REPORT

ON THE

PRINCESS #1-4 CLAIM GROUP [YA34345-YA34348]

LOWER HYLAND LAKE AREA

105 - H - 1

WATSON LAKE MINING DISTRICT

YUKON TERRITORY

N. Lat. 61°04' W. Long. 128°15'

for

MAJESTIC MINING CORPORATION
704-525 Seymour Street
Vancouver, British Columbia

by

DONALD W. TULLY, P. ENG.

March 23, 1979 West Vancouver, B.C.

With an ADDENDUM dated
December 21, 1979

090534

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representational work in the amount of

$ 400.00

J A Morin

Resident Geologist or
Resident Mining Engineer

Considered as representation work under Section 63 (4) Yukon Quartz Mining Act.

B. R. BAXTER
Supervising Mining Recorder

Commissioner of Yukon Territory

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V7V 1C7


PRINCESS I-4
CLAIM
GROUP
FIGURE 1
LOCATION MAP
SCALE 1" = 35 MILES
MARCH 23, 1979
YUKON TERRITORY
NORTHWEST TERRITORIES
DISTRICT OF MACKENZIE
BRITISH COLUMBIA
ALASKA
MACKENZIE MOUNTAINS
SELWYN MOUNTAINS
RICHARDSON MOUNTAINS
OGILVIE MOUNTAINS
COAST MOUNTAINS
SKEENA MOUNTAINS
HAZELTON MOUNTAINS
ROCKY MOUNTAINS
WRANGELL MOUNTAINS
ST. ELIAS MOUNTAINS
ARCTIC RED RIVER
FORT GOOD HOPE
NORMAN WELLS
FORT NORMAN
FORT FRANKLIN
COLVILLE LAKE
FORT MCPHERSON
AKLAVIK
INUVIK
OLD CROW
TUKTOYAKTUK
HERSCHEL ISLAND
CLARENCE LAGOON
COPPERMINE
WOLLASTON PENINSULA
MELVILLE HILLS
PORT RADIUM
SAWMILL BAY
FORT RAE
FORT SIMPSON
FORT LIARD
PROVIDENCE
FORT RESOLUTION
HAY RIVER
DAWSON
CLINTON CREEK
NORTHWAY
MAYO
CARMACKS
FARO
ROSS RIVER
WHITEHORSE
CARCROSS
TESLIN
PINE LAKE
WATSON LAKE
SMITH RIVER
NELSON FORKS
FORT NELSON
FORT WARE
DEASE LAKE
TAKLA LANDING
HUDSON HOPE
FORT ST. JAMES
BURNS LAKE
SUMMIT LAKE
PRINCE GEORGE
PRINCE RUPERT
TERRACE
SMITHERS
KITSAULT
KETCHIKAN
PETERSBURG
WRANGELL
SITKA
JUNEAU
GUSTAVUS
YAKUTAT
ATLIN
BEAVER CREEK
BURWASH LANDING
MT. LOGAN
RAINBOW LAKE
FOOTNER LAKE
FORT VERMILION
PEACE RIVER
ST. JOHN
GRANDE PRAIRIE
MACKENZIE
ALCAN HIGHWAY
STEWART
MASSET
PACIFIC OCEAN
BAHANNI NATIONAL PARK
TCHESINKUT LAKE
ATHABASCA
Arctic Circle
65°
60°
55°
135°
130°
125°

INTRODUCTION

This report was prepared for Majestic Mining Corporation Ltd., pursuant to a request by Mr. B. Hambley, P.O. Box 21, Abbotsford, British Columbia.

The basis for this report is a personal knowledge of the area while examining and exploring prospects for a major mining company during 1966, 1967 and personal reconnaissance during 1975.

The purpose of this report is to evaluate the claim group for mineral potential.

A program of mineral exploration is recommended.

SUMMARY AND CONCLUSIONS

The PRINCESS #1-4 claim group is located about 70 air miles [110 km] northeast of Watson Lake in the Watson Lake in the Watson Lake Mining District, Yukon Territory. The property is situated some four miles [7 km] east of Mile 38 on the North Nahanni Range [Cantung] Road. Access at the present time is best by helicopter.

