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The Granby Consolidated M. S. & P. Co. Ltd.

Geophysical Investigation

of 25 Claims of

The K.M. Group of Mineral Claims

Located about 2 miles north-east of

Aspen Grove Post Office, B.C.

in Nicola M. D.

49° - 120° NW.

By Keith C. Fahrni, P.Eng.

September to November
1958

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INTRODUCTION

During September and October of 1958 a magnetometer survey was made of a block of ground known in this report as the Tule Lake area. This block of ground comprises about 900 acres.

The Tule Lake Area lies on either side and to the north of Tule Lake, a small lake located about $2\frac{1}{2}$ miles north easterly from Aspen Grove Post Office in Nicola Mining Division. Latitude is about $49^{\circ} 58'N$, longitude $120^{\circ} 35'W$.

The area is covered by Canadian Geological Survey Map No. 888A Princeton, and reference should be made to this sheet for the table of geological formations referred to in the report.

The area is entirely covered by located mineral claims. These are tabulated in the schedule of claims. An understanding was arrived at with other claim owners authorizing the extension of the survey onto their ground and applications for certificates of work for them.

The purpose of this report is to present evidence of expenditure and of work accomplished in making the geophysical survey to form a basis for Application for Certificates of Work on the twenty-five claims listed in the attached schedule of claims.

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SCHEDULE OF CLAIMS

<u>Claim Name</u>	<u>Record No.</u>	<u>Tag No.</u>	<u>Due Date</u>	<u>Locator</u>
KM - 13	6738	297963	April 8, 1959.	H.W. Day
14	6739	297964	"	"
15	6740	297965	"	"
16	6741	297966	"	"
17	6742	297967	"	"
18	6743	297968	"	"
19	6744	297969	"	"
20	6745	297970	"	"
KM - 21	9327	297321	September 26, 1959.	L.T. Kirby
22 Fr.	9328	297322	"	"
23 Fr.	9329	297323	"	"
24 Fr.	9330	297324	"	"
25 Fr.	9331	297320	"	"
Kay 35	6792	266835	April 8, 1959.	A.J. Smith
36	6793	266836	"	"
38	6795	266838	"	"
40	6797	266840	"	"
Mike 1	1940	B48247	June 18, 1963.	Michael Hretchka
Chalco 1	1475	B46389	September 22, 1962.	Olaf. Gulliksen
Chalco 2	1476	B46390	"	" "
Chalco 3	1477	B46391	"	" "
AB - 1	1058			
AB - 2	1059			
Hill - 1	5593	266001	January 20, 1959.	A.J. Arland
Hill - 2	5594	266002	"	"

COST STATEMENT

The following statement shows costs of a geophysical survey carried out by magnetometer over the KM group of claims and some adjoining ground in Aspen Grove area of Nicola Mining Division by Granby Company crews during the months of September and October of 1958. Calculations are based on figures taken from the duly audited records of the company which are available at Allenby, B.C.

Costs as calculated are based on the daily pay rate for men who worked on the job with limitations on the pay of professional and technical men as required in the Mining Act.

Only those operating costs directly chargeable to the job are included and no indirect costs such as proportions of office expense, motor vehicle depreciation and insurance are included.

Schedule of Labour on KM Group

<u>Name</u>	<u>Job</u>	<u>Days</u>	<u>Actual or Allowed Rate</u>	<u>Total</u>
Archibald	T. Surveyor	9	14.00	126.00
Bradley	B. Helper	6	13.12	78.72
Colin	P. Helper	29	13.12	380.48
Cook	B. Helper	15	13.12	196.80
Gould	S. Helper	15	13.12	196.80
Jamieson	R. Helper	5	13.12	65.60
McCallum	J. Helper	4	13.12	52.48
Murdock	J. Leadman	8	14.00	112.00
Schutz	J. Leadman	35 1/2	14.00	497.00
	Sub Total:	126 1/2		1,705.90
Fahrni	K.C. Supervision	6	35.00	210.00
Day	H.W. Draughtsman	23	15.00	345.00
Kirby	L.T. Surveyor	6	15.00	90.00
	Sub Total:	35		645.00
	Total:	161 1/2		\$2,350.88

Labour Distribution to Different Jobs on KM Group

Surveying and Line Cutting:

Surveyor	6	shifts at 15.00 =	90.00	
Surveyor	9	shifts at 14.00 =	126.00	
Helpers	30	shifts at 13.12 =	<u>393.60</u>	609.60

Magnetic Survey:

Leadmen	43 1/2	shifts at 14.00 =	609.00	
Helpers	44	shifts at 13.12 =	<u>577.28</u>	1,186.28

Calculations and Draughting:

Draughtsman	23	shifts at 15.00 =	<u>345.00</u>	345.00
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Supervision:

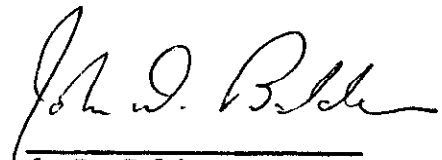
Chief Geologist	6	shifts at 35.00 =	<u>210.00</u>	210.00
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Total \$2,350.88

Summary of Total Costs for KM Group (25 Claims)

Wages and Salaries as per schedule	\$2,350.88
Supplies and miscellaneous including motor vehicle operating costs	<u>155.54</u>
Total:	<u><u>\$2,506.42</u></u>

I hereby certify that the above is a true and correct statement of costs assignable to geophysical surveys carried out on the KM Group of Mineral Claims described in the attached report.



J. D. Balden,
Office Manager.

THE CHANDY CONSOLIDATED M.S. & P. CO. LTD.
ALLENSBY, B. C.

GEOPHYSICAL SURVEY

General Data:

The area covered by the K.M. Group (as confined by the geophysical work) lies in the flat and gently broken country south of the head of Logans Creek, extending roughly from Highway No. 5 on the west to the hills east of Tule Lake. The region is generally covered with light timber, with occasional open, grassy slopes being used as cattle range.

Outcrop is not abundant, being largely restricted to the bluffs and ridges in the central portion of the area.

The Nicola volcanics are the oldest and most extensive rocks exposed, while the Kingsvale volcanics and sediments appear on the west shore of Tule Lake. These are separated from the Nicola series by what appears to be a through-running north-south fault. A zone of complex dioritic intrusion follows a north-north-west direction, breaking away from the Tule Lake fault to the north.

The relation of the diorite - granodiorite - pyroxenite complex has not been proven. It seems likely that the pyroxenite occurs as dykes and lenses in the diorite as to date none has been found in the Nicola rocks.

Station Control:

A transit and stadia survey net work has been established over the area to locate mineral claims and geology with respect to land lots and physical features. This survey includes a north-running base line which forms the bases of the grid system used for magnetometer control. The grid

is based upon a compass bearing which was apparently in a magnetically *parallel!*
disturbed area, for according to land lot lines, grid north is about five and
three quarter degrees west of astronomic north.

The base line is well flaged and cut out while the cross-section
lines, established by pacing and compass, are marked only by pickets and red
flagging tape tied to branches. Pickets on the ground denote each grid
intersection and are numbered according to the rectangular coordinate system.

MAGNETOMETER SURVEY METHOD

Instrument:

The magnetometer survey was run with a "Radar" magnetometer
manufactured by Eastern Geophysics Limited, 69 Kipling Ave. South, Toronto.
The serial number of this instrument is No. 94, and is rated by the
manufacturer at 25.5 gammas per scale division.

Control:

The base line was run as a closed and balanced traverse of less
than two hours duration, and was referred to a control base station at Allenby
with an assumed value of 5000 gammas. Since no precise tie has been made
with any government base stations, all values must be considered as relative
gamma values.

Method:

Magnetometer readings were made at 200 ft. intervals over the entire area and at 100 ft. intervals over areas of irregularity. All readings were adjusted into balanced loops before values were plotted.

Results:

1. The greater part of the survey area is known to be underlain by rocks belonging to the Nicola Volcanic series. These are represented by magnetometer readings ranging about 5000 gammas and shown in yellow on the map.

2. A north south trending band of diorite is indicated by a few scattered outcrops. This rock is represented on the magnetic map by values of 6000 gammas or better and its general outline is indicated by sections of the map coloured orange.

