

6179

Report
on a
DRILLING PROGRAMME
on the
TOL GROUP
by
M.K. Lorimer, P.Eng.
for
Copperstar Mine Ltd.

92I/2E

28 January, 1977

MINERAL RESOURCES BRANCH ASSESSMENT REPORT NO. 6179

SUMMARY

In November, 1976, a short drilling programme was carried out on the IOL Group located about sixteen kilometres northeast of Merritt.

The claims cover an irregular contact between granite and granodiorite of the Nicola Batholith. Previous exploration work has revealed the presence of copper, molybdenum and silver along and near this contact.

Three percussion holes were drilled in 1976 to determine the depth of surface exposures. The holes were drilled to 350 feet. The mineralization, although weak, persisted to the depths tested.

It has been determined that a large but low-grade deposit of copper, molybdenum and silver is located in the area. The deposit has not been delineated and may, therefore, be indicative of more important concentrations in the vicinity.

Further exploration is warranted.

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28 January, 1977

Report on a
DRILLING PROGRAMME
on the
TOL GROUP
Nicola Mining Division

OBJECT:

This report is submitted for the purposes of describing a percussion drilling programme that was carried out on the TOL Group in November, 1976, of recording the results achieved and of presenting the conclusions to be drawn from these results.

LOCATION:

The Group is located about 16 kilometres (10 miles) northeast of Merritt. It is reached by branching off the Merritt-Kamloops highway at Nicola and following a gravel road up the valley of Clapperton Creek. Unimproved mine and logging roads give access to most of the claims.

The geographic location is $50^{\circ}12'N$, $120^{\circ}28'W$, the National Topographic System map area is 92I/2E, the mining division is Nicola and the elevations range from about 3800 to 4900 feet. Map 1.

TITLE:

The Group is part of a property consisting of 43 claims and units, and one Crown Grant.

Details of the TOL Group are tabulated below:

<u>Claim</u>	<u>Record No.</u>	<u>Expiry Date</u>
TOL 1	117	21 Jun 77
TOL 2	118	21 Jun 77
A 2	58418	16 Apr 77
A 4	58420	16 Apr 77
A 6	58422	16 Apr 77
A 8	58424	16 Apr 77
A 10	58426	16 Apr 77
A 12	58428	16 Apr 77
TM 2, 4, 6, 8	58094-7	29 Jan 77

The TOL 1 and 2 claims are owned by M.K. Lorimer; the remainder are owned by Copperstar Mine Ltd.

These claims were grouped as the TOL Group in January, 1977.

The boundaries are as shown on Map 2.

TOPOGRAPHY:

The Group is on a southern slope of about nine degrees. From an elevation of about 3800 feet the ground rises fairly uniformly to a mountain top at slightly over 4900 feet near the northern boundary. The lower reaches are covered with mature Ponderosa pines interspersed with open grassy areas. As the elevation increases the trees become smaller and the growth thickens. Near the mountain top the growth becomes sparse again.

Most of the area is covered with overburden. The

higher elevations are largely outcrops, in places precipitous.

There are a few small ponds and intermittent streams but, in general, water is scarce.

GEOLOGY:

The claims are mainly underlain by granite and granodiorite of the Nicola Batholith with the granite underlying the northern two-thirds. In the extreme southeastern corner, volcanic rocks of the Nicola Group are exposed.

The granite-granodiorite contact runs roughly east-west across the group and is extremely irregular. It has been shown by drilling and trenching, and indicated by geochemical and geophysical surveys, to be the locale of copper, molybdenum and silver mineralization.

HISTORY:

As part of a larger property including the Tur-light Shaft, the TOL Group was explored at least as long ago as 1958. Since then, mainly in the period 1960-66, various owners and operators carried out geophysical and geochemical surveys that revealed certain anomalous areas. Some of these were investigated by trenching and drilling, often with encouraging results.