A zone of chalcopyrite-gold mineral showings occur on the ground immediately adjacent on the south to the Princess claims. The sulphide mineralization is hosted by a limestone - skarn horizon that projects northward through the PRINCESS ground to pyrite and pyrrhotite occurrences further to the north. Lead-zinc occurrences are known in this limestone horizon, also to the south of the claimed

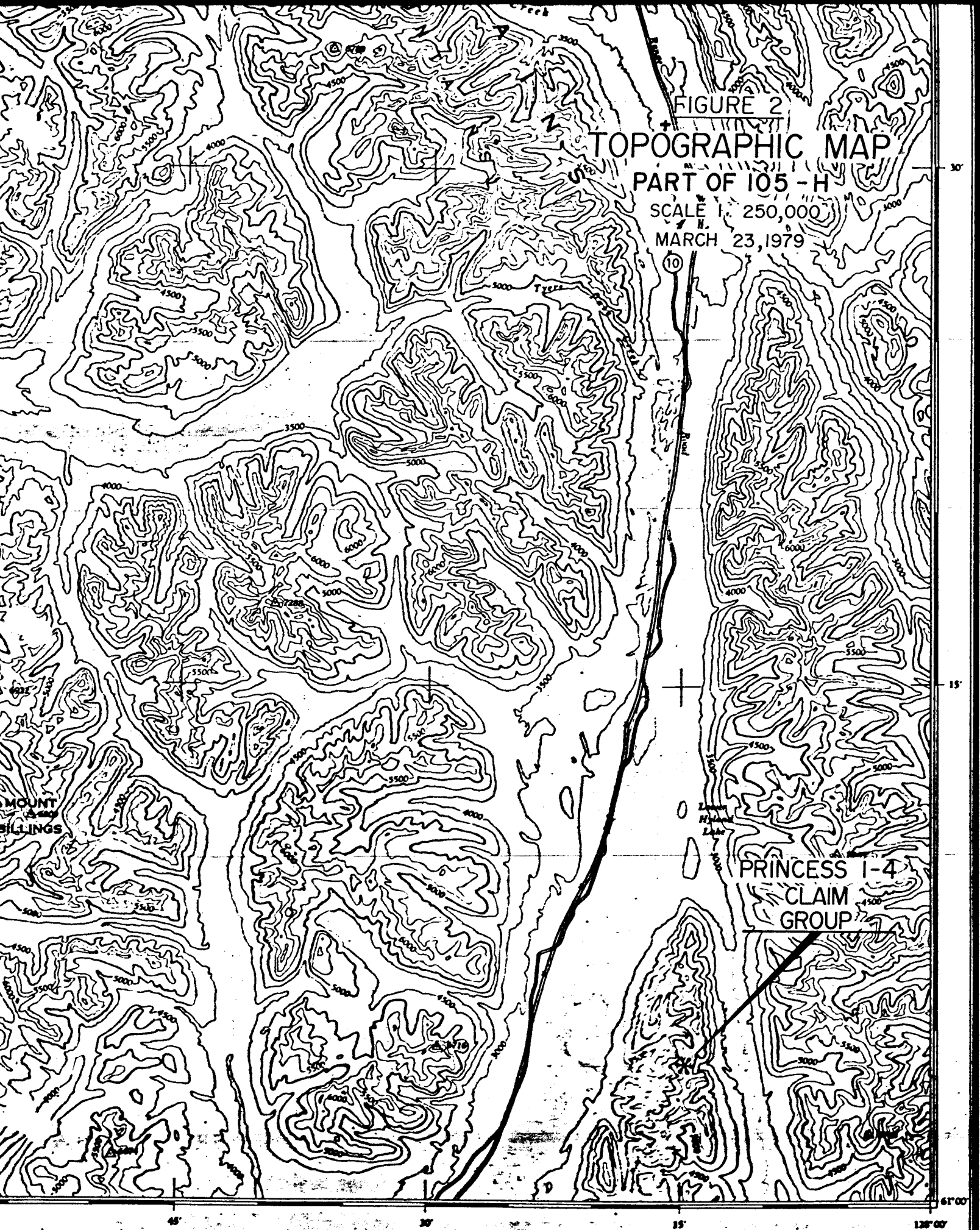
FIGURE 2
TOPOGRAPHIC MAP
PART OF 105 - H
SCALE 1: 250,000
MARCH 23, 1979
PRINCESS 1-4
CLAIM
GROUP
MOUNT
BILLINGS
30'
15'
61°00'
45'
30'
15'
128°00'

ground [Figure 4].

