(No. 4.)

TASMANIA

REPORT

OF THE

DIRECTOR OF MINES

FOR

YEAR ENDING DECEMBER 31

1926

INCLUDING REPORTS OF THE INSPECTORS OF MINES, GOVERNMENT GEOLOGISTS, CHIEF GOVERNMENT CHEMIST AND ASSAYER, MANAGER OF THE MOUNT CAMERON WATER-RACE, &c.

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

Tasmania

JOHN VAIL, GOVERNMENT PRINTER, HOBART

1927

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REPORT OF THE DIRECTOR OF MINES.

Mines Department,
Hobart, 2nd May, 1927.

SIR,

I HAVE the honour to submit my report on the Mines Department and the Mining Industry for the year ended 31st December, 1926.

GENERAL REMARKS.

Hitherto the annual report of the Department of Mines has been prepared by the Secretary for Mines. In consequence of changes in administration that officer has been relieved of a large part of the work of preparation, and that section of the report dealing with the development of mines has been assigned to the Chief Inspector. This issue follows the main lines of the preceding ones, but changes have been made in the mode of presentation, and additional statistical information has been included. The report deals with the following:—

1. Statistical data relating to the production of minerals, metals, and mineral products.
2. Records of the work of the Geological Survey and the Government Laboratories.
3. The inspection of mines, and explosives and inflammable liquids.
4. Other activities of the Department.

The information relating to the foregoing is contributed by the several responsible officers.

STATISTICS.

As regards the statistical returns, the old method has been followed in the compilation, namely, that based on the gross value of the product at current market rates. Statistics compiled on that basis, in the opinion of the Government Statistician, are misleading, and do not represent the actual value of the products to the State. This opinion is in some degree upheld, and it is intended, therefore, in the report of next year, to give a statement of the net value of products in addition to gross value. It is conceded that a compilation of statistics is always open to question because of differences in conceptions, methods, and interpretations, but the basic idea is the development of useful information presented in the form of figures as accurately as possible.

It is the desire of the Department, in future issues, to give a complete account of production, compiled from original returns, and in such manner as to allow of an analysis in detail. For instance, it is desirable to obtain and present information relating to the quantity, the metal content, and value of the crude ore; the proportion of metal extracted, and its net value; the cost of production; and the place of marketing. These details are essential in the compilation of complete statistics such as would prove of local value.

GENERAL REVIEW.

Turning to the principal general statistics, it is seen that copper still retains its position at the head of metal production, despite the low market rates. Silver and lead are next in importance, and these metals, together with zinc, should show a further increase next year, owing mainly to developments in the large Read-Rosebery deposits and the reopening of the South Comet Mine, at Dundas. The extraordinary increase in the market rates for tin has led to great activity in exploration, especially in the Gladstone, St. Helens, Branxholm, Moorina, Avoca, and Renison Bell fields. Osmiridium recorded a spectacular growth following the discovery and development of Adamsfield, but is now declining owing to falling market rates. Coal-mining is rapidly increasing in importance and position, and when the Catamaran Company is fairly started on its career we shall cease to be dependent upon Newcastle for our requirements of high-grade steam coal.

Oil-shale mining and distillation are about to be undertaken on a commercial scale at Latrobe—a consummation long awaited.

Limestone, for fluxing purposes at the Newcastle Steel Works, and for the manufacture of Portland Cement and carbide, is produced in enormous quantities. Our resources of magnetite and hematite iron-ores have not been tapped, owing chiefly to the delay in the construction of the iron works of Messrs. Hoskins Bros., at Port Kembla.

Tungsten, in the form of wolfram, is produced as a by-product of tin-mining. Gold has been declining of late years, but recent developments at Mathinna are likely to give an impetus to the search for this metal. The barium deposits are of great extent, but the cost of transport is too high to allow of profitable production at present rates. The same remarks apply to chromium, nickel, asbestos, and ochre deposits.

Ross sandstones, for building and sharpening, are to be exploited on modern lines.

The foregoing brief commentary will convey an idea of the extraordinary variety of our mineral wealth and of the activity displayed in this branch of industry.

INDUSTRIAL DEVELOPMENT.

As our progress depends not upon the maintenance of present production, but upon a substantial increment, the great problems before us are:—

(1) The discovery of more mineral deposits; and
(2) The more extended utilisation of our known resources.

(1) This may be accomplished by—(*a*) Surface prospecting in unexplored areas; (*b*) exploring and developing at depth old fields.

(*a*) To this end the Mines Department has subsidised prospecting parties and made reconnaissance surveys. It is desirable that the sustenance allowance should be continued to prospectors after the discovery of deposits in order that they may be assisted in the development of the deposits. At present they do not enjoy this privilege.

(*b*) It is recommended that electro-magnetic and other geophysical methods of exploration of outcropping and deep-seated deposits should be adopted to thoroughly survey old fields. These geophysical aids to exploration are coming into general use, and during the past three years have been carefully investigated by officers of the Department. The results of such surveys should be confirmed by the aid of the diamond drill. In these ways many new "blind" lodes may be found and the decline of mining in important centres may be arrested.

(2) This may be brought about by:—(*a*) Greater production; (*b*) increase in the percentage recovery; and (*c*) the utilisation of by-products now running to waste.

(*a*) Attention should be directed particularly to those products in greatest demand, such as tin ore, Portland cement and aluminous cement, oil shale, iron ore, coal, silver-lead, zinc, and sands and sandstone for glass making, building, and other purposes. Open markets are available for all these products.

(*b*) The wonderful advances in metallurgical science during recent years have resulted in the reopening of old mines, closed years ago because the ores were regarded as complex and the component minerals inseparable. Moreover, many of the tailing dumps of tin ore, lead, and zinc mines have been, and are being, successfully re-treated with the aid of modern appliances. The losses in the tin ore mines and in some of the silver-lead ore mines have been very great.

(*c*) In many mines no attempt is made to save the ores of secondary importance, which are allowed to run to waste. In the aggregate this loss is very heavy.

MARKETING.

A great deal of attention has been given to the marketing of the less common metals and minerals, osmiridium, chromite, ilmenite, rutile, monazite, &c., especially in English markets. In order to regulate the sale of osmiridium the Tasmanian Osmiridium Producers' Co-operative Association was formed by the miners, who appointed Messrs. Robt. Nettlefold and Co., of Hobart, as agents for the disposal of the mineral. Owing to leakages (sales to buyers outside the State) the pool became ineffective. The Department then approached the Government with the request that the export of osmiridum be prohibited, except through the hands of the Tasmanian Osmiridium Producers' Co-operative Association was formed by the ter for Customs, Mr. Paterson, agreed to form an Export Board if the producers, by ballot, accepted the proposal.

A poll was taken at Adamsfield and other centres, and the proposal was rejected by a large majority of the miners.

Applications were received during the year for the following list of tracks:—

Boco Siding (Emu Bay Railway) to Ross Creek;
Florentine River to Boyes River;
Princess Mine to Collingwood River;
Extensions at Adamsfield.

In connection with the Boyes River track a steel-wire ropeway and cage were erected over the Gordon River. This will serve those interested in the Florentine Valley country also.

All these works have been completed, and the tracks have enabled prospectors to extend the scope of their operations to those limits.

FIELD INVESTIGATIONS.

Field officers have been very busily engaged during the year, but they have not been able to cope with the large number of applications for special investigations. In order to meet the demand of the mining public for the services of geologists and engineers it was found necessary to amend and curtail the programme of district investigations.

It is hoped to continue the district surveys during 1927.

In addition to my office duties, field investigations were made of the following:—

Kosminski Silver-lead Mine, Dundas.
Blythe's Freehold, Beaconsfield.
Kerslake's Tin Ore Prospect, Renison Bell.
R. Smith's Tin Ore Prospect, Renison Bell.
Mount Paris Tin Mine, Ringarooma.
Swansea Silver-lead Mine, near Zeehan.
Miner's Dream and Old Boys' Gold Mines, Mathinna.
Freestone Beds of Ross.
Sophia River Tin Ore Prospects.
Arthur River Tailing Deposits.
Round Hill Silver-lead Mine.
Cygnet Gold Prospect, Cygnet.
Mineral Prospects, Gawler.
Calder River Gold Prospects.
Osmaston and Chudleigh Oil Shale Areas.
Adjutant and other Gold Prospects, Lefroy.
Sand Deposits of Beaconsfield.
Loongana District.
Mount Rattler, Mammoth, and Bell's Hill Tin Properties, near Branxholm.
Cambria and Liberator Lodes, Weldborough.
Railton Clay Deposits.
Water-supply, Mitchell's property, Kingston's-road.

GEOLOGICAL SURVEY BRANCH.

The reports of the Government Geologist and the Government Chemist and Assayer are appended.

INSPECTION OF MINES.

The reports of the Chief Inspector of Mines and the three district inspectors are appended.

AID TO MINING.

The report of the Government Mining Engineer is appended.

MOUNT CAMERON WATER-RACE.

The report of the manager is appended.

EXPLORATION.

Appended is a report by Chas. Howard, field-assistant.

DEPARTMENTAL STAFF.

Mr. A. McIntosh Reid was appointed Director of Mines on the 1st April, 1926, and, following upon this appointment, a plan for the reorganisation of the Department, recommended by the Public Service Commissioner, was approved by the Governor in Council, and duly came into operation on the 1st November, 1926.

This reorganisation involved the following staff changes:—

(1) The abolition of the office of Government Geologist, formerly occupied by the Director of Mines.
(2) Clerk.
(3) Clerk and Typiste.

And the creation of the new positions of:—

(1) Assistant-Geologist and Draftsman.
(2) Cadet Geologist.
(3) Typiste.

Further staff changes, detailed hereunder, occurred during the year:—

Miss Middleton, Clerk and Typiste, resigned, 30/4/1926.
Mr. W. S. R. Brue, relinquished duties, owing to the abolition of his position, on 15/11/1926.
Miss Priest, appointed to position of Typiste, 1/1/1926.
Miss Coker, appointed to position of Clerk and Typiste on 24/5/1926, and relinquished duties on 31/10/1926, owing to the abolition of her position.
Mr. Geo. Gallop, appointed Messenger, 1/7/1926.
Mr. J. C. Finlay, Clerk, Launceston office, resigned, 31/12/1926.

A. McINTOSH REID.

SUMMARY.

GENERAL REMARKS.

The value of the mineral output of the State for the year 1926 was £1,808,884, being an increase of £107,983 as compared with the year 1925.

The number of men employed for the same period was 5309, as compared with 5110 during 1925, an increase of 209 as compared with the previous year.

CADMIUM.

The output of cadmium during 1926 was 10·4 tons, valued at £1827, an increase of 5·2 tons, and a value of £649, as compared with the year 1925. This metal was obtained by the treatment of zinc products from the Hercules-Rosebery mines.

CARBIDE.

The output of carbide for the year was 3420 tons, valued at £68,400, and was produced by the Carbide Electro-Products Company, situated at Electrona (Margate). These figures show an increase in tonnage of 486, with a value over 1925 figures of £8353.

This property has been under offer to an English company, and it is expected that the option will be completed at a very early date.

COPPER.

The output of copper for the year was 6915 tons, valued at £454,854, an increase of 396 tons, and an increase in value of £18,193 over the preceding year. The product was solely from the Mount Lyell M. and R. Co.'s properties, which were the only mines dealing with copper during the year.

The average price of spot copper for 1926 was £58 1s., as compared with £61 9s. 7d. for the year 1925. The continual drop in copper prices has necessitated a reorganisation of mining and metallurgical methods, with a view to rendering the output more payable. The principal innovation was the proposal to establish refining works at Mount Lyell. The fact of a refinery being established on the mine will probably lead to the introduction of allied industries.

The Mount Lyell Mining and Railway Company Limited.—The General Manager (Mr. R. M. Murray) reports:—Mining operations during the year were mainly confined to the North Mount Lyell Mine, which again supplied practically the whole of the ore treated, the extraction from the Mount Lyell Mine having gradually reduced and being finally discontinued.

Mount Lyell Mine.—Operations in this mine were limited to the breaking of 5169 tons of pyrites above No. 5 level. Work was discontinued towards the end of the year, changes in the ore-reduction plant having made it possible to dispense with the use of the basic ore hitherto obtained from this mine. A small tonnage of copper precipitates was recovered from the mine water during the year.

North Mount Lyell Mine.—Development work was carried out in this mine during the year on a limited scale.

The extension of the Lyell Blocks shaft from the surface to the 1100-feet level was completed during the term, and the shaft is now in commission.

Ore-breaking proceeded actively throughout the year in the various levels, the extraction totalling 116,621 tons.

A quantity of copper precipitates was recovered, as usual, from the mine water.

The company contemplates the construction of a tunnel, 9 feet by 9 feet, in section, to make direct connection between the works and the 1100-feet level of this mine. The approximate distance will be 6900 feet, and it is expected that a start will be made with the work early in the coming year. It is estimated that this work will be completed towards the end of the year 1928.

Reduction Works.—Operations at the ore-reduction plant proceeded on usual routine lines throughout the year. It was decided to extend the grinding section of the concentrating mill by the installation of two additional ball mills, which are now in process of being made locally.

During the term the concentrating plant treated 113,932 tons of North Mount Lyell ore, producing 36,940 tons of concentrates. The metal-bearing material smelted totalled 44,856 tons, including 4745 tons of Mount Lyell pyrites, 3353 tons of North Lyell high-grade ore, and 36,758 tons of concentrates produced from North Mount Lyell ore, these figures being little changed from those of the preceding year, with the exception of Mount Lyell pyrites, which show a considerable falling off. The blister copper output totalled 6980 tons, as against 6599 tons for the previous year.

It has been decided to instal a copper refinery, adjacent to the reduction works, to undertake the refining of the company's blister copper output, which is at present being sent to Port Kembla. A start will be made early in the coming year with the construction work, which it is estimated will take about 12 months to complete.

Hydro-Electric Plant.—The Lake Margaret plant was in continuous operation during the year, and supplied the whole of the company's power and lighting requirements, as well as those of the Queenstown and Gormanston Municipalities. In addition, the supply of current through the Hydro-Electric Department for the requirements of the Electrolytic Zinc Company's works at Zeehan has been maintained.

The Mount Lyell Mining and Railway Company Limited: Return for the Calendar Year 1926.

Ore and metal-bearing flux smelted—

	Tons (Dry).
Ore:	
From the Company's Mount Lyell Mine ...	4,745
From the Company's North Lyell Mine ...	3,353
Concentrates:	
From the Company's North Lyell Mine Ore	36,758
Total	44,856

Blister copper produced—6980 tons: containing copper, 6916 tons; silver, 134,587 oz.; gold, 2306 oz.; approximate value, £481,846.

Average number of men employed—

Mining Department:		
At the Company's Mount Lyell Mine ...	133	
At the Company's North Lyell Mine ...	347	
At the Company's Lyell Comstock Mine	1	
		481
Reduction Works Department (including Lake Margaret)		386
Railway Department:		
Mount Lyell Railway	77	
North Lyell Railway	8	
		85
Total		952

Dividends paid during year, £145,034 8s. 9d. (2s. 3d. per share).

Dividends paid from the inception of the Company to the 31st December, 1926, £4,442,377.

Copper produced from the inception of the Company to the 31st December, 1926, 206,366 tons (fine).

Silver produced from the inception of the Company to the 31st December, 1926, 13,621,608 oz. (fine).

Gold produced from the inception of the Company to the 31st December, 1926, 387,085 oz. (fine).

COAL.

The output of coal for the year was 102,358 tons, valued at £90,401. This shows an increase in tonnage of 20,660 tons, and an increase in value of £19,977, over last year.

The market price of coal remained about the same as in the previous year. As usual, the largest output was

from the mines situated on the East Coast, the Cornwall, supplying 46,344 tons, the Mount Nicholas 29,535 tons, and the Jubilee Collieries 14,403 tons.

