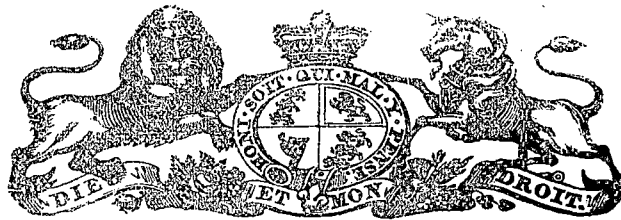


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1885.

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PARLIAMENT OF TASMANIA.

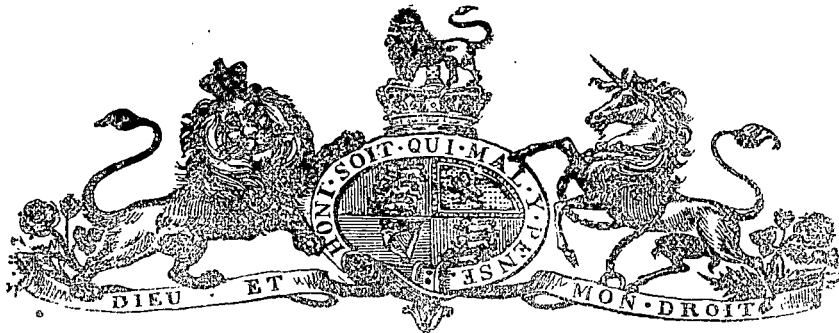
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**THE MINES OFFICE, AND THE MINING  
INDUSTRY :**

REPORT OF THE SECRETARY OF MINES.

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



*Office of Mines, Hobart, 21st July, 1885.*

SIR,

I HAVE the honor to submit my Annual Report upon the Mines Branch of the Lands and Works Department, and the Mining industry generally within the Colony.

*Officers and their Work.*

The permanent Staff in Hobart, in Launceston, and in the several Mining Districts remains the same as last year.

The work in the Launceston Office has considerably diminished, owing principally to the subsidence of the reckless spirit of unreasonable speculation in gold mining ventures which at one time prevailed. The Commissioner has, however, found a fair amount of work, always of a responsible and important nature, to engage his attention, and his visits to Beaconsfield, Lefroy, Back Creek, and Lisle have been frequent, as well as occasional visits to other places within his district. The Registrar is about to be removed temporarily to Hobart, where the increased work of the office, together with the proposed employment of the Chief Clerk and Draftsman exclusively in the preparation of maps, referred to further on, will find him ample employment for some time. The Staff of the Launceston Office will then consist of the Commissioner, a Draftsman, and a junior Clerk.

In the Eastern District the Commissioner, whose office is still combined with those of Stipendiary Magistrate and Commissioner of the Court of Requests, visits all parts of his district occasionally, and although mining litigation has decreased, he has had some important matters to adjudicate.

In the North-Eastern District the Commissioner, who also holds a similar combination of offices, is fully occupied, and holds Courts for the adjudication of mining disputes at stated times in several parts of his district, the work in this direction having lately increased. The Registrars at Scottsdale, Moorina, Gladstone, and Alberton, afford in their offices considerable facilities to the public for the conduct of their business with the Department.

The duties of the Commissioner in the North-Western District are, as intended, in connection with the more important duties of the other offices he fills, of a light nature.

The Commissioner stationed at Trial Harbour, on the West Coast, has some very arduous and onerous duty to undertake, although the amount of work, as represented by his correspondence with the head office, appears inconsiderable. The absence of roads or good tracks to the several places in his extensive district, where the scattered miners are located in small parties, alone entails much labour in travelling, and the position of an officer in such a country charged with the administration of justice under such circumstances is certainly an unenviable one. The necessity, however, for the maintenance of a Commissioner charged with authority to settle disputes amongst the miners and to adjust their differences upon the question of the occupation of claims, is as urgent as ever. The district is not practically for such purpose accessible from any settled part of the Colony, or to any other officer of similar authority in the service; and it is essentially necessary to provide the means for the prompt, summary, and effectual settlement of all disputes, otherwise the miners of the class who work on their own account claims under Miners' Rights, or who prospect under licences for new fields or deposits of gold or other mineral, and whose presence in the Colony it is desirable to encourage in every possible manner, will hesitate before they embark in any venture of the kind. I have not forgotten the urgent and earnest representations on this subject made to me in Launceston some few years since by miners who were preparing to try their fortune on the West Coast. They pointed out that they would not take the risk of prospecting the country unless they were afforded

necessary protection in the shape of a judicial officer, against a class of men who were ever ready to follow upon their heels, and dispute with them the possession of any valuable deposits they might be so fortunate as to find. The existence of an officer prepared to proceed to any part of his district where miners may call for an exercise of his authority, effectually prevents the interference of the class of persons I have referred to, and alone creates that feeling of security without which practical prospectors will not venture into the unexplored regions of the mineral-bearing portions of the Colony. The continued maintenance of the Commissioner at the West Coast is, therefore, in my opinion, indispensable. The proposal to permit mining for tin under a Miner's Right in small areas in a similar manner as regards regulations to alluvial gold, will also, if carried into effect, increase very much the necessity for the office.