It is proposed to trench the PRINCESS claims to check for copper-gold mineralization as shown on Figure 5.

The estimated cost of this proposed work program is $24,000.00.

PROPERTY - LOCATION, ACCESS, PHYSIOGRAPHY

The PRINCESS #1-4 mineral claims are located about 70 miles [110 km] northeast of Watson Lake, Yukon Territory. The property is situated some four miles east of MILE 38 on the Cantung Road at the Hyland River. Lower Hyland Lake is about eight miles to the north of the claim group. There is a trail to the claims that leads eastward from the Hyland River a distance of some five miles.

Access is best at the present time by helicopter.

The claims are located on a local height-of-land between elevations 4800 and 6000 feet above sea-level. The topography is relatively steep and the ground is mostly above timberline.

CLAIMS

The property comprises a contiguous group of four mineral claims located in the Watson Lake Mining District. Information on file with the Mining Recorder at Watson Lake on March 20, 1979 was as follows:

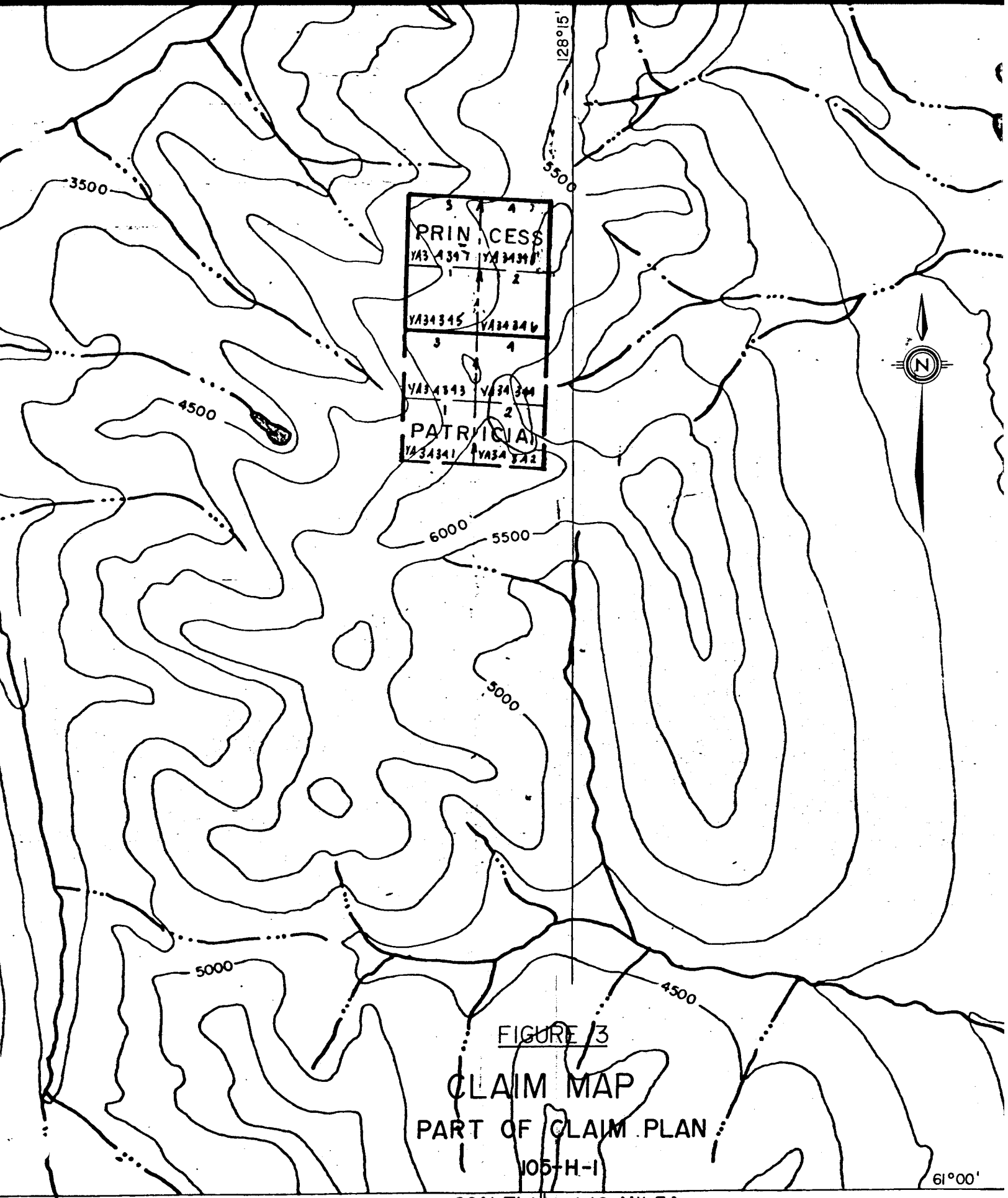

FIGURE 3

CLAIM MAP

PART OF CLAIM PLAN

105-H-1

SCALE: 1" = 1/2 MILE

MARCH 23, 1979

Claim Name	Grant Numbers	Date Recorded	Recorded Holder
PRINCESS #1-4	YA34345-YA34348	July 31, 1978	J.C. Turner

The claims are shown on Yukon Claim Sheet 105-H-1.

HISTORY - PREVIOUS DEVELOPMENT

Prospecting in the mid-1960's in the area immediately south of the PRINCESS claim group showed evidence of copper-gold mineralization. Pyrite, pyrrhotite and chalcopyrite were found in skarn zones along a limestone horizon trending north along the local height-of-land about four miles east of the Hyland River. In 1968 some trenching and a magnetometer survey was done on sulphide zones in a cirque showing. James W. McLeod, in his report dated September 20, 1978, listed twenty-six samples assayed for copper and gold. The best grab sample assayed 2.25% copper. A chip sample was also reported across a sample interval of 10 feet assaying 0.70% copper and 0.20 ounces gold per ton. All these sample results are from the ground adjoining the PRINCESS claims immediately to the south on the PATRICIA claims [Figure 3].

