

WESTERN COUNTRYREPORTS BY THE HON. J.R. SCOTT, AND MR. C.P. SPRENT.-----
GOVERNMENT GEOLOGISTNew Town,
22nd May, 1877.

Sir,

I beg to forward you a sketch map of my recent route from Hobart Town via Lake St. Clair to the Pieman River just above its navigatable point, and thence by Mount Bischoff to Emu Bay making a circuit which I believe I am the first to have accomplished. I send it partly on public grounds, to give as much information as possible to your Department as I can of a tract soon likely to attract the attention of prospectors; and secondly with a request that you will confirm and record some names which I have conferred.

The first of these.- Mount Tyndall - is an appropriate continuation of the sequence of names of eminent men of science given by Gould to the peaks of the West Coast Range, of which it is one.

Lake Dora and Lake Spicer I named in honor of Mr. and Mrs. W. W. Spicer of this city.

I have inserted such native names as I could find recorded. That of the Pieman is more euphonious than our own name for it. One of those of Mount Heemskirk was also the name for the so-called "flints" used by the aborigines.

I fixed various points along the route with tolerable accuracy by prismatic-compass observations of three trigonometrical points where possible, or else to well-known mountains. A good deal of the filling-in is from Gould's plans, in many places certified by me. Still it is only a sketch, liable to considerable error. I have written full explanations upon it, except as to the distances, which I estimate as under.

I have the honor to be,
Your obedient Servant,

JAMES R. SCOTT.

The Hon. the Minister for Lands and Works.

Estimated distance along route	Miles	Nature	Total
Hobart Town via Hamilton & Malborough to boat-house at Lake St. Clair	117	Cart road	117
Lake St. Clair to King's R. at junction of North & South Eldon Rivers	39	Gould's marked track-partly fit for pack-horses, partly foot-track.	156
King's River northerly by Lakes Dora & Spicer, and thence along top of Dundas R.	20	Trackless bush, except where patches were cut through scrub	176

Top of Dundas Range down to nearest open country in direction of Mount Heemkirk .	5	Foot-track cut through forest and scrub.	181
Across open country to Donnelly's track near bend of Pieman River south of Mount Livingstone	10	Trackless bush- part recently burnt	191
Along Donnelly's track to his main depot at head of navigation.	12	Foot-track cut through scrub-unmarked across about four miles of open country	203

Donnelly's depot to Sprent's track of 1876, S.W. of Parson's Hood	12	Part cut track through scrub-rest trackless bush	12
Along Sprent's track of 1876 to Knole Plain.	25	Rough foot-track cut & marked to Mt Ramsay Rd. then horse track.	37
Knole Plain to Emu Bay	48	By cart road.	85

Lands and Works Office,
19th June, 1877.

Sir,

I have the honor to acknowledge the receipt of your letter of the 22nd May last, accompanied by a sketch map illustrative of your route through Western Tasmania via Lake St. Clair to the Pieman River and via Mount Bischoff to Emu Bay, and desire to thank you on behalf of the Government for the very valuable information it contains.

The names suggested by you for various mountains, &c shall be adopted; and when Mr. Sprent furnishes me with a map of the various routes he has accomplished in that country, it is my intention to have a lithographic plan issued for the public benefit, more especially prospectors, whose researches will be materially assisted by the information you have each contributed.

I have the honor to be,

Sir,

Your obedient Servant,

C.O'REILLY,

Minister for Lands & Works

The Honorable James Reid Scott, New Town.

Hobart Town,
May, 1877.

Sir,

During the past five months I have been employed cutting tracks and exploring in the vicinity of the Pieman and Arthur Rivers, and I now have the honor to furnish you with the following Report.

The members of the party besides myself were C.W.Lord, F.H. Long, D.Jones, and J.Burke, Leaving Table Cape on the 21st December.

1876, we arrived at Circular Head the same day, and immediately sent our baggage out to the starting point selected. On the invitation of Mr. S.B. Emmett we established our head-quarters at his farm, close to the south boundary of the Circular Head estate.

The first work to be undertaken was the re-opening of Emmett's track to the Arthur. This track was cut by Mr. Emmett for the Government years ago and has several times been re-opened at private expense, but at the time of my visit it was much blocked up by fallen timber.