Of particular interest was an area on the TM6 claim. Here, stripping, trenching and shallow drilling proved the existence of a zone that in places approached ore grade in copper, molybdenum and silver.

Because most of the work had been done on the surface and because most of the drilling was comparatively shallow, it was decided, early in 1976, to drill a few deeper holes to test the mineralized areas at depth.

1976 PROGRAMME:

Three percussion holes were drilled in the locations shown on Map 3.

The mobilization of the equipment was done on 1 November, 1976. Drilling commenced the following day and was completed on 8 November, 1976.

DRILLING AND SAMPLING:

The drilling was done by Merritt Funk Bros. Drilling Company of Merritt, B.C. The drill was a tractor-mounted machine.

The holes were vertical. All three were drilled to a depth of 350 feet and a diameter of two inches.

The cuttings were sampled for each ten-foot run by a device that allowed about one-eighth of the cuttings to flow to a sample bag while the rest went to waste. The samples, each weighing about four pounds, were sent to General Testing Laboratories and assayed for copper, molybdenum and silver.

A cost summary is given as Appendix A.

RESULTS:

Copies of the Certificate of Assay are attached as Appendix B.

The results show that copper, molybdenum and silver are present to the full depths tested.

Copper ranged from a low of 0.01 percent in all holes to a maximum of 0.20 percent in PH3, molybdenum from less than 0.001 percent in PH4 to 0.13 percent in the same hole, and silver from "trace" in all holes to 0.30 ounces per ton in PH4.


No particular value relationships were observed between the various metals.

CONCLUSIONS:

The drilling has indicated the existence of a large deposit of copper, molybdenum and silver minerals whose limits have not been determined.

While the assays are low, they may be indicative of economic values in the vicinity.

Further exploration of this area is warranted.



M.K. Lorimer, B.A.Sc., P.Eng.

28 January, 1977

CERTIFICATE OF QUALIFICATIONS

I, MALCOLM KEITH LORIMER, of the City of Vancouver, Province of British Columbia, Mining Engineer, hereby certify:

1. THAT I am a practising Mining Engineer and reside at 3082 West 27th Avenue, Vancouver, B.C.
2. THAT I am a graduate in Mining Engineering of the University of British Columbia, Bachelor of Applied Science, 1950, and have been practising my profession for over twenty-six years.
3. THAT I am a member of the Association of Professional Engineers of the Province of British Columbia.
4. THAT I am a member of the Canadian Institute of Mining and Metallurgy.
5. THAT the following is a true record of my employment and experience:
 - 1950 - 52 General engineering, Consolidated Mining and Smelting Company of Canada Limited, Kimberley, B.C.
 - 1952 - 56 Chief Engineer, Pioneer Gold Mines of B.C. Ltd., Pioneer Mines, B.C.
 - 1956 - 57 Chief Engineer, Buchans Mining Co. Ltd, Buchans, Nfld.
 - 1957 - 59 Chief Engineer and Mine Superintendent, Cowichan Copper Co. Ltd., Lake Cowichan, B.C.
 - 1959 - 65 Exploration and consulting work for various companies, mostly in southern British Columbia.
 - 1965 - 75 Associate, H.L. Hill and Associates Ltd., later L.J. Manning and Associates Ltd.
 - 1975 - present. Independent mining consultant.

DATED at *Wreck Cove, Nova Scotia* this *28* day of *January* 1977


M.K. Lorimer, B.A.Sc., P.Eng.

