

GEOLOGICAL REPORT

ON

THE PAT GROUP OF MINERAL CLAIMS (PAT 5-8)

WHITEHORSE M.D. YUKON TERRITORY

NTS: 105-F-14

W. W. G.

CONWEST EXPLORATION CO. LTD.



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Located claims on which assessment credit is requested:

<u>Claim</u>	<u>Record No.</u>	<u>Common Expiry Date</u>	<u>Assessment Credit</u>
Pat 5	Y 60340	September 3, 1972	3 years
Pat 6	Y 60341	September 3, 1972	3 years
Pat 7	Y 60342	September 3, 1972	3 years
Pat 8	Y 60343	September 3, 1972	3 years
Total:			12 years

Work was done on these claims from August 19-21, 1972.

REPORT BY

G.W. GRANT

GEOLOGIST



GWG/pg
September 18, 1972

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$1,336.60

D.B. Craig

Resident Mining Engineer

Considered as representation work under Section 85 (2) Yukon Quartz Mining Act.

[Signature]
Commissioner of Yukon Territory

G.W.G.

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1. INTRODUCTION

The purpose of the work done on the property was to evaluate a tungsten occurrence on claims staked by Mr. Patrick Quinn on February 9th, 1971. Interesting looking scheelite-bearing hand specimens from the property were submitted to Conwest Exploration Company Limited by Mr. Armand Arsenault of Whitehorse. Assays of grab samples were reported by Mr. Arsenault to run better than 1% WO₃. The geological mapping was conducted by G.W. Grant, Resident Geologist in Vancouver, B.C. for Conwest Exploration Company Limited, assisted by Mr. Patrick Quinn, staker of the claims, and Mr. Peter Versluce, prospector.

No obvious signs of previous work on the property were noted, with the exception of a limited amount of blasting on the scheelite occurrence which Mr. Quinn stated was done by him. However, the ground adjoining the Pat claims is covered by Eva claims staked in 1971 as evidenced by posts located by the writer. Two of these claims, Eva 5 and Eva 6, are believed to be still in good standing and lie some 400 feet northwest of the northwest boundary of Pat 7 and 8. These Eva claims are located some 3000 feet south of their plotted position on Claim Sheet 105-F-14.

The property is located in the Whitehorse Mining Division, Claim Sheet 105-F-14, at a latitude of 61°57' N, longitude 133°27' W. The claims lie on the northwest side of the valley of a northeasterly flowing tributary of the Magunday River. The claims lie between 5300 and 6000 feet elevation and are entirely above timberline. The Pat claims are in the Pelly Mountains, some 3½ miles northwest of Fox Mountain which is shown on the Quiet Lake

GWG

Sheet 105-F as having an elevation of 7886 feet. The nearest settlement is Ross River, some 34 miles west of the property from where access was gained by helicopter. The nearest point on the Canol Highway is some 16½ miles southeast of the Pat claims.

The Pelly Mountains in this area are generally fairly rugged with relief from the main valleys to the highest peaks from 2500 feet to more than 3500 feet.

2. GENERAL GEOLOGY

The area was mapped by Wheeler, Green and Roddick of the Geological Survey of Canada between 1956 and 1959 and the results published as Map 7-1960, "Quiet Lake", with marginal descriptive notes, on a scale of four miles to the inch.

The Pat claims lie near the northeast side of a broad northwesterly trending belt of granitic and metamorphic rocks which occupy most of the southwestern two-thirds of the Quiet Lake sheet. These metamorphic rocks (Formation A) are not classified on the G.S.C. Map 7-1960 as to age. They are classified on G.S.C. Open File map "Geology and Mineral Deposits of the Yukon Territory" (O.P.No.87), compiled by Findlay as Paleozoic and Older? The granitic rocks which intrude the metamorphics are classified as Jurassic and/or Cretaceous by Wheeler et.al.

To the northwest of this major belt of metamorphics and acid intrusives in the area of the Pat claims is a belt of folded and faulted Paleozoic rocks, those nearest to the Pat group being northwest striking and northeasterly dipping dolomites and quartzites classified as Silurian and Devonian by Wheeler et.al. The tops of the beds in this formation could not be determined by the G.S.C.

J. W. J.

Map 7 - 1960 shows the Pat claims to lie near the northeast side of a granitic intrusive some nine miles long and three miles wide with a northwest-southeast long axis which intrudes metamorphosed sediments of Wheeler et.al.'s Formation "A". These sediments here are shown to form a northwesterly belt some half mile wide separating the intrusive from the aforementioned Silurian and Devonian sediments to the northeast.

