

1881.

NEW ZEALAND.

THE OTAGO CENTRAL RAILWAY

(REPORT OF COMMISSIONERS ON).

*Laid on the Table by the Hon. Mr. Dick, with leave of the House.*TO THE CHAIRMEN AND COUNCILS OF THE COUNTIES OF VINCENT, MANIOTOTO, AND TAIERI, IN
THE PROVINCIAL DISTRICT OF OTAGO.

GENTLEMEN,—

In accordance with your request that we should examine and report on the area and value of the Crown lands which would be opened by the Otago Central Railway, the capabilities of the land for settlement, and to what extent its value would be enhanced, and population, production, and traffic in the central district of Otago increased, by the construction of the said railway, we have now the honor to report that we occupied eleven days in traversing the district up to the terminus at Lake Wanaka, diverging from the main line at various points to inspect land fit for settlement and partially-settled blocks; that we examined a number of witnesses occupying the said blocks, and others who were in a position to give evidence bearing on the subject, and we respectfully submit the result of our investigation for your information.

2. We have assumed that the route of the line, as laid out by the Government Engineer, is the one best adapted for the public interest. Parliament, after due inquiry, has already sanctioned it, and £115,000 have been expended in partially constructing the most difficult portion, the first twenty miles of the work. We have no hesitation in stating our opinion that the line as laid out follows the course most suitable for the development of the resources of the interior, for the increase of settlement, and for the benefit of the widely-scattered mining population, combined at the same time with greatest economy in the cost of works.

3. A general view of the importance of the line may be realized from the following facts: It would start from the Main Southern Trunk Line, only seven miles south from Dunedin, thus having at one terminus a population of 45,000. The district to be traversed contains at present a number of industrial centres, including the Boroughs of Alexandra, Cromwell, and Naseby, and the Townships of Pembroke, Albertown, Bendigo, Bannockburn, Clyde, Ophir, Drybread, Tinker's, Cambrian, St. Bathans, Hill's Creek, Kyeburn, Hamilton, Hyde, Middlemarch, and Hindon. The population numbers about 10,000, all actively engaged in agricultural, pastoral, and mining pursuits, and the various trades and manufactures necessary for such a population. There are 23 post offices, 10 branch banks, and 25 schools, having 36 teachers and 1,503 scholars. A Resident Magistrate's Court is held at eleven different localities. Three newspapers are published locally, viz., the *Mount Ida Chronicle*, the *Dunstan Times*, and the *Cromwell Argus*. The annual valuation of the Counties of Vincent and Maniototo, including boroughs, is £84,424, although nearly the whole of the land is still part of the waste lands of the Crown.

4. A more detailed survey of the district confirms the impression of its importance conveyed by the foregoing general statement.

5. First, as to its agricultural and pastoral interests. There are 39 pastoral runs, with 1,131,666 sheep, the annual revenue from which may be estimated at £281,458. Mr. John Roberts (of Messrs Murray, Roberts, and Co.,) Chairman of the Taieri County Council, in his evidence before a Parliamentary Committee, estimated the return of wool to be 20,000 bales, or about 2,500 tons. The extent of agricultural land is not less than 550,000 acres. Of this extent only about one-sixth has been alienated from the Crown, leaving about 450,000 acres of land adapted for agricultural settlement as yet unsold. There are two millions of acres of pastoral land, capable of carrying a much larger stock of sheep than at present. As the leases of the large runs fall in, and the lands are subdivided into smaller areas, so as to be occupied separately or by the owners of adjoining agricultural farms, and worked together with the improved low lands, it is calculated that the carrying capacity of the country will be largely increased, and a yearly revenue from flocks will accrue of the value of half a million sterling and a tonnage for export of 5,000 tons, exclusive of fat stock. The various settlers examined spoke without exception of the remarkable fertility of the soil, and concurred in stating that from 30 to 50 bushels per acre of good wheat have been obtained, and from 35 to 70 bushels of oats. Turnips and other root

crops thrive excellently. Such is the superiority of the climate for the growth of cereals, that places situated at an altitude at which grain would not grow in Britain were found to yield productively. Wheat was shown to us at Naseby of good quality, which had been grown at a height above the sea of 2,000 feet. Mr. Roberts states, in his evidence in relation to the high land in the Hindon and Silverpeak Districts, "Good crops are grown 1,500 feet above the sea: oats and magnificent turnips." The height of Strath Taieri Plain at its lowest point is about 625 feet above the sea.