After leaving the cultivated farms the track follows a direction as nearly south as the nature of the country permits and for a distance of about one mile passes through some good agricultural land, after that it enters the usual description of myrtle forest, almost universal in the back parts of the Country of Wellington. This description of country continues for about two miles, save where the locality a stretch of about one mile of bauera scrub and gum trees lends a by no means pleasing variety to the travelling. The forest is very broken and intersected by numerous creeks, but the ~~xxxxxx~~ hills do not rise to any great height above the surrounding country. The rock is in most places basalt, but here and there quartz gravels shows out, and a soil, composed apparently of decomposed slate. In fact it would appear that this country, as well as the Campbell Range, is but a thin overlap of basalt upon a Silurian formation.

About nine miles from Emmett's farm there is a branch track going to Kay's hut, at the junction of the Arthur and Hellyer Rivers. We followed this track for about half a mile then left it and cut a few chains of new track on to Gibson's Plains. North of Gibson's Plain there is some extent of good land, heavily timbered with myrtle, stringy bark, sassafras and fern trees. The creeks show quartz in abundance, and patches of white clay occur. This clay is plentiful, and may some day be used for pottery purposes, although it is not "kaolin" as many have supposed, but rather a decomposed slate, kaolin being a decomposed felspar largely used in the manufacture of china.

Gibson's Plain is about two miles long from north to south, extending for about the same distance westward from the track. Mr. Emmett states that there are other plains on the west side divided from Gibson's Plain by a narrow belt of timber. The plain is covered with button grass and coarse herbage, here and there a few peppermint and gum trees. The soil is very wet and cold, being a spongy white clay, unfit for cultivation. In fact the plain is so boggy as to be dangerous for horses, and we subsequently had some difficulty in inducing anyone to risk horses upon it. The south end of the plain, being higher, is dry and more gravelly, exhibiting quartz veins and slate rock.

After leaving Gibson's Plain the track passes over some very broken country, frequently covered with thick patches of horizontal scrub. Several creeks are crossed, one large one known as the Gunn River. The rock in this vicinity is a dark slate or g flag. One more narrow belt of button grass is crossed and the track then follows the course of a creek, passing over rough ground with cutting grass, tea tree, and bauera of and emerging on a small extent of open ground close to the Arthur River.

As Emmett's track finishes up on a steep bank of the river we cut a fresh track so as to strike a ford lower down, and by making some slight side cuttings we managed to get a fair crossing place for the horses.

The country in the vicinity of the Arthur is very broken and rough, abounding in bauera and horizontal scrubs. The rocks are sandstones, quartzites, and slates. The slates in many places are flat, splitting into flags; they have been classified as Cambrian, but I am inclined to think they are Silurian. The locality is not a promising one for minerals; a little fine gold is found in the river, but it is evidently derived from sources higher up the river. The occurrence of blocks of granite in the river has led many people to imagine that a granite country would be found higher up, but I am of opinion that the granite is derived from conglomerates of Campbell's Range, and that the original site is Hampshire Hills and Mount Bischoff. To the west of Emmett's track the country is entirely unexplored, and I would suggest it to Circular Head prospectors as the field of future operations. It would not be difficult to take out a punt sufficiently strong to carry a party down the river; fish, lobsters and eels are plentiful and there is a fair chance of success in the vicinity of Mount Balfour and the country to the south of the Duck River settlements.

To provide against any interception of our communications by floods, we carried out the boards for a light punt; these we put together at the river, and at our departure left the punt in a small gully on the south side close to our depot.

By the 13th January we had finished clearing out Emmett's track and established our headquarters on the Arthur River, seventeen miles from Mr. Emmett's farm. On the 15th I sent Jones back to Circular Head to fetch out pack-horses, and with the rest of the party started off to examine the country to the south.

After crossing the Arthur we passed through a few chains of timber and found ourselves on a narrow belt of open ground; striking a southerly course, we travelled for four miles over button grass and heath until we came abreast of the Blue Peaked Hill. This hill is, I suppose the one from which Mr. Wedge examined the country in 1828, although I fancy that the "Blue Peaked Range" as Hellyer calls it, was further to the west. The hill itself is a small one of three peaks, not very high in fact not so high as some of the surrounding country. Turning towards the east we crossed a large creek running through a belt of timber and then resumed our southerly course. Another three miles over button grass hills brought us to a fine large creek running through a forest towards the S.W. Seeing a lofty forest in front of us I sent Lord and Burke back to the creek and Arthur to complete the track, whilst Long and I examined the ground ahead. After crossing the creek and travelling for another mile we came to the Rapid River, and immediately on crossing it got into very rough country indeed. After two days tumbling about in bauera and horizontal scrub I determined to strike a course more to the westward, and on making over in that direction we soon came on to extensive button grass plains. Finding that a tongue of these ~~and~~ plains extended back nearly to the Rapid River we crossed that river and marked a route back to our former track from the Arthur.

