REPORT ON

THE UPPER WILSON RIVER & MT. RAMSAY DISTRICTS.

(1) Introduction.

During October and November, 1932 an examination of the Upper Wilson River and Mt. Ramsay districts was made with the object of determining the probable extent and value of the alluvial tin, gold and osmiridium deposits known to occur within the area. In conjunction with this work we were instructed to examine and report upon the state of the various tracks and, if the mineral prospects justified it, to lay out a scheme for the construction of new tracks which would assist in the development of the district.

(2) Location & Access.

The area examined lies to the south of the Waratah-Corinna Road, Several tracks extend southwards from the road and of these the most important are the Mt. Ramsay Track and Betts (1929) Track. The former is a fairly well graded track suitable for pack horses; it leaves the road at 5 miles from Waratah and goes right to the old South Bischoff mine (Webb & Pryde's section). At the pine hut near the junction of Palmer and Aylett Creeks a narrow foot track extends southwards to Mt. Ramsay. It is understood that this foot track formerly went through to Renison Bell but E.J. Webb stated that it was overgrown over that portion extending beyond Mt. Ramsay.

Betts (1929) Track leaves the road at approximately six and a half miles from Waratah. For a distance of nine and a half miles it has been cut out to a width of twelve feet and made suitable for pack horses. Beyond the mine and a half mile mark a narrow foot track extends in a south-westerly direction to Pine Creek. (11½ miles from the road). From Betts Track at Keegans Creek a foot track extends westwards for approximately three and a half miles and connects with a track from the Stanley River to Mt. Stewart. From the vicinity of the 9 mile peg a rough bush track extends eastwards to the Wilson River.

In addition to the above a narrow foot track goes from Webb & Pryde's section the the 5¾ mile on the Waratah Corinna Road. Betts (1923) Track to Mt. Stewart leaves this at approximately three quarters of a mile from the section; for a distance of two miles this passes through heavily timbered country and although partly overgrown it can be followed without much difficulty. Beyond two miles it is almost completely overgrown; the continuation of this track beyond the point where it crosses Betts (1929) track was not examined.

From the end of Betts (1929) tack at Pine Creek an open button grass plain extends southwards across Yellowband Creek and along the headwaters of the Little Wilson River. By following this route a connection may be made with Jones (1901) track from Waratah to the Parsons Hood. Although Jones track may be followed

over that portion of it examined, viz, near Coghlan's prospect, it is presumed that it would be overgrown in a great may places.

(3) Previous Reports.

(1) A.M. Reid The Tin Deposits of the Waratah District.

(2) J.B. Scott Preliminary Report, Upper Wilson River District, West Coast.

(4) Topography.

In general the country is typical of the West Coast Region of Tasmania. Mt. Ramsay, the highest point in the district, lies about seven and a half miles due south of the five mile peg on the Waratah-Corinna Road. It consists of three main peaks which trend north-east. From the northernmost peak a long ridge extends northwards and this forms the divide between the headwaters of the Wilson River and those of the Huskisson, these being the two main streams.

The principal tributaries of the Huskisson are the Ramsay River and Main Creek, while those of the Wilson are Johnson, Moore, Betts, Keegan, Pine and Yellowband Creeks and the Little Wilson River.

From the vicinity of Betts Creek a series of comparatively low ridges extend to within two miles of the Waratah-Corinna Road. These form the divide between the headwaters of the Wilson River and those of the Castray.

An open button grass plain extends along Betts track in the vicinity of Moore Creek and another similar plain extends from Pine Creek southwards to the Little Wilson River. On the western side of the Wilson River and extending northwards between the Little Wilson and Yellowband Creek there is a fairly high range of bare granite hills.

The country is generally heavily timbered with myrtle, eucalyptus, leatherwood etc. and the undergrowth consists of the usual admixture of horizontal scrub, laurel and stinkwood with occasional patches of ti tree and bauera. Near the junction of Pine and Keegan Creeks there are stated to be extensive forests of Huon pine.

(5) Geology.

The rocks of the district may be subdivided as shown in the following tables.

Sedimentary

System		
Ordovician	Dundas	Slates & igneous breccias
Tertiary	Upper	Gravels, sands, clays etc.
Recent		River Gravels

	Igneous
Devonian	(Acid - - - -Granite (Basic & Ultra Basic -(Pyroxenites (Peridotites, (Dolerites, etc
Tertiary	Basalt

The Sedimentary Rocks.