3. GEOLOGY OF THE PAT PROPERTY

The geology of the claims was mapped by establishing a chained base line with permanent cairns established every one hundred feet along the area of best and most continuous exposures for a length of 1400 feet. Exposures were tied in to this base line by chain and compass or pace and compass.

Vertical control was established by measuring the vertical angle between stations on the base line and calculating the difference in elevation between them. Station 0+00 on the base line was given an arbitrary elevation of 5500 feet and all other elevations were related to it.

The location line of the Pat 5 - 8 claims essentially follows a tributary stream to the aforementioned tributary of the Magundy River which rises at an elevation of about 5800 feet and flows southeast into the said tributary which it joins at an elevation of about 4900 feet. Elevation of the northwestern corner of Pat 8 is about 6000 feet and the southwest corner of Pat 5 is about 5000 feet. The stream traversing the claims affords almost continuous exposures across the claim group. Where the stream cuts down the steeper part of the main valley wall it has cut a steep-walled canyon some 150 feet deep.

W. W. W.

The oldest rocks consist of the metamorphic rocks of Formation "A" of Wheeler et.al. On the Pat property they consist primarily of well-bedded, hard, dark grey coloured, slightly micaceous quartzites which occasionally approach a siliceous slate or hornfels, almost black in colour. They are generally thin-bedded, $\frac{1}{4}$ " to 2", often ripple marked on bedding planes and have relatively shallow dips. They weather to a dark grey-brown colour, and are aphanitic to very fine-grained. They outcrop in the northern third of Pat 7 and the southern half of Pat 8. They occupy a belt some 1600 feet wide on the claim group as a roof pendant of apparent limited vertical extent almost surrounded by a granitic intrusive.

The only other rocks outcropping on the ground consist of granitic intrusive rocks and related dykes. The granitic rock is massive and light grey in colour, and generally medium-grained. It consists of about 20 per cent biotite, 15 per cent quartz and 65 per cent white feldspar. It appears fresh and relatively unaltered. The rock can probably be termed a quartz monzonite. This quartz monzonite is part of a pluton which extends some four and one half miles northwest and some five miles southeast of the Pat claims where it underlies the summit of Fox Mountain. The northeast margin lies just north of the group.

The quartz monzonite is cut by a few irregular steep dykes and masses up to five feet wide and some tens of feet long of dark grey feldspar porphyry. This porphyry consists of 60 - 70 per cent unoriented subhedral white feldspar phenocrysts 1 - 3 mm. in size in a dark grey aphanitic siliceous ground mass.

H. W. G.

Vertical dykes of quartz monzonite up to 100 feet wide cut the sediments in the creek between 4+00 E and 9+00 E. Most strike almost due north and are exposed for 100 feet or less.

Contacts between the older sediments and the intrusive are sharp with recognizable inclusions of sediments common within a few tens of feet of the contacts.

4. STRUCTURE

The strike of the metamorphosed sediments varies from 110° to 135° with dips from 35° to 70° to the north. These attitudes are generally the same as those measured by the G.S.C. in the Paleozoic sediments to the northeast of the Pat claims. No reliable top determinations were made on the Pat claims. The variances in attitudes are due to minor dislocation probably related to the intrusion of the quartz monzonite.

Minor north-south faulting was noted in a few places with beds offset from a few inches to a few feet. No major faulting was noted on the Pat claims.

The granite is relatively well fractured with prominent sets striking at 105° dip 65° S; 000° , 70° W; 030° , 75 W.

G. W. G.

5. MINERALIZATION

Two areas of sulphide mineralization with associated scheelite were noted, one located while mapping at 0+00 on the base line less than 100 feet west of Pat 7 and called the Upper Showing, and the second at 7+00 E, 1+00 N known as the Lower Showing.

The Lower Showing is the location of the samples submitted to Conwest by Mr. Arsenault. This occurrence lies on the south wall of the creek and consists of massive pyrrhotite in conformable lens-like masses from 2 to 5 feet wide along a length of 30 feet where it pinches out at both ends. These lenses vary from massive pyrrhotite through disseminated mineralization to barren quartzite in an interval of a few inches. A minor amount of fine chalcopyrite less than 1 per cent by volume was noted. Considerable fine scheelite is disseminated throughout the pyrrhotite but none in the wall rock. While many samples can be obtained which examination under ultraviolet light suggest should run at least 1 per cent WO_3 , careful lamping along the whole occurrence show the intensity of scheelite mineralization to be erratic. The attitude of the sulphide zone and enclosing sediments is 115° dip 75° N.

