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REPORT ON THE COPPER ZONE CLAIM TASEKO LAKES AREA

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Prepared for UNITED GUNN RESOURCES LTD.

Ву

# W. MEYER, P. ENG.

# February 21, 1977

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Vancouver, B.C.

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### CONCLUSIONS & RECOMMENDATIONS

The Copper Zone claim covers an extensive area of low grade copper-molybdenite mineralization with some evidence that higher grade zones may occur. Sampling of these zones on surface is not possible due to deep weathering. Limited drilling in the 1970 and 1971 field seasons indicates that potentially significant amounts of copper-molybdenum mineralization occurs with heavy pyrite mineralization in quartz-diorite rocks of the Coast Crystalline Belt where they are intruded by a porphyry dyke swarm. The potential area of mineralization is expressed on surface in the form of a large "L" shaped gossan measuring 1,000 feet by 2,000 feet in the small dimension and 2,000 feet by 4,000 feet in the large dimension. Intermittent copper mineralization is exposed in a creek bottom for a distance of approximately 2,000 feet to the west of the gossan.

Emphasis in further exploration of the property should be on sampling the potential area initially by percussion drilling on an 800 foot grid to outline the higher grade areas. The proposed holes for the initial drilling are shown on the accompanying plan map. [Fig. 3]

The percussion programme should be followed up by diamond drilling on a closer spaced grid [400 feet] in selected areas. Provision is made for two deep holes and two holes drilled along percussion holes to determine the accuracy of this sampling.

The estimated cost for this programme is shown below:



Stage 1 20 percussion holes to 400' on 800' grid \$3.50/ft. Direct drilling costs .80/ft. Assaying Bulldozer 2.00/ft. Camp, cookery, vehicles, etc. 1.00/ft. Supervision <u>\_.50/ft</u>.  $7.80 \times 8,000 \text{ ft.} = 62,400$ Consulting 3,000 Engineering, drafting, report preparation 2,500 Fixed wing support - 2 trips/week @ \$300/trip 3,000 Mob. - demob. 5,000 \$75,900 Contingency @ 10% 7,590 \$83,490 Say ·\$85,000 Stage 2 Diamond drilling @ \$25/ft. [direct & indirect] 8 holes [fill in to 500 ft.] 4,000 ft. 2 1,000 ft. holes 2,000 ft. 2 check holes along percussion holes 1,000 ft. 7,000 ft. \$175,000 Total Stages 1 & 2 \$260,000 Respectfully submitted, W. Meyers, P. Eng.

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#### INTRODUCTION

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The following report is prepared at the request of United Gunn Resources Ltd. The Copper Zone claims comprise 9 units located at the headwaters of Granite Creek, a tributary of the Taseko River located in the Clinton Mining Division. Widespread, consistent low grade coppermolybdenite mineralization occurs over a large area on the central claims.

Previous work on the claims includes prospecting, trenching, percussion, and diamond drilling starting in 1964 by Phelps Dodge Corporation of Canada, Victor Mining Corporation & Granite Mountain-Galveston Joint Venture. Approximately \$125,000.00 has been spent on the claims in the past.

The writer has been familiar with the property since 1964 and personally carried out or supervised much of the previous work on the claim area.

A two-stage programme of technical and physical work is recommended for the property. This program is estimated to cost \$260,000.00.

### LOCATION & ACCESS

The claims are situated on Granite Creek, a tributary of the Taseko River, 140 miles north of Vancouver, B.C. [See Fig. 1]

Road access by four-wheel drive is via Williams Lake, Hanceville [on the Williams Lake-Bella Coola road] and the Taseko Lakes, a distance of approximately 170 miles [7 hours driving] from Williams Lake to the property campsite.



The main showings lie in a large cirque shaped basin on the eastern side of Granite Creek near its headwaters.

The more pertinent points on the geography of the area may be summarized as follows:

Physiographic Region	-	Coast Range
Altitude [campsite]	-	6,000 feet
Relief	-	2,500 feet
Climate	-	Coal, moderate precipi- tation
Snow-free period	_	4 - 5 months

#### CLAIMS

The Copper Zone claim consists of 9 units located in the Clinton Mining Division.

The claims relative to the local drainage are shown on Fig. 2 and the pertinent data is summarized below:

<u>Claim</u>	<u>Units</u>	<u>Taq No</u> .	<u>Record No</u> .	<u>Expiry Date</u>		
Copper						
Zone	9	-	48[8]	August 30, 1977		

#### HISTORY

Copper mineralization in the intrusive rocks in the Taseko Lakes area has been known since the turn of the century and has been the centre for numerous regional and local exploration projects. The most intense and wide ranging programmes were in the 1960's and early 1970's when there was much interest in large bodies of low grade copper mineralization.



Significant programmes in the general area included prospecting and underground development work on lower Granite Creek by Cominco in the 1930's. Regional exploration by Canex Placer in the 1950's included diamond drilling of the "Spokane" and "Empress" showings on lower Granite Creek. Phelps Dodge Corporation of Canada during the 1960's acquired many of the prospects in the area and "grass-roots" prospecting located others. Properties advanced to the drilling stage by Phelps Dodge included "Fish Lake" [later acquired by Taseko Mines and explored by various optionors], "Limonite Mountain" near Chita Creek [later acquired and explored by Bethlehem Copper], the "Spokane", "Syndicate Mountain", "Empress" and "Buzzer" [later acquired by Scurry Rainbow and explored by Sumatoma, Quintana and others] and "Rowbottom Creek", the showing presently covered by the Copper Zone claim.

