



OTAGO  
PROVINCIAL GOVERNMENT  
GAZETTE.

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J. L. C. RICHARDSON, Superintendent.

Vol. V.]

WEDNESDAY, NOVEMBER 26, 1862.

[No. 217.]

**SURVEY REPORT.**

Dunedin, 12th September, 1862.

To His Honor Major Richardson,  
Superintendent of Otago.

SIR,

I HAVE the honor to forward for your information the Annual Return of work executed by the Staff Surveyors of this Department, by which it will appear that 397 square miles have been triangulated, 134,765 acres have been surveyed and marked into rural sections, 2644 town quarter-acre sections have been laid off, and 41 lineal miles of road survey executed. Besides the above surveys, Geographical data have been observed in various parts of the interior, which will serve as starting points for Reconnaissance

and following Surveys; also, 1446 square miles of Reconnaissance Survey have been effected, extending over the Upper Clutha Valleys.

This year having been one of much excitement among all classes, the Department has been carried on under difficult circumstances in regard to keeping the men together; it is therefore highly creditable to the officers that they have by their exertions fully realised the results anticipated in my last year's report, which were, that 400 square miles of triangulation would be completed, and 120,000 to 150,000 acres of rural sections surveyed. In lieu of the road surveys proposed several towns have been laid off.

Mr. M'Kerrow's Report on the Reconnaissance Survey of the Upper Clutha Districts, and on the Chronometrical and Astronomical observations connected therewith, have already been published. The service was one of great delicacy and difficulty, and having been most satisfactorily conducted by that officer, much credit is due to him.

In glancing over the Returns, I trust it will appear that there has been no retrogression either of energy or zeal on the part of the other officers of the Department.

The cost of work will be seen to be as follows:—Geographical data of Lindis Peak, Mount Nicholas and Mount York, £198 15s.; 1446 square miles of Reconnaissance Survey cost £343, or 4s. 9d. per square mile; 397 square miles of Triangulation cost £1503 13s. 5d., equal to £3 15s. 9d. per square mile, or three-halfpence per acre; 134,765 acres of rural sections cost £4861 4s. 5d., or 8½d per acre; 2644 town quarter-acre sections cost £1149 18s. 7d., or 8s. 8¼d. per section; 41½ lineal miles of road survey cost £393 8s. 9d., or £9 11s. 8d. per mile. It will thus be seen that, with the exception of rural section survey, the cost of work has ruled higher this year than in former years, and one cause is apparent—viz., the higher rate of labour; but other causes must be mentioned—viz., the constant shifting that the Surveyors have been subjected to, and the great distance of many from supplies; this last has particularly affected the triangulation.

The shifting has affected more or less the whole staff, particularly Mr. Shank's party, who had no two surveys contiguous, out all distantly separate.

This circumstance militates much against the progress of the Surveyor, and should if possible be avoided. The altered requirements induced by the discovery of gold of course afforded cogent reasons for breaking up the arrangements that were made for last year.

Annexed is a return published by the Survey Department of Victoria for which I am indebted to Vincent Pyke, Esq. It will partially serve as a comparison of cost, though it does not give the details of the different classes of survey, which will be seen to vary very much.

	OTAGO.	VICTORIA.
Reconnaissance	at 4s. 9d. per sq. mile	All classes of
Triangulation	at 1½d per acre	Surveys at
Rural Sections	at 8½d per acre	1s. 3d to 2s.
Town Sections	at 8s. 8¼d. per qr. acr.	per acre.

The measures for this season I would respectfully recommend to be as follows:—

Mr. M'Kerrow to go on with the Reconnaissance Survey of the Interior till it be completed; this will have the effect of opening all the available country in the Province to the stockowners. On the completion of this survey I would recommend Mr. M'Kerrow's employment on the Geodesical branch, at first under my own charge, till he gain practice in the various operations, so as to be left to his own management.

I would advise two surveyors to be employed triangulating the Lower Clutha, Pomahaka, Tuapeka, and Waipori Districts; seven surveyors to go on with rural sections in the South Clutha, Taieri, Waiholo, Peninsula and Blueskin Districts, with the view of overtaking all the unsettled and outstanding land applications; two to go on with the surveys of Pomahaka and Otepopo Districts.

By this means about 400 square miles would be triangulated, and 150,000 acres surveyed into Rural Sections.

During the last year the Lithographic branch of the Survey Office has worked steadily. I find the wages have amounted to £326 11s. 5d., and plant to £189 14s. The actual money return has been from maps sold amounting to £151 8s. 11d., but the value of work done according to trade rates, is (as per return annexed) £1239 7s. 6d. Independent of all this I respectfully suggest that this branch is well worth maintaining, for the production of Survey maps alone, owing to the increased facilities those give to intending land purchasers; but this coming year I believe will shew a great increase of income from the accumulated stock of maps on hand.

The West Coast still remains a *terra incognita* to this Department; and though I have reason to suppose that there is not much country available for pasture, nor much for agriculture, yet from the reports of fine timber, coal, and copper that have reached us, it would be well to have the mysteries of the locality cleared up, and its resources made known. If a steam coal could be procured, and there is said to be abundance of seams, the sea-borne trade of this part of New Zealand (whether coasting or over sea) would be most beneficially affected. Possibly Dr. Hector might find it convenient to accompany an expedition.

A sketch Map could be completed in about three or four months, and if a steamer were placed at the service of this Department, I would be happy to execute it myself. The best time would be from December to March, for then the passes across the Southern Alps would be practicable.

I have the honor to be,  
Sir,  
Your most obedient servant,  
J. T. THOMSON,  
Chief Surveyor.

REURN OF WORK DONE BY THE SURVEY LITHOGRAPHIC DEPARTMENT, FOR THE YEAR ENDING 30TH JUNE, 1862.

(ESTIMATED AT TRADE RATES.)

		£	s.	d.
Survey Department.	Maps principally	732	10	0
Geological Survey do.	Cards, &c.	2	10	0
Immigration do.	Circulars, &c.	18	3	6
Engineer do.	Cheques, Schedules, &c.	32	10	0
Police do.	Forms, &c.	6	10	0
Superintendent's do.	Circulars, Labels &c.	447	4	0
Total estimated value of work		£1239	7	6

In addition to this, much time has been consumed in mounting maps, which cannot well be specified.

J. T. THOMSON,  
Chief Surveyor.

RETURN SHOWING THE QUANTITY OF LAND SURVEYED, AND THE COST PER ACRE OF SURVEY FOR THE YEARS 1856 TO 1860 (INCLUSIVE).

Extracted from Parliamentary Papers (Victoria).

YEARS.	Number of Acres Surveyed during each year.	Total cost of Survey during each year	Average cost per Acre for each year.	REMARKS.
1856	846,663	80,899	s. d. 1 10½	The total cost of survey during each year includes that of land of all classes, roads, lines of telegraph, small sites for public purposes, topographical features, gold-fields,* and that of trigonometrical and geodetic operations. Signed C.W. Irgar, Surveyor-General
1857	774,592	78,352	2 0¼	
1858	1,073,647	66,310	1 3	
1859	720,696	65,760	1 9½	
1860	637,860	63,848	1 8¼	
By contract	116,821			

\* I do not quite understand what is included in the term "gold-fields." The above certainly does not include the cost of the running survey.

Department of Lands and Survey,  
26th February, 1861.

(Signed)

28/7/62. VINCENT PYKE.

(True Copy.)

J. T. THOMSON,  
Chief Surveyor.

RETURN OF FIELD WORK FOR THE OTAGO STAFF SURVEYORS FOR THE YEAR 1861-62, ENDING 30TH JUNE, 1862.

SURVEYORS' NAMES.	MINOR TRIANGULATION AND MAIN CIRCUIT SURVEY. 1		RURAL SECTION SURVEY. 2		TOWN SECTION SURVEY. 3		EXTRA WORK. 4		TOTAL COST. 5	REMARKS.
	SQ. MILES	£ s. d.	ACRES.	£ s. d.	½-ACRES	£ s. d.	£ s. d.			
George Hately ... ..	292	942 12 3	...	...	..	..	...	...	942 12 3	5 £914 4s. 11d., per Surveyor's return. 1 This does not include 35 sq. miles of country, of which the Topographical Map was completed. 56 days of actual work, weather much broken, in dead of winter. The Topography was very intricate, and done in more than ordinary detail.
W. C. England... ..	95	471 1 0	...	...	..	..	Map of Oamaru, &c.	93 1 2	564 2 2	
J. McKerrow ... ..	..	..	4300	151 4 0	...	...	22½ miles of Road Survey .....	121 18 0	805 3 2	5 £814 7s., per Surveyor's return. 4 Reconnaissance Survey required extra equipment of £30, still available.
							Geo. data of Lindis Peak, Mount Nicholas, and Mount York .....	198 15 0		
							1446 square miles of Reconnaissance Survey .....	343 0 0		
W. P. Smith ... ..	10	90 0 0	13,841	394 15 0	471	271 10 2	19 miles of Road Survey .....	271 10 9	1027 15 11	3 Main street of Kaitangata surveyed, 400 pegs, and other work done besides
C. B. Shanks .. ..	...	...	13,650	499 10 2	1294	519 7 1	...	...	1014 17 3	5 £1018 17s. 3d., per Surveyor's return; camp shifted every survey.
Francis Howden ... ..	...	...	30,216	1038 15 11	...	...	...	...	1038 15 11	2 & 5 £1073 16s. 1½d., per Surveyor's return.
James Mitchell ... ..	...	...	13,400	744 0 3	..	...	..	..	744 0 3	2 & 5 £706 10s. 3½d., per Surveyor's return.
William Arthur .. ..	...	...	25,721	747 18 8	...	...	...	...	747 18 8	2 & 5 £744 7s. 8½d., per Surveyor's return; 8 acres in Canvas Town, Dunedin, are included, and one Block in Waikouaiti District was exceedingly rough and difficult.
Robert Grigor .. ..	...	...	12,895	512 8 1	502	245 5 4	..	...	885 7 9	5 £757, per Surveyor's return
Alexander Dundas .. ..	...	...	930	94 0 0	377	113 16 0	..	..	207 10 0	5 £207 16s., per Surveyor's return.
A. D. Wilson .. ..	...	...	19,812	678 12 4	..	..	...	...	678 12 4	2 & 5 £671 2s. 4d., per Surveyor's return.
	397	1503 13 3	134,765	4861 4 5	2644	1149 18 7		1028 4 11	8656 15 8	

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Survey Office, Dunedin, 12th September, 1862.

J. T. THOMSON, Chief Surveyor.

RETURN OF SURVEY OPERATIONS FOR  
THE SEASONS 1857-58, 1858-59, 1859-  
60, 1860-61, AND 1861-62.

SEASONS.	RECONNAISSANCE.				TRIANGULATION AND MAIN CIRCUIT SURVEY.				RURAL SECTION, AVERAGE SIZE, 80 ACRES.				TOWN SECTION, AVERAGE SIZE, QUARTER-ACRE.				Average cost of Colonial Survey of Otago.
	AREA, ACRES.	ACTUAL COST.	RATE.		AREA, ACRES.	ACTUAL COST.	RATE.		AREA, ACRES.	ACTUAL COST.	RATE.		AREA, ACRES.	ACTUAL COST.	RATE.		
1857-58	7,588,480	£ 1000 0 0	s. 0 3/1000		17,920	£ 100 0 0	s. 0 1 1/4		35,163	£ 1,255 13 8	s. 0 8 1/2		...	...	...	0 9 3/4	
1858-59	...	...	...		147,815	£ 740 3 0	s. 0 1 1/4		22,895	£ 606 11 10	s. 0 6 1/4		398	£ 362 6 2	s. 18 2 1/4	0 7 1/2	
1859-60	...	...	...		506,880	£ 2,900 0 8	s. 0 1 1/4		29,507	£ 1,083 19 10	s. 0 8 3/4		219	£ 313 10 1	s. 28 7	0 10	
1860-61	...	...	...		566,400	£ 2,220 13 6	s. 0 1		141,690	£ 5,280 8 1	s. 0 8 3/4		1,121	£ 1,247 16 3	s. 22 3	0 9 3/4	
1861-62	925,440	£ 343 0 0	s. 0 9/1000		254,080	£ 1,503 13 3	s. 0 1 1/2		134,765	£ 4,861 4 5	s. 0 8 3/4		661	£ 1,149 18 7	s. 34 9	0 10 1/4	

REMARKS.—It will be observed from the above that the cost of Reconnaissance (a most useful preliminary survey for settling pastoral runs, boundaries of districts, and general routes) is merely nominal. The cost of Triangulation is 1d. to 1 1/2 d. per acre. The stations average 2 1/2 miles apart, and on these are based all land measurements. The cost of Rural Section is 6 1/2 d. to 8 3/4 d. per acre, the average size being 80 acres. The cost of Town Section Survey varies from 18s. 2 1/4 d. to 34s. 9d. per acre. Thus it would not do to strike an average of all classes of survey in the year, as the Reconnaissance would unfairly reduce the rate, and Town Section as unfairly increase it. It is Triangulation and Rural Section Survey that are meant when the cost of the survey of a colony is spoken of; in Otago these include road lines (main, district, and occupation), ferry sites, town sites, &c., which I think is all that is included in the annexed return for Victoria.

In South Australia, which from the first has had the advantage of a correct system of survey, as described in the work of Captain Frome, R.E., the cost of Triangulation was only 1/2 d. per acre, and of Rural Section 3d. to 4d. per acre, but these prices ruled before the discovery of gold in Australia, and consequently when labour was cheap. The *trig. points* were at 7 mile distances instead of 2 1/2 miles, as with us, which materially reduces their cost.

In New South Wales it appears from a Report of a Commission of Enquiry into the Survey Department, dated 11th August, 1855, that no regular system of survey was maintained in that Colony; the survey officers seem to have been employed in marking out *spotting claims*, without connexion. This had induced great confusion in titles, and litigation. The cost of this species of survey was executed at a rate varying from 1s. 11d. to 6s. 8 1/2 d. per acre.

From the Report of the Surveyor-General of Victoria (1859-60) the survey of Victoria seems to have been conducted in the same manner as that of New South Wales, his description of which is somewhat deplorable; and to remedy this he proposed to substitute a general system called "Geodetic." Though I could not recommend the system for adoption here, either in principle or detail, yet if persevered in, it will supply a great desideratum—that is, it gives known and undisputable land-marks, on which subsequent sectional surveys are based, and to be referred to for adjusting obliterated boundaries. These land-marks serve the same purpose as our *trig. stations*, and are placed 6 miles apart,

at a cost of about 1d. per acre. The size of rural sections is not given; the cost by annexed return will be seen to vary from 1s. 3d. to 2s. 0½d. per acre.

Regarding the other Provinces of New Zealand I have no reports, either as to style or cost, but with the exception of this Province and Southland, believe them to be conducted on the "spotting system."

J. T. THOMSON,  
Chief Surveyor.

ENGINEER'S REPORT,  
(WITH NOTES BY PROVINCIAL SECRETARY)

Provincial Engineer's Department,  
Dunedin, 22nd October, 1862.

To His Honor the Superintendent.

SIR,

I HAVE the honor to forward a report of the state of the Department, which has been under my charge since the 1st April, 1862.

The Provincial Engineer's Department has hitherto consisted of three Branches, viz.:—1, Engineering; 2, Architectural; 3, Road making and maintaining.

1. ENGINEERING.

Previous to the first of April, the Engineering works were proposed and carried out, partly by the Superintendent of Public Buildings, and partly by the Chief Surveyor, and consisted of Jetties, Piers and Bridges.

The Jetties and Piers in course of construction were:—Jetty-street Jetty, Rat-tray-street Pier, Stuart-street Jetty, Pelichet Bay Jetty, Port Chalmers Jetty, and Waiholia Jetty.

*Jetty-street Jetty.*

The Jetty-street Jetty was contracted for on the 11th January, 1862, by Mr. Henry Hill, for a sum of £4484.

I found that if constructed according to the original contract plans, the structure would not be sufficient for the traffic to which it would be subjected. I have, therefore, introduced additional beams to support the planking, and a large quantity of iron work, in order to secure the superstructure of the piling. The total cost of the work was £5159 16s. 4d., being £675 16s. 4d in excess of the contract sum= 3s. 6d. per square foot. In the original plan it was contemplated that iron tram-rails should be used to convey the goods by trucks along the Jetty to the end nearest Princes-street, in a similar manner to that in use on the old Jetty. Being

convinced that the Jetty would be of comparatively little use unless horses and drays were permitted to traverse its entire length, I proposed to abandon the tram-rails on the Jetty, and by placing an additional layer of red pine planking, render the structure serviceable for horse traffic. This suggestion met the approval of the Government, and a Contract has been entered into (on the 22nd August, 1862) with Messrs. Bullock and Walker, to cover the Jetty with 3-inch red pine for the sum of £1763, or at the rate of 1s. 2½d. per square foot, including all labor, nails, tar, &c. The Contractors are bound to complete this work on the 9th day of December, under a penalty of £5 per day.

In July last I prepared a plan and estimate of such additions to the Jetty-street Jetty as I considered essential to its proper working, viz.:—

1. Two Landing Stages each 390 feet in length, 18 feet 6 inches in width, raised 2 feet 10 inches above the level of the present Jetty, so that drays backing against the staging might have the goods rolled instead of lifted into them. Upon these stages it was proposed to place four 3-ton travelling cranes, by which means goods might be lifted out of vessels into carts, or deposited upon the landing stage.

2. A passenger platform, 150 feet in length by 125 feet in width, with proper steps.

3. A Deck House, including on the ground floor Ladies' Waiting Room and Closets, Gentlemen's Waiting Room, Closets, &c., Jetty-keeper's room, and Staircase; on the first floor Look-out gallery for Police, &c., Clock and Belfry. On the second floor, Lantern and lamps, with compass points and Vane My estimate for the foregoing works was as under:—

	£	s.	d.
Two Landing Stages, 390 ft.			
x 18 ft. 6 in., at £1865 5s.	3730	10	0
Two wrought iron Tramrails for Stages, at £42 .. ..	84	0	0
Four 3-ton Travelling Cranes at £140 .. .. .	560	0	0
Four Buffers, at £20 .. ..	80	0	0
Passenger Platform, 150 ft. x 125 ft. .. .. .	4523	17	0
Deck-house, as described ..	609	6	3
Lamps for Steps, &c. .. ..	96	0	0
	<u>£9683</u>	<u>13</u>	<u>3</u>

The Government approved of the suggestion, but thought the extent of work too great to sanction at once. I was authorised, however, to call for Tenders

for one landing stage, and on the 15th August last three tenders were received, the lowest being £3083 15s. 5d., and the highest £5000. These tenders were made at the time the Dunstan Gold Field was announced, and as I considered them far too high, I suggested that their further consideration should be postponed for one month. On the 17th October, 7 fresh tenders were received, the lowest being £2055 2s., and the highest £4557 16s. As the lowest tender was £45 14s. under the estimate I furnished on the 23rd July last, I have recommended its acceptance.

I would suggest the advisability of placing a sum, say £8000, upon the estimates for the completion of the works above described, and also for the erection of a fixed 10-ton Crane for heavy goods, say £400.

#### *Rattray-street Pier.*

This pier was originally proposed to be 1225 feet in length, by a width of 66 feet at the top, and to be constructed of earth-work, protected by rough stone walling, which was again protected by fender piles, the fender piles being secured by land ties and short piles. The Contract for the work was let on the 4th March to Mr. John Barnes, for the lump sum of £6400, to be completed in 6 months. The method of construction adopted in the formation of this pier seemed to me objectionable for many reasons, and I proposed the substitution of a sloped bank, faced with rough blue stone pitching, so as to withstand the wash of the waves.

This plan of construction is calculated to last as long as the stone will endure, and does not prevent the erection of landing stages or warehouses along the sides of the pier. In reporting on the plan of the proposed extension of the Town, I shall have again to refer to this pier.

The total cost of the work executed to the 30th September last, is £2453 8s. 6d., and the total length completed 600 feet, leaving a balance of £3946 11s. 6d. to finish 625 feet of pier, culverts and metalling. The Contractor for this pier is very considerably behind his time. He has, however, had to contend against very severe weather. A difficulty in obtaining labor, and the alteration in the method of construction have also caused some derangement of his plans. Nevertheless, I do not think that as much energy has been shown as might have been under the circumstances.

#### *Stuart-street Jetty.*

The erection of this Jetty was commenced in the latter part of 1861, and the

system pursued has been to sub-divide the Contracts as much as possible. For instance:—1861, F. M'Ivor, Cartage of Piles. 1862, Jan. 9, John Barnes, driving piles; do. do. 16, John Bullock, supply of red pine timber; Feb. 24, F. M'Ivor, supply of piles; June 5, F. and W. Stone, supply of iron-work. Day labor, framing and construction.

It was proposed that the total length of the pier should be 1100 feet, but no plan was prepared. The whole expenditure on the work to the 30th September was £3763 15s. 4d., or at the rate of 3s. 5d. per superficial foot, and considering the very superior manner in which the work has been performed, both with respect to material and workmanship, as compared with the Jetty-street Jetty, which cost 3s. 6d. per superficial foot (without the additional layer of planking), I consider the work has been economically carried out.

The system of sub-dividing work among various Contractors is objectionable. If one Contractor fails, the others are often brought to a standstill, and the Government loses control over them.

For some time the progress of the works on this Jetty was satisfactory, but the Contractor for supplying the piles was unable, in consequence of bad weather, &c., to furnish the required quantity, and as a necessary result the Contractor for driving was stopped. The length of site on which piles have yet to be driven is 410 feet, and I estimate a further sum of £3235 will be required to finish this work.

#### *Pelichet Bay Jetty.*

A Contract for the extension of the Jetty at Pelichet Bay for a distance of 660 feet, was entered into with Messrs. Hill and Bartly on the 11th January last, and was completed on the 12th April. The structure is of the slightest possible character, being intended merely for small boats and passenger traffic. The total cost has been £2029 10s. 3d.

#### *Port Chalmers Jetty.*

A Contract for the extension of this Jetty for a distance of 100 feet was entered into with Mr. G. M. Aldrich on the 15th January last. The final certificate was granted on the 15th July. Contract sum £473. Extras, £172 16s. 11d. Total cost, £645 16s. 11d.