The Catamaran Collieries Limited became a regular producer, returning 9950 tons for the year. The establishment of this mine is of the utmost importance to the State, as the coal is of a good steaming variety, a variety needed in Tasmania. It is to be hoped that the exploitation will develop a tonnage sufficient to make the State independent of mainland supplies.

This company has erected an up-to-date loading station, from which ships can be loaded at the rate of 300 tons per hour. It is connected with a railway to its mines—a distance of about 2 miles.

The Seymour Coal Mine is being floated on the mainland, with a view to establishing mainland markets.

The railway from Cole's Bay to the Dalmayne Mine is being constructed slowly.

York Plains and Illamartha Mines are returning small tonnages for local use.

Development work is being carried out at Meunna Mine, Preolenna, Strathblane (Dover), Mount Christie (Avoca), and Fingal (Fingal).

CEMENT.

The output of cement for the year under review was 33,611 tons, valued at £166,447, an increase of 1037 tons, and a value of £3577, as compared with the year 1925. The principal producer was the National Portland Cement Proprietary, Maria Island, the return being 29,025 tons. In June the Tasmanian Cement Company, at Railton, commenced to produce, and to the end of the year manufactured 4586 tons. The quality of the article appears to have given every satisfaction, and there has been a ready sale for all produced.

GOLD.

The gold output for the year was 4222·748 oz., valued at £17,936, against 3523·87 oz. in 1925, at a value of £15,041, an increase for the past 12 months of 698·878 oz., and a value of £2895. The principal producers were the Mount Lyell Company (from copper matte), which yielded 2306 oz., and the Golden Gate, which produced 1481 oz. This mine is the principal gold mine in the north of the State, and is the largest producer. Prospecting work was carried out on the Miner's Dream, Mathinna, by sinking a shaft 280 feet, and cross-cutting was commenced to cut the lode, this being carried out for a total length of 300 feet. A winze sunk in the old workings showed that the reef had turned down vertically, and that further cross-cutting was necessary. A 10-head battery has been erected.

At the Old Boys' Mine a shaft has been carried to a depth of 300 feet, and several small "makes" of stone have been located.

A large amount of prospecting has been carried out in the Alberton district without anything of importance being discovered.

The Cygnet Gold Mining Company sank a main shaft to a depth of 200 feet, and is cross-cutting at that depth to locate any ore-bodies which exist.

Round Hill Mine produced 131 oz. of gold, which was obtained from the silver-lead ore.

During the year 1926 fine gold reached an average price of £4 4s. 11½d. per oz.

LEAD.

The output of lead for the year was 5892·58 tons, valued at £183,167. This showed an increase in production of 366·65 tons, but a decrease of £14,275 in value on the figures for 1925. The average value for the year was £31 2s. 3d. per ton, against £35 17s. 3d. for 1925.

In the Northern and Southern Divisions Round Hill produced 394·5 tons. In the North-West the output was 1017 tons, of which 1011 tons were produced by the Magnet Company. The Western Division produced 4481·08 tons, of which the largest producer was the Hercules-Rosebery group, which returned 2184·6 tons. The North Mount Farrell Mine produced 1789·8 tons. It is the intention of this company to sink a new main shaft to explore the lower levels of the mine, and also to instal a flotation plant for the treatment of residues.

The South Comet has been equipped with a treatment plant, and made its first return in September. At the latter end of the year a Cascade flotation plant was in course of erection.

A company has acquired the North Zeehan Mine, and active steps are being taken to carry on vigorous operations.

At the Hercules-Rosebery a boring policy was carried out which exposed large bodies of high-grade ore, and added considerably to the value of the property.

The Horseshoe Syndicate, which is operating on the section formerly held by the Tasmania Crown Lyell Extended Company, is exploiting a large body of lead-zinc ore. The property is under option to a mainland company, and, pending flotation, a very small amount of work has been carried out.

The New Sterling Valley commenced operations, having erected a small mill with a view to treating a large low-grade ore-body.

The prospects of markets for lead-mining are very favourable.

LIMESTONE.

The output of limestone for the year under review was 153,707 tons, of a value of £153,219, an increase of 29,037 tons, and a value of £28,549, over last year. The principal producer was the Broken Hill Proprietary Company, at Devonport, whose output was 145,869 tons. This was shipped to Newcastle Iron Works for flux.

The Electrolytic Zinc Company, Risdon, produced 6037 tons.

Limestone used for building purposes and burning into lime is not recorded, but only limestone used for metallurgical purposes.

OCHRE.

The output of ochre for the year was 38 tons, valued at £69. None was produced during the year 1925. The small amount mined is used in connection with the Serpentine Paint Company at Launceston.

OSMIRIDIUM.

The output of osmiridium for the State for 1926 was 3172·5 oz., amounting in value to £61,908. The principal output was from Adamsfield. The production for 1925 was 3365·543 oz., valued at £103,570. During the year 1926 the yield for the first quarter was 1012·7 oz., and for the last quarter 570·5 oz. The reduction was due largely to the decrease in price. The average price for the first quarter was £23 10s., and for the last quarter £11 7s. per oz.

Owing to the unsatisfactory market for the metal early in the year a pool was formed for the disposal of osmiridium, in an endeavour to stabilise the price. Unfortunately, this step did not produce the desired effect, and there has been a gradual decrease, not only in the metal produced, but also in the number of miners employed on the field.

SILVER.

The output of silver for the year was 766,653 oz., valued at £97,988. The principal producer was the Hercules-Rosebery with 262,010 oz., the next being North Mount Farrell with 173,295 oz. These were followed by the Mount Lyell Company with 134,516 oz.

The average price for silver for the year was 2s. 6·75d., the price remaining fairly consistent, but closing slightly weaker at 2s. 3·05d. per fine oz.

The increase of silver for the year 1926 over that of 1925 was 36,460 oz., but a lesser value of £7521.

In passing it may be said that the silver output from the Mount Lyell Company was obtained from copper ore, and that from the Hercules-Rosebery from zinc-lead ore.

SHALE.

The output of shale for the year 1926 was 2127 tons, valued at £1475. These figures show an increase of 1307 tons over the year 1925, with a corresponding increase in value of £916. The largest output was from the Australian Shale Oil Corporation, at Latrobe. This company is erecting the first unit of a treatment plant, after thoroughly boring a large area which shows a bed of shale 6 feet thick. A dip tunnel has been carried down on this, and a quantity of shale extracted for experimental purposes. Should the returns be satisfactory there is no doubt that this will be the scene of very large operations.

Successful tests were made by the Southern Cross Oil Refineries Limited with its new type of retort.

During the year a new discovery of shale was made near Chudleigh.

TIN.

For the year the output of tin was 1096·16 tons, valued at £322,526, being a reduction of 33·5 tons as compared with the previous year, but an increased value of £25,011. The average market price was £291 3s. as compared with £261 1s. 8d. for 1925.

Briseis, Endurance, Pioneer, and Mount Bischoff Mines were the principal producers. Owing to the increase in price greater activities took place in regard to tin operations. Areas were taken up, and prospecting parties formed, to locate discoveries, throughout the State. In the North-Eastern Division activity was more marked, companies having been formed in connection with the working of deposits at Wynifred River, South Mount Cameron (Gladstone), and other centres of the North-East Coast. A large number of plants have been erected and there is every prospect of the output in the following year being largely increased.

Cox's Bight received attention by the formation of a strong syndicate on the mainland, and there is every promise, as a result of its operations, of a new field being located.

WOLFRAM.

The output of wolfram for 1926 was 83·15 tons, valued at £5265, being a decrease of £9393 in value, and a tonnage of 91·02, as compared with 1925 figures. The price of this mineral remains low, too low to allow of mines being operated for wolfram alone. The output was obtained from material associated with tin ore.

ZINC.

The output of zinc for the year was 5377·75 tons, valued at £183,362, this being an increase of 2265·06 tons, with a value of £72,671, over last year. The principal producer was the Hercules-Rosebery, which won 5161·8 tons. The average price for the year was £34 3s. This metal showed a slight decrease throughout the year, opening at £35 19s. and closing at £33 11s.

Satisfactory results were obtained from the Hercules-Rosebery experimental plant, and this should be the means of a large zinciferous area on the West Coast being brought into prominence later on.

GENERAL.

The advance of the industry generally during the year under review can be looked upon with satisfaction, and the future prospects may be considered bright, especially with regard to tin and zinc-lead ores.

There is considerably more activity with regard to prospecting than has been the case for some years past, and with such large areas of unprospected country, and country covered with dense vegetation in the mineralised belt, a valuable discovery may take place at any time.

During the year hand-boring plants were largely availed of for water-supply purposes, and the introduction of a diamond drilling outfit will tend to enhance greatly the prospects of future mining.

Improvements have been made in the extraction processes at the Electrolytic Zinc Company's works at Risdon, and additions made to the sulphuric acid plant, which is now capable of an output of 10,000 tons monohydrate sulphuric acid per annum. It is hoped that the consumption of superphosphate in Tasmania will continue to increase. An extension of research activities has been a feature of the year.

In 1926 the Electrolytic Zinc Company's Risdon works, in addition to zinc recovered from State products, produced 41,836 tons of zinc, valued at £1,427,845, and 149·8273 tons of cadmium, valued at £27,746, from other than Tasmanian ores, and employed an average of 1051 men.

(No. 4.)

No. 1.

RETURN showing the Quantity and Value of Asbestos produced from 1899 *to* 1920-26 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1899	200	363
1900	128	113
1901	46·5	45
1902–1915	—	—
1916	15	30
1917	271	271
1918	2854	5008
1919	51	1275
1920–1926	—	—
	3565·5	£7105

No. 2.

RETURN showing the Quantity and Value of Barytes produced during the Years 1916 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1916	83	359
1917	52	234
1918	217	977
1919	399	1160
1920	1048	4163
1921–1924	—	—
1925	3·5	16
1926	—	—
	1802·5	£6909

No. 3.

RETURN showing the Quantity and Value of Bismuth produced from 1904 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1904	·3	15
1905	3·5	800
1906	·3	24
1907	·175	27
1908	3·75	462
1909	2·9	980
1910	10·70	4249
1911	14·395	5758
1912	7·59	2646
1913	5·08	1627
1914	5·619	1666
1915	5·5	1203
1916	3·51	1059
1917	4·212	895
1918	4·608	1038
1919	1·77	573
1920	·10	9
1921	·05	21
1922	—	—
1923	—	—
1924	—	—
1925	—	—
1926	—	—
	74·059	£23,052

No. 4.

RETURN showing the Quantity and Value of Cadmium produced during the Years 1924, 1925, *and* 1926.

Year.	Quantity.	Value.
	Tons.	£
1924	5·247	1175
1925	5·2454	1178
1926	10·4014	1827
	20·8938	£4180

No. 5.

RETURN showing the Quantity and Value of Carbide produced during the Years 1922 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1922	4512	135,509
1923	3236	64,720
1924	3305	65,660
1925	2934	60,047
1926	3420	68,400
	17,407	£394,336

No. 6.

RETURN showing the Quantity and Value of Cement produced during the Years 1924, 1925, *and* 1926.

Year.	Quantity.	Value.
	Tons.	£
1924	21,026	105,130
1925	32,574	162,870
1926	33,611	166,447
	87,211	£434,447

No. 7.

RETURN showing the Quantity and Value of Coal raised from 1880 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1880 to 1903 inclusive	767,261·5	659,010
1904	61,109	51,942
1905	51,993	44,194
1906	52,895·75	44,962
1907	58,891	50,057
1908	61,067·75	51,907
1909	66,161·75	56,237
1910	82,445	48,609*
1911	57,067	26,214*
1912	53,560	24,568*
1913	55,043	25,367*
1914	60,794	27,853*
1915	64,536·25	30,418*
1916	55,575	27,736*
1917	63,412	38,673*
1918	60,163	37,676*
1919	66,253	47,004*
1920	75,429	64,005*
1921	66,476	63,446*
1922	69,238	61,016*
1923	80,718	70,797*
1924	75,988	66,555*
1925	81,698	70,424*
1926	102,358	90,401*
	2,290,133	£1,779,071

* Value at pit's mouth.

No. 8.

RETURN showing the Quantity and Value of Blister Copper produced from 1896 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1896 to 1903 inclusive	52,154	4,186,805
1904	8371	*582,540
1905	8610	*704,287
1906	8708	*862,444
1907	8247	*832,691
1908	8833	*603,063
1909	8638	*586,419
1910	8193	*553,822
1911	6022	*385,797
1912	5136	*430,965
1913	4569	*364,732
1914	7509	*477,361
1915	7901	*709,167
1916	6305	*884,689
1917	5845	*841,583
1918	5559	*772,162
1919	5071	*557,710
1920	4837	*576,046
1921	6221	*493,271
1922	—	*410,046
1923	—	*452,879
1924	—	*479,825
1925	—	*455,887
1926	—	*472,245
	—	17,676,436

* Value of Gold contents deducted.

No. 9.

RETURN showing the Quantity and Value of Copper in Blister Copper and Copper Ore during the Years 1919 *to* 1926 *inclusive.*

Year.	In Blister Copper.		In Copper Ore.		Total	
	Q'ty.	Value.	Q'ty.	Value.	Q'ty	Value.
	Tons.	£	Tons.	£	Tons.	£
1919	5014	503,977	13	984	5027	504,961
1920	4791	528,177	·75	60	4791·75	528,237
1921	6171	462,876	9·843	287	6180·843	463,163
1922	5616	391,535	—	—	5616	391,535
1923	6063	435,282	1·7	131	6064·7	435,413
1924	6698	457,386	—	—	6698	457,386
1925	6539	436,661	—	—	6539	436,661
1926	6915	454,854	—	—	6915	454,854

No. 10.

RETURN showing Quantity and Value of Copper Matte exported during the Years 1902, 1903, *and* 1904 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1902	2500	50,112
1903	3727	83,624
1904–1926	—	—
	6227	133,736

No. 11.

RETURN showing the Quantity and Value of Copper Ore produced from 1896 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1896 to 1903 inclusive	23,736·5	298,292
1904	104	1640
1905	1150·75	52,939
1906	2234·5	72,480
1907	788·25	36,975
1908	1185	6588
1909	1587·8	21,619
1910	671·27	13,150
1911	2286	22,852
1912	1391·6	9479
1913	1966·8	10,932
1914	3287·75	18,680
1915	66	1367
1916	96·84	3765
1917	771·40	6171
1918	444·170	3944
1919	123	984
1920	1·50	60
1921	—	287
1922	—	—
1923	1·70	131
1924	—	—
1925	—	—
1926	—	—
	41,894·83	579,335

No. 12.

RETURN showing the Quantity and Value of Gold won from 1880 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Ozs.	£
1880 to 1903 inclusive	1,265,836·95	4,905,706
1904	65,921	280,015
1905	73,540·5	312,380
1906	60,023·4	254,963
1907	65,354·25	277,607
1908	57,085·1	242,482
1909	44,777·366	190,201
1910	37,048·053	157,370
1911	31,100·873	132,108
1912	37,973·252	161,300
1913	33,400·457	141,876
1914	26,243·453	111,475
1915	18,547·338	78,784
1916	15,790·096	67,072
1917	14,496·464	61,577
1918	10,528·930	44,724
1919	7,686·470	32,650
1920	6,246·192	29,796
1921	5,340·094	28,395
1922	3,431·486	15,998
1923	3,684·124	16,639
1924	4,625·600	21,563
1925	3,523·870	15,041
1926	4,222·748	17,936
	1,896,428·066	7,597,658

No. 13.

RETURN showing the Quantity and Value of Iron Ore produced from 1897 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1897 to 1903 inclusive	20,442	16,276
1904	6840	2975
1905	6300	2600
1906	2600	1100
1907	3000	1150
1908	3600	1600
1909–1926	—	—
	42,762	25,701

No. 14.