Many of the showings were either relatively high grade copper-molybdenite <u>+</u> gold, silver occurrences in breccia zones of limited extent [e.g. "Syndicate Mountain"] or 10's of millions of tons of relatively low grade mineralization [e.g. Buzzer, Fish Lake].

The headwaters of Granite Creek and a small tributary, Rowbottom Creek, was staked by Phelps Dodge in 1964 following the discovery of widespread copper and/or molybdenite mineralization associated with a large prominent gossan in that area.

One 190 foot hole was drilled the same year approximately  $\frac{1}{4}$  mile from the gossan zone, encountering uniform low grade copper mineralization averaging 0.12% Cu over its length.



Victor Mining Corporation Ltd. [NPL] acquired the property in 1969 and to 1972 completed four diamond drill holes and four rotary percussion holes on its own behalf or through joint ventures with Granite Mountain Mines Ltd. and Galveston Mines Ltd.

The claims lapsed in 1975 and were re-staked as the present "Copper Zone" claim.

#### GEOLOGY

Regional Reference: Dolmage, V., Gunn Creek Map Area, GSC Summary Report 1928 - Part A. Jeletzky, J.A., Tipper, H.W., Upper Jurassic and Cretaceous Rocks of the Taseko Lakes Map Area. GSC Paper 67-54, 1967

The property lies on the east flank of the Coast Crystalline Belt, characterized by massive batholithic granitic intrusions of post lower Cretaceous age which are in turn intruded by post upper Cretaceous acid stocks and dykes. A major contact with upper Cretaceous volcanics lies four miles NE of the showings. The property is mainly underlain by hornblende quartz diorite intruded by a swarm of feldspar porphyry and quartz feldspar porphyry dykes parallel to the major fracture systems [N 20<sup>o</sup>W and E-W]. There is some field evidence to indicate that the dyke swarm may be peripheral to a small porphyry stock near the area of the better grade mineralization [see attached plan].

Outcrop in the 'key' area is sparse, occurring primarily on the ridge tops and creek bottoms. Scree, varying from a few feet to 30 or more feet in thickness, covers the high slopes and cirques while a thin mantle of soil and timber line scrub brush cover the lower slope.

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The geology of the area was mapped in 1972 by J. Buchholz briefly described in a November 27, 1972 report. His map is reproduced here as Figure 3 with some minor additional data.

### MINERALIZATION

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Chalcopyrite and molybdenite associated with heavy pyrite mineralization occur as fracture fillings and fine disseminations replacing mafics in both the quartz diorite and porphyry dykes. Total sulphides of up to 10% decrease away from the central area and porphyry stock to approximately 2% at DDH A-2, some 3,700 feet to the west.

The area of heavier total sulphides is expressed on the surface as a large prominent "L" shaped gossan whose long dimensions are 4,000 feet x 2,000 feet. Leaching of sulphides in the gossan zone varies from complete leaching of sulphides to a depth of 50 feet in the quartz diorite to 50% leaching of the sulphides in the porphyry dykes. The reason for the variation in the extent of leachings is that the intruded quartz diorite is intensely fractured and sheared throughout the gossan area whereas the later dyke material is more massive and less porous. Similarly, most of the large fragments in the scree slopes consist of dyke material, with the quartz diorite decomposing to sand and pebble sized fragments.

Limited drill hole data indicates that copper min eralization is related to the total density of sulphides and weak chlorite and biotite alteration in the quartz diorite. The alteration, however, has not been a useful guide in surface prospecting or mapping due to the weathering of surface rocks. Copper minerals for the most part are completely leached out of the surface rocks. Minor secondary chalcocite after pyrite was noted in DDH A-1 and some of the cuttings in the percussion holes, but appears to make only a minor contribution to the values in the area tested.

Past programmes included 1,817 feet of diamond drilling in four holes and 1,140 feet of percussion drilling in four holes. The hole locations are shown on Fig. 3 and the assay data summarized below:

Hole	Depth	From	To	<u>Intersection</u>	<u>% Cu</u>	<u>% Mo52</u>
DDH A-1	4001	50'	380'	330'	0.23	0.011
DDH A-2	415	40	400	360	0.12	0.007
DDH 72-1	L 698	250	400	150	0.22	0.008
DDH 72-2	2 304	180	300	120		
PH-1	400	60	400	340	0.21	0.011
РН-2	240	40	220	180	0.19	0.008
РН-З	200	10	200	190	0.12	0.009
PH-4	300	30	300	270	0.10	0.011

The previous programmes on the property were plagued with many problems including difficult access, equipment breakdowns, weather problems late in the season and inadequately equipped contractors and as a result much of the drilling was carried out in areas peripheral to the main zone of interest.

Respectfully submitted,

W. Meyer, P.Eng. February 21, 1977



#### APPENDIX

## <u>CERTIFICATE</u>

- 1. I am a geologist with residence at 911 Jarvis Street, Coquitlam, B.C.
- 2. I am a graduate of the University of British Columbia, [B.Sc., 1962].
- 3. I am a registered member of the Association of Professional Engineers of the Province of British Columbia.
- 4. I have worked as an exploration geologist for fourteen years for the following companies: Phelps Dodge Corporation of Canada Ltd.; Gibraltar Mines; Associated Geological Services Ltd.; Western Geological Services Ltd. [senior partner].

I am presently a senior partner in W. Meyer & Associates Ltd.

5. I have no interest, direct or indirect, nor do I anticipate receiving any, in the properties or securities of United Gunn Resources Ltd.

W. Meyer, P. Eng

February 21, 1977 Vancouver, B.C.

