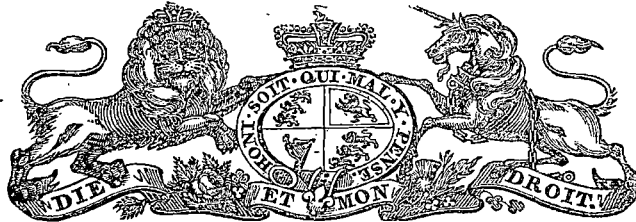


(No. 74.)



1896.

SESSION II.

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PARLIAMENT OF TASMANIA.

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ROUTE TO THE WEST COAST:

Report of Mr. Surveyor Innes upon the Country between Mount Humboldt and the Head of the Navigable Water upon the River Gordon.

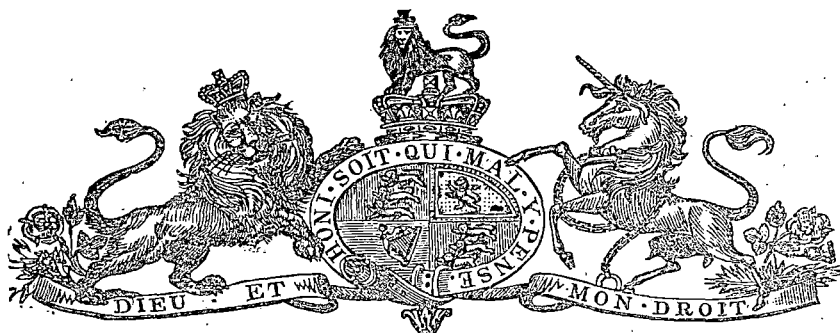
ALSO,

Report of Mr. H. M. Nicholls on the Mineral Characteristics of the Country.

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Presented to both Houses of Parliament by His Excellency's Command.

Cost of printing—£4 10s.



Hobart, 25th August, 1896.

SIR,

HEREWITH I have the honor to forward for your perusal my Report upon the country between Mount Humboldt and the head of navigable water upon the River Gordon, which, acting under your instructions, I recently traversed with a view to finding a practicable track to the West Coast from Hobart *via* Glenora and the Gordon Valley.

I also forward a sketch plan of the country passed over, showing the principal rivers and mountain ranges which intersect it, and also the route followed by myself and party marked in red. I have also indicated in red (thus — — —) a route which, from observations I made while in the vicinity, seems to be the only practicable one to the West Coast from Glenora, and which, if anything further is done in the way of exploration, should be first tested.

My Report is not as complete as I should have liked to make it, as, owing to the broken nature of the country and the exceptionally bad weather the party had to contend with, it was impossible to do more than take a very rough survey of the country over which the party travelled.

Where the track was likely to be of any future use I had it well blazed, and in open country staked. The track marked by Cullen and Cawthorne in 1894 was all re-cleared through the scrubby parts, and stakes re-erected in the open country. This was done as far as View Hill, where it intersects the track marked in 1881 by Mr. Surveyor Jones.

On my return journey from the Gordon I came a considerable distance along Jones's track. This I re-staked in the awkward places and re-blazed it in the gullies, so that there would be no great difficulty in picking it up should a traveller require it.

I have the honor to be,

Sir,

Your obedient Servant,

E. G. INNES, *District Surveyor.*

*The Surveyor-General.*

Hobart, August 19, 1896.

SIR,

IN compliance with your instructions dated 12th day of May, 1896, to cut and mark a track from the vicinity of Russell Falls River to the head of navigable water upon the River Gordon, I have the honor to submit the following Report and accompanying plan for your information:—

I left Hobart on Wednesday, May the 13th, with a full party, consisting of Mr. H. M. Nicholls as geologist and photographer, and three good bushmen, fully equipped with the necessary outfit of tents, tools, &c., and provisions to last at least ten weeks.

We proceeded to Glenora by rail, and thence I had the provisions and outfit taken by cart to the selection of Messrs. Reynolds and Nicholls, some 22½ miles from Glenora Station, and in the vicinity of the head waters of the Russell Falls River.

We reached there about 4 o'clock p.m. on the 14th, and I at once made arrangements for a number of extra men to assist in packing the outfit to what is known as the Humboldt hut, a small but comfortable building in the vicinity of Mount Humboldt, erected some years ago by a mining company, upon a section then held by them under the Mineral Leases Act, but since abandoned.

The distance from Messrs. Reynolds and Nicholls' selection to the Humboldt hut by the Public Works Track is about 6½ miles, over rather broken country. This track had formerly been well cleared of logs and scrub, but at present is blocked in places by fallen trees and newly grown scrub, which renders travelling with a heavy swag rather unpleasant, especially in wet weather.

We commenced the work the following day, and had everything safely under cover in the hut by the evening of the 16th of May, and were prepared to start the actual work of the expedition.

The next day, being Sunday, I followed the Public Works Track as far as the saddle known locally as the Humboldt Divide, which is a saddle between two lofty peaks of the Humboldt Range, and called by the residents of Tyenna The Needles and Shea's Look-out. From this point I could obtain a fair view of the country at the head of the Florentine Valley and the ranges lying west from Mount Humboldt and in the vicinity of the River Gordon.

The day was fortunately fine, and with the aid of my glasses I got a good look at the part of the country through which the first portion of the route lay, and I decided to make my first camp on a branch of the Florentine River about  $2\frac{1}{2}$  miles westerly from the divide in question, and make my examination of the first portion of the route from there.

On Monday, the 18th of May, I took the whole of the party, with tents and tools, and proceeded along the track to the top of the divide, and thence over the range and into the Florentine Valley beyond.

Some little distance beyond the divide we found the track marked in 1894 by Messrs. Cullen and Cawthorne, and as it had apparently been well cut out and cleared of rubbish, and was leading in the right direction, I decided to make use of it for future operations, and with that end in view set to work to clear it of fallen timber and scrub. This necessarily made progress slow, and it was about 2 o'clock P.M. when we made the river, crossing it upon a fallen tree.

Following Cawthorne's track for about another half mile we came to a patch of open country in the shape of a low range of hills, apparently forming the divide between the east and west branches of the Florentine River. They are flat upon top, and are covered with button-rush and a few stunted peppermint gums. As this was a good place for a camp, I had the tents pitched, and as by that time it was growing late in the day, we returned to our camp at the hut.

The following day the men commenced to pack the provisions, &c. from the hut to the new camping place, and as the weather, which had hitherto been fine, had now broken and was raining, it was late on Saturday, the 23rd of May, before they had completed their task and we were fixed in the new camping place. In the meantime I had been making an examination of the country west of the Humboldt Divide, with a view to obtaining the easiest grades into the Florentine Valley.