Dundas Slates and Breccias:- These consist of purple, black and grey slates and fine grained greenish or greyish igneous breccias. The breccias are sedimentary rocks composed mainly of igneous material. They are described in detail by P.B. Nye in Bulletin 33 "The Silver-Lead Deposits of the Waratah District". Interbedded with the slates and breccias there are occasional patches of dense black cherts.

These rocks occur principally in the vicinity of the Waratah-Corinna Road. They extend southwards from the road for a distance of fifty chains along Betts (1929) Track. A small area of these rocks was also observed in Aylett Creek.

In his mapping along Betts (1923) Track, A.M. Reid has shown a narrow belt of slates and breccias extending southwards between the granite to the east of Moore Creek and the belt of basic and ultra basic rocks occurring along Betts (1929) Track. In traversing Betts (1923) Track only one small isolated area of slates was seen and there was nothing to suggest that these were continuous with the slates and breccias occurring to the north. The impression gathered was that the basic and ultra basic rocks were in direct contact with the granite.

In the upper portion of Aylett Creek, to the west of Mt. Ramsay track, slates and breccias are exposed in the creek bed where Recent gravels have been worked for their tin content.

No definite structural features were observed among the slates and breccias, the rock exposures being too poor to enable strikes and dips to be taken.

On Betts track, at a point about thirty chains south of the road, the Dundas breccias are traversed by small veins of actinalite. This is probably due to contact metamorphism consequent on the intrusion of the ultra basic rocks occurring immediately to the south. In thin section the actinolite is seen to be present both as veins and as fine needles throughout the rock. The other constituents of this rock are felspar, magnetite and ilmenite. In contrast with other types of Dundas breccia no quartz was seen in the section.

Tertiary:- In the Ramsay River valley near the mouth of Palmer Creek there occur partly cemented gravels, interbedded with clays; the latter contain thin seams of lignite. These beds are much older than the gravels and sands exposed in most of the creeks and have therefore been referred to the Upper Tertiary. Terrace gravels occur on the hillside to the south of Palmer Creek, above the bed of the Ramsay

River. These are regarded as being of the same age as those interbedded with the lignitic clays.

Recent:- These consist mainly of river gravels and sands occurring in the beds of the present streams. For the most part the gravels are composed of quartz, chalcedony, quartz-tourmaline and granite pebbles varying from one to eight or nine inches in diameter. The thickness of the gravels and sands varies in different creeks and ranges from two to nine feet or more. A bed of gravels occurring in Machens Creek, on the west side of the Wilson River, consisted mainly of slate pebbles; but it is presumed that this forms portion of the terrace gravels deposited by the Wilson River and that the slate pebbles were derived from the belt of slates and breccias occurring to the north.

The alluvial tin, gold and osmiridium is contained principally in gravels composed of quartz, chalcedony, quartz-tourmaline and granite pebbles so that these beds are the most important economically.

The Igneous Rocks.

Devonian.

(a) Granites. - These rocks occupy the greater part of the area examined. The main belt crosses the Waratah-Corinna road between the 4½ and 5½ mile pegs and extends southwards as far as the Little Wilson River and probably for some distance beyond it. Towards the centre of the area the granitic mass attains a width of more than six miles, extending from Mt. Ramsay westwards to the head-waters of Pine Creek.

Many distinct varieties of granite occur within this mass but the most common type is a medium to coarse grained rock composed principally of quartz, orthoclase, plagioclase and biotite. The colour is usually dark grey but some light pink varieties occur. In some places the granite is porphyritic, the phenocrysts being generally orthoclase; they vary in length from half an inch to an inch. Near the Summer P.A. and also near the old South Bischoff workings aplitic types of granite were observed. In both cases, quartz-cassiterite veins occur within the aplite.

Throughout the granitic mass there occur innumerable quartz-tourmaline veins and occasionally, large quartz veins containing small amounts of tourmaline. One of the latter occurs quite close to Betts (1929) Track at approximately four and a half miles from the road. Two samples taken from small veins of the quartz-tourmaline type yielded only a trace of tin when assayed.