Addressing me recently upon the subject, Mr. Glover, the present Commissioner, writes: "I have only held five formal Courts of Mines during the twelve months, but some scores of disputes of minor character,—encroachments, and wrangling over water, tailraces, &c.,—I have prevented from coming to a regular and formal trial by explaining to the parties their privileges and mutual obligations under the Laws and Regulations. Some have settled their disputes on receiving notice of the day of trial."

The Inspector of Mines has furnished an elaborate report, which will be found to contain full particulars of the working of the Regulation of Mines Act, the benefit of which statute to the numerous body of operatives connected with our mines is doubtless as great in this Colony as similar measures have been found to be in others where they are in operation.

The Bailiff of Mines, who has now become thoroughly acquainted with all the Mining Districts in the Colony, except the West Coast, which place there has been no immediate necessity to visit, has done, and is doing useful work. The unauthorised occupation of Crown Lands, and the practice which at one time prevailed rather extensively of removing tin without payment of rent, have been checked. The creation of the office has doubtless tended to protect the revenue to an extent very much beyond the expenditure it entails.

The Foreman in charge of the Diamond Drill is under the immediate control of the Commissioner of Gold Fields in Launceston, whose report appears as Appendix A. The borings for Coal at Tarlton, in the Mersey District, with Drill No. 1, and at Guy Fawkes Gully, near Hobart, with Drill No. 2, in progress at the date of my last Report, have, in both cases, been unsuccessful. The result, although disappointing, has a certain value, inasmuch as it has set the question at rest. Operations are now in progress with Drill No. 2, on freehold property in the Fingal District, at the expense of the proprietors, in expectation of finding a lead of alluvial gold.

The clerical staff in Hobart can scarcely be said to have been sufficient to meet the requirements of the service, and some matters have been perforce neglected, such as the completion of the registration of papers, a duty which was commenced by an officer specially engaged for the purpose, but whose services were discontinued at the close of 1884. I have found it impracticable to attempt the construction of a convenient register of mining companies, a matter very much required, the present registration being contained in books originally commenced by Commissioners in different parts of the Colony under the old Act, and being, as may be supposed, exceedingly inconvenient. The register of leases also requires reconstruction, but I have been quite unable to attempt it. There are other matters of minor importance which have been unavoidably neglected, but which ought to have received attention had the strength of the office permitted it. I trust, however, that the contemplated transfer of the Launceston Registrar to Hobart will enable me to overtake much of the work in arrear.

#### *Maps of Mining Districts.*

In my Report last year I drew attention to the want of maps of the Mining Districts. I said:—"The preparation of a complete set of reliable plans is a matter I have been unable, with the present strength of the office, to attempt. Those handed over from the Lands Office are not accurate, and I have objected to their distribution, nor have I thought it advisable to exhibit them in the public room. Working plans are kept in the office for the use and guidance of the officers, and are now, by dint of repeated corrections whenever an error is brought to light, tolerably accurate; although errors and omissions doubtless still exist. Before lithographs can be produced for general distribution, a fresh compilation from the original diagrams ought to be made. This is a work which is in my opinion very much required, and I fear some dissatisfaction exists because of the want of it." It has now been arranged to relieve the Chief Clerk and Draftsmen of all clerical work by the temporary removal of an officer from Launceston, as already pointed out, to Hobart. By this means the Chief Draftsman will be enabled to devote the whole of his time and attention to the preparation of the much-needed maps, and in the work he will be assisted by the two draftsmen in the office, so far as other work in which they are necessarily engaged will permit. The maps will be compiled from the original diagrams of the surveyors, and the greatest care will be exercised to ensure their accuracy.

*Abandoned Applications.*

In my last Report I referred to the large number of applications for Leases and Water Rights which were originally made before the establishment of this branch of the Department, and which still remained in abeyance. I am glad to say they have now been disposed of. In October of last year it was found that a number still remained; but, so far as I was enabled to judge, they were abandoned by their promoters. I therefore, with your concurrence, notified by advertisement in the newspapers that all such applications not finally disposed of by the 1st January, 1885, would, after that date, be deemed to be abandoned, and would be cancelled. They have been cancelled accordingly.

*Mining Companies Acts.*

The Mining Companies Act and the Mining Companies (Foreign) Act of last Session have thrown considerable work and responsibility upon this Office, which are, I regret to say, greatly aggravated by the extreme carelessness and mismanagement which characterise the operations of a large majority of managers and agents of companies coming under their provisions, a state of things which one would suppose could be remedied by a little intelligent attention to the business entrusted to their hands. The winding up of companies is now conducted in the Supreme Court in Hobart and in the Bankruptcy Court in Launceston. The proceedings initiated under the now repealed Mining Companies Act of 1869 in the Court of the Commissioner of Gold Fields in Launceston for winding up several mining companies have not yet been drawn to a close, the process being an exceedingly slow and tedious one.

*General carelessness and neglect of Agents and Correspondents.*

It is with extreme regret I again, as in my last Report, feel constrained to refer to the vast amount of additional work thrown upon the Office by the almost incredible neglect and wanton inattention to their duty exhibited by a great majority of persons who transact business with us. The irregularity, blundering, and culpable indifference to the most ordinary rules observed in the conduct of business are astounding, and are enough to exhaust the patience of the most enduring. The proportion of work caused by this unfortunate state of things may be best illustrated by pointing out that of 370 letters recently addressed by me to persons immediately connected with the conduct of mining business as agents and in other capacities, no less than 207 were rendered necessary by errors or omissions on the part of those to whom they were addressed.

