

REPORT

ON GEOPHYSICAL INVESTIGATIONS ON ROSE CREEK GROUP
BY MEANS OF A MAGNETOMETER RECONNAISSANCE SURVEY

by

A. Allan

WHITEHORSE, Y.T.

September 22nd, 1955.

TABLE OF CONTENTS

	<u>Page</u>
Introduction.....	I
Summary and Conclusion.....	I
Recommendations.....	2
History.....	2
Location & Access.....	2
Topography.....	3
Geology.....	3
Survey Method.....	3
General.....	3
Acknowledgement.....	4
Personnel.....	5
Cost Summary.....	5

REPORT ON
GEOPHYSICAL INVESTIGATION ON THE ROSE CREEK GROUP
PELLY RIVER DISTRICT, YUKON TERRITORY

INTRODUCTION

A reconnaissance magnetometer survey was carried out over 32 claims in the group during the 1955 field season. The purpose of the survey being to delineate areas covered by overburden, or, to outline anomalous areas found during the survey as a guide to further investigation. In addition to the magnetometer survey, water testing using the dithizone titration method was carried out wherever practical.

The survey was carried out over the following mineral claims; at the east end of the group; the Mill 2-8 incl., tag no's 67092-67099, the Andy 5-8 incl., tag no's 67068-67075, the Baron I-4 incl., tag no's 67084-67087 and the Ron I, tag no. 67116. At the west end of the claims work was completed on the following; Hew I-8 incl., tag no's 67100-67107, Vin 4-8 incl., tag no's 67063-67067, and the Irish 6-8 incl., tag no's 67081-67083.

Work carried out on the remaining 19 claims consisted of extensive trenching and blasting sufficient to maintain the claims in good standing until 1957.

SUMMARY & CONCLUSIONS:

The variation in magnetic intensity as measured on the east group with the greatest variation only 350 gammas above the normal for the area, outlined no anomalies whatsoever. The irregular nature of the contours fails to give any indication of the subsurface structure with the exception of the extreme southern area on the claims. The 1600 gamma contour may reflect gentle folding in the underlying schists with a southerly plunge along the fold axes, lack of outcrops and geological information seriously hinders any attempt at interpretation of the significance of the contour pattern. This area can best be described as underlain by schist and minor limestone, the whole intruded by irregular masses of granite.

On the westerly group the contour pattern is much more idealistic, the southerly plunging folds are outlined fairly clearly, on the basis of the observed attitudes on the outcrops mapped during 1954 it is reasonable to assume that the interpretation of the subsurface structure is correct.

Two anomalous areas were outlined during the course of the investigation, the most significant of which is the one occurring on the Hew 5 & 6 M.C.'s. The sharpness of the anomaly coupled with only modest intensity, 2000 gammas, indicates other than a change of rock type. Water tests in the vicinity indicated as high as 14 parts per million soluble metallics, in addition, an outcrop on the Hew 3 immediately north-east of the anomaly contained very finely disseminated chalcopyrite and pyrrhotite in a silicated and silicified limestone. On the basis of the above information it is believed that the anomaly is due to the presence of mineralization in the underlying rocks.

The anomaly shown on the Irish 8 M.G. has the same general characteristics as the Hew with the pattern reversed. It is quite possible that this high area reflects underlying mineralization. The actual difference between the high readings on the two anomalies is only in the range of 150 gammas.

RECOMMENDATIONS:

1. That the work be recorded for the full two year period.
2. That work on the easterly group of claims be shelved during 1956.
3. That additional work be carried out by means of diamond drilling on the Hew and Irish anomalies. A light drill is recommended for preliminary testing with a minimum footage of 1500' on each zone. The flat dips in the area indicate that vertical drill holes would be most suitable.
4. That arrangements be made to continue the geophysical survey over the remaining 19 claims. This work could be shelved until initial drilling on the Hew anomaly was completed.

HISTORY:

The claims were staked as part of the original Prospectors Airways holdings adjoining the Vangorda creek claims along the strike of the ore zone. The 51 claim group was acquired from Prospectors Airways by Pelly River Mines Ltd in 1954.

Geological mapping and prospecting was carried out over the entire group during the 1954 field season. This work failed to uncover any mineralization of note, and only limited areas of outcrop were mapped.