Near the eleven mile peg on Betts (1929) Track a small porphyrite dyke was observed to be intruding the granite. It is approximately half a chain wide and strikes N 5°E. This is probably a later basic differentiate of the main granitic magma and may possibly be related in some way with the belt of basic and ultra basic rocks occurring further to the north.

(b) Pyroxenites, Peridotites, Dolerites etc. - Extending southwards along Betts (1929) Track from the headwaters of the Arthur River to the vicinity of the 4 mile peg, there is a fairly extensive belt of basic and ultra basic rocks consisting mainly of pyroxenites and dolerites. Though we were unable to devote very much time to the examination of this belt specimens of the principal rock types were obtained.

Towards the northern end of the belt the dominant rock type is a pyroxenite partly altered to serpentine. Approaching the divide between the headwaters of the Arthur and Wilson Rivers these rocks are displaced by rock types similar to the websterite-porphyrites of the Magnet district. After crossing the divide the rocks are principally dolerites and theses persist for a distance of approximately one mile, along the track. Towards the southern end of this belt the rocks are principally partly serpentinised peridotites and pyroxenites, serpentines and leached serpentines. The leached serpentine is a light yellowish to greenish in colour and in hand specimen resembles an acid igneous rock.

Near the 3½ mile peg we obtained a specimen of hornblende-plagioclase porphyrite.

Although we were unable to determine the exact nature of the relationships between the several rock types observed, their general occurrence and nature rather suggested that this belt is composed of a number of smaller dykes ranging in composition from intermediate, through basic, to ultra basic.

(c) Diorite Porphyrite. - Immediately south-west of Wombat Flat and extending for approximately one mile along Mt. Ramsay track is a diorite porphyrite. In hand specimen this rock is dark green to black in colour and resembles a dolerite. In thin section it is seen to consist of hornblende and plagioclase felspar with occasional phenocrysts of felspar. The diorite porphyrite is apparently intrusive into slates and breccias of the Dundas Series, which occur immediately to the west in the bed of Aylett Creek.

Tertiary.

Basalt. This occurs along the track from the old South Bischoff Mine to Mt. Ramsay. It is first seen about one mile south of the pine hut and extends southwards for a distance of approximately two miles. A somewhat smaller area occurs about 40 chains further south. The basalt appears to be directly overlying the granite.

(6) Alluvial Tin, Gold & Osmiridium.

In certain zones within the granite area, most of the creeks are found to contain alluvial tin, the amount of which appears to depend largely on the size and nature of the creek. The tin varies in colour from dark grey to black and in size from 1/16 to 3/8 of an inch. Though frequently associated with the alluvial tin, the gold and osmiridium appeared to be more restricted in their occurrence and were relatively more abundant in some creeks than in others. That is to say creeks containing a fair quantity of tin in the gravels may contain very little gold or osmiridium whereas other creeks containing lesser quantities of tin may contain more gold and osmiridium. In some cases tin, gold and osmiridium have all been present in fair quantity but most of the creeks showing this feature have now been worked

out. Monazite is present in small quantity in some of the creeks.

The alluvial tin may be said to occur within three main zones. These are -

(a) Along the headwaters of Johnson's Creek and the Ramsay River from the vicinity of Webb & Pryde's Section (which is adjacent to the old South Bischoff Mine) northwards to within a half to three quarters of a mile of the Waratah-Corinna Road. This may be referred to as the South Bischoff zone.

(b) From the 6 Mile peg on Betts (1929) track as far southwards as Pine Creek, and extending eastwards for a short distance beyond the Wilson River. This will be called the Betts Creek zone.

(c) A small area lying about one mile to the west of Mt. Ramsay - the Mt. Ramsay zone.

As far as we could ascertain very little, if any, gold or osmiridium is associated with the tin occurring within zones (a) and (c). However many of the creeks occurring within zone (b) contain a certain amount of both gold and osmiridium but, as stated above, it is relatively more abundant in some creeks than in others. The fact that gold and osmiridium are associated with the tin occurring along the western portion of the granite mass and not with that on the east is probably due to the presence of a belt of basic and ultrabasic rocks extending along the western margin of the granite.

In order to give a clear conception of the economic possibilities of the area, all possible information relating to the various creeks examined is shown below.

South Bischoff Zone.

