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

Geophysical Investigation

of 14 claims known as

The Dee Mineral Claims

Located about 9 miles south of

Princeton, B.C.

In Similkameen M.D.

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49° 120° SW

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by Keith C. Fahrni, P. Eng.

August, 1958 to March, 1959

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INTRODUCTION

On April 3rd, 1958 the Dee Mineral Claims were located on Kennedy Mountain about one mile west of the Hope-Princeton Highway and nine miles south of Princeton, in the Similkameen Mining Division of B.C. An area of some 685 acres was covered in the vicinity of Kennedy Lake, at approximately  $49^{\circ} 21'$  latitude and  $120^{\circ} 35'$  longitude.

The 14 claims were staked by H.W. Day and J. Murdock and were subsequently transferred by Bill of Sale to the Granby Company.

A grid survey and the necessary line cutting was carried out in the early fall of 1958 and the magnetometer survey was conducted over all claims during the winter of 1958 and 1959.

The following report covers all work done on the 14 claims and provides evidence of expenditure mandatory for acceptance of the report as assessment work.

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SCHEDULE OF CLAIMS COVERED BY REPORT

The total area covered by the 14 claims listed below is approximately 685 acres as determined by outlines shown on maps attached to the report.

<u>Claim</u>	<u>Tag No.</u>	<u>Located</u>	<u>Recorded</u>	<u>Record No</u>	<u>Locator</u>	<u>F.M.C. No</u>
Dee #1	297341	April 3, 1958	April 8, 1958	7368	J. Murdock	72778-F
Dee 2	297342	"	"	7369	"	"
Dee 3	297343	"	"	7370	"	"
Dee 4	297344	"	"	7371	"	"
Dee 5	297345	"	"	7372	"	"
Dee 6	297346	"	"	7373	"	"
Dee 7	297347	"	"	7374	"	"
Dee 8	297348	"	"	7375	"	"
Dee 9	297349	"	"	7362	H.W. Day	72776-F
Dee 10	297350	"	"	7363	"	"
Dee 11	297351	"	"	7364	"	"
Dee 12	297352	"	"	7365	"	"
Dee 13	297353	"	"	7366	"	"
Dee 14	297354	"	"	7367	"	"

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COST STATEMENT

The following costs for geophysical work done on this property have been taken from the audited cost records in the Granby Office at Allenby. All costs have been based on the base rate of pay for men involved with limitations in pay for technical and professional men as required by the Mining Act. No allowance has been made for overtime pay or holiday pay actually earned by the men under requirements of the B.C. Labour Act.

The motor vehicle operating costs are those directly chargeable to the Dee Group.

No indirect costs such as proportions of the Allenby Office expense, motor vehicle depreciation or insurance are included in costs as shown.

Schedule of Labour on Dee 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
Colin	P. Helper	4	13.12	52.48
Cook	B. Helper	6	13.12	78.72
Gould	S. Helper	6	13.12	78.72
Jamieson	R. Helper	18	14.00	252.00
Mullin	J. Helper	1	14.00	14.00
Murdock	J. Leadman	21	14.00	294.00
Schutz	J. Leadman	<u>2</u>	14.00	<u>28.00</u>
	Sub Total:	67		923.92
Fahrni	K. Chief Geologist	5	35.00	175.00
Day	H. Draughtsman	8	15.00	120.00
Kirby	L. Surveyor	4	15.00	60.00
Laird	A. Technician	<u>6</u>	15.00	<u>90.00</u>
	Sub Total:	23		445.00
	Total:	90		\$1,368.92

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Labour Distribution to Different Jobs on Dee Group

Grid Survey and Line Cutting

Surveyor	5 shifts at 14.00 =	70.00	
Surveyor	1 shift at 15.00 =	15.00	
Helpers	12 shifts at 13.12 =	157.44	
Helpers	5 shifts at 14.00 =	<u>70.00</u>	
			312.44