#### *Waihola Jetty.*

A Contract for the erection of a Jetty was entered into with Mr. Robert Bell, on the 15th January last, and the final certificate was granted on the 21st April. Contract sum, £450. Other expenditure, £33 5s. Total cost, £483 5s.

*Moeraki.*

A sum of £700 was placed upon the Estimates for a Jetty at Moeraki.

Moeraki is particularly favored in its capabilities for being made a first-rate harbour, more so than any place I have seen on the east coast.

A sum of £700 would go but a very little way in erecting a complete pier or Jetty. My late assistant, Mr. Dundas, has made a survey, and taken soundings of the locality, but the plan being unfinished, I am not in a position to state what sum would be required to construct a serviceable jetty. I think £1500 the least sum that ought to be calculated upon.

*Waikouaiti.*

Surveys and soundings have been taken for a Jetty and Break-water at Waikouaiti. No definite plan or estimate has been made. The position chosen, although the best that can be obtained, is very exposed. The Jetty and Breakwater will have to be composed entirely of stone and earthwork. There is abundance of stone in the immediate neighbourhood, but the sum of £2000 at the least will be required to form an efficient work.

*Bridges.*

The Bridges erected hitherto are of the simplest character, and as they have been under the supervision of the Road Inspectors, I shall not allude to them in this report under the head of "Engineering Works."

*Harbour Improvements.*

In connection with Engineering works the most important that presented itself, on my arrival in this Province, was the extension of the Town towards the South-east, or from high water-mark to the Bay. (a) I saw that not only did a large area exist, which was dry at low water, but that a much larger area had only a depth of water of from 1 to 3 feet.

Having been engaged in the north of Ireland in the reclamation of more than 80,000 acres of ground from the sea, where the tide rose and fell 10 feet, and the banks were exposed to an ocean swell, the practicability of a scheme (which I believe has been under consideration for

(a) Under the direction of the late Capt. Cargill, in 1859, a general plan and estimate for the reclamation of the ground referred to was made by J. T. Thomson, Esq., Chief Surveyor, and would have been immediately carried out had the Revenue admitted; and under the present Superintendent a Crown Grant having been obtained, a detailed plan was drawn out by Mr. Langlands, the late Superintendent of Public Buildings, and laid before the Provincial Council; a change in the department then occurred.

some time) for reclaiming some 400 acres from the Bay in front of Dunedin, was at once apparent to me.

One great point in favor of the proposed reclamation, is the immediate contiguity of high lands from whence clay and stone may be readily conveyed to their required position.

With this report I forward a plan of Dunedin, showing the extension of the town. A portion of the proposed extension is drawn in strong red lines; this part having been approved, and the schedule of the several building sites is incorporated in "The Harbour of Otago Leasing Ordinance," Session 15, No.

The area above mentioned extends from a point opposite Walker-street to a point 500 feet north of Stuart-street, extending 2000 feet from high water-mark into the Harbour, and comprising 137 acres—of this area  $37\frac{1}{4}$  acres are appropriated to three Docks, containing respectively  $16\frac{1}{2}$  acres,  $12\frac{3}{4}$  acres, and 8 acres.

In planning the extension it was my object not to sacrifice any works which had been already performed. I have, therefore, made the Jetty-street and Stuart-street piers available, as landing and discharging points in the centre of the docks; and Rattray-street pier being composed of solid earthwork, I propose should form one side of No. 2 Dock.

There are about  $5\frac{3}{4}$  miles of streets, 66 feet in width, of which nearly 2 miles have a frontage to the docks. The streets occupy an area of nearly 46 acres.

The Schedule attached to the plan and the Ordinance, gives the areas of the building sites to be reclaimed, viz., 54 acres 327 square yards.

I have prepared an Estimate of the cost of the works included within the area of 137 acres. In order not to understate, I assume the embankment necessary to form the streets at an average height of 14 feet or 3 feet 6 inches above high water-mark. The solid contents of a bank 14 feet high, with a top width of 66 feet, and side-slopes 2 to 1, are 146 cubic yards, which at 2s. 6d. per cubic yard equals £18 5s. per lineal yard of bank. The embankment will require, say 17 square yards of 15 inch stone pitching at 10s. per square yard, or £8 10s. per lineal yard of bank. The two items make a total of £26 15s. for every lineal yard of street throughout the reclamation. I have before observed that there are  $5\frac{3}{4}$  miles of street, or 10,087 lineal yards, which multiplied by £26 15s. gives £269,827. Metalling  $5\frac{3}{4}$  miles of streets and culverts will cost say £55,478. Three swing Bridges, and three sets of Lock Gates at £10,000 each, equal £30,000.

## ABSTRACT.

5½ miles of Streets .....	£269,827
Metalling do.....	55,478
3 Swing Bridges and Locks	30,000
	<hr/>
	£355,305

The embankment necessary for the street having been formed, the question of filling in the spaces becomes a matter of time; those portions nearest to the harbor can be filled in with the material dredged from the channel, the portions nearer the present town could be filled in from such excavations as are required in forming or lowering existing streets and building allotments. This work I consider might be left to private parties, that is, to those who purchase or lease.

The building sites reclaimed—In some cases the owners or occupiers might not wish the site filled in level with the streets, as for instance when cellars are required under warehouses, &c.

It will be seen, therefore, that the Government will not necessarily be called upon to fill in the whole of the reclaimed area of 137 acres, but merely to provide and deposit the material requisite to form 10,087 lineal yards of embankment, 66 feet wide at the top, or in round numbers 1,472,602 cubic yards, an amount of work which 600 men could easily perform in two years, taking into account every possible contingency.

My knowledge of the value of property in Dunedin is necessarily very limited, but I am given to understand that £7000 per acre is a low price.

54 acres at £7000 = £378,000, or £22,695 in excess of the cost of the formation of Streets, Docks, Wharves, Bridges, Locks, &c.

As a commencement towards the work of reclamation, negotiations were entered into and completed with the proprietors of that part of Dunedin called Church or Bell Hill, in order that the same might be reduced to the level of the surrounding streets, and the material derived therefrom deposited in the Bay.

The site known as Church Hill includes an area of 5 acres 6 roods 16 perches.

From sections I have had made of the site, I find that the quantity of earthwork available for the purposes of reclamation, which can be procured from the Hill, is 338,754 cubic yards.

Borings have been taken of the Hill, the result showing that its main body is composed of a close grained sand, with occasional bands of stone from 1 to 3 feet in thickness. The quantity of stone is

much less than I expected. The labor, therefore, of reducing the level of the hill is of the simplest description.

About three weeks ago the Government being beset by numbers of destitute persons, requested me to find some employment for them, and as the material in Church Hill lay in immediate contiguity with the land it was proposed to reclaim, I have placed as many men as possible to the work of excavating on the hill and filling in the Bay. At present there are upwards of 500 men at work. They are not, of course, so advantageously situated as men should be; or in other words, if a Contractor were carrying out the work for a definite sum, he would not employ as many men or conduct the work in the manner in which it is now advanced. Still if destitute persons are to be employed, it is as well to make them earn their living as far as possible, and I cannot at present find so suitable a field for their labor as on Church Hill.

As more room is obtained I intend setting a number of the men to break stones, either into sizes suitable for facing the slopes, or into 2½ inch metal for covering the streets. (a)

I propose also to employ about 100 of the men in cutting a large drain 10 feet wide round the Reserve for Public Recreation. This, however, though a beneficial work will not afford employment for any length of time.

## 2. ARCHITECTURAL.

The following works were in progress when the Department of Public Buildings was combined with that of the Provincial Engineer. They have since then been carried on under my direction.

*High School, Dunedin.*

A Contract for the erection of a portion of this building was entered into with Messrs. Currie and Co., on the 26th March last, to complete the work in 4 months for £2133. Drawings have been given for details of the work, and for necessary additions to the roof and portico. The Contract is nearly completed.

*North Dunedin School.*

A Contract was entered into with Messrs Mirfin and Co., on the 19th March, 1862, to complete the Masons' work in 2 months, for the sum of £763, and another with M'Ilwain and Croll, on the same date, for the performance of the Carpentry and other works in 3 months,

(a) This has often been urged by the Provincial Government as the only mode of securing a fair return of labour from those who are indisposed to work.

for £640. The time was afterwards extended, and the building is now finished. The extras on Mirfin and Co.'s contract amounted to £172 16s., and were occasioned by inequality of the ground.

*Green Island School.*

A Contract was made with Messrs. Currie and Co., on the 13th March, 1862, to complete the work in 3 months, for £721. The extras amounted to £32 8s. The building is now completed.

*Oamaru School.*

A Contract was made on the 5th April, 1862, with Messrs. Currie and Co., to complete the works in 4 months, for £791. The building is nearly completed.

*Oamaru Court-House.*

A Contract was entered into with Mr. George Gemmell, on the 15th May, 1862, to erect the building for £899 10s., in 3 months. The works are nearly completed. Details have been given for portions of the work, and some necessary additions and alterations have been designed and directed to be carried out.

*Geological Survey Office.*

A Contract was made with Mr. W. M. Edwards, to complete the work for £85. The extras amounted to £16 3s. 9d. The work is now completed.

*Stables for Police at Waitahuna and Tuapeka.*

Contracts for these stables were entered into with Mr. John Beck, on the 26th June, 1862, to complete them in one month, for the sums of £83 and £68 respectively. They have been carried out with some necessary additions. The cost has amounted to £40 and £25 respectively.

*Stable for Police at Tokomairiro.*

A Contract was entered into with Messrs. Bull and Coleman, to complete this work for £378. Some additions were made amounting to £10 10s. The work has been completed.

*Additions to District Police Barracks.*

This work has been performed by day labor.

*Pound at North Dunedin.*

A Contract was entered into on the 26th June, 1862, to perform the work for £46 10s. The sum of £3 15s. was afterwards paid for making a ditch. The work is now completed.

*Dipping Tanks for Sheep.*

A drawing had been prepared, but some alterations being necessary, another was made in lieu of it. Nothing further has

been done in the matter, as the Inspector of Sheep stated some time ago that the tanks would not be required.

*Portable Wooden Houses and Lock-ups.*

The Contracts which had been entered into for the construction of these buildings have been completed. The houses have been erected in different parts of the Province for Police purposes, Telegraph Offices, Office for the Registrar of Deeds, Dwellings for the Commissioners of Gold Fields, &c.

*House for the Inspector of Police.*

Plans and Specifications had been prepared in the late Public Buildings Office. A new Specification was made. Tenders were obtained, and a Contract entered into with Mr. B. Jarvis, to complete the work in 4 weeks, for £339 2s. The sum of £53 12s. was paid for extras in foundations, &c. The work is now completed.

Instructions have been received during the last four months for the performance of the following works.

*Stockade at H. M. Gaol, Dunedin.*

Plans and Specification were prepared, and a Contract entered into on the 11th June, with Messrs. Mirfin and Co., to complete the work in fourteen weeks, for the sum of £857 15s. The size of the Stockade was afterwards increased, and some other additions made. This work is nearly completed.

*Additions to H. M. Gaol, Dunedin.*

(For Female Prisoners and Lunatics.)

I forwarded a report to your Honor in May last, stating the extent of accommodation required, and received a reply directing six portable houses to be made. These houses being unsuitable, I sent a letter recommending that the material of the old Gaol should be used, together with such new material as might be requisite for the construction of the necessary additions, and that the work should be performed by day labor.

Instructions were then received to prepare an estimate of the probable cost of carrying out the work in the manner proposed. A design was accordingly prepared, and forwarded to your Honor, with an estimate of the cost, and I have received directions to carry out the works as shown.

*Gaoler's House.*

Plans, Specifications, and detail drawings have been prepared. A Contract entered into with Mr. W. Sutcliffe, on the 31st July, to complete the work in 3 months for £469 10s, is nearly finished.

*Volunteer Shed.*

Plans were prepared for covering the yard at the Police Barracks, as directed, but it was found that the arrangements required by the Volunteers would interfere with the use of the yard by the Police.

I addressed a letter to your Honor stating the difficulty, and requesting further instructions. No reply has been received, and nothing further done in the matter.

*Museum and Stable, Geological Survey Office.*

This work has been completed.

*Hospital, Dunedin.*

Sundry improvements have been effected from time to time according to instructions.

*Alterations at the Survey Office.*

Have been made.

*Office Furniture, Provincial Engineer's Department.*

Designs and Specifications were prepared, and a Contract was entered into on the 27th May with Messrs. Spicer and Murray to complete the work for £204 14s. Some portions of the furniture were rendered unnecessary by the removal of the Department to its present offices. The remainder of the work has been completed.

*H. M. Gaol, Dunedin (Stone Building.)*

Sundry improvements, alterations, and repairs have been effected, including paving the yards and floors of the cells with asphalt, the erection of a shed, pump, &c.

*Police Station (Port Chalmers.)*

Plans and Specifications were prepared, and a contract was entered into with Mr. George Smith on the 22nd July to complete the work in three weeks for £148 10s. Some additional accommodation was afterwards directed. The whole is now completed.

*Fencing at the Court House, Dunedin.*

Plans and specifications were prepared, and a contract entered into with Mr. B. Jarvis, on the 14th August, to complete the work in 7 days for £27 4s. This work is now finished.

*Police Stables at West Taieri, Popotunoa, and Oamaru.*

A contract was entered into with Mr. John Gray, on the 15th October, to erect the Stable at West Taieri, in four weeks, for £158, and on the same date a contract was made with Mr. John Beck to construct the Stable at Oamaru in six weeks for £208. The tender for the Popotunoa Stable was declined.

*Court-House, Port Chalmers.*

A design was prepared and an estimate made, amounting to £1250. A letter I received from your Honor stated that £500 was the sum appropriated for the building, and suggested that the design should be altered so as not to exceed that amount. A reply was forwarded that the design was in accordance with the suggestions of the Resident Magistrate (who had been requested by your Honor to afford the necessary information) that the sum of £500 was not sufficient for the purpose, and that I would recommend that the money should be expended on part of the building, and another vote taken for the remainder. No answer has been received, and nothing further done in the matter.

*High School, Dunedin (Additions.)*

A design has been prepared, and an estimate made.

*School at East Taieri.*

A design for a Brick Building was prepared and approved. Working drawings are in course of preparation.

*School at Tokomairiro.*

A design for a Wooden Building was prepared, but it was decided by the Education Board that the building should be erected of brick, similar to that which is to be built at East Taieri.

*School at Caversham.*

A design for a Stone Building was prepared and approved. The working drawings are nearly completed.

*Schoolmaster's House at North Dunedin.*

A design has been made for a Stone Building. The drawings are nearly completed.

*Schoolmaster's House at Oamaru.*

The drawings of a Stone Building for this purpose are in progress.

*New School at West Taieri.*

The pressure of other business has delayed the preparation of a design for this building.

*School and Master's House at Saddle Hill.*

Designed to be built of stone. The drawings are in progress.

*Additions to the Presbyterian Church.*

Plans and specifications were prepared and tenders obtained. No tender having been accepted, the work has not been proceeded with. (a)

(a) The estimate being framed too expensively, the necessary work is nearly finished by private arrangement.

*Fittings at Immigrants' Barracks.*  
Have been completed.

*Additions to Court House, Dunedin.*

Plans have been prepared, and a contract entered into with Mr. B. Jarvis to complete the work for £148. Some extras were added. The whole is now completed.

*Quarters for the Commissioners of the Gold Fields (Tuapeka.)*

Plans and specifications were prepared, and tenders obtained. No tender has been accepted.

*Mining Board Offices, Tuapeka.*

Plans and specifications were prepared, and tenders obtained. No tender has been accepted.

*New Shed at Jetty-street Jetty.*

Plans were prepared, and an estimate made and forwarded for the information of your Honor. No further instructions have been received respecting it.

*Fencing, Repairs and Additions to Schools and other Buildings.*

Instructions have been received for numerous works of this kind. Specifications have been prepared when necessary, contracts entered into, and the work completed.

Having furnished a statement of the various Engineering and Architectural works carried out, in progress, and to a certain extent contemplated, I would take the opportunity of stating that many important works have not received the attention wholly due to them. This has been owing to the insufficiency of the staff, and the difficulty, if not impossibility of obtaining efficient assistants at the rates of salary hitherto allowed. I trust there will be no necessity to make this excuse in the next half-yearly report.

### 3. ROAD MAKING AND MAINTAINING.

On the 7th October last I had the honor to inform you that I was about to hand over the charge of the Roads and Bridges to Mr. Howden,<sup>(a)</sup> the Government having sanctioned the proposal contained in my letter of the 9th September, viz., that the Roads should be made into a separate Department. During the short time I have been in office, I have found it impossible to even pay a visit to many districts which require attention, and in the

(a) This separation of the departments had been resolved on for some time, owing to the stagnation of work, and the departments getting inextricably in arrear.

prosecution of the road works, I have necessarily been guided by the reports and advice of the District Inspectors.

In my letter of the 7th instant I stated at length my views on the past management of the Roads of the Province. It will, therefore, be unnecessary for me to repeat them here.

I forward herewith for your Honor's information the District Road Inspectors' half-yearly reports of the various works which have been carried out during the last six months. Three of the reports were not received until the 20th instant.

### MISCELLANEOUS.

Upon taking office I found there was a great want of proper forms of conditions of contract, forms of tender, and bonds, &c., &c. I have prepared such forms after the most approved models in Britain and Victoria. The same, after having been approved by the Provincial Solicitor, were printed, and are now in all cases attached to contracts, large or small. By following this course, an immense amount of clerical work is avoided, there is no chance of an important clause being omitted, and I believe Contractors and Sureties are now more careful in their calculations and tenders.

*Telegraph to Port Chalmers.*

In April last a Contract was entered into with Mr. Richard Woolley, to construct a line of Telegraph between Dunedin and Port Chalmers. This work was not put up under my supervision, but there is a clause in the conditions which states that the work should be completed to the satisfaction of the Provincial Engineer.

In August I was requested by his Honor the Deputy-Superintendent to examine and report upon the work. The substance of my report, dated August 22nd, was, that the work had not been satisfactorily performed, more especially as regards the square posts, through the town of Dunedin.

The Contractor has consequently given orders that the present unsightly posts should be removed, and straight, square, sawn posts erected in their place.

*Building Ordinance.*

During the last six months, a considerable portion of my time has been occupied in the preparation of a Building Ordinance for the town of Dunedin. The Metropolitan and the Melbourne Building Acts were taken as the basis of the proposed Ordinance, such modifications, ad-

ditions, or deductions being made as were rendered necessary by the different circumstances of this locality.

The Ordinance, if passed, will be of the greatest advantage to the Town ultimately, although it will probably press rather severely upon individuals at first.

I have the honor to be,  
Sir,  
Your most obedient Servant,  
C. R. SWYER,  
Provincial Engineer.

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#### GEOLOGICAL SURVEY.

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To His Honor Major Richardson,  
Superintendent.

Dunedin, 25th September, 1862.

SIR,

I HAVE the honor to furnish you, for the information of Government, with the following report of the work done towards the Geological Survey of the Province, since my arrival here on the 15th April last.

Until the end of that month my time was principally devoted to the examination of Dunedin and its environs, as I was detained in town by necessary business.

Thereafter I commenced a rapid and superficial examination of the more accessible portions of the Province, and by repeated journeys in various directions I have now acquired a fair knowledge of the general geological features of the district extending from the Mataura Field on the south to the Waitaki on the north, and as far into the interior as the Umbrella and Dunstan ranges.

I have not considered it necessary to give the information obtained in the course of this hurried examination in a detailed journal form, as the country is so well known for the most part. It has therefore been embodied in the General Report, which is accompanied by a rough Geological sketch map and illustrative sections.

Notwithstanding the unfavorable season of the year for travelling, I am thus able to give information respecting a large portion of the Province mainly owing to the hospitable and valuable assistance I have everywhere experienced from the Runholders.

#### *Laboratory.*

Early in July the Office and Laboratory building was completed and I commenced to employ the necessary assistants. Mr. Wood, the assistant who was engaged in England, arrived in the month of June and to him I intended to intrust the ar-

rangement and chemical examination of the specimens procured; but he unfortunately fell into bad health, and although he exerted himself, even to a prejudicial extent to accomplish his duties, I found it necessary to devote a good deal of my own attention to the work which would otherwise have been directed to the Field work, and to employ an additional assistant. Mr. Skey, who continues to carry out the simpler methods of analysis in a perfectly trustworthy manner.

The following valuable series of examinations have been made, many of them having had the advantage of Mr. Wood's personal superintendence, and all the methods having been directed either by him or by myself, viz.:—38 analysis of varieties of coal and brown coal, 23 of which are of those from this Province, comprising the Clutha, Shag Point, Saddle Hill, Green Island, and other varieties.

The remainder which have been examined for the purpose of comparison comprise varieties from Nelson, Sydney, Valparaiso, Vancouver's Island, and Labuan.

Six specimens of clays have been examined which are apparently promising as fire clays or for pottery.

Ten examinations of the building stones of the Province have been made, the results of which, especially when extended over a large series of samples, will form a valuable guide in the selection of building materials.

Ten analysis have been made of black sand from the Gold Fields; and other localities in the Province.

A valuable limestone or marble which occurs abundantly in the Horse Ranges, north of Shag Point, has been examined and is found to be of the highest value for burning into lime, and moreover to have the character of a valuable building stone.

In addition many analysis of minor importance have also been made.

Most of these analysis occupy a long time for their performance, and in many the processes are rendered more than usually tedious by the want of gas which is a great auxiliary in a Laboratory. In conducting these examinations, books are kept in which the most minute details of the processes employed are entered to serve for future reference and to check errors either of method or calculation.

Since 15th July a draughtsman has been employed in making tracings from the various maps of the Survey Department, to form the basis of the Geological maps, also in preparing fair copies of the sections, &c., which have been already surveyed.

### *Detailed Field Work.*

As early as I could, after acquiring a general idea of the manner in which the geological formations were to be naturally grouped, I employed two field assistants to make a detailed examination of certain localities, where the results obtained would have an immediate and practical bearing.

