

PRELIMINARY REPORT ON THE MEREDITH RANGE DISTRICT.INTRODUCTION.

Under the Aid to Metalliferous Mining Advance, a comprehensive scheme of mineral exploration was instituted, entailing properly supervised track-cutting and prospecting coincident with geological reconnaissance and mapping.

A great extent of potentially tin and gold bearing country was known to exist in the vicinity of Parsons Hood, and from there towards the Meredith Range. Development has been retarded by several factors, very rugged topography, thick forests and almost impenetrable scrub and heavy rainfall. In general the forests, scrub, vegetation and depth of soil, peat etc. are such as to render surface prospecting, communication, and transport both difficult and arduous.

The object of the present investigation was to examine and explore the known mineral zones.

In March 1935, a party of five men, subsequently increased to seven, under the control of the Assistant Government Geologist, commenced operations from a base camp about two and a half miles north west from the Pine Creek bridge, which, at the time, was the terminus of the Pine Creek pack-track, from the six and a half mile peg on the Waratah-Corinna Road. Exploratory foot-tracks were cut through the Harmon River basin in the south and Pine Creek and Castray River to the north. The Pine Creek pack-track was extended a distance of approximately five miles south to the Little Wilson River.

Subsequently, late in May 1935, a second party consisting of five men commenced track-cutting from the 16 mile on the Waratah-Corinna Road in a general southerly direction to cross the Whyte River above the junction of the Heazlewood River. Good progress was made with this track, almost reaching the Whyte River.

Survey operations were commenced on 4th June 1935 by E.D. Blackwood, Authorised Surveyor, and carried on until 6th July, during which time approximately ten miles of traverse and topographical features were completed. He also measured base line and conducted triangulation over an area of approximately ten square miles.

Altogether the time occupied was four months, from March to July 1935, although the writer spent approximately two months only in the district, being absent for the remainder of the time on other Departmental business. Owing to the arduous climatic conditions prevailing in this part of the State, it was decided to cease operations during the more severe winter months, and work ceased on the 6th of July, 1935. This interim report deals with the area examined up to that date.

LOCATION and ACCESS.

The Pine Creek - Parsons Hood area under examination is portion of the Meredith Range and the investigation was confined to a tract of country with a general north westerly trend, along the eastern slopes of the Range and covering an area of approximately 24 square miles. It is bounded on the south by the Little Wilson River and Parsons Hood, to the north by the watershed of the Whyte and Wilson Rivers, the former represented by Loughnan Creek and the Castray River, and the latter by the Yellowband and Pine Creeks, and extends from the vicinity of the Wilson River westwards to the Meredith Range.

Access is gained by means of the pack-track known as Betts (1929) track, which leaves the Waratah-Corinna Road near the six and a half miles from Waratah, and extends southward for a distance of nine and a half miles; the track is cut out to a width of 12 feet. Beyond this (9½ mile peg) the track is about six feet wide and runs in a south-westerly direction for approximately two miles to Pine Creek bridge, which was, at the time, the terminus of the constructed track which subsequently was extended to the Little Wilson River. The old partially wrecked bridge over the Pine Creek was replaced by a new structure in a more favourable position down stream and a new bridge constructed over the Yellowband Creek.

Exploratory foot-tracks have been cut through the Harmon River basin and down towards the Wilson River. Jones (1901) old Stewart-Stanley track was re-opened as far as the Yellowband Plains. From where the Stewart-Stanley track turns south along Tin Creek, a foot-track continues east and then south along Pine Creek to connect with Betts track, a distance of approximately three miles.

Regarding the other area examined, it could be reached either by way of the Waratah-Corinna Road, leaving the road just east of the Heazlewood River, 16 miles from Waratah, from behind the old battery site of the Mt. Jasper Copper Mines, or from the Pine Creek area by way of Stewart-Stanley track mentioned above.

TOPOGRAPHY.