Taking the saddle on the top of the divide as my starting point, some 750 feet above the Humboldt hut and 2025 feet above sea-level, I followed the marked track, which led in a westerly direction across the range through open button-rush country for about one mile. The grade to this point would be very easy, the angle of depression being generally only about  $3^\circ$ ; but it is here the difficulty commences, as the country now becomes very broken and covered with heavy timber, consisting of stringybark (*Euc. obliqua*), white myrtle (*Fagus Cunn.*), and a few celery-top pines (*P. rhomboidalis*), with a thick undergrowth of ti-tree (*Melaleuca*), ferns, and other small shrubs. The angles of depression along this portion of the track were often as much as  $25^\circ$  and  $30^\circ$  for short distances of a few chains, and seldom less than  $10^\circ$  to  $18^\circ$ , until the Florentine Valley was reached. The aneroid here gave me 1290 feet above sea and about 735 feet below the lowest point upon the Humboldt Divide in a distance of about two miles, and divided thus: from top of the divide to Cawthorne's track, about one mile, depression 235 feet; from Cawthorne's track to Florentine River, about one mile, 500 feet.

The east branch of the Florentine forks within a chain of where the track crosses, and one large tributary, taking its rise in the High Rocky Range, flows in a north-westerly direction close to the foot of the mountain.

The country forming the watershed of this stream is very heavily timbered, and broken up into a series of deep gorges and sugar-loaf hills, with precipitous spurs jutting right down to the river bed. The angle of elevation in this vicinity being often as much as  $45^\circ$  and  $50^\circ$ , and seldom less than  $20^\circ$  upon the slopes, there would be an enormous amount of cutting and earthwork to form anything like a decent road or even a good pack-track.

Finding that it was next to impossible to obtain a fair grade for either road or pack-track from the Humboldt Divide into the Florentine Valley hereabouts, I decided not to spend any more time in this vicinity at that particular time, but to push along as fast as possible towards Mount Wedge and the Gordon.

On Monday, 25th May, we were again on the move, and still following Cullen's track, found that it led nearly due south along the plateau forming the summit of the divide between the two main branches of the Florentine. This is covered with a scanty growth of button-rush (*Gymnoschanus spherocephalus*) and peppermint gums (*Euc. amygdalina*), and is fairly good travelling so long as the plateau can be kept, but unfortunately it is intersected by a number of small creeks flowing through deep ravines full of heavy scrub. The sides of these ravines are often very steep, the clinometer giving angles ranging from  $10^\circ$  to  $30^\circ$ , and in one instance I noticed, in going down a steep incline, that the aneroid gave a difference in height of 150 feet in a distance of about five chains.

These creeks flow into the west branch of the Florentine, which is reached in about six miles from the commencement of Cullen's track. This is apparently the main branch of the Florentine, and is a deep, sluggish stream flowing through a narrow belt of rich alluvial soil only a few chains wide, heavily timbered with stringybark (*E. obliqua*), white myrtle (*Fagus Cunn.*), and tree-ferns (*Dicksonia antarctica*), but very low and swampy. The stream where the track crosses is about thirty feet wide, and is crossed upon a fallen tree.

Messrs. Cullen and Cawthorne, when cutting the track, had placed forked stakes in the river, and leaning them against the trunk of the tree had placed a light pole in the forks, thus forming a

handrail to steady a traveller, as the tree itself is narrow and, in wet weather, slippery. Finding the forks and pole rotten, I had them renewed, so that it is now safe.

The height by aneroid at this point was 1350 feet above sea level, or about 60 feet higher than the crossing-place at the east branch of the river.

Cullen's track now turns in a more westerly direction, and leads direct for the broken country north of Mount Wedge, and following it we soon commenced to ascend the outlying spurs of that mountain. Upon one of these, about half a mile from the Florentine, I pitched No. 2 camp, fifteen hundred feet above sea-level, and set three of the party to bring up the stores. This operation was greatly retarded by the state of the weather, which had now set in very bad, thick rain and heavy fogs being the rule.

While this was being done I took one man and cut a track from this camp in an easterly direction across the head of the Florentine Valley towards the south end of the High Rocky Range, to enable me to ascertain if there was any prospect of obtaining an easier route by going south of that mountain, and thus avoid the necessity of crossing the Humboldt Divide.

This track runs through fairly level country for a couple of miles, then striking one of the spurs of the High Rocky Range, leads up it to a high pinnacle some 2600 feet above sea-level. From this point I got a good view of the country forming the watershed of the rivers Styx, Weld, a branch of the Russell Falls, and also the source of a large stream flowing south-westerly into the Huon.

At the foot of this spur I crossed a track cut by Mr. Surveyor Frodsham in 1890: this was, although considerably overgrown with scrub and rubbish, very plainly marked, and I followed it for some distance towards Mount Anne, finding that it led into a low saddle between the south end of the High Rocky and Mount Anne, some 1500 feet above sea level, or some 500 feet less altitude than the Humboldt Divide.

The flat land through which this track runs at the south end of the Florentine Valley is of splendid quality, being a rich chocolate soil, heavily timbered with myrtles (*Fagus Cun.*) of a large size, a few scattered stringy barks, with an occasional silver wattle (*Acacia dealbata*) and pencil cedar or lightwood (*Acacia melanoxylon*), the undergrowth being chiefly peartree (*pomaderris*) and cat-head ferns. The high land forming the spurs of the Rocky range is comparatively open, covered with stunted button rush, and here and there a few peppermint gums.

The state of the weather was now greatly retarding both exploring and packing operations, each succeeding day being apparently worse than its predecessor, nothing but rain and sleet, with gales of wind; this, together with the short days, made it impossible to get through a satisfactory amount of work, especially in a heavily timbered country; and having satisfied myself that I could find a better route by going south of the Rocky Range, I decided to leave further exploration hereabouts for more favourable weather, and push on at once for the Gordon, where I hoped to find more open country.

To enable me to do this as quickly as possible I had a storage depôt constructed of logs, securely notched together, and lined with grass and dried leaves. Into this we packed all our surplus stores, and covered the whole with a tent-fly to keep off the rain.

On June the 9th I struck the tents and continued the journey westward. Proceeding along Cullen's track we soon found ourselves in a broken rugged country between Mount Wedge and a long range extending northerly to the Thumbs Mountain, and forming the divide between the Florentine and Wedge Rivers and the water flowing into the Gordon.