COST SUMMARY

Road and Drill-site preparation	\$180.00
Mobilization	136.00
Drilling	3675.00
Sampling	88.00
Assaying	1802.50
Vehicle rentals	138.76
Fuel	16.00
Hotels	41.00
Meals	18.00
Engineering and supervision	718.75
Final report	400.00
	<hr/>
TOTAL	\$7214.01



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TO:

DANSTAR MINES LTD.
#704 - 525 Seymour Street,
Vancouver, B.C. Canada
V6B 3R7

CERTIFICATE OF ASSAY

No.: 7611-0954

DATE: Nov. 19/76

We hereby certify that the following are the results of assays on: 103 DRILL CORE samples (submitted)

PAGE: 1

MARKED	SILVER	Copper	Molybdenum	XXX	XXX	XXX	XXX
	OZ/ST GR/MT	OZ/ST (Cu) %	(Mo) %				
PH 76 # 3 ⁶ 340 - 350	---	0.15	0.01	0.001			
PH 76 # 4 0 - 10	---	trace	0.01	0.001			
10 - 20	---	trace	0.01	0.04			
20 - 30	---	trace	0.04	0.002			
30 - 40	---	trace	0.06	0.002			
40 - 50	---	trace	0.11	0.001			
50 - 60	---	trace	0.20	0.008			
60 - 70	---	trace	0.03	0.001			
70 - 80	---	trace	0.02	0.001			
80 - 90	---	trace	0.10	0.001			
90 - 100	---	trace	0.04	0.009			
100 - 110	---	trace	0.02	0.013			
110 - 120	---	trace	0.03	0.002			
120 - 130	---	trace	0.01	0.002			
130 - 140	---	trace	0.02	0.001			
140 - 150	---	trace	0.02	0.001			
150 - 160	---	trace	0.02	0.002			
160 - 170	---	trace	0.02	0.002			
170 - 180	---	trace	0.02	0.002			
180 - 190	---	0.30	0.02	0.003			
190 - 200	---	trace	0.03	0.003			
200 - 210	---	0.15	0.03	0.005			
210 - 220	---	trace	0.03	0.004			
220 - 230	---	trace	0.09	0.002			
230 - 240	---	trace	0.08	0.001			
240 - 250	---	trace	0.03	0.002			

Cont'd.

LN; AT

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PAGE: 2

MARKED	XXXX GOLD	SILVER	Copper	Molybdenum	XXXX	XXXX	XXXX	XXXX
	OZ/ST GR/MT	OZ/ST GR/MT	(Cu) %	(Mo) %				
PH 76 # 4								
250 - 260	---	trace	0.07	0.002				
260 - 270	---	trace	0.02	0.002				
270 - 280	---	trace	0.02	0.003				
280 - 290	---	trace	0.02	0.003				
290 - 300	---	trace	0.02	0.003				
300 - 310	---	trace	0.02	0.004				
310 - 320	---	trace	0.01	0.001				
320 - 330	---	trace	0.02	0.002				
330 - 340	---	trace	0.01	0.001				
340 - 350	---	trace	0.01	0.001				
PH 76 # 5								
5 - 10	---	0.07	0.01	0.001				
10 - 20	---	trace	0.01	0.001				
20 - 30	---	trace	0.02	0.001				
30 - 40	---	trace	0.03	0.001				
40 - 50	---	trace	0.02	0.001				
50 - 60	----	trace	0.01	0.001				
60 - 70	---	trace	0.03	0.001				
70 - 80	---	trace	0.02	0.001				
80 - 90	---	trace	0.02	0.001				
90 - 100	---	trace	0.01	0.001				
100 - 110	---	trace	0.01	0.001				
110 - 120	---	trace	0.03	0.002				
120 - 130	---	trace	0.03	0.004				
130 - 140	---	trace	0.01	0.001				
140 - 150	---	trace	0.02	0.001				
150 - 160	---	trace	0.01	0.001				
160 - 170	---	trace	0.01	0.001				
170 - 180	---	trace	0.02	0.001				
180 - 190	---	trace	0.02	0.001				
190 - 200	---	trace	0.02	0.001				
Cont'd.								
LN:AT								

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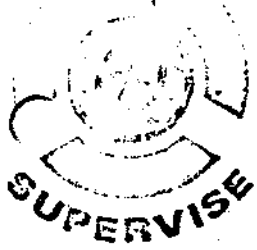
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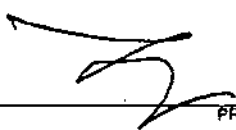
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PAGE: 3