RETURN showing the Quantity and Value of Iron Pyrites produced during the Years 1915 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1915	12,835·59	8945
1916	14,005·084	13,597
1917	7,685·549	7137
1918	5,105·600	4667
1919	3,456·95	4288
1920	4,440	7346
1921	606·5	2579
1922	8,276	18,620
1923	11,882	26,737
1924	—	—
1925	—	—
1926	—	—
	68,293·273	93,916

No. 15.

RETURN showing the Quantity and Value of Lead included in Silver Lead during the Years 1919 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1919	2357·142	64,403
1920	3855·639	142,268
1921	1434·794	32,241
1922	4925·880	118,257
1923	4784·057	127,542
1924	4559·110	154,881
1925	5525·99	197,452
1926	5892·58	183,167

No. 16.

RETURN showing the Quantity and Value of Limestone produced during the Years 1923 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1923	100,113	122,428
1924	146,140	146,140
1925	124,670	124,670
1926	153,707	153,219
	524,630	546,457

No. 17.

RETURN showing the Quantity and Value of Ochre produced during the Years 1918 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1918	100	200
1919	—	—
1920	—	—
1921	14	56
1922	—	—
1923	—	—
1924	20	50
1925	—	—
1926	38	69
	172	375

No. 18.

RETURN showing the Quantity and Value of Osmiridium produced during the Years 1910 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Ozs.	£
1910	120	530
1911	271·88	1888
1912	778·77	5742
1913	1261·65	12,016
1914	1018·83	10,076
1915	247·048	1581
1916	222·150	1899
1917	332·079	4898
1918	1606·743	44,833
1919	1669·715	39,614
1920	2009·196	77,114
1921	1750·655	42,935
1922	1173·924	35,512
1923	673·423	19,642
1924	364·805	10,617
1925	3365·543	103,570
1926	3172·5	61,908
	20,038·911	474,375

No. 19.

RETURN showing the Quantity and Value of Scheelite produced during the Years 1917 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1917	69	12,130
1918	216	39,252
1919	198·98	43,181
1920	105·09	17,905
1921–1926	—	—
	589·07	112,468

No. 20.

RETURN showing the Quantity and Value of Shale produced during the Years 1910 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1910	364	214
1911	500	250
1912	—	—
1913	130	130
1914	75	75
1915	—	—
1916	1286	1286
1917	—	—
1918	—	—
1919	600	900
1920	140	172
1921	868	1506
1922	40	100
1923	1101	1094
1924	1576	1526
1925	820	559
1926	2127	1475
	9627	9287

No. 21.

RETURN showing the Quantity and Value of Silver-Lead Ore produced from 1888 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1888 to 1903 inclusive	300,977·5	2,571,771
1904	51,138	203,702
1905	75,270·5	246,888
1906	87,117·75	462,443
1907	89,762·5	572,560
1908	63,116·9	322,007
1909	80,378·35	298,880
1910	51,226·91	247,576
1911	61,501·195	253,361
1912	90,123·868	309,098
1913	83,289·268	319,997
1914	11,565·54	96,225
1915	10,382·95	91,689
1916	11,229·410	153,796
1917	9575·780	152,122
1918	7241·400	127,176
1919	* —	136,234
1920	—	261,166
1921	—	59,422
1922	—	223,183
1923	—	201,284
1924	—	230,279
1925	—	283,735
1926	—	263,764
	—	8,088,358

* "Quantity" discontinued, as it has been found previous figures are misleading concentrates, hand-picked ore, and crude ore having all been added and included under the one head.

No. 22.

RETURN showing the Quantity and Value of Silver contained in Silver-Lead and Blister Copper during the Years 1919, 1920, 1921, 1922, 1923, 1924, 1925, *and* 1926.

Year.	In Silver Lead.		In Blister Copper.		Total.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Ozs.	£	Ozs.	£	Ozs.	£
1919 ...	296,719·27	71,831	228,624	53,733	525,343·27	125,564
1920 ...	453,411	118,898	169,948	47,869	623,359	166,767
1921 ...	165,637	27,181	183,021	30,395	348,658	57,576
1922 ...	674,886	104,926	119,699	18,511	794,585	123,437
1923 ...	516,073·61	73,742	122,528	17,597	638,601·61	91,339
1924 ...	494,782	75,398	147,376	22,439	642,158	97,837
1925 ...	597,012·67	86,283	133,181	19,226	730,193·67	105,509
1926 ...	...	80,597	...	17,391	766,653	97,988

No. 23.

RETURN showing the Quantity and Value of Tin exported from Tasmania from 1880 *to* 1904 *(compiled from Customs Returns only), Tin Ore produced during the Years* 1905 *to* 1918 *inclusive, and Metallic Tin produced during the Years* 1919 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1880 to 1904 inclusive	76,708·4	7,167,564
1905	3891·5	362,670
1906	4472·75	557,266
1907	4342·75	501,681
1908	4520·8	421,580
1909	4511·2	418,165
1910	3701·01	399,393
1911	3953·05	513,500
1912	3713·825	543,103
1913	4010·41	531,983
1914	2572·713	259,300
1915	2599·234	292,306
1916	2854·636	350,852
1917	2637·337	427,917
1918	2256·203	488,798
1919	1580·22*	395,794
1920	1310·411*	369,362
1921	790·395*	130,257
1922	679·440*	112,407
1923	1160·390*	236,955
1924	1108·450*	275,014
1925	1129·662*	297,515
1926	1096·16	322,526
	14,700·946	15,375,708

* Metallic Tin.

No. 24.

RETURN showing the Quantity and Value of Wolfram produced from 1899 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1899 to 1903 inclusive	57·25	2157
1904	15·5	1147
1905	32·25	2371
1906	19·75	1465
1907	40·75	4411
1908	4·5	338
1909	28·35	2494
1910	67·35	7280
1911	69·96	7769
1912	66·49	6601
1913	68·07	7040
1914	46·873	4327
1915	94·685	11,115
1916	106·265	16,910
1917	172·190	28,714
1918	155·362	27,239
1919	120·907	26,613
1920	70·89	13,626
1921	10·34	676
1922	19·26	1024
1923	96·86	6150
1924	54	2785
1925	174·170	14,658
1926	83·15	5265
	1675·172	202,175

No. 25.

RETURN showing the Quantity and Value of Zinc produced during the Years 1917 *to* 1926 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1917	48	1968
1918	3822	152,880
1919	285	13,110
1920	9·3	334
1921–1923	—	—
1924	2748·75	90,485
1925	3112·69	110,691
1926	5377·75	183,362
	15,403·49	552,830

No. 26.

RETURN showing Value of Minerals and Metal raised in Tasmania from 1880 *to* 1926 *inclusive.*

Mineral or Metal.	Value.
	£
Asbestos	7105
Barytes	6909
Bismuth	23,052
Cadmium	4180
Carbide	394,336
Cement	434,447
Coal	1,779,071
*Copper (Blister)	17,676,436
Copper Matte	133,736
Copper Ore	579,335
Gold	7,597,658
Iron Ore	25,701
Iron Pyrites	93,916
Limestone	546,457
Ochre	375
Osmiridium	474,375
Scheelite	112,468
Shale	9287
*Silver-lead	8,088,358
Tin	15,375,908
Woltram	202,175
Zinc	552,830
Unenumerated prior to 1894	31,988
Total	54,150,103

* Metallic contents and values are shown in Tables Nos. 9, 15, and 22.

No. 27.

RETURN showing the Amounts paid in Dividends by Mining Companies during the Year ending 31st December, 1926.

Mines.	Dividends.
	£ s. d.
Copper	2114 0 0
Gold	...
Tin	8916 0 0
Silver	...
Coal	...
Total	£11,030 0 0

No. 28.

RETURN showing the Average Number of Persons engaged in Mining during the Years 1880 to 1926 inclusive.

Year.	Number.	Year.	Number.
1880	1653	1904	6194
1881	3156	1905	6581
1882	4098	1906	7005
1883	3818	1907	7516
1884	2972	1908	6466
1885	2783	1909	6054
1886	2681	1910	5770
1887	3361	1911	5247
1888	2989	1912	5566
1889	3141	1913	6107
1890	2868	1914	4741
1891	3219	1915	3908
1892	3295	1916	3864
1893	3403	1917	4050
1894	3433	1918	4278
1895	4062	1919	4413
1896	4350	1920	5364
1897	4510	1921	4011
1898	6052	1922	3835
1899	6622	1923	4785
1900	7023	1924	5264
1901	6923	1925	5110
1902	5934	1926	5309
1903	6017		

No. 29.

RETURN showing the Mining Companies registered during the Year ending 31st December, 1926.

Number of Companies.	Capital.
12	£72,600

In addition to the above, five Agents for Foreign Companies and one Syndicate under Part Va. of the Act were registered.

No. 30.

RETURN showing the Average Number of Miners employed during the Year ending 31st December, 1926.

Division.	Number.
Northern and Southern	2353
North-Eastern	486
Eastern	522
North-Western	421
Western	1527
	5309

No. 31.

RETURN showing the Total Amount of Rents, Fees, &c., received by the Mines Department during the Year ending 31st December, 1926.

Head of Revenue.	Amount.
	£ s. d.
Rent of Auriferous and Mineral Land	12,148 17 10
Fees, ditto ditto	2333 14 3
Survey Fees	4455 13 4
Fees under "Explosives and Inflammable Liquid Act"	686 3 6
Total	£19,619 8 11

No. 32.

RETURN showing the Total Area of Land and Number of Sluiceheads of Water applied for during the Year ending 31st December, 1926.

Mineral.	Number.	Sluiceheads.	Area.
			Acres.
Barytes	...	...	...
Clay	...	...	...
Coal	6	...	1770
Copper	1	...	80
Gold	33	...	605
Ilmenite	1	...	76
Limestone	2	...	240
Minerals	37	...	1914
Osmiridium	1	...	10
Phosphate Ore	1	...	7
Silver	5	...	224
Stone	1	...	14
Slate	...	...	...
Tin	327	...	11,345
Wolfram	1	..	9
Nickel Copper	1	...	10
Zinc Lead	3	...	120
Machinery Sites	3	...	10
Mining Easements	11	...	29
Dredging Claims	49	...	1013
Water Rights and Dam Sites	101	348	298
Licences to search for Coal or Oil	1	...	1920
	585	348	19,694

No. 33.

RETURN showing Total Number and Area of Leases and Licences issued during the Year ending 31st December, 1926.

Mineral.	Leases.	Sluiceheads.	Area.
			Acres.
Arsenic	...	...	...
Clay	1	...	19
Copper	1	...	3399
Coal	11	...	9
Dredging Claims	23	...	238
Gold	18	...	500
Gems	...	...	...
Iron	2	...	134
Limestone	...	...	...
Minerals	27	...	1690
Machinery Sites	3	...	16
Mining Easements	3	...	19
Osmiridium	4	...	35
Phosphate Rock	1	...	7
Silver Lead	3	...	30
Stone	1	...	40
Shale Oil	...	...	...
Tin	81	...	2034
Water Rights and Dam Sites	26	165	7
Licences to search for Coal and oil	3	...	3560
	208	165	11,737

t of Rents, Fees, &c., received
he Year ending 31st December,

	Amount.
	£ s. d.
d.....	12,148 17 10
.....	2333 14 3
.....	4455 13 4
iable Liquid	
.....	686 3 6
.....	£19,619 8 11

2.

f Land and Number of Sluice-
turing the Year ending 31st

r.	Sluiceheads.	Area.
		Acres.
	...	...
	...	...
	...	1770
	...	80
	...	605
	...	76
	...	240
	...	1914
	...	10
	...	7
	...	224
	...	14
	...	...
	...	11,345
	..	9
	...	10
	...	120
	...	10
	...	29
	...	1013
	348	298
	...	1920
	348	19,694

33.

and Area of Leases and Licence s
31st December, 1926.

s.	Sluiceheads.	Area.
		Acres.
	...	...
	...	19
	...	3399
	...	9
	...	238
	...	500
	...	...
	...	134
	...	...
	...	1690
	...	16
	...	19
	...	35
	...	7
	...	30
	...	40
	...	...
	...	2034
	165	7
	...	3560
	165	11,737

No. 34.

RETURN showing the Total Number of Leases and Licences in force on 31st December, 1926.

Mineral.	No. of Leases.	No. of Sluiceheads.	Area.
			Acres.
Asbestos	1	...	1
Coal	34	...	10,464
Copper	4	...	99
Clay	4	...	32
Dredging Claims	42	...	363
Gold	42	...	870
Gems	1	...	80
Iron	15	...	690
Kaolin	1	...	5
Limestone	8	...	951
Mining Easements	68	...	494
Machinery Sites	25	...	150
Minerals	117	...	7952
Nickel	1	...	80
Osmiridium	7	...	108
Ochre	1	...	20
Phosphate Rock	1	...	7
Serpentine	1	...	80
Shale	3	...	1689
Silver-lead	20	...	561
Slate	...	...	...
Tin	368	...	12,400
Water-rights and Dam Sites	360	1591	2190
Wolfram	3	...	46
Licences to search for Coal or Oil	8	...	10,660
	1135	1591	49,992

No. 35.

RETURN showing the Annual Value of Mineral Products for the State of Tasmania from 1880 to 1926 inclusive.

Year	Value.	Year.	Value.
	£		£
1880	554,031	1904	1,379,204
1881	602,723	1905	1,729,129
1882	556,306	1906	2,257,147
1883	560,873	1907	2,277,159
1884	468,302	1908	1,650,027
1885	518,885	1909	1,574,995
1886	489,966	1910	1,432,193
1887	593,256	1911	1,349,497
1888	616,733	1912	1,493,502
1889	504,718	1913	1,415,700
1890	444,210	1914	1,007,038
1891	528,388	1915	1,225,575
1892	526,909	1916	1,521,050
1893	627,909	1917	1,584,290
1894	732,764	1918	1,750,574
1895	575,692	1919	1,301,090
1896	662,058	1920	1,421,104
1897	1,006,140	1921	822,851
1898	1,071,084	1922	1,013,415
1899	1,660,622	1923	1,219,456
1900	1,888,695	1924	1,496,804
1901	1,763,896	1925	1,700,861
1902	1,378,406	1926	1,808,844
1903	1,354,044	Unenumerated prior to 1894	31,988
			£54,150,103

No. 36.

RETURN showing the Number and Area of Leases held under "The Mining Act," in force on 31st December, 1918 to 1926 inclusive.

Nature of Lease.	In force on 31st Dec., 1918.		In force on 31st Dec., 1919.		In force on 31st Dec., 1920.		In force on 31st Dec., 1921.		In force on 31st Dec., 1922.		In force on 31st Dec., 1923.		In force on 31st Dec., 1924.		In force on 31st Dec., 1925.		In force on 31st Dec., 1926.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.
For Minerals, Silver, Tin, &c.	796	32,011	823	31,006	795	30,043	901	31,719	716	26,459	614	21,880	460	23,308	532	23,588	541	22,129
For Coal, Slate, Shale, &c.	44	10,729	45	11,562	50	11,667	66	15,430	73	16,809	66	16,053	27	8901	35	9922	49	13,136
For Gold	43	657	32	537	65	1403	92	1894	127	2424	108	1687	91	1829	70	1340	42	870
Dredging Claims	23	323	31	482	30	410	29	413	36	399	33	369	20	289	20	195	42	363
Mining Easements	111	594	113	608	104	616	97	621	87	607	81	606	77	592	77	570	68	494
Machinery Sites	37	165	38	180	33	147	34	152	31	123	30	124	26	115	27	112	25	150
Licences to search for Coal or Oil	—	—	—	—	—	—	51	117,031	73	137,692	36	34,761	21	38,528	19	14,130	8	10,669
Water-rights Mineral and Gold	494	2121 & 1865 sluice-heads	551	2116 & 1975 sluice-heads	559	2094 & 1982 sluice-heads	543	2247 & 2060 sluice-heads	493	3002 & 1814 sluice-heads	435	2147 & 1612 sluice-heads	338	1 & 1520 sluice-heads	371	2167 & 1604 sluice-heads	360	2190 & 1591 sluice-heads

No. 37.