The topography of the Pine Creek-Parsons Hood and Meredith Range district is generally of very high relief and is essentially that of an extensive peneplain which has been elevated and dissected. The general level of the elevated peneplain or plateau would be approximately 2,000 feet. Rising to varying heights up to nearly 4,000 feet above sea-level, the Meredith Range, Parsons Hood and Mt. Ramsay, 3600 feet, 2800 feet and 3890 feet respectively, represent residual prominences above the old peneplain level. Since the elevation, the streams have cut deeply into the plateau and are still in a very youthful state of development.

The rugged Meredith Range extends from the Parsons Hood in a northerly direction for approximately ten

miles. This range, composed of granite, consists of a series of peaks well rounded in the characteristic fashion of weathered granite country. The body of the range is rugged, and is found to be cut up into gorges by the various water-courses, and most of these gorges are filled with almost impenetrable timber and scrub. The main range slopes steeply to the east and west. The rugged, broken nature of the range is due essentially to weathering agencies, which have been at work for a long period since the formation of the range.

Parsons Hood, the southern bluff of the Meredith Range, is a long flat-topped mountain, which rises to a height of 2,800 feet. The whole of the drainage of the area is affected by the Wilson River and its numerous tributaries. The main tributaries draining the area under discussion are the Yellowband and Pine Creeks and the Little Wilson and Harmon Rivers. While the Yellowband and Pine Creeks take rise among the spurs of Mt. Meredith and flow eastward, the others drain a considerable extent of the peneplained surface to the south, south east and east of Parson's Hood and have a general south to south easterly trend.

The steep slopes of the present hills and ridges, and the ungraded streams and rivers, have prevented any accumulation of any considerable alluvial deposits of recent date. Those which do occur are shallow and local.

GENERAL GEOLOGY.

Owing to the almost impenetrable timber, horizontal and bauera scrub etc., deep gorges and steep spurs in the area south of the 16 mile peg on the Waratah-Corinna road, and the limited amount of time available before work ceased in July, insufficient evidence was collected to interpret with any degree of accuracy the geological features and structure of this portion of the district, therefore it is deemed advisable to leave the discussion of it until the examination is completed at a later date .

The Pine Creek-Parsons Hood and Meredith Range area is occupied wholly by the acid group of igneous rocks and includes granite, granite-porphry, aplite and pegmatite.

Granite is extensively developed, and occupies the largest portion of the area discussed in this report. Typically the rock is of medium and fairly even grain-size, although it shews a tendency to become porphyritic in places, with phenocrysts of orthoclase of nearly one inch in length. Normally, the orthoclase reaches about one third of an inch in length; it is usually fresh in newly-broken specimens. Throughout the ground-mass of the rock is fairly abundant glassy quartz, in irregular masses of about one eighth of an inch in diameter. In some localities quartz becomes quite subordinate in amount. Black biotite mica is scattered through the rock. Tourmaline appears to be almost universally present but never in large amount in the normal granite.

A variety of granite which deserves mention is the nodular white granite, a rock in which the general appearance is almost "aplitic", due to the excess of white feldspars, some of which are lath-shaped. Quartz is present in variable amount. Black tourmaline is

almost universally present and black biotite mica is usually distinguishable. The striking feature of the rock is the abundance of nodules of quartz and tourmaline which it contains. The nodules vary considerably in size, from a fraction of an inch to six inches in diameter. The main mass of the nodule consists apparently of equal quantities of quartz and tourmaline. A notable feature is the manner in which the nodules resist weathering and stand out in striking relief from the weathered surfaces of the granite in which they occur. Ultimately they become detached from the parent rock and accumulate in the detrital and in the watercourses. The majority of them are spheroidal but some are rather irregular.

Granite Porphyry:

This rock was observed at various points throughout the granitic area, and may be either fine-grained or porphyritic. Usually the constituents of the normal granite are distinguishable. The rock occurs as narrow dykes in the main granitic mass.