MARKED	SILVER	SILVER	Copper	Molybdenum	XXX	XXXX	XXX	XXXX
	OZ/ST GR/MT	OZ/ST XXXXXX	(Cu) %	(Mo) %				
PH 76 # 5								
200 - 210	---	trace	0.01	70.001				
210 - 220	---	trace	0.02	70.001				
220 - 230	---	trace	0.01	70.001				
230 - 240	---	trace	0.01	70.001				
240 - 250	---	trace	0.01	70.001				
250 - 260	---	trace	0.01	0.001				
260 - 270	---	trace	0.01	0.001				
280 - 290	---	trace	0.01	0.001				
290 - 300	---	trace	0.01	0.001				
300 - 310	---	trace	0.05	0.001				
310 - 320	---	trace	0.04	0.001				
320 - 330	---	0.05	0.04	0.001				
330 - 340	---	0.02	0.04	0.001				
340 - 350	---	0.06	0.04	0.002				
PH 76 # 6								
10 - 20	---	trace	0.02	0.002				
20 - 30	---	trace	0.01	0.001				
30 - 40	---	trace	0.01	0.001				
40 - 50	---	trace	0.01	0.001				
50 - 60	---	trace	0.01	0.001				
60 - 70	---	trace	0.01	0.001				
70 - 80	---	trace	0.01	0.001				
80 - 90	---	trace	0.01	0.001				
90 - 100	---	trace	0.01	0.001				
100 - 110	---	trace	0.01	0.001				
110 - 120	---	trace	0.01	0.001				
120 - 130	---	trace	0.01	0.001				
130 - 140	---	trace	0.01	0.001				
140 - 150	---	trace	0.01	0.001				
150 - 160	---	trace	0.01	0.001				
Cont'd.								
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DATE: Nov. 19/76

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PAGE: 4

MARKED	XXXX	SILVER	Copper (Cu) %	Molybdenum (Mo) %	XXXX	XXXX	XXXX	XXXX
	OZ/ST GR/MT	OZ/ST XXXX						
PH 76 # 6								
160 - 170	---	trace	0.01	0.001				
170 - 180	---	trace	0.01	0.001				
180 - 190	---	trace	0.01	0.001				
190 - 200	---	0.04	0.01	0.001				
200 - 210	---	trace	0.01	0.001				
210 - 220	---	trace	0.01	0.001				
220 - 230	---	trace	0.01	0.001				
230 - 240	---	trace	0.01	0.001				
240 - 250	---	trace	0.01	0.001				
250 - 260	---	0.01	0.01	0.001				
260 - 270	---	0.41	0.01	0.001				
270 - 280	---	0.47	0.01	0.001				
280 - 290	---	0.38	0.01	0.001				
290 - 300	---	0.15	0.01	0.001				
300 - 310	---	trace	0.01	0.001				
310 - 320	---	0.28	0.01	0.001				
320 - 330	---	0.89	0.01	0.001				
330-340 UNMARKED	---	0.19	0.01	0.001				
340-350	---	0.15	0.01	0.001				