One of these surveyors, Mr. Williams, has now been at work on the Saddle Hill and Green Island Coal Basin, and his maps, showing the boundaries of the various groups of strata, with their dip and strike, with copious notes, and every information which can be acquired from the natural sections without an expensive and lengthened examination, are well advanced.

The other surveyor, Mr. Davis, is employed upon the Shag Point Coal Reserve, making as correct a mining plan of it as the natural exposures of the strata along the coast will allow of, on which will be shown the various strata and seams of coal with the faults and dislocations by which they are disturbed. Both these assistants collect full suits of specimens, and I take as frequent opportunities as possible of going over the ground with them for the purpose of guiding their work. Without such lengthened and detailed scrutiny of the ground, but to which it would not be advisable that I should devote my whole time, no geological information could be obtained sufficiently accurate for Government to form an opinion from as to the extent and value of these and the other coal bearing districts.

### *Museum Store.*

The accumulation of minerals, rocks, and fossils, has already reached over 500 specimens, so that the nucleus of a collection for a Museum is rapidly forming. Were there a proper place for its display, and a person appointed whose time might be wholly devoted to the management and arrangement of such a collection, I feel sure that valuable and interesting local specimens would be contributed by many in the Province, while I have the promise of liberal contributions and exchanges for New Zealand specimens from collectors at home.

To show the interest which is taken in this country by naturalists, I may mention that Professor Allman and Dr. Greville have consigned to me a large quantity of apparatus and materials for making a collection of the marine fauna of the coast, concerning which they will no doubt publish their researches; and of the specimens sent home, a complete set might be retained for a Museum here.

Botanists are of opinion that they have not yet obtained an exhaustive collection of the plants of the Middle Island, and especially of this southern portion of it; and I believe that Dr. Hooker is only waiting for more complete materials before undertaking the republication of his magnificent work on the Flora of New Zealand, but in a cheap and concise form to serve as a handbook for residents in the country. Other colonies, such as Victoria, Ceylon, Canada, British Columbia, and others, are having the same work done for them in such a form, and it has been usual for the Colonial Governments to bear the small expense necessary for the completion of those collections from their particular country, which are already stored in the Royal Hibernum at Kew.

Dr. Hooker expects me to add largely to the collection which he has for this Province, but to obtain the novel, rare, and peculiar specimens of plants, requires a more systematic search than I can find leisure for. I mention these circumstances in order to point out, that by a very small outlay, Government would be able to confer a great boon upon science, from which the Province would reap a direct benefit by hastening the publication of accurate information respecting its botanical products, in a cheap and accessible form.

The botany of the West Coast will be especially interesting, and in any arrangements for an exploration of that region, a properly qualified person should be included, whose whole time may be devoted solely to forming a collection of plants, as from the great humidity of the atmosphere their preservation will be a difficult task, requiring constant attention.

### *Meteorological Observations.*

The Meteorological Observatory connected with this office was completed on the 1st September, since which time the observations have been made daily. For the present only the self-registering instruments are observed once a day, which is quite sufficient for the purpose of intimating the weather. From next month, however, a series of observations of a more exact nature will be taken three times a day in addition, as recommended by the Board of Trade, and from the results of which an exact comparison can be instituted between this and other climates. The instruments used are of the best construction, and have been carefully corrected by comparison with the Kew Observatory standards, and every care has been taken in exposing them to ensure freedom from disturbing influences.

The Observatory might be certainly in a better position, especially for the sake of

getting a fairer average of the wind, but its removal might be at any time easily effected could a better site be conveniently granted.

Proximity to the office is the only recommendation of the present one.

I have the honor to be,

Sir,

Your most obedient Servant,

JAMES HECTOR,  
Provincial Geologist.

### GOLD FIELDS.

To His Honor Major Richardson,  
Superintendent.

#### REPORT

*On the Progress, Condition, and Prospects of the Gold Fields of Otago.*

BEFORE proceeding to the consideration of the present condition and future prospects of the Otago Gold-fields, I desire to invite attention to a *brief retrospect* of the earlier discoveries. The facts which I have to detail in connection therewith may not possess the attraction of novelty; but it seems desirable that the principal circumstances relating to this branch of the History of the Province should be embodied in an Official Report for future reference. With this object in view, I have collected materials from every available source. And here I wish to record my obligations to the Chief Surveyor, who kindly placed at my disposal much interesting information, and otherwise rendered valuable assistance in the compilation of my Report.

It is difficult to say positively when, or by whom, *gold was first discovered* in Otago. That the Maories were aware of its existence before the arrival of the European colonists is an undoubted fact. I have been informed by Mr. Palmer, of Moeraki Bush, that many years prior to the settlement of the Province, he was assured by the Native Chief Tuawaiki that "*plenty ferro*," or yellow stone, such as that of which the seals of the white men were made, could be obtained in the interior of the island, and the country of the Upper Molyneux, or Clutha River, was particularly indicated as a gold bearing locality.

At a later period, *other natives* confirmed these statements; and at least one party of settlers attempted to discover the El Dorado, asserted to exist. Mr. Thomas B. Archibald, of the Pomahaka, has kindly favored me with a letter, from which I make the following extract respecting this expedition, in which that gentleman was himself an active agent:—

"Nearly all the Maori residents at the Molyneux at the time of our excursion were strangers, having been only a few years in the place. There were only a man and woman who knew the country between the mouth of the River and the Lakes. The man, Raki Raki, had resided on the Wakatipu Lake, but had left many years ago. He left a brother, who had two wives, behind; and who, he said, were the only Maories in the interior. He told me he once picked up a piece of "*simon*" (gold) about the size of a small potato on the banks of the Molyneux, but did not know its value, and he threw it into the river. They told us they had seen the small "*simon*" on the sides of the river, where three canoes had been lying. On seeing a small sample of gold (which, I think, Mr. Meredith brought down from Tasmania, about the beginning of 1852) the natives were the more convinced we should find it in the sands of the Molyneux. As some of us were on the eve of starting for Australia, we thought we would give the River a trial first, more especially as we had the services of a Californian miner, who had left a whaling vessel in the Bay. We made a party of five and started up the River in March, 1852, in a whale boat which I brought from Dunedin. We prospected the bars and banks of the river, as far as a creek now named the Beaumont. As none of us knew anything about gold-seeking, except the American, and getting nothing more than the colour, we resolved to return, after having nearly a three week's cruise; the more so, as the river seemed a succession of rapids, which it was difficult to get the boat through. If our Californian miner had been the practical hand he represented himself to be, I have no doubt we would have been successful at least in getting a good prospect."

*Dated "Pomahaka, 29th Sept., 1862."*

Gold was also found in various parts of the Province by *the settlers* themselves, but the fact was either suppressed, as likely to produce mischievous results, or neglected, as of trivial import. I have been shown a small quantity of fine, scaly gold, which was procured in 1853, in the neighbourhood of the remarkable chert rocks known as the Fortifications.

*The first official intimation* of the discovery of auriferous deposits in Otago appears to have emanated from Mr. C. W. Ligar, formerly Surveyor-General of New Zealand, and who now holds the same office in the colony of Victoria. A letter written by that gentleman in 1856 to the then Superintendent—Captain Cargill—contains the following passage:—

"In my recent visit to the south part of the Province of Otago, I found gold very generally distributed in the gravel and sand of the Mataura River, at Tuturau; and from the geological character of the district, I am of opinion that a remunerative gold-field exists in the neighborhood."

*No effort was ever made* to test the value of this discovery. Indeed, the policy of the Government at that period appears to have been adverse to the encouragement of what is termed "prospecting;" for the Superintendent, in his address to the Provincial Council (December, 1856), commenting upon Mr Ligar's statement, observes that—

"In no circumstances would it be advisable to allow a searcher to go upon a run without leave of the lessee, or upon a Native Reserve without leave of the Natives."

Still, from time to time, *vague rumors* were circulated of gold being found in the mountain streams, and individuals occasionally brought into Dunedin small quantities of the precious metals. These circumstances, however, attracted very little attention, for the sufficient reason that the "finds" were inconsiderable. The Chief Surveyor—Mr. Thompson—in his Report on the Reconnaissance Survey of the Southern Districts, states that "the existence of gold is undoubted," but adds:—

"I have nowhere yet known of individual success at the occupation of gold washing or digging as a business, nor have I seen above the small fraction of an ounce in the hands of any one."

Mr. Thompson tried the sands and rocks for gold in various localities, without success; but when it is considered that his only implements were knives and pannikins, this result is not surprising. However, on the *Waiau River*, near the Limestone Gorge, one of his assistants obtained a single speck, the residue of the sands consisting of black grains—probably magnetic iron—"and a few small crystals not unlike the garnet."

*More ample confirmation* of the presence of gold was at hand. In the months of October and November, 1857, and during the early part of 1858, Mr. Alexander Garvie—late Assistant-Surveyor—executed a reconnaissance survey of the South-eastern Districts, and in his very full and complete report, he remarks that:—

"The eastern portion, from the coast to the Manuherikia, appears to be composed almost entirely of rocks belonging to the *mica-schist* systems. Towards the southwest, clay, slate, and altered rocks appear,

as at Tapanui, the lower part of the Pomahaka, and the Clutha, below the Tuapeka. . . . Traces of gold were found in the gravel of several of the streams and rivers. The trials were all made on the very surface, at such odd times as would not interrupt the proper work of the survey, by one of the party who happened to have previously visited the Australian gold-fields. The gold found was in every case small and scaly, varying from the smallest specks to about the roughness of bran. . . . *It was found in the Clutha river, above the junction of the Manuherikia, and in the Tuapeka stream, in sufficient quantities to make it probable that it would pay to work if set about in a proper manner, with some wholesale system of washing, such as sluicing.* Specks were also found in the Manuherikia, Pomahaka, and Waitahuna. . . . Along with the gold was found black sand, in some places fine, and resembling emery; in other places coarser, and sometimes in square block crystals."

The person of Australian experiences referred to by Mr. Garvie was a Mr. Buchanan, now a resident in Dunedin.

I cannot but regard this as *the first practical demonstration* of the mineral wealth of Otago. Earlier explorers had merely ascertained its existence, but here was sufficient evidence to have satisfied the most incredulous. The announcement was however unheeded at the time, and it was reserved for Mr. Gabriel Read and Messrs. Hartley and Reilly to develop the hidden treasures of which Mr. Garvie undoubtedly intimated the presence, although he was probably unaware of the importance of his discovery.

In a foot-note attached to Mr. Garvie's report, the Chief Surveyor states that the *best sample of gold* which had then been brought into town was found in the south branch of the Tokomairiro River. "This sample," adds Mr. Thompson, "indicates a workable gold-field." The locality referred to is now known as the Woolshed Diggings, where a native of Bombay, named Edward Peters, was in the habit of obtaining small quantities of gold from sands of the River.\*

In the same year—1858—the Chief Surveyor discovered *gold in the Lindis River*, a circumstance to which he publicly referred in a lecture subsequently delivered at Dunedin. Traces of gold were

\* I am informed that Peters also obtained gold from a gully on Davy and Bowler's run, near the north bank of the Tuapeka River, and consequently not far from Gabriel's Gully.

found shortly after in the sands of a small stream which enters the sea near the township of Hampden, on the Moeraki Beach.

But notwithstanding these accumulated proofs of the distribution of gold throughout the Province, *no systematic search* was prosecuted until 1861, when some men who were engaged on the new road which the Government was forming across the run of Mr. M'Lean to the pastoral districts beyond the Lindis Pass, in the Dunstan Mountains, accidentally struck upon a deposit of the precious metal. This occurred towards the end of March, and a small "rush" immediately set in. Although fair prospects were obtained, the general yield was not very encouraging. The field was therefore pronounced a failure, and the greater part of the miners returned. But even to the present date the neighborhood of the Lindis Pass continues to be wrought, not altogether unsuccessfully, for gold.

My own impression is, that the Province was then upon the verge of a very valuable discovery, and that a payable gold-field of large extent will yet be discovered in the country north of the Lindis Pass, and between Lake Hawea and the head waters of the Waitaki River.

Scarcely had the brief excitement consequent on the Lindis discoveries subsided, when it was revived by information of a more determinate character. In June, a letter was received by his Honor the Superintendent, from Mr. Gabriel Read, announcing the discovery of what is now *the Tuapeka Gold-field*. I make the following extract from Mr. Read's letter:—

"Tokomairiro, 4th June, 1861.

"To Major Richardson, &c.

"SIR—I take the liberty of troubling you with a short report on the result of a gold prospecting tour, which I commenced about a fortnight since, and which occupied me about ten days. During that period I travelled inland about thirty-five miles, and examined the ravines and tributaries of the Waitahuna and Tuapeka Rivers.

"My equipment consisted of a tent, blanket and spade, tin dish, butcher's knife, and about a week's supply of provisions. I examined a large area of country, and washed pans of earth in different localities. I found at many places prospects which would hold out a certainty that men with the proper tools would be munificently remunerated; and in one place for ten hours work, with pan and butcher's knife, I was enabled to collect about seven ounces of gold."

A portion of Mr. Read's statement found its way into the public press, and numbers of persons of all classes, flocked to the scene of the discovery,—the now world-famed "Gabriel's Gully." The results were highly satisfactory. *The first gold escort*, in August, brought down 5056 ounces. The excitement soon became intense. Thousands were bitten by the gold fever, and abandoned their ordinary pursuits to "try their luck" at the diggings. The contagion spread to the adjacent Provinces, to the Northern Island, and finally to Victoria and the Australian colonies; and the rush to Otago soon assumed enormous proportions. Then commenced one of those startling revolutions which, under the direction of an all-wise Providence, is everywhere wrought out by the discovery of gold. In a few months Otago was elevated from the position of a comparatively unknown settlement to the foremost rank amongst the Provinces of New Zealand. In 1860 only 69 vessels were entered inwards. In the following year 256 vessels, many of them of large tonnage, arrived at the Port. The population computed in December, 1860, at 12,691, had increased by December, 1861, to 30,269 souls. The Revenue advanced from £83,046 2s., the amount received for the financial year ending September, 30, 1861, to £280,097 2s. in 1862, whilst a comparison between the half-year ending 31st March, 1861 (prior to the discovery of the Tuapeka Gold-fields) and the corresponding period of 1862, shows an increase of £128,234 14s., the exact figures being:—

1861 .. .. .	£33,509	6	4
1862 .. .. .	161,744	0	4

#### OTHER GULLIES.

*Wetherstone's and Munroe's Gullies* were shortly afterwards opened up by the miners, and in the month of July another rich Gold-field was discovered in the Waitahuna stream, by Mr. Gabriel Read, accompanied by Captain Baldwin and Mr. Cargill. The first dishful of earth, washed by Captain Baldwin, yielded a quarter of an ounce; the next, washed by Gabriel Read, yielded half an ounce. The place was "rushed" by about 500 men, who speedily deserted it, and declared the Waitahuna to be "a duffer." For some time there were only three parties on the field. On 1st September there were about 200, and on the 30th, 4000 men were at work there and doing well. Since then its prosperity has been continuous.

In the month of September there occurred one of those feverish *reactionary movements*, which would appear to be necessarily consequent on every new "rush." The world-famous gold-fields

of Ballaarat, Bendigo, and Ararat, in Victoria, were all rushed, and deserted as unprofitable when first opened up. The senseless panic which hurried thousands from Otago in 1861 is only another illustration of the same general rule. Many who hastened to seek sudden fortune at Tuapeka were utterly unprovided for the purpose; and numbers, deterred by the gloomy tales of unsuccessful diggers, never even quitted the vicinity of the Jetty at Dunedin until they re-embarked for Melbourne. At this juncture the Government issued a *Proclamation*,\* in which the peculiar features of the gold-fields, and the difficulties attendant on mining enterprise in Otago, were fairly and honestly pointed out, and exaggerated statements were denounced as "likely to be productive of much suffering." His Honor Major Richardson, Superintendent of Otago, asserted in this document "the existence of a valuable gold-field, of considerable extent, capable of affording remunerative wages to a large population;" and avowed the confidence of the Government in the auriferous capability of the Province, as a highly remunerative field for capital and labor; at the same time deprecating the inconsiderate influx of persons from other colonies, and cautioning intending immigrants to act with greater prudence. The result was a diminution of immigration; but there is no doubt that the gold-fields progressed all the more favorably from the consequent absence of undue excitement. A sufficient number of miners remained to test the ground, and in the month of November the escorts attained an aggregate of 73,904 ounces, affording indubitable evidence of the capacity of Otago to afford remunerative employment to a large mining population.

Early in the year 1862, further discoveries of auriferous deposits were made on the Waipori River and its tributaries, and also on the Woolshed Creek, a branch of the Tokomairiro River.

With the approach of winter came first a cessation of immigration, and then a gradual exodus from the Province. The Victorian miners were alarmed at the prospect of a rigorous season in a district where fuel is scarce; and the population consequently sustained considerable diminution, until in July—mid-winter—the total number of persons resident on the gold-fields was estimated by the Commissioners at about 7000 persons, of whom probably only two-thirds were actually engaged in mining, the remainder being principally women and children, and store-

keepers and their employés. Many professed their intention to return in the spring; others, deceived by the appearance of the country, so different to what their Australian experiences taught them to consider as auriferous, entertained the fallacious idea that the mines were exhausted. Those who remained certainly had no reason to regret having done so; for the minimum yield of gold in any one month (that of July) as evidenced by the escort returns, independently of the quantities brought down by private hand, was 10,557 ounces, which, at current rates, would give an average of about £2 10s. per week for each miner.

Some discoveries of smaller extent, yet promising great results hereafter, were made during the winter months. The first of these was at Timbrell's Gully, under Mount Highlay. Deep-dell Creek, a branch of the Shag River. Filly-burn, a branch of the Taieri, and Murphy's Gully, on Run 109, all in the neighbourhood of the Mount, were successfully prospected. Gold was also found at Coal Creek, on the head waters of the Shag River. These localities constitute what was known as the Highlay Gold-field.

More recently a party of miners were discovered working on the *Dunstan stream*, near its junction with the Manuherikia; and in a Report on the Reconnaissance Survey of the North-Western Districts, Mr. McKerrow stated that gold had been found by a shepherd, between Lake Hawea and Lake Wanaka, on *Quartz Creek*, a small tributary of the Clutha River.

Still at the end of July no new field of equal magnitude with the earlier discoveries had been developed. But in the following month two Californian miners, named *Hartley and Reilly*, lodged at the office of the Chief Gold Receiver in Dunedin 1047 ounces of gold. The locality whence this treasure had been obtained they refused to divulge, until the Government had guaranteed to them a reward of £2000, conditionally on 16,000 ounces being brought down by escort within three months. These terms having been accepted, they stated that the scene of their labours was on that portion of the Clutha river which is situated between the junction of the Manuherikia and that of the Kawarau.

No sooner was this information made public than a *rush* of unprecedented magnitude occurred. Without waiting for any confirmation of the prospectors' statements, thousands hastened to the new field. Clerks resigned their situations, and mechanics quitted their work. On

\* September 28.

the older Gold-fields miners deserted payable claims, and for a brief period Tuapeka and Waitahuna were nearly deserted. That a re-action should occur was inevitable. It was hastened in this instance by the scarcity of provisions, principally bread-stuffs, which, of course, could not be procured in a remote district in sufficiently large quantities to feed an extensive population. Two shillings and sixpence was readily paid for a pound of flour; other stores were retailed at proportionate rates, and wood for making cradles sold at fabulous prices,—as much as £3 having been paid for an old gin case. This drawback is even now only partially removed, and owing to the excessive rates demanded and paid for carriage from Dunedin, from £130 to £150 per ton, stores are only obtainable at extravagant prices. But these rates will, no doubt, undergo a gradual diminution as the field becomes supplied with stores during the ensuing summer. Timber of excellent quality ("white pine") is now being rafted down from the extensive forests at the head of the River, on the shores of Lakes Hawea and Wanaka, an operation in which private enterprise has been stimulated by the timely offer of a bonus given by the Government.

In spite of every difficulty, about 3,000 miners remained to test the field, and a large quantity of gold is expected to arrive by the first escort.

The auriferous country discovered by Messrs. Hartley and Reilly is at the western base of the Dunstan Mountains. It has, therefore, received the name of *the Dunstan Gold-field*, which more nearly indicates its precise locality than any other.

In September, another discovery was communicated to the Provincial Government, by Mr. James Lamb, one of a party of six Victorian miners, who brought to Dunedin about 28 ounces of coarse nuggetty gold, obtained at Moa Creek, on the *Nokomai River*, itself a branch of the *Mataura*. His application for a prospecting claim was favorably received, and an area of 200 feet square (equal to 4,000 square feet) was allotted to the party.

Contiguous to Moa Creek is a large extent of apparently auriferous country, bordering on the *Nokomai*, and extending over the dividing range through the valley of the *Nevis Stream* to the *Kawarau River*, along the lower portion of which parties of miners are working with satisfactory results. It is, therefore, probable that the *Dunstan* and *Nokomai Gold-fields* will be united by a continuous series of gold-workings.

These discoveries have attracted great attention in the Australian Colonies.

During the month of September 4,800 men arrived here from Victoria and New South Wales, in addition to about 1,000 from the other Provinces of New Zealand.

Having thus traced the history of the gold discoveries from their commencement to the date of my report, I will now proceed to detail the *actual results*.

The following table shows the quantity of *gold exported* from Dunedin in the first twelve months, namely: from August 1861 to July 1862, inclusive:—

		oz.	dwt.
Spring.	1861, August . . . .	7,876	13
	" September . . . .	15,300	16
	" October . . . .	19,889	0
Summer.	" November . . . .	74,176	12
	" December . . . .	70,452	8
Autumn.	1862, January . . . .	65,464	7
	" February . . . .	61,946	10
	" March . . . .	43,359	12
Winter.	" April . . . .	18,945	7
	" May . . . .	45,747	3
	" June . . . .	16,513	0
	" July . . . .	17,568	18
Total . . . . .		457,240	6

In addition, 1208 ounces 12 dwts. of gold, the produce of Otago, were exported from extra-Provincial ports, making the total 458,448 oz. 18 dwts.