Magnetometer Survey

Leadman	21 shifts at 14.00 =	294.00	
Helper	16 shifts at 14.00 =	224.00	
Helper	4 shifts at 13.12 =	<u>52.48</u>	
			570.48

Calculations and Draughting

Surveyor	4 shifts at 14.00 =	56.00	
Surveyor	3 shifts at 15.00 =	45.00	
Technician	14 shifts at 15.00 =	<u>210.00</u>	
			311.00

Supervision

Chief Geologist	5 shifts at 35.00 =	<u>175.00</u>	
			175.00

Total: \$1,368.92

Other Charges


During the survey a series of direct charges, under the heading of supplies, have been accumulated totalling \$60.59. This includes engineering and surveying supplies, such as, flagging tape, pickets, and field books, as well as some motor vehicle operating costs.

Summary of Total Costs for Dee Group - 14 claims

Wages and Salaries as per Schedule	\$1,368.92
Other Charges	<u>60.59</u>
Total:	\$1,429.51

Certification

I hereby certify that the above is a true and correct statement of direct costs assignable to the geophysical survey carried out on the Dee Group of Mineral Claims described in this report.

  
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J.P. Balden,  
Office Manager.

THE GRANDY CONSOLIDATED N. S. & P. CO. LTD.  
ALLENBY, B. C.



GEOPHYSICAL SURVEY

General Details

The Dee Group covers a portion of the flat and gently broken summit of Kennedy Mountain between the Hope-Princeton Highway on the east, Wipsaw Creek on the North-west, and Friday Mountain on the south. The land is moderately timbered with small sloughs lying in the shallow depressions and several deep coulees cutting the ridges and dropping down to Whipsaw Creek and the Similkameen River. Kennedy Lake, the adjacent hay fields, and a small cabin camp all lie within the claim area.

Access is by a side road which leaves the Hope-Princeton Highway 15 miles south of Princeton at the site of the old Tupper's Mill. This road runs through the claim area and can be followed to the extreme north end of the group.

Overburden is generally not deep and outcrop can be found on the flanks of the ridges and on the sides of some of the draws and coulees.

According to Map 888-A which accompanies G.S.C. Memoir No. 243 by H.M.A. Rice, the area is mainly underlain by Nicola volcanic rocks while the Lost Horse intrusions appear on the eastern slopes of the mountain. Several mineral showings in the region have been exposed by trenching and the possibility of finding commercial copper values in this locality are considered good.

Grid Layout

Base lines were surveyed west along the east-west location line of Dee 1 - 8 Mineral Claims, and north along the north-south location line of

Dee 9 - 14 Mineral Claims. Two connecting legs were run from the south end of the north-south base line to the quarter points on the east-west base line, thus providing a central closed and balanced transit loop with three open legs running east, west, and north.

A grid system was laid out parallel to astronomic north with co-ordinates 10,000 E - 10,000 N arbitrarily established near the initial posts of Dee 1 and 2 Mineral Claims. Short pickets were placed at 200 foot intervals along the base lines to identify the grid line - base line intersections.

#### Instruments

The magnetometer survey was run with a "Radar" magnetometer manufactured by Eastern Geophysics Limited, 69 Kipling Ave. South, Toronto, Ont. This particular instrument has a sensitivity of 25.5 gammas per scale division.

A check traverse was also made using a "Sharpe" Model A-2 vertical force magnetometer, manufactured by Sharpe Instruments Limited, 6080 Yonge Street, Willowdale (Toronto), Canada. This instrument is designed to eliminate errors due to the influence of the compass, and automatically compensates for small to moderate temperature changes. The sensitivity is 20.0 gammas per scale division.

#### Control

The base lines were run in as closed and balanced traverses of less than two hours duration and are referred to a control base station

near the highway. This in turn was referred to a base station near Allenby which is assumed to have the value of 5,000 gammas.

No tie-in with any known government established base station has been made so values shown must be considered as relative gamma values.

