

MOUNT GRANT MINES LTD.

GEOLOGICAL REPORT

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SUMMARY

This report describes the geology and economic potential of sixteen claims, held by Mount Grant Mines Ltd. in the Mount Grant area of the Yukon Territories, approximately seventy miles east of Whitehorse.

The outcropping of a thick band of mineral zone with a high percentage of manganese indicates a good potential for a large body of this mineral in the claims. The fact that Canada has no known source of high grade manganese, adds interest in this property, and a recommended expenditure of \$60,335.00 is well justified.

In the opinion of the undersigned, the potential value of the property is in excess of \$75,000.00.

TABLE OF CONTENTS

	Page
INTRODUCTION	1
PHYSIOGRAPHY	2
GEOLOGY	3
Stratigraphy	3
Structural Geology	4
Mineralization	4
Economic Geology	6
RESUME AND CONCLUSIONS	7
RECOMMENDATIONS	8
COST ANALYSIS	10
PLATES	
1. View on West Bank of River	
2. View on Main Outcrop	
3. View on 200' South of Main Outcrop	
4. Relative Positions of Outcrops on Photos 2 and 3	
5. Relative Positions of Outcrop on Photo 2 and Pinchout at South.	

MAPS

1. Index Map
2. Geological Map
3. Map on Ore Body

MINERAL CLAIMS AT MOUNT GRANT

YUKON TERRITORIES

INTRODUCTION:

This report is being prepared at the request of Mount Grant Mines Ltd., 1002 Chancery Hall, Edmonton, Alberta. It is to be included in a submission to the Alberta Securities Commission, on behalf of Mount Grant Mines Ltd.

The area consists of sixteen contiguous claims at the headwaters of Evelyn Creek and about 1-1/2 miles due south of Mount Grant, Yukon Territories.

These claims consist of the following:

The Lucky Claims, Nos. 1 to 8 inclusive, registration 92940 to 92947 inclusive;

and

The Marlin Claims, Nos. 1 to 8 inclusive, registration 92903 to 92910 inclusive.

PHYSIOGRAPHY:

The area has considerable relief rising from about 2500 feet at the banks of the Teslin River to over 7000 feet at the peaks. Average elevation is about 4500 feet.

The slopes are reasonably rounded and accessibility by foot is no problem.

Accessibility for vehicles should be from the Canol Road to the East. Any road approaching from the West, along the Teslin River, would be crossing tributaries of this river. Due to this fact, initial construction would involve considerable filling and bridging; costs would therefore be high. It would further be expensive to maintain such a road.

GEOLOGY:Stratigraphy:

Cretaceous	Coast Intrusions	granite, granodiorite, diorite, gabbro, hornblend, pyroxomite, syenite monzonite gabbro;
Mississippian or earlier	Big Salmon complex	<ul style="list-style-type: none"> a. quartzite, quartz-mica schist and gneiss; b. slate schist and quartzite; c. limestone; d. green chloritic, epidotic rocks, biotite schist, amphibolite; e. albite gneiss, chlorite, epidote amphibolite; f. quartz-biotite-amphibolite- epidote-plagioclase-garnet gneiss.
	A.	quartz-horne blende and quartz- feldspar hornblende gneiss and amphibolite.

On the adjoining geological map, it is found that the rock units e. and f. are not present.

The most abundant rocks in the area are those belonging to the Big Salmon Complex. These consist predominantly of micaceous quartzite and quartz-mica

GEOLOGY: (continued)Stratigraphy: (ctd.)

schists and gneisses of units a. and b. They generally overlie and are sometimes inter-bedded in white crystalline limestone, unit c.

Underlying the limestone are green chloritic rocks, quartzites and schists, unit d.

Structural Geology:

The major structure in the area is a tightly folded anticline. This structure runs N.N.W. - S.S.E., the crest of the structure is on the claims and at its core, the manganese is exposed. The east and west flanks of the structure dip generally at about 65°, whereas both the north and south plunges of the structure are about 20°.

No major faulting has been observed in the immediate area, but crush zones are frequent.

Mineralization:

The mineralization is within the green chloritic rocks of Unit "d." It consists mainly of a massive manganese deposit and finely disseminated sulphides.

GEOLOGY: (continued)Mineralization:
(ctd.)

