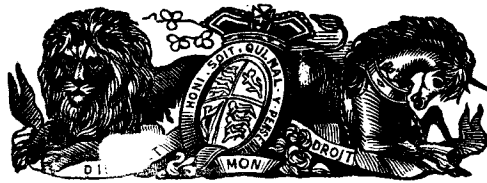


NEW ZEALAND.



OTAGO PROVINCIAL GOVERNMENT GAZETTE.

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Vol. XI.

DUNEDIN, WEDNESDAY, AUGUST 28, 1867.

No. 497.

[WITH SUPPLEMENT.]

CITY OF DUNEDIN. — NOMINATION OF COUNCILLOR FOR BELL WARD.—I hereby give notice, that the Nomination of Candidates for Election to the office of Councillor for Bell Ward, in room of Cr. John Barnes, resigned, will take place on Wednesday, the 28th day of August instant, at the City Council Chambers, Octagon Market Reserve, at the hour of noon.

Nominations must be in form of Schedule D of the "Otago Municipal Corporation Ordinance, 1865," and be lodged at the office of the Town Clerk, where blank forms may be had on or before noon of the day herein fixed for the nomination.

By order, J. M. MASSEY, Town Clerk.

City Council Chambers, Dunedin, 22nd Aug., 1867.

DISSOLUTION OF PARTNERSHIP.—NOTICE IS HEREBY GIVEN, that the Partnership hitherto subsisting between the undersigned, Myrick Jones and Baldwin F. Stohr, trading as Butchers in Dunedin, under the firm of "Jones and Stohr," has this day been dissolved by mutual consent. The debts and credits of the said firm will be paid and received by the said Baldwin F. Stohr, who will continue the business on his own account.

MYRICK JONES.

BALDWIN F. STOHR.

Witness:—JAMES KELLY.

Dated 22nd August, 1867.

7s.

In the Supreme Court of New Zealand, }
Otago and Southland District. }

In the matter of the Petitions of James Simmonds, of Manuherikia, Storeman; Charles Chalker Beer, of Dunedin, Master Mariner; and Franz Julius, of Tokomairiro, Publican, debtors; and in the matter of the "Debtors and Creditors Act, 1862," the "Debtors and Creditors Act Amendment Act, 1865," and the "Debtors and Creditors Acts Amendment Act, 1866."

NOTICE IS HEREBY GIVEN, that His Honor Mr. Justice Chapman has appointed Monday, the thirtieth day of September next, at ten o'clock in

the forenoon, at the Supreme Court House, Dunedin, for hearing the above Petitions.

Dated at Dunedin, the 23rd day of August, 1867.

12/6. EDWARD FRANCIS WARD, Petitioners' Solicitor.

STATEMENT OF ACCOUNTS OF THE SUSPENSION WATER-RACE COMPANY Registered, Blacks No. 1, Otago:—

<i>Assets.</i>	£	s	d
Race, Dams, Plant, &c., in 300 shares at £20 each	6000	0	0
Golden Gate	18	2	0
Rent for water due and in hand	70	0	0
Messrs Gaffney and McGarey	4	0	0
	6092	2	0

<i>Liabilities.</i>	£	s	d
Mr. Rivers	448	18	9
" M'Donald	7	0	6
" Wickham	26	14	6
" Walsh	5	13	6
" Gilligan	3	17	6
" Gannon	9	4	0
" Ennis	3	0	0
" Power	7	1	0
" J. M'Donald	17	18	0
" Nihel	16	13	0
" Casey	3	10	0
" Hughes	31	18	0
Golden Gate	15	8	0
Mr. Carlbeck	23	14	11
" M'Intosh	23	19	9
" Woodworth	128	0	0
" M'Comb	13	13	4
Messrs Cope and Fache	3	0	0
" Gaffney and M'Garey	175	0	0
	964	4	9

Assets over Liabilities £5127 17 3

£6092 2 0

JAMES RIVERS, Secretary.

Dated, Black's No. 1, July 1st, 1867.

20s.

SURVEY REPORT FOR THE YEAR ENDING 30TH JUNE, 1867.

Survey Office, Dunedin, 12th August, 1867.

SIR,—I have the honor to forward to you the Annual Return of Work executed by the Surveyors of this Department during the year ending the 30th of June last.

The return shows 524½ square miles of minor triangulation, 74,260 acres of rural section survey, and 188 allotments surveyed in various townships.

The 524½ miles of minor triangulation will be seen to have cost £2,702 17s. 8d., or at the rate of somewhat less than twopence per acre.

The 74,260 acres of rural sections have cost £7,091 9s. 9d., or at the rate of about 1s. 11d. per acre; and the 188 town allotments, generally of sizes less than quarter of an acre, have cost £203 1s. 7d., or at the rate of £1 1s. 7d. each.

Comparing the above results with those of former years, it will be seen that the cost of minor triangulation is the same as it was last year, and somewhat in excess of years preceding that again—the cause of which is to be ascribed to the very diffuse manner in which these operations are now conducted, extending, as they do, to the most remote parts of the Province.

At the commencement of this system of check survey in 1857-8, the cost did not exceed 1½d. per acre, owing to the most part of the settlement survey being close at hand, and confined to limited districts.

The cost of the rural section survey nearly doubles that of any preceding year. Last year it was at the rate of 1s. 2½d. per acre, while in 1857 and 1858 the average was only 6d. to 9d. per acre. The cause of this is to be entirely ascribed to the present system of land sales, i.e. to free selection before survey. This free selection extends from the Waitaki to the Toetoes, and over this dispersed area the numerous and distant choices of settlers must be followed after by the Surveyor, connected for record, and marked on the ground.

The now extended privileges of settlers in their land applications cannot, therefore, be expected to be met by this Department at the same cost as previously, when complete blocks were surveyed, the sections marked on the ground, and thus prepared for sale after survey.

It is evident, in the present system of selection before survey, that the cost to Government must depend much on the sizes of the applications and their comparative dispersion,—small and distinct selections costing more than large and close ones.

On the result of this year's operation, I feel it to be my duty, notwithstanding their greater cost, to solicit the favorable consideration of the Government to the general energy, good conduct, and zeal of the Officers at present with me. That the returns of each officer have not been so great was fully anticipated by me, and of which I have several times advised the Government, but more particularly in 1859, in my report dated 20th July; and, also, under date 11th August, 1863.

While in previous years the average work of each Section Surveyor working on the block, or aggregate system, was about 20,000 acres per annum; I see no possibility of each Surveyor doing more than 10,000 acres in the present mode of spotting, especially where small applications are numerous and distant. If, therefore, the Government desire to increase the annual acreage, one Surveyor will be required for every 10,000 acres sold.

This being the first year the Gold Field Surveys have been placed under the supervision of this Department, I beg to report the steps that were taken to put the Surveyors in a position to carry out the various operations in a manner suitable for record.

After visiting the various Fields, in company with my principal assistant, Mr. McKerrow, I perceived that

the first step necessary was to divide the whole country into Geodesical Districts, and at once apply the check of the Geodesical bearings to all work emanating from this branch. Four offices were also suggested to be established at Lawrence, Queenstown, Clyde and Hamilton, and which met the approval of the Government. By the establishing of these offices in the principal mining centres, the operations for mining and agricultural leases could be at once entered into the application maps, and the positions so made known to the respective surveyors. The mining property by this step was also placed on a more safe basis than formerly.