From a high rise near the Rapid River we had a capital view of the country, and saw Mount Cameron, Cape Grim, and other points on the Woolnorth estate. The country between us and Woolnorth appears to be low but very broken, with here and there patches of button grass and bauera scrubs.

We returned to the Arthur on the 20th January, and found the depot completed, and a good supply of provisions fetched out by the pack-horses. On the 22nd we carried out a load of provisions to the Rapid River and commenced cutting a pack horse track across the valley. The Rapid River runs through a deep gorge the banks are very precipitous and covered with horizontal scrub. To make a safe road for horses we were obliged to make side cuttings, and remove immense logs and rocks. This occupied us until the 27th when we again reached the open ground on the south side of the river. Finding that the open ground some distance south we determined to shift our depot our as far as the horses could be got.

The Rapid River is well named running as it does very swiftly over a bed of hard red slate; immense cliffs of slate rock, of the metamorphic variety occur all along its banks. In these cliffs small veins of iron occur, and the crevices and protected parts are frequently covered with crystals of alum. All the button grass country on both sides of the river is composed of slates, quartzites and sandstones, no appearance of gold or black sand, occasionally a few zircons.

On the 29th January Jones went to Circular Head to fetch out the pack horses, the rest of us crossed the Rapid River and struck out in a S.S.W. direction over the open ground. We found the travelling very good, and as we proceeded the open ground extended further to the westward to the eastward being a high forest. The button grass was short and scanty having been burnt off not many years previously consequently our fires did not make much progress. Crossing several small creeks we continued our route over level ground until we came to a large creek running through a narrow band of timber. After crossing this belt the open ground widens out very much, extending for more than a mile to the east whilst to the westward veins of forest and button grass plains extended as far as the eye could see. The plains hereabouts are studded with trees and present a very pleasing appearance, and from a distance would be mistaken for a fine grassy country, Continuing our course about S.W. we passed over open rises until we came to a river running round the base of a wooded hill. This river is no doubt the one Wedge named the Arthur mistaking it for the Arthur named by Hellyer, a river which unites with the Hellyer many miles to the east. At the place where we struck the river it flows over flat flags, the water being shallow but here and there deep holes occur and frequent falls. Higher up the stream is gravelly impeded by timber and abounds in large blackfish and lobsters. We established out camp on this river, two of the party returning to stake out the route we had taken, whilst Long and I examined the forest in front. On entering the forest we found that it was very good agricultural land, timbered with gums, myrtles, fern trees, pepper, &c. the soil being derived from a dark blue slate. Clay-slates abounded some of them splitting well but containing too much iron pyrites to be of any value. There must be a large extent of fair land in this locality and it appears to extent some miles to the west. On examination we found that the button grass country extended farther in a S.E. direction; accordingly we struck our camp and returning about a mile on our track, altered our course to S.E. and travelled over button grass rises for some three ~~xxxxxxx~~ or four miles further, the latter part of the route being south again. We now found that a narrow forest divided us from a high range of open hills and that there were several branches of the river flowing from them.

After cutting a track through the forest and crossing two branches of the river, we came out on some wet button grass plains extending up to the foot of the high hills. As these plains had never been burnt we lost no time in setting them on fire, and soon had the satisfaction of seeing the high button grass swept clean away. Travelling over this country for a couple of miles we pitched our camp at a creek close to the foot of a spur leading into the high hills, having determined to establish a depot here.

Reckoning the Rapid River as eight miles from the Arthur we had now travelled about eighteen miles from the latter river and with the exception of about a mile and a quarter of forest at the Rapid River and the half mile of forest dividing ~~this country for some~~ the plains, the whole of this route was over button grass country, of slate and quartzite formation.

Meanwhile Jones had hired pack horses and fetched them out thirteen miles south of the Arthur. They might easily have come on another five miles, but their owners were afraid of the boggy nature of parts of the plain.