3. Within the diorite is an irregular mass of quartz diorite which is of appreciably lower magnetic value than the diorite or nicola rocks. Around coordinate 16,000 N, 9000 E this rock is exposed in outcrop. On a basis of similar values, a second dyke-like band can be inferred across the north-east corner of the area mapped.

*Shown as
quartz diorite
(at least)
& outlined by diorite
on accompanying map*

4. Several areas of magnetic highs lie along a north-south line in the diorite. The strongest of these, beside Tule Lake, has at time of writing been checked by tractor stripping since no outcrop occurred. The high values are apparently due to high magnetite content as nodules and blebs in a serpentine zone along or close to a major fault. The serpentine apparently represents lenses and more irregular injections of ultra basic rock

which have been changed to serpentine by hydrothermal action where close to the fault. These anomalous high values occur in three areas. The southern, by Tule Lake, already described has been tested. The central area at latitude coordinate 16,600 is found to correspond on the ground with an area of ultra basic dyke intrusion with a little pyrite and considerable magnetite. Neither of these has more than occasional traces of copper minerals. The northern anomalous area is only partly defined by readings being on the edge of the map area. No outcrop or testing indicates its geological character.

5. On the west shore of Tule Lake, outcrop indicates a series of rusty reddish sedimentary rocks which have been correlated with the Kingsvale Series of sediments described by Rice and others of the Canadian Geological Survey in regional reports. This series corresponds with an area of magnetic lows on the magnetometer map.

The magnetic profile across this area shows a sharp drop from a relative gamma level of 6000 and higher in the diorite to around 3000 gammas. This suggests a considerable thickness of sediments and with the dip indicated would require the presence of a fault with an appreciable downthrow on the east side. Assuming these sediments to be Kingsvale, of early tertiary age and younger than the mineralizing epoch, this fault would only act to displace potential ore areas and would not likely have mineralization related to its late movement. The Kingsvale rocks thin out to the north and south along this fault. Gamma values resemble the quartz diorite values and care should be used in interpretation.

or Sediments?

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CONCLUSIONS

Magnetic work on the KM Group is very useful in outlining geological formations but to date has not directly indicated any magnetic mineral deposits of economic value.

RECOMMENDATIONS

1. It is recommended that the magnetic survey be continued to the north where structures and formations extend as a preliminary to work by other geophysical methods or by stripping or drilling.

2. It is recommended that boundaries of the diorite body indicated by the survey be carefully prospected by ground methods where rock outcrop occurs and by geochemical methods where outcrop is absent to check the possibility of presence of copper ore bodies along that line.

SCHEDULE OF MAPS

The following maps are part of this report.

1. Key Map of British Columbia.
2. Key Map of Aspen Grove Area.
3. Tule Lake Area Claims and Geology. (in pocket)
4. Tule Lake Area Magnetometer. (in pocket)
5. Tule Lake Area Magnetometer Profiles. (in pocket)

Report respectfully submitted,



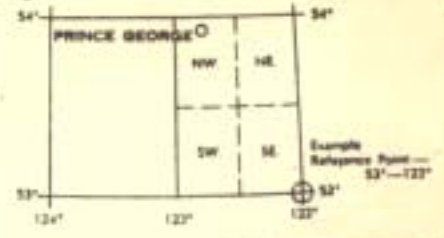
Keith C. Fahrni, B.A.Sc.
Professional Engineer in B.C.
Chief Geologist.

LAND DISTRICTS OF BRITISH COLUMBIA



EXPLANATION OF QUAD. INDEXING SYSTEM

The geographical indexing system used in this Gazetteer makes it applicable to all maps showing lines of latitude and longitude. Each geographical quadrilateral of the earth's surface of 1 degree in extent in latitude and longitude is divided into the SE, SW, NE, and NW quarters. The south-east corner of each quadrilateral gives the initial point for the figures of reference.