Mr. McKerrow at once applied himself to the instruction of the various officers in the routine of the Otago system, and which, I am happy to say, was easily mastered by the more intelligent of the officers.

Proper camp and field equipments and staff were also granted to each surveyor on my recommendation, thus allowing the various parties to progress in their more distinct duties with comparative comfort and efficiency. I found that the Mining Surveyors had previously been called upon to perform many quasi-public duties, not necessarily professional, and, to relieve them of these, necessarily detrimental to the public convenience, I arranged as far as possible that, where necessary the Wardens should call upon the Draughtsmen to execute the same. Thus the higher paid officers with their parties, who are kept up at great expense, were at liberty to go on with the general survey and settlement of the country, without constant retarding calls on their time. This, I am glad to say, has been agreed to without much murmuring by the Wardens in charge of the various Gold Fields, and with whom I was so fortunate as to obtain a generally good understanding.

The work of the mining branch of the department is not so much to be judged of by the amount of acreage performed as by the number of claims surveyed and settled. I found, when I first took charge, that all surveys requiring record in the public maps of the Province, had to be done over again; that with the staff then retained, about two years' arrears had to be made up, more particularly in Tuapeka District. I therefore despatched several of the officers of the general staff to assist in overtaking this work, and I may say that the survey duties of the Gold Fields are now so far forward as it is possible to make them under the system of diffuse and indiscriminate selection that there prevails. Generally speaking, the officers have about six months' work on hand, which they attend to by rotation. The system of application, indeed, necessitates arrears to some extent.

In order to give the Government a fair view of the cost of surveying lease applications, (mining and agricultural) in the Gold Fields, I have had the following table prepared:—

GOLD FIELDS SURVEYS.

Table shewing cost of Survey per Application or Section.

	Exclusive of Triangulation.	Inclusive of Triangulation.
Mr. Shanks	£6 6 4	
„ Wright		£ 9 17 6
„ Howden	4 15 6	
„ Arthur	6 18 0	
„ Adams	6 19 4	
„ Millett	7 0 0	
„ Bate	9 6 3	
„ Wilson	6 10 3	
„ Mackenzie		10 9 6

It will thus appear that mere survey and marking on ground of each application costs, on an average, £7; and if the cost of connection or triangulation be added, the amount will be £10.

I have drawn this statement up in order to give the Government sufficient information for deciding on their measures relating to their charges on Gold Fields settlers for survey, as I have had considerable opposition from the Gold Fields authorities in allocating a fair charge. I may, therefore, now advise, with good grounds, that a general charge should be made on every survey of 50 acres and under of £7, leaving the connection or triangulation to be paid for by Government, as it serves to check future surveys of adjacent applications. Unless this be done, then it would appear that the survey staff on the Gold Fields must be entirely supported by the Provincial Government.

It is an invidious task to mention particularly any officer, yet I cannot omit the opportunity of bringing to the notice of the Government the services of the officer who has had this season the most arduous duties to perform, and the most inaccessible and dangerous district to labor in, yet who has acquitted himself most satisfactorily, and, judging from the plans, in a masterly manner. I do this with the greater pleasure as Mr. W. C. Wright is one of the Gold Fields officers, and not previously connected with the general survey staff. While mentioning the services of Mr. Wright, I would guard myself against the surmise that equal confidence is not placed in the zeal and efficiency of the other Gold Fields officers who remain by their duties, and now form part of the Provincial staff.

In amalgamating the services, it has been necessary, in assigning the separate places of officers, to go upon a principle; and I believe that which I have adopted will meet the approval of the Government, viz., the placing of the officers of each grade according to the date of their appointment to that grade.

Appended to this are reports from the various Gold-field officers, which may be interesting in shewing the principal works and pursuits of the mining population. It is necessarily defective, as the officers, having lately been more engaged in settlement survey, have not been able to examine each locality.

Large sluicing operations would appear to be the ultimate great industry of the interior, and that the mining portion of the population have been fully alive to this will be proved by the enumeration in these reports of their great and numerous water races.

The principal sources of water are in the Snowy Ranges, such as the Dunstan, Umbrella, Nevis, Richardson, Pisa, Hawkdun, Kakanui, Rock and Pillar, Lammermoor, &c., &c. But it appears to me that in the Golden Stream—that is, in the Clutha itself—is to be found a power that will serve to wash away all its auriferous banks, and clear the same to the profit of the miner. The fall of this river from the lakes to the sea is about 1000 feet, in 100 to 120 miles, and the area from which it collects its waters above the gorge of the Dunstan is equal to 3,325,000 acres. From these data we can have a rude or comparative estimate of the power contained in it. Allowing 24 inches of fall over the area, by averaging the greater fall in the mountains with the lesser fall on the plains, we have 289,674,000,000 cubic feet per annum as the discharge of the Clutha at the above point. This is equal to a discharge of 551,130 cubic feet per minute, but allowing again half the fall to be absorbed by evaporation, the actual result will be 275,565 cubic feet per minute.

Now, to arrive at the object of the inquiry, we have the fall from the Lakes to the Sea, as above stated, at 1,000 feet, which gives 422,500 nominal horse-power. This may truly be said to be a very valuable property of the Province, which always remains to it, and which, if only very partially made use of, may be fraught with great importance to the prosperity of our interior population.

It would not be consistent with the object of this

report for me to suggest modes for the economical use of this power; but I may shortly state that I am aware that the mining population have applied it to a limited extent to several purposes. Of all contrivances, however, the simplest, I have no doubt, will prove the most successful, and the merits of the paddle-wheel and the marine screw as motive powers will, no doubt, eventually be much canvassed. I would, personally, advocate the latter, on account of its greater hold on the body of the flowing stream, its ready management and applicability in swift or slow currents, and its easy connection with the apparatus for raising water.

I may also be permitted here to remark that the operations of the various mining projects will, from year to year, call the more for the advice of professional skill. It is not to be ignored that for ordinary purposes the practical man, with his rude instruments, is competent to deal with all requirements. He brings in his race by leading on the water close after him; but, when this safe process cannot be adhered to, he has been sadly at fault, and projects have ended in disaster.

For the benefit of all, it would be well if there could be an arena on which the practical and the professional man could meet.

The practical man ventures farther than the professional man would advise; yet, where large interests are at stake, is not the safer the better course?

I have very frequently noticed a tendency to disparage the services of professional men. There may be some reason for this; but I feel convinced that, were managers of great works to do their duty to themselves, they would engage the highest skill and the most honorable talent. I feel also assured that the members of the profession, laying claims to the above qualifications, would, if employed, gladly guarantee their work by stable and undoubted securities, and it would be well for the employers that these, in every case, were exacted. Such a course, at the same time, would never injure the competent practitioner, and it would weed out empirics.

Enclosed I beg to forward a Map of the Gold Fields, shewing the localities of the various diggings now established.

I have the honor to be, Sir,

Your most obedient servant,

J. T. THOMSON,
Chief Surveyor.

REPORT OF FRANCIS HOWDEN, DISTRICT SURVEYOR,
TEVIOT.