COMPARATIVE Statement of Revenue from Mines, being Rents, Fees, Storage of Explosives, &c. (exclusive of Survey Fees), paid to the Treasury for the Years ending 30th June, from 1882 to 1903, and for Six months ending 31st December, 1903, and for the Years ending 31st December, 1904 to 1926, inclusive.

Year.	Amount.	Year.	Amount.
	£ s. d.		£ s. d.
1882	23,077 1 9	1904, Jan. to Dec.	16,631 8 2
1883	15,439 14 5	1905	20,208 17 0
1884	6981 11 10	1906	24,136 12 5
1885	11,070 5 7	1907	24,794 7 7
1886	12,523 10 4	1908	20,311 3 0
1887	14,611 11 5	1909	22,804 1 5
1888	23,502 8 4	1910	22,221 18 0
1889	17,254 9 0	1911	20,556 15 10
1890	26,955 4 9	1912	17,639 19 11
1891	37,829 16 5	1913	19,410 17 8
1892	17,568 18 4	1914	14,087 0 6
1893	16,971 9 2	1915	17,679 3 6
1894	16,732 7 7	1916	14,678 19 10
1895	15,323 1 9	1917	14,669 7 2
1896	20,901 13 2	1918	17,833 14 9
1897	25,631 0 3	1919	15,388 7 7
1898	33,661 13 9	1920	16,767 11 6
1899	24,696 10 5	1921	11,248 14 11
1900	28,380 11 10	1922	14,184 7 3
1901	21,569 5 2	1923	13,224 11 9
1902	19,471 0 1	1924	14,678 13 11
1903	17,776 14 3	1925	14,229 8 7
1903, 1 July to 31 Dec.	14,758 17 1	1926	15,163 15 7

The above Statement does not include Stamp Duties upon Transfer of Leases and Tax payable upon Dividends, from which sources large sums are derived.

No. 38.

RETURN Showing the Average Annual Prices for Minerals during recent years.

	Average for 1916.	Average for 1917.	Average for 1918.	Average for 1919.	Average for 1920.	Average for 1921.	Average for 1922.	Average for 1923.	Average for 1924.	Average for 1925.	Average for 1926.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Copper—Standard, Spot : per ton	116 1 3	125 2 5	115 11 6	90 19 4	97 12 5	69 8 8	62 3 6	66 7 4	63 4 3	61 9 7	58 1 0
Lead—Soft Foreign : per ton	30 19 6	30 0 0	30 2 8	28 3 11	38 4 7	22 14 6	23 14 10	25 19 4	33 13 11	35 17 3	36 2 3
Spelter : per ton	68 8 11	52 3 6	52 3 11	42 5 3	45 4 6	26 4 1	29 14 2	32 18 4	33 12 0	36 5 0	34 3 0
Tin—Standard, Spot : per ton	182 3 5	237 13 1	329 11 2	257 9 8	296 1 7	165 8 2	159 10 9	191 7 5	248 17 4	261 1 8	291 3 0
Silver—Standard, Spot : per oz	2 7·32	s. d. 3 4·88	s. d. 3 11·57	s. d. 4 9·06	s. d. 5 1·56	s. d. 3 0·875	s. d. 2 10·41	s. d. 2 8·37	s. d. 2 9·97	s. d. 2 8	s. d. 2 6¾

No. 39.

RETURN showing the Quantity and Value of Minerals Produced in the State of Tasmania during the Year 1926.

Mineral.	Quantity.	Value.
		£
Cadmium ..... tons	10·4014	1827
Carbide ..... „	3420	68,400
Copper..... „	6915	454,854
Coal ..... „	102,358	90,401
Cement ..... „	33,611	166,447
Gold .....ozs. f.	4222·748	17,936
Lead..... tons	5892·58	183,167
Limestone..... „	153,707	153,219
Ochre..... „	38	69
Osmiridium ..... ozs.	3172·50	61,908
Silver .....ozs. f.	766,653	97,988
Shale..... tons	2127	1475
Tin ..... „	1096·16	322,526
Wolfram ..... „	83·15	5265
Zinc ..... „	5377·75	183,362
Total.....	...	£1,808,844

REPORT OF THE GOVERNMENT GEOLOGIST FOR THE YEAR 1926.

Hobart, 6th April, 1927.

SIR,

I HAVE the honour to submit my report for the year ended 31st December, 1926.

Field Investigations.

The field work during the year consisted mainly of special examinations of short duration in connection with individual mines, deposits, and underground water supplies.

The two most extended field trips were those to the Low Rocky Point and the North-Eastern districts. The Low Rocky Point district was examined during the months of February and March, and this examination is the first geological one made of the district. The rocks are mainly an ancient series of schistose rocks, with intrusive granite and quartz-felspar porphyries. Veins of galena, pyrite, and chalcopyrite, hematite, and also quartz, with the above metallic and some gangue minerals, occur. They are numerous, but generally of small dimensions, and those found are of no commercial value. Some of the quartz veins are gold-bearing, but only to a small extent. The largest deposits are those of pyrite, with a small content of copper.

The extended trip to the North-Eastern districts comprised an investigation of the mineral resources, especially those of tin ore, in connection with the possible provision of hydro-electric power.

The following list contains a complete statement of the field-work performed:—

(1) Geological examination of limestone quarry at Ida May for Hydro-Electric Department.
(2) Geological examination of the Magnet Mine.
(3) Geological examination of the property of Mr. R. G. Vernon, East Devonport.
(4) Geological examination of Mr. A. Gillow's property, Bagdad.
(5) Geological survey of Low Rocky Point district.
(6) Geological examination of Baker's Discovery Mine, Branxholm.
(7) Geological survey of Dalmayne and Mount Peter districts, East Coast.
(8) Geological examination of the properties of Mr. Kirwood, Howden, and Margate.
(9) Second examination of Dalmayne and Mount Peter districts.
(10) Geological examination of the Gipps Creek and Story Creek district.
(11) Geological examination of Caudry's Osmiridium Mine, Bald Hill.
(12) Geological investigation of the North-Eastern districts in connection with possible provision of hydro-electric power.

The following reports were prepared in connection with the above and other field trips, and upon other subjects:—

(1) Report on Property of Mr. P. G. Vernon, East Devonport.
(2) Report on Limestone Quarries at Ida Bay.
(3) Report on Possibility of Obtaining Supplies of Underground Water on Mr. A. Gillow's Property, Bagdad.
(4) Report on the Prospects of the Florentine Mining Company, Mt. Mueller District.
(5) Report on the Magnet Mine.
(6) Report on Section 9177-M (D. Baker).
(7) Report on Cement Materials at Dalmayne.
(8) Report on Possibilities of Obtaining Underground Water on Property of Mr. Kirwood, Howden and Margate.
(9) Preliminary Report on Low Rocky Point District.
(10) Second Report on Cement Materials at Dalmayne and Saltwater Lagoon.
(11) Report on J. J. Goodall's Prospecting Area, Storey's Creek.
(12) Report on Section 9223-M, Aberfoyle Creek.
(13) Report on Caudry's Osmiridium Mine, Bald Hill.
(14) Report on S. R. Fowler's Alluvial Deposit, Alberton.
(15) Preliminary Report on the Michael Tin Mine.
(16) Preliminary Report on the Dawn of Peace Mine, Branxholm.
(17) Report on C. E. Chesshere's Prospect, at Fingal.
(18) Supplementary Report of C. E. Chesshere's Prospect, at Fingal.
(19) Report on M. Wallace's Prospect, Alberton.
(20) Report on the Development of the Mining Industry (State Development Board).
(21) Second Report on the Development of the Mining Industry (State Development Board).
(22) Shale Deposits on the Development of the Mining Industry (State Development Board).
(23) Titanium-bearing Minerals in Tasmania.

Preparation and Publication of Bulletins, &c.

During the year Underground Water-supply Paper No. 4 (the Campbell Town, Conara, St. Marys District) was completed and printed for issue.

The bulletin on the Low Rocky Point District is in course of preparation.

Routine and Other Duties.

A considerable amount of correspondence had to be attended to, and numerous interviews held with visitors desiring information about mineral deposits, mines, &c.

Reports were prepared for organisations such as the State Development Board. The osmiridium handed over to the Commonwealth Bank on behalf of the Tasmanian Osmiridium Producers' Co-operative Association Limited was inspected and weighed, and certificates as to weight and quality were given to the bank.

Yours faithfully,

P. B. NYE, M.Sc., B.M.E.,
Government Geologist.

A. MCINTOSH REID, Esq.,
Director of Mines, Hobart.

REPORT OF THE CHIEF GOVERNMENT CHEMIST AND ASSAYER, LAUNCESTON.

Geological Survey Laboratory,
Launceston, 5th May, 1927.

SIR,

I BEG to submit my annual report for the year ending 31st December, 1926.

During the year the work consisted largely of making metallurgical tests and analyses of ores, rocks, and minerals.

The total number of assays and analytical tests made for the public and the Department amounted to 5522.

Assays have been made for gold, silver, lead, tin, zinc, copper, bismuth, tungstic acid, molybdenum, barium, iron, manganese, sulphur, nickel, cobalt, osmium, iridium, ruthenium, rhodium, platinum, chromium, antimony, arsenic, titanium, phosphorus, magnesium, potassium, sodium, vanadium, mercury, fluorine, and aluminium.

Complete analyses have been made of rocks, ores, clay, shale, coal, and alloys. Distillation tests of shale, &c., have been carried out.

Personal Interviews.

In addition to the large number of inquiries by post, over 1700 personal interviews have been attended to. The large amount of technical information supplied has involved considerable work after office hours.

British Empire Exhibition.

I officially represented the State at the British Empire Exhibition, and returned to Tasmania on 1st July. After taking up my duties in the laboratory a detailed report, dealing with work undertaken in London, was prepared and submitted to the Honourable the Premier.

To carry out research and essential work the sum of £250 will be required for apparatus, &c., next year.

In order to cope with the increasing amount of work it will be necessary to appoint next year a sampler and junior chemist-clerk-librarian.

Correspondence.

A large amount of correspondence has been dealt with during the year, the number of letters in and out totalled 1850.

I desire to place on record my appreciation of the splendid services rendered by the officers of the staff—Messrs. L. H. Bath, W. St.C. Manson, and R. B. Reid.

During my absence in England Mr. L. H. Bath acted as Government chemist and assayer, and he carried out his duties in a most satisfactory manner.

I have, &c.,

W. D. REID,
Chief Government Chemist and Assayer.

The Director of Mines, Hobart.

REPORT OF THE CHIEF INSPECTOR OF MINES.

Chief Inspector of Mines' Office,
Hobart, 5th April, 1927.

SIR,

I HAVE the honour to submit my annual report for the year 1926 in connection with the inspection of mines and the administration of "The Mines and Works Regulation Act, 1915."

Tables showing (1) the number of persons killed and injured in and about the mines of Tasmania, (2) rate per 1000 killed and injured in the different divisions, and (3) analysis of statistics of accidents for the Western Division are attached, as well as a comparative table of statistics in and about the mines of Tasmania from 1st July, 1892, to 31st December, 1926, and a graph showing the ratio of fatal accidents per 1000 men employed.

There has been no alteration in the field staff during the year, but towards its end Inspector Williams (Western Division) was forced to relinquish work and undergo an operation, after which his health broke down and he was granted sick leave.

"The Mines and Works Regulation Act, 1915," was amended to make fuller provision for general rules in collieries.

At the Electrolytic Zinc Company's works, Risdon, the production of electrolytic zinc, cadmium, and by-products has continued steadily during the year. Intensive application to continued improvements in the extraction processes has been maintained, and considerable sums of money have been spent on alterations and modifications to plant. Additions have been made to the sulphuric acid plant, and this section is now capable of an output of 10,000 tons per annum of monohydrate sulphuric acid. This work has been carried out in the hope that the consumption of superphosphate in Tasmania will continue to increase, and any additional demand by consumers in the future can now be very comfortably taken care of.

The board of this company during the year authorised an extension of research activities in the direction of an intensive study during the next few years of the factors concerning the principles underlying the various steps in the process. Research of this character is necessarily slow and arduous, and no immediate results can be expected, but no doubt in due course this work will be fully justified.

The Carbide Works, at Electrona, operated intermittently, and at the close of the year there was every indication of an English company taking over the concern.

The National Portland Cement Pty., at Maria Island, worked continuously during the year, the product being of good standard.

The Catamaran Collieries Ltd. equipped their mine at Catamaran with an up-to-date loading station. A railway line of two miles was installed, dip tunnels carried down on the anthracite seam 50 feet, and on the shaft seam 800 feet. The main operations are being carried out on the shaft seam, and are producing a good quality steaming coal.

An endeavour is being made to obtain capital to develop the Strathblane area.

A company has been floated to work the Seymour colliery. The railway works are being continued from Cole's Bay to the Dalmayne Coal Mine.

Work at the quarries which come under the provisions of the Act has been very satisfactory. At the Municipal Domain quarry provision is being made to remodel the whole process, and this should be the means of effecting considerable economy, as well as improvement in health conditions.

Accidents.

The total number of accidents reported for the year was 54, as against 62 for 1925. These caused injuries to 57 persons, five of which were fatal, and 52 caused injuries which necessitated absence from work for more than 14 days. The rate per 1000 persons employed (injured and killed) was 10·736, compared with 12·328 for the previous year. The rate per 1000 persons employed was 0·941, compared with 0·391 for the previous year. The four fatal accidents were caused as follows:—

(1) A slip of ground from the toe of a tailing-dump in a large sluicing mine jammed two men against the water-column. The slip caused the water to burst before a rescue could be effected. Both men were drowned and another seriously injured.

(2) A foreman employed in a large treatment plant entered the residue-bin alone to make an examination. The men removing the residue by trucking, on finding a hat, became alarmed, and reported the matter. The bin was run out as speedily as possible and the body recovered, death being due to suffocation.

There is a rule on the works that no person should enter a bin alone.