It is worth while to remark that the *Escort Returns* for the same period only amount to 394,599 ounces 18 dwts., being 62,640 ounces 8 dwts. less than the quantity exported; a difference equal to 15 per cent, irrespective of gold on-deposit at the office of the Gold Receiver, and that in the hands of the Banks and private holders. We may, therefore, reasonably assume that not more than four-fifths of the gold actually raised is transmitted to Dunedin by the Government escort.

Reckoning 20,000 ounces to the ton, the total aggregate of the year's produce, as exported, amounts to 19 tons 204 pounds, representing a value of £1,833,792.

In order to form a correct estimate of the position which Otago occupies as a gold producing country, it is necessary to institute a comparison. For this purpose, I have selected the colony of Victoria, the mining records of which are more complete and reliable than those of either New South Wales or California.

In 1852, the *yield of gold in Victoria*, considered relatively to population, attained its maximum, the yearly average per man being estimated at £233. Since then the decrease has been gradual. In 1860 the adult mining population was officially stated to consist of 108,562 per-

sons; and the exports of gold amounted to 2,156,660 ounces, valued at £8,626,240. This will give a weekly average of about seven and a-half pennyweights for each miner, and a yearly monetary average of £79. This calculation is confirmed by the report of the Secretary of the Mining Department of Victoria, appended to a recently published Despatch from His Excellency Sir Henry Barkly, which states that—"divided amongst the total "number of miners, the earnings would "be for 1859 £72 per man per year; for "1860, £79, and for the first six months "of 1861, at the rate of £69."

*In Otago*, during the twelve months ending July 31st, 1862, the number of the mining population fluctuated very considerably. During the first months there were comparatively few persons on the ground. According to the census of December the number of miners then on the gold-fields was 10,826, and 3000 more were supposed to be on the road to the diggings and in the outlying gullies. Since then, from causes already explained, a considerable decrease has occurred, and in July not more than 5000 miners were at work throughout the Province. Assuming that in the first and last quarters of the period referred to—from August to October, 1861, and from May to July, 1862, inclusive—the average adult mining population was 6000; and that in the intervening six months—from November, 1861, to April, 1862, inclusive—the average was 10,000, we thus obtain a mean average of 8,000 persons. If the amount of gold exported is divided amongst this number, it will show £229 per year, or more than an ounce per week per man.

The above estimate, although useful as the means of obtaining a comparative result, by no means furnishes a clue to *individual earnings*. I have reason to believe that nearly 20,000 persons visited the gold-fields of Otago during the year 1861-2. But the greater proportion remained for a few months only, and many for still briefer periods. As usual, some have been very fortunate, others only in a less degree; whilst numbers have barely succeeded in earning a living. Such is ever the case in all gold countries. The hope of ultimate success induces the miner to persevere in the face of numberless difficulties, and in spite of repeated failures; but most men abandon the pursuit as soon as they obtain the means to engage in less hazardous occupations.

*Revenue*.—The amount and sources of revenue derived from the Gold-fields, during the year ending 31st July, 1862, are as follow:—

SOURCE OF REVENUE	TUAPEKA.	WAITAHUNA.	WAIPORI.	TOTALS.
Miners' Rights...	£ 10,877 10 0	£ 3,215 5 0	£ 115 0 0	£ *14,207 15 0
Business Licenses...	3,085 0 0	1,000 0 0	200 0 0	4,285 0 0
Spirit Licenses...	2,095 0 0	510 0 0	160 0 0	2,765 0 0
Registration Fees...	15 0 0	5 0 0	3 17 0	23 17 0
	16,072 10 0	4,730 5 0	478 17 0	21,281 12 0

\* The number of Miners' Rights actually issued is 14,234, the difference being accounted for by the issue of 185 as *renewed Rights* (in accordance with the old Regulations) at five shillings each—a practice now discontinued.

To the gross sum of £21,281 12s. must be added Export Duty on 458,448 ounces at 2s. 6d. per ounce, amounting to £57,306, making a total of £78,587 12s.

*Present Condition of the Gold-fields*.—*The Tuapeka Gold-field* (comprising the three districts of Gabriel's, Waitahuna, with the Woolshed and Waipori) continues to yield a steady return, but it is now passing through a transitional stage, such as the celebrated gold-fields of Ballarat, Mount Alexander, and Bendigo have all undergone in turn. To the gold miner the newest field always offers irresistible attractions; and Tuapeka is therefore at the present date almost deserted. When the fever of the rush to Dunstan and the Nokomai has abated, the old ground will be re-visited by thousands, whom experience has made acquainted with its auriferous resources, which are still unexhausted, and only partially developed; for the few isolated gullies that have hitherto been opened bear no greater relative proportion to the entire area of the Tuapeka gold-field than the fingers bear to the whole body.

In the first-named district, operations are principally conducted at Gabriel's, Monroe's, and Wetherstone's Gullies, and along the banks of the Tuapeka River. The spurs of the ranges have in many

places proved highly auriferous, and the hill-workings on the river side have handsomely rewarded the miners engaged on them. In a recent official report from Mr. Mining-Surveyor Drummond, that gentleman states:—

“From careful enquiries I made prior to the rush to the Dunstan, I learned that the miners of Gabriel’s Gully and Wetherstone’s were averaging from £3 to £10 per man per week. A few parties are still at work, and are doing well. With a return of population and the cutting of the drainage channel through Wetherstone’s Flat, I have no doubt but that a large extent of auriferous ground will be opened up in this portion of my district.”

The latter sentence refers to a *storm-water channel*, which, at the instance of the Mining Board and the inhabitants of Wetherstone’s, the Government has decided to construct for the drainage of an extensive flat in that locality. This flat is a continuation of the rich workings at the head of the gully, and is believed to be highly auriferous; but owing to the heavy influx of water it cannot now be worked. The sum appropriated for this purpose is £1200.

At *Waitahuna* the gullies originally discovered are still worked, and some fresh ground has lately been opened. Here also the hills have been wrought with fair results, and it is probable that when the conditions, to which the auriferous deposits of Otago are subject, become better understood, the spurs of the ranges will be less neglected than they are at present.

At the *Woolshed* (recently included by Proclamation within the boundaries of the Gold-fields) the auriferous drifts have been followed down to the west branch of the Tokomairiro River. In many instances “leads” have been traced into private property; but in every case that has come to my knowledge, arrangements for working the ground have been entered into between the miners and the owners of the land. At Glenore township, a Government road is being mined upon by permission of the General Road Board, adequate security having first been exacted for filling up and making good the surface.

The miners at *Waitahuna* and the *Woolshed* continue to average fair wages, and occasionally do better; and there is still a large extent of ground unopened in the District.

*Waipori* is the least developed of all the old Gold-fields. This may be accounted for, in part, by the circumstance of its having been discovered late in the summer. Situated high up amongst the spurs of the Lammerlaw, the climate of *Waipori*

is far more rigorous than that of Gabriel’s or *Waitahuna*; and it was all but deserted during the winter. There is every evidence, however, of its becoming a profitable field for summer operations. The yield of gold is encouraging, and there is an ample supply of water for sluicing. The workings are chiefly conducted on the *Waipori River* and its numerous tributary streams.

The *Mount Highlay* diggings, inclusive of *Coal Creek*, continue to support a small population. Mining operations are carried on in the beds, and on the banks of several creeks and burns—branches of the *Taiari*, *Waikouaiti*, and *Shag Rivers*. The whole of the district drained by these streams appears to be highly auriferous, and gold has been found in various localities throughout its entire area, from the sea coast to the ranges which divide it from the *Manuherikia Valley*. Although there is no escort from the *Highlay*, I have reason to believe that the miners located there are doing well.

The *Dunstan* Gold-field promises to rival, if not to exceed, the glories of Gabriel’s Gully. The miners appear to be doing well. Mr. Gabriel Read, in his valuable Report, says:—

“The returns of those who are working in the bed of the river may be taken as varying from 2 dwts. to 2 oz. per diem per man.”

Instances of individual success are frequent. The workings are mostly confined to the rocky bars which jut out from the bed of the river. The rough ledges have acted as a natural cradle, retaining the gold and the heavier particles of the detritus. So rich are these deposits that several ounces are sometimes extracted from a single shovelful of sand. Owing to the melting of the snow on the neighbouring mountains, the *Clutha* is now rapidly rising and covering these bars. But in the adjacent valley of the *Manuherikia*, numerous “made hills” and “beaches,” composed of diluvial drift, present indications of being the repositories of immense auriferous wealth; and it is to be hoped that the accustomed energy of the miners will, ere long, overcome the difficulties arising from the loose shingly nature of the soil, so as to determine this question. If the general belief in the auriferous qualities of these drifts is well founded, the *Dunstan* will prove to be a very extensive Gold-field, affording profitable employment for many years to several thousands of men. Already some slight efforts have been made in this direction, *tunnels* having been driven from the river-bank. The prospectors have been rewarded by obtaining gold of a heavier

description than that taken from the bars, some of the pieces found in these tunnels being reported to weigh from 10 dwts. to 1 oz. each. At the junction of the Manuherikia with the Clutha is the claim of the Government prospecting party, hereinafter more particularly referred to, and from that point to within a few miles of the boundary of the Tuapeka Gold-field, the borders of several of the streams running into the Clutha have recently been tried and found to contain gold in payable quantities. The latest known discovery in this direction is on *the Teviot*, from which locality some miners report that they have obtained 23 ounces of gold for four days work. The Chief Harbour Master, during his recent exploratory trip up the Clutha River, found a party of ten men washing out on the bars of the river, below the junction of the *Beaumont-burn*, all evidently satisfied with the result of their labour. One of them informed Captain Thomson that he had washed out an ounce during his stay of two-and-a-half hours. A deposit of very fine gold, mixed with iron sand, was found on the upper side of the bars in this portion of the river wherever they were tried.

A *continuous Gold-field* may now, therefore, be said to extend in a general northerly direction, from Tokomairiro to the valley of the Upper Clutha—a distance exceeding 100 miles, as the crow flies.

The *Nokomai* Gold-field has not yet been sufficiently developed to admit of any very decided expression of opinion as to its value. The following extracts from the very able Report of the Commissioner of Police, Mr. St. John Brannigan, comprises all the information obtainable to this date:—

“*Moā Creek, or Victoria Gully*—the scene of the gold workings—rises in a large range of mountains, of which the steeple is the highest point, and empties itself into the *Nokomai*. It is about three miles long, and varies from 200 to 600 yards in width. \* \* \* The prospectors continue to do remarkably well. \* \* \* Kelsey's party had washed 6 ounces 11 dwts. from about two loads of washing stuff. \* \* \* Coulson's party had washed about an ounce to the first tin dish. \* \* \* If the same fortune experienced by the miners whom I saw at work, attends the remainder, the field will prove rich, permanent, and extensive.”

Gold mining operations in Otago are entirely confined to alluvial and river workings. In *quartz-reefing* little or nothing has yet been done, and it is at least problematical whether rich lodes such as those of Australia will be found here.

The *first reported reef* was discovered at the *Highlay* in May, 1862. Gold in minute specks, as fine as points of needles, is discernable in the specimens obtained from the “cap,” or crown of the reef. The stone is, however, of an unpromising appearance generally. A lease of a portion of this reef was to have been granted by the Government to the prospector, on condition of adequate machinery being erected, but up to the present time no further action appears to have been taken in the matter.

*Auriferous Quartz* has also been found at *Waipori*. The stone from this reef is of a compact ferruginous nature, containing water-worn gold of a somewhat heavier description than that from the *Highlay* reef. The discoverers have been allotted a full prospecting claim, and they propose to erect a battery of 4 stamps, to be worked by water-power, of which there is abundance in the vicinity.

A quartz-reef has also been reported as having been discovered at *Canada Bush*, between the main branches of the *Tokomairiro* River.

Perhaps one of the most peculiar conditions under which gold has been developed in Otago, is presented by the *Coast workings*, near the township of *Hampden*, on the *Moeraki Beach*. Very fine gold is there found amongst the detritus of the sea shore, intermixed with iron sand, fragments of crystals, and minute gems, chiefly garnets and zircons. Samples, tested by competent metallurgists, have yielded at the rate of from 50 to 100 ounces to the ton of sand. The quantities operated upon have been small, and the results are consequently indecisive, but the particles of gold are generally diffused through the sand as to leave no doubt of its remunerative character, if subjected to proper scientific treatment.

These sands are found along the coast, from the mouth of the *Big Kauri* stream to *Vulcan Point*, and *similar deposits* have been discovered beneath the soil, in the adjacent creeks and gullies.

The *character of the gold* produced on the various fields differs very considerably. That obtained at *Tuapeka* is generally fine and of good quality. The *Clutha* river gold is still finer, consisting principally of thin scales, greatly resembling bran—to quote the original comparison of Mr. *Garvie*—but it is of inferior quality. The *Moeraki* beach gold is the purest and best of any.

*Coarse rough gold*, intermixed with fragments of quartz, is found at *Waipori*, and in some parts of the *Highlay* District.

These contain more impurities than any other, the loss in smelting being from 4 to 7 per cent. The Nokomai gold is water-worn and nuggetty, and this also, judging from a few ounces which were assayed for the prospectors, is comparatively inferior.

The following table (for the contents of which, with the exception of the item relating to Moeraki, I am indebted to the courtesy of the Manager of the Bank of New South Wales) furnishes the *results of actual assays* :—

	Carats.	ct. grs.	$\frac{1}{2}$ ct. grs.
Tuapeka, from 23 Carats to	23	1	0
Waipori, smooth - - -	23	0	2
Do., rough grain - - -	22	3	6
Highlay - - - - -	22	2	4
Dunstan - - - - -	22	3	3
Nokomai - - - - -	22	1	2
Moeraki - - - - -	23	1	2

The *methods adopted for extracting the gold* from the soil are of the simplest description, cradles, long toms and ground sluices being the machines ordinarily employed. Owing to the abundance of water, sluicing is the favorite system. Puddling-mills have been tried, but they do not answer so well as the sluice. These mills, the idea of which was originally derived from the clay-mill of the brick-maker, were adopted on the Australian Gold-fields, because of the facilities which they afford for disintegrating the tough clays, intermixed with which gold is usually found in that country. In Otago the wash-dirt is of a sandy, gravelly character with an almost total absence of argillaceous earths. Consequently the mills become quickly silted up, and the miners derive very little assistance from the process. In some districts, as at Gabriel's and Waipori, *hill sluicing* is resorted to. This is effected by conducting a stream of water to the brow of the hill which is to be operated upon. The soil is then washed bodily away to the bed rock, the gold being saved in sluices underneath.

Some of the *channels, or "races,"* as they are technically termed, used for sluicing operations are extensive and costly works, upon the construction of which much time and labour have been expended. Through these water is conducted from high levels around and over, and sometimes *through*, the mountain ranges; frequently from a point several miles distant, to the scene of operations.

In the *gullies and flats* the workings are shallow, seldom exceeding 20 feet. The earth is loose, gravelly, and easily removed; but this peculiarity renders "driving" or tunnelling dangerous, and the usual practice is to strip the ground through-out.

*Hill sinking* varies from 5 to 50 feet, and the soil being somewhat firmer, the hills are often worked by adits, driven from the sloping surface.

*Bar workings*, as in the Clutha River, are well understood and practised in California, although quite unknown in Australia. The process is very simple. The auriferous sands, collected from the rocks, are first washed in an ordinary cradle, when the lighter particles float off leaving a residuum of highly magnetic iron sand and gold. The iron is most effectually removed by a magnet, and the gold is then finally "panned off," *i. e.*, washed until perfectly clean in a tin pan.

*Present population.*—Owing to the recent discoveries, the mining population is now rapidly on the increase. It is estimated that there are not less than 10,000 *miners* in Otago at the present time. Of these there are about 1500 on the various districts of the Tuapeka Gold-field; 3000 at the Dunstan; 2500 at the Nokomai; 2000 are supposed to be on the way to the various Gold-fields; and the remainder, including about 500 on the Highlay diggings, are distributed over the Province beyond the boundaries of the proclaimed diggings.

The number of persons holding *Business Licenses* on the Gold-fields is about 1000, and there are 60 Licensed dealers in Spirituous liquors. Their *employés* may be set down at 1500.

I have no means of forming even an approximate estimate of the *female and infant population*. In December, 1861, there were only 148 females of all ages on the Gold-fields. A considerable improvement has since taken place in this respect, and continues to progress favorably; but their numbers are still very disproportionate to that of the adult male population.

*The condition of the miners* is very favorable. Taken as a class, a more respectable body of men never followed the vocation of gold mining. Orderly and peaceable in their habits and general conduct, crime is rare amongst them, and although the police-force on the gold-fields is necessarily small, life and property are safer in the tented gullies of Otago than in many of the cities of civilised Europe. From the ruffianism which pervades some other colonies, this Province is now almost free—a result mainly attributable to the efficiency and excellent conduct of the Otago police-force; somewhat also, perhaps, to the peculiarities of the country, which affords but slight facilities for concealment or escape to the hunted desperado.

Hitherto the Otago miners have evinced but little *disposition to settle*, or even to render themselves comfortable by surrounding their dwellings with gardens, as in other gold countries. No doubt this has been owing, in a great degree, to the absence of facilities for so doing, as, until lately, no inducement has been held out to them. Considerable changes have, however, been effected in this respect. By a recent proclamation, holders of Miners' Rights are permitted to occupy, for *residence and cultivation*, half an acre of land within the gold-fields; no extra charge being made beyond a registration fee of five shillings. Measures have also been taken, in accordance with the "Gold-fields Act, 1858-60," to enable persons desirous of cultivating a larger area, to obtain *leases for seven years* of ten-acre sections on those portions of the Tuapeka gold-field wherein the titles of the run-holders have been extinguished. The rental has been fixed at five shillings per acre, and auriferous land is expressly exempted from the operation of the leasing regulations. A *township* named Laurence has been laid out at Gabriel's, and another, named Havelock, at Waitahuna, and the first sales of these will be held in November. Ample opportunity is therefore now afforded for settlement.

*Climate.*—The climate of the older gold-fields has been a serious obstacle to their progress. Waipori and the Highlay district are both at a high elevation, and consequently subject to snow-storms and severe frosts; and even in the comparatively milder region of the Tuapeka, several days occurred during the past season when mining operations were, of necessity, almost at a standstill. It is only fair to state that the winter of 1862 was far more severe than that of the preceding year, when (as I am assured on undoubted authority) with the slight exception of two or three days, the miners were not prevented by the weather from working during the entire season. To the Australian miners, accustomed to a burning climate, the mere prospect of enduring the rigours of winter was sufficient to send them away from our shores. But at the Dunstan, a winter diggings has been assured for the future. Although surrounded by snow-clad mountains, rain rarely falls there. Hartley and Reilly state that, during their secret operations—from May to August—on only three days were they prevented from working. The valley of the Manuherikia is warm and salubrious; and the district of the Upper Clutha, in the neighbourhood of the Lakes, also possesses the advantage of fine dry weather.

Of the Nokomai country little is yet

known, but that little is very favorable. I am assured by the Chief Surveyor that the climate is exceedingly fine and dry, resembling that of the Clutha and Manuherikia Valley.

I subjoin a "Summary of the Weather at Dunedin, Otago, for the year ending 30th June, 1861, and its results, as compared with the nine preceding years," compiled from valuable tables published in the *Government Gazette* by the Rev. Dr. Burns, Minister of the first Church of Otago.

MONTHS.	THERMOMETER.			BAROMETER.	DEPTH OF RAIN-FALL.	DAYS IN WHICH NO RAIN.
	MAX.	MIN.	MEAN			
July 1860	42.9	35.9	39.4	30.27	4.88	12
August "	45.4	35.5	40.4	29.92	3.84	15
September "	48.6	36.9	42.8	30.23	1.65	21
October "	54.2	43.4	48.8	29.92	2.10	22
November "	59.2	46.0	52.6	29.87	1.66	23
December "	63.9	49.7	56.8	29.89	2.50	23
January 1861	60.6	49.3	54.9	29.98	1.89	20
February "	64.7	53.3	59.0	29.86	1.06	21
March "	60.0	47.4	53.7	29.57	2.67	17
April "	55.5	45.6	50.6	30.00	5.82	20
May "	52.6	45.0	48.8	30.17	6.20	18
June "	47.8	39.5	43.7	29.93	2.28	18
Results of the } year... .. }	54.6	43.9	49.2	29.96	36.55	230
1860 { ending June 30	55.8	43.0	49.5	29.97	20.79	244
1859 "	56.1	43.9	50.0	29.95	29.21	218
1858 "	55.7	45.3	50.5	29.94	24.50	227
1857 "	57.5	46.5	52.0	29.86	27.74	220
1856 "	57.3	45.1	51.2	29.96	25.07	252
1855 "	57.4	44.0	50.7	29.93	22.05	261
1854 "	57.4	43.9	50.6	28.87	22.69	235
1853 "	55.1	41.7	48.4	29.84	50.80	203
1852 "	...	...	50.5	29.85	29.33	228

*Timber and Fuel.*—Amongst the difficulties enumerated as attendant on mining in Otago, in the Proclamation of September, 1861, was "a scarcity of wood for fuel and slabbing purposes." Subsequent discoveries have, in a great degree, obviated this inconvenience. I have already referred to the forests at the head of the Clutha, whence timber is rafted down to the Dunstan gold-field. On the banks of that river, and in the very heart of the workings, a large bed of *bronn coal*, or lignite, has been found. At the Nokomai (Gabriel's District) there are valuable deposits of lignite in Wetherstone's Flat, and also near the township of Laurence. At the latter place a seam, eight feet in thickness, is known to extend over an area of more than 25 acres. Fine timber for the use of this field can be obtained from the "Remarkable Patch," at the

junction of the Tuapeka River with the Clutha. Waitahuna is well supplied with lignite, obtained from the flat in the vicinity of the township. At Waipori trees are found imbedded in the soil a few feet below the surface, and so well preserved are these as to be available for any purpose. On the Tokomairiro Plains an extensive deposit of lignite is now being worked; and at Coal Creek, in the Highlay District, the same mineral crops out of the banks of the stream. Indeed, lignite abounds throughout the Province; and by a little judicious outlay for roads, timber may be brought within the reach of our miners in almost every locality.