15th August, 1867.

SIR,—In compliance with request contained in Circular No. 41, I have the honor to furnish you with a list of Water Races, &c., in my district, as far as my personal knowledge enables me.

As I have only been a short time in the Teviot District, my information is necessarily limited.

Water Races.

Name of Creek whence taken.	Length of Race.	Capacity—Approx.
Lignite Creek	2 miles	4 sluiceways
Cave Creek	2 "	2 "
Teviot River	2 "	10 "
" "	2 "	10 "
" "	5 "	6 "
Creek head of Moa Flat... ..	6 "	3 "
" " " "	5 "	1 "
" " " "	1 "	1 "
Bengerburn	3 "	4 "
" " " "	3 "	4 "
Campbell's Creek	8 "	4 "

These are all the Water Races within the limits of surveys executed by me, although I believe they do not comprise nearly all within the limits of my district.

The only other work of any importance is a new dredging machine, which has been placed on the Clutha about three-quarters of a mile below Roxburgh, and cost £1,200.

Mining operations at the Teviot are almost entirely

carried on by ground-slucing, nothing being done by tunnelling that I am aware of.

I have the honor to be, Sir,
Your most obedient servant,
FRANCIS HOWDEN,
District Surveyor.

J. T. Thomson, Esq., C.E.,
Chief Surveyor.

REPORT OF W. C. WRIGHT, DISTRICT SURVEYOR.
Wakatipu Survey District,
Queenstown, July 25, 1867.

Sir,—In compliance with instructions as per circular No. 41, I have the honor to furnish for your information the subjoined Report on the condition of that portion of the Wakatipu District immediately under my charge, and regret my not being able to enter more fully into detail in describing the various works, as I have not for several months been able to visit some portions of the field.

The workings at present being carried on are chiefly confined to the auriferous drift beds—the terraces of the Shotover and other valleys—in many of which distinct leads have been proved to exist at great depths beneath the surface. In quartz mining, with the exception of four or five instances, work is at a stand still; and in river or creek workings—that class of mining which at one time engaged the attention of almost the entire population—not more than a dozen companies are engaged.

It was anticipated, in the event of a favourable season occurring for the carrying on of river and creek workings, that many portions of the Shotover and other streams would again have a numerous population settled upon them; but although the Shotover has for months past been lower than has yet been known, comparatively few have been at work upon it. Some portions were, however, occupied, but an obstacle presented itself most difficult to be overcome.

It was found that the debris from the many extensive sluicing operations had accumulated to a very considerable depth, and that expensive preliminary works in connection with powerful machinery, would be required for successfully working the drift beneath it. On the "Perfect Cure" Beach, below Maori Point, a company of miners cleared a paddock a depth of ten feet, expecting to have struck the wash-dirt, but not succeeding, a rod was put down nine feet six inches further without then reaching the bottom. There must in this place have been ten to twelve feet of silt and debris accumulated above the original bed. This is an extreme case, but everywhere along the natural course of the Shotover the beaches have been raised considerably.

An overshot wheel is in use for draining ground at Arthur's Point, measuring 35 feet in diameter and 2 feet 9 inches between shroudings, and is intended to work to 15 horse-power when fully-supplied with water. Two others are fixed at the Big Beach, the one above the other, 20 feet each diameter and two feet two between shroudings; to these wheels are attached California pumps, the first being 41 feet long, two feet wide and five inches deep, and the other two 40 feet long, one foot eight inches wide and five inches deep; the latter two wheels are worked from the same race of water, but they are now, however, standing idle.

There are two undershot wheels on the Shotover above Arthur's Point, and these constitute the whole amount of machinery of any importance used in river and creek workings.

Some excellent ground has recently been opened at the Big Beach, which is paying about £15 per man per week; and two extended areas and some ordinary claims have been taken up. These are upon ground which three years since, and previous to the river being turned, was a low terrace, with from 12 to 18 feet of drift overlying the wash-dirt. The effect of diverting the stream has been the complete washing away of the superincumbent drift, and almost laying bare the wash-dirt over an area of several acres. The river itself is

now running on wash-dirt which will probably be worked.

In quartz mining, I regret to state that, with a few exceptions, a general stagnation has taken place, which is doubtless attributable to the fact of the first crushings not having realised the anticipations of shareholders, and also to the many delays which occurred in getting machinery to work. The long-continued drought has also been a serious drawback, as the three machines that have been erected are depending entirely upon water-power. As a general thing not more than four or five of the stamps of each battery could, for want of sufficient water, be kept at work; for which reason, although the stone passed through has been exceedingly good, the quantity has been small.

I visited the principal reef claims a few weeks since, and found the following to be the condition of the works.

At the leasehold of the "Great Scandinavian Company" a tunnel had been entered into the reef perhaps 150 feet in length; in the face was a solid, well-defined reef, bearing nearly east and west, and being of about six feet in thickness. A stoop had been opened up into the same kind of stone to a considerable height. In addition to this, work was being carried on upon a flat vein of white quartz, lying in a rubbly, oxidised fluccau, some of which, with the quartz, was being removed to the machine. I procured from this place some of the best specimens I have seen in Otago. A drive 60 feet below this has pierced the reef. This Company's machinery is erected at the junction of Murdock's Creek with Skipper's Creek, about twenty chains from the reef and 200 feet below the level of the adit. The quartz is taken by trucks to the mouth of the tunnel, and thence by tramway to a shoot overhead the machine, down which they are emptied, when they fall into a paddock capable of holding about 1,000 tons. A shoot from this fills other trucks, which are rolled away to the top of the machine house, where it is deposited in the hoppers of the machine.

This battery is self-feeding, for by a very simple contrivance one of the cam disks of each sets of stamps is made to drop on the hammer-head, attached by a lever to the hoppers, and when the stone is low in the boxes it falls with force sufficient to open a valve, which admits a certain amount of quartz to the stamp-beds. The stamps are 30 in number, and would require about 32 horse-power to be kept in motion.

The first wheel attached to this battery was a Scheile's turbine, having a feed-pipe of 54 feet in height and two feet in diameter, the orifices being about 60 inches; but it was found not to work, as no more than two feet of a head of water could be obtained. The orifices were then partially closed, when the water rose to 40 feet, and five stamps were thus put in motion; eventually another wheel was procured from Dunedin—a White law's turbine—which appears to act very well. Twenty stamps have been put in motion, and 15 worked up to full speed, but want of water has prevented the use of more than five, except at intervals when rain had swollen the creeks.

The yield per ton I am not able to give, as I have not had an opportunity of enquiring, but judging from the quantity of stone removed, and from the amount of gold sent down, it must have been satisfactory. The Otago Company had, in the early part of the season, two or three excellent crushings, and were induced to place eight extra stamps to their battery, which now consists of sixteen; their wheel is a Whitelaw's turbine, two feet six inches in diameter, having three arms; it is worked with a head of water of fifty-seven feet and a pipe eleven inches in diameter.

The mine is fully a quarter of a mile away from the machinery, which stands in Murdock's Creek, and a tramway, built altogether of timber, connects them along which the quartz is carried by trucks. The tunnel from which the quartz is at present being taken is on the west side of Murdock's Creek, and the reef, when last I saw it, was about five feet wide. Two

other tunnels, probably 200 feet each in length, have been driven, the one east and the other west of the creek.

