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THE MINERAL PROSPECTS OF THE PIEMAN RIVER AREA.

The rocks of the Pieman River area, consisting of sedimentaries of the Pre-Devonian complex intruded by granitic masses and an ultra-basic dyke of considerable dimension, present most favourable geological conditions for the development of deposits of the base metals tin, silver lead, zinc and copper and the precious metals gold and osmiridium. Included as members of this complex are beds of dolomite and limestone.

That the area has potential mineral prospects second to none in Tasmania is clearly demonstrated by the fact that it embraces the North Pieman and Huskisson River lead-zinc-copper deposits, the Wilson River-Renison Bell Tin, osmiridium and gold deposits, the Stanley River tin field, the Meredith, Paradise and Rocky Rivers iron-ore deposits, the Corinna gold deposits and the Interview River wolfram deposits. The attached map indicates the general distribution of the known mineral deposits.

But as the geological survey of a State of the size of Tasmania must necessarily concern itself with mineral deposits of economic importance, attention has been directed to the geological mapping of isolated areas treated individually rather than to regional mapping, the elucidation of this exceedingly complex geological structure of Pre-Devonian rocks in which all the important metalliferous deposits are likely to occur still awaits a satisfactory interpretation. Owing to the extraordinary difficulties of terrain, climate and vegetation only the broadest of reconnaissance mapping has been possible and although the total area mapped in isolated surveys represents less than half of the area under review, sufficient is known to indicate the general meridional trend of the various zones of mineralization.

At least five important zones of mineralization have been located

- (1) The lead-zinc-copper deposits associated with the sheared and fractured western margin of the porphyries extending from Rosebery through the Pinnacles to at least the Que River.

Another ore zone is indicated about one mile west of the Pinnacles prospects where the Silver Falls ore body is exposed over 50 feet wide for a length of a 1,000 feet. Where sampled the grade was low but little or no prospecting work has been done. Natural facilities for mining exist.

Farther north, near the junction of the Que and Huskisson Rivers the barites-galena ore occurs in limestone and as considerable leaching has taken place, deep prospecting will be necessary to determine the true nature and extent of the ore.

- (2) The osmiridium and gold occurrences associated with the Wilson River - Renison Bell ultra-basic rocks.

At Wilson River the alluvials contain tin and gold as well as osmiridium: and as osmiridium

is known to occur in the foliated serpentine it is incomprehensible that no sustained attempt has been made to quarry osmiridium content. There are possibilities of large scale mining and sluicing. The Huskisson River "terrace" gravels are worthy of investigation by drilling because of the possibility of tin being derived from the numerous quartz porphyry dykes.

Gold deposits occur in Melba Flat gravels, osmiridium has been detected in the Ring River workings and asbestos has been found in several localities so that the whole of the Wilson River - Renison Bell ultra-basic rocks require a detailed geological and structural investigation in order to determine the distribution of these primary ores.

(3) The Stanley River tin field.

Geological conditions are favourable in almost any part of the field for both primary and secondary tin ores.

Any sedimentary rock and even the granite itself may carry tin lodes. Silurian rocks east of the Wilson River are known to carry tin in at least one locality. Silver lead may also be expected.

The Pre-Silurian rocks between the Wilson and Stanley Rivers particularly in the vicinity of the granite contact needs and warrants systematic prospecting. The extensive Harmon flats may carry tin and osmiridium and require investigation.

(4) Meredith, Paradise and Rocky Rivers iron deposits  
Under existing transport facilities these deposits are so remote that they have received but scant attention, but should reasonable access be provided the prospects may assume a much greater importance.

(5) The North Heemskirk tin field is an alluvial rather than lode mining area although several lodes have been found. Geological conditions are favourable for the deposition of tin ores especially in the vicinity of the slate - granite contacts.

Here the sub-basaltic sands and gravels have been subsequently cemented and their true nature has not always been recognised so that although tin is known to occur in them at several places no real attempt has been made to determine the prospective merit of the deep leads and terraces.

The future of mining in the Pieman River area doubtless will depend upon the development of known ore-bodies and the location of ore deposits which are not exposed at the surface and it is extremely unlikely that all mineral prospects are confined to the area mapped. Before any attempt can be made to assess the potential mineral prospects, of such an area as this, on a sound basis a complete and detailed knowledge of the geological structure is absolutely essential. In this area less than half has been geologically examined and that only in broad reconnaissance surveys. At the present time there is little or no incentive to the ordinary prospector to undertake active prospecting operations because primarily most of the mineral deposits of any size outcropping at the surface have been located and secondly because of the overgrown condition of existing tracks; travelling,

arduous under good conditions is well nigh impossible. The exceptionally heavy falls of snow during the winter of 1943 seriously aggravating an already serious position in respect of tracks.

Further more the restrictions imposed on the free movement of prospectors through scenic reservations and state forest reserves limits still more his sphere of operation.

The extraordinary conditions of terrain, climate and vegetation render the exploitation and development of the mineral resources of this area a matter for an organization with appreciable funds and expert technical staff rather than for the ordinary prospector.

Geological conditions obtaining in this area are undoubtedly favourable for the development of mineral deposits of economic importance and there are numerous prospects which warrant further testing to demonstrate their productive capacity, but until adequate access is provided there can be little hope of rehabilitating the mining either of the precious metals or the base metals.

Without exception it can be said that the dominant factor in retarding the development of mining in this area has been the lack of adequate transport facilities. Pack-tracks were provided in some cases but the high cost of packing, up to £12 per ton from Stanley River to Renison Bell was prohibitive.

Alluvial mining will require cheap electric power for the purpose of pumping water supplies for sluicing.

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