The manganese mineralization is limited to a band of hard massive clean quartzite which lenses out to the southwest .

The main showing, the manganese was twenty-five feet thick; a channel sample taken across this section by the undersigned, showed an average grade of 36.3% manganese . It is estimated that about one third of this manganese was in the form of the carbonate, rhodocrosite, and the remainder was in the form of rhodonite, a manganese silicate .

To the Southwest, the mineral pinches out at a distance of 200 feet . Towards the North-West, the trace of the ore is covered, but at a distance of approximately 1400 feet, considerable manganese is picked up on a talus slope . Between this point and the main outcrop, there is vegetation clinging to the slope, and very little rock is exposed .

It is logical to expect that the mineralized bed can be found under the vegetation .

GEOLOGY: (continued)Mineralization:
(ctd.)

In that the mineralized bed is massive, it may be assumed that this bed fractured much more readily than did the adjoining bedded quartzites and schists. In all probability, the mineralizing solutions entered these fractures and the mineralization spread outwards from the openings.

Economic
Geology:

The mineral in question, is predominantly a manganese silicate, and as such, the normal methods of refining and costing would not apply. Probably the best procedure would be to smelt the mineral on the site and make a silico-manganese product which could be sold to the steel industry.

GEOLOGY: (continued)Economic Geology:
(ctd.)

Since Canada is lacking in sources of high grade manganese ore, considerable interest, both on the industrial level, and on the governmental level, could be taken in devising a means of smelting this mineral to produce a saleable product. However, such feasibility studies could only be made if a large tonnage were proven up.

RESUME AND CONCLUSIONS:

1. The claims are all on the Big Salmon Complex which is a series of metamorphic rocks, pre-mississippian in age.
2. The manganese mineralization is in a massive quartzite.
3. The host rock pinches out to the southwest, but appears to continue towards the northeast until the strata plunge down on the steep north flank of the anticline.
4. Maximum exposed thickness of the mineralized zone is 25 feet.

RESUME AND CONCLUSIONS:

(continued)

5. The manganese content is high - 36.3%.
6. The economic potential of the deposit hinges on the smelting of the mineral to form a silico-manganese for the steel industry.
7. In order to set up a smelter on the location, a large deposit of the mineral should be found.
8. The fact that Canada does not have a large deposit of manganese ore, makes this deposit more interesting.

RECOMMENDATIONS:

It is recommended that an exploration program be initiated to evaluate the amount of manganese present in the immediate vicinity of the outcrop, which appears to be about 1600 feet long. During this program, further exposures along the outcrop trace should be opened up, and a series of holes should be drilled into the mineralized zones, to extend about 300 feet to the West, beyond the outcrop.

RECOMMENDATIONS:
(continued)

The drilling should be as follows:

1. 50 feet \pm above the main outcrop which is 25 feet thick. A 350 foot hole, drilled at an angle of 25° should traverse the mineral zone about 300 feet in from the outcrop.
2. Two similar holes should be drilled 400 feet and 800 feet to the north.
3. A fourth hole should be drilled on the north flank of the structure to traverse the manganese at its extrusion about 300 feet beyond the outcrop trace. This hole should be vertical, and would traverse the manganese at a depth of about 250 feet.

Allowance should be made for an extra 700 feet of drilling to be carried out at the discretion of the Geologist in attendance.

If the drill holes should traverse an average thickness of 20 feet of manganese, there would be an ore body in excess of 1,000,000 tons in the immediate vicinity.

RECOMMENDATIONS:
(continued)

If the manganese assays were as high as the previous assays, a feasibility study could be recommended as the next phase.

COST ANALYSIS:

<u>Item</u>	<u>Cost</u>	<u>Total</u>
Drilling	2030' @ \$12.00/ft .	\$24,360.00
D-8 bulldozer	30 days @ \$350.00/day	10,500.00
Helicopter	10 days @ \$560.00/day	5,600.00
Geologist	35 days @ \$125.00/day	4,375.00
Supplies		6,000.00
Transportation		5,000.00
Assays		1,500.00
Drafting and Reproduction		1,000.00
Contingencies		<u>2,000.00</u>
		\$60,335.00
		<u><u> </u></u>

