

REPORT ON THE LITTLE WILSON RIVER
AND MT. RAMSAY ALLUVIAL TIN PROSPECTS.

(1) Introduction.

During December, 1933, an examination of the Little Wilson River and Mt. Ramsay alluvial tin prospects was made with the object of determining the extent and value of the reported new discoveries and to investigate the necessity of additional track clearing and extensions to afford better transport facilities.

In general, this report must be regarded as supplementary to that prepared by K.J. Finucane and F. Blake, 6th June, 1933, namely "Report on the Upper Wilson River and Mt. Ramsay Districts"; for although included within the scope of their report, the areas to which this report refers are remotely situated with the result that it was impossible for the previous investigators to make more than a hurried reconnaissance trip to them.

So for the sake of brevity, only where necessary will additional notes be given on the general topographical and geological features which have been discussed at length in the above report.

(2) Location and Access.

The areas examined lie to the south of the Waratah-Corinna Road. The Mt. Ramsay area is reached by means of a fairly well graded track, with a number of soft patches which require attention but otherwise quite suitable for pack-horses.

From the turn-off, five miles from Waratah, the track extends in a general southerly direction to the pine hut near the junction of Palmer and Aylett Creeks, a distance of approximately three miles, where the track forks, the western branch leading to the old South Bischoff workings and connecting with Betts (1923) track to Mt. Stewart while the other continues southwards for a distance of five miles through a thick myrtle forest, where it picks up and follows Jones (1901) track from Waratah to Parsons Hood for about a mile to the old Ramsay hut.

Beyond Mt. Ramsay, Jones track is thickly overgrown, but in the vicinity of the Little Wilson River, the other area examined, it is possible to follow the staked track.

The Little Wilson River area is situated some six miles south of the Pine Creek bridge the present termination of the constructed pack-track known as Betts (1929) track, which leaves the Waratah-Corinna Road near the six and a half mile peg and extends southward for a distance of nine and a half miles; the track is cut out to a width of twelve feet. Beyond this (9½ mile peg) the track is about six feet wide and runs south westerly for two miles to Pine Creek.

No defined track exists beyond Pine Creek. The route taken was across an open button-grass plain extending southwards across Yellowband Creek and along the head waters of the Little Wilson River, thence in an easterly direction along Jones (1901) track a distance of a half to three-quarters of a mile.

- (1) A.M. Reid - The Tin Deposits of the Waratah District.
- (2) J.B. Scott - Preliminary Report, Upper Wilson River District, West Coast.
- (3) K.J. Finucane & F. Blake - Report on The Upper Wilson River and Mt. Ramsay Districts.

(4) Geology

In the Mt. Ramsay area above the bed of the creeks are old terraces covered with morainal material consisting largely of enormous boulders of quartz-tourmaline. The terraces show a general south-westerly slope, at a very low angle from 3 to 5 degrees which indicates a possible main outlet by way of the Huskisson Valley. The creeks have since deeply entrenched themselves in the bed-rock of the glacial valleys, occupying narrow, steep-walled channels considerably above base level of erosion.

The country rock consists almost wholly of porphyritic granite which weathers easily with the result that it is only the more resistant quartz-tourmaline segregations in the form of nodules that withstand the weathering and erosion giving a predominance of this type in the "wash". The tourmaline is represented by both the green and black varieties.

As two unrelated areas are herein to be described it will be necessary to give all details relating to economic possibilities, productive operations etc. separately.

Mt. Ramsay Area.

This area consists of tin-bearing gravels and detritus ranging in depth from a few inches to two or three feet, covering a button-grass flat from two to ten chains wide and extending in an easterly direction for about three-quarters of a mile from the old Mt. Ramsay hut; through this flat flows a small tributary of the Huskisson River.

In the creek, the "wash", as a rule is shallow, with an average depth of approximately fifteen inches, but it contains a fair proportion of coarse tinstone or cassiterite. The "wash" is composed of water-worn pebbles, ranging in size up to two feet in diameter on L. Aylett's claim, the greater part consisting of quartz-tourmaline and to a much lesser extent quartz and porphyritic granite, with occasional sub-angular pieces of purple slate, and is overlain by a black peaty soil ranging in depth from one to four feet.

Very little prospecting has been undertaken to prove the value and extent of the deposit but the few shallow shafts that have been sunk tend to show the existence of cassiterite or tinstone in the "wash" over an area of approximately 60 acres although the probable extent would be very much greater.

It is not possible to form any idea of the average content per cubic yard for besides the variation in the distribution of the tin ore there is also a variation in the proportion of chromite to tin ore, the content

of the former reaching a maximum at the southern end of the flat and decreasing to negligible quantities in the vicinity of L. Aylett's claim.

The tin ore occurs in small sub-angular to well-rounded grains, the average size of which would be about $\frac{1}{8}$ of an inch in diameter. In some of the prospects tried the tin occurred in fine even grain size. In colour the tin varies from dark grey to black.

South of the old Ramsay hut osmiridium and gold are present in small quantities, four colours of the former and two of the latter being the best dish prospects obtained but these were the exception rather than the rule.