*Commissioners' Reports.*

The Commissioners of Mines and of Gold Fields have furnished reports, which are generally of an encouraging nature.

Mr. Commissioner Belstead, in charge of the district known as the Northern and Southern District, including the Gold Fields on both sides of the River Tamar, and to the north east of Launceston, draws attention to the most important fact that, at the two leading mines at Beaconsfield (the Tasmania and the Florence Nightingale), *the reefs at the lower levels are of increasing richness*. The greatest depth in the Tasmania mine is 298 feet, and the production has now reached in a period of less than seven years upwards of seven and a quarter tons of gold, and it is now yielding with increased productiveness. The pyrites works established at Beaconsfield some three years since are still in active operation,—it is believed, with most satisfactory results. Alluvial mining at this Gold Field and the neighbouring one, Salisbury, although prosecuted with somewhat more vigour during the past year, has not been attended with any very great success, the depth now attained, and the consequent expense of working, requiring the outlay of considerable capital, which the holders under Miners' Rights are unable or unwilling, with such a tenure, to expend. The quantity of gold obtained from quartz during the half year just closed was 16,085 ounces, valued at £60,200. The depression which existed at Lefroy last year still continues, the reefs appearing to lose their richness as they go down; but, as in other mining countries, reefs are constantly found "to make again," as it is termed, at a depth, it is much to be regretted that either private or public enterprise cannot be induced to test the question here, the deepest shaft being already down 812 feet. Quite recently two discoveries of auriferous reefs have been made in the centre of the Gold Field which are of a promising character, but remain to be further developed. The yield of reef gold for the half year was 1411 ounces, valued at £5632. At the Back Creek about 25 men are profitably employed in alluvial mining, and at Lisle there are about 80 men similarly occupied, amongst whom a co-operative party of miners, with commendable energy, and at a large expenditure of time and labour, have brought in a race, with a fine supply of water, from a source distant upwards of seven miles, whilst another party are engaged in constructing a second extensive race in the neighbourhood. The Bangor Slate Quarries, the Commissioner remarks, are in full work; they have fallen into the hands of a wealthy and enterprising proprietary, who are introducing skilled labour, erecting elaborate machinery, and doing all that is necessary to thoroughly open their mine.

Mr. Belstead concludes his Report by repeating his statement of last year, "that legitimate mining is in a sound and healthy condition, and that the depression which has existed is passing away, and that with restored confidence in the mineral wealth of the country, will come the disposition on the part of those having the ability to do so, to aid in developing that wealth."

Mr. Commissioner O'Reilly reports upon the North-Eastern District:—With reference to the goldfields at Mount Victoria the depression experienced during the early part of the year is gradually passing away, and more confidence is now felt in the future success of mining operations there. This return of confidence has been brought about through the satisfactory reports received from one of the principal claims, in which the reef has been further prospected from a depth of 100 to 190 feet with satisfactory results, the stone at the greater depth being found to be of a superior quality to that taken at the higher level. The value of gold raised since operations commenced, towards the close of 1883, is £20,430, of which 1616 ounces, valued at £5916, was the produce of the first half of this year. Gold has been procured from twelve reef claims, but operations are now going on on six only. At Waterhouse some few prospectors only are at work, and the gold-bearing localities near Branhholm, Mount Horror, and the Mussel Roe are not at present attracting any attention.

Referring to the Tin-mining industry, the Commissioner points out that to a certain extent the richest portions of surface tin have been worked out, yet there is much ground left that can be mined with considerable profit, and calculated to last for many years under an ordinary average system of mining, and that at much deeper levels rich deposits are found, which are of such a promising character as to warrant a large expenditure of capital in their development, with every reasonable prospect of remunerative and permanent success. On the principal claims in the neighbourhood of the Brothers' Home and Branhholm mining proceeds with much activity and success, and a considerable outlay of capital is now going on to enable the working of the deep deposits to be carried on by ground sluicing. A large number of Chinese are employed in the vicinity of Moorina and towards Gladstone, working on tribute, and they generally succeed very well. At Gladstone there has been a temporary depression, owing principally to the want of water. In many instances tributers are succeeding very well in the mining of claims that under companies' management failed to pay current expenses. The inadequate supply of water to work the large area of tin-bearing land in the country surrounding Gladstone is a very serious drawback, and until this great want is supplied the District cannot possibly advance or prosper in the development of its resources. The recent forfeiture of a number of Mineral leases has had a very beneficial effect upon the future prospects of mining in the North-Eastern District generally, as the land is being rapidly taken up by working miners. The Bailiff of Mines recently reported upon 62 mines in full work, employing 599 men. The quantity of ore shipped from the District during the half-year ended 30th June last was 764 tons; viz.,—at Bridport 486 tons, and at Ringarooma 278 tons. Mr. O'Reilly concludes his Report as follows:—"The state of mining on the whole in the North-Eastern District is in a satisfactory and progressive condition. Unabated energy and enterprise are exhibited in the development of the extensive and payable deposits known to exist, and I look forward with confidence to the output of tin ore being very largely increased during the coming year."