LOCATION & ACCESS:

The claims extend in a north-west south-east direction along the Rose creek valley and adjoin Prospectors Airways claims to the southeast. The property is about 6 miles distant from the rough airstrip at the P.A. camp and 7 miles due north of the confluence of Vangorda creek and the Pelly river.

A rough bulldozer road exists between Prospectors Airways camp and the property, the road extends entirely across the claims. In addition there is a poor packhorse trail from Dickson lake to the property a distance of about 4 miles.

Supply to the camps in the area is entirely by air, although heavy equipment was moved into the P.A. camp via the Canol road to Ross river and thence by boat to the road terminus at Blind creek. During the past season supplies were flown in to Blind creek, Jacknife lake or Dickson lake and transported by pack horse to the property.

TOPOGRAPHY:

The claims lie along the bottom of the broad U shaped valley of Rose creek at an elevation of approximately 4000'. The terrain slopes moderately upward to the north on a very even grade to the base of the mountains. Rose creek meanders through the bottom of the valley in a north-westerly direction to empty into the Pelly river. The southerly portion of the claims is covered with swampy ground and low buckbrush, here and there on the claims small stands of spruce exist. Dickson lake to the east is entirely above timberline.

GEOLOGY:

The claims are underlain by schist, limestone, quartzite and granite, from the abundance of granite boulders on the eastern portion of the claims it is reasonable to assume that the intrusive is much more widespread in this area than is indicated by the outcrops. In the vicinity of Canyon creek numerous dykes of composition ranging from andesite to felsite were mapped during 1954. Lack of outcrops prohibits any great speculation as to the structure of the underlying sedimentary rocks, however, changes in the observed attitudes on the outcrops would indicate gentle folding.

Survey Method:

A baseline was established across the claims surveyed, stations were established at 500' intervals and picket lines cut out at right angles to the baseline. Magnetometer stations were surveyed along the picket lines at 200' intervals with provision for intermediate stations if necessary. Readings were taken initially with a Radore magnetometer, extreme drift of this instrument and eventual breakdown rendered this portion of the work useless. An Askania model magnetometer no. 1556 was procured and the entire operation rerun, all stations were reoccupied to assure proper correlation of the results.

The readings thus obtained were averaged, corrected for drift, calculated on the scale constant for the instrument and plotted on the map on a scale of 400' to the inch. Contours were constructed through points of equal magnetic intensity. In one instance the location of the actual stations is plotted on the map but on the westerly group it was decided to abandon this procedure to avoid cluttering up the map.

GENERAL:

A crew of 5 men were employed for a total of 10 weeks carrying out the survey under the direct supervision of Mr. A. Allan, geologist. Chief of the field party was Mr. C.D. Guss. Two pack horses were retained to move the camps and to transport supplies from the nearest airfield or suitable lake. Very poor weather conditions through most of the field season added to the difficulties of the field crew. One camp was wrecked by bears during the course of the work.

ACKNOWLEDGEMENT:

The writer wishes to acknowledge the friendly assistance of Prospectors Airways staff members during the season, they willingly transmitted radio messages and were of considerable assistance in calibration of the magnetometer.

The field crew is to be commended for the excellent manner in which their work was carried out, at times their work was carried out under rather difficult conditions.