6. Cultivation, beyond what is necessary to supply local wants, is subjected at present to the prohibitive drawbacks of distance from market and cost of carriage. We found in several instances two years' crops on hand. These drawbacks were the only complaints made by the settlers. They praised the climate and the fertility of the soil, and were all desirous to increase their area of cultivation, if facility of communication could be obtained.

7. In the face of the existing difficulties a flour-mill has been built at Ophir, in which the amount of wheat ground is increasing every year. The proprietor, Mr Jones, expects to be able to keep two pairs of stones constantly going. The quality of wheat and flour on hand was remarkably good: Mr Jones stated as his opinion that betwixt his mill and St. Bathans there is a length of twenty miles of as fine land as any farmer could wish to put a plough into, and that he had no doubt it would pay to grow wheat in the district to be ground into flour and sent to Dunedin for export, provided there was a railway to carry it. A large flour-mill is now in course of erection at Luggate Creek, Upper Clutha, and a third has been built in the Maniototo Plain.

8. In addition to its agricultural capabilities, the district can produce fruit and vegetables of all kinds of surpassing quality, the consumption of which is at present limited to the immediate vicinity. The cost and delay incident to land carriage by heavy wagons are prohibitive of fruit being sent to Dunedin. The total cost to the colony for imported fruit is above £100,000 annually, the greater portion of which might be supplied locally. Near Clyde we saw vines growing in the open air loaded with grapes, which were ripe and well flavoured, some of the bunches weighing 3 lb. each. Peaches, plums, apples, pears, nectarines, strawberries, and other fruits were all growing in profusion, of large size and of excellent quality. At Clyde we were much gratified by an exhibition of fruit, vegetables, and grain, the produce of the neighbourhood, which were all of remarkable excellence and quality. This fruit-bearing zone extends as far as Pembroke, on Lake Wanaka. The growth of fruit might be indefinitely extended, leading to local manufactures. Mr. J. D. Feraud, Monte Cristo, near Clyde, carries on a considerable trade in spite of the expense of carriage, and sends fruit, wines, bitters, and liqueurs to Dunedin to a considerable extent. He has obtained a large number of awards for his productions at the Sydney and Melbourne Exhibitions.

9. It is an important fact to be taken into account in considering the extent of the agricultural resources that, with the exception of the small area specified as already alienated, the whole of the land in the district is still in the hands of the Crown.

10. From Hindon onwards to its terminus at Lake Wanaka the line proceeds through a chain of agricultural plains, ancient lake basins, the soil of which appeared to be well adapted for the growth of cereals and root crops. Its character is fine alluvial silt, easily worked, and showing capability of raising crops of good quality and of a high average. Along the margin of these basins travertine is found in abundance, and the soil is thus enriched with plenty of lime. The straw of the crops seen was of a rich golden colour. These plains are surrounded by hills, from which numberless perennial streamlets flow, affording an easy and unfailing means of irrigation, should it be found necessary in very dry seasons.

11. The Strath Taieri Plain commences thirty-four miles from Dunedin. It is twenty miles in length, and contains 37,000 acres arable, of which 18,172 have been already sold. The total area of the plain and adjoining table land, capable of being classed as agricultural land, is 97,250 acres, of which 56,550 have been sold. Gladbrook, at the lower end of the valley, is noted for the excellence of its fat stock. We saw there a grass paddock of 95 acres, which carries 85 head of cattle all the year round. Last year 300 head of cattle and 4,000 sheep fattened off turnips on this estate were sold, the greater number of which would have been sent by railway if the line had been in operation. Settlers in the upper end of the plain, near Hyde, obtained 40 bushels of wheat to the acre; one had an average of from 45 to 50 and 70 bushels of oats. All concurred that with better communication production would be largely increased and profits considerably augmented. If more land were opened in Strath Taieri it would at once be taken up. It is estimated that, in addition to fat stock and wool, Strath Taieri is capable of exporting 6,000 tons of grain annually.