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#11
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MAP

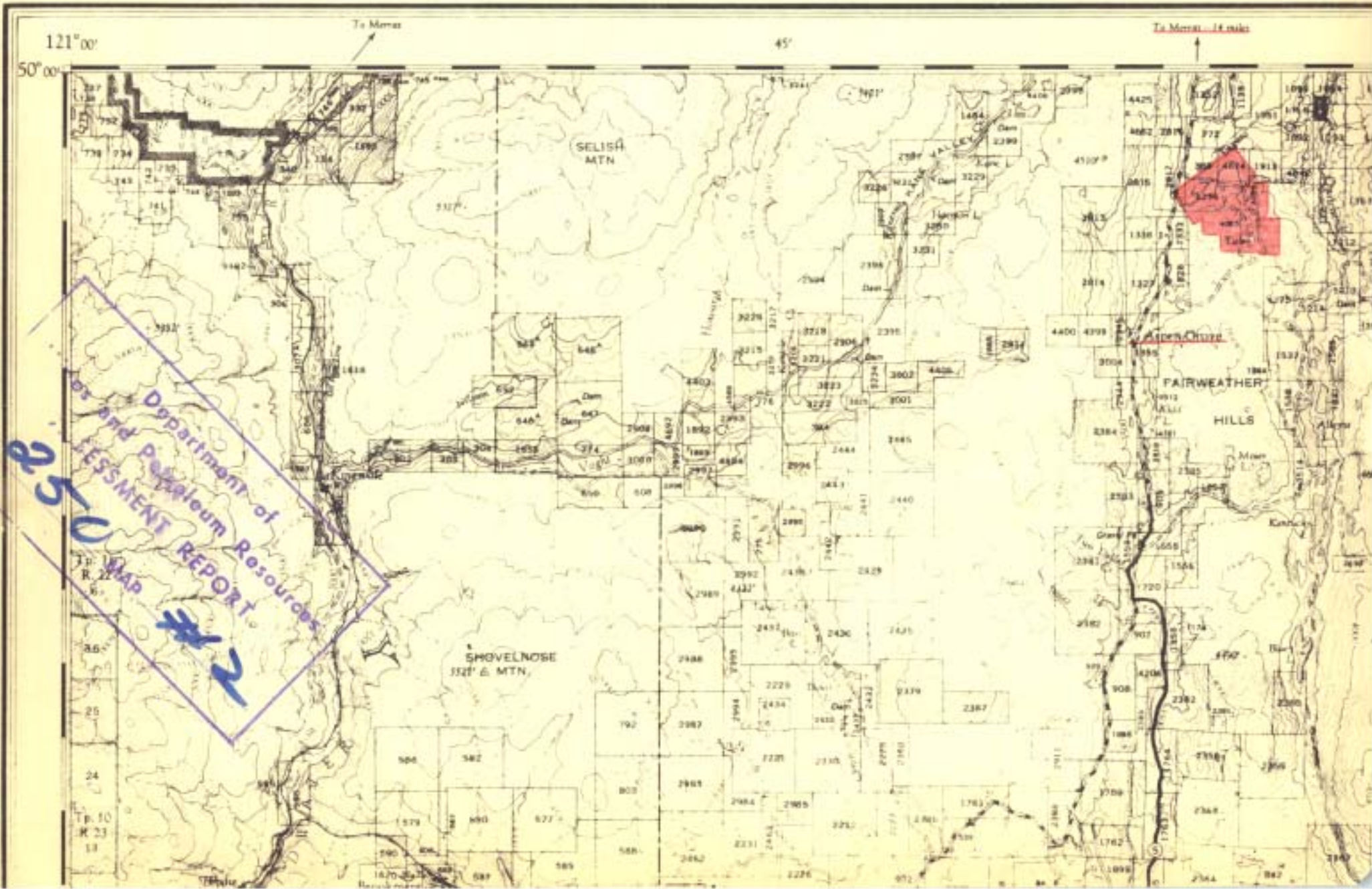
NOTE:
For Land Districts on Southern Vancouver
Island, see Provincial Map 2-A.
KEY MAP OF B.C.