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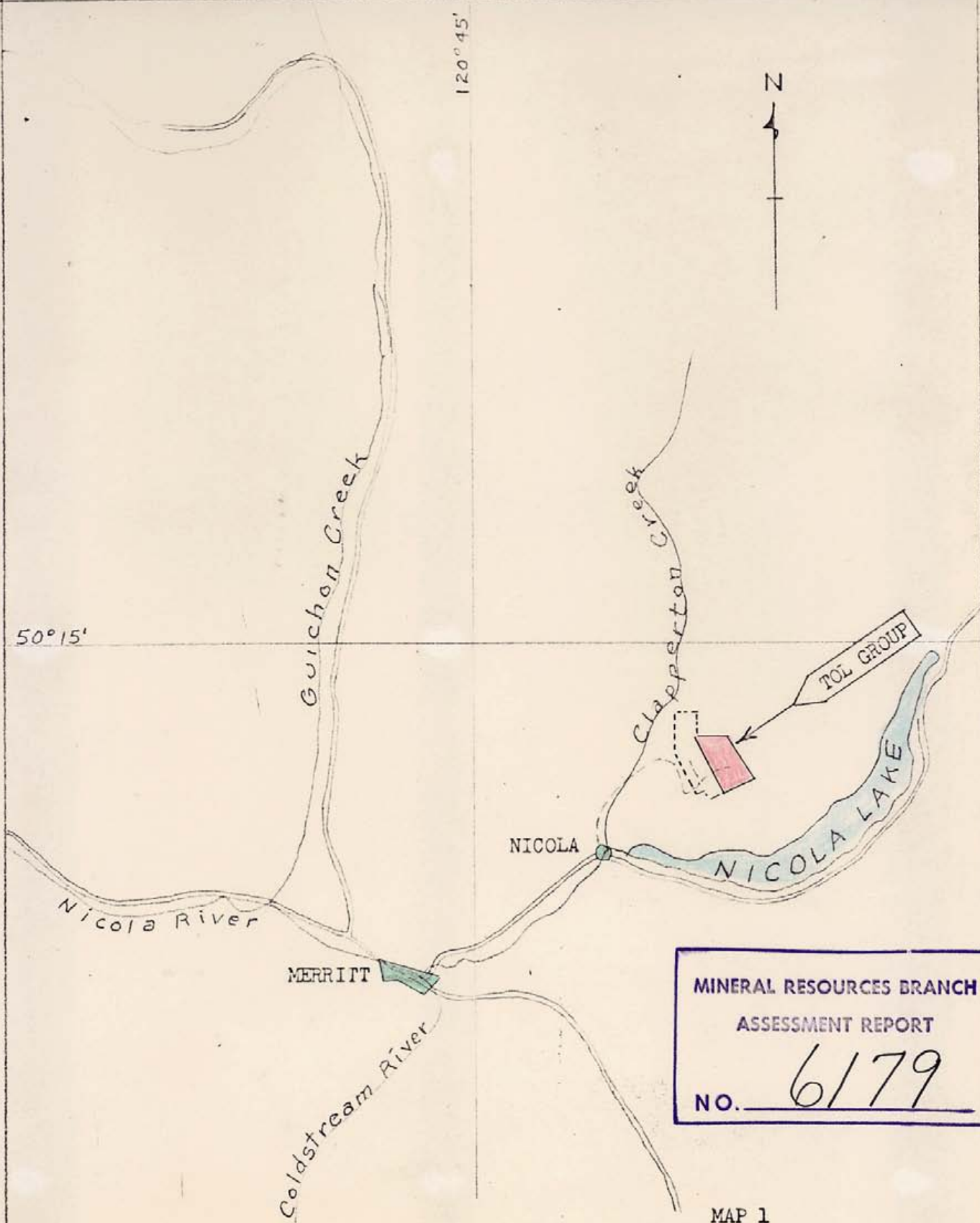
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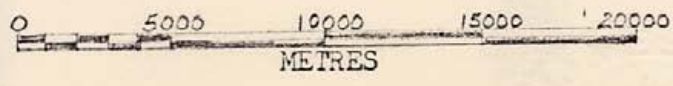
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MAP 1