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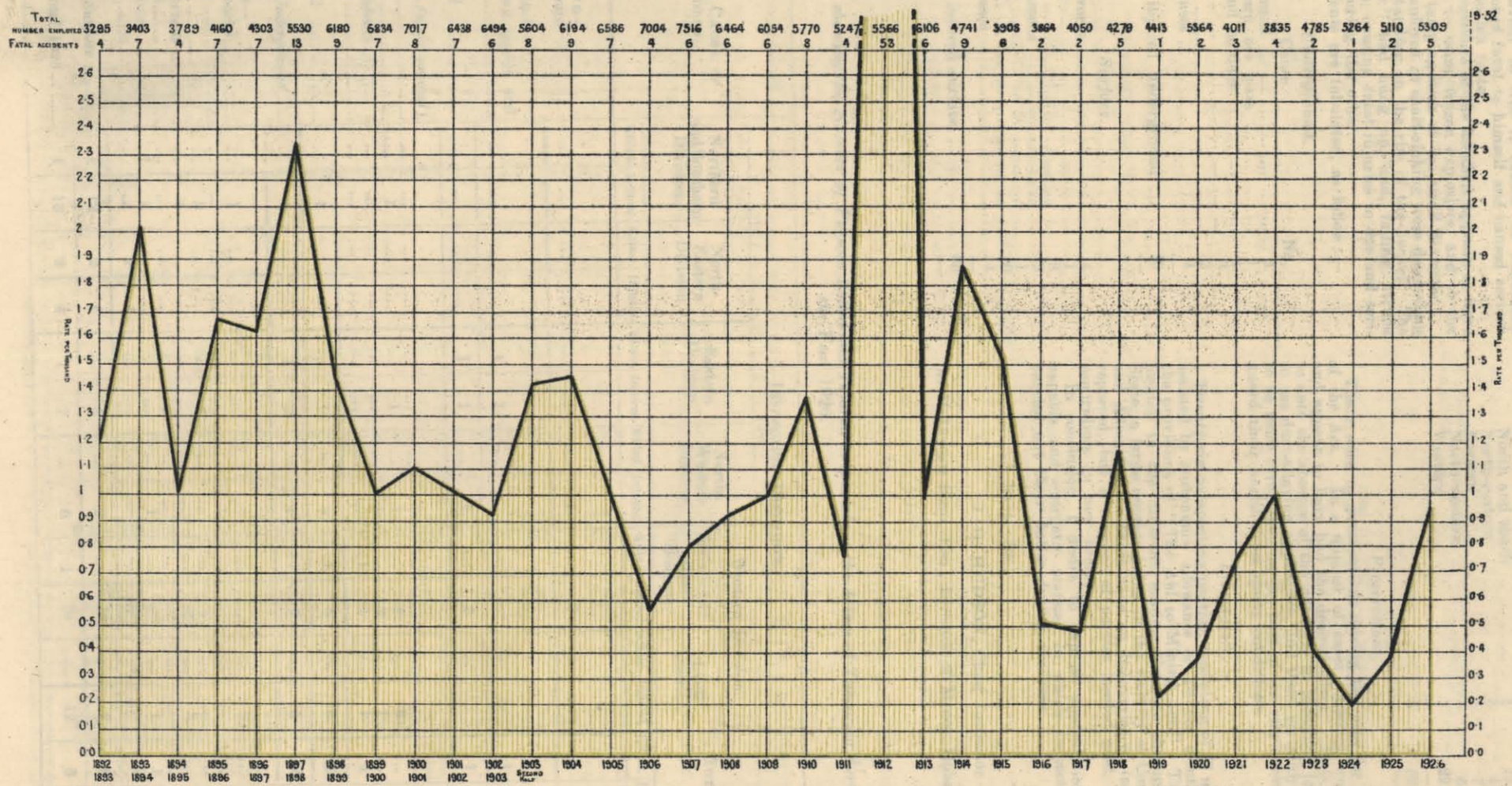
Diagram showing the ratio of Fatal Accidents in Mines in Tasmania

Rate per 1000 men employed



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(3) A miner employed underground was charging a hole with explosives. A plug became jammed, and the endeavour to free it caused an explosion, which proved fatal to himself and caused serious injuries to his mate.

The occurrence of the accident appears to have been due to using frozen explosives, and to the use of a tamping-stick of too small diameter.

(4) Two men employed in shaft-sinking were descending a shaft standing on the rim of the bucket. The "monkey" had hung up, and, falling, struck both men, causing fatal injuries to one and seriously injuring the other.

The serious accidents are tabulated, as follow:—

Underground.

Cause.	No.
Fall of ground	3
Falling down ore pass	1
Underground haulage	1
Trucking	8
Explosives	2
Sundry clauses	4
Total injured underground	19

Surface.

Smelting works	4
Machinery	1
Tramways	8
Fall of persons	9
Explosives	1
Sluicing	6
Sundry causes	4
Total injured surface	33

The district proportion of accidents was:—

District.	Killed.	Injured.
North and south	1	13
North-eastern	2	4
Eastern	1	7
North-western	—	6
Western	1	22
	5	52

Prosecutions.

There were no prosecutions during the year for breaches of the Act. In a number of cases warnings were given and appear to have had the desired effect. It is pleasing to note the absence of the necessity to prosecute for failure to use dust-allaying appliances, and there certainly appears to be more care taken on the part of the employees to safeguard their health from dusty conditions.

Prospectors.

Twenty-six prospecting parties, consisting of 52 men, were assisted by sustenance allowance of £8 per month, under the provisions of "The Aid to Mining Act." These were located in the different mining divisions throughout the State, a large number being in the vicinity of Cox's Bight and Adamsfield. There were no discoveries of importance reported, but a number of parties located gold, tin, and osmiridium in new areas.

In conclusion, I desire to express appreciation of the capable and energetic manner in which inspectors have carried out their duties during the year.

I have, &c.,

J. O. HUDSON, Chief Inspector of Mines.

A. McINTOSH REID, ESQ., Director of Mines, Hobart.

TABLE showing the Number of Persons Killed and Injured in and about the Mines of Tasmania during the Year 1926.

Place or Cause of Accident.	Inspection Districts.													
	Northern and Southern Division.		North-Eastern Division.		Eastern Division.		North-Western Division.		Western Division.				Total.	
									Zeehan and other Districts.		Lyell District.			
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
UNDERGROUND—														
Falls of ground	...	...	...	...	...	...	...	1	...	2	...	...	...	3
Shaft Accidents—														
Falling down passes and shafts	...	...	...	...	1	1	...	...	...	...	...	...	1	1
Total	...	...	...	...	1	1	...	1	...	2	...	...	1	4
Miscellaneous (underground).														
Haulage	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Trams, &c.	...	1	...	...	...	1	...	1	...	2	...	3	...	8
Sundry accidents	...	...	...	...	...	...	...	1	...	2	...	1	...	4
Explosives	...	...	...	...	...	...	...	...	1	1	...	1	1	2
Total	...	1	...	...	...	1	...	3	1	5	...	5	1	15
Total Underground	...	1	...	...	1	2	...	4	1	7	...	5	2	19
ON SURFACE—														
Smelting-works	...	1	...	...	...	...	...	...	...	...	...	3	...	4
Machinery	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Tramways	...	3	...	...	...	4	...	...	...	1	...	...	...	8
Falls of persons	...	4	...	...	...	...	...	...	...	2	...	3	...	9
Explosives	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Miscellaneous	1	4	...	...	...	...	...	1	...	...	...	1	1	6
Sluicing	...	...	2	4	...	...	...	...	...	...	...	...	2	4
Total Surface	1	12	2	4	...	5	...	2	...	3	...	7	3	33
Gross Total, 1926	1	13	2	4	1	7	...	6	1	10	...	12	5	52

TABLE showing Rate per Thousand Killed and Injured in different Divisions for the Year 1926.

Division.	Average Number of Men Employed.	Number of Accidents.	Number of Persons		Total Number Killed & Injured.	Average per 1000 Killed and Injured.	Average per 1000	
			Killed.	Injured.			Killed.	Injured.
Northern and Southern	2353	14	1	13	14	5·949	0·425	5·532
North-Eastern	486	4	2	4	6	12·345	4·115	8·230
Eastern	522	7	1	7	8	15·325	1·915	13·409
North-Western	421	6	...	6	6	14·251	...	14·251
Western	1527	23	1	22	23	15·062	0·654	14·407
Total	5309	54	5	52	57	10·736	0·941	9·795

ANALYSIS of Statistics of Accidents for Western Division.

Division.	Number of Miners Employed.	Number of Accidents.	Number of Persons		Total Number Killed & Injured.	Average per 1000 Killed and Injured.	Average per 1000.	
			Killed.	Injured.			Killed.	Injured.
Mt. Lyell	959	12	...	12	12	12·513	...	12·513
Zeehan, &c.	568	11	1	10	11	19·366	1·760	17·605
Total	1527	23	1	22	23	15·062	...	14·407

COMPARATIVE Table of Statistics of Accidents in and about the Mines of Tasmania from 1st July 1892, *to* 31*st December*, 1926.

Period.	Number of Miners Employed.	Number of Accidents.	Number of Persons.		Total Killed and Injured.	Average per 1000 Killed and Injured.	Average per 1000.	
			Killed.	Injured.			Killed.	Injured.
1 July, 1892, to 30 June 1893	3295	28	4	25	29	8·8001	1·214	7·586
„ 1893 „ 1894	3403	25	7	20	27	7·934	2·057	5·877
„ 1894 „ 1895	3789	26	4	24	28	7·390	1·058	6·332
„ 1895 „ 1896	4160	22	7	16	23	5·529	1·682	3·847
„ 1896 „ 1897	4303	36	7	31	38	8·831	1·627	7·204
„ 1897 „ 1898	5530	36	13	33	46	8·318	2·351	5·967
„ 1898 „ 1899	6180	35	9	34	43	6·957	1·456	5·501
„ 1899 „ 1900	6834	19	7	16	23	3·365	1·024	2·341
„ 1900 „ 1901	7017	29	8	23	31	4·417	1·140	3·278
„ 1901 „ 1902	6438	38	7	35	42	6·524	1·088	5·437
„ 1902 „ 1903	6484	44	6	43	49	7·557	0·925	6·632
„ 1903, to 31 Dec., 1903	5604	27	8	20	28	4·977	1·428	3·569
1 Jan. 1904 „ 1904	6192	73	9	65	74	11·951	1·454	10·497
„ 1905 „ 1905	6586	34	7	30	37	5·618	1·063	4·555
„ 1906 „ 1906	7004	65	4	61	65	9·280	0·571	8·709
„ 1907 „ 1907	7516	68	6	64	70	9·314	0·798	8·515
„ 1908 „ 1908	6464	60	6	58	64	9·900	0·928	8·972
„ 1909 „ 1909	6054	54	6	49	55	9·085	0·991	8·093
„ 1910 „ 1910	5770	63	8	57	65	11·265	1·386	9·878
„ 1911 „ 1911	5247	80	4	77	81	15·437	0·762	14·675
„ 1912 „ 1912	5566	60	53*	53	106	19·044	9·522	9·522
„ 1913 „ 1913	6106	64	6	60	66	10·809	0·982	9·826
„ 1914 „ 1914	4741	69	9	62	71	14·977	1·896	13·081
„ 1915 „ 1915	3908	71	6	67	73	18·679	1·535	17·144
„ 1916 „ 1916	3864	53	2	51	53	13·716	0·517	13·198
„ 1917 „ 1917	4050	50	2	48	50	12·345	0·493	11·852
„ 1918 „ 1918	4279	50	5	45	50	11·684	1·168	10·516
„ 1919 „ 1919	4413	58	1	57	58	13·143	0·226	12·917
„ 1920 „ 1920	5364	52	2	50	52	9·694	0·372	9·322
„ 1921 „ 1921	4011	40	3	37	40	9·972	0·748	9·224
„ 1922 „ 1922	3835	31	4	27	31	8·083	1·043	7·040
„ 1923 „ 1923	4785	64	2	63	65	13·584	0·417	13·166
„ 1924 „ 1924	5264	72	1	73	74	14·057	0·189	13·867
„ 1925 „ 1925	5110	62	2	61	63	12·328	0·391	11·937
„ 1926 „ 1926	5309	54	5	52	57	10·736	0·941	9·794

* Mt Lyell disaster.

REPORTS OF INSPECTORS OF MINES.

Mr. Inspector Curtain (Launceston) reports:—

I have the honour to submit the following report on the various works of inspection and administration of the various Acts for the year ended 31st December, 1926.

The attached tabulated statement and report deals with the accidents that have taken place during the past year and the general conditions prevailing in connection with the mines and works on the eastern and north-eastern divisions of the State for the same term.

Accidents.—Fifteen accidents were registered. Of these three were fatal. Of the latter two men lost their lives at the Briseis Mine, Derby, under most distressing circumstances, the occurrence being attributable to a slip of spoil from the base of the tailing-dump. This, in addition to carrying away the suction or vital part of the drainage column, also caught the men within its folds in their endeavour to escape, so that, despite the best efforts of their comrades and the mine staff, the fast-accumulating water rose and drowned both. The other was equally regrettable, by which a capable and esteemed man lost his life at the Miner's Dream Mine, Mathinna. The details, as supplied by his mate, who was with him, were to the effect that at the conclusion of their shift, and prior to ascending the shaft on a bucket, they failed to observe or notice the absence or want of the guiding-frame or "gambaree," used to steady the bucket overhead, and only realised its absence while on their journey—immediately following this discovery—by hearing its rustle and descent down the shaft. It struck both of them, but, mercifully, only one fatally. In a measure the accident was brought about by their want of forethought in failing to make themselves sure of the safety of their surroundings before commencing the ascent of the shaft. All the other accidents were of a minor or trivial character, and each injured man made a speedy recovery and returned to work.

Health of Miners.—Apart from local visitations, principally influenza, the general health of the men compares favourably with that of others engaged in manual labour throughout the State.

Ventilation.—This most necessary factor in both the coal and metal mines has been attended to and reasonably provided for. Instances have, however, arisen that while awaiting air-course connections the air has been found "sluggish," but reasonable endeavours were always under way to overcome such defects and restore to normal conditions.

Dust.—The mining companies using rock-drills provide reticulation water services, and reasonably comply with the requirements of the Act.

Changing-Houses.—Where called upon, the metal-mining companies provide these necessary requirements, but so far the colliery companies have failed to do so, their managers advancing a reason that the men will not use them. This, however, is anticipatory of results that are not likely to follow, as, with the completion of the buildings that are still slowly under way, and proper equipment, more than ordinary and serviceable use will be made of them.

Ropes and Cages.—Each have received periodic attention, and during the term both hauling ropes on the Golden Gate Mine, at Mathinna, were replaced with others of a stronger and more suitable kind.

Magazines, Fuse, Detonators, and Explosives.—All have received attention, and, where necessary, especially regarding the firstmentioned, the attention of mine-owners and others have been drawn to the necessity of keeping them clean, and the surroundings free from scrub and other menaces of fire danger.

Inflammable Liquids.—The principal bulk stores and depots, both in town and country centres, reasonably comply with the requirements of the Act, in addition to which large "bowser" tank containers are being installed with satisfactory results to the seller and consumer.

General.—The prospects for the ensuing year may be regarded as most encouraging, principally with regard to tin, for the production of which large areas of ground have been applied for between Ringarooma, the Tiers, Gladstone, Scamander, Avoca, and Ben Lomond. When these prospects are developed an increase in the output may be expected, because the older and better established properties may be expected to supply their respective quotas. The latter are individually dealt with, as follows:—

MINING.

Gold.

The output is still diminishing, and in the once notable fields of Beaconsfield, Lefroy, Back Creek, Golconda, and Lisle, beyond offering probabilities regarding their future, no progress has been made during the period under review. From residues concentrated in and around the battery site of the Tasmanian Mine, Beaconsfield, 130 ounces of gold was recovered.

Alberton—Hannah's Syndicate (late Ringarooma United)—Work has been confined to the top or shallower adits, where short "makes" of stone have been met, and a battery test of 58 tons of the latter yielded 60 ounces of smelted gold.

Mount Victoria Gold Mining Company.—This property has been acquired by Mr. J. C. Matthews, who, with two assistants, has done serviceable prospecting work both on the surface and underground.

Wallace and party are farther afield towards the head waters of the Dorset Rivulet, where, in addition to tunnelling, they have sunk two 15 feet shafts on 20 inches of gold-bearing stone, which they expect will improve in depth. With this objective they purpose extending their present workings to 65 feet.

Alluvial.—Fowler's party, by a deep 8-chain tail-race, have opened a 15 feet face of wash at the junction of the Ringarooma and Forrest King Creeks in expectation of locating a lead or gutter which, by shaft-sinking, they are still trying to locate

Mathinna—Golden Gate Consolidated.—The mine having been unwatered to 1700 feet, prospecting was continued between that level and the upper levels with encouraging results. This chiefly refers to a side "make" of stone found parallel and close to the old stopes between 10 and 11 levels that was missed by the former owners. A winze was sunk 60 feet, and drives therefrom 140 feet on stone up to 5 feet in width containing gold at rate of 2 ounces to the ton by battery returns. In addition to this another winze has been sunk 40 feet from the floor of the 1500 feet level, and an intermediate has been opened on stone containing by assay from 3 to 20 dwts. of gold to the ton, while from No. 9 level satisfactory progress has been made. The mine, on the whole, shows improvement, and a continuance of good results may be looked forward to during the coming year. During the term 1584 tons of stone was crushed at the battery for a return of 1481 ounces of smelted gold.