Ramsay River. - The Ramsay River, a tributary of the Huskisson, is formed by the confluence of Badger and Wombat Creeks at Wombat Flat. These creeks rise in the vicinity of the five mile peg on the Waratah-Corinna Road. Wombat flat and most of the creeks to the north have been worked in the past and their tin content extracted. Below Wombat Flat and extending down the Ramsay River for about ten chains below Palmer Creek there are extensive river flats, but, with the possible exception of a short stretch along the lower portion of Palmer Creek, the gravels of these flats do not appear to have been mined. Gravels are exposed in the tail race and old alluvial workings of Palmer Creek near its junction with the Ramsay River; they consist mainly of quartz and quartz-tourmaline pebbles from 2 to 8 inches in diameter; the thickness of the beds ranges from 3 to 6 feet. A number of dish prospects taken from the old Palmer Creek workings and from the tail race near its entrance into the Ramsay gave results varying from a half to two ozs of tin per dish, and a little monazite.

Summer P.A. Creek. - This is a small tributary of Badger Creek. At the time of our visit Gonninon Brothers were working in this creek at a point about five to ten chains above the track from the 5¼ Mile on the Waratah-Corinna Road to Webb & Pryde's section. The creek had been worked in the past but a fair amount of wash had been left in the sides. Fair results were obtained from two or three prospects taken from the wash, Though the ground remaining to be worked does not appear to be very extensive it seems probable that a few bags of cassiterite could be obtained by diligent and careful work.

Johnson's Creek. - (Webb & Pryde's Section 10995/M 40 acres). This creek is one of the principal tribuataries of the Wilson River. The section embraces 20 chains of tin bearing gravels extending in north-south direction with the creek. Of the 20 chains of alluvial ground 4½ chains had been worked out at the time of our visit. The section was held from 1920 to 1924 by the Waratah Tin Slucicing Company who had worked the alluvial ground for a distance of 2½ chains northwards from the south boundary of the section. The amount of stream tin (cassiterite) obtained over this length is reported by W. Pryde as being approximately 4 tons. Subsequently this ground was worked for a further distance of 2 chains. The tin production over this length is as follows:-

Machem & Pryde	0 tons 5 cwt. 1 qr.
Machem & Brothers	0 " 3 " 0 "
Webb & Pryde	1 " 12 " 0 "
Total	2 tons 0 cwts. 1 qr.

Thus the total production of stream tin from the 4½ chains of worked ground would be approximately 6 tons.

The present section was applied for by Webb & Pryde in October 1932. These men had installed a sluicing nozzle and a hydraulic elecator, water being obtained from two dams located about one mile higher up Johnson's Creek. At 4½ chains from the south boundary the workable ground was 6 feet deep and about one chain wide. The average width of the ground already worked was given as being approximately one chain and the depth as 5 to 6 feet. The alluvial tin (cassiterite) occurs in coarse gravels whose average thickness is approximately 1 foot 3 inches. The gravels are composed of pebbles of quartz, quartz-tourmaline and granite, and are overlain by 4 feet 9 inches of soft clay, soil and roots. Below the gravels there is a few inches of soft clayresting on decomposed granite, the latter grading into solid granite. The upper 4 feet 9 inches of the face contained only a little fine cassiterite. The cassiterite being won is of a dark grey colour and varies in size from 1/16 to ½ an inch in diameter.

Above the present face the creek flat extends as far as the north boundary of the section and there is approximately one chain of unworked ground above this. Thus there is from 15 to 16 chains of ground remaining to be worked. Johnson's creek was in flood at the time of our visit and we were unable to sink any test holes in the unworked ground but the following information may be of some use.

At 6½ chains above the south boundary the width of alluvial ground is constricted by a hard granitic bar in the creek. At 7 chains a large creek enters Johnson's Creek from the south east corner of the section. A wide flat occurs at the junction and extends for a few chains back towards the south east corner. Three prospect holes were sunk in this tributary stream just above the lease boundary. The results obtained are as follows:

(a) Hole 2 chains outside boundary - A little fine cassiterite
(b) Hole 4-5 chains outside boundary - Top wash ¼oz. per dish not bottomed.
(c) Within a few feet of (b) Wash at 3 feet ½-¾ oz. per dish - not bottomed.

Although this tributary stream does not appear to be very important, the fact that it contains tin may favourably affect the value and extent of alluvial tin bearing ground occurring at the junction.