Respectfully submitted,

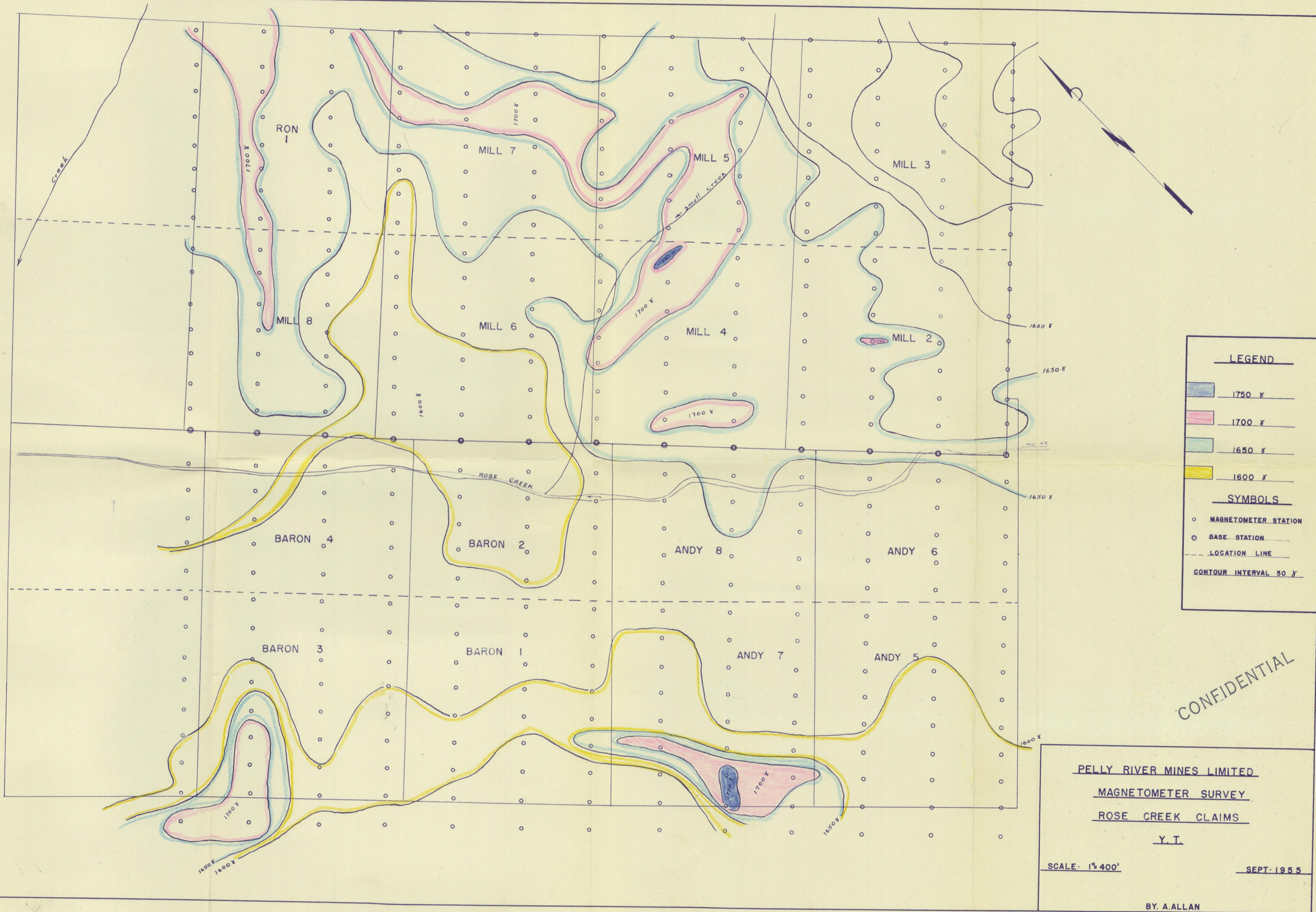
A. Allan (Geologist)
EXPLORATION SERVICES LTD.

PERSONNEL EMPLOYED:

Chief of field party.....	C.D. Guss.....	\$	400.00/mo.
Labour.....	A. Menard.....	\$	10.00/day.
Labour.....	J. Testewich.....	\$	10.00/day.
Labour.....	J. Bunbury.....	\$	10.00/day.
Labour.....	P. Ritco.....	\$	10.00/day.
A. Allan.....	Supervision.....	\$	20.00/day.

COST SUMMARY:

Preparation of base maps and preliminary plans..	\$	150.00
Line-cutting - 160,000 feet.....	\$	1850.00
Surveying and magnetometer readings.....	\$	1850.00
Transportation - Air.....	\$	1175.00
Camp and food supplies.....	\$	960.00
Magnetometer rental@ 150.00/mo.....	\$	150.00
Pack horse hire 2 horses @ 6.00/day.....	\$	444.00
Supervision, final report, preparation of maps..	\$	<u>440.00</u>
Total	\$	<u><u>7019.00</u></u>



LEGEND

- 1750 γ
- 1700 γ
- 1650 γ
- 1600 γ

SYMBOLS

- MAGNETOMETER STATION
- ⊙ BASE STATION
- LOCATION LINE
- CONTOUR INTERVAL 50 γ

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PELLY RIVER MINES LIMITED
 MAGNETOMETER SURVEY
 ROSE CREEK CLAIMS
 Y.T.

