REPORT ON G.W. CLARK'S DISCOVERIES NEAR ZEEHAN

LOCATION

The area which Mr. Clark has been investigating lies some four miles NW of Zeehan. At a point four miles from Zeehan along the Zeehan-Corinna Road, is the turnoff to the Pieman River. The Mines Dept. is at present constructing a track from this turnoff to the Pieman River at its junction with the Stanley River. The lode occurrences are found near this track and distant between one quarter and one half a mile from the Zeehan-Corinna Road,

GENERAL GEOLOGY

The area is part of an extensive button grass area. The old peneplain has been uplifted recently and the streams are at present actively engaged in cutting their way down to baselevel. The net result as far as topography is concerned is that there have been developed a series of small streams fairly deeply entrenched and separated from one another by sharp ridges. In the area under review, the streams have reached temporary baselevel and their courses are marked by a fringe of alluvium on one or both sides. This alluvium is usually marshy. The stream beds are between 50 and 100 feet below the level of the dividing ridges.

Geologically, the area is part of the Montana Western district and the similarities of topography, geology and lode occurrences between this new area and the known mineralised areas of the Montana Western, Ben, Barnett's etc. are very close.

On the north side of Ben Creek and on both sides of the Little Pine, slates and lowgrade schists occur. These are part of an extensive formation on which extends northwards beyond the Pieman. On the south side of Ben Creek and extending south to the road the Zeehan Tillite occurs. There has been much discussion as to the relative stratigraphical position of these two rock types. In this area, although the actual contact is masked by the alluvium along the streams, it appears that the tillite rests on the slates and schists. The attitude of the slates is difficult to determine as they have been much twisted and disturbed by several orogenies. In general they strike a little east of north and dip at moderate angles to the south east. There is some evidence of a small anticline striking roughly along the direction of Little Pine Creek.

LODE OCCURRENCES

Mr. Clark has observed eight fractures in the area. These fractures agree in strike with that of the slates i.e. a little east of north. In this they also agree in strike with the lodes at the Montana Western and at the Ben. The fractures have so far been observed on the surface only. No costeaning or driving has been done so it is impossible to say what is the direction or degree of the pitch of the lodes. It is reasonable to

assume, however, that they dip to the south east as do the Montana Western lodes.

No. 1 Lode This occurs near No. 1 bridge and can be observed in the hill north of Ben Creek. It has also been in the bed of the creek. The width is unknown but appears to be about ten feet. The fracture is filled with lode material, brecciated slates and lode quartz. The lode material shows traces of galena, sphalerite, pyrite both in the quartz and disseminated through the slates. Pyrite is dominant and lead and zinc are in sub-equal amounts.

No. 2 Lode This is quite close to No. 1 on the western side. The occurrence is quite similar. The width of the lode cannot be determined at present.

Nos. 3 4 5 & 6 Lodes These are fractures only which, while showing lode filling, quartz etc. as in Nos. 1 & 2 do not show mineralisation at the surface.

No. 7 Lode This is the best defined of the series. Four exposures occur along the course of the Little Pine Creek. Although the walls are not defined, the exposure between No. 2 camp and No. 2 bridge indicates that the width is of the order of forty feet. In the lode filling which is similar to that of the previous lodes, splashes of copper minerals, chalcopyrite and bornite occur. On the surface they are traces only and no bands of ore were seen. In loose stream boulders west of the camp, traces of galena were observed but this mineral was not seen in the solid.

No. 8 Lode This was observed in a small un-named creek west of No. 2 camp. The general details of this lode are similar to those of No. 7 lode. However, only one exposure has so far been noted and the information is therefore scanty. It was impossible to determine the approximate width of this lode.

These eight lodes or fractures constitute the whole of the known occurrences. It must be indicated however, that they also constitute the whole of the area investigated. Mr. Clark has not so far been east of No. 1 lode nor west of No. 8 lode. There is therefore every chance that further lodes or fractures occur in and around this area.

CONCLUSIONS

(1) As a new discovery this area is of definite interest.

(2) The geology of the area and the structure of the lodes are very similar to those of the known Montana Western area.

(3) The lodes which show traces of mineralisation at the surface indicate that metal occurs in the area.

(4) The fractures showing lode filling but no mineralisation at the surface are not necessarily barren. As metal occurs on either side of these

fractures it is reasonable to assume that metal may be found in them also at depth.

(5) Two distinct types of lode occur lead-zinc and copper-lead. The latter type of lode is not known in this district and is thus of especial interest.

(6) Throughout, only traces of mineralisation have been observed at the surface. This is not surprising as the Zeehan area was fairly thoroughly prospected in the early days and it is reasonable to assume that all large bodies of ore showing at the surface have been found.

(7) As to what occurs below the surface no definite statement can be made at the present time. It is likely however, that bodies of ore of reasonable size occur at no great depth. This conclusion is based on similarities to similar lode occurrences nearby.

(8) Prospecting by means of crosscuts and costeans is to be recommended for Nos. 1 and 2 lodes which show mineralisation.

(9) Diamond drilling is to be recommended for Nos. 7 and 8 lodes which do not lend themselves to cross-cutting.

(10) Prospecting work on the remaining lodes is not to be recommended until it can be shown that the lodes showing mineralisation do in fact contain reasonable quantities of ore at depth.

(11) Geophysical work over the whole area is strongly to be recommended.

GEOLOGIST

The Director of Mines,
HOBART.

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The shallow shafts and trenches have served to