At nine chains above the south boundary a prospect was taken from some wash lying near an old prospect hole. This yielded 3½ ozs. of fine tin to the dish. At 15½ chains from the south boundary similar material lying alongside an old hole yielded a little fine cassiterite and some tourmaline, ilmenite and magnetite.

Though little can be said as to the probable tin content of the unworked ground above the hard granitic bar, our examination showed that the flat extends northwards for a distance of 15 chains and that it varies in width from one to three chains. Judging by the amount already obtained from the 4½ chains worked it seems probable that a good deal of alluvial tin remains to be won from this section.

Johnson's Creek below section 10995/M. - This portion of Johnson's Creek was not examined but R.W. Pryde stated that he had prospected it for a distance of approximately one mile, that it has been swept clean most of the way but that, where any flat stretches did occur, dish prospects averaged from 1 to 2 ozs. of cassiterite. At a distance of one mile below the section there are said to be falls 60 feet in height and about twenty chains below the falls there are flats which extend southwards to Guy's Creek. As far as is known these flats are untested.

Alluvial Tin Production from the South Bischoff Zone. - The following information with regard to the past production of alluvial tin from this zone was supplied by J. Betts & R.W. Pryde. The figures supplied are only approximate.

Johnson's Creek.	tons	cwts.	qrs.
Section 10995/M	6	0	0
Section 7214/M	1	10	0
" 7245/M	0	4	0
Near Top Dam	0	4	0
Above Top Dam	7	10	0
W. Branch above Top Dam	0	10	0
Total	15	18	0

Badger Creek.	tons	cwts.	qrs.
Prydes Creek	4	10	0
Summer P.A. Creek	4	18	0
Small Creek near Moore's Prospect	2	10	0
West Branch	6	0	0
Near Road	0	5	0
Total	18	3	0
Palmer Creek.			
Main Branch	5	6	0
Aylett Creek	1	18	0
Total	7	4	0
Jones' Alluvial Workings (total)	0	10	0
Wombat Creek (total)	77	0	0
Grand Total	118	15	0

Thus the total production of alluvial tin from this area is in the vicinity of 120 tons.

Bett's Creek Zone.

Bett's Creek. - This large creek heads to the west of Betts (1929) Track and flows in a general south easterly direction to join the Wilson River. Practically no mining has been undertaken owing to the large volume of water to be controlled. J. Betts states that 2 bags of tin, 6 dwts. of osmiridium and 3 dwts. of gold were obtained from one hole sunk in the wash at a point a few chains below the track crossing. The distance between the track and the Wilson River is approximately three miles. We were able to traverse this but weather conditions were so bad that no test holes could be sunk. Some portions of this three miles have been swept and contain no wash but considerable lengths are fairly flat and should afford a good catch for alluvial tin and other minerals. A large flat exists at the Junction of Betts Creek and the Wilson River; a trial hole sunk on this flat a few chains up from the Wilson yielded 6 ozs. of cassiterite to the dish, the depth of the wash being seven feet. Owing to its size and the fact that practically all of its tributaries contain tin and osmiridium Betts Creek should be worth systematic testing.

Ladlee Creek. - This crosses Betts Track at 9½ miles and flows in a north westerly direction to Betts Creek. It was worked by Ladlee over a length of 3 chains for a return of 13 bags of tin and ½ oz. of osmiridium and by J. Betts over 13 chains for 3 tons of tin and 5 ozs. of osmiridium. Portions of this creek yet remain to be worked below the track while that portion above the track has not been thoroughly tested. The width of workable ground in this creek varied from 10 to 20 feet or more and the depth of the tin bearing wash from two to three feet.

Luke Creek. - This flows in a general southerly direction into Betts Creek and lies about 60 chains east

of Betts Track. Luke Bros. worked over a length of ten chains for a report of approximately 1½ tons of tin and several ounces of osmiridium. P. Hurley is at present sluicing in this stream, above Lukes' old workings, and has won 22 bags of tin and a little osmiridium over a length of 11 chains. The thickness of wash in the present workings varies from 18 inches to 2 feet. Two dishes of wash taken from the creek gave good prospects of coarse tin, several colours of osmiridium and one colour of gold.