SCALE: 1" = 400'
 SEPT. 1955

BY: A. ALLAN

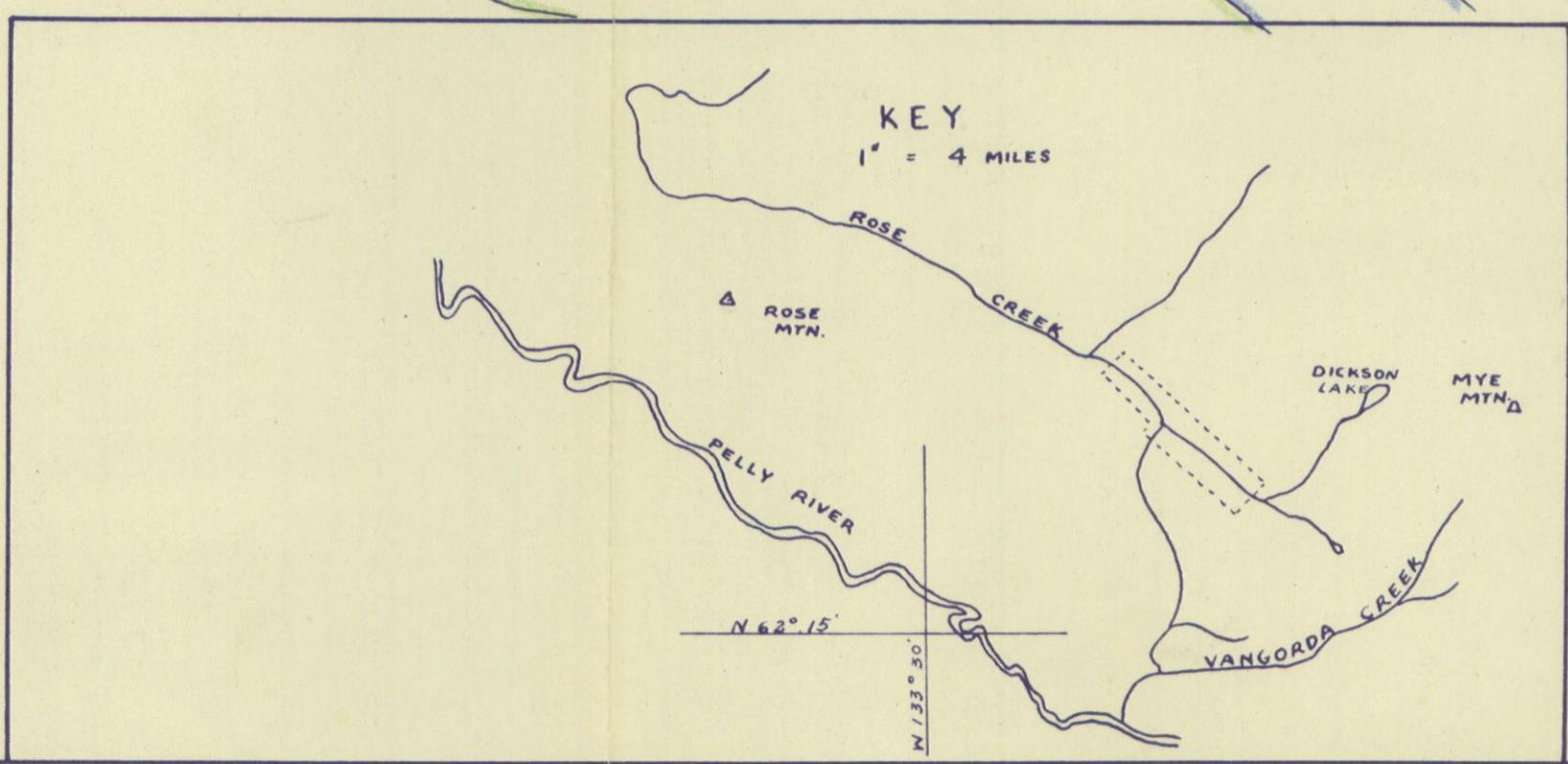


LEGEND

- 2000 GAMMA
- 1950 "
- 1900 "
- 1850 "
- 1800 "
- 1750 "
- 1700 "
- 1650 "
- 1600 "
- 1550 "
- 1500 "
- ⊗ MINERALIZATION