About half a mile of fluming brings the water to the feed-pipe, and although, from the very unusual scarcity of water, the work done has hitherto been small, there is little doubt but that the creek in ordinary times will keep the whole sixteen stamps at work.

The "British American Company" have temporarily discontinued work, but the following is a statement of what has been done towards opening up their mine:—

The stone crushed from the original works was 450 tons or thereabout, the yield of gold about 370 ounces, the average being about 16 dwts. per ton; but it was found, in stooping out, that at the depth of about 40 feet the stone became so hard as to render it difficult to work to profit at that yield. A prospecting shaft was then sunk to a depth of 70 feet, about 600 feet distant, and nearer the Scandinavian Lease, from which a drive of 100 feet was run into the reef, which was found here to be about three feet wide, and very well defined; eight tons of stone only were taken from it, which, on being crushed, yielded 10 dwts. per ton. This portion of the reef is easily wrought, and the stone not hard to crush. It is also most conveniently situated for conveying the quartz to the machinery. Afterwards two drives, each about 200 feet in length, and 300 feet apart, were entered between the shaft and the western end of the claim, which work was done on account of very rich stone having frequently been picked from the surface of the slip which here covers the bed rock; but the reef not having been met with so soon as it was anticipated, the work was discontinued, owing to the difficulty of driving through the massive rocks composing the slip. The Company are now intending to return to that part of the reef discovered by the shaft, as it is more contiguous to the machinery than any other part of the reef known.

The machinery of this Company consists of twelve stamps worked by a Whitelaw's turbine, four feet in diameter, the head of water is 40 feet, and the supply pipe two feet in diameter; the water is brought about thirty chains by wooden fluming, and an inclined tramway of 1,300 feet is laid on the slope of the hill, down which trucks of quartz are lowered to the mill.

The aggregate horse-power required to keep the three batteries at work is about 70, and the value of the three plants about £24,000.

I cannot give a description of the other reefs, not having visited them for a considerable time; but prospecting is going on at the "Nugget Lease," and at the claim of the "Justin Reef" prospectors, the latter company had a trial crushing yielding six dwts. to the ton. The stone from the "Nugget Reef" is still shewing well. A trial crushing has been made of the stone from the "Prince of Wales Reef," the result being 15 dwts. per ton for ten tons.

None of the trial crushings have equalled the expectations of the shareholders, nor, I imagine, have the yields from those claims that have machinery in connection with them; but, provided the stone continues of equal extent and richness as that hitherto obtained, there is very little doubt of these reefs being good investments. An adequate water supply is now all that is required, and I trust that spring will bring with it the only thing needed to render the working of them profitable.

The principal terrace workings are on the west side the Shotover, between Stapleton's Beach and Skipper's Point; on the west side of Skipper's Creek; east and west of the Shotover, from Skipper's Point to the Sandhills at Moke Creek; Few's Creek, Simpson's Creek, and the Bucklerburn. Both sluicing and tunneling are adopted in carrying on this class of work.

The terraces between Stapleton's Beach and Skipper's have been found to contain gold remunerative to a depth of 150 to 200 feet below the surface, besides other runs not so deep. Mathews and Company, who are working an extended claim on the Race Course

Terrace, north of Maori Point, have drives to the extent of one thousand feet, the main level running northward upon the deepest run. Leydon and Company, whose lease is adjoining, are sinking a shaft which will probably be 200 feet when the wash-dirt is reached. This same run of deep ground is found intersecting all the creek, crossing the terrace formation between Maori Point and Skipper's Point. In Pleasant Creek, Brown and Company, with a supply of water brought from Pleasant Creek at a point about two miles up, have been for the last twelve months engaged in extensive sluicing operations upon the same lead, and have stripped the ground to a depth of 180 feet, with excellent results. An area at Skipper's Point now held under lease by "Abrahamsen" has been worked for nearly four years also, on what appears the same lead; no regular or distinct gutter exists, but a succession of deep crab-holes with very rich patches of wash-dirt at intervals on the rock bottom, the drives are of very considerable extent, entering towards the north and intersecting the ground in all directions.

The "Mountain Race" has been extended a distance of two miles or more, making its length about six miles. The ground being worked is a terrace close by Butcher's Gully, being at an elevation of six or seven hundred feet above the Skipper's Creek. The Aylmer Race, from the same source is sluicing away some very good ground. These two Races have been the most costly of any in the District, on account of the broken nature of the country and of the great extent of fluming used in their construction, in fixing which the workmen were suspended by ropes while they drilled the rock for fixing the brackets on which some of the boxes stand. Each of these Races will carry from 180 to 200 cubic feet of water per minute.

A new race is being constructed from the creeks on the east side of the Shotover, at Sutherland's Beach, the ground to be worked being a terrace on the western side of the river. It is intended to cross the river by a flume suspended on wire ropes, the supports being 700 feet apart. The flume will be, perhaps, 200 feet above the river. Two such flumes, of less span, are in existence, the one at the Shotover at "Spratt's Lease," and the other over Sawyer's Gully at "Aspinwall's Lease," the former being about 300, and the latter 150 feet long. Canvas is used in both instances for conducting the water.

At the little lake above Frankton, "Johnston's Lake," a considerable amount of ingenuity has been used in adapting this lake to the purpose of a reservoir. A dam has been thrown across the natural outlet, fitted with a sluice gate, from which is cut a race from the ground under work. All the small creeks in the locality have been diverted, and races cut round the sidelings to catch the storm waters, which are thus brought to the reservoir. The surface of this lake is from 60 to 70 acres in extent, and the ground under work is on some of the sections of block II.

A race capable of carrying four sluice heads has been constructed between Fern Hill Creek and the "One Mile," near Queenstown, in connection with "Johnston's Lease."

There are a great many good water races employed on the terraces about Moke Creek and the several creeks running into the lake, and there is scarcely a stream falling into the lake or Shotover but is diverted for mining purposes. The deep lead at Fern Creek is being followed up by "Small and Company," and at Simpson's (25 mile) Creek "Grant and Company" and others are working some of the best terrace ground ever opened in the district.

The estimated length of water races in the Queenstown and Upper Shotover Warden's District is 170 to 180 miles; the cost of which would not amount to less than £30,000. These two Warden's Districts include all under my charge.

The long-continued drought has seriously retarded the progress of mining both in alluvial and quartz workings. Few races have had a full supply of water, and many

have been dry since Christmas. Till the last week or two, no rain of any consequence has fallen, and very much partially wrought ground known to be highly auriferous has been lying idle, the holders waiting month after month for rain.

A considerable amount of snow has lately fallen, and although for the present the creeks in the higher parts of the district are frozen, it is confidently anticipated that spring will bring with it a reaction in every class of mining work.

I have the honor to be, Sir,
Your most obedient servant,
W. C. WRIGHT.

The Chief Surveyor, Dunedin.

REPORT OF W. ARTHUR, DISTRICT SURVEYOR.
Survey Camp, Waihera,
August 8, 1867.