Miner's Dream.—Accompanied by many difficulties, and consequent delays, the main cross-cut from the 280 feet level was put out in a northerly direction to 300 feet, this being beyond the point where it was expected the reef on the dip or underlay would be cut, operations in this direction were suspended. Since then a winze has been sunk on the stone left in the floor of the prospecting shaft, and from the information thereby obtained regarding the dip of the walls, it is believed that the reef will be found near the present deeper workings, towards which exploration further work is contemplated. A 10-head battery, in conjunction with other plant, has been erected, and a crushing of stone, the tonnage not being supplied, returned 20 ounces of smelted gold.

Old Boys', or "Brock's Show."—Constant work has been carried out, and while small makes of stone have been met nothing of real value has, so far, been discovered.

Mathinna Prospecting Syndicate.—Following results from surface trenching on the sides and top of Eldorado Hill, prospecting shaft was sunk 60 feet and an adit driven 130 feet. The results were not satisfactory. The area is worthy of further attention, as rich patches of stone have been obtained from shallow depths in the vicinity.

Prospecting.—Gold having a more direct incentive for wanderers, several small parties, including those assisted by State under the sustenance allowance section of "The Aid to Mining Act, 1921," have paid this and the neighbouring fields attention, but, to date, no discovery of any importance has been reported.

Tin.

Note.—All weights are metallic.

Throughout this extensive division tin is still the most important product, and tin-ore mining provides employment for a number of small co-operative parties. Their combined production adds substantially to the general output of the principal mines, but their individual progress need not necessarily be dealt with or described.

Ringarooma and Branxholm.—Arba Tin-mining Company.—Chiefly by tribute parties working the tailing dumps, 28 tons have been recovered which has permitted the paying of a second dividend.

Ruby Flat Tin-mining Company and Royal Gordon are properties now held by the Messrs. Walsh Bros., who command "The Nugget Race" water-supply, and with its use work both mines concurrently.

Ormuz Tin-mining Company, adjoining the Arba, is working a 20 feet face on the eastern wall of the "Easement Section," from which a return of 9 tons has been obtained.

Derby—Briseis Tin and General Mining Company.—Exceptionally heavy work has been performed at this mine, principally in the removal of the massive basalt overburden, which is a necessary preliminary operation to an attack upon

the underlying alluvial deposits. A plentiful supply of water is available, but the tailings, which are dumped into the river, have become a block and hindrance, and cannot be permitted further to accumulate until the winter rains set in and wash them away—a difficulty that is obvious to the management, who must await, and be guided by, circumstances. In other respects the prospects are favourable, and during the term 117½ tons of tin ore has been produced.

Lone Brother Tin-mining Company, situated about two miles further down the river, is opening a deep 30 feet to 50 feet face, similar in appearance to the Briseis Drafts, which, according to face prospects, should prove payable at present market rates.

Cascade River and Main Creek operations provide employment for a number of small parties. These call for no special mention in the report.

Bradshaw's Creek.—Pioneer Tin-mining Company.—From this well-known property 76 tons of tin ore has been produced during the term.

Wynyford River.—On the opposite bank of the river the Waugh and Rajah Mines are working under similar conditions, and the output of each is noteworthy.

South Mount Cameron.—Eastern Leads Tin-mining Company have started recently the electrically-driven plant bought from the Leona Mine, at Avoca, to work shallow ground on the roadside. So far no returns have been furnished.

Endurance Tin-mining Company, working back and parallel with what was termed "the lead," has obtained satisfactory rturns with no apparent diminution in the grade of material in the present face, from which 85 tons of ore was produced during the term. The company is also assembling an up-to-date 250 h.p. crude oil plant to work the river flats opposite the post-office.

New Clifton Tin-mining Company.—Here also a crude oil plant is being installed to work the flat grounds south of the old workings. These have been closely bored and are reported as being payable.

Gladstone.—Compeer Tin-mining Company.—Sluicing by nozzle and gravitation continues on the Star Hill and terraces with results stated to be payable.

Garfield and Arcadia Tin-mining Companies.—Large areas have been taken up by both of these proprietors, but being in the early stage of development neither has yet furnished any returns. The former is installing a 120 h.p. pumping plant in order to provide a constant supply of water under pressure to work the drifts now open on the property, which, by this means and gravitation, should be productive of good results.

Fly-by-Night Creek (Ground formerly worked by Messrs. Whittaker and Daws).—Mr. Edwin Pett has acquired this and neighbouring land on behalf of a local syndicate, and, in addition to the water obtained from the Mount Cameron Water-race, is installing a crude oil plant in order to get more pressure. The lode and alluvial grounds show favourable prospects.

Monarch Tin-mining Company.—Operations have recently been resumed on this property, and the manager is at present assembling a plant further afield, where the prospects show improvement.

Moorina.—Moorina Tin-mining Company, formerly Weld-Echo.—With a serviceable water-supply, work has been resumed, and the company has produced 18½ tons of tin.

Weldborough.—Weldborough Tin-mining Company.—This is the principal mine in this centre, and from the river flat 7½ tons of tin has been won. Other mines in the district are the Laffer and small prospects, all of which have contributed to the output.

Lottah.—Mount Michael Tin-mining Company is working a soft granitic body to a depth of 20 feet and a chain in width, estimated to contain 0·5 per cent. tin. From this body over £10,000 worth of tin ore has already been extracted.

New Blue Tier or Old Anchor Tin-mining Company.—Work with a 10-head battery has intermittently continued, but at present all labour is confined to the alluvial deposits below the battery site, which are regarded as payable.

Goshen.—A large area of ground has been taken up in this locality by Messrs. Lascelles and party, who are sinking shallow shafts in order to test the property.

St. Helens.—Argonaut Tin-mining Company, on account of its efficient water service, has worked extensive areas of shallow ground, from which 10 tons of tin has been obtained.

George's Bay Tin-mining Company's ground is somewhat similar to the lastmentioned, and has produced 8¾ tons of tin.

Constable's Creek Company, situated 5 miles south towards the Scamander River, possesses a fairly large area of ground. With an adequate supply of water it could be treated at a profit, or if let in miner's right blocks would find employment for a number of small parties of workmen. Owing to the low rainfall of the district conservation in dams would not be sufficient, and the only way to surmount the difficulty would, if warranted, be to bring a supply into the field, either by pumping or by gravitation from the Scamander River, either of which would prove expensive.

Scamander.—Pyramid Tin-mining Company.—Messrs. Aulick and party have taken up this once notable property, and are erecting a 5-head battery in order to crush the rich surface stone which might lead to more important bodies of stone.

Avoca.—Storey's Creek Syndicate.—This well-established company has sunk to a depth of 200 feet on the underlie. The lodes exposed in length 1200 feet present one of the best examples of its type in the Commonwealth. The ore consist of wolfram and tin oxide in a quartz matrix, which shows no indication of thinning. It may be relied upon as one of the State's chief producers for some time to come. During the year 56 tons of tin ore and 83 tons of wolfram have been obtained from this source.

Aberfoyle Prospecting Syndicate is situated in the neighbourhood of the lastmentioned mine, the lodes bearing many features of resemblance. The company is sinking a 100-feet shaft vertically in order to test more thoroughly the known lodes.

Wolfram.

Storey's Creek Syndicate, in addition to its tin output, has also produced 88 tons in wolfram.

COAL MINES.

Our coal mines have maintained their relative output, but the consumption is not sufficient to keep the principal mines fully occupied, which is regrettable, as the average working-days do not exceed nine a fortnight. This is both detrimental to the owners and workmen, but more especially to the latter, who, while being credited with receiving big money, do not, in the circumstances, average ordinary wages.

Mount Nicholas Colliery.—Work is chiefly confined to what is termed the "new" pit and the 4-feet seam over the old No. 1 workings, from which 28,735 tons was excavated.

Cornwall Colliery.—Work in three divisions of the main pit continues, and 46,344 tons of coal has been produced.

Jubilee Colliery.—Extensive areas have been opened, and 14,403 tons of coal has been produced.

York Plains Colliery.—The coal produced from this seam is of a smokeless variety, used chiefly for malting and hop kilns, for which purposes 746 tons was mined during the year.

Fingal and Avoca.—Small quantities, not exceeding 10 tons in all, have been mined by Messrs. Williams and Rubenach in these localities.

Mr. Inspector Vaudeau (Burnie) reports:—

I have the honour to submit my annual report for the year 1926, in connection with the work of inspection and administration of the various Acts delegated to this office, and a resumé of the work carried out in the district.

The average number of persons engaged in my district was 1112, against 1042 in 1925. More men have been out prospecting during the year under review than in any other term since I have been an inspector, but, as far as I know, nothing of any commercial importance has been discovered.

Accidents.—A tabulated list containing an account of the various accidents requiring to be registered in compliance with Section 26 of "The Mines and Works Regulation Act, 1915," has been furnished to the Chief Inspector of Mines.

Eighteen accidents were registered during the year. Eight of these occurred on the surface and 10 underground. One person was killed by a premature explosion underground and one very seriously injured in a quarry by the undercarriage of a side tip-truck falling across his back, breaking the spine in two places. Three men had their legs broken and two lost tops of fingers.

Of those injured all have returned to work with the exception of the man whose back was hurt. An operation was performed on him, the doctor stating that his recovery would be slow, but he had every hope that he would be on his feet again by the end of 12 months. The man had no feeling from the middle of the body downwards. He can now sit up and be wheeled about in an invalid carriage.

In connection with the premature explosion, it was found after the accident, that the company had been in the habit of giving the gelignite to the men, requesting them to pick it over and return any defective (frozen) plugs to the store to be thawed. On this occasion the men had two packets given to them, a considerable amount of it being frozen. The man's mate stated that none of this material was being used; that in charging a hole he had got a plug stuck, and, in trying to free it, an explosion occurred which killed the man instantly. His mate suffered from shock and a slight cut on the head from a flying piece of

the tamping-stick. The coroner's jury brought in a verdict "that he met his death accidentally and not otherwise." They made a strong recommendation, which I strongly endorsed in my report, that the onus be on the employer to have all explosives given to the miners in good condition; also, that the size of plugs be as large as consistent with the size of the holes being bored. I felt we might be able to protect others if we could get a general rule covering the matter; so I worked at the coroner's inquiry to get a recommendation on the above lines. The General Rules, as at present, make it that a miner should not only be able to know what is safe to use, but be able to thaw any frozen explosives. This is right on small mines away in the bush, but in mines like the one where the accident occurred it is unreasonable, to my mind, to ask men, particularly contractors, to pick over explosives at their working places. After very careful consideration and inquiry I feel sure the man was charging holes with partly frozen explosives, and if only good gelignite had been issued the man would not have been killed.

In connection with the man who had his back broken, he, with three others, was tipping a big side tip-truck containing soft, sticky clay. He was leaning over a spragstick to help keep the truck from going too far over. His mates called out to him to let go, but, before he could do so, he was thrown over the top of the truck onto the ground below the tip. The hood stuck in the bank of the tip as it went over, but the undercarriage continued and fell across his back. It was folly to lean over the stick to try to hold a truck containing such sticky material.

Two men were hurt through falls of earth in shallow open cuts not over 7 feet high. In both instances the men stated that they had been up on the top of the bank a little while previously and considered all was safe.

Four other accidents were due to rolling and falling stone, but, considering the circumstances, could hardly be classified as falls of ground, as will be seen from the tabulated list.

With a little more care most of the accidents could have been avoided, but they are those which are incidental to the industry and which an inspector is ever endeavouring to keep down.

Ventilation.—At the mine mentioned in my last report conditions are still far from satisfactory. I have endeavoured to assist the management in every way to improve matters, but have had reluctantly to come to the conclusion it does not care under what conditions the men work. A rise is being put up, which was obtained after considerable pressure, and should make a considerable difference, but the time is fast approaching when it will be necessary to put in a proper system of power ventilation, owing to the depth of the mine and the uncertainty of natural ventilation.

At other mines a few instances were noticed where the ventilation was not too good, and various recommendations made were adopted, improving conditions considerably.

Settlements of Ground.—Nothing of a serious nature occurred during the year. In three instances some ground set off to structural weaknesses, giving plenty of warning as it did so, on to the timbers; these were stiffened up and the ground eventually removed. No accidents, that I know of, occurred in doing so.

Change-Houses.—I am pleased to report that, in both instances where conditions were not satisfactory (as mentioned in my last report), there is now no room for complaint. The manager of one big works has promised to put in a change-house, as required under the Act, as soon as the change-over is made from steam to electrical power, as there will then be available all that is required in connection with building, pipes, &c. Any requests made at other places have been promptly met with.

Shelter Sheds and Crib Places.—An improvement has been obtained in this connection, but I am still endeavouring to get a betterment at some of the works and one quarry.

Health and Sanitation.—Improvements have been noticed in many instances, but I regret having again noticed the usual sign when men are not using sufficient water. On one occasion a man was found boring dry in a shale mine: the condiions were not very bad, and a warning was given. At other places the men and bosses have been spoken to and a request made to discontinue the practice.

At one quarry (mentioned in my last report) where a mutual agreement was come to (the superintendent was not present at the time), things were not carried out as agreed on, and, after every endeavour had been made to get the spirit of the agreement carried out, it was decided to write the officer with whom the agreement was made, when a ready response was made and an assurance given that the agreement would be adhered to. The superintendent was instructed accordingly.

At one works considerable opposition has been met with, the manager going so far as to state that the Government should be satisfied, if it was found necessary, to see up to 20 men's lives ruined to see the industry established. Of course he disagreed with my contention that the dust about the works was injurious. Every reasonable assistance was given and much patience shown so as not to interfere in any unfair manner with getting the concern to be a payable proposition, but the way this person ignored the various Acts and regulations thereunder was "the limit." Rather than go to law on one occasion (which usually gets one nowhere), the Chief Inspector was asked to come along and see what he could do. After a lot of unpleasant discussion the management agreed to do as previously requested in this connection.

One man at Latrobe is suffering from phthisis—an old West-Coaster who has been at this end for some time. He is having a very bad time. Two others, whom I have known for some years, have passed away, suffering from the same complaint, during the year.

Explosives and Magazines.—Considerable attention has been given to the safe handling and storage of explosives, the landing of explosives from the mainland being supervised as the occasion demanded.

Only a small quantity of sodium-nitrate gelignite needed destroying. On one mine the magazine, which was underground, became unsatisfactory, and, on a request being made for another, the general manager asked that the company be allowed to just use it to keep a weekly supply therein for the time being, drawing the supplies from a new main magazine at another mine a few miles away, and that, as soon as the electrical current was brought to the mine and installed, a magazine, which could be suitably warmed so as to keep the temperature therein satisfactory, would be erected. This was agreed to. This mine is above the snow-line, and there has always been some difficulty during the winter months with frozen explosives.

There were two reports in connection with No. 7 Detonators, stating that they had exploded with not sufficient force to explode the charges, but, from enquiries made, I came to the conclusion that in both instances the detonators had been underground for some time and had become defective.

As far as my observation and enquiries went the fuse has been satisfactory; when tested it has always been good. I have had no complaints as to the condition of explosives.

Magazines generally, with one exception, have been kept clean.

Two explosive accidents occurred during the year: One was attended with fatal injuries, as mentioned under accidents; the other occurred to a lad named Alan Bower at Lapoinya on October 11th. The lad was preparing to go fishing and started to make a "sinker" from what he took to be an exhausted detonator. Unfortunately the detonator was intact, and, when given a tap, exploded, shattering two fingers and the thumb.

As already stated in previous reports, I consider it would be advisable to get the Education Department to give lessons in connection with the danger of explosives. If taught in the schools it might save many accidents. For instance, the other day a young man, who had just lost a thumb and finger through the explosion of a detonator, told me he did not know it was dangerous to twist the fuse in the detonator to clear the sawdust out of it.

I might state here that, at one quarry I go to, on the bench in the tail-house, where "tails" are made up, they have a piece of rubber cemented on to it, on which they gently tap the detonator to disengage any sawdust that may be sticking therein. If used carefully this should be quite safe.