CONTOUR INTERVAL
50 GAMMAS

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PELLY RIVER MINES LTD.
MAGNETOMETER SURVEY
ROSE CREEK CLAIMS
Y.T.
SCALE: 1" = 400'
SEPT. 1955
BY: A. ALLAN

REPORT
GEOLOGICAL INVESTIGATION & RECONNAISSANCE
OF
THE ROSE CREEK MINERAL CLAIMS
OWNED BY
FELIX RIVER MINES LTD.

TABLE OF CONTENTS

1. Covering Letter - L. G. White, P. Eng.
2. Geological Report - H. Powell, M.E.
3. Expense Summary.
4. Appendix.
 - (a) Geological Map of Claims.

Vancouver, B.C.,
Nov. 23, 1954.

Mining Recorder,
Department of Northern Affairs & Natural Resources,
WHITEHORSE, Y.T.

Dear Sir:

We submit herewith our report with accompanying map, covering a complete geological reconnaissance conducted for Pelly River Mines Ltd., owners of a group of fifty-one mineral claims situated on Rose Creek, Pelly River Area, Y.T.

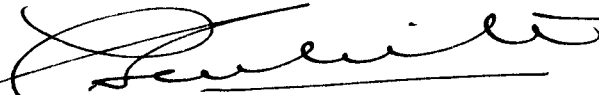
A party of six men consisting of a qualified mining engineer, two senior geological students, two prospectors and an Indian packer and horse wrangler, was maintained in a camp on Rose Creek for a period of forty-six days. Claim location lines were surveyed, using a triangulation system with transit and stadia. All rock outcrops were examined in hopes of locating mineral in place worthy of further investigation.

The extensive areas of moss-covered, low country separating the few rock outcrops made any correlation of structural features an impossibility. Minor evidence was studied, which suggested that the Rose Creek valley was a fault trench.

Geochemical, in conjunction with geophysical methods of prospecting, has been recommended for further investigation of the property.

Our affidavits in application for Certificates of Work to be granted under Section 54(2B) of the Yukon Quartz Mining Act, together with Grouping Notices, were filed in your office on September 22nd, 1954. The expense statement substantiating the amounts shown on the affidavits has been included as a section of this report.

Yours very truly,



L. G. White, P. Eng.,
Agent for:
PELLY RIVER MINES LTD.

Vancouver, B.C.,
November 23/54.
LAW/hc.
encl.

A GEOLOGICAL REPORT
ON
THE ROSE CREEK CLADE
OF
THE PELLY RIVER MINES LTD.

VANCOUVER, B.C.,
November 23, 1954.

By: H. Powell,
Mining Engineer.

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A GEOLOGICAL REPORT
ON
THE POSE CREEK CLAIMS
OF
THE PALLY RIVER MINES LTD.

PREFACE:

This report is to be classified as a geological investigation, as per Section 54-2B of the Yukon Quartz Mining Act.

A party of five men accomplished the work between August 3rd and September 17th, 1954.

The crew and equipment were flown from Blind Creek on the Pally River to Dickson Lake, where a temporary camp and supply base was established. From this point a packhorse trail was scouted and blazed to a campsite on the RDN No. 2 mineral claim, a distance of approximately six and one-half miles.

Supplies were flown from Whitehorse, landed at Dickson and transferred by packhorse to the camp.

As a basis for the geological work, the claims were surveyed using transit, triangulation and stadia, also in part by compass and chain, moreover all location posts were duly tagged.

The geology was mapped by cross-cruising to locate outcrops and by pacing to claim boundaries.

With the exception of a few days in the early part of August, good weather prevailed, greatly facilitating the work.

LOCATION:

The property is situated at 135° 19' West longitude, and 62° 18' North latitude. Location is approximately eight miles due west of Mount Mye; elevation 6763 feet on the Tay River, Sheet 105K N.T.S.