Sir,—In reply to your Circular No. 41, I have now the honor to report the following works in the Mount Ida Gold Field.

Macrae's Flat Diggings.—Three quartz reefs are here taken up—the Eclipse, Alliarce, and Golden Bar. On the Eclipse, six shafts, average depth 15 feet, capacity 4:0 x 2:6; six prospect holes, 10 x 10 x 3, have been sunk by Imrie and party. Trial crushings of this reef, 2oz. 6dwt. per ton of quartz. No machinery as yet here, but it is proposed to be got as soon as the party can muster funds sufficient.

Alliance.—Two shafts, each 15 ft. in depth, 4:0 x 2:6. 10lbs. of quartz crushed yielded 3grs. of gold.

Golden Bar.—Several prospect holes are sunk on this reef, and a tunnel or drive on the side of the spur is run into it, 90 feet long and 5 x 3 sectional area. A small trial of 1lb. quartz yielded $\frac{1}{2}$ gr. of gold—2oz. per ton expected by the shareholders.

On the "Flat," and among the old claims, a shaft 30 feet deep has been sunk on to the wash-dirt; it has proved a good ground below and been in work for some time. A "whip," worked by one horse, bails out the water continually during the day.

Numerous parties are digging in the neighbourhood, and in Deep Dell a large sluicing claim of six acres (applied for by E. Clark) is expected to prove as good as hitherto, much of it having been already worked with profit. One hundred miners are estimated to be located in this district.

Fullarton's Diggings.—Near this, on the Mareburn, are three quartz reefs applied for and surveyed. On these are sunk four shafts, 15 feet deep and 4:0 x 2:6. Five prospect holes 10 x 10 x 3. Gold can be seen in specimens of these reefs, but I have not heard what the result of any crushing has been. Some stone has been sent to Morrison.

The Spout Water Race, which passes, I believe, through the above, is 40 miles long, as nearly as I can make it from such data as I possess; its section is about 2 x 1. The large fluming which carries it across the valley beyond Pigroot is formed of a wooden box or aqueduct, supported on timber uprights about 15 feet apart, and of an average height of say 26 feet, secured by ties, stays, and struts in a substantial manner. The total length of this erection I estimate at 250 yards.

Of the other parts of the District I cannot give any report, as I am not sufficiently acquainted with what works are in existence there.

I have the honor to be, Sir,
Your most obedient servant
W. ARTHUR,
District Surveyor.

J. T. Thomson, Esq., Chief Surveyor.

REPORT OF C. W. ADAMS, ASSISTANT SURVEYOR.
Survey Camp, Lawrence,
July 27, 1867.

SIR,—In accordance with your instructions per circular No. 41, I now give you what information I have been able to collect, with regard to the principal works on the Tuapeka Goldfields. First in importance

comes the *Blue Spur*. This remarkable formation lies between Gabriel's and Munroe's gullies, and consists principally of a blue cement, which again lies in a kind of basin (of rock) which extends across the Spur to the gully on either side. The bottom of this basin is supposed to be lower than the gully on either side, and has never been bottomed yet (except round the edges).

Those most competent to form an opinion, declare that the Blue Spur will not be worked out within the next fifty (50) years. The Blue Spur population, including women and children, is about 400. Substantial houses are constantly going up, and the place presents an appearance of permanent prosperity. As one feature indicative of the permanent nature of the workings, I may mention that there are over 86 married couples living at the Spur. There is a small Presbyterian church, and a neat school has recently been erected, (32 scholars).

To give you an idea of the work going on, I may state that about 100 men are constantly employed in the claims and at the races. There are 8 or 9 races required to supply the Blue Spur with water. About 20 tons of blasting powder is used in a year, and more than a ton is frequently used in one blast.

REPORT ON TUAPEKA GOLD-FIELD.

In addition to the table I forward with this, there are a few remarks I shall have to embody in this report.

Race A, see table.—There is a dam connected with this race which forms a reservoir 130 yards long by 100 yards wide, average depth 12 feet.—Cost £750.

Race C, see table.—There is a reservoir for this race formed by an embankment 100 feet long by 27 feet high, and cost £600.

NOTE.—The races marked in the table A. B. C. D. E. F. G. H. and I., all discharge their water at the Blue Spur.

The Wetherston reservoir is about 2 miles behind the town of Wetherstone, and is formed by throwing a dam 150 feet long and 50 feet high across a narrow gorge. The embankment is about 120 feet wide at the base. The water covers about 9 acres of ground, at an average depth of about 20 feet, it escapes through iron pipes over a foot in diameter.

This piping is 180 feet long, weight, 16 tons, and cost £450. It is laid through the base of the embankment, and the valve (which cost £72) is at the lower end of the piping.

The race marked (J) in the table discharges into this dam. This reservoir supplies water to most of the claims about Wetherston, by means of several small races—aggregate length of these, 15 miles.

Connected with races K. L. and M. are six dams:—
No. 1, 180 feet long, width 60 feet, height 9 feet, cost £150.

No. 2, 250 feet long, width 50 feet, height 10 feet, cost £200.

No. 3, height 10 feet, cost £100, and three small dams costing £75.

Race (N. see table) is to be extended 10 miles further at a cost of £30 per mile.

Besides the above, there are a large number of minor races, of which I have no statistics.

The following is a list of the working expenses at Morrison and Co's. claim, Blue Spur, for 12 months:—

Wages—(16 men at £3 6s per week)	£2756	16	0
Paid for water	832	0	0
9 tons of powder, at 10d. per pound	750	0	0
Tools, boxes, &c.	130	0	0
Hospital and charities	20	0	0
Total	£4478	16	0

There are no quartz works that I am aware of in this district.

I have the honor to be, Sir,
Your most obedient servant,
C. W. ADAMS,
Assistant Surveyor.

To J. T. Thomson, Esq.,
Chief Surveyor.

REPORT OF R. MILLETT, ASSISTANT-SURVEYOR.

Shotover Survey District,
Camp, Arrow, 31st July, 1867.

SIR,—In accordance with instructions contained in your circular letter, number and date as per margin, I have the honor to report. (Circular 41, '67.)

That having been for the last nine months engaged principally in surveying "Agricultural Areas," I am not so thoroughly acquainted with the mining works in this portion of the Wakatipu Gold Field as would enable me to give other than an approximate description of them.

1st. Commencing at the 12-Mile Creek, Arrow (Richurn), and extending south along the tributaries of the Arrow River to its junction with the Kawarau, the principal works are as under:—

Water Races.

Precise Locality.	Name of Company.	Length in chains.	Capacity in heads	Remarks.
Twelve Mile Creek	Beale & Co.	480	4	This race took three years to bring in, & cost near £2500.
"	Clark & Co.	320	2	Crosses the 12-Mile creek by flume 500 ft., cost £1000.
"	Scanlan & Co.	120	2	
"	Hyam & Co.	240	2	
"	Jenkins & Co.	480	4	Has its source on the east watershed of the Shotover.
Eight Mile	Gibson & Co.	240	4	Commands the high terraces at the 8 Mile Hill.
Arrow river East	Hutton & Co.	200	6	Has its source in the Roaring Billy, (Soho Creek).
"	Golden Point Sluicing Co	480	6	Has its source in Bracken's Gully, depth of working 120 feet.
"	M'Whirter & Co.	720	4	Taken from the Crown range, depth of working 100ft.
"	Union Co.'s Race	160	4	Heads from New Chum gully, depth of face 120 ft.
Arrow River West	German Co.	240	2	From the head of Sawyer's gully.
"	" "	200	2	Heads from north branch of Bush Creek.
"	Hill & Co.	200	2	From Sawyer's gully.
Junction of Arrow & Kawarau.	Lang & Co.	320	4	From the Crown range.

