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REPORT OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

RED, TAY AND TED GROUPS

SKEENA MINING DIVISION

By G. W. H. Norman, P. Eng.

For: GRANDUC MINES LIMITED (N.P.L.)

June - October 1960

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Figure 1: Outcrop Geology - Red, Tay and Ted Groups:
800 feet to the inch In folder

Figure 2: Magnetics - Part of Red, Tay and Ted Groups:
200 feet to the inch In folder

**Department of
Mines and Petroleum Resources
ASSESSMENT REPORT**

NO. 348 MAP

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INTRODUCTION

This report presents geological and geophysical (magnetic) data collected on the Red, Tay and Ted groups of claims in the Unuk River district of the Skeena Mining Division.

The claims were staked in May to cover a few scattered small magnetic anomalies located by airborne work in April along the valleys of Mitchell and Sulphurets Creeks. Work on the claims commenced in June after the snow had partly disappeared and was continued at intervals throughout the summer field season.

In the early part of the season work in the area was carried out from a base camp of pre-fab wooden buildings at the edge of the Granduc Mine landing strip at Granduc Mountain. A second base camp was set up on the Unuk River, between the mouths of the Sulphurets and South Unuk streams. This camp had an elevation of 750 feet above sea level, which was nearly 3,000 feet lower than the Granduc air strip. The Unuk River base camp was below cloud level most of the time and proved more satisfactory as a helicopter base.

The cost of using the helicopter worked out approximately at \$10.00 per man-day. The output of the party employed, which totalled approximately 20 men, was probably doubled by the use of the helicopter. The helicopter expense was therefore justifiable in terms of amount of work done in a short field season. However, it added considerably to the cost of performing work in a remote area such as the Unuk River district. The remoteness is due to a rugged terrain with numerous glaciers blocking access to the sea on the Canadian side and to the location of the Canadian-U.S. boundary across the natural route to the sea along the Unuk River valley. The district is without roads and the few trails and cable crossings that have been constructed do not remain serviceable without constant maintenance.

The work on the Red, Tay and Ted groups was carried out mostly from fly camps set up on the claims, utilizing the helicopter to freight in the camps, supplies and personnel. In order to keep map preparation, rock examination and the processing of results under control and supervision the personnel returned to base camp for $1\frac{1}{2}$ days each week.

LOCATION

The Red, Tay and Ted groups of claims lie ten miles east of the junction of Sulphurets Creek with Unuk River. The junction is 44 miles north-north-west of the town of Stewart at the head of the Portland Canal. The south-west and south-east corners of the claims lie about 3/4 mile and 3 miles respectively south-east of the toe of Sulphurets Glacier. The claims extend northward about 3½ miles from Sulphurets Glacier to about 1/2 mile north of Mitchell Glacier.

The accompanying plan, Figure 1, shows the location of the claims in relation to Sulphurets Glacier and the relative position of the Red, Tay and Ted claim groups.

WORK PERFORMED

General Statement: The personnel employed on the geological and geophysical investigations and mapping of the three claim groups were as follows:

D. R. S. Doal, Graduate, Haileybury School of Mines, Geophysicist (Several years field experience magnetic and E.M. surveys)	
Gordon Gutrath, B. Sc. 1960 U. B. C.,	Geologist
R. Kirkham, B. Sc. 1960 U. B. C.,	Geologist
J.H.Montgomery, M. Sc. 1960 U. B. C.,	Geologist
L. E. Iverson	Foreman
T. Wilkinson	Assistant
J. Brache	Assistant
W. Gauthier	Assistant
L. Meindl	Assistant

under the supervision of:

G. W. H. Norman, P. Eng., Chief Geologist and K. G. Sanders,
B.ASc., Toronto, Assistant Chief Geologist.

The work on the claims consisted of line cutting; magnetometer surveys; and geological surveys of the lines on 200 feet to the inch and mapping of the claims on aerial photographs, with scales ranging from 1/2-mile to the inch to 800 feet to the inch. Two men always worked together as a safety precaution. The results of this work are illustrated in Figures 1 and 2 in the folder at the end of the report.

Red Group: Work in the field on the Red Group started on June 8th and ended on September 13th. The work is divisible into 14 man-days of line cutting and picketing through low dense scrub; 14 man-days magnetometer work by geophysicist and assistant; 40 man-days geological mapping by geologist and assistant and 3 days of supervision.

Tay Group: Work in the field on the Tay Group commenced on June 15th and ended on September 13th. It may be divided into 13 man-days line-cutting; 11 man-days geophysical; 39 man-days geological and 5 days of supervision.