ROAD MAP

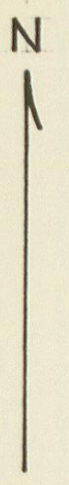
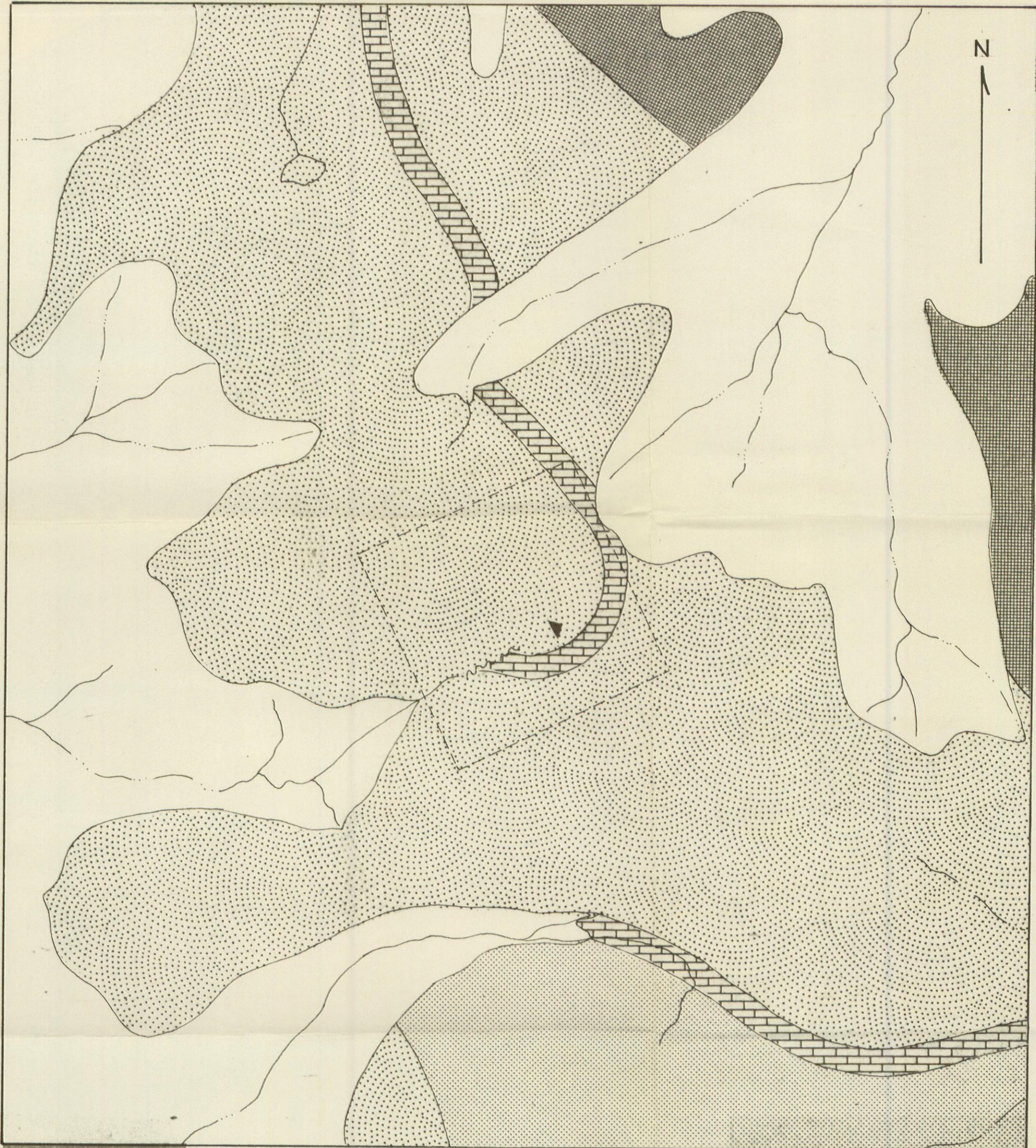
YUKON TERRITORIES