Mr. Commissioner Dawson reports upon the Eastern District, that business connected with the mining industry is in a more healthy state than it has been for some time past, owing to the fact that the practice of taking up ground and floating companies for mere speculative purposes has ceased. Large numbers of miners left the district during the early part of this year to seek employment upon the railway works, but many have returned since tin has risen in price, and have either taken mineral sections on tribute, engaged to work for wages, or turned their attention to prospecting. Alluvial mining is still being steadily carried on in various parts of the District, and is mostly done by Chinamen as tributers. When wages men are employed, our own men, if well up to their work, always get the preference. The Bailiff of Mines has recently reported on 70 mines in full work, employing 346 men. The quantity of ore shipped at St. Helen's, George's Bay, during the half-year ended 30th June last, was 310 tons. Lode-mining is confined to the operations of the Anchor Company, whose crushing-plant is still kept at work. Operations appear to have ceased upon the claims in the neighbourhood of Ben Lomond, but the rise in the value of tin is expected to lead to the working of some of them on tribute. Gold mining in the Fingal District is in a very depressed condition, and at the Scamander River some few men are employed.

I have recently visited the North-Western District, which is under the charge of Mr. Commissioner Boyd. The mine of the Mount Bischoff Tin Mining Company, Registered, continues to yield the magnificent returns which entitle it to rank as probably the most productive tin mine in the world. It has now produced, during a period of nine years, 22,060 tons of ore, yielding 15,442 tons of smelted tin. Several other mines at Mount Bischoff are being worked, with varying results. The existence of gold and silver in the district is known, but success has not hitherto attended the efforts to develop the deposits.

The Western Mining District, embracing the whole West Coast of the colony, and extending inland to the borders of the settled districts, presents features so different from those of any other of our mining districts, and, as regards the mining interests, is separated so completely from them, that

I append Mr. Commissioner Glover's very interesting report in full. (See Appendix B.) It will be sufficient here to draw attention to the fact that this most important, but still little known, part of the colony undoubtedly contains vast hoards of mineral wealth, especially of gold and tin, and that its development depends altogether upon the construction of passable pack tracks in the first instance, and subsequently of roads. The total absence of a settled population in any part, the want of tracks and roads of any description through the dense scrub and forest which cover the surface of nearly the whole country, present obstacles to the prospector, which even his recognised courage, industry, and perseverance are unable to cope with.

*Report of Mr. Thureau, F.G.S.*

An interesting description of the mineral and metalliferous deposits in the Colony will be found in the Report of the Inspector of Mines, Mr. Thureau, F.G.S., which accompanies this Report.

*Ringarooma Water Supply.*

The proposal to construct a high-level water race on a large scale from the upper waters of the Ringarooma, along the western side of the river, to Mount Cameron and Gladstone, is a matter which has engaged attention, two engineering survey parties being now employed taking the necessary levels, &c., under the superintendence of Mr. G. J. Burke, M. Inst. C.E., an experienced hydraulic engineer. The execution of this work is a matter of the utmost importance in the development of the deep leads and extensive terrace deposits of tin now lying dormant for want of sufficient water supply.

*Condition of the Mining Industry.*

The actual condition of the mining industry in the Colony is a subject upon which we still occasionally meet with a great diversity of opinion, arising apparently out of the failure of some persons to distinguish between the reckless gambling in shares which at one time had taken such hold upon the people (and from the consequences of which the commercial interests are still suffering severely) and the legitimate prosecution of mining enterprise. I have lately observed, with much regret, that some persons, whose position in the commercial community would lead one to expect of them a sounder appreciation of the true state of the case, as well as some Tasmanian correspondents of leading newspapers in the other colonies, speak of the mining industry as a thing of the past, and deplore the failure of our mining enterprise. Such persons, one would presume, must necessarily be in utter ignorance of the facts, and their action in the promulgation of such inaccurate statements, calculated to inflict, and unquestionably inflicting injury upon the Colony, is excusable only at the expense of their intelligence. I venture to think that no person acquainted with the subject, or possessing any practical knowledge of the question, will attempt to deny that the quantity of mineral produced is the true index of the actual state of the industry. A reference to Return No. 2, in Appendix C., will show that the quantity of gold procured from quartz during the half year ended 30th June last exceeds by nearly thirty per cent. the quantity obtained during the corresponding period of last year, and exceeds considerably the yield of any previous year with the exception of 1881, when alone the production was in excess of it. Return No. 3 in the same Appendix shows that the export of tin during the half year just closed exceeds very considerably the export of any corresponding period in all previous years. The recent rise in the price of tin in the European market—now £95 a ton—and which has led to the opening up of a considerable number of new mines in the Eastern and North-Eastern Districts, had little effect upon the export during the half year, for the simple reason that but a small part of the tin mined since the present price was attained had yet reached the smelting works when the half year closed. I may here repeat my statement made last year: "It is true that many spirited attempts, undertaken in perfect good faith, to develop mines of tin and gold, have failed, resulting in the loss of considerable sums of money to the enterprising shareholders; yet the number is not above the average of failures in other countries, and is no more than experience has shown must be expected in an industry which partakes so largely of the speculative element, and in which the greatest skill, industry, and practical knowledge are often of little or no avail."