*Administrative and Legislative.*—During the session just concluded the General Assembly of New Zealand passed a new Gold-fields Act, which it is believed will in some degree amend the defects of the present unworkable Act. The *Regulations* formerly in force have been cancelled, and an amended code issued. One *Mining Board*—that of Gabriel's District—has been established, and the election of members took place on the 24th April. Bye-laws have been drafted, but not yet finally passed by the Board, and consequently the old Regulations still remain in force upon that part of the gold-fields. The recent "rushes" have prevented the establishment of similar institutions elsewhere; but it is hoped that when the miners become more settled, they will avail themselves largely of the power to legislate for the regulation of the gold-fields.

I have elsewhere referred to other important changes.

A *Mining Surveyor* has been appointed for the Tuapeka, and the beneficial effects of his presence there are already beginning to be felt.

The *Nokomai* and the *Dunstan* gold-fields have been proclaimed in the *Gazette*. To the former district Mr. Commissioner Worthington has been appointed, and the district of Waipori—formerly under that gentleman's charge—has been temporarily merged in that of Waitahuna. Mr. Ked-dell has been appointed to the Commission-ership of the Dunstan field, for which office he had previously evinced his fitness, whilst in charge of the district *pro tem*.

*Prospecting.*—Three prospecting parties were fitted out by the Provincial Government in the month of April.

The first, under the leadership of Mr. H. Stebbing, explored the country north of Tuapeka, and on the 18th August that gentleman reported that he had discovered a payable gold-field extending from the head of the Teviot stream to the junction of the Clutha and Manuherikia Rivers.

Another party, headed by Mr. John Meade, crossed the Clutha from Waitahuna, and proceeding towards the Mataura found good prospects on Waikiki Creeks, from two to four grains of gold to the pan being obtained from every gully tried. Respecting this locality Mr. Meade reports:—

"Some of the gullies are more than a mile long, all containing a little gold, and though they would not permanently occupy the labor of many miners, yet they would be gladly sought after in Victoria. During the time of working, men might realise from £2 to £3 per week. This is writing within bounds. . . . On every side the country looks favorable for prospecting; but we have been particularly directed to Waikiki and Otaria Creeks. From what I have seen of Otaria Creek, I highly approve of it."

In a subsequent report he states:—"I am thoroughly convinced that good sluicing ground exists in the neighborhood."

A third party was despatched from Waipori, and prospected the head of the North Taieri Plain, finding gold in small quantities wherever they tried for it."

Mr. Gabriel Read has also furnished the Government with an account of his explorations since September, 1861, from which I extract the following passages:—

"I found gold in small quantities on the Waipahi, near its junction with the Pomahaka, and also on the latter river. . . .

"My next journey was to the *Landslip Hill*. I could wash fine gold in every place I tried, but was not able to attain to the slate bed rock. The creeks are full of lignite, by breaking up the surface of which, and washing it in the prospecting pan, I could obtain as much as sixty or seventy minute scales of gold. . . . I am of opinion that the hills throughout the whole range of runs 167, 175, to the north of the Landslip Hill, will some day be valued for their auriferous treasures. . . .

"Passing to the right of Mount Wendon, I struck the Lathan, at Mr. Manley's station. In the slate laid bare in the bed of this stream, very minute gold may be washed out in every pan."

Mr. Read also tried the Okapua, Wendon, and Otaria streams, and found *light gold*, intermixed with magnetic iron sand, in all of them.

*Deep Sinking.*—Alluvial gold mining in Otago has hitherto been confined to workings in the *newer tertiaries*, at a moderate depth. Below these, *older tertiaries*—constituting a second bottom—are now known to exist. Whether the

drift of the lower formation is sufficiently auriferous to remunerate individual enterprise is yet an unsolved question. To determine this very important point, the Government have appropriated a sum, in aid of local contributions, and two sites have been selected for the experiment.

The first is at *Wetherstone's*, where a shaft had previously been sunk to a depth of 120 feet. On the bottom, coarse water-worn gold was found, although not in payable quantities—a circumstance attributed by the miners to the “dip” of the rock, by following which downwards they anticipated reaching a deep gutter, where, if at all, a lead of gold would be struck. The difficulty of conveying the excavated soil from the “drive” to the shaft induced a change in the plan of operations, and a tunnel from the hill-side was commenced.

This tunnel has now been carried 200 feet into the hill, with a height of six feet and a width of three feet. At the extreme end a shaft has been sunk to a depth of 80 feet, and the miners are now driving in the direction of the original shaft, in the expectation of shortly striking the gutter.

From a recent report of the Mining Surveyor, I learn that—

“The nature of the strata gone through in the tunnel is composed principally of a blue and black consolidated clay, with occasional veins of slate rock, which very much resembles some of the deep sinkings at Ballaarat.”

In the progress of these operations, gold has been obtained in small quantities, and Mr. Van, under whose able superintendence the work is being performed, is very hopeful of ultimate success. The completion of this work is considered important by Dr. Hector, the Government Geologist, who thus refers to it in a recent memorandum:—

“It will help to settle a question which is not only of great theoretical interest, but also of practical importance, in estimating the probable extent to which the Otago gold-fields may become developed—viz., by proving whether there is a layer of “wash,” or auriferous gravel, at the base of the older tertiary conglomerates.”

The second experiment is being tried at *Waitahuna*, where a shaft has been sunk to a depth of 110 feet, without any bottom having been found. The strata is described by Dr. Samuels, the Chairman of the Local Association, as consisting of blue clay, washed quartz, slate, and drift firmly cemented together, and containing traces of gold.

It may not be out of place here to refer to the *Exploration of the West Coast*. To the north-west and west of the settled districts of Otago, and of Southland, there is a large tract of unexplored country included within the boundaries of the former Province, but which now appears as a blank upon the map. Coal of a very superior description has been found upon the Coast, at Preservation Inlet and other localities; and this *terra incognita* is reported to be rich in other minerals. It is on the west coast, for instance, that the Buller River Gold-field in Nelson Province, is situated. Private enterprise has already started on the path of discovery; a small vessel, the “Emerald Isle,” having recently been fitted out for this purpose, and the Provincial Government of Otago contemplate placing a sum on the Estimates for the prosecution of a systematic exploration.

With regard to the future of Otago as a gold-producing country, I entertain the belief that her prosperity will be permanent and progressive. I am not desirous to foster extravagant ideas of the mineral affluence of the Province, but I am, nevertheless, impelled to express my conviction that we are, even yet, only at the threshold of discovery. When it is considered that our mining population has hitherto been smaller than ever before developed the Gold-fields of a new country, and this paucity of numbers is contrasted with the splendid results already obtained, we may reasonably anticipate that the extensive migration which is now taking place to these shores will be productive of still greater results, and more valuable discoveries. Much may also be hoped for from the application of the knowledge and experience which has been acquired by our resident miners during the past year. To the eye of the Australian miner, Otago presents few of the ordinary characteristics of a gold-bearing country. He misses the quartz-reefs, which serve as an index to the auriferous deposits of the adjacent colonies, and looks in vain for the tilted slate bands which there protrude in bold relief from mountain ranges, almost denuded of soil. In this Province quartz reefs are seldom met with, and throughout the greater part of the country the hills are covered to their very summits with deep black soil, and clothed with luxuriant grasses, concealing from view the schistose rocks, which are much less verticle than in Australia, and only crop out from the surface at infrequent intervals. Here too (as I have before observed) gold is principally found in the drift of the newer tertiaries, presenting no true bottom; so that the inexperienced miner is liable to penetrate through and below the auriferous

strata; and in many districts extensive land slips have so changed the appearance of the country, that the present gullies are often mere surface depressions, whilst the true "gutters" are hidden beneath the points or spurs of the adjacent hills; a fact which has been amply demonstrated on the Tuapeka Gold-fields. All these peculiarities tend to delay the progress of discovery by misleading prospectors. But as the miners become better acquainted with the country, and observe the conditions under which the gold drifts are to be found here, there can be very little doubt but that many localities hitherto deemed unproductive, or but slightly auriferous, will yet be worked with successful results. There is now ample evidence that the Gold-fields already opened are not merely exceptional, or isolated patches as was, at one time, supposed. From the Kakanui Mountains to the Mataura River the same geological indications are found to exist, and the presence of gold over the whole of the vast area comprised within these limits has been so far ascertained as to induce the belief that rich fields will, for some time to come, be continuously discovered, and that Otago is only now reaping the first fruits of that golden harvest which awaits her in future years.

VINCENT PYKE,  
Commissioner of Gold Fields.  
Dunedin, October 1st, 1862.

NOTE.—The probable extent of the auriferous deposits in the districts comprised within the limits of the Tuapeka gold-field can scarcely be indicated with any degree of certainty. Hitherto the gold workings have been entirely alluvial; for although the quartz reefs at Waipori and those in the Canada Bush, near Burnt Hill, on the upper waters of the Tokomairiro River (south branch) have been proved to contain gold, yet no systematic search has been prosecuted, and we are therefore not in a position to form any definite opinion as to their value; neither is it certain that they are true lodes, such as are found in other gold-producing countries. It is a remarkable fact, however, as stated by experienced miners, that the above reefs bear about 22 degrees west of (magnetic) north, which corresponds with the general bearing of the richest Victorian reefs.

The escorts for the month of October amount to 26,990 ounces (irrespective of large quantities of gold received from these fields by private hands) which is equal to 6,747 ounces per week, or an average of more than one ounce per man.

Official returns show that during the month ending 17th October, Victoria, with 100,000 miners, only produced 132,246 ounces, equal to 33,060 ounces per week, or an average of little more than 6½ dwts. per man.

The gold-fields of New South Wales, with a mining population approximately estimated at 30,000, forwarded per escort on the 16th October, 6,983 ounces, and on the 23rd, 11,175 ounces, or at the rate of about 9000 ounces per week, equal to an average of 6 dwts. per man.

It is apparent therefore that Otago at the present time is the most remunerative gold producing country in the Southern Hemisphere,

if not in the world; and from reliable information in my possession, I have reason to believe that the results recorded above will be very much surpassed during the coming summer; whilst in the river workings discovered by Hartley and Reilly, an ample field for winter operations has been secured, in a region which possesses the additional advantage of a fine dry climate.

## HARBOUR DEPARTMENT.

Harbour Office,  
Port Chalmers, 29th Sept., 1862.

His Honor Major Richardson,  
Superintendent.

SIR—I do myself the honor to furnish you with a Report relative to the present state of the Harbours and Roadsteads in the Province of Otago, and of the works necessary in the same to meet the present requirements, and to make provision for the rapidly-increasing shipping trade to our ports.

1st. At *Oamaru* there is a good coasting trade carried on, and increasing. The moorings laid down in the Bay have been of great service to the smaller class of vessels, and a Flagstaff has been erected on the shore, by which means the Beach Master is able to communicate with the shipping. The management of the Surf Boats is in the able hands of Captain Sewell, who also acts as Beach Master, and who continues to give every satisfaction in all matters connected with the shipping. For the accommodation and safety of the vessels of a large tonnage that occasionally visit this roadstead, I would recommend that heavy outer moorings should be laid down.

2nd. *Moeraki* is a superior roadstead to that of Oamaru, possessing a Boat Harbour, well sheltered, in which the beach is perfectly smooth, except in heavy S.E. weather, which does not occur more than (20) twenty days throughout the year; yet no advantage is taken of this harbour. The settlers in the locality do not seem to give encouragement to shipping,\* the steamer "Geelong" being the only vessel calling there, and that only from necessity—to comply with the terms of contract. The want of an outlet from the Boat Harbour to the township of Hampden and surrounding district, I believe to be the cause. As soon, therefore, as a road is opened up, I would recommend that the erection of the Jetty in contemplation, should be proceeded with, for which the most convenient site would be in the north shore of the Boat Harbour, and

\* A road is now under construction, which was absolutely necessary to enable the settlers to approach the Harbour.

which would admit of vessels drawing (6) six feet water going alongside at low water.

3rd. At *Waikouaiti* a large trade is being done. This roadstead has the advantage of (2) two landing-places—the River on the south, and under Matanika Head on the north shore of the Bay. It is practicable to land on the north shore at all times that the state of the weather admits of landing on the south—having this advantage, that communication can be had at all times of the tide; whereas on the south, by the River, no communication can be had with the shore on the last quarter ebb and first quarter flood. As the north shore is near to the township of Hawksbury and the great North Road, it would be desirable to make it the landing place; and, so as to complete the little Boat Harbour which nature has partially formed, I would recommend that on the reef, which at present forms a little shelter for boats, there should be erected a small Breakwater, thereby affording every facility to the loading and unloading of vessels, and thus avoid the destruction of goods that landing in a surf too frequently causes.

4th. *Otago Harbour*.—On the outer bar I find that no change has taken place in the depth of water from that shown by Captain Stokes' survey, there being still (17) seventeen feet at low water spring tides. On the inner bar, which is of a shifting nature, there is (17) seventeen feet at low water spring tides. Within the last six months a sandy knoll, having only a depth of (11) eleven feet at low water, was formed in the channel across this bar, not blocking it up, but a corresponding width to that of the knoll has been washed away from the banks on either side. The knoll being in mid-channel, vessels drawing over (17) seventeen feet were with difficulty steered clear of it.\* I am glad, however, to inform your Honor that since the steamer "Samson" has been running the harrows over it, which she has done for (7) seven tides during the ebb, there is now a depth of (13) thirteen feet, and more of a uniform depth throughout the whole extent of the channel across this bar. There being (7) seven fathoms water not more than a cable's length from the knoll, I feel convinced that the harrows must stir the sand up so that a strong ebb tide will carry it into the deep water before it can have time to settle, and the change already wrought proves it. From the inner bar to Dunedin Bay there is still the same depth

\* Since this was written a new channel has been opened, which gives a depth of      feet at low water.

of water in the main channel as is shown by Captain Stokes' survey; and, from close observation of this harbour for the last seven years, I do not find any other change than the channel across the inner bar occasionally shifting. It is true that vessels have taken the ground in this channel from time to time; it is also true that there was the same obstruction in former years to the navigation as exists now. Three years ago it was considered not practicable to take vessels drawing (18) eighteen feet water above the lower anchorage, whereas now there are vessels from 1000 to 2,200 tons, and drawing (21) twenty-one feet water, taken up to the Port. If the knoll aforementioned were once removed, I feel assured that by running the harrows over the ground from time to time, it would prevent the formation of it in future. The Pilot Schooner is of great service in putting the pilots on board of vessels well in the offing, and much credit is due Captain Loudon, Chief Pilot, and his brother officers, for their careful watching and successful efforts in boarding vessels before they near the danger. The expenditure of the schooner has been heavier than I anticipated, caused by the loss of anchors and chains, and damage sustained through stress of weather. The Light on the Heads is much improved, the kerosene lamps being now visible (15) fifteen miles off.\* I have been disappointed by the contracting party in the erection of Beacons, the want of which is much felt by steamboat masters during the night, but I expect to have the works proceeded with immediately.

I would now respectfully recommend that a *Steam Tug*, of not less than (70) seventy horse power, should be procured for the Pilot service, which would be available for running the harrows in the channel when required, would be always at the Heads ready for any emergency, and would further facilitate the boarding of vessels in the offing. It would in a great measure be self-supporting; the rate of towage should be fixed at a price that would induce the masters of large vessels at all times to take the services of the boat, thereby avoiding the risk of grounding on the inner bar; and, on the whole, it would establish the character of the Port as being very safe for vessels of any tonnage under 2000. The cost of such a steamer would be about £4000, and the annual expenditure about £4000, being £2,800 in excess of the annual expenditure on account of the schooner, which the towage of 150 vessels, at £20 each,

\* Two light-houses are expected immediately from Britain.

would more than cover; and, with the present prospect of shipping to this Port, a larger revenue from towage than quoted would be derived. A vessel will be required soon for the purpose of laying down and overhauling moorings in the roadsteads, for which purpose the pilot schooner would be applied.

The amount of shipping now visiting this Port, more particularly iron steamers, demands that accommodation should be given them for repairs. As the erection of a *Patent Slip* capable of taking up a vessel of large tonnage will involve an outlay of not less than £20,000, thereby deterring private enterprise from engaging in the work, I would therefore recommend that the Government should secure the Bay frontage on the south side of Acheron Head, that being the most suitable site, and thereon erect a Patent Slip capable of taking up a vessel of 1,200 tons. The character of the Port I have no doubt is at present suffering from the want of accommodation for the repairs of vessels. I would also recommend that a *Steam Dredge* should be procured, with a view to deepening Dunedin Bay. Much inconvenience is still felt, notwithstanding the increased Jetty accommodation, as over-sea vessels cannot get alongside, and in consequence are compelled to lighter their cargoes, which invariably leads to a certain amount of loss and destruction of property. Vessels drawing (12) twelve feet water are taken up to Dunedin Bay, while at the end of the Jetties there is only a depth of (8) eight feet at high water; it would therefore be desirable to deepen the harbour so as to give the required accommodation.

5th. At the *Taiari* there is not any increase of coasting trade since my last report of this Harbour to your Honor. The signals for steering vessels, and showing the state of the tide and bar, are carefully attended to by Mr. Irving, and are of great service to the few vessels visiting this Port. The River and Waiholo Lake Steam communication is kept up by the owner of the steamer "Betsy Douglas," and who, I understand, has a new steamer on the way out from England, and which he intends placing on the same line.

6th. At the *Molyneux* there is an increasing trade; being a Port of Entry, the high way to extensive Gold-fields, sheep and agricultural districts, we may expect an increase of foreign trade. The abundant supply of coal in this locality will also be an inducement for shipping to visit this Port. The signal station is under the management of Mr. Hoggart, whose services and attention to the bar and tidal signals the ship-masters trading

to the Port consider of great value. The inner branch of the river has been partly cleared of the snags as far as the Ferry; the waters having risen has put a stop to further operations this season. There is a sufficient width of channel for a steamer drawing (3) three feet to pass up as far as the mouth of the Tuapeka. In order that over-sea vessels may approach the entrance of the river with a feeling of security, and for the use of vessels that cannot enter the river, I would recommend that Moorings should be laid down in Wiltshire's Bay; and also that as the price paid for the use of a vessel to remove the snags amounts to the value of the vessel in (2) two months, I would recommend that the schooner "Clarendon," at present in the river, and which has been employed at the above-mentioned works, should be purchased, in order that there may be no delay, as formerly, in procuring a suitable vessel; the price asked, with tackling complete, is £280. On the arrival of the steamer for the river service, arrangements will have to be made for raising the Ferry wires, as at present the hull of the vessel will not pass clear under them. I trust that your Honor will sanction the purchase of the "Clarendon," that I may be able to begin operations in the removal of the snags as soon as the waters fall.

7th. At *Catlin's* river nothing has been done; there not being any settlers in this locality, nothing is required. It is a pity that such a valuable wooded country, possessing a good harbour for small vessels, and so near to a market in which there is a large demand for timber, should be lost sight of.

8th. At *Waikana* there is a good trade done in timber, giving employment to several small vessels. This harbour has a very safe entrance, having (3) three fathoms water on the bar.

I have not made mention in the foregoing report of the desirability of establishing steam communication between Dunedin and the Molyneux, being aware that the Government is still open to receive tenders for such service. I will, in a few days, be able to furnish your Honor with a tracing of the Harbour of Otago, and Moeraki Bay, showing the soundings as at present.

I have the honor to be,  
Sir,

Your most obedient servant,  
WM. THOMSON,  
Harbour Master.

Harbour Office,  
Port Chalmers, 13th Oct., 1862.  
To His Honor Major Richardson,  
Superintendent.

SIR—I do myself the honor to acknow-

ledge the receipt of your Honor's communication, of 9th inst., and reply to queries to state as follows:—

1. Oamaru moorings laid down with cost £300.

2. In a communication to your Honor, of 7th July last, I recommended that the Breakwater at Waikouaiti Bay should be a continuation of a reef under Matanika Head, about (150) one hundred and fifty feet in length, which would carry it into (9) nine feet at low water, and form a boat harbour suitable for the present requirements.

3. The proposed steam tug for the Pilot service would be commanded by one of the Pilots stationed at the Heads, for the purpose of towing and putting the Pilots on board of vessels. I feel assured that it would be nearly self-supporting. Overhauling moorings is a work that would occupy from ten to twelve days at a time, too long to be away from the Pilot Station. The expenditure for schooner, as a mooring vessel, is £180 per annum, to which would be added the present crew of the launch, whose work it would be to attend to moorings as well as buoys and beacons.

4. The weather has been unfavorable to take correct soundings of Acheron Head. I will furnish some on an early day.

5. The probable cost of a steam dredge will be about . . . £8000  
Cost of 6 punts (£250 each) . . . 1500

£9500

EXPENDITURE—

Master's salary, per annum..	£250
Engineer's do., do... ..	250
2 Firemen do., do... ..	360
6 Men do., do... ..	900
900 tons coal, do. at 50s.	2250
Repairs do... ..	1000
Oil and tallow, do... ..	100
Incidental expenses do. . .	100

Total working expenses ... £5210

6. The "Betsy Douglas" steamer has had a break down occasionally, arising from inexperience in working the boat. She has gone up to Grey Town as often as inducement offered; the speed of the boat is not what is required. The owner, Mr. Douglas, has a new boat on the way out from England, which he says will be more suitable. The "Betsy Douglas," as at present managed, cannot comply with the terms of contract.

7. Moorings laid down at Molyneux Bay would be the same as at Oamaru, £300. I would recommend the purchase

of the "Clarendon," as the price paid for hire of a vessel will soon exceed her value, and that she may be ready for use as soon as the river falls, there having been serious loss of time last winter in procuring a suitable vessel. The removal of snags is so tedious an operation, and would seriously interfere with the regular communication being kept up, if the steamer was to be engaged in the said works. In my opinion the steam-boat owners would charge a higher rate for the removal of snags than it can be done for by vessels fitted for the purpose.

8. The Ferry wire would require to be raised (12) twelve feet above the present height, during summer months. The funnel would also fold down, so that nothing of the present work should be disturbed, I would recommend that a derrick of sufficient height should be set up at the water's edge, close on the upside of the wire, with a tackle attached so as it (the wire) could be raised when wanted, or the wire might pass through the derrick and be a fixture; it will only be wanted on one side of the river.