2nd. Tunnelling was at no very late date carried on systematically in this part of the District, but the heavy floods of last Autumn having destroyed the machinery connected with the works, operations have to the present been resumed.

Under are the principal works of this description, extending from the 12-Mile to the Arrow, and the deep dam on the Cardrona, which has been traced from near old township, for a distance of about half-a-mile on the western side of the Cardrona creek, and within the month still further to the south and west of the present course of the creek.

The works are being carried on principally by shafts and level drives, and the aid of pumping gear driven by water-wheels of small diameter.

Tunnels.

Locality.	Length in ft.	Depth in ft.	Range.	Remarks.
8-Mile Hill ...	1000	150	N. & E.	There are 3 parties tunnelling on this hill.
12-Mile Terrace...	5000	150 to 200	N. & E.	These terraces have been tunnelled by 10 or 12 parties. I do not estimate more than half that number now at work.

Tunnels.—(Continued.)

Locality.	Name of Company.	Length in ft.	Depth in ft.	Range.	Remarks.
Arrow Falls	Miller & Co.	110	100	N. E.	This party, 2 men, have been at work seven months, the object is to bring up a tail race to work the deep ground above the Falls. 350 feet will have to be driven before the object is attained.
New Chum gully ...	Ogilvie & Co.	600	120	N. & E.	Made ground in spur between the Arrow river and New Chum gully.
Cardrona...	Pierce & Co.	500	50	S. & W.	This is the most northern claim on the lead.
"	Swyer & Co.	500	50	S. & E.	The east side of this claim is shallow ground.
"	Bowes & Co.	200	50	S. & W.	On the lead.
"	The Sir G. Grey Co.	200	50	S. & W.	On the lead.
"	Keppel & Co.	200	50	S. & W.	On the lead.
"	"	250	50	N. & E.	On the lead.
"	Patterson & Co.	500	50	S. & W.	On the lead.
"	Miller & Co.	500	50	"	Shaft only going down.
"	Patton & Co.	500	60	"	Shaft only.
"	Brigizalazi & Co.	50	30 to 60	N. W.	Prospecting.
"	Toori & Co.	50	30	"	Shaft only.
"	Caldwell & Co.	50	30	"	Shaft only.
"	Bell & Co.	30	30	N. W.	This party have got gold and putting up pumping gear.

3rd. Quartz Works.—Numerous surveys have been made, in this part of the district, for mining leases, taken up by different companies; of these, some seven or eight have been prospected to a small extent, and three have been proved to contain gold—namely, the Criterion Company's Claim, the Cornish Company's Claim, and the German Company's Claim. The first-named of these companies commenced crushing about the month of May, 1866, and had some two or three washings up to the middle of June, when the dam across the Arrow River was partly destroyed by the heavy floods which occurred in that month.

On the completion of the new dam the Company again commenced to crush, and so continued till about May, 1867, when the works were suspended.

The machinery consists of—

- Water Wheel ... 20-horse power.
- Cornish Stamps... 5
- Horse Whim ... 10 feet diameter.

Workings—

- Main Shaft ... 110 feet deep, timbered.
- Main Level ... 117 feet, timbered
- Forty Foot Level 50 feet, "

Average of Reef. . . 2'-6" in thickness.
 Estimated quantity
 broken out ... 600 cubic yards.
 Yield ... 700 ounces gold.

Cost—

Plant, including permanent works, Main Shaft and Main Drive ...	£1,500	0	0
Dam ...	1,097	0	0
	<u>£2,597</u>	<u>0</u>	<u>0</u>

Aqueducts—

Beale & Co., 12-mile, length, 300 ft. girder.
 Clark & Co., 12-mile, length, 500 "

These are the only aqueducts I recollect in the Arrow district; they are of no particular note as to construction, being simply sluice boxes placed on longitudinal poles, supported by vertical ones and diagonal braces.

I have the honor to be, Sir,

Your most obedient servant,

R. MILLETT,
 Assistant Surveyor.

The Chief Surveyor, Dunedin.

REPORT OF H. C. BATE, ASSISTANT SURVEYOR.
 Survey Office, Clyde,
 27th July, 1867.

Sir,—In compliance with the request contained in your circular letter of 18th instant, No. 41, I have the honor to furnish you with the following information for embodiment in your annual report.

I must premise, however, that each item must be taken as nothing better than approximate.

Water Races.

The numbers under the head "Capacity" represent the quantity of water in sluice heads.

	LENGTH.	CAPACITY.
Scandinavian	25	20
Blackstone Hill	10	9
Drybread	10	15
Perseverance	10	15
Golden Gate	20	10
Walsh's	10	8
Oven's	25	12
Drummy's	25	12
Rose, Thistle, and Shamrock	10	10
Ida Valley	Unfinished	20

The above list comprises only the most important water-races. In addition to them, there are a great number of shorter races with less carrying capacity.

Of tunnels, there are none of any importance now being worked in this portion of the district.

The quartz works are situate at almost the north-eastern extremity of the Rough Ridge. Here there is a machine-house, erected by the Ida Valley Quartz Mining Company, containing a machine of ten (10) stampers, worked by water power and a turbine wheel. No actual work has yet been done by this machine on account of the hitherto meagre supply of water in the Company's race; but by experiment it has been found that about four (4) sluice heads of water would be a sufficient power to work the ten (10) stampers, with the escapement of the turbine wheel considerably lessened. If there were a sufficient supply of water, a much greater number of stampers could be set in motion, but in that case the escapement would have to be enlarged to its original dimensions.

The prospecting of reefs here and at other places is also carried on by means of windlasses and the ordinary appliances of the miner.

The principal aqueducts, or, as they are called in mining parlance, flumes, are those of the Golden Gate and Walsh's race, over the Manuherikia River at Black's; the Blackstone Hill race, over the saddle, near Hill's Creek; and a second one of Walsh's, near the head of the race at Devonshire Gully.

The two first-named only of these are suspension

flumes, the others being supported throughout by staying, struts, &c.

The following is a statistical review of them:—

	SUSPENSION LENGTH.	HEIGHT.	CAPACITY.
Golden Gate ...	370ft. ...	200ft. ...	10
Walsh's ...	370ft. ...	210ft. ...	8
" ...	—	40ft. ...	8
Blackstone Hill...	—	60ft. ...	9

Those named as suspension-flumes consist of iron pipes, the others are the ordinary timber boxes.

I may mention in addition to the foregoing, that as a proof of the success which has attended dredging operations, another machine is now being built at Clyde.

I have the honor to be, Sir,

Your obedient servant,

H. C. BATE,
 Assistant Surveyor.

The Chief Surveyor,
 Survey Office, Dunedin.