Scale: 1" = 48 Miles



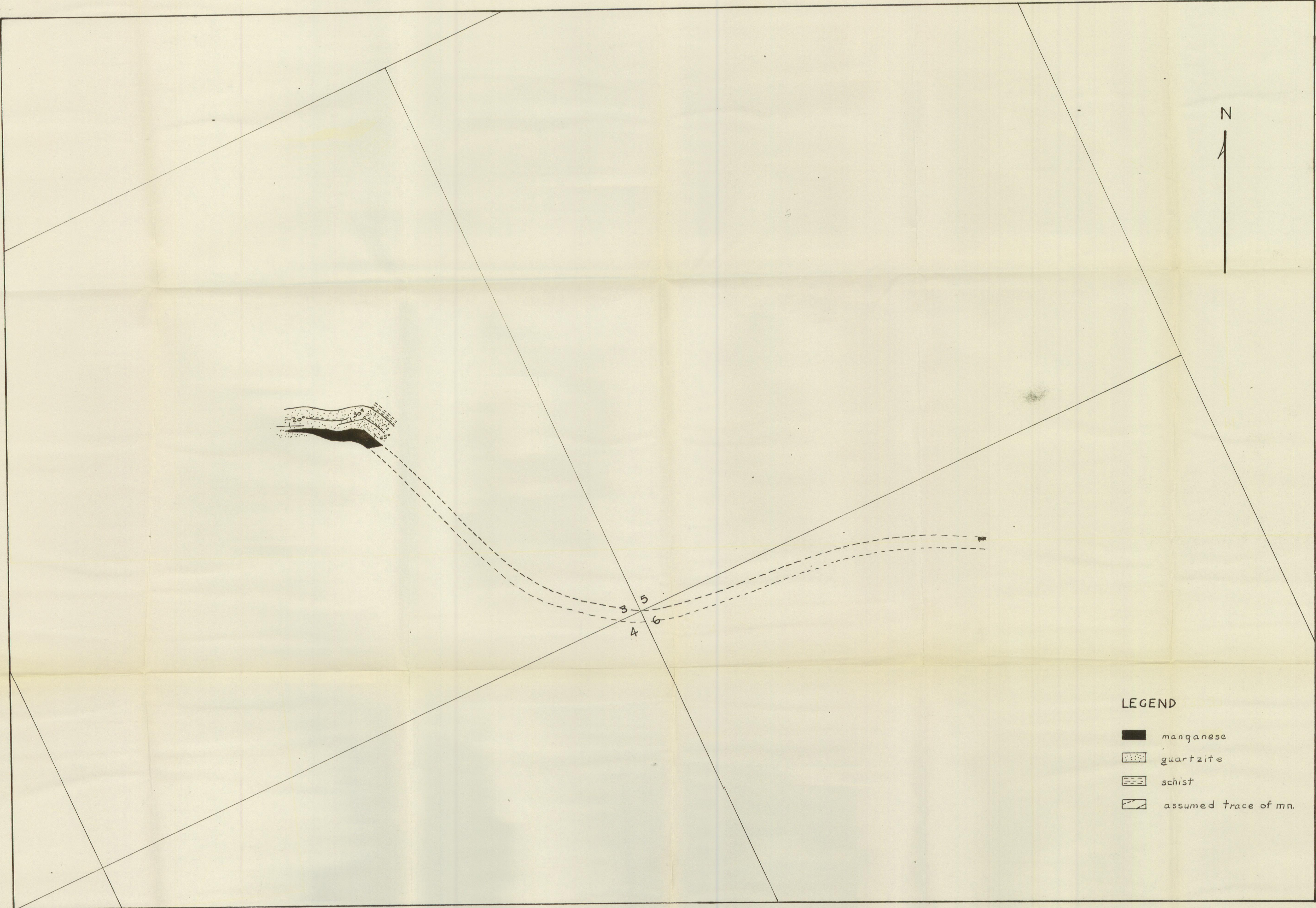
Location of Mount Grant
Mineral Claims





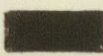
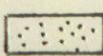
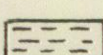
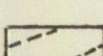
Geological Map
 Mount Grant
 Yukon Territories
 Scale - 1" = 2630'

LEGEND	
	Cretaceous
	Coast Intrusives
	Mississippian & Earlier Big Salmon Complex
	Limestone
	Manganese
	Quartz and schist
	Quartz - hornblende



N

LEGEND

-  manganese
-  quartzite
-  schist
-  assumed trace of mn.

GEOLOGY
MANGANESE DEPOSIT
MT. GRANT
Y. T.

Scale 1" = 100'