Leaving Jones and Burke to carry the provisions from the place where the horses left them to our new depot, I started out with Long and Lord to make a route over the hills. After setting fire to the button grass we climbed up some steep rises covered with tall button grass and tea tree and with some difficulty got on to the ridge. To the east of us appeared a deep gully separating us from a range of bare mountains running north and south for many miles; to the westward were deep gullies full of bauera scrub and thick tea-tree, and beyond them again bare hills connected with the Norfolk range. Travelled for four miles over this high ridge and then finished up with a high peak which we named the "Pyramid Hill". From this hill we observed a deep valley in front of us, and open ground on beyond apparently extending right up to Mount Norfolk.

By this time the country was on fire in all directions, and completely obscured by the smoke; but on another occasion from this same hill we saw Mount Bischoff, Mount Cleveland, Meredith Range, Mount Heemskirk, and the whole of the Norfolk Range. On coming down off this peak we entered the forest and commenced cutting out a track. The edge of the forest as usual was very thick bauera, tea-tree, and cutting grass then changing into thick horizontal.

(Continued on next page)

After cutting about half a mile we came on a very rapid stream, not very large, but very rocky and very troublesome to get across in wet weather. In this river I noticed waterworn boulders of granite showing mica and iron pyrites. Climbing up a steep bank we cut our way through horizontal and tea tree and in a short distance came on another river but much larger than the last one. This river also showed granite, and we procured a few specs of scaly gold from the gravel. On the south side of the river an open spur came close down to the bank so that we lost no time in getting across and setting fire to the button grass, and we soon had the satisfaction of seeing an extensive fire.

The belt of forest we had cut through would be about a mile and a half wide, and appears to be the valley of the Savage River, as indicated on Mr. Gordon Burgess's map.

We now took a course nearly S.S.E., and travelled for a mile or so over open rises covered with button grass, then over wet flats of tea-tree and button grass for another mile, arriving at the foot of some steep quartzite hills. Here we established our camp for a few days whilst we burnt off the surrounding country.

Provisions being exhausted we returned to our last depot and obtained a fresh supply, and on the 15th February carried out a heavy load each, just in time to escape a perfect deluge of rain. The weather was now very wet and stormy and hindered our operations very much; but as our present camp was almost flooded out we were obliged to get further on to obtain shelter and firewood. We accordingly climbed up the steep hills and saw in front of us an immense timbered gorge evidently containing several streams. By this time I was getting tired of the barren and useless sort of country we had been travelling over and thinking that if I got nearer the Granite Range I might come across a more promising country for minerals, I altered the course E.S.E., not gone a quarter of mile before the quartzites gave place to limestones, and the forest proved to be more open than usual. We prospected one large creek and obtained a few specs of scaly gold. After crossing several creeks about a mile and a half from the open ground, we came on the River Donaldson and camped there for a few days. Noticing some pebbles of iron ore in the creeks we traced the gullies up and soon came to an immense quantity of iron ore, thousands of tons strewing the surface of the ground. The ore is sometimes magnetid ore sometimes brown ore and hematites here and there veins of iron pyrites. The most abundant rock in the vicinity is mica schist; but limestones are abundant on the west side of the river. The iron is all on the east side, and is associated with a quartz conglomerate and veins of granite.

Metalliferous veins abound, but I could not find any valuable ones, although I am of opinion that copper pyrites would be found along with the veins of iron pyrites. We traced the iron over some half a mile of country up the river, and also examined the river for gold but on account of the immense quantity of iron sand in every dish we had not much success. On going down the river we lost the iron and came on mica schists and metamorphic slates, obtained gold wherever we managed to bottom a hole, but there is very little wash dirt in the river. Large boulders of granite abound derived probably from dykes of granite penetrating the slates. Altogether this is a country well worth prospecting.

Leaving the Donaldson, we went over a steep rise and found another valley before us, this we had to cut our way across, and we found the horizontal very thick indeed. The soil had now changed to quartz gravel. After cutting through about three miles of scrub we again came on to open button grass country.

By this time our work was getting very heavy as we had our provisions some distance, two men being constantly at work going and returning with loads. I now saw very plainly that we should not be able to fetch out our provisions from Circular Head but must communicate with Mount Bischoff. We therefore established a depot on the open plains we had just reached, and after stowing away our baggage shaped a course in the direction of Mount Cleveland to try and find Burgess's track. For about three miles we travelled over a spur of the Button Grass Hills, and then came to a thick scrub of tea-tree and bauera. Here we picked up Burgess's marks, and followed them as far as we could trace them. Passing through the bauera scrub we went down a deep gully of slate formation, where we had to encounter some bad horizontal scrub; missing the marked-track we came on a large stream, most probably the Whyte River. Here I noticed a clay-slate containing carbonate of copper amongst the boulders in the river. At a late period we discovered this same rock in situ; it will be described further on.