In about two miles from the west branch of the Florentine the track reaches a saddle in the range some 1950 feet above sea level, which is apparently the lowest altitude to be obtained hereabouts, being only some 75 feet lower than the Humboldt Divide.

This saddle forms a sort of connecting link between the range running northerly to the Thumbs, and is very narrow, not more than about 5 chains wide on top where the track crosses, and the western slopes are all very steep.

From this saddle to the flats in the vicinity of the Wedge River the distance does not exceed three miles, and the difference in height 830 feet.

The whole country from the Florentine crossing to the flats in the vicinity of the Wedge River is very heavily timbered with stringy-bark, myrtle, and swamp gum, with here and there small patches of teatree (*Melaleuca*); some of this is really fine timber, the stringy-bark being of the gum-top (*E. Siberiana*) species.

At about five miles from the Florentine we reached the flats in the vicinity of the Wedge River, 1120 feet above sea level, and found ourselves in what had been described as "open country."

The track here turns to the south west, crossing these flats, which are covered with button-rush and tea-tree, and are simply swamps, full of water after heavy rain, having a bottom of soft black mud, into which a man with a swag will often sink above his knees, and have a job to extricate himself. These are the flats described by the late Mr. District Surveyor Thomas in his note upon the tracing supplied to me for the purpose of information.

The most easterly branch of the Wedge River flows through these flats, and is a fine clear stream, about twenty feet wide where the track crosses, having low alluvial banks over which it flows in flood time, and evidently spreads for some considerable distance, as is shown by the water-worn debris scattered about. We crossed it upon a fallen tree, at eleven hundred and ten feet above sea level.

After leaving the Wedge River the track still continues in a south-westerly direction over a lot of undulating country, low button-rush hills, and timbered gullies, until it enters what is called by Cawthorne the Two-mile Forest, a fine belt of heavy timber covering the western slopes of Mount Wedge, and a ridge forming the divide between the two branches of the Wedge River. The top of this ridge, some seventeen hundred feet above sea level, is reached in about a mile and a half after crossing the Wedge, and from this point the track commences to descend towards the Denison Plains, through which the other branch of the Wedge River winds its way, twelve hundred and ninety feet above sea level.

I, with two of the men, reached this river at about 4 p.m. on Wednesday, 10th of June, the remainder of the party having stayed behind to pack the stores along the track to a tent I had left pitched about half way between the two branches of the Wedge River. It was pouring with rain when we made the river, and we pitched our camp in a clump of timber growing near its banks, and some twelve hundred and ninety feet above sea level.

On Thursday, June 11th, we packed up lighter loads, and proceeded down the Denison Plains towards M'Partlan Pass. The track now runs in a more westerly direction, the general bearing being about south  $75^{\circ}$  west, and crossing the Denison Plains at a slight incline until M'Partlan Pass is reached. This is an opening in a range of quartzite hills forming the divide between the Wedge and Serpentine Rivers, and leads into the Hermit Valley, a level plain of button-rush land nestling in the centre of these quartzite hills. Continuing the same course until late in the day, we pitched a spare fly, and hanging the swags to the ridge-pole, returned to camp.

By the evening of Saturday, June 13th, we had all our stores, with the exception of what were required for immediate use, under cover in the Hermit Valley, not more than about three miles from the Serpentine River by Cawthorne's track.

On Saturday, the 13th, while the remainder of the party were engaged carrying stores, taking my aneroid and glasses I climbed a high range in the vicinity of the camp not previously charted, and from its summit, 2800 feet above the sea, obtained a good view of the country south of Mount Wedge and easterly towards Mount Anne. As far as I could see there appeared to be a large tract of open flat country thereabouts extending from the east side of Lake Pedder right to the foothills of Mount Anne and away towards the head of the Styx and Weld rivers, and presenting no serious obstacle to road or track making. I also obtained a good view of the country in the vicinity of the junction of the Gordon and Serpentine rivers; this was rough and broken, being a continuation of the range upon which I was standing, and composed of rugged quartzite hills intersected by deep ravines and watercourses.

The following day being Sunday, gave all hands a rest, and on Monday morning we picked up our swags and continued our journey towards the Serpentine River. Our course lay across open plains about S.  $75^{\circ}$  west, and passing through M'Partlan Pass, thirteen hundred and seventy feet above sea level, we pushed ahead across the Hermit Valley. Here I left the track marked by Cawthorne, and finding a pass near the western extremity of the valley, went through it and out on to the plain through which the Serpentine flows. Our camp was pitched that night on a hillock close to the junction of the Serpentine and the river which flows out of the Hermit Valley.

On the following day, while the remainder of the party were moving our supplies to this camp, I occupied the time in examining the Serpentine River with a view of finding a fording-place. This is a difficult matter, especially when the river is flooded as it was at that time, for the Serpentine flows through a low flat valley covered for some distance upon both sides of the river with a heavy growth of tea-tree and honeysuckle. These flats are full of lagoons, and when the river is high the whole is transformed into one large swamp knee deep in water, through which the river winds. Failing to find a ford, I determined to look for the one mentioned by Cullen and Cawthorne, and the next day was spent looking for it. We found it late in the afternoon, having had some difficulty in picking up the track leading to it, the country having been fired where the track entered the swamps, and the track through the tea-tree having been very indifferently cut out, when found was difficult to follow. When we came to the river and looked for the stakes mentioned by Marriott as indicating when the river was safe they were not to be seen, but I managed to ascertain that some of them were still in position, although under water. The next day we moved our camp up the valley to the vicinity of this ford, and by fixing a mark found the water was falling, though slowly. I employed the party next day in cutting a new track from the open country through the tea-tree swamps to the ford, and the following day, Saturday, June 20th, finding the stakes were visible, picked up our swags and crossed the river, the water being about up to our waists.

We camped that night in a solitary clump of peppermint gums about one mile from the river bank, 1300 feet above sea. Here we found the remains of an old camp which had evidently been used by one man, and many years ago, probably one of M'Partlan's camps when employed in carrying the mail from Hamilton to Gould's camp.

The next day, being Sunday, was occupied in drying our wet clothes, writing letters, &c., to be left in a tent I had left pitched near the Serpentine at the camp we had just left, for the use of anyone who might be following us with despatches. In the afternoon I crossed the Serpentine Plain and got upon a spur of the Frankland Range, and as the day was fine took some bearings to known points. These bearings were as follows:—Mount Wedge, N.  $59^{\circ}$  E., Mount Thumbs, N.  $34^{\circ}$  E., Frenchman's Cap, N.  $25^{\circ}$  W., our camp, N.  $5^{\circ}$  E. distant about one mile; general bearing of the Serpentine Valley, N.  $30^{\circ}$  W.