The claims lie astride the upper reaches of the Ross Creek valley. Ross Creek joins Anvil Creek to form a northern confluence of the Pally River.

They may be reached approximately 120 flying miles from Whitehorse to Dickson Lake or by road, under construction, from Ross River via Prospectors Airways camp on Vanguarda Creek, a distance of thirty-five miles.

PROPERTY: The property consists of fifty-one mineral claims as follows:

MILL Nos.	2 to 8 inclusive,	Tag Nos.	67092 to 67099 inclusive.
ANDY Nos.	5 to 8	" "	67068 to 67075
BARON Nos.	1 to 8	" "	67084 to 67091
RON Nos.	1 to 8	" "	67116 to 67123
IRISH Nos.	1 to 8	" "	67076 to 67083
VIN Nos.	1 to 8	" "	67060 to 67067
HEW Nos.	1 to 8	" "	67100 to 67107

The claims were recorded by Prospectors Airways Limited at Whitehorse, Y.T., September 18th, 1953 and subsequently sold and transferred to Pelly River Mines Limited, Toronto, Ontario.

These claims are well staked and are bounded on the south-east by the RON and ANDY Groups (Prospectors Airways); on the south-west by the CUB group (Karl Springer), GESSNA and MAJOR Groups (G. Dickson); and on the northwest by the ROSE and RUST groups.

The location lines run approximately N. 44° W. and are on each side paralleling Rose Creek.

TOPOGRAPHY: The claims lie between 3500 feet and 4500 feet in elevation and are almost entirely covered by recent alluvium, supporting six-foot Arctic birch and willow (locally buck brush) and small to medium spruce.

Rose Creek lies in a "U" shaped valley roughly paralleling the Pelly River and drops about 500 feet in four miles. The mountains to the north rise gently and those to the south rise rapidly from the creek valley.

The greatest relief is afforded by Canyon and South Creeks, transversing the trend of the formation.

GEOLOGY: Practically the whole area covered by the claims is underlain by rocks of the Yukon Series, consisting chiefly of schists with minor amounts of interbedded limestone and quartzite.

The general trend of the formation is to the northwest -- almost horizontal -- with a southwesterly dip varying from 15° to 30°. To the north of the area at an elevation of 5000 feet granodiorite is exposed, gently sloping to the southwest, and is part of the massive batholith in the area.

It is assumed from the physiography of the area that Rose Creek flows northwesterly in a fault trench. The impression is gained by the attitudes of the rocks along Canyon Creek and also by the non-conformity of the rocks where exposed on the north and south banks of Rose Creek itself.

MINERALIZATION: No evidence of mineralization was located during the course of the surveying and prospecting work.

DESCRIPTION OF ROCK TYPES:

(1) **SCHISTS:**

The schists vary greatly in texture and appearance from fine chloritic and sericitic schists to coarse, banded micaceous and graphitic types, also those having gneissic appearance.

(2) **LIMESTONE:**

The limestone, where noted, is altered and of the recrystallized variety.

(3) **QUARTZITES:**

The quartzites are generally fine grained, varying from sub-white to slightly brownish in colour. They are interbedded and show little or no great alteration along the contacts.

(4) **GRANODIORITE:**

The granodiorite is medium grained, grey in colour and composed of quartz feldspar, mica and hornblende.

The small dykes appearing on the VIN No. 3 and MILL No. 7 mineral claims are fine grained, grey to greenish in colour and tentatively classified as andesitic.

Although not separately mapped and believed to belong to the same series as the schists on the ANDY No. 8 mineral claim, there occurs an outcrop of fine grained granitic rock; the crystals therein are elongated and the contacts with the schists show little alteration.

A most vivid picture of the bedding of the area is shown in Canyon Creek, a small stream crosscutting the formation through the VIN Nos. 3 and 4 mineral claims. Here a series of rocks is exposed showing the granodiorite overlain by micaceous and graphitic schists interbedded with quartzite and cut by narrow andesite dykes.

(4)

CONCLUSION: Since the greater part of the four-square mile area is covered by overburden and from the lack of mineralization noted, any further work contemplated on these claims should embrace geophysical and geochemical methods.

Respectfully submitted,

H. M. Powell

H. Powell,
Mining Engineer.

Vancouver, B.C.
Nov. 19/54.
HP/hs.