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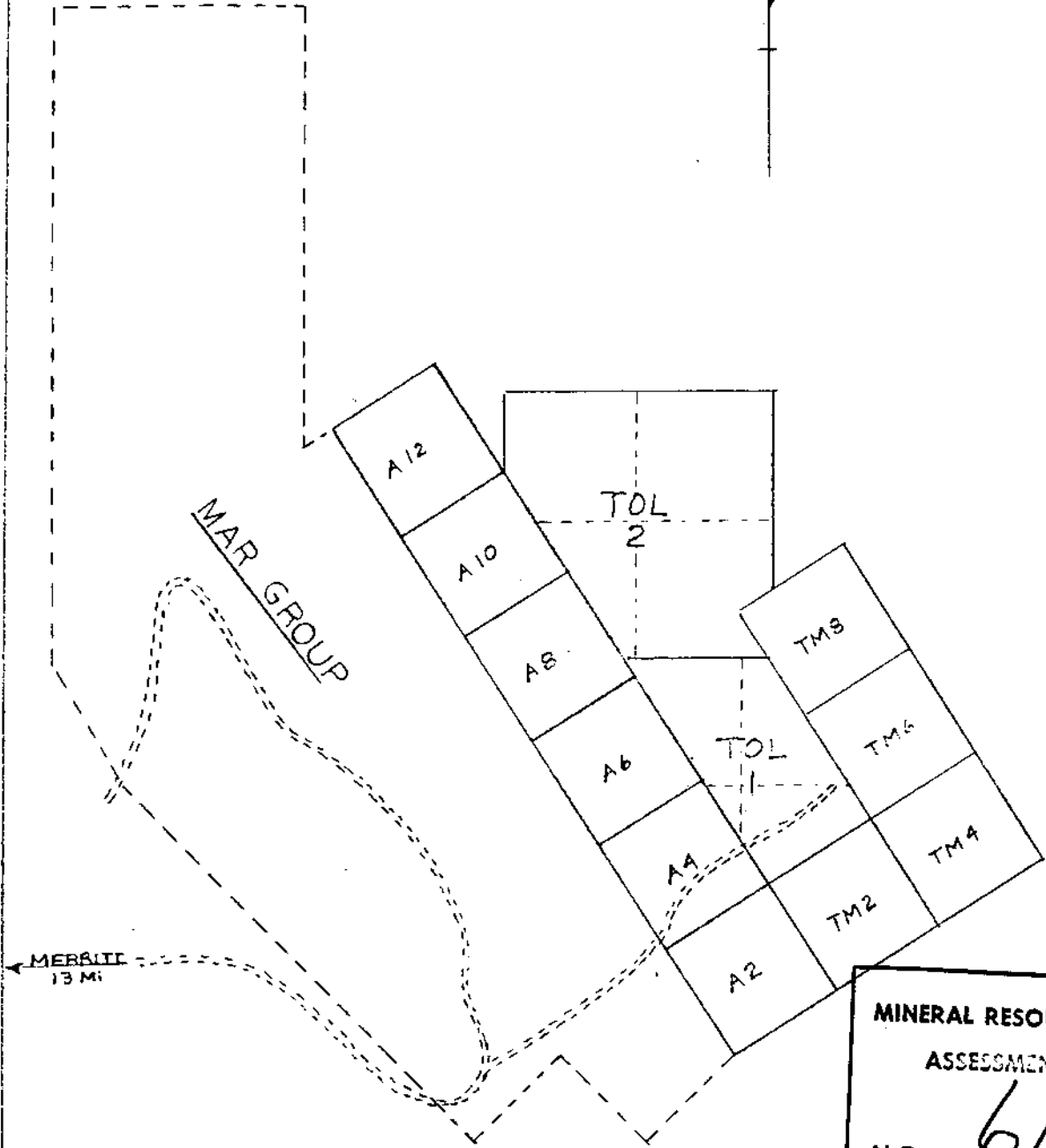
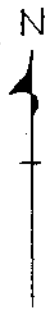
INDEX MAP