12. The Maniototo Plain contains 150,000 acres of arable land, of which only 31,236 have been sold by the Crown. We examined settlers from the Eweburn and Sowburn Blocks and from the Kyeburn Hundred. A settler on the Kyeburn Hundred who had broken up 300 acres described the land as specially adapted for root crops. His crop of turnips, he said, astonished him by the size of the bulbs, and he had a fine crop of carrots from seed sown broadcast upon the first ploughing. He had 50 acres sown out in grass, which, he stated, five sheep to the acre could not eat down all the year round. He had had 100 bushels of oats to the acre. Another had 400 sheep on 100 acres of English grass. In the Eweburn and Sowburn Blocks witnesses stated that their averages were—wheat, 40 bushels to the acre; oats, from 40 to 65 bushels; barley, 25 bushels. Peas had been tried in several instances with the result of excellent crops, the produce being used for feeding pigs. All the settlers concurred in the opinion that there was

urgent necessity for improved communication, which would lead to the land being profitably occupied and production largely increased. The probable export of grain when the district is fully cultivated may be estimated at 30,000 tons annually.

13. The Ida Valley contains upwards of 60,000 acres adapted for agricultural settlement. It is about twenty miles in length, by between five and eight miles in width. Several blocks of land have been recently opened for settlement. In the lower part of the valley, at Poolburn and Tiger Hill, 5,000 acres have been taken up, and in the upper end 2,377 acres. We found that good averages of cereals prevailed equally here. One settler (Mr. McIntosh) said, "We cannot get any sale for our produce. We have all last year's oats here yet, and we can't sell them. That is how we are placed, and why we want a railway." Another said he would be prepared to increase the extent of his farm and cultivation if there were the means of sending away his produce. He had had 1,100 bushels of wheat of good quality from 45 acres last year. Some of the settlers here possess considerable means from their mining industry, and are very desirous to extend their agricultural holdings. The ridges of hills which surround the valley are well adapted for being divided into suitable areas as pasture land in connection with the arable land. The probable export of grain may be estimated at 12,000 tons annually.

14. The Manuhirikia Valley is an extensive plain, containing a large amount of valuable land. It is estimated that the agricultural area is not less than 160,000 acres; of this, 30,000 acres have been surveyed, and nearly one-half of the surveyed land has been sold. A great deal of land of superior quality is yet to be surveyed. One farm of 1,250 acres, of which there are 280 under cultivation, was an excellent sample of the rolling downs at the upper end of the plain. Wheat gave 30 bushels to the acre, and oats 30. But in this instance it was the excellence of the root crops which specially attracted our attention. The crops of turnips, beet, and carrots, sown on the first furrow, were most remarkable. At the lower part of the plain there are thirty settlers in the Spottis Hundred. One farm, containing 500 acres, is nearly all broken up, and there are about 170 acres of English grass. Butter and cheese-making have been undertaken here, but, beyond supplying the local demand, there is no encouragement at present to extend the manufacture. The grain export may be estimated at 30,000 tons annually.

15. On the Earnsclough Station, near Clyde, there is a moderate extent of agricultural land, on which good crops of wheat and oats were grown this season. The Bald Hill Flat has been nearly all taken up and cultivated. The valley of the Clutha narrows to a gorge between Clyde and Cromwell; but there are numerous fertile patches where orchard-growing could be carried on profitably. At Cromwell the valley opens out into a wide plain stretching thirty miles, as far north as the Lakes. The area of agricultural land is not less than 150,000 acres, of which 20,000 acres have been alienated. The Hawera, Tarras, and Wanaka Blocks are all of good quality. In the Mount Barker Block the average yield of wheat was 35 bushels per acre, and in some places the yield of oats was 70 bushels. On the Hawera side of the Clutha several settlers were examined. They concurred in the estimate that there were above 100,000 acres between the Hawera and the Lindis, on their side of the river, all suitable for cultivation. The average yield of wheat was said to be 40 bushels to the acre, and oats 35 bushels. In the words of one of the witnesses, sown grass "grows splendid." We were struck by the intelligence of the witnesses, and the total absence of complaint on their part, except that they were shut out from a market by distance, and thus prevented from doing justice to the productive capabilities of their farms. The export of grain from this district may be estimated at 30,000 tons annually.

16. Within the influence of the terminus at the Lakes there are several important valleys on which a large population might be settled. The Matukituki Valley, opening to Lake Wanaka, contains an area of 14,000 acres arable, of a quality little inferior to that of the celebrated Taieri Plain. Motatapu Valley, 1,000 acres; the Makaroa Valley, 10,000 acres; and the Forks, 4,000 acres.