Ted Group: Work on the Ted Group started June 15th and ended on September 14th. It may be divided into 13 man-days line cutting; 11 man-days geophysical; 38 man-days geological and 4 days supervision.

GEOLOGICAL SURVEY

General Statement: The geology of the Red, Tay and Ted groups is shown on Figure 1. The map is made from detail work along the magnetometer lines and from traverses made using aerial photographs for locating outcrops and rock boundaries. The ground varies from about 2,000 to 5,500 feet above sea level. The highest part is the ridge between Mitchell and Sulphurets Glaciers, which remains partly snow-covered throughout the year. Scrub timber occurs at the lower elevations along the margins of the glaciers and makes dense thickets that are difficult to traverse. Bedrock is considerably covered by scrub, moraine and snow.

Rock Units: The surficial rocks of the area are a series of interbedded volcanic and sedimentary members that have been locally highly sheared and in part changed by alteration to aggregates of quartz, carbonate, sericite and chlorite. Alteration, shearing and steep tilting of the beds has made determination of the true order of superposition impossible locally. Failure to determine the true sequence of the rock units prevents a clear appraisal of the folding and faulting.

The sequence indicated on the accompanying figure, with argillites, greywacke and conglomerate as the youngest rocks and andesite flows and tuffs as the oldest, is believed to be correct. It is possible, however, that the unit

mapped as medium green and consisting of flows and tuffs may be a sheared altered equivalent of the red and green andesite breccia.

The surficial rocks are intruded by sheets of coarse feldspar porphyry that have been given the field designation of syenite and syenite porphyry and by medium grained diabase. It is considered probable that the two intrusives are of approximately the same age and related to one another as derivatives from a common source.

The youngest intrusives are dikes of fine grained diorite that may be more closely related to the Coast Range granodiorite than are the syenite diabase series.

Structure: The bedding attitudes and contacts shown on Figure 1 indicate a northerly trend with a convergence northward. The general outward dips, eastward on the east side and westward on the west side, suggest a somewhat broken anticline. There may be an unconformity below the sedimentary group colored brown on the map, or a fault.

Mineralization: Small amounts of pyrite, magnetite and chalcopyrite occur in the volcanic rocks of the claims, as disseminations.

MAGNETIC SURVEY

Magnetic work on the claim groups was confined to traverses on the north and south sides of Mitchell Glacier and to an area of picketed lines east of Sulphurets Glacier.

The results of the survey of the picket lines is given on Figure 2. The positions of the traverses along the Mitchell Glacier are shown on Figure 1. The readings taken along the line north of the glacier across claims Ray 1 and 2 did not vary from a constant background level and a profile of these values would be a straight line. The line run across claims Ray 7 and 8 did show a gradual rise to nearly 600 gammas, 700 feet west of the east end of the line on claim Ray 7, and then a gradual decline to the background level of this section of the district.

The readings were taken with an Askania Torsion type magnetometer, with a sensitivity of 266 gammas per degree. The degrees are divided into 10 divisions and the instrument can be read to 1/100th part of a degree. It has proved a valuable, light, instrument for mountain work.

A station was set up and read daily with the magnetometer at the base camp to correlate the readings throughout the district and to check diurnal variation. The magnetic values plotted on the contour plans are in

gammas relative to the base station as the selected datum. The value arbitrarily assigned to the base station was 2123 gammas, and the figures given on the plans were obtained by multiplying the instrument readings by 266 and subtracting 2123.

Interpretation: Both anomalous areas, (a)(Line 27E, Line 22E, Line 17E, Line 11W) and (b)(Base line 42+00 to 43+00, Line 32W), on Figure 2, line up parallel to the general strike of the rocks. Their alinement with the structure might indicate that they are merely due to greater amounts of magnetite present in certain formations than others. There are indications that magnetite has been introduced, but whether there is any correlation between introduced magnetite and other more valuable ore forming minerals such as chalcopyrite has not been demonstrated.

March 3, 1961


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G. W. H. Norman, P. Eng.