On Monday, 22nd June, we struck the tents and continued our journey towards the Gordon, making towards the north end of the Wilmot Range. Our track now lay through the low country between the Frankland Range and the Serpentine River. This is covered with button-rush, and is very swampy, and intersected with numerous small creeks, which, taking their rise in the gorges of the Frankland Range, flow across the plain and empty into the Serpentine. Many of these are deep and difficult to cross in wet weather, being rapid and full of holes.

We crossed a small branch of the Serpentine about six miles from our last camp, a small stream about 20 feet wide, shallow, with a hard gravelly bottom, and camped for the night in a patch of peppermint gums about a couple of miles further down the valley, height above sea level about 1270 feet.

The next morning we started again, and continuing a northerly course along the foothills of the Wilmot Range, in about three miles ran out of the open country and into a dense tea-tree scrub, through which we had to cut our way. This country continues for about a mile and a half, and it was here we first came upon the valuable timber known as Huon Pine (*Dac. Franklinii*). We continued the same course all that day through a narrow valley, the Wilmot Range being upon our left and a lofty rugged range upon our right, and at night pitched our camp in a small patch of open land close to the foot of the Wilmot. While the camp was being pitched I took a walk about half a mile further ahead to what appears from a distance to be a lagoon, but to my surprise I found a large river flowing directly across our track. Taking out my compass I took a rough bearing along the channel of the river, and upon referring to the chart found I had struck the Gordon sooner than I expected.

The next day, having struck the tents and packed up our swags, I took J. Innes and Woolley with me and went down to the river bank, intending to follow it for some distance to see if I could get around the foot of the Wilmot, between that range and the river.

We followed the river across the valley at a bearing of about N. 55° W. for about a quarter of a mile, when it enters a tremendous gorge, having perpendicular cliffs upon the northern side at least 500 feet high, and upon the other side the slope of the mountain is something like 80°.

Our course from the camp at the Serpentine crossing had been a general bearing of N. 20° W., and we first struck the river about eleven hundred and seventy feet above sea level.

Seeing that we were fairly caught, there not being the slightest chance of our being able to get round the Wilmot owing to the inaccessible nature of the gorge, it was evident that we must either retrace our steps for some miles and endeavour to find a way through the Frankland Range or climb over the Wilmot. I chose the latter, and at once commenced the ascent. We left the valley at noon, and it was 4 o'clock P.M. when we made the summit, at an altitude of 3245 feet above sea level. The evening was fine and clear, but as the hour was late we at once commenced to make our way down the western side to find a camping-place and gain some shelter from the keen biting breeze.

We camped for the night amongst some stunted myrtles and tea-tree, at an altitude of two thousand nine hundred and twenty feet above sea level, and passed the worst night we had upon the whole journey, for the ground was too steep to lie down comfortably, and in the morning we felt as if we had been tramping the mountain all night.

The western slopes of the Wilmot are very precipitous, and are covered with a dense scrub, consisting of stunted myrtle, tea-tree, and other rubbish, and as I could see nothing to be gained by forcing our way through that sort of country, it being impossible to get any kind of useful track, I again changed the course and made the best of our way along the range in a south-easterly direction. The greatest altitude reached was three thousand four hundred and seventy feet above sea level, and only a few feet below the trigonometrical station upon the summit. I did not go to the station because I could see the weather (which had been fine for the last week) now looked very threatening, and it behoved us to get off the mountain as quickly as possible.

About 2 o'clock P.M. we reached the saddle between the Frankland and Wilmot Ranges, and finding an open spur leading into a button-rush plain at the foot of the range we followed it down, and crossing the plain, pitched our camp for the night in a bunch of peppermint gums. That night it commenced to snow and rain, and in the morning the Wilmot was covered with a white mantle. It rained and snowed all the following day, and kept us confined to the tents.

This continued without intermission until the following Monday, when it broke a little, and, taking Woolley with me, I endeavoured to get a look at the surrounding country. As it was still raining, although not so heavily as during the previous days, we were soon wet to the skin, but managed to force our way across the valley, through some stunted tea-tree scrub, and into a patch of timber where we could see Huon Pine growing. Here we found a large stream running to the north-west with the pines growing upon its banks. As it was about half a chain wide here and apparently a good depth, being flooded, we had some little difficulty in crossing it, but managed to do so upon a fallen pine, and then made our way to the top of another range whence I could see the country beyond. This appeared to be of much the same character as that lately passed over, and generally covered with a dense scrub.

The next day, Tuesday, June 30th, the rain having abated, and seeing that it was hopeless to expect to get a practicable route anywhere near the Gordon in this vicinity, I decided to make away more to the south-east and see if we could not find an opening in the ranges in that direction. With this in view we struck the tents, and taking our swags pushed along up the valley in which we had been camped. In about four miles from our last camp, and at the head of the river mentioned, we came to some country which had apparently been burned off within the last

couple of years, and, crossing a gully, came upon Cawthorn's track just where it crossed the Frankland Range.

As it was growing late and raining hard we camped for the night in a tea-tree swamp, fifteen hundred and forty feet above sea level, and at the foot of a high range immediately behind the Frankland, but not marked upon the chart.

All that night and the following day it rained and snowed, with a gale of wind from the north-west, but on Thursday it looked better, and I decided to make for the Gordon as fast as circumstances would permit, as our stock of available provisions was none too plentiful. Taking our swags and following Cawthorne's track we made the Rookery Plain that evening, camped there for the night, nine hundred feet above sea level, and, rain having set in, we were obliged to remain in camp all day.

On Saturday, July the 4th, the weather again favoured us, and, making an early start, we crossed the Rookery Plains and found the stakes on Jones' track at the foot of View Hill, and I determined to follow it for some distance, as it was apparently in the best line of country thereabouts.

We camped that night in open button-rush country, about three miles north of View Hill, 1350 feet above sea level, having made a short day's journey, as some of the party, including myself, were anything but well, and unfit to travel.

On Sunday, July the 5th, we made another start, taking a general course of about N. 10° W. through open button-rush country, intersected with numerous creeks and ravines, generally full of bauera, stunted tea-tree, and peppermint, through which we had to cut our way.

About noon the weather, which had been threatening all the morning, changed for the worse, and it commenced to rain in torrents, so that we were all drenched to the skin in a short time. Shortly afterwards it came on to blow a hard gale from the north west with hail and sleet, and as this was directly in our faces, the pleasures of travelling in such weather can be better imagined than described.