Pyrite and pyrrhotite mineralization was found along the limestone-skarn horizon which trends northerly along the height-of-land towards Lower Hyland Lake.

REFERENCES

1. Report on the PATRICIA claims on behalf of PATMAR RESOURCES CORPORATION dated September 20, 1978 by James W. McLeod, B.Sc.
2. Geological Survey of Canada Map 6-1966 Frances Lake
3. N.T.S. Topographic Map 105-H scale 1:250,000

GEOLOGICAL SURVEY OF CANADA
DEPARTMENT OF MINES AND TECHNICAL SURVEYS

105 H

DESCRIPTIVE NOTES

Access is provided by well maintained gravel roads linking Watson Lake on the Alaska Highway, Ross River on the Canol Road, and the Canada Tungsten mining community near the headwaters of Flat River.

An ice-sheet covered all but the highest peaks at least once during the Pleistocene Epoch, leaving erratics at elevations greater than 6,000 feet. Little evidence of direction of ice movement remains in the upland areas, but forms of drumlinoid ridges indicate that ensuing valley glaciers flowed southward down the major drainage systems.

Unit 1 comprises two main divisions with a combined thickness probably well in excess of 10,000 feet. A lower division is characterized by granule-pebble conglomerate and gritty quartzite and an upper one, at least 1,500 feet thick, is composed almost entirely of shale. The upper division is represented by map-unit 1d east of Hyland River and probably by units 1c and 1a, but owing to complex structure has not been separated elsewhere from unit 1.

Unit 2 contains appreciable siltstone and fine-grained quartzite near Flat River. Southeastward it changes progressively to shale and phyllite that may be correlative in part with uppermost strata of unit 1. A minimum thickness of 10,000 feet is estimated in the coarser grained facies northeast of Flat River. The base of unit 2 is ill-defined in the shaly facies near Little Hyland River and some basal strata may be included within 1c. Unit 2a is tentatively correlated with unit 2 on the basis of lithologic similarity, but may be older.

Unit 4, informally termed the "Swiss-cheese limestone", forms a distinctive and persistent marker 100 to 200 feet thick above unit 2. It is characterized by recessively weathering oval-shaped pods and lenses of limestone in a more resistant siltstone matrix.