SUPPOSED GEOLOGY - RED, TAN, & TED ADAMS

DATE: 10/2/02
BY: TED ADAMS

SCALE: 1" = 1 MILE
NAD 83

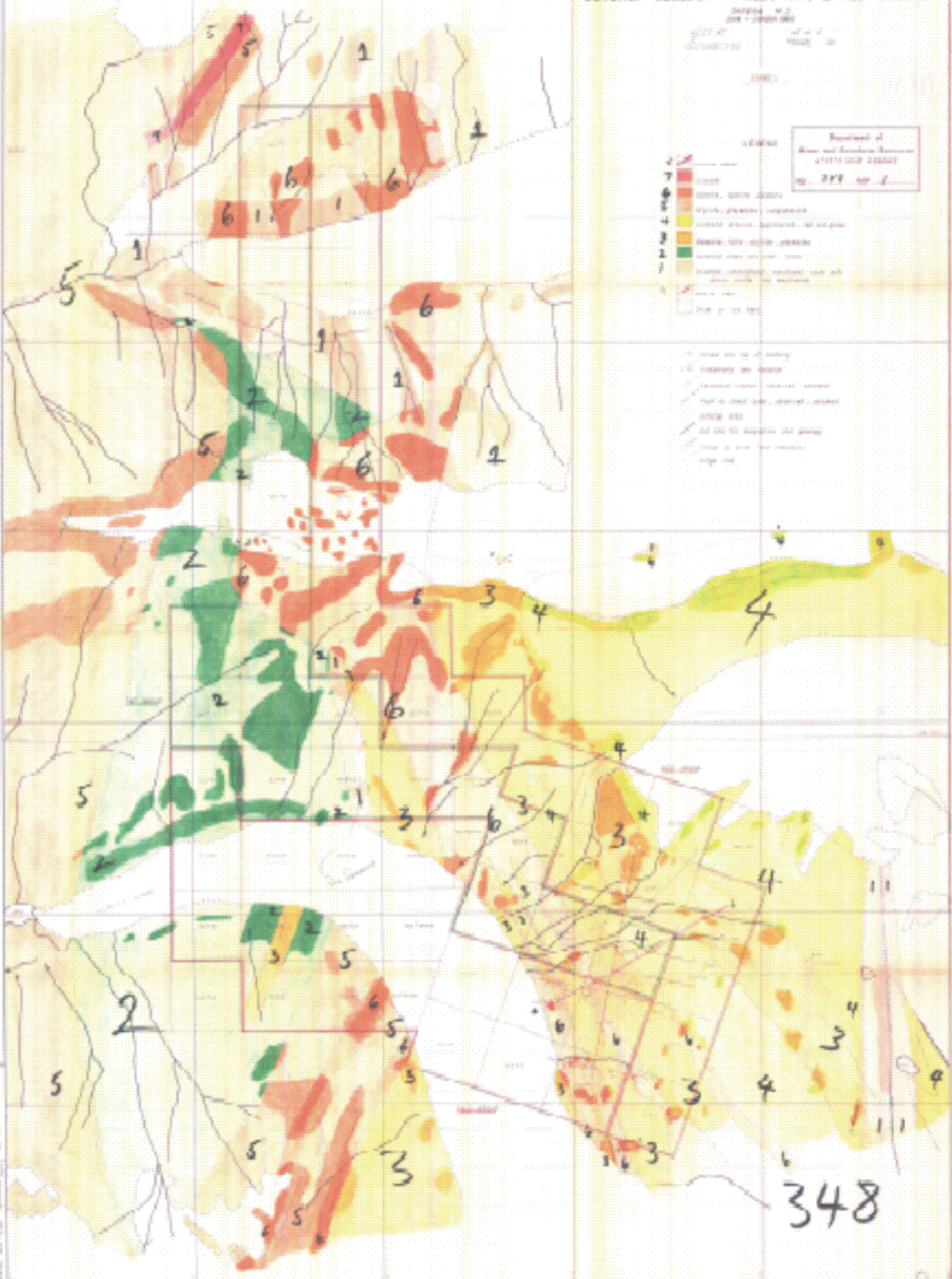
1982

LEGEND

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Natural Resources
Geological Survey
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- 7 Dark
- 6 Dark, light green
- 5 Light green, yellow
- 4 Yellow, brown, tan, grey
- 3 Brown, tan, light green
- 2 Green, tan, light green
- 1 Tan, brown, light green, grey

- 1000' contour
- 500' contour
- 100' contour
- 50' contour
- 20' contour
- 10' contour
- 5' contour
- 1' contour
- 0' contour



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Statement of
 Mineral and Petroleum Resources
 Assessment Report
 No. 348 Vol. 2

TED*10 M.G.

TED*10 M.G.

RED GROUP

TED*10 M.G.

TED*10 M.G.

TED*10 M.G.

TED*10 M.G.

TED*10 M.G.

BASE LINE
 NORTH 11° EAST

TED GROUP

TED*4 M.G.

TED*4 M.G.

TED*4 M.G.

TED*10 M.G.

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TED*10 M.G.

TAY GROUP

L. 52

GROUND MAP DATUM: 1957 AT BASE CAMP, 10 KILOM. N. OF LINDA RIVER

GRANDIC MINES LTD. 2000 SUITE 100-100-100	TAY, W. TED GROUPS 2000 SUITE 100-100-100
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