Referring to Appendix C., Return No. 1 exhibits a comparative statement of the quantity and value of gold entered at the Customs for export during the first half of each year since 1879. It is well known that a large quantity of alluvial gold is exported without entry at the Customs, and goes to swell the production with which the other Colonies are credited. It is taken from shallow deposit, without the aid of capital, and with the use only of ordinary hand appliances; and as the gold-digger is particularly reticent on the subject of his gains, and there are no means of ascertaining the actual quantity he secures, the total production of the Colony has never been ascertained. Returns No. 2 and 3 I have already referred to; but I may here point out that of the 2157 tons of tin already exported this year, 944 were the produce of the Mount Bischoff Company's mine, leaving 1213 tons as the produce of other mines, principally in the North-Eastern and Eastern Districts. Return No. 4 shows the number and area of leases in force, and the number applied for in 1884 and in the first half of this year. During the past year 904 mineral and 68 gold leases have been forfeited for non-payment of rent. They were, with few exceptions, originally taken up with a greater desire to operate in the share market than to enter upon legitimate mining work, and therefore their disappearance from the roll of leases is decidedly an advantage.

The clear inference to be drawn from an examination of these returns is that the mining industry is in a sound and progressive condition. During the period of feverish excitement already referred to, a large number of persons were steadily prospecting the country, and opening up mines of more or less value. In spite of the reaction which, as a matter of course, followed the excitement, and of the serious commercial depression which accompanied the reaction, and still continues in many quarters, and in spite of the doubt which is still thereby thrown upon legitimate enterprise, the true mining industry—the operation of extracting and winning mineral from the ground—progressed steadily, and is still progressing, and is at this moment exhibiting a more satisfactory and substantial result than at any previous period in the history of the Colony.

I have the honor to be,

Sir,

Your most obedient Servant,

BERNARD SHAW, *Secretary of Mines.*

*The Hon. the Minister of Lands and Works.*

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## APPENDIX A.

### DIAMOND DRILLS.

*Office of Mines, Launceston, 30th June, 1885.*

SIR,

IN compliance with your instructions, I beg leave to submit a brief Report upon the operations of the Diamond Drills since their introduction to the Colony in the latter part of 1882.

#### *Drills.*

Two drills were imported from America in 1882. They were manufactured under the patent of the Pennsylvania Diamond Drill Company, U.S.A., one being a powerful surface machine, capable of boring, by steam power, to a depth of 2000 feet, the other being a smaller machine, designed for either surface or underground ground, and capable of boring, at any angle, up to 600 feet, the motive power being steam for surface, and compressed air for underground work. The same style and sizes of bits and other appliances which were imported with the drills continue in use, with the exception of a derrick for the small drill, which was manufactured here, and which is of much more handy and slight design than the imported article. It has been found elsewhere that bits made of steel or Lowmoor iron are infinitely superior to the American brass bits. The change, also made in Victoria, of adopting a standard gauge for bits and all other drill appliances, is one which, so soon as our present stock is exhausted, it will be wise to adopt here, as it will greatly facilitate the repair and renewal of such parts of the machinery as may require it, and consequently will reduce the cost of boring. A bit has lately been designed by Foreman Harrison, of No. 2 Drill, for saving samples of soft strata; it has yet to stand a practical test, but, if successful, will be found of great value in boring for coal or alluvial gutters. The Foreman reports as follows:—"The great difficulty the Diamond Drill has to contend with in this sort of ground is that of drawing the rods; the weight of water in them clears everything out of the barrel. In boring for coal, if a seam is passed through a few hundred feet deep there is nothing to show for it but some discoloured water and a handful of sediment, whilst the bit designed will bring up a perfect sample of the strata."

#### *Work done.*

Up to date the aggregate number of bores put down has been 18, and the total distance bored 4867 feet; the longest vertical bore 612 feet 1 inch, and the longest horizontal bore 546 feet. Details are appended.

#### *Diamonds.*

The diamonds used in boring are known as Carbons and Brazilian Boarts. The former should be cubical in shape, devoid of sharp angles, and varying from 1 to 3 carats in weight. They are used in the face of the bits. The latter should be as nearly spherical as possible, and are used for inside and outside clearance in the bits. The prices range considerably, the original stock costing 84s. per carat, whilst more recent supplies have been obtained at 56s.

#### *Cost of Boring.*

Much depends upon the skill of the foreman in charge, the nature and depth of the strata bored, and the price, quality, and skilful setting of the diamonds. The estimated cost has been—in sandstone, 5s. 6d. per foot, in basalt 5s. 8d., and in metamorphic schist, 15s. 1d.

*Conditions under which Drills are lent.*

The whole cost of working (exclusive of the wages of the men employed), together with the value of diamonds lost or worn out while the drill is being worked, is paid to the Government by the lessees. The sum of £40, an approximate estimate of the above cost, to be paid in advance on account of expenses for the first month; excess or deficiency deducted from or added to the payment of £40 for the succeeding month, and so on from month to month.

The drill to be worked and operations superintended by the foreman in charge, the management, charge, and working of the drills being under the absolute control of the Mines Branch of the Lands and Works Department; the necessary labour to be provided by the lessees. The right is reserved to the Minister of Lands and Works to suspend or terminate the operations of the drill at any time, and the lessees shall not be entitled to any compensation for such suspension. All expenses connected with the removal of the drill to the place of operation to be borne by the lessees. No charge is made for the use of the drill.