Machinery, Ropes, &c.—At a concentrating mill a young man was caught on a shafting in trying to untwist a belt that had come off the driven pulley, and, as a result of injuries received, died. This accident is recorded by the Machinery Department, so is not entered up in my tabulated list. On a previous occasion, the 20th October, 1925, this person had been hurt in putting on a belt, and the manager was written to and a request made that men should be instructed to handle belts carefully.

A good deal of engine trouble was experienced at one mine using suction gas, the "timing" appearing to me to be out considerably. The matter was fully discussed, and passed over to the inspector of machinery. A change was soon after made in the management and engineer, the defects were remedied, and the plant is now working much more satisfactorily.

At another mine an accident occurred to the winding engine, the enginedriver stating he was hoisting, at a slow rate of speed, when one of the teeth on the pinion-wheel broke. He stopped the hoist at once, but it was found that owing to the shock the bed-plate of the winding-drums was cracked. The driver could give no reason for the occurrence. Repairs were put in hand, and things have been alright since.

Two occasions were reported from one mine of cages getting away while changing gears on main hoist. From what could be seen it was downright carelessness on the enginedriver's part in both instances in not seeing the

chairs were safely under the cage, the braceman being away at the time. The manager gave instructions that the braceman must be in attendance when changing gear. On the last occasion the rope was damaged and had to be taken off. An old one, which I had previously requested to be taken off, was put on and another ordered, men not being allowed to ride on the cage for the time being.

Only when found very necessary has any interference been made in connection with machinery, all cases being promptly submitted to the Inspector of Machinery, with the request that they receive attention. This was done to try and save the overlapping between the two departments. There appears to be a good deal of difference of opinion as to the safe method of installing electricity in the underground workings. I consider this should be dealt with in "The Machinery Amendment Act," or permission made to cover it under regulations under our Act.

Ropes were inspected, and requests made for cutting and reshoeing when necessary, as required by the Act.

Inflammable Liquid Storage.—Considerable attention has been given to this as time permitted, but there is still much to be achieved regarding safety. Some 38 depots were registered and ten new licences to store taken out, and 28 registered premises were changed over to licence to store.

It was thought that the installing of so many kerbside tanks and pumps would lighten up the work in connection with the safe keeping of motor spirits, but up to the present it has not been so in my district. Assistance has been asked for from the Police Department as occasion demanded, and a very ready response was given at all times, and I would like here to express my appreciation of it. Legal proceedings were instituted against two persons. One was fined a total of £2 10s. 6d. for smoking while unloading inflammable liquid from a lorry near a depot, being a contravention of Regulation 5. The charge against his mate was dismissed. Other breaches were reported to the Chief Inspector, but as the persons concerned were willing to make good it was decided by him to overlook their offences.

General.—The various mines, works, and quarries in my district which are under the provisions of "The Mines and Works Regulation Act, 1915, have been inspected as time permitted and as the importance of the operations called for. I still find considerable amounts of loose and affected ground, both at the quarries and underground workings, and find that this becomes more noticeable if for any reason a longer time intervenes between my visits. Apart from three places my recommendations and suggestions have been heartily appreciated and acted on regarding better working conditions and safety. I would again like to express my appreciation to the various managers, officers, and workmen who have given me, at any time, their co-operation in my endeavours to get a reasonable degree of safety and decent working conditions. If only managers and others would see that when remarks and suggestions are made concerning methods adopted they are not made in a personal way it would help considerably. One's desire is to help the industry, and if a sensible view was taken it would be seen that if good conditions prevail it must be to the betterment of everyone, both commercially and physically.

Herewith I submit a summary of the mines in my district:—

Tin.

Mount Bischoff Tin Mines.—During the year a fair amount of progressive work has been carried out, both underground and at the surface. An average of 208 men have been employed. Some 77,110 tons of ore were treated at the concentrating mill for a return of 293½ tons of metallic tin, an average of ·38 per cent. Sn per ton. The work of testing the alluvial ground of the Waratah River flats was completed, and values were reported to be well over payable, and a recommendation made by the consulting engineer and the manager to instal the necessary equipment to treat same. A road has been cut around the north valley to the flats.

From my own observations there are some very rich patches of alluvial ground on these flats, but there is a great amount of boulders in the wash weighing from a few to many pounds, and it is to be hoped that every consideration has been given to this in connection with values and plant to be erected. Underground a nice discovery was made in what is known as the x-lode, on the main tunnel level. It does not appear to go up very far above this level, but has been cut from what is known as the Stanhope adit, some 125 feet below. It has been driven on 70 feet, and a connection made to level above, giving 180 feet on the underlay. The lode averaged 12 inches wide with an average assay of 5·35 per cent. Sn. Only the future can tell what length and depth of payable ore will be exposed here, but the lode was cut and driven in very favourable country, and the prospects should be good. To my mind it is a pity that a more progressive policy of exploration has not been adopted in connection with the underground workings. The fact cannot be hidden that the old surface deposits known as the "brown face," "white face," and "slaughter-yard" deposits are nearing their end, and if the old mine is to continue for any length of time it must be from underground bodies, as there is not a very long life in the alluvial deposits.

Mt. Bischoff Extended Tin Mine.—This mine is now run with electrical power, obtained from the Mt. Bischoff Tin Mining Company, which has made a big difference to the costs; in fact, one could say positively that were it not for this the mine would not be working to-day. A considerable amount of developmental work has been carried out, but values are very near the just-on-payable lines, and the utmost economy has to be exercised. During the year attention has been directed to the lowest No. 9 level. This is 350 feet vertically below No. 6 level, and the whole of the ground, apart from drive and about 20 feet high by 70 feet long of stoping, is in "situ.' The ore being mined from this place is "dirty," but can be handled at the concentrating plant, so that as long as values are right this will be no obstacle. I would like to see the lode driven on at both ends. If a few decent chutes of ore could be obtained at this level it would make all the difference to the future of the mine. Most of the ore treated at the mill during the year was obtained from the old Wheal workings, but owing to the excessive amount of handling in getting it to the mill there was very little profit in working it. Some 18,873 tons were crushed for 126·8 tons of SnO, which contained 85 tons of Sn. Average number of men employed, 80·4.

Pryde, Palmer, and Others, South Bischoff.—Some 3 tons of tin (metallic) has been won by 4 men working part time in the alluvial ground in this quarter.

Luina Tin Mine, Old Cleveland T.M.—No work has been carried out during the year. The legal manager is still trying to get money into this property.

Prospectors.—A little prospecting work has been carried out at "yellow band,' and a little osmiridium and some alluvial tin won. There is some ground there which would be payable if it were not so far away from the main-road.

Renison Bell District.—A. Victor Leggo & Co., who have options over the Renison Bell, Montana, and Dreadnought-Boulder Tin Mines, have only had about an average of two men employed during the term. They had some difficulty in getting options extended and fixed up to their satisfaction. A contour survey of the known ore bodies has been made, and a drilling programme has been laid out to further test the ore at depth. The consulting engineer states that the work carried out in connection with sampling was quite satisfactory and up to expectations. Work has also been carried on at these mines by tributors, who have obtained ore which gave 8·848 tons of metallic tin.

Pine Hill Tin Mine (Kitto's).—Very little work has been carried out here during the year, and nothing of any importance discovered.

Penzance Tin Mine (D. Albury).—No work has been done here of late. If this and Kitto's were joined together and a proper system of prospecting put in hand, there is every reason to believe that a good mine might result.

E. J. and R. Kerslake's M.L.—Some work has been carried out on these properties and a little tin sent to smelters. The owners have cleaned out the old workings so that samples can be carried out. They state the values are right.

A. Kemp's M.L.—A small concentrating mill to re-treat Boulder tin mill tailings was completed, but results have not been encouraging.

Stanley River District.—A few bags of tin have been sent away from the old Reward Claim, and one man has been working at the Mt. Linsday Tin Mine for the first part of the term re-treating tailings, and for the latter part treating some oxidised material from the approach of No. 1 adit, from which he has been winning some fair values. There is only a limited amount of this material available as far as can be seen.

Rosebery and Williamsford Districts.—Williamsford Tin Mine: The concentrating mill was completed and a start made again at the mine. As was expected and reported previously, it was found that enough developmental work had not been carried out. The value of the ore developed had been over-estimated to a great extent, and on ends and rises being extended the ore obtained was found to be too low to be payable. At present the mine is closed down. An average of 16 men were employed.

A. J. Salmon's M.L., Emu Bay Railway.—This man opened up a formation carrying some fair values in tin. It contained a lot of iron, which needed to be burnt to free the tin. He picked out some of the richest and burnt it, and then crushed it up by hand and obtained ore which gave ·2818 tons of metallic tin. An option was given to Adelaide people, who drove an adit to cut this ore at about 90 feet vertically below Salmon's work. The formation was about five feet wide where cut. Values were reported to me to be worth just under 1 per cent. Some good values could be seen on the hanging-wall portion, the gangue consisting of quartz and carbonate of iron. No more work has been done since. On this and the next section there appears to be at least two lines of lode for-

mation which carry tin, and if opened up on good lines might turn into decent concerns. The Emu Bay Railway passes through the section and the Pieman River just below them.

Merton's Prospect, Little Wilson River District, now "Hershaw's."—Some prospecting work has been, and is being, carried out on this property, where two men are employed. Prospects are reported to be encouraging.

Mt. Claude District, Moina.—New Shepherd and Murphy Mine.—The only work carried out during 1926 was to dismantle the magnetic separation plant at Launceston and take it to the mill site at the mine, erect, and house it, two men being employed. It is hoped that sufficient capital will be forthcoming shortly to re-open the workings below adit level.

Kemp's Rainbow Tin Mine (Old Iris T.M.).—Two men have been employed during threequarters of 1926, when water was available. The tin obtained is mixed with a fair amount of wolfram, which needs to be separated. The ore obtained was sent to Sydney for treatment towards the end of the year, but so far no results have reached this office.

Mt. Oliver Tin Mine.—This is situated above the old Tin Spur. An Adelaide syndicate is doing some prospecting work on the property. There is some tin stone showing, but, personally, I do not like the country, and as previously reported in connection with the Tin Spur property, I will be greatly surprised if ever a payable mine is developed there.

Balfour District.—An average of five men have been prospecting and sluicing for tin, and 3·0238 tons of tin were obtained. On man has some precipitating boxes on the old Reward Copper Mine, and 1·6236 tons of copper were obtained from the last clean up.

King Island.—Sea Elephant P. Ass.—This mine is known on the island as the "White Hawk." I understand a company has been (or is being) formed to work the property. I have not visited the mine during the year, as most of the work carried out was drilling operations. An average of 6¼ men have been engaged.

Zinc-Lead Silver Mines.

The Electrolytic Zinc Company of Australasia Limited have carried out an extensive diamond-drilling campaign at their Rosebery and Mount Read Mine. At Rosebery Mine results, I understand, have been satisfactory. Results at the Mount Read Mine have been varied. Mining developmental work has been carried out at No. 4, 5, and 5A levels at the Hercules Mine, and the ore bodies are opening up in a very satisfactory manner. A little work was carried out during one term by three men at the old Dalmeny mine, and during the first quarter seven men were employed underground at the Mt. Read Mine.

A considerable tonnage of ore has been broken at the Hercules and Rosebery Mines and sent forward to the works at Zeehan. Figures are sent to the Mines Office, Hobart, regarding the contents and value of this ore.

An average of 98 men were employed at the Rosebery Mine end and 45¼ at Hercules Mine.

Silver-Lead Mines.

Waratah District: The Magnet Silver Mine.—The manager (Mr. R. G. Hales) has supplied the following data:—14,326 tons of ore have been treated and 2294 tons of ore sent to market, containing 1021·97 tons of lead and 154,801 oz. of silver; gross value, £61,100. Average number of men employed 108. The principal development work carried out was at No. 16 level—cutting the plat and driving to cut the lode. This was cut at 523 feet from the main shaft, the lode being 34 feet wide where the cross-cut passed through it. Drives north and south have been driven 20 feet and 18 feet respectively. Sufficient work has not been done to prove the value of the lode, but so far it is encouraging.

No. 15 level.—The bulk of the ore mined has come from the stopes over this level. The lode is still maintaining its value.

No. 13 level.—Development has been carried out at this level by driving in a southerly direction on the western side of the dolomite, but only poor values were met with in the drive. The best values are showing at the bottom of the drive. North on this lode a little stoping has been carried out on a formation 2 feet wide, giving some nice values. A rise has been commenced and is up 96 feet. This is to connect up to No. 11 level for ventilating purposes.

No. 9 level.—Stoping has been carried out with variable results.

No. 4 level.—Driving, rising, and stoping have been carried out at this level, but, owing to the smallness of the veins of ore, work has been suspended.

I can concur with the above. One trouble with the mine is the power system, which has cost an exorbitant amount, quite out of keeping with what would have suited the mine, and owing to the water storage system being inadequate. Nearly every year it fails during the dry season. This disorganises the whole of the work, as the men being put off naturally look for work of a more permanent character in other places. Men, knowing this, who would probably go to the place, will not do so owing to these stoppages. Needless to say this piles up the costs. In my opinion it is a pity a power scheme was not adopted that could have been obtained from the larger rivers near by, at a much lower cost, transmitting the power to the mine, which could have served for all the year round. Provision should be made to instal plant that could keep the mine going continuously. There are many ways in which this could be done.

It is too soon yet to say what the ore on the western side of the dolomite is going to turn out, but the indications, in my opinion, are decidedly encouraging. The thickness of the dolomite between the two ore bodies appears to be decreasing as depth is obtained, and I would not be surprised to see this cut out and the ore bodies come together in depth.

Prospecting.—To the south of the Magnet Silver Mine some work was carried out under Government assistance by Mr. J. Betts, but nothing of any value was discovered.

Mt. Jasper Copper Mining Company.—Some work was carried out on what is known as the Wright Mine. Ore carrying 539 oz. of silver and 5·069 tons of lead was sold, an average of three men being employed. The work consisted of driving and stoping on the ore channel, so it can be seen the ore is costly to get.

Mt. Farrell District.—North Mt. Farrell Mine, Tullah.—The following is supplied by the manager (Mr. F. H. Jorgenson):—Crude ore raised and treated, 15040 tons. Marketable ore obtained, 2969 tons, containing 193,287 oz. of silver and 1790·38 tons of lead. Average number of men employed, 112½.

Development Work, 1926.—Main shaft sunk 15 feet. No. 9 level: Plat cut; cross-cutting, 221 feet; drives on lode, 28 feet north and 24 feet south. No. 8 level: Cross-cutting, 50 feet; driving, 276½ feet; raising 324 feet. No. 7 level: Driving 87 feet. No. 6 level: Cross-cutting, 92 feet. No. 5 level: Cross-cutting, 10 feet; driving, 58 feet.

Towards the end of 1926 it was decided to sink a new main shaft from the surface. There were several reasons for deciding this; two of the principal ones were that the hoisting engine at the present main shaft could not handle the output from a deeper level, in fact it is not satisfactory from the present level, and that, as the shaft is sunk, the cross-cutting became greater to cut the lode at each level, owing to the underlay of the ore channel.

There are many things to be said in its favour, but whether the mine warrants the expenditure at the present moment only the future will prove.

Nearly all the development work carried out for many years has been in connection with the one line of lode formation, but one cross-cut was put out to get filling to fill stopes, and some galena was cut. This was driven on for a short distance north and south. This was at No. 5 level. The cross-cut is being extended at No. 6 level to try and pick it up. It is too soon to say much about this make of ore, but it is encouraging. To my mind it is a great pity that some diamond-drilling work has not been put in hand to test the country to the east and west, particularly to the east towards the contact.

Old Mt. Farrell Mining Company's Mineral Lease (now A. Maggs' and others).—A little prospecting work has been carried out on this property.