About 3 P.M. we came to a small patch of country which had been burned a couple of years since, and camped for the night in a patch of stunted peppermint gums.

Monday, the 6th of July, saw it raining, if possible, harder than the previous day, confining us to the camp, and it continued without intermission until about midnight.

On Tuesday, July 7th, we were again on the move, and continued our course northerly over open button-rush country for about two miles.

About mid-day we crossed a large stream flowing through a deep gorge in a north-easterly direction towards the Gordon; this, I called the Olga, after my youngest child, it being her birthday.

After crossing this stream we passed through some of the roughest country it has ever been my lot to travel over, being broken up into a number of narrow ridges or razor-backs, intersected by deep ravines and watercourses. The slopes of the razor-backs giving angles of elevation and depression seldom less than 45°, and often much greater, were very rocky and broken, and covered with a dense scrub consisting of bauera (*Rubroides*), horizontal (*Anodopetalum biglandulosum*), tea-tree (*Melaleuca*), and here and there a stunted peppermint gum. We camped in this kind of country that night, and starting again the next morning continued the same course until about 2 P.M. over the same description of country, when, finding the country getting worse, if anything, to travel over, and the weather looking very bad, snowing and raining, I altered the course more north east, in the hope of getting better country near the Gordon.

That night we camped in a deep gully in a dense grove of myrtle (*Fagus Cun.*), and had great difficulty in getting a fire, everything being saturated with water; however, after considerable trouble we succeeded in getting a blaze, and having dried tents, &c., turned into bed.

The next morning, July 9th, the whole of the surrounding country was white with snow, and looked anything but pleasant to travel through, but there was no help for it, so, making a scanty breakfast off a porcupine, we strapped on our swags and continued a north-easterly course towards the Gordon. By 10 o'clock A.M. we were down off the high land, and found ourselves in a swamp covered with bauera, tea-tree, and Huon pipe.

This swamp was about half a mile wide, and in forcing our way across it we came to a large creek, in which pine had been cut apparently about twelve months previously. Seeing this, I surmised that the Gordon was not far off, and following the creek down we soon came to the larger river. The Gordon is here a splendid stream, about five chains wide, and has a fine clear channel with high banks upon either side.

We followed the course of the Gordon the remainder of that day, camping at night upon a high bluff close to the river, and near a large creek flowing through a deep ravine having perpendicular sides of black limestone, generally known as the Gordon limestone.

The following morning (Friday, July 10th) we packed up our swags as soon as possible after daylight, and not troubling to cook breakfast (for the best of all reasons, we had none to cook), continued to follow the course of the Gordon. About noon I noticed some pine freshly cut, and just as I drew the attention of another of the party to it he heard the sound of a hammer branding logs, and giving the usual cooe, got a reply, and soon came to the piners at their work. The party consisted of Messrs. G. Bennett, C. Stevens, and G. Davey, hailing from Strahan, and they soon led the way to their camp and made us welcome, treating us in the most hospitable manner.

After making enquiries as to the distance to the head of navigable water and the character of the intervening country, I came to the conclusion that it was useless to attempt anything further in the way of track-making near the banks of the Gordon, and arranged with the piners to take the party down the river in their boat to the landing-place at Gould's old track near the Cataract River.



On Saturday, July 11th, we left the camp in the boat, seven in all, and pushing into the stream, soon found ourselves travelling at a rapid rate towards our destination. About five and a half miles below the piners' camp, after passing the Sprent and several other smaller streams, we came to Pyramid Island, at the confluence of the rivers Franklin and Gordon. This is covered with rank vegetation, the large timber growing upon the centre of the island giving it a pyramid shape, hence the name.

Upon making inquiries of the piners if the river were not navigable to this point, they replied in the negative, pointing out that we had two more rapids to cross before we came to navigable water. This we found to be the case, and after safely negotiating these, found ourselves in the comparatively still water at the head of navigation known as "The Big Eddy," about one and a half miles from Gould's old track and the Cataract River.

The remainder of the journey was soon accomplished, and landing, I found Mr. Burgess's note fast to the tree where he had left it, and the case of provisions safe.

I estimated the distance from the mouth of the Sprent to the Cataract River at about six miles, and for nearly the whole of the way the Gordon flows through one tremendous gorge, in many places having perpendicular cliffs of limestone rock from fifty to one hundred feet high jutting out into the river; when not perpendicular the sides of the gorge gave angles of elevation varying from  $45^{\circ}$  to  $65^{\circ}$  over rugged limestone country. The general course of the river from the Sprent to the head of navigable water is about north west.

July the 12th, Sunday.—Mr. Bennett kindly offering the use of his boat for a trip down the river, we gladly availed ourselves of it. About a mile below the Cataract Creek we came to Butler's Island, which I at once recognised as the island described by Captain Lloyd. This is merely a large rock in the middle of the river, and has a deep but narrow channel upon either side; here also I noticed the high cliff described by Captain Lloyd. We proceeded down the Gordon as far as Champ Cliff, better known as the Marble Cliffs, a large body of black limestone rising to a height of about one hundred feet above the river. As it was getting late in the day when the cliffs were reached, and commencing to rain, we returned to camp. That night it commenced to rain in earnest, and continued without intermission until the following Thursday, when it cleared a little. The Gordon was now in a flood, and the piners finding themselves unable to return up the river to their work, decided to go to Strahan; this gave me the opportunity of sending a despatch to Hobart announcing the arrival of the party safe and sound at our destination upon the Gordon.

On Friday, July 17th, we struck the tents and commenced the return journey. Proceeding along Gould's old track in a south-easterly direction for about two and a half miles over a steep broken country, clothed with dense forest consisting chiefly of myrtles and Huon pine, we reached the top of the range immediately overlooking the Gordon, and not more than half a mile from the banks of the river, the heights taken by aneroid as I came along reading thus—about one mile from starting point 650 feet above high water-mark at the Gordon (the river is tidal to that point); about  $2\frac{1}{2}$  miles, on top of range, 900 feet above starting point. Here the track emerges from the timber on to a button-rush plain.

Gould's track still continuing to follow the course of the river, I altered my course to about south-west in order to get a look at the country near Mount Direction, which was apparently open.

It was now raining again, and after travelling about half a mile over very broken country we camped for the night on the edge of the plain, 875 feet above the starting point. The next morning, July 18th, we continued the course south-west through a terribly broken country forming the watershed of the Cataract and Abel's Creek, and covered with a dense scrub consisting chiefly of bauera from 10 to 15 feet high.