Robbie Creek. - This is a small tributary of Betts Creek lying about 20 chains east of Luke Creek; its course is generally parallel to the latter. The gravels of this stream vary from 18 inches to 2 feet and carry tin and osmiridium from top to bottom. The bottom 4 to 10 inches generally carries the best values. Four chains of this creek were worked by Hurley & Webb for 6 bags of tin and 11 dwts. of osmiridium; Betts worked two chains for 7 bags of tin and 3 dwts. of osmiridium; Devlin and party worked ten chains for 4 bags of tin, and Judd worked a short length of the creek for 1 bag of tin and 4 dwts. of osmiridium. Four dishes of wash were tried and fair tin prospects obtained together with a few colours of osmiridium.

In addition to those described above two small tributaries of Betts Creek were tested. These are located a short distance west of the Wilson and are crossed on the foot track from Betts Track to Machems Creek. They yielded fair tin prospects but are too small to be worked profitably.

Machem's Creek. - This is a small tributary of the Wilson River and is located about 20 chains above the mouth of Betts Creek. It has been worked over a length of four chains. Machem and party obtained 10 dwts. of osmiridium, 4 dwts. of gold and 1 bag of tin, Dalton and party 10 dwts. of osmiridium and a few s dwts. of gold, and Judd 5-6 dwts. of osmiridium and a little gold from various portions of it. Pearson and Lynch were engaged in cleaning up the bottom of this creek and had won four bags of concentrates containing cassiterite and chromite. A sample of this concentrate when assayed in the Government Laboratory at Launceston gave a result of only 18.1% metallic tin.

Keegan's Creek. - Keegan's Creek crosses Betts track at 10½ miles from the Waratah-Corinna road and flows in a south easterly direction into Pine Creek. On the upstream side of the track, near the crossing, three chains of the bed have been sluiced by Marsh and and Pearson. The gravels in this section are about 2 feet deep. The 3 chains of ground yielded 2 bags of tin. At the head of these workings the bottom has flattened slightly and it would be necessary to bring in a deeper tail race in order to continue working.

About forty chains above the track are Pryde Bros. and Keegan Bros. old workings. These consist of a fairly deep tail race cut out of the granite and approximately 10 chains of worked ground. The wash averaged 3 feet in depth, the bottom portion consisting of pebbles and boulders of cream coloured chalcedony, quartz, quartz tourmaline and granite. Two and a half tons of stream tin and 10 ozs. 4 dwts of osmiridium were obtained from these workings.

At the head of Pryde and Keegsn's workings the alluvial ground is rapidly increasing in depth and appears to be spreading out on to a flat area on the western side of the creek. In order to work the deeper ground it would be necessary to deepen the old tail race, or, providing the necessary water and fall could be obtained, to instal a sluicing nozzle and an hydraulic elevator.

Pine Creek. - This is crossed by Betts Track at a distance of approximately 11½ miles from the Waratah-Corinna Road. It rises approximately one and a half miles north-west of the track crossing. It flows in a general easterly direction and joins the Wilson River about one and a half miles below the mouth of Betts Creek. With the exception of a few short stretches the upper portions of Pine Creek have been worked out. Though it was evident that a considerable amount of work has been carried out we were unable to obtain full particulars as to the amount of tin and osmiridium produced. The following particulars are all that were available. Marsh, from 3 chains of ground located ½ mile below Betts Track, obtained 75 lbs. of tin and 6 dwts. of osmiridium; Pryde Bros. won 3 bags of tin and 4 ozs. of osmiridium from an upper left had branch of Pine Creek, and from a small tributary flowing in from the north they won 17 bags of tin and 10 ozs. 4 dwts of osmiridium.

From the point of view of future production the most promising area on Pine Creek is the fairly flat stretch extending approximately sixty chains upstream from the track crossing. Owing to adverse weather conditions no test holes were sunk near the creek itself but a small north flowing tributary which enters Pine Creek at the track crossing yielded a little coarse tin and some fine monozite.

Yellowband Creek and the Little Wilson River. - During a reconnaissance trip to Coghlans prospect these creeks were examined very briefly. Mr. J. Betts, one of our field assistants and a most reliable and experienced prospector, stated that he had prospected these streams but that he had obtained no encouraging results.