#### Method

Loops were run from the base lines to the boundaries of the property with magnetometer readings taken at the intersections of the 200 foot grid lines. Since much of the work was done over deep snow, no pickets were placed in the ground, but the exact location of each reading was marked by a strip of orange or red marking ribbon on an adjacent tree or bush.

Barometer elevations were recorded to indicate topography, and the time of each reading was noted to provide a basis for balancing closure errors.

#### Calculations

The method of keeping notes in the field, and of reducing these from time and divisions to gammas in corrected and balanced loops, is illustrated by the following example. This is a transcript of pages 46 and 47 in note book No. 37 -

<u>Line</u>	<u>Sta.</u>	<u>Time</u>	<u>Alt.</u>	<u>Mag.</u>	<u>Corr'n</u>	<u>Corr'd Mag.</u>	<u>Diff.</u>	<u>Gammas</u>	<u>Remarks</u>
6200E	10190N	12:50	3775	894	0	894	0	5127	Base point
	10000N	12:54	3775	896	0	896	+2	5178	
	9800N	12:59	3775	894	0	894	0	5127	In middle of dry lake
	9600N	13:02	3775	892	+1	893	-1	5102	
	9400N	13:06	3750	895	+1	896	+2	5178	
	9200N	13:10	3750	889	+1	890	-4	5026	
	9000N	13:16	3775	887	+1	888	-6	4974	
	8800N	13:19	3800	894	+2	896	+2	5178	
	8600N	13:27	3800	889	+2	891	-3	5051	
6000E	8600N	13:30	3800	893	+2	895	+1	5153	
	8800N	13:34	3800	892	+2	894	0	5127	
	9000N	13:37	3800	894	+3	897	+3	5204	
	9200N	13:41	3800	896	+3	899	+5	5255	
	9400N	13:46	3800	898	+3	901	+7	5306	
	9600N	13:50	3800	894	+3	897	+3	5204	
	9800N	13:54	3800	891	+4	895	+1	5153	
	10000N	13:58	3800	893	+4	897	+3	5204	
	10170N	14:02	3800	892	+4	896	+2	5178	Base point

The gamma values are those plotted on the  
attached map.

### Mapping

The volcanic rocks of the Nicola series, which underlies the greater part of the area being mapped, has varying magnetic properties from place to place. The values plotted are contoured on 1000 gamma intervals, considering that this degree of definition would smooth out irregularities due to variations of rock composition but would show up any appreciable body of hydrothermal or contact metamorphic replacement magnetite which might be valuable in themselves as iron ore, or which might be associated with valuable deposits of ores of copper and other metals.

### Summary

The area being mapped by magnetometer was previously covered by reconnaissance geology. Where outcrop permits the magnetic survey is tied into the geological map. A number of small copper showings occur in the area, almost without exception these are areas of brecciation developed at the contacts of early porphyry dykes cutting Nicola series rocks where they are transected by minor east-west fractures. None shows indications of mineable size. The felspar porphyry dykes themselves are seldom over 25 feet in width and would not be shown on the 200 foot grid pattern of the map if a magnetic difference were proven. These dykes have a regional trend of from N 25 E to N 50 E. There is some indication of the presence of late felsite dykes in the area. Their trend is north-south. They should be appreciably lower than the volcanics in magnetic level but no tests have been made and their trend is so close to that of the regional Nicola Volcanics that indications may be obscured by variations in the volcanics. The Nicola series rocks have a trend of from N 10 E to N 15 E

with dips to west of from 25 degrees to 55 degrees. These rocks are exposed in the northern part of the claims, but practically no outcrop occurs in the southern part.

Stereoscopic study of air photos indicates several well defined trends which are also considered in the interpretation of the magnetic results.

### Results of Survey

The east-west profiles of magnetic values suggest quite regular regional trends for the bedrock formations. This trend corresponds closely with known strike directions of the Nicola Volcanics in the northern part of the map area. A slight asymmetry verifies the western dip.