The geological nature of the country now changed entirely for after crossing the Whyte a second time we came on rocks which appeared to me to be chlorite and hornblendic schists gradually giving place to a dense hornblende rock. Further on we came on rocks which I think are serpentines; frequently narrow veins of asbestos traverse these rocks. Other rocks, which are altogether strange to me, occur, and until I have had them properly classified it would be useless to describe them.

After leaving the Whyte River for the second time we went up a steep spur covered with tea-tree, cutting grass and bauera, very slow travelling indeed, and it cost us much hard labour to gain the button grass beyond. Another three miles of steep bare hills succeeded, when we found ourselves stopped by a dense scrub of bauera, tea-tree, and cutting grass. This piece of scrub was the worst I have ever been in; and although there was not a quarter of a mile of it, we were nearly four hours tearing our way through it to the Hazlewood River. After some hours tumbling about on rocky hills covered with dense scrub we came on a blazed line going in an easterly direction. After crossing the Hazlewood River ~~we~~ the hornblendic rocks were replaced by schists and patches of basalt and quartzites. Making our way along the blazed line over some very steep hills and gullies we came down on the Whyte River again, and crossed it three times before we got clear from the valley. The track now led up a very steep spur of the Magnet Range very fair travelling, but blocked up by much fallen timber. For the past two days we had been on very short allowance of provisions and when we reached the Magnet we were reduced to small cakes amongst five of us so that we had to make the best speed we could to Bischoff. Climbing up the spur of the Magnet Range we at length came on some open ground - a gum forest with a slight undergrowth of bauera. The track was now more distinct having been cut through in 1866, and though much timber has fallen across it, it is still a great assistance to travellers.

After crossing a large creek running into the Arthur we came on the granite country at the back of the Wombat Hill. Passed over a large button grass plain and came on a man prospecting for silver. This man informed us of our distance from Bischoff, and by stepping out briskly we managed to get there the same night, March 8th.

From my experience of Burgess's track I saw that it would be too rough and hilly for use to carry heavy loads over ~~the~~ ~~little~~ in the little time we had left; I therefore decided to make use of the track I had cut in the previous summer from the Ramsay River to the Parson's Hood.

By March 13th I had sent out about seven hundred pounds weight of baggage to the Ramsay River, and we had now to carry it on our backs to the Parson's Hood. On our way out with the first load I was taken ill with diarrhoea and obliged to stop for a day. I sent Long and Lord ahead, with instructions to mark a track from the Parson's Hood to our depot near the Whyte River, Burke and Jones remaining with me to carry out the provisions. By the 23rd March we had all the provisions on the Yellband Plain, but on account of heavy rain and hail it was not until the 2nd April that we got them to the south side of the Hood.

In my Report of last year I have fully described the nature of the country from the Ramsay River to the Parson's Hood: I will now describe the country from the Hood to our depot at the Whyte River.

After leaving the camp at the foot of the Parson's Hood we followed the Pieman track on the open ground, and at the foot of the first bare rise we struck off in a westerly direction to make our way round the south end of the Meredith Range. The route led us over the ground burnt off by us last summer; consequently the travelling was very good. About a mile from the end of the forest we crossed the Stanley River and found ourselves at the foot of a steep bare hill composed of quartz and slate. Climbing these hills and following the ridge round until we could see up the west side of the Meredith Range, we took a course N.10°W., and travelling over spurs covered with short button grass and stunted honeysuckles. Close to us on the east was the steep slope of the Meredith Range, slate and sandstone formation, very barren, and worthless. In every direction the country was intersected by deep and steep gullies, full of bauera cutting grass, and other detestable scrubs. The first creek we came to was in an almost inaccessible gully. Just as we arrived there a furious storm of hail and rain set in, and we were obliged to camp. So steep and rough was the ground that we could not even find a spot flat enough to sleep on, and we were obliged to build a wooden floor for our tent to stand on. In this miserable camp we were obliged to stop for several days, the hail and rain being something to be remembered. The force of the wind on these bare and exposed hills is very great indeed, and a few hours' rain floods all the creeks and renders the ground so soft and pulpy as to make travelling very laborious.