Units 5 and 7 total a minimum of 4,000 feet in thickness northeast of Flat River where they are separated by a thin but conspicuous bright orange weathering dolomite unit (6). They comprise various mixtures of dolomite, sandstone, siltstone, minor limestone and shale. Individual members and beds lense out or interfinger abruptly and dinstems appear to be numerous. Basic volcanic flows and tuffaceous beds occur in the upper part of unit 5. An abrupt change in facies occurs westerly across Flat River where at least the lower part of this carbonate section (5), (6), and (7) changes to calcareous shale and argillite of unit 8. A discontinuous limestone member, about 100 feet thick, at the base of unit 8 is the host rock for the principal tungsten deposits at and near the Canada Tungsten mine. It gradually lenses out about 2½ miles northwest and 4 miles southeast of the mine. Apparent thinning or absence of unit 3 or equivalent strata northeast of Hyland River airstrip is believed due to an unconformity at the base of unit 8.

Intercalated siltstone and limestone of unit 9 characteristically occurs in wavy, undulatory or anastomosing bands, which on weathering impart a very rough pitted surface. An important regional unconformity at the base of this unit in places sharply bevels Lower Cambrian and older strata. Unit 9 is at least 4,000 feet thick near the Yukon - Northwest Territories boundary, but is itself bevelled by an unconformity beneath unit 11, so that apparently its thickness varies markedly. Exposures of unit 11 are limited to stream cuts along Flat River valley where it overlies unit 9 unconformably. Graptolites collected from the lowermost 500 feet are Upper Ordovician, but as the overlying part of unit 11 is much thicker, it may be in part of Silurian age.

Units 10 and 12 are lithologically correlated with strata previously mapped in adjacent regions.

Unmetamorphosed, predominantly pelitic, strata (13) are believed correlative with Devono-Mississippian rocks in adjacent regions. Characteristic are chert-pebble conglomerate, varicoloured chert, and black quartz-bearing greywacke and gritty quartzite. In the Campbell Range unit 13 includes numerous small bodies of greenstone, many intrusive, but most of the greenstone, mapped as 13b, appears to be volcanic and probably overlies or occurs within the upper part of unit 13. Serpentinite (13c) is thought to be an integral part of the Devono-Mississippian assemblage. A profound angular unconformity occurs at the base of this sequence.

Unit 14 comprises mainly hornfelsed pelitic rocks whose age and correlation are in doubt. Overall lithologic character, lack of regional metamorphism in rocks near the gneissic belt (3) and one collection of Middle or Upper Devonian fossils (near the south boundary at 128° 40'W) suggest that probably most, if not all, of this unit is correlative with Devono-Mississippian strata of unit 13.

Granitic rocks (15) generally have sharply defined contacts, but in the schist-gneiss belt (3) they are commonly bordered by complex zones as much as 1/4 mile wide in which massive plutonic rock is interspersed with bit-par-bit migmatites and partly granitized inclusions. These mapped boundaries are largely arbitrary, based on proportion of intrusive to host rocks.

Outside the complexly deformed central crystalline terrain, regional structures trend northwest except in the northern part of the map-area where they become westerly. Regional metamorphism appears unrelated to Cretaceous(?) granitic intrusion and probably predates the Devono-Mississippian strata. These strata overlie schist and gneiss of unit 1 unconformably and are essentially non-schistose. Northwest-trending regional folds near Flat River, which may be related to tectonism in the central belt, are post Late Ordovician, as they involve rocks of this age and older. These folds clearly predate and are modified by intrusion of granitic rocks.

Sphalerite with minor amounts of galena, pyrrhotite and chalcopyrite occur in silicated calcareous members in several localities throughout the schist-gneiss terrain (3) and in hornfelses that may be equivalent to unit 13. Pyrrhotite with some chalcopyrite was noted in black shale and argillite of unit 13, west of Hyland River road at mile 88. Scheelite is reported in the north-central part of the map-area near 61° 46' in contact zones with calcareous beds of unit 1.