Across the southern border of Dee 9 and Dee 10 claims an east-west zone of slightly higher but constant value suggests a cross-cutting formation of some kind. This is probably a dyke with uniform but slight magnetite mineralization.

To the south of this line, magnetic values again vary in a way to suggest north-south structures, but levels are slightly higher and there is a definite displacement of lines of magnetic change which can be correlated with structure of the Nicola Volcanics in the northern section. In this section, on the east side, new and more magnetic rocks are indicated.

### Conclusions

1. No indication was obtained of any body of magnetic mineral of appreciable size which might in itself constitute ore, or which might have associations of valuable minerals.
2. The map area is entirely underlain by rocks of the Nicola Volcanic series in a regularly trending westerly dipping sequence. The strike is from 10 to 15 degrees east of north.
3. A dyke, probably of medium basic composition from 200 to 300 feet in width, follows a fault which crosscuts the Nicola Series rocks and offsets them about 500 feet in a right-hand direction. This structure strikes east-west, close to the southern border of Dee 9 and Dee 10 claims almost following along coordinate 12,100 N of the map sheet. The dip of the formation is close to vertical.

### Recommendations

It is recommended that the geophysical survey on the Dee claims be continued. The electromagnetic apparatus may be useful in further determining the character of the fault. It may locate conducting sulphide bodies within it if such exist within range of the instrument.

Further magnetic detail to the east of the group should be done. Some outcrop occurs in this direction and geology would be further clarified by direct correlation of the magnetic results with the surface rocks.

SCHEDULE OF MAPS

Maps which accompany this report are bound in the following appendix or enclosed in the pocket inside the back cover. The list is as follows:

- #1. Key Map of British Columbia showing area.
- #2. Key Map of Princeton District showing Dee claims.
- #3. Dee Group Magnetometer map showing corrected magnetic intensity values.  
(Scale: 1 inch to 400 feet - in pocket)
- #4. Dee Claims showing magnetic profiles and indicated geological trends.

Report respectfully submitted,

*Keith C. Fahrni*

Keith C. Fahrni, P. Eng.  
Chief Geologist,  
The Granby Cons. M.S. & P.Co.Ltd.

March 21st, 1959

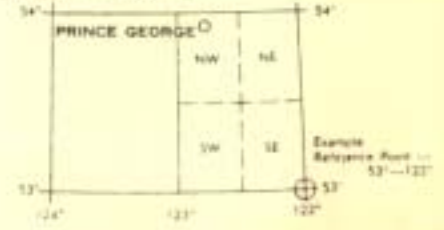


OF  
BRITISH COLUMBIA



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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 Mines and Petroleum  
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 MAP #1