This belt of scrub was not more than one mile wide, but it took us from early morning until 3 o'clock P.M. to get through it, having to cut every inch of the way. About the centre of this scrub at the bottom of a deep gorge we crossed the head of the Cataract Creek, 600 feet above the Gordon at Gould's Landing. Getting clear of this belt of scrub we were again in the button-rush, and again altering the course to S.  $15^{\circ}$  W., were soon making good headway.

We camped that night in a bunch of stunted peppermint gums about two miles east of Mount Direction, 875 feet above the Gordon Landing, or exactly the same height as our last camp.

The following day, Sunday, July 19th, taking Heather with me, I left the remainder in camp and went to have a look at the country near the south end of D'Aguilar Range. This consists chiefly of open button-rush hills intersected by deep ravines, the slopes of which are covered with a dense growth of myrtle, Huon pines, celery-top pines, with a thick undergrowth of bauera, honeysuckle, and other rubbish. Before we got back to camp the wind had got round to the prevailing quarter and was blowing a hard gale from the north-west, with rain and occasional snowstorms. This continued all the following day and kept us confined to the tents. On Tuesday, July 21st, we left camp early, and continuing in a southerly direction over the country just mentioned; about 2 P.M. came to a large stream, which I afterwards found to be the River Sprent, here a fine stream about 30 links wide, flowing through a swamp covered with tea-tree and honeysuckle. After crossing the Sprent and reaching the rising ground clear of its swamps, I found further progress south was barred by a high-wooded range terminating in two lofty peaks close together—these I called the Twins.

Changing the course a little to the east of south we skirted the foothills of this range over rough broken country, consisting of a number of razor-back spurs or ridges open near the summits, all the lower portions being covered with timber and scrub. We camped that night on a branch of the Sprent in a mass of bauera and stunted tea-tree.



Wednesday, July 22nd, saw us make an early start, continuing the same course over the same description of country, until about midday, when we struck the large plain at the foot of and west of Mount Charles. Here we picked up the stakes of the track marked by Mr. District Surveyor Jones in 1881, and followed them for the rest of the day, camping that night on the banks of a fine stream flowing towards the sea coast.

On July 23rd we were again under weigh, and pressing forwards towards the hills known as Table Top and Moore's Look-out, over undulating country, generally button-rush land, with here and there a thick belt of scrub on the banks of the numerous creeks and watercourses with which this country is intersected. About noon the weather, which had been fine for the last couple of days, changed for rain, and the remainder of the day we had heavy squalls of rain and snow. About 3 o'clock p.m. we crossed the main branch of the Mainwaring River, and shortly afterwards passed Moore's Look-out, camping for the night in a deep ravine about half a mile south east of that hill.

Friday, 24th July, broke fine, and having dried our wet tents, &c., we continued a southerly course across the same description of country, but encountered rather more scrub than on the previous day. We struck Jones's track again about 2 p.m., about five miles from View Hill, and here I had a large stake driven with the course plainly marked upon it in pencil, to lead either to Moore's Look-out or the Rookery Plains. We now followed Jones's track, and soon came to where it had been restaked by Messrs. Cullen and Cawthorn in 1894.

Saturday, July 25th, we got an early start, and, following Jones's track, reached the Rookery Plains about 2 o'clock p.m., crossed it, and camped about four miles west from the Frankland Range; weather again bad, raining, and very cold.

Sunday, 26th, we stayed in camp all day, it being too wet to continue the journey.

On Monday, July 27th, the weather looked finer, and I decided to go straight over the Frankland Range, and, if possible, reach the Serpentine that night. We reached the foot of the mountain about noon, and having had a billy of tea, we strapped on our swags and went at it. In exactly 1 hour and 50 minutes we had gained the summit, here some 3240 feet above sea-level, having climbed 1700 feet in the time mentioned above. Four o'clock p.m. found us once more on the plains near the Serpentine River, and about dark we made our old camp in the clump of peppermint gums about a mile west of the river, which we had left some five weeks previously.

The next morning I sent J. Innes and Woolley to have a look at the river before we moved the camp. They returned in about an hour, but reported it flooded and dangerous, although apparently falling. I expected this, for on the previous day, when crossing the Frankland Range, I could see the swamps and flats in the immediate vicinity of the river were under water. We stayed in camp that day, all hands being glad of a spell.

The following morning, finding the river falling very slowly, I shifted the camp up the valley to Lake Pedder, with the double object of having a look at the lake and trying to find a fording place. We camped about half a mile from the lake that evening, and devoted the whole of the next day to making an examination of the lake and its surroundings. Lake Pedder is a beautiful sheet of water about three miles across, bounded on the north by a rugged range, on the east by a beautiful white beach, on the south by the rugged walls of the Frankland Range, and west the Serpentine Valley. Mr. H. M. Nicholls got a couple of photos, which will give some idea of the beauty of this gem of Southern Tasmania. Failing to find a ford at the lake, I decided next day to return to the crossing-place on Cullen's Track, and if the river was not fordable, to send the tents and bedding across on a line I had for the purpose, and swim the river. We reached the ford late on Friday, 31st July, and camped beside the river that night. The next morning Mr. Nicholls and G. Heather swam across, gaining the opposite bank safely, and made the line fast to a tea-tree. In the meantime, those left behind had fixed a stout pole in the ground, and fastened the line securely to it some six or eight feet above the water in the river. Upon this line all our kit was transported safely across, and, casting the line adrift, the remainder of the party took to the water and soon landed safely upon the opposite bank. Here I found the despatch and letters left by Mr. Kenneth Nicholls a month previously. We were soon out of the Serpentine swamp and up to our old camp, where, to my surprise, I found the provisions left had not been touched, and the mailbag in the same position as I had left it, showing that whoever had been out had not found the tent. Picking up the tent and provisions, I continued the journey along the track marked by Messrs. Cullen and Cawthorne. This passes over a low range and into the Hermit Valley. From the summit of this range and on the track I got the following bearings to fixed points:—Mount Wedge N. 67° E., Mount Wilmot N. 64° W., and camped that night in the Hermit Valley, near the track followed upon our outward journey.

On Sunday, August 2nd, we continued the homeward journey, making one of our old camps near Mount Wedge that night, and the evening of Monday, August 3rd, saw us at our provision depôt near the head of the Florentine River. That night it came on to snow heavily, and the next morning everything had on a white mantle, making travelling out of the question.