A high-grade tungsten deposit on Flat River is presently being mined by Canada Tungsten Mining Corporation. Scheelite, with pyrrhotite and minor amounts of chalcopyrite occurs with other minerals in quartzites of Lower Cambrian limestones. The deposit is several hundred feet from nearest exposed granitic rocks, but within a zone of moderate to high-grade contact metamorphism.

MAP 6-1966
GEOLOGY
FRANCES LAKE
YUKON TERRITORY AND DISTRICT OF MACKENZIE

Scale 1:253,440
1 inch to 4 miles

FIGURE 4
REGIONAL GEOLOGY MAP
PART OF G.S.C. MAP 6-1966
MARCH 23, 1969

MAP 6-1966
FRANCES LAKE
YUKON TERRITORY AND
DISTRICT OF MACKENZIE
1969

4. Yukon Claim Sheet 105-H-1 scale 1" = ½ mile
5. Personal communications

GEOLOGY

Three lithological units underlie the PRINCESS claim group [Figures 4 and 5]. A tentative table of formations is as follows:

Formation	Description	Age
Sand, gravel and glacial debris	Unconsolidated	Quaternary
Quartz Monzonite [unit 15]	Intrusions Tectonic activity	Cretaceous [?]
Skarn Limestone Sediments	Metamorphosed [probably some of unit 2]	Late Paleozoic
Basement complex of granitic gneiss and schist	Probable erosional unconformity Tectonic activity	Cambrian or earlier

The regional geology is shown on Figure 4.

The trend of the geologic horizons is northward. Metamorphism from the quartz monzonite intrusives no doubt has been a factor in the skarn and mineralization development in the trenched area in the limestone horizon.