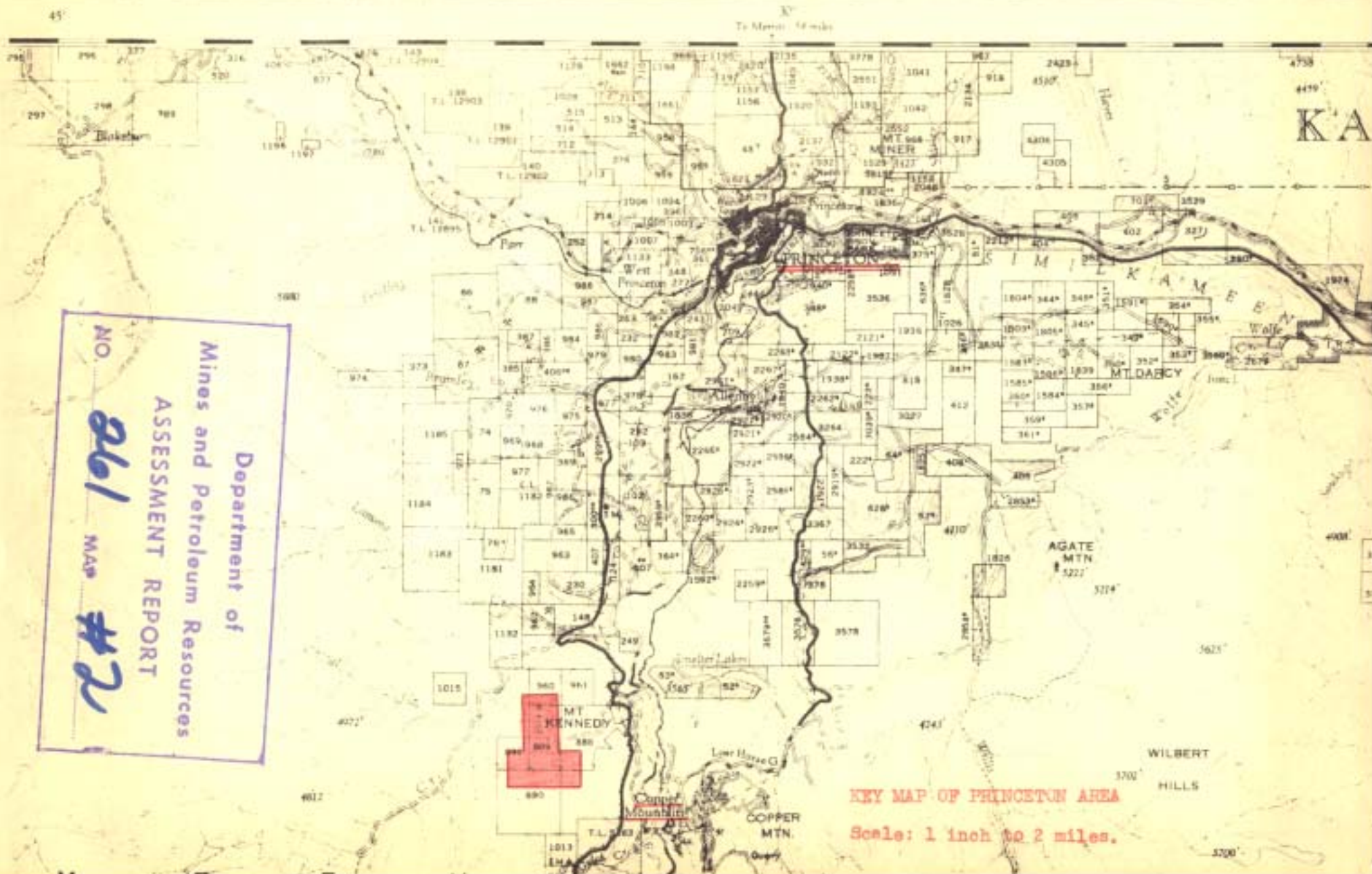
NOTE  
For Land Districts on Southern Vancouver Island see Provincial Map 2-A