*Wages.*

For some portion of the year the Department employed two Foremen at £5 10s. and £5 per week respectively, but one drill only being now at work, the Foreman at £5 per week is the only one employed; two assistants are required at each drill at rates of wages 7s. 6d. to 7s. per shift of eight hours for surface work. A shift consists of a Foreman and 1st and 2nd Assistants.

*General remarks.*

Making due allowance for the difficulties, incident to a small community, of obtaining suitable diamonds and renewals of machinery, the work done by the drills in use in Tasmania will, it is believed, bear favourable comparison as regards economy of working, rate of boring, and freedom from serious breakage or accident, with similar operations elsewhere; this result has been largely contributed to by the skill and care displayed by the Foreman in charge of the Drills. That no important discoveries and consequent direct benefits have accrued from the use of the Diamond Drill in this Colony, is not the fault of the machine or its management; on the contrary, it is an admitted fact that, as a means of exploiting ground with economy, thoroughness, and expedition, the Diamond Drill is admirably adapted.

I have, &c.

F. BELSTEAD, *Commissioner.*

*The Secretary of Mines, Hobart.*

## DIAMOND DRILLS.

*Statement of Work done.*

| <i>Year.</i>        | <i>Locality.</i>                              | <i>Direction of Bore.</i> | <i>No. of Bores.</i> | <i>Total Distance bored.</i> | <i>Average Cost per foot.</i> |
|---------------------|---|---------------------------|----------------------|------------------------------|-------------------------------|
| <b>No. 1 DRILL.</b> |   |                           |                      |                              |                               |
| 1882-3              | Back Creek .....                              | Vertical                  | 7                    | 1330                         | 10 9                          |
| 1883..              | Lefroy .....                                  | Ditto                     | 4                    | 1011                         | 5 3                           |
| 1884..              | Tarleton—For Coal .....                       | Ditto                     | 1                    | 401                          | 5 6                           |
|                     |   | TOTAL ....                | 12                   | 2742                         |                               |
| <b>No. 2 DRILL.</b> |   |                           |                      |                              |                               |
| 1882..              | Beaconsfield .....                            | Horizontal, underground   | 1                    | 68                           | No record                     |
| 1883..              | Mangana .....                                 | Ditto                     | 1                    | 546                          | 15 1                          |
| 1884..              | Guy Fawkes Gully, near Hobart—For Coal        | Vertical, surface         | 1                    | 612                          | 5 6                           |
| 1885..              | Malahide Estate, nr. Fingal (now in progress) | Ditto                     | 3                    | 899                          | 5 6                           |
|                     |   | TOTAL ....                | 6                    | 2125                         |                               |

Aggregate Number of Bores .....

18

Total distance bored .....

4867 feet.

30th June, 1885.

F. BELSTEAD, *Commissioner.*



## APPENDIX B.

*Trial Harbour, Western District, 3rd July, 1885.*

SIR,

In compliance with your request for a Report upon the Mining industry generally in the Western District up to the 30th June, I have the honor to state as follows:—

*Goldfields.*

As regards the Corinna goldfield, the principal operations during the past twelve months have been confined to the Specimen Reef neighbourhood, Rocky River, and Long Plain. At the former the only quartz claim worked is that of the company formed on the site of the original discovery, and the prospecting work of the mine has been continued energetically, with varying success as to prospects. The discovery, however, on one of the leased sections of a gold-bearing reef has just been reported. The remaining sections taken up in the locality remain still unworked, awaiting apparently the result of the labours of the original company; and alluvial gold continues to be obtained in the vicinity. At Rocky River, celebrated as the spot where the large nuggets (243 and 144 ounces respectively) were found two years ago, a considerable quantity of gold has been obtained; and works have recently been attempted by "wing dams" to work portions of the bed of the river which are believed to contain coarse gold, but floods have destroyed the works, and the operators have been compelled to desist until the season or the weather shall enable them to proceed. One man who has just departed has taken away 120 ounces of gold. The sections taken up on this river for quartz mining remain as yet unworked. One of these has been the subject of litigation under different applicants, and the last case is not yet decided, awaiting the Surveyor's plan and report, in accordance with the Regulation. It is believed, from the persistent litigation over this section, that some of the parties are cognizant of certain facts enhancing its value, and the holders of other sections are, as usual, awaiting events. Nothing remarkable has occurred on Brown's or Long Plains, with the exception of the reported discovery last summer of a gold-bearing reef on the latter, and the acquisition by the discoverers of the reward claims provided by law, and two 10-acre sections have also been taken up adjoining. These and several other individuals are working satisfactorily on alluvial gold, but no further development of the alleged reef has taken place. At the Castray River, about 20 miles N.W. from the Corinna settlement, several persons have been obtaining gold in payable quantities; and as this is principally "reef gold," of apparently recent liberation from its matrix, prospectors are searching for quartz reefs in the neighbourhood. About thirty persons have been employed in the various gullies and creeks, and the quantity of gold obtained in the Corinna field for the past twelve months, as nearly as it can be ascertained, was 1140 ounces. During the summer deposits of gold in paying quantities were discovered between the Heemskirk Range and the upper portions of the Pieman River, about 20 miles east from Trial Harbour, and some 15 or 20 diggers collected there, but although they pronounced the deposits to be quite satisfactory under ordinary conditions, the difficulty and labour of transporting supplies, in the absence of a pack track, caused them to abandon the place until the return of summer.

