

## The Mount Remus Prospect

*by V. M. Threader*

The Mount Remus prospect (Nichol's Reward) is a molybdenite lode situated on an un-named creek which forms part of the Cradle Mountain–Lake St Clair National Park boundary (grid reference 3824E, 8728N). It lies five miles due east of Waldheim and can be reached by following the National Park boundary from the Cradle Mountain Road.

This lode was examined and sampled by Nye in 1928 and Burns in 1963; both workers recommended further investigations. An examination was made in 1964 by the writer to determine what further work was necessary before an evaluation could be made. Some stream sediment samples were collected for trace element determinations to test the usefulness of geochemical prospecting as a guide to future drilling and trenching operations. The remainder of this report deals with the results of these stream sediment assays.

The country rock consists of older Precambrian chlorite schist and Cambrian porphyry. The lode is in schist but is in contact with a porphyry dyke at its northern end.

The lode consist of a number of narrow quartz veins and lenses up to 6 inches wide, but mostly less than ½ inch in width in a 3 feet wide band. The band may be locally wider than this or a nearby parallel lode may exist as indicated by the presence of shallow stopes on the creek bank. The general strike of this band is NE–SW and it is estimated to be at least 10 chains long. Thick scrub obscures its possible continuation southward.

Stillwell (1932) recorded the following visible minerals in the lode; molybdenite, pyrite and hematite in a gangue consisting of chlorite, epidote, zoisite, mica and quartz. Assays showed the presence of cobalt which he thought occurred as linnaeite associated with the molybdenite and pyrite in the ore, and vanadium which he thought originally occurred as roscoelite in the gangue. This roscoelite (vanadium mica) is now altered to chlorite. Vanadium as patronite in minute amounts was also present in the ore.

The stream sediment samples were assayed for molybdenum, vanadium and cobalt. Results are shown on the attached table. It should be noted that none of the results obtained are abnormal for some unmineralised sedimentary and igneous rocks (Hawkes and Webb, 1962, p. 376), but there is little doubt that the variations are controlled to some extent by lode proximity. Values for samples 1, 3 and 4 are better than those downstream of the known lode and in some respects better than those at the lode itself.

The source of this mineralisation is unknown; molybdenite is most commonly found in or close to granitic contacts, but no granitic rocks are known in the vicinity of the lode, despite the deep dissection of the countryside. This indicates the likelihood that the tenor of ore would improve with depth as the igneous source is approached. The Cambrian porphyry is not known to be genetically related to any mineralisation but the possibility of its being so here cannot be overlooked at this stage.

There is an obvious need for an extension of this preliminary geochemical testing, not only of stream sediment but also of stream waters, peat and country rocks. The limited work already done has indicated the probability of other lodes.

The difficulty of access and sample removal will necessitate 'on the spot' geochemical tests, but these, in the case of molybdenite, are well known (Lissiman, Baker and Marshall, 1965).

**Table 1**

<i>Item (%)</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>24B</i>	<i>24C</i>	<i>24D</i>
Mo	1.57	0.2	1.33	0.65	45.67	0.48	0.43	0.49	0.48
V	0.33	0.22	0.39	0.19	4.38	1.57	tr.	tr.	tr.
Co	0.33	0.30	0.31	0.18	0.63	0.50	0.26	0.18	0.29
Cu	nil	nil	nil	nil	–	nil			
S	–	–	–	–	38.24	49.7	47.1	46.5	36.8
Fe	–	–	–	–	8.2	39.0			
Pb						nil			
As						tr.			
Ni						tr.			
Zn						tr.			
Au							nil		
Ag							tr.		
Insol.						8.9			
<b>Total</b>					<b>97.12</b>	<b>100.15</b>			

**Table 2**

<i>Item (ppm)</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>
Mo	60	45	53	68	6	12	15	28	75
V	32	34	35	36	19	36	nil	28	31
Co	7	13	9	13	nil	nil	2	nil	6

**Notes on tables.***Table 1*

Samples 1 to 6	Taken by P. B. Nye, 1928
Samples 1 to 3	Portions of a 6" mineralised vein.
Sample 4	Stockwork in schist
Sample 5	Selected grains of molybdenite
Sample 6	Bulk sample
Sample 24B and D	Taken by K. L. Burns, 1963.
Sample 24B	Channel sample across a clean 6" wide vein
Sample 24C	Chip sample across 8" vein (contiguous with 24B)
Sample 24D	Molybdenite picked out of a number of veins

*Table 2*

Samples 1–9	Stream sediment taken by V. M. Threader, 1964
Samples 1 and 3	From Tributary stream above and south of lode
Sample 2	From main stream 15 chains downstream from lode.
Samples 4, 5, 6	From main stream above lode
Samples 7 and 8	From tributary streams from north and above the lode
Sample 9	From main stream at the lode

## References

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