9. Nothing is required at Catlin's river to encourage vessels of small tonnage, and drawing not more than ( $4\frac{1}{2}$ ) four and a half feet of water, but settlers in that locality; and a sale of the lands, I believe, is wanted. A party, with whom I have had conversation respecting this Harbour, and who is desirous to establish a sawmill there, objects to investing so large a capital as would be required for such purpose, with no other security than a timber-cutting license. A rock in mid-channel, over which there is (5) five feet at low water, can be removed when the trade for larger vessels than the afore-mentioned demands it.

10. The weather has not been favorable for me taking soundings at the entrance to Otago Harbour and Moeraki Bay. I will furnish your Honor with some as early as possible.

I have the honor to be,  
Sir,

Your most obedient servant,

WM. THOMSON,  
Harbour Master.

SHEEP REPORT.

Dunedin,  
12th October, 1862.

To His Honor Major Richardson,  
Superintendent.

SIR,

FOR the information of the Government, I beg leave to inform you that the number of cattle imported from Wel-

lington into this Port since October, 1861, was fourteen hundred (1,400); and, with the exception of four hundred (400) store cattle, the remainder were fat.

I may further mention that Wellington was the only settlement in New Zealand that shipped cattle to Otago, but large herds have been brought overland from Nelson and Canterbury.

I have the honor to be,  
Sir,  
Your obedient servant,  
WM. LOGIE,  
Inspector of Cattle for Otago.

Dunedin, 12th October, 1862.

To His Honor Major Richardson,  
Superintendent.

SIR—I have the honor to lay before you the returns of Sheep within the Province of Otago for September, 1862.

There are yet a few returns to be sent in, which will give an additional twenty thousand (20,000), making a total of seven hundred and seventy-two thousand five hundred and six sheep in the Province.

Out of this number, six hundred and three thousand (603,000) are ewes, and one hundred and sixty-nine thousand five hundred and six wethers. This is independent of a large number of lambs under three months old, not yet returnable.

One hundred and sixty-two thousand nine hundred and six (162,906) sheep have been imported and introduced into Otago since November, 1861.

From Victoria—Fifty-four thousand three hundred and six (54,306) ewes, and thirty thousand (30,000) wethers.

From Wellington—Five thousand (5000) principally fat.

Brought across the Waitaki from Canterbury—Thirty-five thousand (35,000) ewes, and twenty-five thousand (25,000) wethers.

Southland—Ten thousand six hundred and fifty (10,650) ewes, and three thousand (3000) wethers.

From my own knowledge, and the information I have gathered, the number of sheep slaughtered for meat in the Province within the last twelve months, is I think between seventy (70) and eighty thousand (80,000).

I am sorry to see such a large number of Diseased Sheep in the list, and must say that some of the settlers are very much to blame in the matter. Several of the runholders have been in the habit of taking sheep to the diggings, and when found unsaleable there, they have driven them back to their stations, and turned them on their runs without dressing, thereby diseasing their own flocks and likewise their neighbours'. But, as soon as the shearing is over, it is my intention to take stringent measures to have the disease eradicated.

I have the honor to be,  
Sir,  
Your obedient servant,  
WM. LOGIE,  
Chief Inspector of Sheep, Otago.

THE NUMBER AND CONDITION OF THE SHEEP IN THE PROVINCE  
OF OTAGO.

30TH SEPTEMBER, 1862.

No. of RETURNS.	NAME.	NUMBER OF RUN.	ACREAGE.	CLEAN.	DISEASED.	TOTAL.
1.	Borton & M'Master ...	27, 92, 103, 205, 211	141,960	36,000	...	36,000
2	F. & W. Fenwick ..	Hundreds 12, 17, 217	84,480	33,200	...	33,200
3	M'Lean (Brothers) ...	235, 236, 237, 238	353,280	32,000	...	32,000
4	Wilkin & Thomson ...	239, 240, 245, 340	172,160	26,000	...	26,000
5	W. & R. Filleul ...	(Hundred 16) 18, 19	65,920	18,845	4,100	22,945
6	Rowley, Hamilton, & Wayne...	109, 204	94,720	19,727	...	19,727
7	A. & W. Shennan ...	220, 221	92,160	18,500	...	18,500
8	James Smith ...	106, 123	22,000	16,000	1,500	17,500
9	Clapcott (Brothers) ...	Hundreds	...	16,200	...	16,200
10	E. S. Saxton ...	210	58,880	6,600	9,000	15,600
11	J. & W. D. Murison ...	222, 247	90,880	14,000	...	14,000
12	Chalmers & M'Haffie ...	215, 253, 368	122,400	13,551	...	13,551
13	John M'Lean (Trustee) ...	23, 228	91,520	13,466	...	13,466
14	M'Murdo & Hodgkinson ...	1 of C, 2 of C, 3 of C.	153,700	13,000	...	13,000
15	Chas. D. Teschmaker ...	78, 131	55,040	12,500	...	12,500
16	W. & C. F. Black ...	226, 244	90,880	12,300	...	12,300
17	Holmes & Campbell ...	Hundreds	...	11,700	...	11,700
18	Webster and Thomson ...	223	80,000	11,490	...	11,490
19	W. H. Dansey ...	28	51,200	11,440	...	11,440
20	W. H. Valpy ...	248	70,400	11,398	...	11,398
21	Musgrave & Anderson ...	199	64,000	11,000	...	11,000
22	Robison & Walker ...	201, 322	121,600	10,750	...	10,750
23	Holmes & Gleeson ...	(Hundred 11) 209	40,160	7,000	3,000	10,000
24	Robert Campbell ...	220, 226	89,600	10,000	...	10,000
25	J. W. Manley ...	62, 63, 202	68,480	9,177	...	9,177
26	Reginald Julius ...	243	60,000	9,000	...	9,000
27	Chas. Hopkinson ...	121, 250	82,560	...	9,000	9,000
28	W. H. Teschmaker ...	98	23,040	8,500	...	8,500
29	Thomas Ferens ...	124	41,600	8,454	...	8,454
30	Grant, Gamie, & Rees ...	331, 345, 346, 356	285,000	8,300	...	8,300
31	Harries & Innes ...	213	60,160	8,001	...	8,001
32	Philips & Seal ...	205, 227	83,200	8,000	...	8,000
33	Mark Noble ...	99	19,200	8,000	...	8,000
34	N. B. M'Gregor ...	39 & 39 B	32,920	4,046	3,946	7,992
35	Alex. M'Donnell ...	132	26,240	7,500	...	7,500
36	Hepburn & M'Master ...	219	33,280	7,250	...	7,250
37	Alex. M'Nab ...	111	54,680	6,400	...	6,400
38	A. R. B. Thomson ...	254	122,840	6,600	...	6,600
39	F. W. M'Kenzie ...	167, 168	35,000	6,000	...	6,000
40	Joseph Maitland ...	Hundred 36	5,000	6,000	...	6,000
41	E. B. Atkinson... ..	22, 301	33,200	6,000	...	6,000
42	James Rolland ...	224	30,700	6,583	...	6,583
43	Edward M'Glashan ...	20 218	32,600	6,000	...	6,000
44	Chas. L. Swanston ...	193, 194, 254 B	92,160	5,709	...	5,709
45	G. Spooner ...	243	2,000	5,000	...	5,000
46	W. D. Inverarity ...	175	30,120	5,200	...	5,200
47	J. C. Andrews ...	160	62,720	5,450	...	5,450
48	J. H. Harris & E. Lee... ..	57, 185	33,000	5,600	...	5,600
49	Stafford, Bell, & Richmond	244, 261	128,640	5,499	...	5,499
50	Comber & Douglas ...	225	50,000	5,200	...	5,200
51	J. R. Jones ...	Hundreds	...	5,000	...	5,000
52	A. Oliver ...	90, 258	46,720	5,000	...	5,000
53	John Roy ...	334	100,000	5,500	...	5,500
54	John Anderson... ..	161, 162	53,760	5,496	...	5,496
55	John Healy ...	260	24,960	5,300	...	5,300
56	Joseph Preston... ..	203	32,240	4,740	...	4,740
57	Greg & Turnbull ...	308	49,920	4,000	...	4,000
58	W. T. Y. Burnett ...	175	23,000	4,367	...	4,367
59	Walter Miller ...	200	37,760	4,000	...	4,000
60	J. & A. Boyd ...	75	28,160	4,300	...	4,300
	Carry forward ...		4,130,800	801,839	30,546	632,485

THE NUMBER AND CONDITION OF THE SHEEP OF THE PROVINCE  
OF OTAGO (Continued.)

30TH SEPTEMBER, 1862.

No. of RUMERS.	NAME.	NUMBER OF RUN.	ACREAGE.	CLEAN.	DISEASED.	TOTAL.
		Brought forward ...	4,130,800	801,839	30,546	632,485
61	Wm. Pinkerton ... ..	163	30,080	4,250	...	4,250
62	Gamie & Grant ... ..	140	35,840	4,400	...	4,400
63	Thos. J. Ord ... ..	72	20,480	3,700	...	3,700
64	J. Burke ... ..	337, 338	100,000	3,500	...	3,500
65	W. J. Cumine ... ..	(52, Gold Fields)	49,920	3,500	...	3,500
66	Pagan, Junn, & Wilson ... ..	251	16,000	3,150	..	3,150
67	Miller & Gooch ... ..	233, 335	75,000	3,400	...	3,400
68	Mr. Baldwin ... ..	262	51,000	3,500	...	3,500
69	Mr. H. S. Roberts ... ..	167 B	14,000	3,600	...	3,600
70	Bagrie & Roberts ... ..	212	47,360	3,900	...	3,900
71	Purdie & Dick ... ..	307	30,000	...	3,281	3,281
72	John Switzer ... ..	326	50,000	3,150	...	3,150
73	F. S. Pillans ... ..	35	5,000	3,200	...	3,200
74	Joseph Rogers ... ..	214	20,000	3,750	...	3,750
75	Thos. Trumble ... ..	102	26,480	3,400	...	3,400
76	James Hassell ... ..	Hundreds	...	3,100	...	3,100
77	W. S. Trotter ... ..	323	60,000	3,900	...	3,900
78	Campbell (Brothers) ... ..	64	20,480	3,500	...	3,500
79	Strode & Frazer ... ..	249, 325	58,280	3,400	...	3,400
80	Allan & Oliver ... ..	179	17,000	3,462	...	3,462
81	W. Telford ... ..	Hundreds	...	2,800	...	2,800
82	Sutton's (Trustees) ... ..	79	26,240	2,900	...	2,900
83	Mr. Toppelwell ... ..	Hundreds	...	2,000	...	2,000
84	Holmes & Campbell ... ..	Hundreds	...	2,229	...	2,229
85	James Adam ... ..	Hundreds	...	2,100	...	2,100
86	H. & M. Orbell ... ..	171	84,560	2,850	...	2,950
87	Henry Monro ... ..	167 B	10,000	2,307	...	2,307
88	Jas. Menzies ... ..	88	25,600	2,655	...	2,655
89	A. M'Lean ... ..	339	50,000	2,100	...	2,100
90	Robert W. Aiken ... ..	172	15,000	1,950	...	1,050
91	Mr. Dalrymple ... ..	Hundreds	...	1,706	...	1,706
92	Mr. Carr Young ... ..	189	44,800	1,400	...	1,400
93	Robert Campbell ... ..	96	5,000	1,000	...	1,000
94	Peter Bell ... ..	Hundreds	...	1,250	...	1,250
95	Walter Grieve ... ..	257	12,160	1,020	...	1,020
96	F. D. Rich ... ..	Hundreds	...	1,900	...	1,900
97	Frederick Jones ... ..	255	34,560	1,100	...	1,100
98	Holmes & Campbell ... ..	Hundreds	...	1,470	...	1,470
99	J. Turnbull ... ..	67	24,320	1,700	...	1,700
100	F. H. Richardson ... ..	65	19,840	1,994	...	1,994
101	Shanks & Sons ... ..	66	24,320	1,829	...	1,829
102	George Hay ... ..	122	10,880	1,300	...	1,300
103	James Brugh ... ..	129	20,480	1,513	...	1,513
104	Daniel Sinclair ... ..	63	13,440	1,207	...	1,207
105	Adam Bothwick ... ..	Hundreds	...	1,400	...	1,400
106	George Peel ... ..	177	15,360	1,227	...	1,227
107	Robert Hunter ... ..	...	...	1,260	...	1,260
108	Robert Rotson ... ..	Hundreds	...	911	...	911
		Totals... ..	5,244,280	918,679	33,827	751,896

## EDUCATION REPORT.

*Extract from the Minutes of the Adjourned Half-Yearly Meeting of the Otago Education Board, 28th October, 1862.*—The Meeting resumed consideration of the Secretary's Report for the year ended September 30th, 1862. It was resolved, that the Secretary's Annual Report, together with his estimate of Expenditure for the current half-year, be forwarded to His Honor the Superintendent.

THE ANNUAL REPORT OF THE  
SECRETARY TO THE EDUCA-  
TION BOARD, 1861-62.

To His Honor Major Richardson,  
Superintendent.

SIR—

I HAVE the honor to submit my  
Annual Report for the past year.

*Operation of the New Education  
Ordinance.*

In consequence of the disallowance by the General Government of the Education Ordinance, 1861, the changes in the arrangements for the administration of Educational affairs in this Province, which had been resolved on by your Honor and the Provincial Council, have been delayed for a period of twelve months. As the provisions of the recently enacted Education Ordinance, 1862, did not come into full operation until the 1st October, 1862, no opportunity has yet been afforded of judging of the success likely to attend the scheme of Public School Education now inaugurated. The Inspector of Schools, who has recently visited the different school districts, reports that there appears to be a determination on the part of the School Committees generally, fairly and efficiently to carry out the provisions of the new Ordinance.

*Educational Districts.*

Since the publication of last year's report, the Education Board, after careful consideration of the subject in all its bearings, have resolved upon a definite scheme of adjustment of the different *Educational Districts*, and in pursuance of the provisions of the new Ordinance, a list of those districts, with the description of their respective boundaries, has been published in the *Provincial Government Gazette*. (See Vol. IV., No. 188, page 461.) In order to facilitate the labors of the School Committee, your Honor has been pleased to cause maps of the different Educational Districts to be prepared in the Government Survey Office. A supply of the forms and schedules required by the Ordinance will also forthwith be provided by the Board.

*Number of Schools.*

There are now nineteen *Educational Districts* established in the Province; in connection with which there have been sixteen *Main Schools*, and four *Side Schools* in operation during the whole or a portion of the past year. The *Main Schools* in the recently formed districts of North Dunedin, Caversham and Oamaru, to all of which duly qualified Masters have been appointed, will be opened in the course of a few days. No master has yet been appointed to the District School of Saddle Hill, in consequence of the want of suitable school buildings. The School of Anderson's Bay, which has been conducted with considerable success for several years, is at present vacant, in consequence of the appointment of the former teacher to the Mastership of the adjoining district school of Caversham. All the other schools are at present provided with teachers.

*School Attendance.*

Appended to this report is a Tabular view of the *Attendance* at the different schools, and of the population, &c., of the several Educational Districts. (See Appendix B.) The classification of ages in the Census Returns of December, 1861, renders it impossible to ascertain precisely the number of children generally regarded as of school age, but a careful consideration of the subject has led to the belief that the columns in the Census Abstracts, which exhibit the number of children of the age of 6 and under 16 years, may be taken as showing the number of children that should be attending school. In December, 1861, the total population of the districts, in which schools were in operation last year, was 12,579, while the number of children of school age was 2,295. The number of scholars who attended the Government schools, last year for longer or shorter periods, was 1249; while the number in ordinary attendance last month, was 910. But from the Census Abstracts it appears that there were about 400 children within the Educational districts, who, in December, 1861, were receiving education privately, or were attending other than Government schools. There are now several additional private schools established in Dunedin, but against this may be placed the consideration that the number of educable children in the Province, especially in Dunedin, must have considerably increased since December, 1861. It would thus appear that of the 2295 educable children within the limits of the existing educational districts, there were about 1310 in ordinary attendance at school in Septem-

ber, 1862, and about 985 who, at the same time, were not receiving school education.

The population, in December, 1862, of those portions of the Province not yet included in any school district was 14,584, or exclusive of the Gold-fields, 3112. The number of educable children in the same localities was 364, or exclusive of the Gold-fields, 307; while the number of children receiving education privately, was 28. The foregoing results may be thus briefly stated, viz. :—

No. of Educable children within School Districts ... ..	2295	
Do. without School Districts... ..	364	
		2,659
No. of Pupils in ordinary attendance at Government Schools ...	910	
Do. do. other Schools ... ..	428	
		1338
No. of Pupils who have attended for a short period during last year ...	339	
No. of educable children who have not attended at all ... ..	982	
		2,659

It would thus appear that the proportion of children who received school instruction for longer or shorter periods during the past year, to the whole population, exclusive of the Gold-fields, was 1 in 9.4, or about 63 per cent. of the whole educable children; while the number in ordinary attendance, in September, 1862, was 1 in 11.7, or about 50 per cent. of the whole educable children. Within the limits of the educational districts the corresponding proportions would be about 1 in 8, or 72 per cent, and 1 in 9.6, or about 57 per cent.

#### *Causes of Non-attendance.*

It is to be borne in mind that several of the more recently settled educational districts are of considerable extent, and that there are many families resident within their limits, whose children cannot possibly attend any existing school. The unsettled and very exceptional condition of the population at the present time must be taken into account in forming an opinion respecting the school attendance. A reference to the returns will show that in the older and more densely peopled districts, such as Anderson's Bay, Green Island, East Taieri, &c., whose population has been less affected by recent events, the proportion of children in ordinary attendance to the whole population is equal to that of the best educated countries in Europe.\* It may be necessary to

\* "The progress (in the amount of education) reported to have been made (in England) in the last 50 years, is from 500,000 to 2,500,000, or from 1 in 17 of the population to 1 in 7,—an enormous stride. In France, the proportion of children receiving instruction is 1 in 9; in Holland, 1 in 8, and the slight superiority of Prussia, where the proportion is 1 in 6, is dearly bought by her compulsory system of schooling."—*Quarterly Review*, January, 1862.

explain that the comparatively large attendance at N. E. Valley school is owing to its proximity to the northern parts of Dunedin, in which there has been a very inadequate supply of school accommodation.

#### *Lower Waipori and Blueskin.*

A memorial has been presented by the settlers of *Lower Waipori*, craving the formation of that locality into a separate Educational district. It has been ascertained that there are already about fifty children under 14 years of age resident within reach of the proposed school, of whom there are about twenty-five between 5 and 14 years. As the land in the neighborhood has been recently surveyed and the greater part of it already sold, there is reason to believe that the population of the district will be much increased in the course of a few years. A similar application has been made by the settlers in the vicinity of *Blueskin Bay* where there are now resident upwards of thirty children, between the ages of 5 and 15 years, who are entirely without the means of school education. A large area of agricultural land in this district has now been purchased, and is in the course of being occupied; and as there is a prospect of the Main North Road, which traverses the district, being completed thus far ere long, this locality will probably contain at no distant period a very considerable population. It is therefore respectfully submitted that the Education Board will be fully warranted in sanctioning the formation of the localities of Lower Waipori and Blueskin into separate Educational Districts.

#### *Taieri Beach and Greytown.*

Applications have also been made by the settlers resident at *Taieri Beach* and in the neighborhood of *Greytown* (Scrogg's Creek) respectively, for the establishment of schools in those localities. As the number of educable children residing within reach of the proposed schools is as yet limited, and as there is no immediate prospect of a large increase of population, it is respectfully recommended that side schools only should be provided at present.

#### *Dunedin.*

The Secretary, in common with the existing school committees of *North and South Dunedin Districts*, has had under careful and anxious consideration the best means whereby elementary school education could be placed within the reach of the children residing in all parts of Dunedin. The extent and the present and prospective population of the city, the separation of the southern from the central portion by the deep ravine at Maclaggan

Street and Canongate; and the difficulty, if not the impossibility, of procuring a suitable site for a school-house that would be equally and easily accessible to the children residing on both sides of the ravine, appear to render necessary the establishment in Dunedin of three public elementary schools, viz.:—1st. The school already erected in Great King Street, which will accommodate the children residing in the northern parts of the city. 2nd. A school in the neighborhood of York Place for the central portion of the city; and 3rd. A school near Maitland Street or Walker Street, which would meet the requirements of the Southern District. The school committees of the two districts into which Dunedin is at present divided have had under consideration a suggestion made to them by the Secretary in reference to the union of the two districts, and they have unanimously resolved to recommend to the Education Board the combination of the two districts, as authorised by the Education Ordinance. By this proposed combination, greater unity of action, and greater economy in the administration of the educational affairs of Dunedin would be effected, while the school-rate to be imposed would fall equitably upon the holders of property in all parts of the city.

It was stated in last year's Report that several of the *Educational Buildings* formerly provided had been erected in an imperfect and unsatisfactory manner, and were in an unfinished condition. On the representation of the Board, your Honor was pleased to place on the Estimates a sum sufficient to render those buildings complete. Some of these are now completed in an efficient manner, and it is expected that in a short time the others will also be placed in the finished condition contemplated by the Education Ordinance. After their completion, one half of the cost of keeping them in repair will fall upon the districts in which they are respectively situated. Commodious and substantial school-houses of stone have been erected at North Dunedin, Oamaru, and Green Island, all of which are nearly ready for occupation. In consequence of the failure of the school committee of North Taieri to appoint a competent master to their district school, no buildings have yet been erected in that district. As a well qualified teacher has now been engaged, the immediate erection of school buildings in that district is rendered necessary. School-houses are also urgently needed at South Dunedin, Caversham, Saddle Hill, East Taieri, Tokomairiro, West Taieri, and Warepa, as well as in the localities proposed to be formed into new Educational Districts. The cen-

tral portion of the Otago High School is now approaching completion, and steps will forthwith be taken for the erection of the additional class-rooms that will be required.