On the King River field the principal mining centres are those of the King River Company's mine at Lynch's Creek in the South, and the Linda in the North. In the valley of the Queen River profitable, though limited, sluicing operations were carried on last spring and summer. But the ever-present impediment to the West Coast Goldfields—inaccessibility for the transport of supplies—caused its inevitable result, and operations were abandoned. At the Linda Messrs. Crotty and Dixon's party of five men are still profitably engaged in sluicing a rich deposit of very fine reef gold on a saddle between Mounts Lyell and Owen, and leading into the mountain. They are very sanguine as to this work leading them to the reef from which the gold has been derived. This is the first party on the West Coast who have advanced from the rude "diggers'" appliances by using improved methods of gold-saving by blankets and mercury. They obtain water from four different sources. In the same vicinity are several working parties, in a creek which had some 18 months ago yielded a large quantity of gold, but had been abandoned as worked out. On being recently taken up, however, in extended claims under the Regulations, what had formerly been supposed to be the true "bottom" was broken through and a deposit of, as yet, unascertained depth was discovered, containing fine gold in quantity, payable by means of ground-sluicing. And this industry is accordingly proceeding, in spite of the difficulties, loss of time, and expense of transporting supplies. The country in this locality is pronounced by all experienced quartz miners to present indications of a rich reefing country second to none; but the inevitable drawback—the want of even the most moderate facilities for the transport of supplies—must indefinitely postpone its development. The only quartz sections which have yet been opened up are those of the King River Company, on the site of the original discovery. Here systematic and judicious mining has been carried on for more than twelve months, and the mine has now been thoroughly opened out and developed and the reef prospected for a space of 500 feet at a depth of 200 feet, disclosing many thousands of tons of estimated payable stone, ready to be stoped and sent to the battery whenever the latter shall be provided. The several lease claims adjoining these sections have remained dormant, awaiting the results of the

Company's works. Amongst these the ground of the Pateena Company has a reef of even greater promise than that of the mine alluded to, and, consequent upon the success of the latter, will doubtless soon become the scene of busy industry.

As regards the mining population of King River generally, throughout last year, until the spring, the hope and expectation that a definite period was at hand which would end their difficulties and labours as to the transport of supplies, induced by the works in progress on the track from Macquarie Harbour then under construction by the Government, encouraged them to bear with some amount of patience their difficulties. But on the sudden stoppage of that work in the spring they gave up their occupation in despair, and a general exodus has since taken place; indeed it is only the exceptional richness of certain discovered spots which can now induce men to remain. Nevertheless the approximate yield of gold from the King River field for the last twelve months was 1250 ounces.

#### *Mineral Lands.*

The general collapse of the operations of the various joint stock companies, which, amongst them, have hitherto held possession of the greater part of the tin-bearing sections of Mount Heemskirk, is a circumstance sufficiently well known to obviate the necessity of any announcement of the fact on my part. There appears, however, to be a wide-spread misconception in the minds even of those most interested in the event. It is quite true that certain companies established for tin mining, and operating at Heemskirk, have failed in their object, but so far from the mines or the tin prospects of the place in question having failed, the prospecting or testing of these has never yet been accomplished, nor, with perhaps two exceptions, even systematically attempted; surface works, and operations in roads, buildings, and machinery erection being apparently the paramount consideration with the Heemskirk companies. This system may have been adopted under the erroneous idea that lode tin mines could be opened out and developed to a sufficient depth and paying condition, and the current expense largely met by their own resources. It is quite evident that the expensive road and bridge construction engaged in by the companies was not required, in the absence of sufficient development of the mines, to necessitate the transport of heavy machinery, &c.; and the elaborate works in rock excavation and building to accommodate the machinery and final appliances for tin dressing, could equally have been postponed until justified by the results of mining. But the capital of the companies having at length given way under the severe strain of expenditure, and their resources being exhausted, the inevitable result has followed in the suspension of operations on all the sections, without any mining worthy of record being accomplished. Nor did the evil end here. Constant pressure was throughout exerted upon the Government to induce them to aid the companies by roads, jetties, &c. in their premature operations in the landing and transport of heavy machinery and materials, in anticipation of their possible, but remote, future requirements. If only a moiety of the many thousands of pounds expended by the companies at Heemskirk had been devoted to actual mining operations, some judgment might reasonably have been arrived at to-day as to the actual character of, at any rate, many of the existing lodes. As it is, with the exception of one mine, which, before its suspension, had attained a depth of some 430 feet, with varying success, extremely rich "shoots" of ore alternating with very poor spaces, nothing whatever in the way of the necessary deep mining has yet been attempted at Mount Heemskirk. And notwithstanding the vast expenditure incurred in premature, and therefore, as yet, useless work, the fact still remains, that there has been virtually and literally no failure whatever of the "mines." The lodes are still there, but they are practically as untested as when they were discovered. This fact, obvious to every one, even the most superficial observer or witness of the operations of mining companies at Heemskirk, seems to be persistently and perversely ignored by the public. And the West Coast tin mines are condemned under the sweeping fiat of "failure," and would apparently be bequeathed to a more reasonable and practical generation to utilise them. Nevertheless, the lodes being unmistakably there, and all the expensive ultimate appliances for utilizing them being also there, and ready for use, it is very probable that the essential intermediate operation of mining will be supplied by the employment of new capital and new operators.