REPORT OF A. D. WILSON, ASSISTANT SURVEYOR.

Survey Department,
 Woolshed, July 23, 1867.

Sir,—I have the honor to acknowledge the receipt of Circular Letter No. 41, and beg to forward you the following information as required.

Head Races.—In this district there are only three Head Races of any consequence, averaging in length about fifteen miles, constructed at a cost of about £60 per mile, and which, on the average, do not carry more than two sluice-heads of water—the average fall is about 18 feet per mile. One of the races is brought under ground for a distance of about 120 yards. There are three or four others which may be valued at £100 each.

Cradles and Water-wheels.—There are not more than four parties using Cradles, the value of which I estimate at £2 each cradle. Twelve Water-wheels are in use, the value of which is about £12 each wheel.

Reservoirs.—The total number of Reservoirs constructed in this District does not exceed ten, the total cost of which may be estimated at about £1000.

Tunnels.—Five tunnels are in use in Waitahuna Gully. The main drive in each instance is not less than 400 feet; in one claim the tunnel is over 600 feet in length, the timber for which alone cost over £200.

Quartz Reefs.—Quartz mining operations are at present limited to the Canada Reef. The crushing machine has ten stamp heads, and I believe is equal to 40 horse-power. The yield of gold at the two last washings-up was, respectively, 6dwts. and 8dwts. to the ton. I have great hopes that the reef, though at present under a cloud, will ultimately prove remunerative. The whole works connected with it are of a very superior description, the wheel being of a very large size (40 feet in diameter). I am sorry I cannot give fuller information regarding this, as my visit was made before the works were finished.

Flumes.—There is, I believe, one Girdered Flume, extending across a gully for a distance of about three chains, the height above creek being about 40 feet. This work I have not personally inspected.

Miners.—The total number of miners in Waitahuna Gully does not exceed 150, but on the outlying gullies there are about 50 more, which will make the total number about 200.

Woolsheds.—The number of miners in this district I do not think will at present exceed 40; the uncertainty attaching (I mean in regard to being allowed to work) to mining on private property having hitherto deterred numbers from setting in to work. As, however, this will in a great measure be removed, I trust I shall be able to give a more favorable report hereafter.

Waipori.—Not having visited this district during the last two years, I am unable to report further than

that its mineral resources are being rapidly developed.

I have the honor to be, Sir,

Your most obedient servant,

A. D. WILSON,
Assistant Surveyor.

J. T. Thomson, Esq.,
Chief Surveyor, Dunedin.

REPORT OF DAVID BARRON, DRAUGHTSMAN.
Survey Office, Hamilton,
27th July, 1867.

Sir,—I have the honor to forward returns of Water-races in this district, as per annexed Schedule.

Tunnels.—The only Tunnels that are in the district are used for Tail-races—they are of so varied a character that it is hardly possible to classify them. At the Hogburn or Naseby there are a great number of them from one of the branch gullies into the main gully, the extent of which I would estimate to be about eight miles in length. At Hamilton, one of the Companies have had twelve men engaged for the last three months in tunnelling a tail-race through solid rock. At the Serpentine a Company have been engaged in something similar, but have had to give it up for the want of the necessary funds.

Quartz Works.—The Quartz works in the district may be said to be *nil*, with the exception of a small machine that has been at work for some time near Hindon, with very poor results. A number of quartz mining leases have been taken up, with the intention of starting companies; the returns from the trial crushings have been so much exaggerated, and the prospectors demand so much as a bonus or price for the mines, that no one will invest in them.

Aqueducts.—I have not been able to ascertain returns of Aqueducts or Fluming in the district, with the exception of the Shag River Company's.

It will be seen, from the approximate position of Clark's Diggings on the tracing, that they are not within the Gold Fields.

I have the honor to be Sir,

Your most obedient servant,

DAVID BARRON,
Draughtsman.

J. T. Thomson, Esq., Chief Surveyor, Dunedin.

List of Water-races in the Mount Ida and Taieri Districts of the Otago Gold Fields.

Name by which Race is known.	No. of Sluice Heads.	Length of Race	Terminating at
		Miles.	
Band of Hope ...	2	10	Mount Ida (Naseby)
Mirmock's ...	1	1½	"
Newsome's ...	1	1½	"
Undaunted Co. ...	5	12	"
Hit or Miss ...	10	9	"
Mosquito ...	2	8	"
" ...	1	1½	"
" ...	1	2	"
" ...	1	6	"
" ...	1	1½	"
Conicordi's ...	1	1	"
Enterprise Company...	6	7	"
" ...	6	8	"
Band of Hope, No. 2...	5	7	"
Mount Ida Company	4	6	"
Baxter's Race ...	1	2	"
Lewis's ...	1	2	"
Coagan and Company	10	16	"
Carling and Company	10	11	"
" ...	2	0	"
M'Master & Company	4	3½	Gimmerburn
Dunne and Company	1	1	Eweburn
Jackson and Company	6	6	Rough Ridge

Name by which Race is known.	No. of Sluice Heads.	Length of Race	Terminating at
		Miles.	
O'Sullivan & Company	3	6	S.E. of Rough Ridge, in course of construction
Pandene and Company	2	4	Kyeburn
White and Company...	1	2	"
Gronberg & Company	1	1½	"
Osterberg & Company	1	1	"
Christian & Company	1½	4	"
"	2	5	"
Archer and Company	3	5	"
Hare and Company	1	4	"
Lewis and Company	1	5	"
M'Intosh's ...	1	4	"
Harrington ...	3	3	"
Nicholas & Company	4	14	"
Stoddart ...	3	2	"
M'Intosh ...	4	5	"
Osterberg, No. 2 ...	1	2	"
Indian's ...	2	1	"
Slovat ...	1	1½	"
Hardaev & Company	8	7	"
Samson and Company	1	2	"
"	2	0¼	"
Archy and Company...	4	4	"
Swan and Company...	4	18	"
Brown and Company	4	4	"
Frater and Company	4	3	Clark's Diggings
"	6	3½	"
"	8	3½	"
Grayson and Company	6	3	"
Gogarty and Company	3	4	Clark's Diggings
"	8	15	"
"	2	1	"
Greer and Company...	3	4	"
Victorian Company ...	4	3	Sowburn
Sowburn Company ...	4	2	"
All Nations Company	4	1½	"
Simpson and Company	3	1	"
Simpson and Company	2	2½	"
Pearson and Company	4	8	" near Buchanan's Station
Hamilton United Sluicing Co. (Registered)	5	9	Hamilton
Perseverance Company	5	5	"
Rise and Shine Co. ...	6	5	"
Cornish Company ...	4	6	"
Bailey and Company	1	1½	"
Udie's ...	1	1	"
Robert's ...	1	2	"
Victorian Company ...	6	7	Hyde
Enterprise Company	6	12	"
Homeward Bound Co.	6	12	"
Sowburn Company ...	4	20	"
Nicholson and Co. ...	1	1	" Three Mile Creek
O'Regan and Company	7	20	Sutton
Botherway and Co. ...	1	½	Macrae's
Mareburn Company...	8	9	Fullarton's
Shag River Company	12	50	" in course of construction
Bremner & Company	2	1	Fullarton's
Morgan and Company	1	1½	"
Brown and Company	1	2	"
Oliver and Company	1	1	" Filly Burn
Thirston & Company	1	1	Horse Flat
Harris and Company	6	2	"
"	2	2	"
Cooper and Company	2	½	"
Swedish Company ...	—	2	Serpentine
The Last Chance Co.	—	1½	"
German Jack's ...	—	3	"

TABULATED STATEMENT OF RACES, &c., ON TUAPEKA GOLD FIELDS.