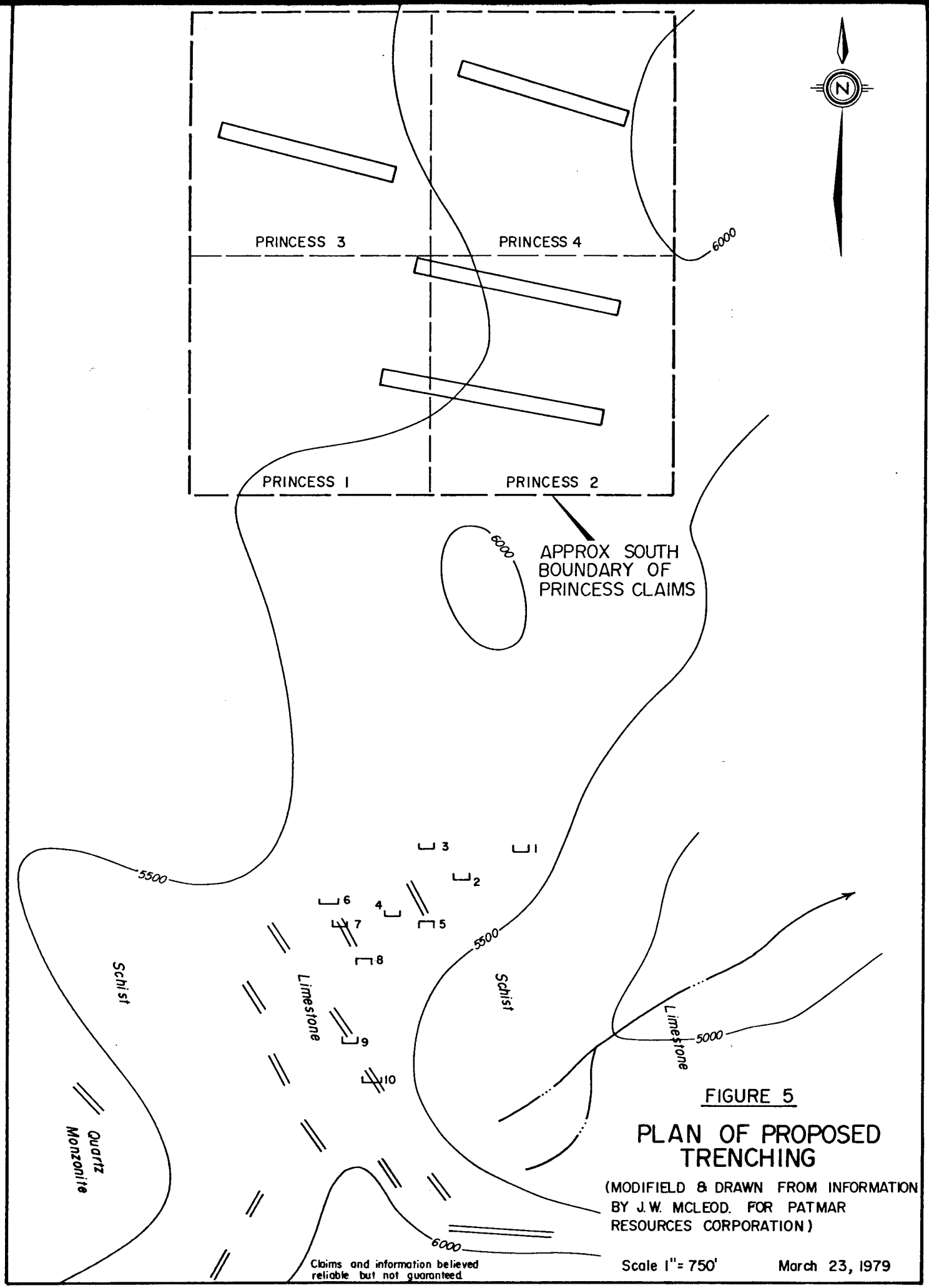

FIGURE 5

PLAN OF PROPOSED TRENCHING

(MODIFIELD & DRAWN FROM INFORMATION BY J.W. MCLEOD. FOR PATMAR RESOURCES CORPORATION)

MINERALIZATION

Copper-gold mineralization has been found on the adjacent PATRICIA claims immediately to the south [Figure 5]. James W. McLeod, in his report dated September 20, 1978, gave the results of twelve chip samples and fourteen grab samples. The assays ranged between 0.10 - 2.25% copper and trace and 0.20 ounces of gold per ton for the twenty-six samples taken on the PATRICIA ground.

The northerly trend of the zone of mineralization in the limestone-skarn host horizon suggests the zone of values could project northward on to the PRINCESS claims.

RECOMMENDATIONS

It is proposed that the northward strike extension of the copper-gold bearing sulphide mineralization on the PATRICIA claims [Figure 5] be exposed with four bulldozer trenches. Following the completion of this program of earth trenching the exposed zones should be mapped, sampled and evaluated for mineral potential.

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ESTIMATED COSTS OF THE PROPOSED WORK PROGRAM

1.	Mobilization and demobilization of a D-7E bulldozer or larger size from Watson Lake, Y.T. with fuel	$ 2,000.00
2.	Fording the Hyland River near Mile 38 on the Cantung Road and walking the bulldozer with supplies about five miles eastward along a trail to the PRINCESS claim group	1,500.00
3.	Bulldozing four trenches as proposed on Figure 5 across the strike of the copper-gold mineralization [200 hours x $95.00/hour including camp costs and fuel to complete job]	19,000.00
4.	An engineering evaluation of the results of the program of trenching including geological mapping and sampling of any exposed mineralization	1,500.00
	Estimated total cost	$24,000.00

Respectfully submitted,

Donald W. Tully, P.Eng.,
Consulting Geologist

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ADDENDUM

[TO REPORT ON THE PRINCESS #1-4 CLAIM GROUP

DATED MARCH 23, 1979]

On April 19, 1979, I examined the PRINCESS mineral claims, grant numbers YA34545 - 48, located on Yukon Claim Sheet 105-H-1. I was accompanied by J.C. Turner and Pilot Al Jackson with Frontier helicopter FQGP.

Numerous rock exposures were available for examination. At the top of the cirque on claims #2 and #4 meta-sediments with narrow lenses of crystalline limestone were noted trending 345 degrees. Schistosity and foliation was observed dipping steeply to the east. Further to the north on claim #4 the dip appears to be steeply westward where the rock outcrops are increasingly schistose in aspect. Cross-folding and warping are indicated and may well be manifested by the cirque topography.

A small test pit on Princess #4 showed fine pyrrhotite mineralization in a slightly oxidized schistose pelite.

The claim posts were examined and found to be according to the QUARTZ ACT.

Donald W. Tully

Donald W. Tully, P.Eng.

December 21, 1979

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