On Wednesday, August 5th, we packed up the swags, and, continuing the journey, crossed the Humboldt Divide, and camped that night in the Humboldt hut. We reached Tyenna the next day, and on Friday, August 7th, made Glenora in time to catch the 4 p.m. train, arriving in Hobart the same evening, after an absence of twelve weeks and three days.

A rough estimate of the distance travelled after leaving the Humboldt Divide is about 150 miles, and taking into consideration the broken nature of the country, I think this would be found to be rather under than over the actual length.

Throughout the whole journey we had to contend with very bad weather, being continually drenched to the skin, and not only this, but the days being at their shortest it was often impossible to do anything like a fair day's work. Another great drawback to exploring in that country in winter is the continual fogs to which it is subject, obscuring everything, so that it is often impossible to see further than a very short distance from your camp, consequently one is to a certain extent working in the dark. Although we all suffered some pretty severe privations the health of the party was good, and I think none of the members of the expedition appear much the worse for their journey.

#### PRACTICABILITY OF THE ROUTE FOR ROAD PURPOSES.

From the observations taken and all information gathered while in that portion of the country, I am afraid the expedition, as far as the primary object for which it was dispatched goes, viz., that of finding a practicable route to the West Coast *viâ* Russell's Falls River and the Gordon Valley, must be looked upon as a failure, because, even supposing all other difficulties surmounted, the Frankland and Wilmot Ranges, standing as they do directly across the route, present a barrier over which it is impossible to climb with a road of any description unless at an enormous expense. As far as I could judge the only possibility of obtaining a practicable route is to go much further south; viz., after leaving Tyenna go south west around the south end of the High Rocky Mountain, pass between Mount Anne and Lake Pedder, across the Huon Plains, and through the pass between the Arthur and Frankland Ranges into the valley of the Davey River, follow that valley to the middle ground, thence go northerly along the Rookery Plain, passing View Hill upon the north side. From the Rookery Plain a track could be taken over the country I traversed upon my return journey from the Gordon to either the Gordon or Birch Inlet; if to the Gordon it should strike the river in the vicinity of Butler Island, but I am inclined to think it would be less costly to go to Birch Inlet. This route I believe to be perfectly practicable, and if anything is done in the way of exploration I would suggest that it be tested, although from its great length I doubt if it would be found very satisfactory.

#### AGRICULTURAL LAND.

From the Humboldt Divide the whole of the way to the Gordon I did not see a thousand acres of land that would be of any value for agricultural purposes. I crossed one small patch, not more than three or four hundred acres, at the head of the Florentine Valley; this consisted of a dark chocolate soil, level, and free from stone. The timber upon it is principally myrtle of a very large size, with an undergrowth of cat-head ferns.

I saw a few hundred acres upon the north-western slopes of Mount Wedge. The soil was of the same character, only apparently stony, the country thereabouts being steep and broken.

#### PASTORAL LAND.

Unless the button-rush plains could be made capable of carrying stock, by constantly burning off, there is nothing in the way of pastoral land of any description.

#### TIMBERED LANDS.

In the Florentine Valley between High Rocky Mountain and Wedge there are some fine belts of Stringy-bark (*E. obliqua*) and Gum-top (*E. Siberiana*), with a large quantity of Myrtle (*Fagus Cyn.*) and Celery-top Pines (*P. rhomboidalis*), with a few scattered Silver Wattles (*Acacia dealbata*) and Lightwood (*Acacia melanoxylon*). The foothills and slopes of Mount Wedge are covered with timber of the same description. This extends to the banks of the Wedge River near the Denison Plains. From the Denison Plains to the Franklin and Wilmot Ranges very little timber of any description is to be found; here and there a few patches of stunted Peppermint Gums (*E. amygdalina*) are to be seen in a gully upon the hillside, but they are worthless for anything but firewood. After crossing the Serpentine River we strike the pine country. Huon Pine (*Dac. Franklinii*) is the most valuable timber the Colony contains, and, unfortunately, the area upon which it grows is very limited, so that in the near future, unless carefully conserved and protected from ruthless destruction, Huon Pine would become a thing of the past. After crossing the Wilmot Range every stream of any consequence that we crossed had its fringe of pine upon the banks and adjacent swamps, and in many places the streams would be seen flowing over trees that had evidently been down for ages, but, with a few blows of the axe, proved to be as sound as the day they fell. None of the pine timber passed through by my party was of very large size, generally nice handy timber from two to three feet in diameter, with here and there one of larger size. After we come to the country where the pine had been worked some years previously, I could not help noticing the immense number of young pines that are springing up in all directions. Upon the banks of the Gordon and all the little streams forming its tributaries there are millions of young pines growing, from the little seedling only a few inches high to the pine sapling of apparently a good many years' growth.

As the land in the vicinity of the Gordon is useless for agriculture, I would strongly advise the Hon. the Minister of Lands to cause it to be reserved as a State forest, and take every possible measure to protect these young pines, which, if allowed to come to maturity, must eventually prove

a valuable asset to the State. I have indicated upon the plan the position of most of the pine we saw growing, but it is to be found on almost every stream west of the Frankland and Wilmot Ranges.

#### MINERALS.

Looking at the country passed over from a geological point of view, its indications for minerals are of a very promising nature, and I have but little doubt that if a few properly equipped parties were despatched during the summer months to systematically prospect the country, that we should hear of something good being unearthed. Although no time was lost in actual prospecting, still, in accordance with your intentions, I carefully noted every change of formation, and where possible, secured a small specimen of the country rock.

These are as follows:—On the Humboldt Divide, indurated sandstones and sandstone conglomerates. In the Florentine Valley, and extending to Mount Wedge, quartz, gossan, quartz conglomerates, and micaceous sandstone. Vicinity of Mount Wedge, extending to Hermit Valley, jasperite, black slate, quartz, and micaceous schist. Vicinity of Serpentine River, quartz, micaceous schist, and serpentine. Vicinity of Frankland and Wilmot Ranges, and extending west and north-west towards the Gordon, hydro-mica schists, clay-slates, quartz, and sandstone. Vicinity of Sprent River, hydro-mica schists, quartz carrying tourmaline, and slates, with here and there a little granite showing. Gold was seen on more than one occasion by different members of the party in the vicinity of the Gordon River and also near the Frankland Range, but, as we were short of provisions, no time could be taken to see whether it was likely to prove payable for working.

I have the honor to be,

Sir,

Your obedient Servant,

E. G. INNES, *District Surveyor,*  
*in charge of Party.*

*The Surveyor-General.*

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#### REPORT ON THE MINERAL CHARACTERISTICS OF THE COUNTRY BETWEEN TYENNA AND THE GORDON.