On the 9th April Lord and Long returned, and reported having marked a trackthrough to the depot and examined the country near the Whyte River. They had found the locality of the copper previously noticed by us in the Whyte, and had also procured in a little gold and platinum. They had been on short allowance for some days and were almost in rags.

On the 10th April I sent Long and Jones back to Bischoff with instructions to examine the country between Hadfield Plain and Mount Sophia and to fire the button grass if the weather should clear up. The rest of us went on with the track.

On the 12th we managed to get a start again, and were in hopes of finishing before bad weather came on again. The same barren sandstone hills continued for another couple of miles until we came to a very steep gorge running across our course.

On the east of us the Meredith Range now showed a bare and rugged tier of granite, the junction of the sandstones, slates and granites being within a few chains of the track. Our fires had made a clean sweep of the scrub and button grass, except in the deep gorges.

After crossing two deep gorges we got into a dense scrub of bauera, tea-tree, and cutting grass and our progress

became very slow indeed, every inch having to be cut out. On the 16th we came to the forest and a complete change of country. In place of granites, quartzites, and sandy slates we now had micaceous schists and quartz, the latter sometimes in veins, but more frequently inter-mixed with the schists. All the quartz contains sulphides of iron, and ought to be examined for gold. No reefs occur nor could I find any alluvial gold. Sometimes the micaceous disappear and their places are supplied by clay-slates and white quartz the quartz in the micaceous schists being all rusty. Some two miles of rough ups and downs brought us to the Whyte River, a large and rapid stream, running over a rocky bottom. In the boulders of this river I detected many traces of copper ores, carbonate and sulphurets, but on account of the rush of flood-water could not examine the river for gold.

After crossing the White River we went up a long spur of horizontal scrub, large tea-tree and stringy barks, and again got into the micaceous schists, quartz, and talcose schist.

Veins in clay-slate filled ^{with} the calcareous matter, are numerous; some of them I think contain lead; but they are of no value at present.

As we approached the open country the quartzites and slates reappear, and would seem to be the general formation of the button grass hills.

On the 26th we came on burnt ground again and finished the track, reaching our depot at sundown. Having a day to spare we went down to the Whyte and examined the rocks. Noticed clay-slates metamorphic slates, mudstone, and masses of decomposed vein-stone, oxides of iron; obtained some very fine gold, but could not find much wash in the river.

As our ~~time~~ rations were getting low we determined to make a start for Mount Bischoff. Stowed all the superfluous baggage away in the hopes of being able to make use of it at some other time, and on the 28th were on the way home.

Camped at the Whyte for a day whilst we examined the place where Long and Lord found gold. The river being high were unable to sink in a promising place, so had to content ourselves with surfacing. The spot where we tried was on a small beach of the river. We obtained gold and platinum in every dish; quite enough to pay if there were any quantity of dirt, but unfortunately there is not. The bed rock appeared to be a chloritic slate, very soft and greasy. If my rations had not been so low I might have further examined the river for gold, and also tested the terraces round about. After getting a sample of the gold and platinum we went higher up the river to where the copper shows out. Close to the bank of the river was an immense quantity of a reddish clay-slate everywhere impregnated with carbonate of copper, apparently the outcrop of a large lode. Traced the copper for some three or four chains across the face of the hill and about the same distance up. Found some large masses of "gossan" in a creek, and a very much decomposed vein-stone. The red clay-slate invariably contained copper, but there was none in an adjoining yellow clay-slate.

As it was impossible to make any impression on this mass of rock with our used-up pick we crossed the river and proceeding on our journey. A short distance from the river I noticed the red slate again, and on examination it proved to contain carbonate of copper. The red slate was succeeded by black clay-slates, hornblended slates, and finally hornblende rock, this bringing us on to the country I have already described in this Report as being the route we took to Bischoff.

We arrived at Bischoff on the 7th May, Long and Jones arriving at the same hour from Hatfield Plain.

The season being now too far advanced to permit much more exploration, I sent our Burke with Long and Jones, instructing them to cut a track from Hatfield Plain as far in the direction of Mount Sophia as circumstances would permit. I have not yet received any report from them, nor so I think they will be able to get very far in the present weather. Mr. Lord and myself left the party and came on to town.