#### *High School.*

The Rectorship of the *Dunedin High School* having been resigned by Mr. Livingston, the Education Board proceeded some time ago to consider the duty incumbent upon them to adapt the institution to the increasing population and the altered circumstances of the Province, and after mature deliberation, the following resolution was unanimously adopted, viz.:

“That in the opinion of this Board the population and circumstances of the Province render necessary the immediate establishment in Dunedin of a *Provincial High School* upon a much more liberal and extended basis than has hitherto existed; and that, while the special arrangements for the carrying on of the work of the school may with advantage be left to the Principal and the Masters that may be appointed, the proposed institution should be established and conducted on the following general principles, viz.:—

1. The proposed *High School of Otago* as provided for by the Education Ordinance, 1862, shall be established with a view to place within the reach of the youth of this Province the means of procuring a thorough English, Classical, Commercial, and Mathematical education, and also instruction in those other branches of knowledge, the acquirement of which constitutes a *liberal education*.

2. Such number of competent masters and assistants shall be employed in the institution as the advancement of the Province and the increase of the population may from time to time render necessary. The number of masters at the outset shall be not less than three. One of the masters shall hold the appointment of Principal, and shall have the general oversight of all the classes within the institution, and shall be responsible for the good government, efficiency, and success of the same; but each master, as far as possible, shall have the charge of a distinct department of instruction.

3. Subject to such modifications as circumstances may from time to time render necessary and expedient, the departments of instruction shall be arranged somewhat as follows, viz.:—

1. *Principal's (or Classical Master's) Department.*—To include Latin, Greek, French, &c., Ancient History and Geography, &c.

2. *English Department.*—To include Advanced English Reading, Grammar, Composition, and other collateral branches, Geography, History, &c.
3. *Arithmetic and Mathematical Department.*—To include Arithmetic and Mathematics, in theory and practice, Book-keeping, &c.

Writing, Drawing, Religious Instruction, &c., shall be taught by the several masters agreeably to such arrangements as may be hereafter made; and care shall be taken, if possible, that one or more of the masters shall be qualified to impart instruction in Natural Science to the more advanced pupils by means of lectures, experiments, &c.

4. Provision shall be made for the formation and maintenance of a well-selected Library for the use of the pupils of the institution, and also for the supply of suitable apparatus, including diagrams, maps, globes, models, specimens, &c.

5. No boy shall be admitted a pupil of the institution until he shall have passed an *Entrance Examination* of such nature and extent as may be fixed by the Education Board.

6. Until provision shall have been made for the board and residence within the walls of the institution of the masters and the pupils, every facility shall be afforded to settlers at a distance to avail themselves of the advantages of the school by arranging with the masters for the reception of boarders, and by registering or recommending boarding-houses, subject in virtue of such recommendation to visitation and inspection by the masters of the institution."

The Board at the same time took into consideration the steps necessary to be adopted to procure the services of three thoroughly qualified masters for the proposed High School, and resolved to request his Honor the Deputy-Superintendent to forward instructions for the engagement in Britain of a Principal (or Classical) Master, an English Master, and an Arithmetic and Mathematical Master for the proposed institution. His Honor was also authorised to defray the cost of those gentlemen's passage from Britain to Dunedin from the sum of £400 appropriated for that purpose by his Honor the Superintendent and the Provincial Council, and to enter into such engagements with those gentlemen as he shall consider advisable and proper. His Honor was further requested to instruct the home agents to forward, along with the masters a supply of such school-books and stationery as may by the masters be considered

necessary for the classes in the High School. At a subsequent meeting of the Board his Honor reported that he had authorised the home agents to place the selection of the three proposed masters in the hands of the Provost of Eton, the Rector of the Edinburgh High School, and the Rector of the Edinburgh Academy; that to each of those gentlemen he had addressed a letter soliciting their aid in making selections so important to the Province; and that he had authorised the following salaries to be offered, viz.:—the Principal, £550, with £100 in lieu of house; each of the other Masters, £450, with £75 for house.

#### *Expenditure.*

The *Expenditure* on account of education during the past year has been as follows, viz.:—

Secretary and Inspector's salary .....	£326	5	4
Teachers' salaries .....	1880	16	1
Contingencies.....	86	6	7
Expense of Establishment .....	2293	8	0
New School Buildings, Fencing and Repairs, including the High School .....	4132	16	10
Total Expenditure .....	£6426	4	10

Appended to this report is a tabular view of the expenditure on education by the Provincial Government and by the settlers in the different educational districts, from the establishment of the schools to the 30th September, 1862, and also for the year ended 30th September, 1862. (See Appendix D).

I have the honor to be,  
Sir,

Your very obedient servant,

JOHN HISLOP,  
Secretary to the Education Board.

Education Board Office,  
Dunedin, 10th October, 1862.

#### APPENDIX A.

#### REPORT

*Of the Inspector of Schools for the year ended 30th September, 1862.*

Dunedin, Oct. 10th, 1862.

His Honor Major Richardson,  
Superintendent.

SIR—

I have the honor to report that during the past year I have visited and examined all the schools within the Province, established under the provisions of the Education Ordinance. In order to become personally acquainted with the state of educational affairs in the different districts, immediately before preparing my annual reports, I have hitherto visited the schools

towards the close of the financial year. It has become apparent, however, that an inspection of the schools at this season does not do full justice to the teachers, as owing to the impassable state of the roads, or the want of them altogether, many of the pupils are unable to attend school during the winter months, or do so very irregularly. It is, therefore, my intention, if circumstances will permit, hereafter to visit and inspect the different schools twice in the course of the year; first, in the month of January or February, when the schools may be expected to be in their highest state of efficiency; and again in August or September.

#### *School Attendance.*

The returns for the past year show a large increase of attendance, and with scarcely an exception this increase is spread somewhat uniformly over all the districts. The total number of children who attended the schools for longer or shorter periods during the year 1860-61 was 964, while during the past year the number was 1249. The returns of the ordinary average attendances for the former year were somewhat defective, and no comparison can therefore be instituted under this head. The number of pupils present on the day of my visit to the different schools in 1861 (exclusive of Dunedin) amounted to 385, while the corresponding number present this year was 598. I have appended a return showing the ages of the children who have been in attendance during the past year, and the length of time they have been at school. (See Appendix E.) It will be noticed that the number of scholars of the age of 12 years and upwards is 216, or more than one-sixth of the whole attendance. It must not, however, be supposed that the attainments and proficiency of the pupils of this more advanced age at all correspond with their years. In numerous cases, the pupils who have reached 12, 13, or 14 years of age or upwards, are children who, from the former want of the means of school education in the district, or from other causes, have been imperfectly educated while young, and have now been sent to school, as it were, "at the eleventh hour," not to acquire a knowledge of the more advanced branches, but to receive instruction for a short time in the mere elements of school education, before being finally sent out into the world. It is much to the credit of the parents in several of the districts that, notwithstanding the great value of their older children's services at home or on the farm, they should, nevertheless, keep them in attendance at school, and thus manifest a wise and enlightened regard for their children's best interests, by

availing themselves of the means of school education which may now for the first time be placed within their reach.

#### *School Registers.*

An accidental delay in the receipt of the School Register Books authorised by the Board, has as yet prevented them from being placed in the hands of the different teachers. When these shall have come into general use, a much more correct and reliable account of school attendance, and of the pupils' progress will be procured, than has hitherto been possible. Until such register books are regularly and accurately kept it will be impossible for the School Inspector to form a correct and decided opinion respecting what may be reasonably expected of any schoolmaster, or to judge how far the unsatisfactory appearance of the classes in any school, or the want of progress or proficiency on the part of any of the pupils, arises from shortness or irregularity of attendance or from other causes; whether from the Master's want of care, or of "aptness to teach," or from the child's irregularity and inattention, or want of capacity. I am induced to offer these remarks because I am compelled to report that in many of the schools the progress and proficiency of the pupils generally come short of what might be expected, when the attainments and the experience of nearly all the teachers are taken into account. This state of matters, which is discouraging to the teachers, is mainly attributable, I believe, to the irregularity of attendance on the part of many of the pupils, the advanced age at which some of them enter school, and the indifference which prevails among a number of the parents to anything beyond the mere rudiments of learning. For the exoneration of the competent and faithful teacher, it is, therefore, necessary that the statistics of school attendance should be accurately kept and carefully noted.

#### *Causes of Irregular Attendance.*

The state of the roads is undoubtedly the main cause of the comparatively small attendance at school during the winter season, and this cause generally operates most effectually in some of the oldest settled districts, where many of the roads to the school are now fenced on both sides, and are rendered impassable for several months in each year. But in several instances the attendance throughout the entire year would be much increased by the opening up of roads, and the construction of bridges within the school districts. In the districts of N. E. Harbor and Portobello, which comprise the greater part of the Otago Peninsular, there are

families resident in the bush, and on the shores of the numerous bays which fringe the Harbor, whose children, owing to the want of roads through the bush, cannot possibly attend with safety either of the two well-taught schools now established there. From the report of others, and from my own observation in the course of a journey from Portobello Bay to East Harbor, I am led to believe that there are not a few families on the Peninsula, and almost within sight of Dunedin, now living without the means of religious or secular instruction, and whose children are growing up in a condition utterly rude and uncultivated.

#### *State of the Schools.*

With two exceptions, the teachers of the several schools appear to have performed their duties generally in a satisfactory manner, and the School Committees, and the settlers generally, have expressed their approval of the conduct of their respective teachers during the past year. While it will not be expected that I should at present express publicly any opinion respecting the comparative efficiency of the different schools, I considered it right to make mention of the peculiar excellencies by which some of them are characterized. In the well-taught school of Wakari I was much pleased with the precision and thoroughness with which the different classes acquitted themselves, and especially with the accuracy and the distinctness of enunciation which marked their reading lessons, both in prose and verse. The school at East Taieri, while successfully taught in all its departments, greatly excelled in Arithmetic. The accuracy and expedition with which the exercises selected by me were performed by almost all the scholars in the different arithmetic classes, I never saw surpassed. I was much pleased with the heartiness and the success with which religious instruction is communicated and enforced by the teacher of Tokomairiro school, and with the general intelligence of the pupils in all the classes. The scholars attending Wai-kouaiti school are carefully trained by their teacher in the application of arithmetic to the purposes of everyday life. Each class is well-exercised in mental arithmetic; and as an exercise in mensuration and proportion some boys were sent with a foot-rule to take the dimensions of different doors and windows, and to calculate the cost of the same at so much per square yard. This teacher also very successfully instructs his pupils in the theory and practice of music, and, so far as I am qualified to judge, the singing which I heard in his school was of a superior description. He has secured in an eminent degree the affections of his pupils, and he

manifests much interest in the exercises of the play-ground, where he has erected a rotatory and a common swing, which are in constant requisition during play-hours. In several other schools the progress and proficiency exhibited by those of the pupils who had been somewhat regular in their attendance were very satisfactory. The organization and discipline continue to be well maintained in nearly all the schools.

#### *Religious Instruction.*

The children generally appear to be well acquainted with Bible History, and especially with the Life and Precepts of the Saviour; and as far as I am able to judge, they are taught their duty to God, themselves, and to others, by the example as well as the precept, of their respective teachers.

#### *The essential Branches of Common School Education.*

I have occasionally observed a tendency on the part of some of the teachers to devote an undue amount of time and attention to the higher branches of education, even when the more elementary and indispensable ones had been very imperfectly acquired. No doubt, it is very desirable that the largest possible amount of education and training should be received in school; but when, as is unfortunately the case with many of those who attend our district schools, the period of attendance is limited, care must be taken that due prominence is given to the more indispensable branches. Our district schools, as a rule, can furnish only a foundation upon which the whole subsequent life must erect a superstructure; and it is vastly more important that the foundation should be strongly and fitly laid than that it should contain a great variety of material. There are some branches which are necessary for all, and should form a part of every system of instruction, whatever the pupil may afterwards be destined for. Reading, writing, and arithmetic are indispensable requisites, and a thorough knowledge of these, with their practical application, and an acquaintance with grammar, geography, and British History ought to be possessed by every youth of our land before leaving school. The knowledge of these, however, should not be of a merely superficial or mechanical description. The instruction in them must be thorough and systematic. The scholars in learning these must learn principles, and should be able to understand and to reproduce for practical purposes all they pass over. I shall, therefore, consider it my duty to discountenance any attempt to introduce and give prominence

to other subjects of study, when such evidently lead to the neglect or the imperfect acquisition of the indispensable branches I have specified.

#### *Reading.*

In several of the schools the reading lessons were gone over in a slovenly and imperfect manner. Too little importance appears to be attached by some of the teachers to this important department of school instruction. Even when the pupils seemed to be well acquainted with the sense of the lesson, the reading was often characterized by a want of distinct enunciation, fluency, and expression. It may be unreasonable to expect that a pure English accent should be generally acquired in our district schools, but there is an accuracy of pronunciation and a distinctness of enunciation which everywhere distinguish the well-educated from the uneducated man or woman, and this accuracy and this distinctness it should be the object of every teacher to secure. I must, however, reserve to a future occasion my remarks on the manner in which I conceive reading and the other essential branches of education may be most successfully taught in our district schools.

#### *Operation of the New Ordinance.*

As far as I have been able to judge, the provisions of the new Education Ordinance seem to meet with the approval generally of the School Committees and of intelligent settlers, and there is evident in many of the districts a determination fairly and fully to carry these into successful operation. The chief, and indeed, the only difficulty that seems to be apprehended, is the expense and trouble that will probably attend the assessing of the property, and the levying of the school-rate. The maps of the different educational districts which your Honor has caused to be prepared for the use of the committees will greatly facilitate the labors of the assessors; and as the trouble and cost of preparing the assessment roll will be comparatively trifling after the work of the first year has been accomplished, I believe that the anticipated difficulties will eventually prove much less formidable than they at present appear.

#### *Teachers' Incomes.*

The School Committees generally have manifested a disposition to deal liberally with the teachers in respect of salary. In South Dunedin the annual salary is £250. In North Dunedin, Oamaru, N.E. Valley, and Caversham, the Committees have resolved to pay £200. In the Clutha district, which comprises three Main Schools,

each of the teachers receives £125 of fixed salary, and all the school fees, which last year averaged £30 each. In Tokomairiro the salary is £180, and in nearly all the other districts the Main School teachers receive either £150, or a fixed salary of £100, together with the fees, which will average upwards of £50 each.

#### *Pupil Teachers.*

The large and increasing attendance at several of the schools render necessary the immediate introduction of the scheme authorised by the Education Ordinance for the employment and training of Apprentice Pupil Teachers in the most numerous attended and best conducted schools. I will, on an early occasion, submit to the consideration of the Board a set of proposed regulations respecting pupil teachers.

#### *Teachers' Associations.*

The provisions of the new Education Ordinance for encouraging and aiding the teachers to form book clubs and mutual improvement associations, appear to be duly appreciated by those gentlemen, and I have reason to believe they will take an early opportunity of meeting together to consider in what manner the objects contemplated can be best accomplished. The District School teacher generally lives far removed from the highways of life, and from the intercourse and companionship of others of the same profession or of kindred spirit, and he is surrounded with so many secularising influences (if I may so term them) that he is in great danger of lapsing into a state of mental and intellectual torpor, and of resting contented with the knowledge he has already acquired. Now, all good teaching must flow from copious knowledge. To ensure a constant and vigorous stream, there must be a deep and well-replenished fountain. In the mother country and elsewhere, means are employed to counteract the tendency I have referred to, by the institution of Teachers' Associations, Teachers' Book-clubs or Libraries, and by Lectures on professional subjects. In the course of my official intercourse with the teachers of this Province it will be my duty—as it is my intention—to urge upon them the duty and advantage of continuing to add to their stock of professional and general knowledge, and thereby to maintain and increase their influence as well as usefulness in their respective spheres of labor.

#### *School or District Libraries.*

Many enquiries have already been made respecting the mode in which the Board propose to carry out the provisions of the Education Ordinance for encouraging the

formation of School or District Libraries. From the difficulty that has already been experienced by the promoters of such libraries in procuring a suitable supply of books, it has been suggested that the Board could in no way better promote the establishment of libraries in the rural districts than by procuring from Britain a large assortment of *strongly bound* and suitable books, from which selections could be made by the different Library Committees. By this arrangement, the Board would be enabled to give to each district an equivalent in suitably bound and well-selected books, instead of the money authorised by the Ordinance. I have already remarked that our district schools can at best furnish only a foundation upon which the whole subsequent life must erect a superstructure. It appears to me that in no way could the Board more effectually and satisfactorily complete the good work proposed to be begun in our district schools than by encouraging the formation of well-selected school or district libraries in connection with our system of public school instruction. When so much is proposed to be done to teach the *art* of reading, it would be well not to stop here, but to offer every facility for the establishment of those institutions which would tend to foster and extend the *habit* of reading, which multitudes can never be said to have acquired; chiefly from want of access to such stores of knowledge. A highly efficient scheme of national education has been in operation in Canada for several years, and the system of district libraries engrafted on the public schools

of the colony is represented to have been attended with very beneficial and gratifying results. Lord Elgin is reported to have said in a public address in 1854—“Our township and county libraries are becoming the crown and glory of the institutions of the Province.”

#### *Certificates of Qualification.*

In the course of the past year several candidates for schools made application for the *certificate of qualification* required by the Ordinance. In two cases where candidates submitted themselves for examination, I considered it my duty to decline granting the required certificate on account of their want of sufficient scholarship. I have granted full certificates of qualification to Mr Lewis, of N.E. Harbor, Mr. Douglas of Waiholā, and Mr. Halliwell of South Dunedin. To another teacher I have given only a conditional certificate, to be exchanged for a full certificate upon his undergoing successfully a year's probation as a teacher in one of the public schools. Mr. Paradise, formerly of Akaroa, who has been appointed to the school at Oamaru, is in possession of a certificate from H. M. Committee of Council on Education.

I have the honor to be,

Sir,

Your very obedient servant,

JOHN HISLOP,

Inspector of Schools.

## APPENDIX B.

*Tabular View of the Population of the Educational Districts, and of the Attendance at the District Schools of Otago, for the year ended 30th September, 1862.*

SCHOOL.	TEACHER.	School Established.	Appointment of Teacher.	Population of School Districts, December, 1861.	No. of educable Children in each District, i.e., aged 6 but under 16 years.			No. of Pupils who attended School for longer or shorter periods during the year.			Highest weekly average attendance.	Lowest weekly average attendance.	Average attendance for the year.	Present ordinary attendance.	Present on day of Inspector's visit.	Scholars admitted during the year.	Left during the year.	Proportion of attendance in column 7 to the population, 1 in	Proportion of Present ordinary attendance to the population, 1 in
					Boys.	Girls.	Total.	Boys.	Girls.	Total.									
Dunedin ...	T. Halliwell	1856	1862	5850	458	458	916	155	73	228	216	89	169	206	170	104	26	25.6	28.5
Port Chalmers ...	W. Reid	„	1861	674	61	49	110	76	44	120	80	35	58	77	73	75	33	5.6	8.7
N. E. Harbor ...	J. A. Lewis	1860	1862	309	61	36	97	21	6	27	25	22	23	27	16	27	—	7.9	7.9
Portobello (Side) ..	C. Greenwood	1858	1862																
N. E. Valley ...	P. Stewart	1858	1860	469	56	42	98	67	57	124	90	50	68	70	55	29	23	3.8	6.7
Wakari ...	A. D. Johnston	„	1858	433	44	53	97	37	27	64	45	20	36	43	39	33	13	6.7	10.
Anderson's Bay ...	A. Russell	„	„	316	48	41	89	32	30	62	58	47	54	48	35	16	14	5.1	6.6
Caversham (Side) ...	J. F. Barke	1861	1861	346	30	27	57	29	15	44	30	11	20	16	14	44	26	8.	23.
Green Island ...	A. G. Allan	1856	1859	322	42	36	78	30	30	60	52	35	48	48	44	15	13	5.4	6.7
East Taieri ...	J. Waddell	„	1861	546	65	54	119	52	40	92	90	55	77	80	68	20	25	5.7	6.8
N. Taieri (Side) ...	W. Finlay	1860	1860	321	31	28	59	16	7	23	20	6	18	23	—	8	8	14.	14.
West Taieri ...	R. S. Gardner	1858	1858	444	48	33	81	42	39	81	55	30	48	62	53	32	11	5.5	7.1
Moeraki Bush (Side)	J. Sutherland	1859	1862	172	20	16	36	9	18	27	20	14	16	22	16	9	1	6.4	7.8
Waihola ...	T. Douglas	„	„	324	22	64	46	21	10	31	26	6	16	27	25	16	1	10.4	18.
Tokomairiro ...	A. Ayson	1856	1856	866	93	79	172	56	34	90	63	14	42	44	29	40	46	9.6	19.6
Inch Clutha ..	A. Grigor	1858	1858	127	18	19	37	15	12	27	22	1	16	19	13	5	4	5.	6.7
South Clutha ...	J. M'Ewan	„	1861	331	32	29	61	20	14	34	30	27	28	29	31	15	2	9.7	11.4
Warepa ...	H. M'Leod	„	1862	284	26	25	51	14	9	23	23	20	21	23	22	13	—	12.	12.
Waikouaiti ...	F. Franks	1860	1860	325	32	35	67	36	29	65	34	10	23	27	25	33	24	5.	12.
Goodwood ...	N. M'Leod	„	„	120	11	13	24	7	8	15	10	7	8	8	8	5	6	8.	15.
Totals ...				12579	1198	1097	2295	744	505	1249	1001	505	801	910	768	561	266	10.	13.8

## APPENDIX C.

*Tabular View of the Branches of Education taught in the Public Schools of the Province of Otago, and the number of Children learning the same, for the year ended September 30th, 1862.*