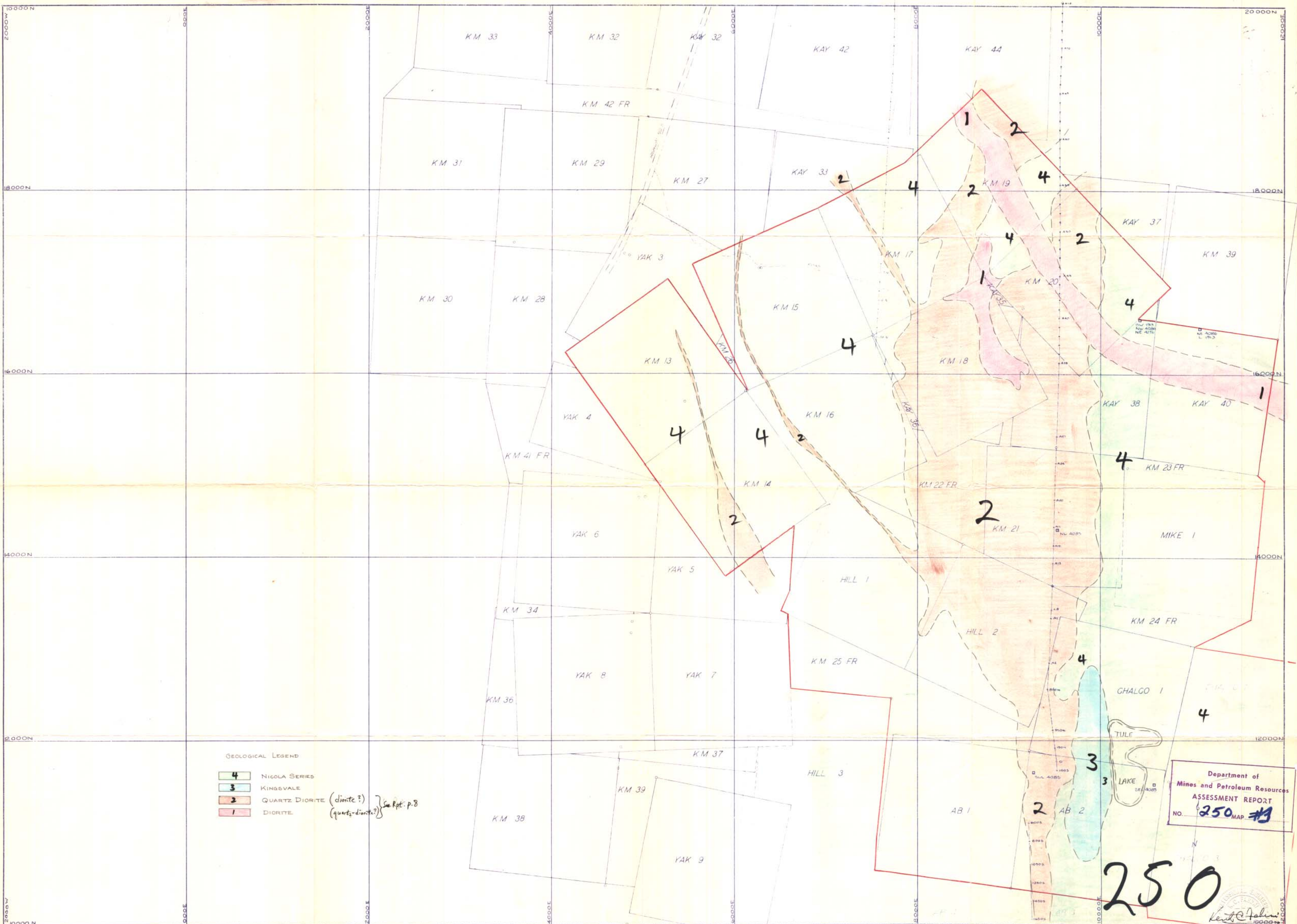
KEY MAP OF ASPEN GROVE AREA.

1 Inch to 2 Miles

DEP

NATIONAL TOPOGRAPHIC SERIES





GEOLOGICAL LEGEND
 4 NICOLA SERIES
 3 KINGVALE
 2 QUARTZ DIORITE (diorite?)
 1 DIORITE

(quartz-diorite?) See Rpt. p. 8

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 250 MAP #19

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GRANBY CONS. M.S. & P.CO. LTD.
 COPPER MOUNTAIN, B.C.
 TITLE CLAIM SURVEY TULE LAKE AREA
 SCALE 1 INCH = 400 FEET
 ELEV. No.
 Sept & Nov. 1958
 267.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **250** MAP **#4**