17. In estimating the tonnage of grain for export which the district is capable of producing only one-third of the arable land has been taken into account, and allowance has been made for local consumption. We believe that as settlement proceeds a large area of what is at present considered pastoral land will be found well adapted for settlement and cultivation. The total annual tonnage, estimated at 100,000 tons, is under the limit of the capabilities of the country.

18. For further details reference is made to the evidence and explanatory map accompanying this report.

19. We have unanimously come to the conclusion that the pastoral and agricultural resources of the district to be traversed by the proposed railway are of very great extent, but production is at present limited by the want of means of sending produce to market. It is not too much to say that, were the railway carried through, it would secure an immediate and large traffic in stock and produce, and the result would be the rapid settlement of a fine tract of country, and a large increase of revenue and population. The yearly value of the produce if facility of communication were afforded cannot be estimated at less than a million sterling. We are also of opinion that delay in prosecuting the railway works will, for want of a market, be attended with loss and damage to the enterprising men who have settled as the agricultural pioneers of the country, and whose present position justly deserves early and earnest consideration.

20. In addition to the agricultural and pastoral resources of the country, the timber trade from the extensive forests in the vicinity of Lake Wanaka, which reach back as far as the West Coast, may be referred to. At present no more is cut than is necessary to satisfy local wants,

but a supply at a moderate cost would lead to an increased local demand for building, fencing, and mining purposes.

21. The next important source of production is that of gold-mining. The whole of the district which would be opened up by the proposed line is an established and productive gold field. We were glad to observe the appearance of stability shown in the various places we visited, good stone buildings having been erected as stores and hotels, instead of the temporary structures in use in early times. Mining, which is chiefly carried on by sluicing, has settled into a steady industry, and, until the agricultural capabilities of the country are made available, it may be said to be the mainstay of the population. We found at Naseby and other mining centres there was a tendency on the part of the miners to associate themselves into companies, and thus to carry on their labour more systematically and profitably than when single-handed. A number of the miners were thus enabled to occupy their time partially in agriculture. The quantity of gold, the produce of Vincent County, exported last year was 23,785 oz.; of Maniototo County, 15,855 oz.; of Lake County, so far as it is affected by the proposed railway, say, 5,000 oz.; and of Taieri, 1,887 oz. Making allowance for the gold retained in the colony, it may be safely averred that the value of the gold produced in 1880 in this district was not much under £200,000. From the testimony of witnesses examined, we believe that the production of gold might be largely increased if the cost of living were lowered, and facilities of tunnelling afforded by timber being carried at a low rate. The importance of the industry is shown not only by the value of the produce, but also by the amount of capital engaged in it. According to a parliamentary return there are 1,741 miles of head races in Vincent, Maniototo, and Taieri, and the cost of construction of works is valued at £370,985. This large capital would be made still more productive than it is by the extension of mining, consequent upon improved communication. An important branch of gold-mining, namely quartz-crushing, may be said to be only beginning in this district. The Cromwell mine, with a capital of £74,000, yields paying dividends, and there are good prospects in the undertakings in Carrick Range, Rough Ridge, and the Serpentine. Near Hyde we saw a party engaged in turning the course of the Taieri River for a length of 60 chains to secure the golden harvest in the old channel. Arrangements have been made to place four new dredges on the Molyneux, near Alexandra. These are indications of the spirit and energy which would be evoked by the better opening up of the country. The whole of the railway route is within the geological formation named by Professor Hutton "The Wanaka," and stated by him to be "the main gold-bearing formation of Otago." The very richness of its alluvial workings has been derived from the degradation of the quartz veins, leading to the inference that a vast amount of auriferous rock is yet to be profitably worked, capable of maintaining a large population.