The result of my explorations on this occasion more than ever confirm my often expressed opinion that the western country is rich in minerals, and will ultimately become an important part of the colony. Utterly worthless for agricultural or pastoral purposes it has hitherto been but little explored and even now when so much ~~attractions~~ ~~attention~~ ~~is directed~~ ~~to the search for minerals,~~ attention is directed to the search for minerals, the west offers few attractions for prospectors. The country is exceedingly rough and what scrubs there are grow so thick that a whole day is sometimes occupied in getting across a single river gully.

At Mount Heemskirk the presence of tin, reported by me in my last year's Report has been conclusively proved by the discoveries of the Messrs Meredith, and I have little fear that the ore will be found in large quantities. The specimens exhibited to me by the Messrs Meredith are black oxide of tin, similar to the ore of Mount Bischoff; and as slate and granites are together ^{at} the Mount Heemskirk, it is more probable that lodes will be found there. The discovery is an important one, and will do much towards opening up the west coast.

The Meredith Range another great granite formation deserves a more careful examination. I do not think much alluvial tin will be found there, nor indeed any mineral veins in the central portion; at the north and south end, where the granite and metamorphic rocks join the indications are very promising indeed. As noticed in my last year's Report, Mr. Harman discovered on the east side of the Parson's Hood copper in small quantities in connection with serpentine rock, gold, and osmiridium. These minerals occur precisely the same on the north end of the range.

The east side of the Meredith is occupied largely by sandstones and granite, with tourmaline; and this is exactly the formation of the tin country in the island of Banca, where the ore occurs with peroxide of iron at the junction of sandstones and granites.

Gold occurs in small quantities almost everywhere. In two instances it occurs with osmiridium (a metal of the platinum class) in the vicinity of serpentine. Instances of serpentine being the mother rock of gold are by no means rare in Australia.

Dykes of diorite are often met with; and as these dykes in Victoria are frequently auriferous prospectors should pay them particular attention.

Much of the quartz, particularly that found in connection with micaceous schists, contains much sulphide of iron. I am not aware of any of it having been tested for gold. The Rev. W. B. Clarke I think, states that sulphide of iron is the matrix of gold in Tasmania; and he also explains how gold is often contained in the sulphide though invisible to the sight. This statement is fully borne out by recent tests of the pyrites of Mount Ramsay which yielded both gold and cobalt. The best authorities agree that where the pyrites are abundant the gold is scanty; where the pyrites are scanty the gold occurs more freely; in the absence of pyrites the gold is not general found. It seems then that some

attention should be directed to the sulphides of iron so abundant in many parts of the colony, more especially to the arsenical pyrites. The common cubic pyrites is not often auriferous.

Most of the gullies in the western country are very steep and the creeks very rapid consequently there is not much wash-dirt, and prospecting for tin or gold is rendered difficult; whilst other minerals, such as copper, silver, bismuth, &c. require rather more careful examination than most prospectors are able or willing to devote to them.

I am of opinion that copper will ultimately be found in large quantities on the western country. It has already been found in many localities, but as yet the extreme roughness of the country has deterred speculators from testing the value of the discoveries. As a proof of the large area over which it is to be found, I may mention a few localities that occur to my remembrance: - Port Davey, Eldon Ranges, Parson's Hood, Meredith Range, Mount Ramsay, Hampshire Hills, Campbell's Range, Duck River, Duniam River, Mount Balfour, besides many localities in the County of Devon.

An immense area of the western country is occupied by button grass hills of quartzite slate, and quartz formations as far as my observations go, entirely destitute of useful minerals. A few specimens of zircon corundum, rubies, &c. are to be obtained; none of them sufficiently large or clear to be of any value.

Although the season was the finest I have ever known we were not able to do nearly so much work as I expected. Much of our time was expended in carrying provisions and baggage, in fact two of the party were almost constantly employed in that extremely laborious work.

My operations were entirely confined to the country north side of the Pieman, there being plenty of prospectors cutting tracks on the south side.

To complete the examination of the country I would strongly recommend the continuance of the track from Knole Plains to Lake St. Clair so as to open up the granite country near Mount Sophia and Granite Tor.

A track from Knole Plains to the west side of the Meredith is much required. Burgess's track is too rough; a better one might be had more to the south.

The two tracks would not cost more than £300 and they would be of immense assistance to prospectors.

I hope to be in a position to communicate further information respecting the geology of the country after my specimens have been examined by a competent authority.

A map is in preparation to illustrate this Report.

I have the honor to be

Sir,

Your obedient Servant,

CHARLES P. SPRENT,
District Surveyor

The Hon. the Minister for ~~Miner~~ Lands and Works