NAME OF RACE.	SUB-DIVISIONS, AND WHERE SITUATE.	LENGTH.		WIDTH.		DEPTH.		FALL PER MILE.	CARRYING CAPACITY.		TOTAL COST.	FLUMES, OR AQUEDUCTS.			TUNNELS.	
		Miles.	Feet.	Inches.	Feet.	Inches.	Feet.	Inches.	Heads.	Length.		Height above Valley.	How Constructed.	Length.	Depth below Ridge.	
(A) Tuapeka Water Race	From Waipori River to Tuapeka River.....	18	2	0	1	4	25	200	5	} 4000	£	} 1000	3 to 100	Props and Girders	...	...
	Tuapeka River to Dam	10½	2	6	1	6	20 to 30	320	8						...	...
	Dam to Blue Spur... ..	3½	3	6	2	0	50 feet with drops.	800	20						...	...
	Branch of above	32	...	...	...	...	...	...	...						...	...
(B) Hibernian Water Race	Reedy Creek to Dam.....	19½	2	0	1	2	16	...	4 "reg. heads."	} 2000	}	854	10 to 24	Props and Girders	...	...
	Dam to Blue Spur.....	4	2	6	1	4	23	...	11						453	6 to 10
(C) Waipori and Blue Spur Water Race	Waipori to Blue Spur	40	2	6	1	2	16	350	...	4000	...	...	...	...	300	20
(D) Perseverance		20	1	6	1	3	...	80	2	1800	...	...	...	...	...	...
(E) Blue Spur.....		7	1	3	1	0	...	50	...	500	...	...	...	...	...	...
(F) Nelson Company	Gabriel's Creek to Blue Spur.....	3	1	3	1	2	...	60	...	600	...	...	...	...	...	...
(G) Heales & Hindie	From Gabriel's and Tuapeka to Blue Spur	7	1	6	1	2	...	80	...	600	...	...	...	...	...	...
(H) Strong & Co.	Gabriel's to Blue Spur	3	2	0	1	6	...	160	...	600	...	...	...	...	...	...
(I) Livingston's	From Munro's Creek.....	3	...	...	...	...	...	...	...	600	...	...	...	...	...	...
<i>Note.—All the above discharge their water at the Blue Spur.</i>																
(J) Wetherstone Water Race Company	From a tributary of the Waitahuna to the Wetherstone Dam.....	6	1	3	1	3	10	80	...	240	} 684	Average, 30	Props and Girders cost £80	...	...
	From Dam to Wetherstone	5	2	9	2	6	28	2000	...	500				...	...
	From Main Race to various Claims	15	...	...	...	...	...	2000	...	150				...	...
(K) Wetherstone Lower Water Race		8	2	0	1	6	5	...	2	} 1000	}	250	33	100 feet of cutting, 6 feet deep. 1 mile solid rock cutting.	200	20
		...	...	...	...	...	...	...	...						100	20
		...	...	...	...	...	...	...	...						100	6
		...	...	...	...	...	...	...	...						80	10
(L)	From Waitahuna District	9	3	0	1	6	Average, 20	300	...	1200	64	6	...	300	35	
		...	...	...	...	...	...	...	...	...	80	20	...	200	24	
		...	...	...	...	...	...	...	...	...	120	40	...	...	...
(M) No. 3	From Blackman's Gully, N.E. of Wetherstone Gully, to	0½	2	0	1	3	...	150	...	50	40	20	...	...	...
(N) Blundell & Co.	Tuapeka Flat.....	16	2	6	1	3	10	320	8	640	
(O) Boland's Race	Clark's Flat to Hospital Flat.....	4	1	6	1	0	

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RETURN of the APPROXIMATE VALUE of WORK executed by the LITHOGRAPHIC PRINTING OFFICE, the AMOUNT of EXPENDITURE, and the CASH RECEIPTS for the SALE of MAPS, for the YEAR ending 30th JUNE, 1867.

FOR SURVEY AND LAND DEPARTMENTS	FOR OTHER DEPARTMENTS.	FOR SALE.	TOTAL.	EXPENDITURE.	RECEIPTS.
£55 12 0	£72 8 0	£367 19 0	£496 2 0	£429 2 7	£86 5 9

13th August, 1867.

J. T. THOMSON, Chief Surveyor.

(From the New Zealand Gazette.)

RETURN of the QUANTITY and VALUE of GOLD Exported from NEW ZEALAND, from 1st April, 1867, to the 30th June, 1867.

PORT OF EXPORT.	PRODUCE OF THE GOLD FIELDS IN THE PROVINCE OF	DURING THE QUARTER ENDED 30TH JUNE, 1867.						EXPORTED PREVIOUS TO THE 31st MARCH, 1867.		TOTAL EXPORTED FROM NEW ZEALAND TO THE 30th JUNE, 1867.	
		To Great Britain.	To New South Wales.	To Victoria.	To other Places.	TOTALS.					
						Quantities.	Value.	Oz.	£	Oz.	£
Auckland ...	Auckland ...	Oz. 13	Oz. 697	Oz. ...	Oz. ...	Oz. 710	£ 569	Oz. 21,522	£ 63,041	Oz. 22,232	£ 63,610
Havelock ...	Marlborough ...	...	79	...	...	79	306	33,385	128,352	33,464	128,658
Nelson ...	Nelson ...	...	1,885	3	...	1,888	7,316	} 332,755	} 1,289,526	} 389,365	} 1,508,890
Westport ...	" ...	4,122	13,293	...	...	17,415	67,483				
Brighton ...	" ...	...	16,843	...	...	16,843	65,267				
Greymouth ...	" ...	1,125	14,042	5,296	1	20,464	79,298				
						56,610	219,364				
Greymouth ...	Canterbury ...	1,253	5,634	2,632	1	9,520	36,890	} 722,224	} 2,804,185	} 793,733	} 3,081,232
Hokitika ...	" ...	12,215	32,970	10,955	...	56,140	217,542				
Okarita ...	" ...	...	*5,849	...	...	5,849	22,665				
						71,509	277,097				
Greymouth ...	Otago ...	...	...	...	15	15	58	} 2,090,228	} 8,099,636	} 2,188,818	} 8,287,922
Dunedin ...	" ...	19,381	2,779	26,405	10	48,575	188,228				
						48,590	188,286				
Invercargill ...	Southland ...	11	1,188	638	...	1,837	7,119	8,579	33,245	10,416	40,364
	Totals ...	38,120	95,259	45,929	27	179,335	692,741	3,208,693	12,417,935	3,388,028	13,110,676

* 2248 oz. of this quantity exported via Hokitika in March Quarter.

Office of the Commissioner of Customs,
Wellington, 25th July, 1867.WILLIAM SEED,
Secretary of Customs.

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