**KEY MAP OF B.C.**



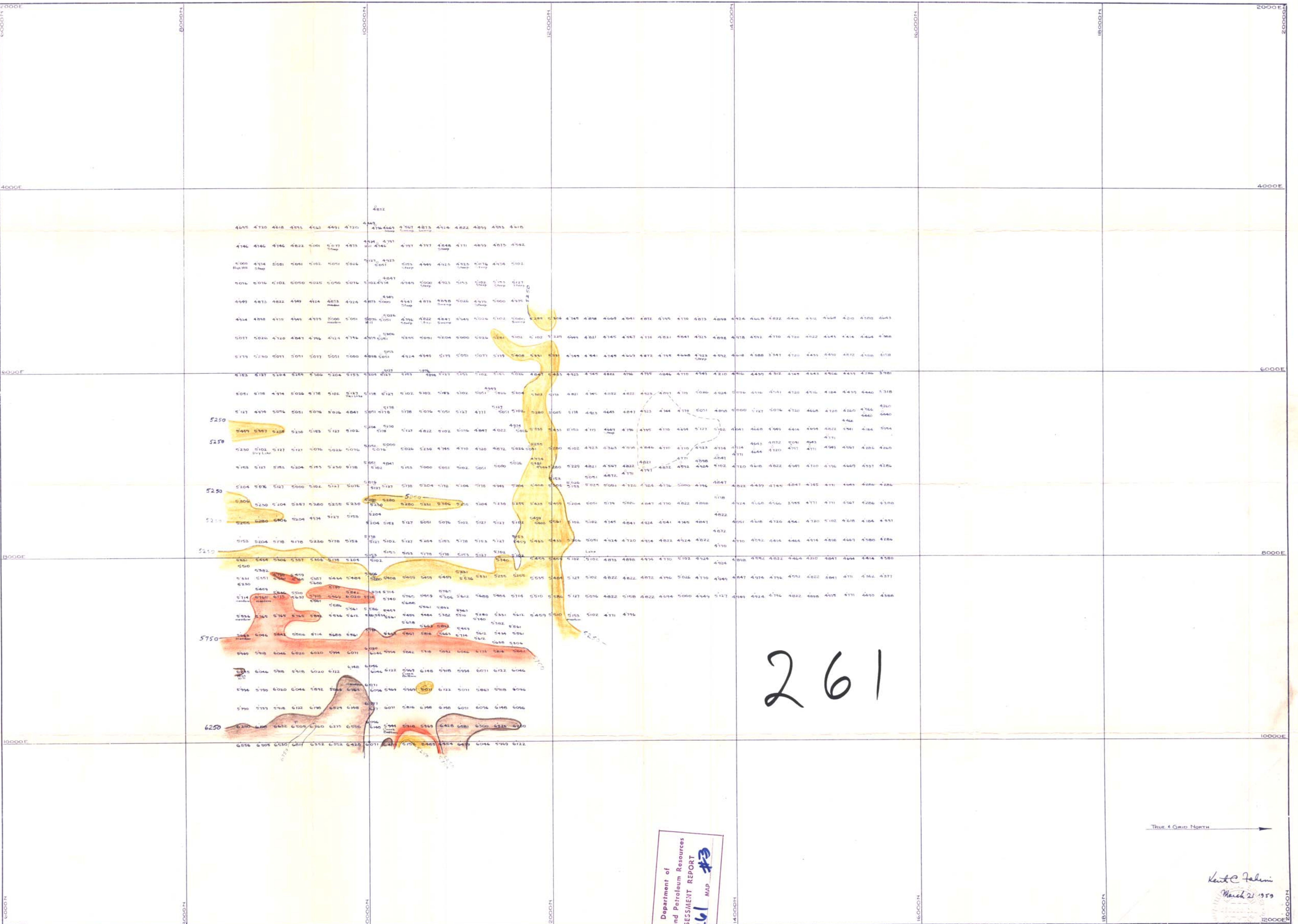
DEPARTMENT OF LANDS AND FORESTS  
 BRITISH COLUMBIA  
 HONOURABLE R. E. SOMMERS, MINISTER  
 C. E. HOPPER, DEPUTY MINISTER OF LANDS  
 B. S. ANDREWS, DIRECTOR OF SURVEYS AND MAPPING

FIRS



Department of  
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 NO. **261** MAP #2