LEGEND

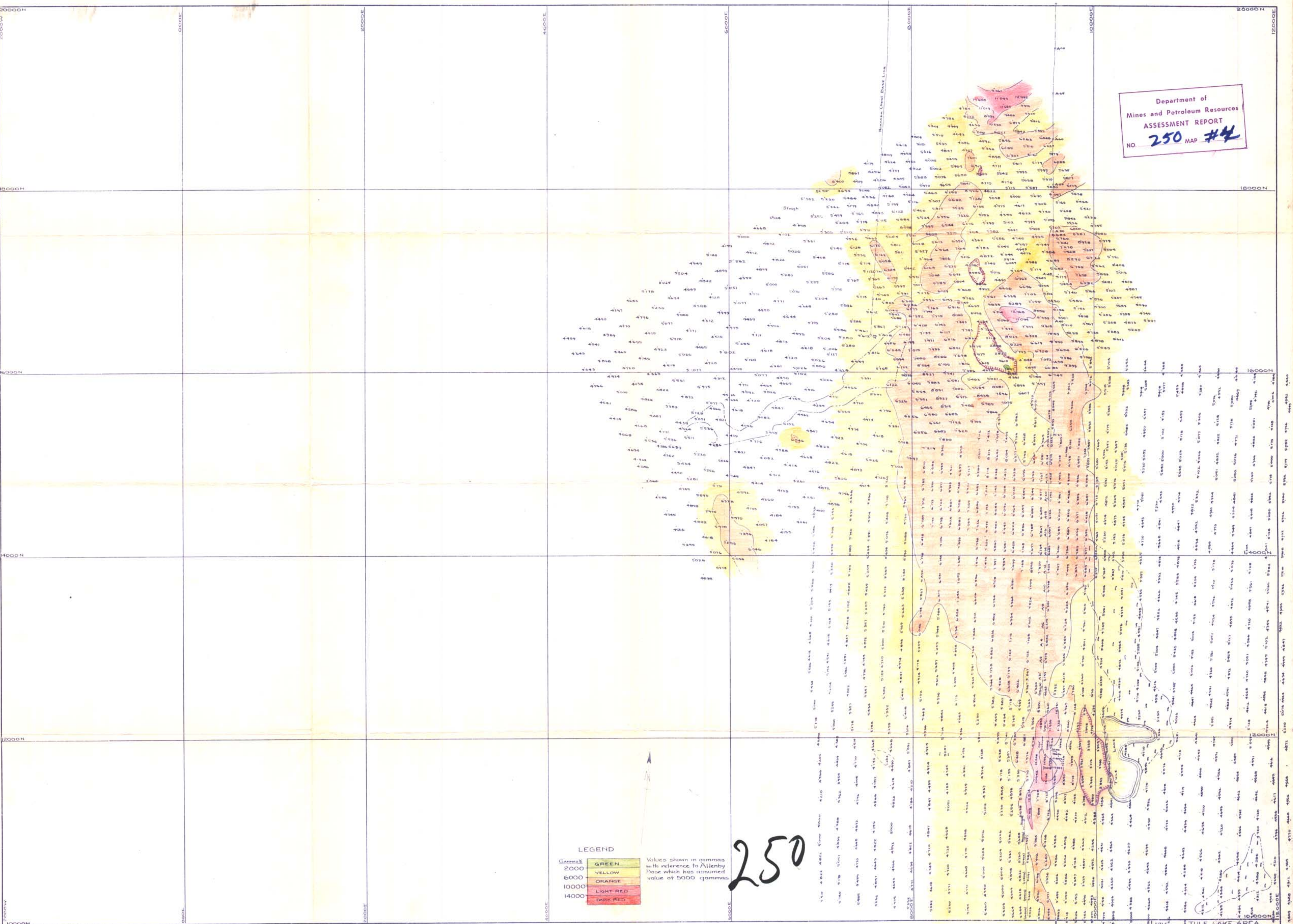
Gamma	GREEN
2000	YELLOW
6000	ORANGE
10000	LIGHT RED
14000	DARK RED