The final collapse of the old companies at Heemskirk, however, proves to have been by no means an unmixed evil, and will probably make way for a speedy development of the place by other agencies. The consequence of their removal from the scene, and the liberation, by forfeiture of leases, of many of the sections held by the effete companies, has been that co-operative parties of working miners have taken up, for the purpose of alluvial tin mining, 20-acre sections respectively such being the minimum quantity by law available. Five such sections have recently been taken up, and the holders of four of them are now busily employed, and with highly satisfactory results, in the work of actual tin getting. On the extensive area embraced under the term Heemskirk, comprising some 15,000 or 20,000 acres, there is a large quantity of alluvial tin in scattered patches of a few acres. But the minimum quantity of 20 acres fixed by the present law is somewhat beyond the means of working miners, besides probably embracing too large a proportion of barren ground. If the present minimum could be much further reduced, or an entirely new system were adopted so as to throw open the alluvial lands to workers under a more simple and expeditiously acquired title, similar to the miner's right for gold, an extensive industry in alluvial tin mining would speedily be established at Heemskirk, and a means opened to the discovery of many valuable lodes by their operations.

Of the value of the Silver-Lead claims in the vicinity of Mount Zeehan very little is yet known, as nothing in the way of mining has been done upon them. The lodes are plainly visible, and the ore in them is equally visible and apparently in large quantity, so that their value will depend on the percentage of silver. Since Mr. Thureau's visit to the spot in March last, the claimholders have had 15 cwts. of galena shipped to Hobart *en route* for one of the Australian colonies for assay, but I am not aware of the result.

I have the honor to be,  
Sir,

Your very obedient servant,

BERNARD SHAW, *Esq.*, *Secretary of Mines.*

W. H. GLOVER,  
*Commissioner of Mines.*

## APPENDIX C.

### No. 1.

*COMPARATIVE Statement of Gold exported from Tasmania during the first half of each year since 1879: compiled from Customs Returns only.*

| HALF YEAR.                          | QUANTITY.     | VALUE.   |
|-------------------------------------|---------------|----------|
| From 1st January to 30th June, 1880 | 29,301 ounces | £115,606 |
| " " 1881                            | 27,852 "      | £108,146 |
| " " 1882                            | 18,195 "      | £69,274  |
| " " 1883                            | 22,148 "      | £86,512  |
| " " 1884                            | 17,346 "      | £65,509  |
| " " 1885                            | 22,413 "      | £85,133  |

### No. 2.

*RETURN showing the quantity of Gold obtained from Quartz during the years 1880, 1881, 1882, 1883, 1884, and the first half year of 1885.*

| YEAR.                               | QUANTITY.     | VALUE.   |
|-------------------------------------|---------------|----------|
| 1880.....                           | 34,345 ounces | £130,622 |
| 1881.....                           | 45,776 "      | £174,956 |
| 1882.....                           | 36,215 "      | £137,183 |
| 1883.....                           | 36,672 "      | £138,060 |
| 1884.....                           | 30,540 "      | £114,630 |
| Half-year ended 30th June, 1885.... | 19,260 "      | £72,330  |

Compiled from Returns furnished by the proprietors of Crushing Machines, and checked with Customs Entries of Exports.

### No. 3.

*COMPARATIVE Statement of Tin exported from Tasmania during the first half year of each year since 1879.*

| HALF YEAR.                          | QUANTITY. | VALUE.   |
|-------------------------------------|-----------|----------|
| From 1st January to 30th June, 1880 | 1655 tons | £160,638 |
| " " 1881                            | 1807 "    | £158,464 |
| " " 1882                            | 1570 "    | £158,953 |
| " " 1883                            | 2008 "    | £184,424 |
| " " 1884                            | 1922 "    | £152,615 |
| " " 1885                            | 2157 "    | £160,354 |

Compiled from Customs Returns.

## No. 4.

*RETURN of the Number and Area of Leases under "The Mineral Lands Act" and "The Gold Fields Regulation Act" in force on 1st July, 1885," and the Number and Area of Leases applied for in 1884, and to 30th June, 1885.*

| NATURE OF LEASE.   | NOW IN FORCE. |        | APPLIED FOR IN 1884. |        | APPLIED FOR IN 1885 TO 30 JUNE. |        |
|--|---------------|--------|----------------------|--------|---------------------------------|--------|
|  | No.           | Area.  | No.                  | Area.  | No.                             | Area.  |
|  |               | Acres. |                      | Acres. |                                 | Acres. |
| Under "The Mineral Lands Act" for tin, &c., at 5s. an acre rent..... | 1042          | 37,694 | 57                   | 1326   | 109                             | 2819   |
| For coal and slate, at 2s. 6d. an acre rent .....                    | 27            | 4579   | 7                    | 1750   | 6                               | 745    |
| Under "The Gold Fields Regulation Act".....                          | 268           | 2425   | 105                  | 1050   | 31                              | 320    |