22. Although the precious metal has hitherto been the main object of pursuit, the other mineral resources of the district are beginning to command attention. In Vincent and Maniototo Counties there are eighteen collieries under lease, and the supply of brown coal of good quality is abundant. Some of the seams are 25 feet in thickness. Grey antimony has been found in various places. A fine lode is situated in Carrick Range, regarding which Professor Ulrich, in his essay on the Gold Fields of Otago, writes: "Although the lode is a promising one, the expenses of the carriage of the ore to the nearest market would be so high as to leave but a small, if any, margin for working expenses out of the price obtainable for it." In the Carrick Range copper pyrites is obtainable which contains $13\frac{1}{2}$ per cent of metallic copper. Similar ore in Cornwall, containing only from 5 to 10 per cent of copper, is sent to Sawnsea for reduction. Until cheaper carriage can be had, the local mines cannot be profitably worked. Cinnabar, containing 82 per cent of mercury, has been found in the same range. We saw a sample of specular iron in the County Museum at Clyde, which is found in quantity at the Old Man's Range, and which on analysis is reported to be capable of yielding 80 per cent. of pure steel. The Ural Mountains and Sweden are said to be the only places where it is wrought at present. The following minerals are also found in abundance in the Dunstan District, viz., rhodonite, or manganese spar; manganite, or the grey oxide of manganese; bournonite, or grey copper ore; and specimens of galena, graphite, native copper, zinc blende, and silver have also been obtained. The dormant mineral resources of the district are evidently very extensive, only requiring improved communication to become a source of additional wealth to the community. We saw at the Museum at Clyde a specimen of stalactitic marble, beautifully marked and semi-translucent, which was taken from a vein discovered betwixt Cromwell and Clyde, said to be capable of being quarried to a large and profitable extent if easy means of carriage were practicable.

23. We have not been able to obtain an accurate return of the existing goods and passenger traffic betwixt Dunedin and the interior. There are three main roads, one by Lawrence and Roxburgh, one by Strath Taieri, and a third by Shag Valley, on each of which a coach travels twice a week. Many travellers use their own conveyances, or ride on horseback. The whole of the stores used, excepting food produced on the spot, are transported by wagons at a heavy cost, checking the development of trade. We are satisfied that the existing traffic is of considerable value, but it is of less importance that we should be able to give an approximation, as experience has proved that the convenience of a railway so operates on the resources of a district as to make a traffic for itself. In the Imperial Parliament a traffic case is never now required to be proved by promoters, as it has been found without exception that the actual traffic resulting from the construction of a railway has far exceeded the most sanguine estimates. It is sufficient therefore that we give a statement as to the resources of the country. If these be abundant, remunerative traffic will prove to be a reality.

24. In regard to passenger traffic a large increase may reasonably be expected. The natural beauty of the lake scenery in the interior is already attracting numerous strangers, the number of whom would be indefinitely increased by the convenience of railway travelling. Professor Hutton, in his *Geology of Otago*, writes: "These lakes present scenery unsurpassed. Wanaka is perhaps the most beautiful lake in the world."

25. In reporting upon the resources of the district in the pastoral and agricultural production and in gold-mining, we have to repeat that they are at present very considerable, and may be safely estimated at half a million sterling. We have already shown that there are 500,000 acres of agricultural land well adapted for settlement, and there are at least two millions of acres of pastoral country, which, by the intended subdivision of the runs which fall in by the expiry of the leases within the next three years, would maintain a much greater number of families than they do at present. Looking at the stimulus the construction of this railway would give in every direction, and the consequent development of agricultural, pastoral, and mining industry, timber traffic, and other latent resources, it may be held that the annual value of the increased production would not be less than a million sterling. No doubt is left on our minds that the construction of the railway would be attended by a very material addition to the general wealth, and would be a marked public benefit. It should not be overlooked that a great public advantage would accrue from the line forming the easiest and most economical means of direct communication between the East and West Coasts. The saddle beyond Lake Wanaka is only 600 feet above the terminus there, and the rise all the way is so slight as to be almost imperceptible. The terminus at the lake is 1,130 feet above Dunedin. When the varied and abundant resources of the interior are considered, we are forced to the conclusion that the capabilities of the interior for settlement by an industrious population are very great, and probably unequalled by any area of similar extent in the colony.

26. To sum up briefly the result of our careful consideration of the whole matter submitted to us we have to report:—

(1.) That the construction of the Otago Central Railway would be the means of opening for sale and settlement an area of not less than 2,500,000 acres of Crown lands, about 500,000 acres of which are suitable for cultivation, and 2,000,000 of acres may at present be classed as pastoral and semi-agricultural lands. The selling value of this large estate would be increased to the extent of at least half a million sterling, and its letting value enhanced to a corresponding degree, while the value of adjacent Crown lands would also be largely augmented.

(2.) That the construction of the line would lead to the whole of the agricultural lands being immediately purchased and occupied, to a large addition to the local population, production, and traffic, and to the profitable occupation of the pastoral and semi-agricultural lands in blocks from 2,000 to 10,000 acres by families residing on the land. By these settlers cultivating sufficient to grow winter feed for the stock, the industrial population employed on this class of land would be largely increased, and the carrying capacity and production of the land at least doubled. The settlers already located in the interior, and those who have taken up lands there recently, would also be enabled to farm their lands profitably.