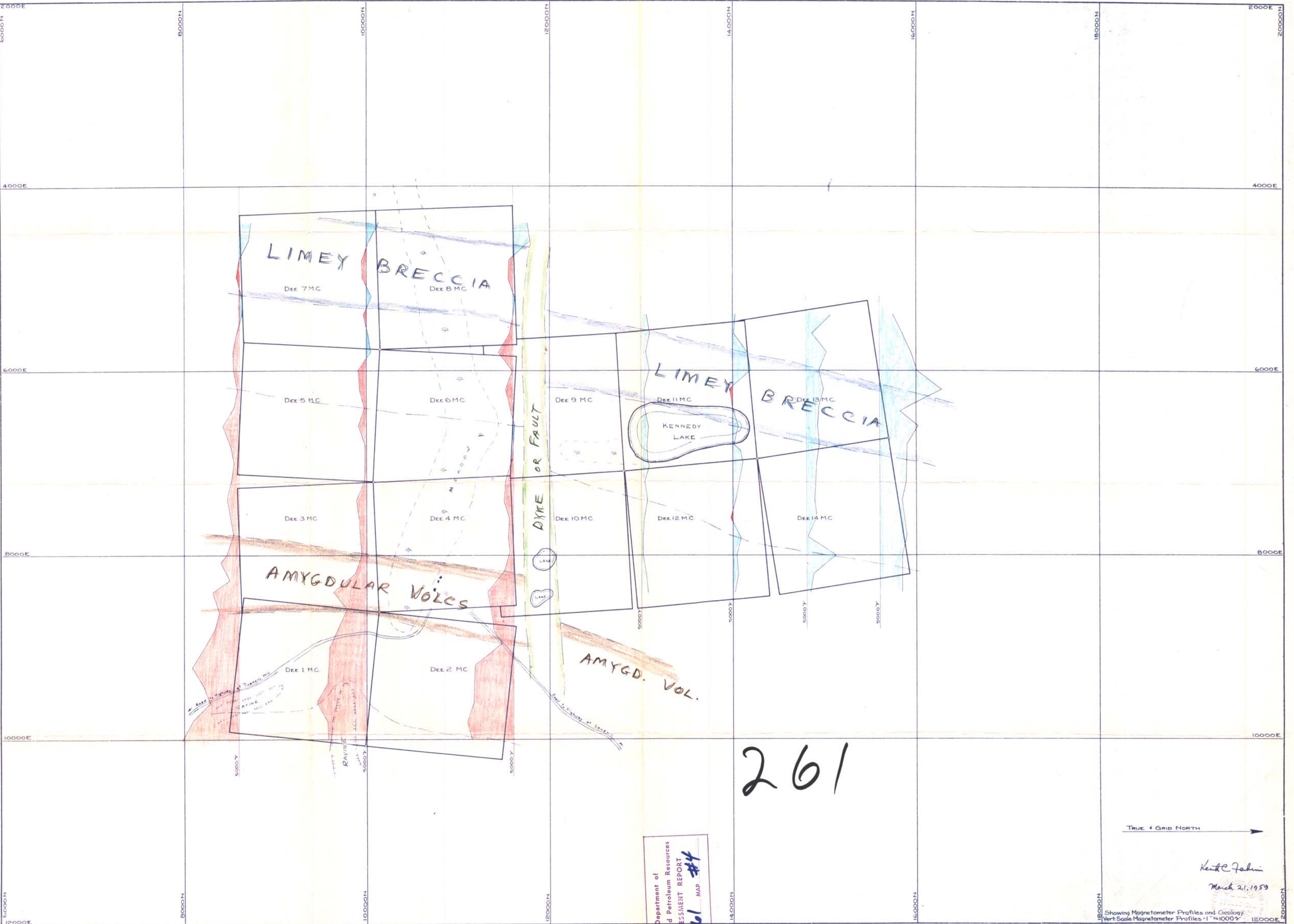
KEY MAP OF PRINCETON AREA  
 Scale: 1 inch to 2 miles.



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ASSESSMENT REPORT  
NO. 261 MAP #3

True & Grid North

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March 21 1959



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Department of  
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NO. 261 MAP #4

TRUE & GRID NORTH →

Keith Johnson  
March 21, 1959

Showing Magnetometer Profiles and Geology  
Vert. Scale Magnetometer Profiles - 1" = 1000'

GRANBY CONS. M.S. & P.CO. LTD. COPPER MOUNTAIN, B.C.	TITLE DEE CLAIMS
SCALE: 1 INCH = 400 FEET	ELEV. NO.