I have the honour to report that, in accordance with instructions, I paid particular attention to the geological formations and mineral indications of the country passed through by the Gordon exploration expedition, and herewith submit the results of my observations. I desire to say at the outset that the difficulties of various kinds the party had to contend with prevented me from making as full an examination of the country as I could have wished, but I can speak with confidence in regard to the rock formations met with. Starting from Tyenna, the prominent characteristic of the country is quartzite, which extends from the neighbourhood of Pine Hill to Pillinger's Creek on the one hand, and thence to the Humboldt Divide on the other, until the basaltic formations of High Rocky Mountain and Mount Humboldt are reached. The quartzite is of a poor-looking character throughout, but alternates in places with quartz stained with iron. Gold has been found in fine colours in this district, and also upon High Rocky and the range of hills which form the barrier between the Russell's Falls and Styx Rivers. Under the foot of High Rocky I have on a previous occasion found strong indications of minerals. The country from the Humboldt hut towards High Rocky and the Needles shows mineral indications, being traversed in many places by bands of limonite and other forms of iron oxide, one of which has been sunk upon by a prospecting association. This association met with very fair prospects, but had to cease work when the general depression came. Some other prospectors found a small vein of copper pyrites, with baryta or heavy spar in this locality also. No prospecting work of a systematic character appears to have been done—at any rate, of late years—in this district, but I am of opinion that any strong financial body that undertook the task would find it a not unprofitable one. The country is an alternation of small button-grass plains and heavy scrub, and the work of the prospector is consequently a difficult one, and time and expense are required to fully examine the capabilities of the place. Leaving the Humboldt hut and passing towards the Divide, a clay-slate formation is met with in the bed of a creek which assists in forming the north branch of the Russell's Falls River. In ascending the Divide the track passed over very nice-looking fragments of slate, with quartz bands through it, coming from higher up the hill. On the Divide, which is a pass between the Needles on the western and Tim Shea's Look-out on the eastern sides, the quartzite and quartz country again appears. The Needles are composed entirely of quartzite and quartz conglomerate, while the Look-out consists of indurated sandstone, apparently of great geological age. Some of the quartz-drift from the Needles has what is known as a "kind" appearance, but the majority of it has a very hungry look. Descending into the Florentine Valley, iron in various forms becomes a prominent feature of the country. Here gold in fine specks has been found. From the junction of Cullen and Cawthorne's track with the old track to the Florentine, towards Mount Wedge, iron in various forms of oxidization occurs everywhere. On a small button-grass plain, a few miles from the junction referred to, it crops out along a hillside for over a

mile; it is mixed with pieces of quartzite. A careful test revealed the presence of nothing but iron and silica, but the test piece was only taken off the surface. On another plain, a short distance further on, a shaft has been sunk upon an iron outcrop of a similar character, but abandoned after a depth of 30 or 40 feet was reached. Some good indications were, I believe, met with before the work was abandoned, but of what they were I have no personal knowledge. A little further on again, towards Mount Wedge, there is a large "iron blow" occupying several acres in extent, mixed with large masses of quartz conglomerate. A saw-backed ridge, composed of quartzite and quartz conglomerate, extends right down to the head of the Florentine River from the Thumbs in the Valley of Rasselas, and where Cullen and Cawthorne's tracks crosses it; it looks well worth prospecting. The general character of the country from the Divide up to this point consists almost exclusively of iron and quartzite, and, except around the basaltic hills, is generally open and easily attainable. I noticed nothing in the shape of granite or the metamorphic mineral-bearing rocks here, though I have found these more to the south of High Rocky Mountain towards the Styx Valley. From Mount Wedge to near the Serpentine River the country consists of quartz of a hard flinty character and quartzite. Metamorphic rocks here make their appearance in the shape of micaceous schists, cropping out everywhere on the hills. The hills themselves are nearly all bare masses of quartzite without timber, and the country is all open button-grass plains, with patches of small scrub in the creeks and gullies. In one small creek near M'Partlan's Pass slate and quartz, with iron pyrites, can be seen. This formation appears to extend up the Denison Plains towards the Gordon, and might be worth following up. On the Wilmot Range, where it rises from the Serpentine River Plains, many of the little creeks look very inviting from a prospecting point of view, though the quartzite and mica schists are still the most prominent features of the country. The Wilmot and Frankland Ranges are of the ubiquitous quartzite formation, but contain the micaceous schists in large masses, coloured in many places by iron. On the Wilmot Range slate appears in large masses, while the quartz upon the western slope assumes a much more inviting character. The creeks which run down this side I should judge to be worth examination, but as they were all flooded during my visit, I was unable to see what they contained. Rocks of aqueous origin, however, were discernible in the shape of grits, in which the quartz grains, in a very fine form, are cemented together. All the creeks to the westward of the Hardwood River where we crossed them were literally full of mica, and in many places the hills were covered with a sandstone full of scales of mica. Some of the rocks I noticed contained specular iron. From the Wilmot Range until nearing the Gordon quartz and quartzite were still the principal characteristics of the country, but as the Gordon was approached the quartz assumed a different character, being in nearly every case much less flinty and more kind in appearance. This run of country appeared to me to trend off to the south and west in the direction of Low Rocky Head. One creek we crossed, in a gully covered with almost impenetrable bauera, ran over a bed of talcose slate, but all the rest running to the Gordon ran over mica and blocks of micaceous schist. The Gordon limestones did not appear until we reached the bank of that river, and there they only seem to occupy a limited area, extending but a very short distance south from its banks. The creeks running into the river, however, show hard granular limestone, black marble, and slates, of Silurian age apparently, mixed with boulders of quartz and quartzite, schist, and other rocks of the older formations, and I have no doubt that they would all prove auriferous. The country to the westward of the Wilmot and Frankland Ranges is, in my opinion, worth prospecting for gold, but the work should only be undertaken in the summer, and by those who can afford to incur some expense. The country can be most easily reached from Port Davey or the Gordon. Cullen and Cawthorne's track I should not advise anyone to attempt to use to reach this western country, as the succession of hills and marshes that these gentlemen chose as a suitable route render it impassable except in the driest months of the year, and the difficulties of swagging tucker along it would be sufficient to prevent any real work being done. With the exception of patches of scrub in the gullies and on the eastern slopes of the hills, the whole country from Port Davey to within a few miles of the Gordon is open and covered with button-grass, and very little difficulty would be experienced in following up any mineral indications found if the season were a good one.

I remain,

Your obedient Servant,

H. M. NICHOLLS.

E. A. COUNSEL, Esq., *Surveyor-General.*