SCHOOLS.	NUMBER OF CHILDREN.					NUMBER OF CHILDREN WRITING.			NUMBER OF CHILDREN LEARNING ARITHMETIC.				NUMBER OF CHILDREN LEARNING.							
	Not able to read New Testament with ease.	Reading the Scriptures and Books of general information.	Learning British History.	Learning English Grammar.	Learning Geography.	On Paper from Copies.	And also on Slates or Paper from Recitation or Memory.	Abstracts or Original Composition.	In the Simple Rules.	In the Compound Rules and Reduction.	As far as Proportion and Practice.	As far as fractions.	Mensuration.	Algebra.	Geometry or Trigonometry.	Latin.	French.	Book-keeping.	Vocal Music from Notes.	Drawing.
1 Dunedin .....	105	111	13	65	113	104	57	27	96	41	25	8	5	4	3	8	9	9	58	
2 Port Chalmers .....	87	60	...	20	20	68	20	6	17	14	8	4	...	...	...	...	3	...	2	
3 N. E. Harbour .....	3	10	...	9	9	27	27	9	9	...	...	...	...	...	9	3	...	...	...	
4 Portobello (Side) .....	10	10	...	...	9	12	9	...	11	1	...	...	...	...	...	...	...	...	...	
5 N. E. Valley .....	64	70	...	35	35	73	35	...	53	25	17	5	1	1	1	...	...	...	...	
6 Wakari .....	22	42	...	21	26	42	20	15	17	13	10	1	...	...	...	...	1	64	...	
7 Anderson's Bay .....	7	47	5	12	12	34	8	3	29	8	4	1	1	...	3	1	...	...	1	
8 Caversham (Side) .....	10	8	...	2	1	14	...	...	10	3	...	...	...	...	...	...	...	...	...	
9 Green Island .....	14	46	13	32	32	37	14	5	15	24	21	7	...	...	...	...	...	...	2	
10 East Taieri .....	31	49	...	12	12	48	30	...	2	17	12	8	...	...	...	...	...	...	...	
11 North Taieri (Side) .....	3	20	...	5	...	12	5	...	4	6	...	...	...	...	...	...	...	12	...	
12 West Taieri .....	26	55	...	47	47	58	22	22	19	17	16	6	...	2	10	...	...	...	...	
13 Moeraki Bush (Side) .....	6	10	3	5	5	14	2	...	10	...	...	...	...	...	...	...	...	...	...	
14 Waihola .....	10	21	..	12	12	26	13	5	7	7	5	...	...	...	...	...	...	...	...	
15 Tokamairiro .....	35	55	...	36	30	64	15	...	32	4	9	3	...	3	...	...	...	...	...	
16 Inch Clutha .....	6	21	2	9	12	22	...	2	7	6	1	2	...	...	...	...	...	...	...	
17 South Clutha .....	5	29	...	18	18	27	14	10	26	13	11	2	...	...	...	...	...	...	...	
18 Warapa .....	7	16	...	8	8	16	6	6	13	3	1	...	...	...	...	...	...	...	...	
19 Waikouaiti .....	23	42	...	24	24	52	35	24	32	13	4	3	3	...	...	...	...	32	...	
20 Goodwood .....	2	13	...	6	11	12	12	...	2	3	4	2	...	...	...	...	...	...	...	
Total .....	476	735	36	378	436	762	344	134	411	218	148	52	10	7	7	30	4	13	108	63

## APPENDIX D.

*Tabular View of the Expenditure on Education by the Provincial Government, and by the Settlers in the different Educational Districts, from the Establishment of the Schools to 30th September, 1862, and also for the Year ended 30th September, 1862.*

SCHOOLS.	When Established.	From the Establishment of the School to 30th September, 1862.			For the Year ended 30th September, 1862.				
		Expended by the Government.		Expended by the Settlers.	Expended by the Government.		Expended by the Settlers.		
		Buildings, Fencing, and Contingencies.	Teachers' Salaries.	School-fees or Subscriptions	Buildings and Fencing.	Teachers' Salaries.	School-fees or Subscriptions		
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
High School .....	...	1018 5 4	...	...	1018 5 4	...	...	...	...
South Dunedin .....	1856	475 3 9	1517 1 11	1165 9 9	...	283 18 7	240 1 5	...	...
North Dunedin .....	1862	1200 0 0	...	...	1200 0 0	...	...	...	...
Caversham .....	1861	75 18 0	50 0 0	50 0 0	75 18 0	50 0 0	50 0 0	...	...
Port Chalmers .....	1856	646 11 6	520 7 5	287 10 5	3 10 0	100 0 0	54 0 0	...	...
North-East Harbor .....	1860	421 2 6	239 7 2	41 8 4	22 18 0	65 5 0	35 16 4	...	...
Portobello (Side) .....	1858	277 7 2	173 7 4	173 7 4	27 19 8	15 16 8	15 16 8	...	...
North-East Valley .....	"	606 0 6	360 17 3	266 1 9	5 3 0	100 0 0	58 14 1	...	...
Wakari .....	"	586 9 7	361 17 0	130 15 0	92 19 2	100 0 0	42 7 6	...	...
Anderson's Bay .....	"	472 8 7	344 13 8	190 15 11	...	100 0 0	70 4 3	...	...
Green Island .....	1856	1077 11 11	497 1 10	198 2 10	774 15 0	100 0 0	58 17 0	...	...
East Taieri .....	"	457 1 8	513 14 5	343 19 0	29 0 0	100 0 0	83 9 0	...	...
North Taieri .....	1860	...	75 0 0	75 0 0	...	25 0 0	25 0 0	...	...
West Taieri .....	1858	463 0 2	377 6 10	182 7 1	24 0 0	100 0 0	61 11 3	...	...
Moeraki Bu h (Side) .....	1859	333 6 8	139 10 10	139 10 10	35 18 8	40 15 10	40 15 10	...	...
Waihola .....	"	430 18 5	241 13 4	46 6 11	7 10 0	100 0 0	32 0 0	...	...
Tokomairiro .....	1856	506 2 9	562 18 9	278 12 7	...	100 0 0	70 15 0	...	...
Inch Clutha .....	1858	580 19 5	393 7 8	75 11 0	156 0 0	100 0 0	23 17 0	...	...
South Clutha .....	"	349 5 6	199 1 0	185 14 2	134 0 0	100 0 0	42 18 2	...	...
Warepa .....	"	324 16 0	209 15 0	153 4 6	120 0 0	100 0 0	22 19 6	...	...
Waikouaiti .....	1860	606 7 6	200 0 0	84 3 10	...	100 0 0	48 7 0	...	...
Goodwood .....	"	5 0 0	211 1 5	38 7 1	5 0 0	100 0 0	14 12 6	...	...
Oamaru .....	1862	400 0 0	...	...	400 0 0	...	...	...	...
Totals .....		11313 16 11	7188 2 10	4106 8 4	4132 16 10	1880 16 1	1092 2 6	...	...

## APPENDIX E.

No. of Pupils who have attended the Public Schools in the Province of Otago in the course of the year ended 30th Sept., 1862, and who, at the close of the year, or when they left school, were aged						Boys.	Girls.	TOTAL.
Under 4 years	...	...	...	...	...	8	10	18
Between 4 and 5 years	...	...	...	...	...	24	23	47
" 5 " 6 "	...	...	...	...	...	60	43	103
" 6 " 7 "	...	...	...	...	...	92	64	156
" 7 " 8 "	...	...	...	...	...	94	77	171
" 8 " 9 "	...	...	...	...	...	87	59	146
" 9 " 10 "	...	...	...	...	...	92	59	151
" 10 " 11 "	...	...	...	...	...	88	46	134
" 11 " 12 "	...	...	...	...	...	64	43	107
" 12 " 13 "	...	...	...	...	...	69	28	97
" 13 " 14 "	...	...	...	...	...	32	26	58
Over 14 years	...	...	...	...	...	34	27	61
Totals ..						744	606	1249
<hr/>								
Who have been in School less than 1 year	...	...	...	...	...	313	169	582
" 1 "	...	...	...	...	...	174	132	306
" 2 years	...	...	...	...	...	166	106	272
" 3 "	...	...	...	...	...	64	71	135
" 4 "	...	...	...	...	...	21	18	39
" 5 years and over	...	...	...	...	...	6	9	15
Totals ..						744	505	1249

## GAOL REPORT.

H. M.'s Gaol, Dunedin,  
October 13th, 1862.

His Honor Major Richardson,  
Superintendent.

I HAVE the honor to forward the Estimate of the probable requirements for this Department for the current half year, and also Returns, showing the number of Prisoners received into the Gaol during the past six months, and the number in the Gaol on the 1st instant.

The Prisoners sentenced to short terms have been employed at sundry works outside the Gaol; it is, therefore, difficult to give any correct information as to the value of their labor.

The long sentenced men have not been put to work in consequence of there being no place for the purpose, and I did not consider it right to send them out with the other men, most of them being old offenders. On the completion of the Stockade, now erecting, this difficulty will be removed, and I would suggest the discontinuance of employing any Prisoners outside the Gaol for the future, as it is attended with danger of escape and other evils, besides depriving the Gaol of the protection of the Warders, should any attempt be made to escape by the Prisoners confined in the Gaol.

The female Prisoners have been generally employed in sewing for the Hospital and Gaol, but the want of proper accommodation often obliged them to be unemployed.

The confinement of debtors and lunatics in the Gaol with convicts, without any means of keeping them separate, is very dangerous, and I would suggest some separate accommodation be provided to remove this evil.

In consequence of the determination of the long-sentenced prisoners to break out of the Gaol, it was found absolutely necessary in May last to reorganize and increase the staff of Warders, which is now effective, but not larger than is required for the safety of the prisoners.

I herewith attach a Return, showing the distribution of the officers.

The large number of prisoners now passing through the Gaol creates a large amount of clerical labor, in keeping the necessary records respecting them. This I have to perform, and occupies my time considerably, and therefore precludes me from that close supervision which I should have in conducting the business of the Prison. I have therefore to request the appointment of an officer to perform the duties of clerk and storekeeper.

The present attendance of the Visiting Justices I find very inconvenient, I therefore request that some provision be made which will secure the attendance of a Visiting Justice one day in each week.

I regret that I am unable to carry out proper discipline, there being no means of doing so. This want the prisoners are aware of, and are therefore very insubordinate. I have therefore to suggest that immediate steps be taken for the erection of a new Gaol.

I have the honor to be  
Your Honor's most obedient servant,  
J. STODDART,  
Gaoler.

## DISTRIBUTION RETURN

Of Officers employed in Her Majesty's  
Gaol, Dunedin.

STATIONS.	ChiefWarder.	Overseer of Labor.	Sergeant Warders.	Warders.
Front Gate ... ..	...	...	...	1
Interior of Prison ... ..	1	...	1	1
Airing Yards ... ..	...	...	...	2
Platform ... ..	...	...	...	1
Guarding Labor Prisoners ... ..	...	1	...	4
Old Gaol ... ..	...	...	...	1
Night Watch ... ..	...	...	2	3
Reserve ... ..	...	...	...	1
	1	1	3	14

J. STODDART, Gaoler  
His Honor the Superintendent.



## HOSPITAL REPORT.

Dunedin Hospital,  
October 1st, 1862.

His Honor Major Richardson,  
Superintendent.

SIR—

I HAVE the honor to forward a return of the number of patients admitted and discharged at this Hospital in the twelve months ending 30th September, 1862. It is with considerable satisfaction I direct your Honor's attention to the number of cases effected, and the proportional small number of deaths which have taken place in this Hospital, where every species of incurable disease is admitted. While the mental and bodily condition of every lunatic has improved in this Hospital, the treatment adopted has been attended with more than the average proportion of cures, and one death only in six years.

Considering the number of cases of Typhoid and Typhus fever treated in the temporary Hospital, hastily erected to meet the rapidly increasing medical requirements of the Province, it is matter for thankfulness that none of the attendants or patients have been affected by contagion.

Several cases of badly fractured limbs, accompanied with great injury to the soft parts, recovered, without either sloughing, erysipelas, or the loss of limb, which so often happens when such cases are admitted into the foul air of Hospital wards. Immunity from Hospital gangrene and erysipelas is to be attributed to the purity of the air, and the absence of foetid smells in the wards, consequent on the peculiar arrangement of the Surgical and fever cases, the establishment of convalescent wards and basement ventilation. But the rapid increase of population calls for a more commodious and better constructed Hospital, and there is an immediate and urgent need of a model Institution for the safe keeping, treatment, and cure of the Insane, to be presided over by a properly qualified specialist, who, I trust, the Government will authorise me to procure from the Home country.

The most important measures for the prevention of disease are the formation of main sewers in the principal streets, the drainage of each house by drain pipes, for the conveyance of house and soil drainage, and the drainage of the subsoil of the low parts of the town by land drains to carry off the natural water, so as to free it from damp. Impermeable drains are absolutely necessary, in order to carry off the house and soil drainage without contaminating the atmosphere of the town. The main sewers should extend to the proposed seawall, and discharge on the waterside of it, otherwise the sewage matter deposited on the beach, together with animal and vegetable matter decomposing thereon will be

not only offensive but injurious to the public health, by the evolution of sulphuretted hydrogen and hydrosulphuret of ammonia into the surrounding atmosphere and dwellings. In the absence of sewers, every householder in the more densely inhabited portions of the town should be required to have properly-constructed drains and cesspools. If they are not water-tight, their liquid contents, abundantly charged with hydrosulphuret of ammonia and other nitrogenous compounds permeate the neighboring soil, thus rendering the surrounding dwellings damp and unhealthy. The introduction of noxious gases into the blood by inhalation, consequent on terrestrial exhalations of sulphuretted hydrogen, hydrosulphuret of ammonia, and carbonic acid gases finding their way into the dwellings is not the only way in which the human system is injuriously affected by them. The liquid contents of permeable cesspools and drains find their way into the adjacent wells and springs, and are thus introduced into the blood by imbibition. Hence arises the necessity of removing some of the town pumps, and supplying the inhabitants with unpolluted water conveyed to them from a distance through iron pipes. It is unnecessary for me to indicate the sources whence water is to be obtained, but for culinary and all the ordinary purposes for which water is required, that from the Kaikorai is to be preferred. The water, which issues from a rock hill on the Town Belt, near Mr. Logan's residence, if conveyed to the Octagon in iron pipes, would supply the public with water of the first quality for internal use.

Having thus briefly adverted to the principal medical requirements and remedies for the prevention of disease within the Province, I would further direct your Honor's attention to the precautions in force for the prevention of the introduction of disease from without. The quarantine regulations adopted by the General Government, and peculiar to New Zealand, are no longer suited to our altered circumstances, or sufficiently comprehensive or stringent to protect us against the introduction of foreign diseases. I would also suggest the necessity of your Honor's recommending the General Government to appoint a Health Officer to be resident at the Port.

While it is considered necessary on public grounds to guard against the generation and importation of disease, it is highly important that a local Ordinance should be passed protecting the public against a host of unqualified medical pretenders who now infest Dunedin and the gold-fields.

I have the honor to be,  
Sir,  
Your Honor's most obedient servant,  
EDWARD HULME, M.D.,  
Provincial Surgeon.

## DUNEDIN HOSPITAL.

*Report by the Provincial Surgeon to His Honor the Superintendent, from October 1, 1861, to September 30th, 1862.*

DISEASES.	Total in Hospital on October 1, 1861.	Admitted since.	Total.	DISCHARGED.					Total.	Total remaining in the Book.
				Cured.	Received Benefit.	Not Benefitted.	For Misconduct	Died.		
Fevers, Typhoid ...	1	122	123	101	...	...	...	16	117	6
Inflammatory Diseases ...	2	141	143	101	9	...	...	8	118	25
Affections of the Head ...	...	...	...	...	...	...	...	...	...	...
Disorders of the Nerves ...	...	19	19	10	3	...	...	1	14	5
Disorders incidental to Females ...	...	3	3	3	..	...	...	...	3	...
Dropsy ... ..	1	5	6	3	1	...	...	2	6	...
Disorders of the Bowels ...	...	36	36	16	6	...	1	3	26	10
Diseases of Children ...	...	...	...	...	...	...	...	...	...	...
Diseases of the Heart ...	...	10	10	3	3	...	...	4	10	..
Consumption ... ..	2	6	8	...	2	...	..	4	6	2
Scrofula ... ..	1	2	3	1	1	...	...	...	2	1
Diseases of the Skin ...	..	12	12	11	...	...	...	...	11	1
Surgical Cases ... ..	6	127	133	90	12	1	3	3	109.	24
Accidents ... ..	5	62	67	53	...	...	...	2	55	12
Lunacy ... ..	6	12	18	2	2	1	...	1	6	12
<b>Grand Total ..</b>	<b>24</b>	<b>557</b>	<b>581</b>	<b>394</b>	<b>39</b>	<b>2</b>	<b>4</b>	<b>44</b>	<b>483</b>	<b>98</b>

EDWARD HULME, M.D.,

Provincial Surgeon.

MEETING OF THE PROVINCIAL  
COUNCIL.

PROCLAMATION

By his Honor JOHN LARKINS CHEESE  
RICHARDSON, Esquire, Superintendent  
of the Province of Otago, New Zealand.

WHEREAS by Proclamation in the  
*Provincial Government Gazette*,  
dated the 24th day of October last, I did  
thereby fix and proclaim that the Sixteenth  
Session of the Provincial Council, of the  
Province of Otago aforesaid, should be  
held within the Provincial Council Hall,  
Dunedin, in the said Province, or in such  
other place within Dunedin aforesaid as  
should be intimated in a future Pro-  
clamation, and should commence upon  
Wednesday, the twenty-sixth day of No-  
vember, 1862, at twelve o'clock, noon.

Now, therefore, in pursuance of the  
power and authority vested in me in that  
behalf, I do hereby proclaim that the said  
Session of the said Council of the said  
Province shall be held within the First  
Church, Dunedin (Dr. Burns'), upon Wed-  
nesday, the twenty-sixth day of November  
current, at twelve o'clock noon, and the  
Members of the said Council, are hereby  
warned to give their attendance at such  
time and place accordingly.

Given under my hand, and issued  
under the Public Seal of the  
(L.S.) Province of Otago, at Dunedin,  
this twenty-fifth day of Novem-  
ber, one thousand eight hundred  
and sixty-two.

J. L. C. RICHARDSON,  
Superintendent.

Provincial Secretary's Office,  
Dunedin, 21st Nov., 1862.

HIS HONOR THE SUPERINTEN-  
DENT directs it to be notified that  
he has appointed

WILLIAM BUCHANAN, Esquire,  
to be an Assistant to the Receiver of all Fees  
for Miners' Rights, for Business and other  
Licenses, and all Fines, Fees, and other  
Revenue whatsoever arising out of and  
accruing from the Dunstan Gold Field,  
and any future extension thereof. And  
also to take charge of and safely keep in  
the chest or safe to be provided for that  
purpose all such bags and parcels of Gold  
as any of the Miners or other persons at  
the said Gold Field may require to be sent  
to Dunedin, and deliver the same to the  
Commander of the Escort appointed for  
the conveyance thereof to Dunedin.

By order,

THOMAS DICK,  
Provincial Secretary.

Provincial Secretary's Office,  
Dunedin, 22nd Nov., 1862.

HIS HONOR THE SUPERINTEN-  
DENT directs it to be notified that  
he has appointed

JOHN MACKAY, Esquire,

to be a Receiver for all Fees for Miners'  
Rights, for Business and other Licenses,  
and all Fines, Fees, and other Revenue  
whatsoever arising out of and accruing  
from the Tuapeka Gold Field, and any  
future extension thereof. And also to  
take charge of and safely keep in the chest  
or safe to be provided for that purpose all  
such bags and parcels of Gold as any of  
the Miners or other persons at the said  
Gold Field may require to be sent to  
Dunedin, and deliver the same to the Com-  
mander of the Escort appointed for the  
conveyance thereof to Dunedin.

By order,

THOMAS DICK,  
Provincial Secretary.

Provincial Secretary's Office,  
Dunedin, 22nd November, 1862.

HIS HONOR THE SUPERINTEN-  
DENT directs it to be notified that  
he has accepted the resignation of

WILLIAM BALDWIN, Esquire,

as a Warden and Judge of the Wardens'  
Court on the Otago Gold-fields.

By order,

THOMAS DICK,  
Provincial Secretary.

Provincial Secretary's Office,  
Dunedin, 22nd Nov., 1862.

HIS HONOR THE SUPERINTEN-  
DENT directs it to be notified that  
he has appointed

JOHN MACKAY, Esquire,

to be a Mining Registrar for the Tuapeka  
Gold Field.

By order,

THOMAS DICK,  
Provincial Secretary.

Provincial Secretary's Office,  
Dunedin, 22nd Nov., 1862.

HIS HONOR THE SUPERINTEN-  
DENT directs it to be notified that

Mr. A. Q. HENRIQUES,

Assistant to the Receiver at Waipori, has  
been transferred in the same capacity to  
the Tuapeka Gold Field.

By order,

THOMAS DICK,  
Provincial Secretary.

## PROCLAMATION

By his Honor JOHN LARKINS CHEESE  
RICHARDSON, Esquire, Superintendent  
of the Province of Otago.

*Of the Appointment of Judges of the  
Wardens' Courts in the said Province,  
under and by virtue of "Gold Fields  
Act, 1858."*

WHEREAS by Proclamation, given under my hand and issued under the Public Seal of the Province of Otago, the 13th day of October, one thousand eight hundred and sixty-two, I, John Larkins Cheese Richardson, Esquire, Superintendent of the Province of Otago, on the recital and in pursuance and exercise of the powers delegated to me by the Governor of New Zealand therein set forth, constituted provisionally for certain parts or Districts therein mentioned of the Gold Fields of the Province of Otago WARDENS' COURTS for the administration of Justice within the said Districts respectively: And whereas it is necessary that in further pursuance and exercise of the powers delegated to me as aforesaid,

I should appoint Wardens or Judges of the Wardens' Courts of such Districts;

Now therefore I, John Larkins Cheese Richardson, Superintendent aforesaid, do by this instrument, in pursuance and exercise of the power so delegated to me, appoint—

JOHN NUGENT WOOD, Esquire,

to be Warden and Judge of the said Warden's Court, with power to him to act alone or with Assessors or Juries, and in such manner and to exercise all or any of the powers in the Gold Fields Act, 1858, mentioned as the Governor shall think fit to direct, but declaring that such appointment shall be deemed to be provisional only until the same shall have been confirmed and allowed by the Governor, and that the Governor shall have power to disallow the same.

(L.S.) Given under my hand at Dunedin,  
and issued under the Public Seal  
of the said Province, the twenty-  
second day of November, one  
thousand eight hundred and sixty  
two.

J. L. C. RICHARDSON.

ERRATUM.—For "verticle" in page 230, eighth line from bottom of second column, read "vertical."