Tol Group

Scale: 1:250,000

Drawn: M. K. Lorimer

M. K. Lorimer



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MAP 2

COPPERSTAR MINE LTD.
- TOL GROUP

CLAIM MAP

Scale: 1:25000
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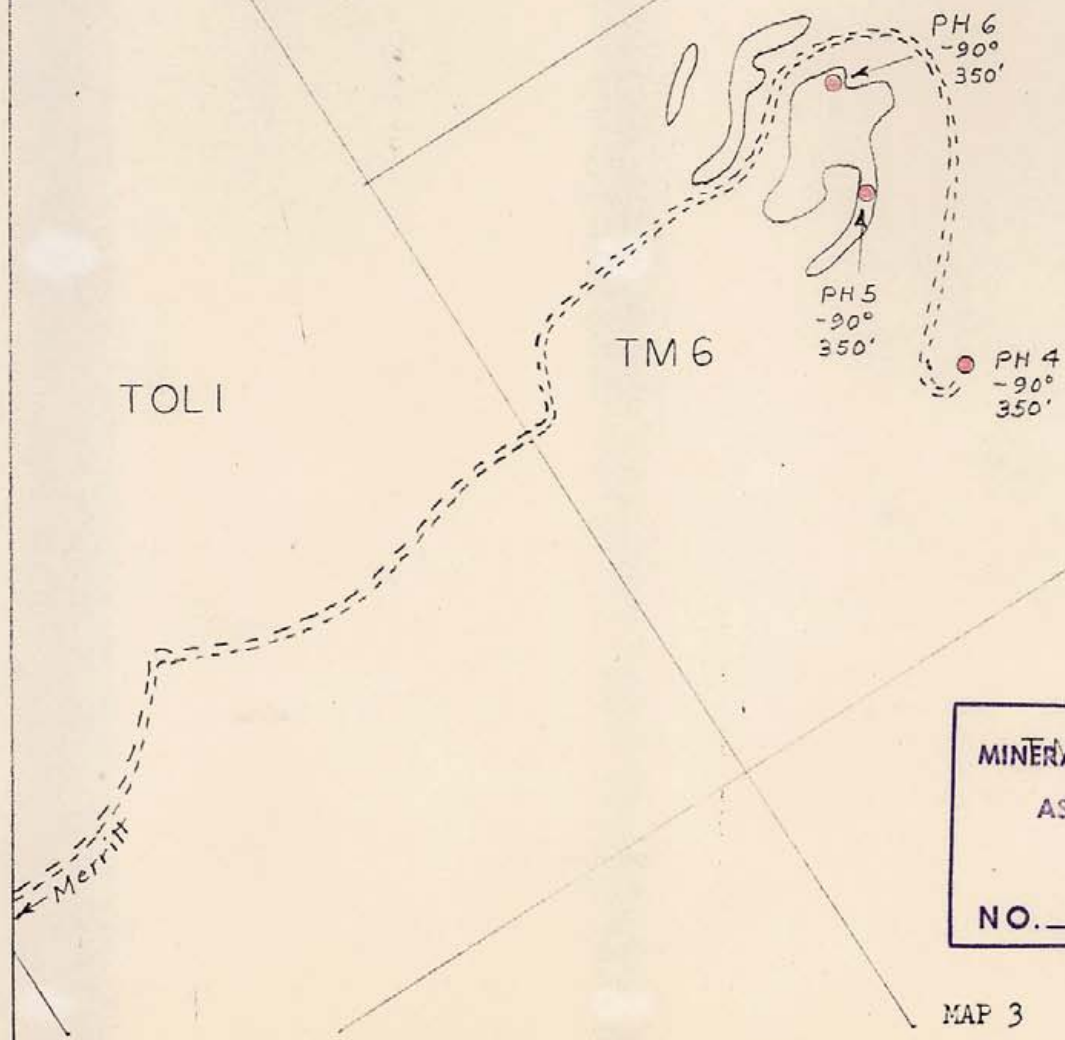
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METRES

TOL 2

TM 8

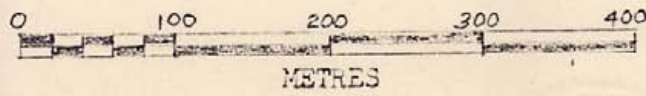
TOL 1

TM 6



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MAP 3



COPPERSTAR MINE LTD.

TOL GROUP

DRILL HOLES

Scale: 1:5000

Drawn: M.K. Lorimer