Wilson River. - Northwards from Pine Creek, most of the tributaries of the Wilson contain greater or lesser amounts of alluvial tin. Hence it seems reasonable to assume that any flat areas along this stream should be worth testing for that mineral. Some information relating to the upper portion of the Wilson has already been given when describing Johnson's Creek. In the Betts Creek zone there are extensive flats above Machems Creek. Similar flats exist at the mouth of Betts Creek and these

extend downstream for a distance of approximately half a mile. Above the mouth of Pine Creek the Wilson is reported as flowing in a deep rocky gorge. As far as is known the flat areas described have not been tested.

Creeks between the 6 and 8 mile pegs on Betts Track. - A number of small creeks crossing the track were sampled and practically all of them found to be tin bearing. The most promising is that near the 7½ Mile hut. Here good dish prospects of coarse black tin were obtained; this creek has been opened out over a length of two chains.

Though most of these creeks are small they should be worth testing on the lower (western) side of the track.

Other creeks. - In addition to those described above it is probable that some of the tributaries of the Wilson flowing in from the eastern (Mt. Ramsay) side should also contain alluvial tin. A small creek entering the Wilson about twenty chains below Betts Creek was tested by Mr. J. Betts at out request. One hole yielded approximately 3 ozs. of coarse tin per dish, the depth of the wash being two feet.

The total production of tin,osmiridium and gold from the Betts Creek zone is, approximately, as follows:

Alluvial tin (cassiterite)	11 tons
Osmiridium	33 ozs.
Gold.	Uncertain, probably several ounces.

Mt. Ramsay Zone.

A very brief visit was made to this vicinity for the prupose of examining E.J. Webb's prospect. No time was available in which to examine any of the creeks, but, judging by the amount of tailings, many of them appeared to have been worked out.

(7) Lode-Tin Prospects Examined.

Coghlans Prospect. This is located about one mile east of the bend on the Little Wilson River and approximately four miles south-east of the end of Betts (1929) track at Pine Creek. It may be reached by following the open button grass southwards from Pine Creek across Yellowband Creek and thence along the Little Wilson to Jones' Track. This is then followed for about three quarters of a mile, the workings being situated about ten chains east of it.

The lode strikes E35°S and has been traced over a length of 60 feet, five shallow holes having been sunk on it. At the surface there is some loose gossaneous material and the trenching has revealed a quartz-tourmaline-pyrite vein containing a little cassiterite. Dish prospects taken along the surface yielded a little coarse tin but insufficient work has been done to

enable one to judge either the size or value of the vein. A sample of the veinstuff lying about the surface yielded only a trace of tin when assayed.

E.J. Webb's Prospect. This is located approximately one mile due west of the southermost peak of Mt. Ramsay and may be reached by following a track which goes southwards from the pine hut at the junction of Palmer and Aylett Creeks. The distance from the pine hut to Webbs Prospect is approximately 6½ miles.

By following up a small creek flowing from the north east, Mr. Bebb has located a shallow gutter containing coarse detrital material composed of pieces of granite, quartz, tourmaline and quartz-tourmaline veins. Among this rock and vein detritus there occur small and large nuggets of cassiterite which vary from 1 ounce to 3 lbs. in weight. The creek has been trenched for a distance of approximately seven chains. It is apparent that this material is being shed from a vein or lode and it should be well worth doing some further systematic trenching in an endeavour to locate it. It is suggested that the best method of attack would be to put in a series of trenches at short intervals above the present workings. The bottom of the gutter could then be cleaned out where the main run of tin bearing rubble appeared to cease and carefully examined for any signs of a lode or vein. Should this prove unsuccessful it would be advisable to trench the hill on the northern side of the gutter and immediately above the last trench in which detrital lode material and cassiterite had been obtained.

A fair amount of trenching etc. has been carried out in the past in an endeavour to locate the source of this vein material but as far as could be judged none of it has been done along systematic lines.

(8) Conclusion.

The present examination has confirmed the existence of a large area of potential tin producing country in the Betts Creek area. Most of the creeks in the area adjoining the old South Bischoff Mine have now been worked out but the Ramsay River holds possibilities for the future, and Webb and Pryde's section should yield a good many tons of alluvial tin.

In the Betts Creek zone, osmiridium has proved to be payable when worked in conjunction witht the alluvial tin but the amount of alluvial gold associated with these minerals is usually very small. Among the many prospects tried during our visit only a few colours of gold were observed.

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