Chromite, a black mineral resembling ^{magnetite} but lustre somewhat like pitch, is present in abundant quantities at the southern end of the field but offers no great difficulty in the matter of separation owing to the disparity in specific gravities although it is not possible to affect separation by ordinary streaming methods.

The principle used is similar to that employed in the Willoughby jig which consists of a rising stream of water under a low pressure head. The volume of flow is under control and is adjusted to suit requirements.

Productive Operations.

At the present time only two claims are being worked. One of these is a few chains south of the old Ramsay hut, by W. Aylett and party (5 in all) and the other about three quarters of a mile north of the old hut by L. Aylett and party.

W. Aylett and party first worked the creek at the southern end of the flat where the chromite is particularly abundant; one analysis of concentrates gave a return of only 12% tin according to a statement made by C. Aylett.

Owing to the inability of the party to effect a satisfactory separation by ordinary streaming methods and being unfamiliar with other effective methods they were forced to abandon the claim and moved to the present site. Here the party have stripped a small paddock approximately twelve feet square exposing about eighteen inches of "wash" on a smooth granite bottom.

Dish prospects indicate payable ground provided the method of working is improved and that adequate water is available for treatment.

Although chromite is present in fair proportion the problem of separation has been in part solved by the placing in operation of a small improvised Willoughby jig which, owing to its limited capacity, of approximately 25 lbs. of mixed concentrates, and inadequate water supply is slow and inefficient.

No attempt is made to classify which is essential to speedy and efficient separation.

C. Aylett reports that the party is recovering a bag of tin a day, that is dressed to 68 to 70% tin.

The amount of osmiridium and gold recovered is so small that it will hardly pay for time expended in recovering it.

L. Aylett's Claim.

Conditions similar to those found on the other claim are found here with these differences. The "wash" is much heavier than observed on any other part of the field the boulders reaching a maximum size of over two feet in diameter.

The "wash" is handled twice before being thrown on to a hopper, a cast iron plate 2'6" x 2'6" with $\frac{3}{4}$ " in holes, and then streamed in a box.

The tin ore is coarse and sub-angular.

As pointed out above, in this part of the area chromite if present is negligible.

A small quantity of monazite is present but no gold or osmiridium was observed.

As this party had only commenced operations ten days prior to the writers visit and much of that time had been spent in cutting a tail-race and preparing a sluice-box etc., no figures are available which would serve to indicate possible production.

L. Aylett states that they were averaging a bag of tin per day at the present time.

Water Supply.

The country at the present time is experiencing an exceptionally dry period with the result that the water supply is far below normal, not more than half a sluice head being available at the southern claim and less at the northern one.

To enable more men to take up claims in this area it will be necessary to bring additional water in.

It is understood that a possible scheme exists which would tap the head waters of the Wilson River and necessitate the cutting of at least three miles of race. Further investigation of this scheme would be necessary to decide the practicability of it.

On L. Aylett's claim additional water is available by cutting a water-race a few chains which would at least double the present supply.

The Little Wilson Area.

Owing to the inaccessibility of this area and the difficulty experienced in getting to market any tin won, very little prospecting has been done; beyond testing the creek beds only one shaft has been sunk to prove the extent of the tin-bearing gravels and that only a few yards from the creek.

Dish prospects were taken in a number of west flowing creeks forming the head waters of the Harman River and some very encouraging results obtained.

Four to five ounces of coarse, rounded to

sub-angular tinstone (cassiterite), and quite free from chromite were the best prospects obtained.

The area consists of a series of flats arranged in tiers. The first one is a small button grass flat near where Jones (1901) track crosses the small tributary of the Little Wilson River which flows east near Coglean's Prospect and thence south; the flat is about two chains wide and five long and on the western side of the creek is situated the only shaft in the area.

Just above the bend where the creek turns east the valley opens out into two very large flats with a total length of three-quarters of a mile and a width averaging from five to ten chains.

Although no holes have been sunk in these flats to test the lateral extent of the tin-bearing gravels, dish prospects in the creek bed indicate a fair distribution over the entire length, with an approximate average of about 2 ozs. per dish.

Water Supply.

With the exception of the first flat, that is the lowest one, difficulty will be experienced in getting sufficient water to enable a number of men or small parties to work the deposits as they are situated well above the level of any stream of sufficient magnitude to permit water to be obtained by means of water-races and the configuration of the area does not lend itself to cheap dam construction.

Conclusions and Recommendations.

From the brief examination made of the areas the prospects are encouraging and indicate the presence of large areas of potential tin-producing country and it is the inaccessibility of the locality that has been responsible for inattention by prospectors in the past.

With regard to water supplies there will not be available sufficient water for large scale operations but in the normal rainy season adequate water could be made available to enable the working of a number of claims.

A small expenditure in giving attention to three or four soft places on the existing track is all that is necessary to provide adequate transport facilities to the Mt. Ramsay area.

The extension of the pack track from the Pine Creek bridge to the Little Wilson River a distance of approximately six miles and including three bridges, would give access to a large area where men could commence operations without much initial expenditure and providing better and cheaper transport facilities are made available much will be done to give the necessary impetus to the thorough investigation and development of its mineral resources.

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