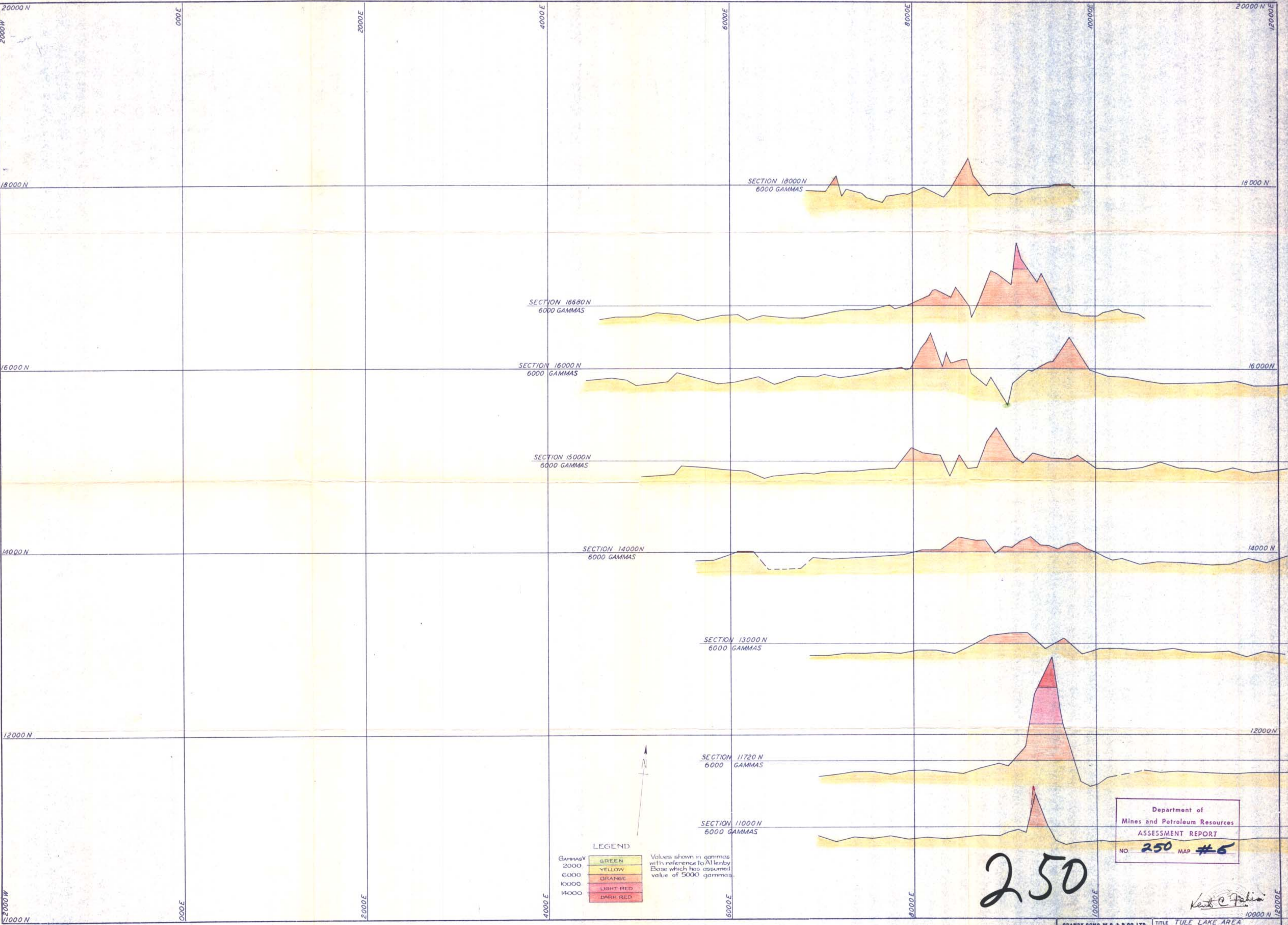
Values shown in gammas with reference to Allenby Pass which has assumed value of 5000 gammas

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GRANBY CONS. M.S. & P. CO. LTD.
COPPER MOUNTAIN, B.C.
TITLE: TULE LAKE AREA MAGNETOMETER
ELEV. NO. 10000
SCALE 1 INCH = 400 FEET

Keith C. Johnson
Sept 27 Nov. 1958. 1007.





LEGEND

2000	GREEN
6000	YELLOW
10000	ORANGE
14000	LIGHT RED
18000	DARK RED

Values shown in gammas with reference to Allenby Base which has assumed value of 5000 gammas.

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NO. 250 MAP #5