(3.) That if railway communication with the interior were established, the delay and cost in conveyance of goods and passengers would be largely obviated, the expense of living would be reduced, and new enterprises created and stimulated. It would lead to an increased development of gold-mining, as well as mining for other valuable minerals, affording employment for a larger population, adding to the wealth and general prosperity of the community, and lightening the taxation to the rest of the people of the colony.

(4.) That a sum of about £115,000 has already been expended on the construction of the railway, which sum will be entirely unproductive until the line is extended to Strath Taieri. It is important in connection with this to note that nearly the whole of the lands to be opened by the railway are still Crown lands, the enhanced value of which will go to recoup the cost of the proposed work. We have no hesitation in affirming that if the first section of the line to Taieri Lake were completed the revenue which would be immediately available from the sales of land would be sufficient to construct the next section, and thus the line might be gradually completed by the proceeds derived from sales of Crown lands in the district, without any further addition being made to the permanent debt of the colony.

27. For these reasons we are unanimously of opinion that the welfare of the present inhabitants of the interior, and the profitable settlement of a large and highly productive area, thus aiding in the general prosperity of the colony, imperatively require that the construction of the Otago Central Railway be proceeded with and steadily carried forward to completion without delay.

28. No objection against the prosecution of the undertaking can reasonably be taken on the ground of expensive works. The first twenty miles, in course of completion, is the portion on which the most expense in proportion to the mileage will be incurred, the total cost of the section on hand being £213,000, or £10,650 per mile. The line has been authorized as far as Taieri Lake, forty-five miles farther, which latter portion can be completed for £287,000, or £6,400 per mile, making a total for the sixty-five miles from Chain Hills to Taieri Lake, already authorized, of £500,000, or £7,700 per mile. The remaining part of the line is singularly free from heavy works. It traverses stretches of fine agricultural plains, where the earthwork is remarkably light. There are no tunnels or costly bridges, the line through the Clutha Valley having been judiciously laid out on one side of the river. The estimate for this portion, 115 miles, is £680,000, or, say, £5,900

per mile. The total estimate for the whole line to Lake Wanaka, 180 miles, amounts to £1,180,000. The highest point the line will attain above the sea-level, 2,070 feet, will be at a spur of the Rough Ridge, near road-crossing, eighty-seven miles from the junction. The ruling gradient does not exceed 1 in 50. This is on the part already constructed. The greater portion of the remainder is remarkably easy and free from sharp curves. It would prove to be the cheapest constructed line in the colony, its length being considered, and in our opinion it would not be the least remunerative.

29. The great advantage of the line forming a convenient means of access between the East and the West Coasts would be felt immediately on the line reaching Lake Wanaka, cheap water-carriage being then available for twenty miles, a steamer having been built and recently launched there through the enterprise of one of the settlers. There would thus be, after reaching the head of the lake, only a distance of forty miles, on a comparatively level road, to complete the through communication from sea to sea.

30. The nature of the country is such throughout the course of the line after reaching Taieri Lake that side traffic with the townships, five, ten, or fifteen miles distant from the railway, could be conveniently and economically carried on by means of light of tramways, or the improved road-engines now coming into use.

31. As a whole, we have been deeply and favourably impressed both with the present and latent wealth of this important and magnificent district, and we cordially recommend the completion of the Otago Central Railway as not only being an absolute necessity for the prosperity of the existing population, but as in itself holding out every prospect of a lucrative return, and being certain to exercise a beneficial influence on the future progress of the colony. In our opinion it is a matter of colonial concern, which should be removed beyond the region of local jealousies or prejudices, and should command general support.

We have, &c.,

JOHN BATHGATE.

HENRY CLARK.

DONALD REID.

HORACE BASTINGS.

Dunedin, 1st June, 1881.

OF DUNSTON

MAP OF
THE OTAGO CENTRAL RAILWAY,
REFERRED TO IN REPORT OF
COMMISSIONERS APPOINTED BY THE COUNTIES OF
VINCEN, MANIOTOTO, & TAIRI,
1881.

SCALE

0 1 2 3 4 5 6 7 8 9 10 Miles

REFERENCE.

Arable Land, unsurveyed, thus
do do surveyed.
Goldfields.
Main Roads.
Railways, open.
do in progress.
do proposed & surveyed.



