest particles in outcrop 2 mm. to 64 mm.
- Coarsest particles in outcrop 1 mm. to 4 mm.
- Coarsest particles in outcrop 1/2 mm. to 2 mm.
- Outcrop of Athabasca Formation
- Outcrop of Carswell Formation
- Locality and sample number of sieve analysis 65-58
- Generalized sand transport direction in  
the Athabasca Formation
- Shale or siltstone layers in outcrop
- Fault

Geology by W. F. Fahrig 1957-58

To accompany Bulletin 68 by W. F. Fahrig

Cartography by the Geological Survey of Canada, 1961

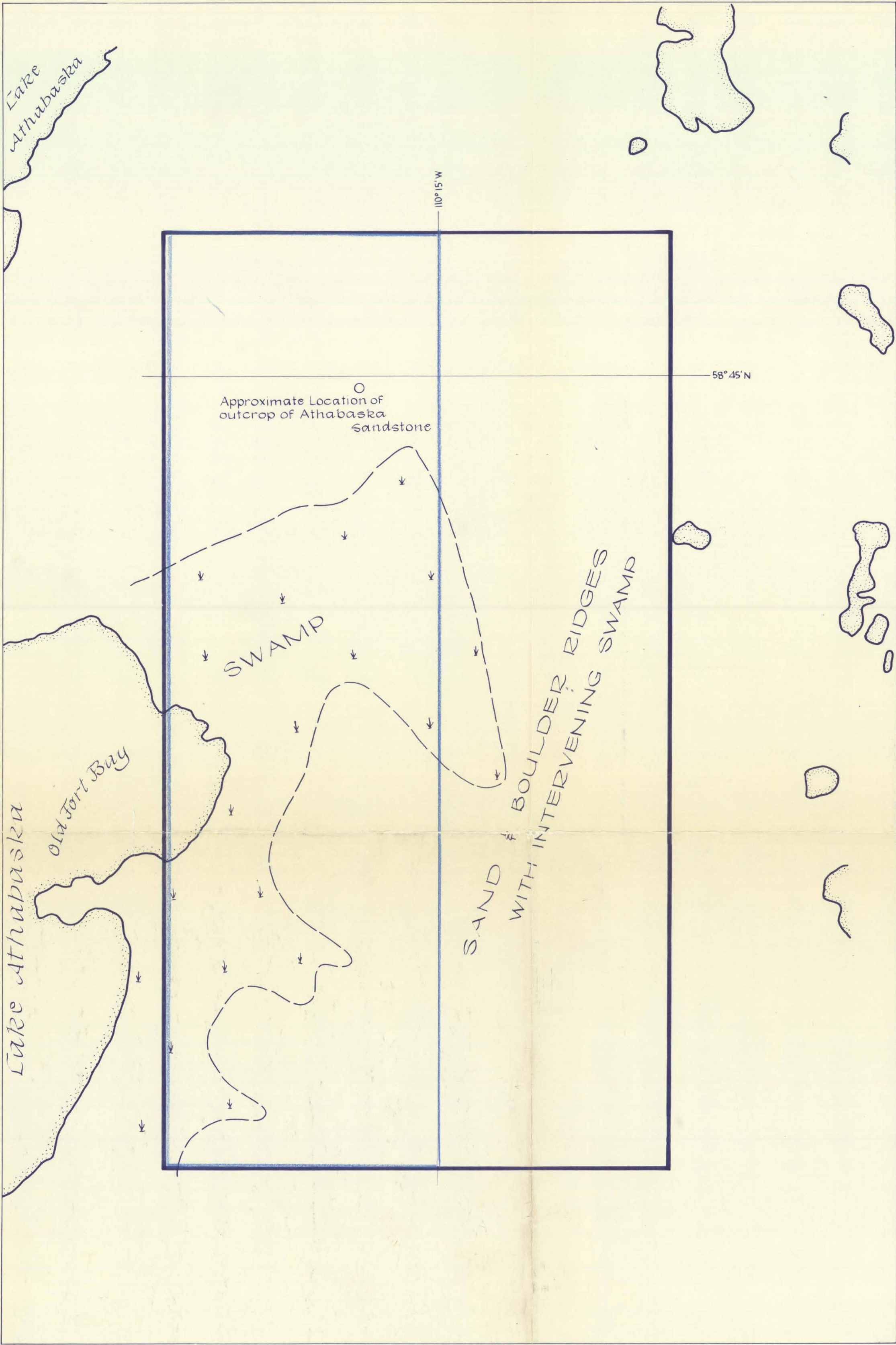
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ENGIN OILS LTD.  
QUARTZ PERMIT #74  
Location Map



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Figure 1



**FORT RELIANCE MINERALS LTD.**

**ENSIGN OILS LTD.**

QUARTZ PERMIT NO. 74 ("OLD FORT"), ALBERTA

**GEOLOGICAL MAP**



GEOLOGY BY: PE. Hirst PEng., December 8, 1969.  
FOR Surveymin Limited - 25 Adelaide St. East, Toronto.