Pegmatite:

The occurrence of pegmatite, although not abundant or important, is worthy of note. It occurs as narrow dykes usually a few inches in width and varying somewhat from point to point. The pegmatite consists essentially of coarse crystals of quartz and felspar usually orthoclase and occasionally a little tourmaline.

For the purpose of this report it is not thought necessary to elaborate upon the mode of origin of the varieties of granitic rocks and the structure of the granite massif, and the statements here put forward must necessarily be regarded as provisional and subject to any alteration that may be required when the final report is prepared.

It is apparent that all the granitic rocks are closely related genetically, and that all have resulted from the differentiation of a large mass of igneous rock material, in place, after it had been forced up into a thick series of sedimentary rocks. In other words, although different rocks are noticed they are but variations of the one main granitic intrusion and all the variations constitute the one granite massif.

Outside the area under discussion the granite can be seen to be intrusive into cambro-ordovician sedimentary rocks. No other evidence of age is available, but in conformity with other granites in Tasmania it is regarded as having been intruded in Devonian times.

Economic Possibilities:

Prospecting operations revealed that, although traces of cassiterite were found in many places, usually associated with the "nodular white granite" it did not occur in payable quantities. It has been already pointed out that the steep slopes of the present hills and ridges and the ungraded streams and rivers have prevented accumulation of alluvial deposits of any size.

At the time of the writer's investigation a prospecting party, of six men, was attempting to develop shallow and local accumulations along Pine Creek in the vicinity of the bridge and also at Coghlan's Prospect near the little Wilson River. Two sections were pegged on behalf of Waratah interests.

The party tried to work the bed of Pine Creek, approximately half a mile south of the bridge but primitive methods and frequent floods rendered the venture an unprofitable one.

North-west from the Pine Creek bridge a 20 acre dredging claim had been pegged by this party on behalf of O.A. Spinks after a little prospecting had been done. It consists of a flat of extremely variable width and extending probably 20 chains along the creek. Prospecting on the claim is limited to eight shallow shafts, maximum depth 7 feet, two of which were not bottomed owing to encountering heavy drift timber; with the exception of one, all shafts are on the south-side of the creek. The deepest shaft is only seven feet and reveals a section of two feet wash overlain by about five feet of clayey soil, containing but a trace of cassiterite. The bottom portion of the wash, some few inches, may reach a pound of cassiterite to the dish and contains numerous colours of osmiridium. No gold was observed. Other associated minerals are monazite, limonite and chromite present in varying proportion but never in objectionable amounts.

From the very limited amount of prospecting that has been done it is impossible to arrive at a true estimate of the value of the claim, but it is apparent that the working of this claim can be undertaken with but meagre hope of success for the depth of comparatively barren overburden (five feet) in comparison to the shallow depth of wash (two feet being the maximum) together with the amount of drift timber and boulders requiring manhandling, the cost of bringing water under sufficient pressure and the necessity for provision to elevate tailing and the all too frequent flooding to which the ground is subjected are conditions which rendered the prospects distinctly unfavourable.

The other section was an eight acre one pegged in the name of F.S. Thorne and was situated on a small button-grass flat near where Jones' (1901) staked track crosses the small tributary, of the little Wilson River, which flows east near Coghlan's Prospect and thence south; the flat is about two chains wide and five chains long and on the western side of the creek is situated the only shaft on the area, put down many years ago.

Results did not justify a continuance of operations and the applications were withdrawn in August last. No lodas were observed within area which warrant further exploitation.

Conclusions:

From this examination it is apparent that although the area is potentially tin bearing, no deposits of economic value, either lode or alluvial, were located, but in view of the rugged nature of the country and the difficulty of exploration, more intensive search may reveal such deposits, but it must be borne in mind that no large accumulation of alluvial deposits can be anticipated.

(SGD) Q.J. Handerson Jnr.

ASSISTANT GOVERNMENT GEOLOGIST.

Mines Department, Hobart.

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