EXPENSE SUMMARY

TO:- Transporting and maintaining a party of six men, which conducted a geological reconnaissance and mapping program over fifty-one (51) mineral claims in the Pally River Area, Y.T.

Crew: 6 men
Time: 46 days
No. of Claims: 51

LABOUR COSTS - Per Payroll Summaries:

1 Engineer in Charge @ \$18.00/day	\$ 828.00
2 Student Assistants @ \$10.00/day	920.00
2 Prospectors @ \$12.00/day	552.00
1 Horse Wrangler @ \$10.00/day	<u>460.00</u>

Total Payroll Costs: \$ 2,760.00

Workmen's Compensation (Insurance) @ 5% 138.00

FOOD COSTS - Northern Commercial Invoices:

Food Supplies averaged \$3.00/day/man 828.00
Total supplies cost (\$18.00 x 46)

TRANSPORTATION - Whitehorse Flying Services:

5 Plane Charters - 15 hours @ \$80.00 1,200.00

HORSE RENTALS - T. Connally, Ross River, Y.T.

Packing Supplies and Equipment -
2 horses @ \$6.00/day - 46 days 276.00

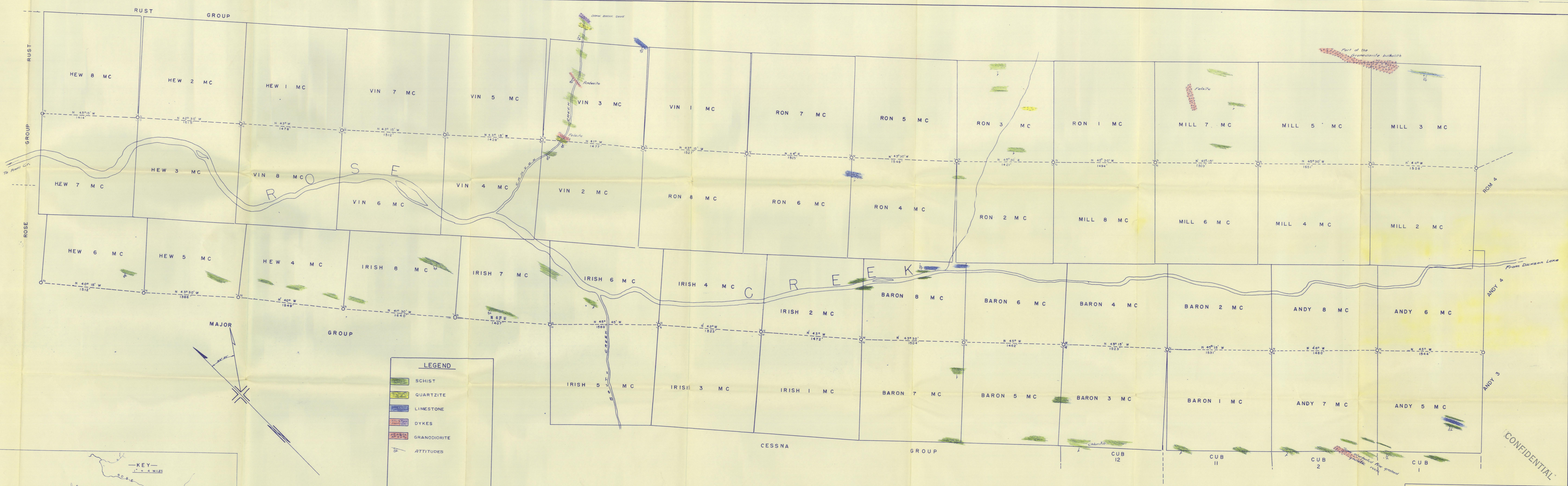
PREPARATION & PRINTING REPORT - Engineering Service 100.00

TOTAL EXPENSE: \$ 5,302.00

EXPENSE/CLAIM: \$ 103.96

CORRECT:


L. G. White.



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GEOLOGICAL PLAN
 ROSE CREEK CLAIMS
 PELLY RIVER DISTRICT
 — Y. T. —
 PELLY RIVER MINES LTD.
 SCALE 1" = 400' ENGINEER Powell
 Nov. 1952