The upper showing is exposed in the creek bed and consists of massive pyrrhotite exposed across 20 feet. The north side of the mineralization is in conformable contact with barren quartzite striking at 110° and dipping 45° N. On the other three sides the occurrence is surrounded by rubble in the creek bed. While exposed along a strike length of only 5 feet nearby exposures indicate a possible maximum strike length of 100 feet and a maximum width of 25 feet. Lamping of this occurrence showed only a very few fine specks of scheelite and three representative samples across the

J.W.N.

20 foot exposed width all gave only trace WO_3 on assaying.

No other mineralization of note was observed on the Pat claims or the adjoining areas.

6. ECONOMIC CONSIDERATIONS

The scheelite bearing sulphide occurrence on the Pat group is not of economic interest in itself. The roof pendant of sediments in which scheelite bearing sulphides occur is almost certainly of limited vertical extent. Thus any other occurrences of a similar nature are not likely to persist to depth.

7. RECOMMENDATIONS AND CONCLUSIONS

A limited amount of detailed prospecting in the area north of the creek where outcrop is scarce but overburden appears light could be justified. This might be accompanied by soil sampling with analysis for copper which appears to be associated with the scheelite mineralization. The likelihood of locating an economic scheelite deposit on the Pat claims is not good.

G. W. Grant

REFERENCES

- 1) Geological Survey of Canada, Map 7 - 1960, Geology, Quiet Lake, Wheeler, Green and Roddick.

- 2) Geological Survey of Canada, Geology and Mineral Deposits of Yukon Territory, Map, Open File 87, 1972.

J. A. G.

STATEMENT OF QUALIFICATIONS

G.W. Grant was responsible for carrying out the geological survey on the Pat group of claims and for the preparation of this report. Grant attended McGill University from 1950 to 1953 and Michigan College of Mining and Technology from 1953 to 1956 where he completed all undergraduate geology courses. Mr. Grant has not completed some other requirements and has not been awarded a degree .

I have known Mr. Grant since 1956 and consider him an experienced and capable geologist. I have read the report on the Pat claims and agree with the conclusions and recommendations contained therein.

A handwritten signature in cursive script, appearing to read 'W.G. Timmins', written in black ink.

W.G. Timmins, P. Eng.

CANADA)
)
PROVINCE OF BRITISH COLUMBIA)
)
TO WIT:)

STATUTORY DECLARATION RELATING TO
EXPENDITURES ON A GEOLOGICAL SURVEY
OF CERTAIN CLAIMS LOCATED IN THE
WHITEHORSE MINING DIVISION, YUKON
TERRITORY



I, GERALD WALLACE GRANT, Geologist, of the City of Vancouver
in the Province of British Columbia, DO SOLEMNLY DECLARE:

1. That I am the person who performed a geological survey and prepared a geological report as a result of said survey on certain mineral claims for Conwest Exploration Co. Ltd.
2. That copies of this report are being filed with the Mining Recorder at Whitehorse.
3. That attached hereto and marked with a letter "A" upon which I have signed my name at the time of declaring hereof, is a statement of expenditures incurred in connection with the geological survey of said claims.

AND I MAKE this solemn declaration conscientiously believing it to be true and knowing it is in the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

DECLARED before me in the)
)
City of Vancouver, in the)
)
Province of British Columbia)
)
this ..18th..... day of)
)
September, A.D. 1972.)

Wm. G. Zing

A Notary Public in and for the
Province of British Columbia

G. W. Grant

CONWEST EXPLORATION COMPANY LIMITED

STATEMENT OF COSTS

1972 GEOLOGICAL SURVEY EXPENDITURE

PAT 5 - 8 CLAIMS

Y 60340 - Y 60341

Sheet 105-F-14

Whitehorse Mining Division



Geological Work

Geological Survey performed by G.W. Grant (Geologist), assisted by Patrick Quinn (Prospector), and Peter Versluce (Prospector), August 19 - August 21, 1972. Office interpretation and compilation, G.W. Grant, two days, September, 1972. \$635.00

Transportation

Helicopter Charter \$701.60

\$1,336.60

This is Exhibit "A" to the Statutory Declaration of G.W. Grant declared before me the 18th day of September, 1972.

This is Exhibit "A" referred to in the affidavit of G.W. Grant sworn to before me herein this 18th day of September 1972

Wm H. Ruyter
 A Commissioner for taking Affidavits for British Columbia

A Notary Public in and for the Province of British Columbia