It appears to me, judging by the material lying about on the various dumps, that, at present prices of metals, this old mine deserves looking into. It would not cost a great amount to clean out the drives, so that an inspection could be made, a scheme of development work laid out, and, if satisfactory, a concentrating-flotation plant erected.

South Mt. Farrell Syndicate (Old Murchison Mine).—Some ore was discovered by two men working in their spare time, and an option given to a syndicate, which drove an adit to cut the ore lower down. On doing so it was not payable, and the option was surrendered.

New Sterling Valley Silver-Lead Mining Company.—The old wooden tramline was relaid from Tullah to the mine, and ate up most of the capital available. Some of the ore body previously opened up was stoped out, and a few tons of clean ore was picked out and sent to market, but it was soon seen that this was not going to be payable, as the ore was too dirty to be hand-dressed. A start was made to continue to sink the main shaft, but money was not forthcoming and work has been suspended. Some milling plant was bought, but never installed at the mine. This is another case of investors being badly advised. If the money raised had been spent in systematically prospecting the property, there is a probability that the makings of a good mine may have been discovered.

Prospecting.—A little prospecting work has been carried out in the outside district, but nothing of any value has been discovered, as far as I know.

Mt. Claude and Moina District.—Round Hill Silver-Lead Mine, Cethana.—The manager (Mr. J. J. Andrews) reports as follows:—During the year exploratory work has been carried out, principally at No. 1 level, from shaft; towards the end of the year development work was started at No. 1 tunnel.

South-east drive, quartzite lode, south-east of shaft, No. 1 level: This drive was extended 161 feet on the course of the lode. This, for the greater distance, was payable and contained good silver values.

South-east drive, quartz lode, south-east of shaft, No. 1 level: This drive was advanced on the lode, which is associated with quartz, 99 feet, the lode producing good milling ore for 74 feet, the last 25 feet being poor seconds.

North-west drive, north-west of shaft, No. 1 level: This drive, which is coming out under the entrance of No. 1 tunnel, was driven 278 feet in the ore channel. This, for the most part, proved to be very erratic and patchy.

Branch lode, north-west of shaft, from south cross-cut: Work on this lode was continued for 67 feet, the ore making in hard quartzite. The lode was not payable.

Cross-cuts, No. 1 level, off main shaft: Cross-cuts were driven a distance of 65 feet to test walls both sides of ore channel, but nothing of any value was exposed.

No. 1 tunnel, quartzite lode: The drive on the quartzite lode was extended to 65 feet, the lode here being small and faulted.

Cross-cut off No. 1 tunnel: A cross-cut north has been started from quartzite lode to test the probability of the En-echelon theory occurring in this part of the mine. This cross-cut has been driven 20 feet at a point 560 feet south-east of the shaft.

Rises.—No 3 rise, north-west of shaft, has been put up and holed through to No. 1 level.

Stopes.—Stoping has been carried out south-east and north-west of shaft from shaft No. 1 level. The work south-east of shaft has proved payable, but from the north-west otherwise.

Concentrating Plant.—During the year the mill treated 8287 tons, from which 637 tons of marketable ore was produced, containing 129 oz. gold, 24,238 oz. silver, and 381 tons of lead. An average of 39 men were employed.

The above speaks for itself. The results have been very disappointing. The drive was driven at No. 1 level right under and beyond where tributers had some very rich ore in the early days of the mine, but nothing of any extent was discovered. Three rises were also put up to level above to prove the downward course of this ore.

The ore occurrences in this mine have been very erratic, and this usually does not tend to good results from diamond-drill work. Still, I would recommend that it be tested by drilling. Before abandoning the mine I strongly recommend that a couple of thousand pounds be expended in this way.

Washington Silver-Lead Mine, Moina.—The water-race has been continued, and is now on the mine, but a tunnel has to be completed through the hill to get it to the top of the mill site. A site has been cleared to the concentrating mill and a quantity of old second-hand machinery brought on to the mine. I am informed that this is to be erected at once; the intention being to open up the mine from profits made from milling the ore in sight. Personally, I think the shareholders would have been better advised to have opened up the mine to see if it warranted the erection of a mill.

Prospecting.—A little prospecting has been carried out at the Dove River and at and around the old Caledonian Mine, but no ore was sent out during the year.

Penguin District.—A fair amount of prospecting work has been done in several places from just near the seashore back into the Dial Ranges, most of it being in connection with places indicated by "diviners" with their wires. In all instances formations were discovered, but were of no commercial value.

Coal.

Preolenna Coal Mine.—No cutting of coal has been carried out that I know of during 1926.

Meunna Coal Mine.—One man has been engaged best part of the year, and a few tons of coal have been won and sold. It is a pity this field has not been bored. There may be other seams, or other places on the known seams, where there is greater thickness than that showing at present which could be worked at a profit.

Illamatha Colliery, Spreyton.—Some 1240 tons of coal has been sold from this mine during 1926, an average of nine men being at work. There is hardly a living wage to be earned at the price received for the coal, but the men state they have their homes and families around there, and they would sooner stay than go further afield.

Shale.

Tas. Cement Pty. Ltd., Shale Mine, Latrobe.—Some 2000 tons of shale have been mined and crushed and sent to the cement works to be used in the making of cement during the last half year, eight men being employed.

Australian Shale Oil Corporation, Shale Mine.—A considerable amount of plant has been erected, and the big retort, which was expected to treat 140-180 tons per 24-hour day, was given a run, and a good many alterations made. The last continuous run was for ten days, and the quantity treated was 480 tons, giving 46 gallons to the ton. During 1926 altogether 1598 tons of shale were retorted, an average of 45 men being employed. At the mine the main adit was stopped and entries turned to the right and left, from which 8-yard bords were turned as entries advanced. From these the shale was obtained, which was retorted.

New Southern Cross Motor Fuel Pty.—No work has been carried out at the mine end. A small retort, designed by the manager (Mr. McPherson), was given a trial run, and was reported to be satisfactory. This was altered in a few details in connection with the feed and discharge ends, these being made mechanical instead of by hand, and then given another run. Work was then stopped, and nothing has been done since last June. No figures reached this office in connection with the last test made.

Deloraine District.—Discoveries of shale were reported from Chudleigh, but very little work has been carried out. No mining work has been carried out on the properties of the Osmaston Shale Syndicate. Both parties are, I understand, seeking for capitalists to open up and develop their resources.

Iron Ores.

Hoskins' Iron and Steel Company.—These people, during the first three quarters of the year, only carried out a small amount of prospecting work, but in the last quarter had up to 30 men at work. A considerable amount of trenching, tunnelling, and shafting was carried out, and the results of the tunnels and shafts were very disappointing, excessive sulphur contents showing. In one place where there had been good values in iron showing for 240 feet along the trench a shaft was started, and at 17 feet deep was very pyritical. At another place where there were cliffs of magnetite showing, a tunnel was driven in 50 feet, and pyrites was showing nearly all the way. Work was stopped just before Christmas, and since then all tools have been carted into Waratah. So far as I know no other work has been carried out on any of the iron deposits in my district.

Cement.

The Tasmanian Cement Proprietary Ltd.—Many alterations and additions were made during the year, an average of 90¼ men being employed, and 4586 tons of cement was made, the value being placed on this by the company being £21,322·5. From reports the cement is a very good article, and when the "clinker" shed is completed should be even better. A change over to electrical power will be made shortly, and should help considerably in connection with costs.

Osmiridium.

Caudry's Osmiridium Mine.—The concentrating mill was completed and mining operations resumed, but there was very little to put in it. Apart from a few isolated patches the ground mined has not been payable. The average number of men employed, as given by the managers, was, for each quarter, as follows: 17, 6, 9, and 4. For the first two quarters the return given was 37 oz. 3 dwt. 16 grs. of osmiridium, valued at £970. No metal recovery or values have reached this office during the last two quarters. A small mechanically-driven sampling plant has been erected, and a good deal of prospecting work was being done towards the end of the term.

Savage and Castra Rivers, 19-Mile Creek, Little Wilson, and Wilson River Districts.—An average of 51 men were employed at these places, gradually becoming smaller towards the end of the year.

Limestone.

The Broken Hill Proprietary Co., at their Melrose quarry, have broken and dispatched 145,869 tons of limestone to their works at Newcastle, the average number of men employed being 80½.

Ochre.

During the first two quarters 38 tons was sent to Messrs. C. Atkins' paint works in Victoria, the value being given as £69. Two men at work.

Liquid Oil.

The Adelaide Oil Exploration Company have been engaged in diamond-drilling for oil during the last two quarters at East Devonport, then at Northdown.

General.

The prospects regarding mining at the present moment are, I think, on the whole much brighter. There seems to be more inquiry for mining properties, and I am hoping that the prices for metals, particularly tin, may keep where they have been of late. If so, I feel sure we will have an increased output and a larger number of men engaged during 1927.

CHIEF INSPECTOR OF MINES (Queenstown Reports).

I HAVE the honour to submit the following report upon the work of inspection and administration of the provisions of "The Mines and Works Regulation Act, 1915," "The Explosives Act, 1916," and "The Inflammable Liquid Act, 1920," within the Lyell and Zeehan inspection division for the year ended 31st December, 1926. Owing to the illness of Inspector Williams, a return from this officer is not available.

The principal mines and works again commanded the greater number of underground and surface inspections, the work of inspection being extended to those of lesser importance as occasion demanded. The production and maintenance of safe working conditions received full consideration. In several instances cases of laxity were encountered in respect to barring down unsafe ground, adoption of general protective measures in regard to broken ground, efficacy of timbering, underground excavations, and attending to other details upon which safety depended, all of which received consideration.

There were no extensive or uncontrolled settlements of ground during the year, and it is pleasant to note their continued absence. Open-cut workings, where quantities of ground subsided, have continued to be kept under close observation and attention. Workings on this ground have been discontinued, and no person received injury during the long period of settlement.

Accidents.—Fifteen accidents, involving 15 casualties, were registered, but it is pleasing to record that there was an absence of fatalities. Eleven of these accidents occurred on the surface, and four underground. Five cases occurred involving the fracture of limbs, and three of burns. The remainder were due to various causes, such as trucking and persons falling, but were not of a serious nature, although were such as to necessitate 14 days' absence from work.

Health and Sanitation.—Matters pertaining to health and sanitation have received close attention, and good results have been recorded. The abolition of dust has received considerable attention, and it is pleasing to note that considerable advancement has been made in the conditions at reduction works, especially in regard to crusher stations and smelting works. Change-house accommodation received considerable attention, and greater comfort has been obtained. In one instance the introduction of vacuum cleaners has had a very marked effect. Underground crib places and latrine accommodation have been very satisfactory.

Mining Activities.—Mount Lyell Mining and Railway Company Limited.—The output for the year was—

Mineral.	Quantity.	Value.
		£
Silver (oz.)	134,586	22,176
Copper (tons)	6,535	454,854
Gold (oz.)	2,300	9,797
Total value		£486,823

The principal operations were confined to the North Mount Lyell Mine, which supplied almost the whole of the ore treated, with the exception of a small quantity on the Mount Lyell Mine for fluxing purposes. At the latter end of the year all work was discontinued at the Mount Lyell Mine, and in future ore from the North Lyell Mine only will be treated. The discontinuance of work at the Mount Lyell Mine will cause reorganisation in mining methods. It is the intention of the company to drive a tunnel from the smelters to the 1000-feet level in the North Lyell Mine. The whole of the transport of ore will then be done through the tunnel. This will mean the discontinuance of the haulage and handling from the mine to the top of the haulage, and will also mean the discontinuance of pumping from the 1100-feet upwards.

During the year the main shaft of the Mount Lyell Blocks has been cut to the surface and equipped, and is now nearly ready for operations. The hydro-electric plant at Lake Margaret was in continuous operation, and supplied the whole of the power and light required for the Company's mines and works. Arrangements were also being made for power to be supplied to the Electrolytic Zinc Company at Zeehan and Rosebery.

South Comet.—The output for the year under review was—

Mineral.	Quantity.	Value.
		£
Lead (ons)	59·6	1,834
Silver (oz.)	3,838	462
Zinc (tons)...	2·5	85
Total value		£2,381

The deposit has been mined from the northern hillside end by three adits—No. 1 adit, just below the outcrop, which is 120 feet above No. 2; at No. 2 main adit most of the exploitation has been carried out, and is 220 feet below the lower-level adit; No. 3 (or lower level) adit has been driven 470 feet on the zinc ore-bodies, the face being vertically under a point 50 feet from the entrance of No. 2 adit. The strike of the lode is a few degrees west of north, and the lode dips south-westerly at a high angle. The country which contains the ore-body is mainly slates. Previously it was considered to be a single lode, but later developments make this doubtful, and development is being carried out which may prove that there are two lines of lode, one containing zinc-lead and the other silver-lead. A concentrating mill about 1 mile from the mine, connected by an aerial tramway, has been erected. The object of selecting a site for the mill away from the mine is with a view to treating other ore-bodies in the district. The mill is designed in two sections, viz., a gravity section and a flotation section. During the coming year the zinc product will be recovered and marketed.

West Coast Silver-Lead Company.—This property was formerly known as the North Zeehan, and is situated about 3 miles from Zeehan post-office, and on the Granville tram. During the year the property was taken over by a syndicate. They have developed a large formation at the 40-feet level, and have driven a distance of 280 feet on a formation carrying irregular values. It is the intention of the syndicate to sink a main shaft 10 feet by 4 feet on three compartments of 100 feet. Water is very light, a 4-inch pump coping with the supply easily.

The output for the year was—

Mineral.	Quantity.	Value
		£
Silver (oz.)	6,200	742
Lead (tons)	49·25	1,563
Total value		£2,305

Horseshoe Syndicate.—This mine was formerly worked by the Tasman and Crown Lyell Company, and is situated about 6 miles from Queenstown.

The output for the year was—

Mineral.	Quantity.	Value.
		£
Silver (oz.)	5,369	716
Lead (tons)	87·89	2,756
Zinc (tons)	63·50	2,114
Total value		£5,586

A large amount of development work was carried out by this Company, and the present owners have been developing a zinc-lead ore-body, about 30 feet in width. The main shaft is on the property (264 feet), and is equipped with a small, primitive winding-engine. In addition to the silver-zinc ore-body there are also occurrences of copper. The property is one which has good prospects, but requires capital to develop it. It is under offer to a mainland syndicate, and, pending arrangements being finalised, a very small amount of work is being carried out.

Swansea Silver-Lead Mine, Zeehan.—The output for the year was—

Mineral.	Quantity.	Value.
		£
Silver (oz.)	3,300	450
Lead (tons)	106·82	3,369
Zinc (tons)	100·5	3,301
Total value		£7,120

A large amount of work has been carried out on this property by a local syndicate. A large zinc-lead deposit has been proved, but the property is one that requires capital to thoroughly develop it. It is the intention to place it on the market, with a view to raising capital.

Razorback Tin Mine.—The output for 1926 was 4 tons, valued at £1239. This mine was worked by tributors during the early part of the year. Oxidised ore was treated, but at the latter end of the year attention was paid to the sulphide zone in the main open-cut. A winze was sunk about 15 feet, and some very fine ore disclosed. A crushing and concentrating mill has been erected on the property.

Federation Tin Mine.—The Federation Tin Mine, situated at Heemskirk, was floated on the English market during the year, and active operations should eventuate during the coming year.

Kozminsky Silver-Lead Mine, Dundas.—An option was let to the Washington Silver-Lead Mining Company, which picked up the mouth of the lower tunnel, and opened it to the face. It then started to extend it to a lead which was considered to have payable milling values.

Machinery and General.—Due regard was directed to the efficient maintenance of ropes, cages, and attendant appliances, and generally were found to be reasonably well cared for.

Explosives.—No complaints were received, and only in very isolated cases was any defect found in regard to the quality of the explosives used. In several small mines the absorption of moisture continued, but in the larger mines the conditions may be classed as satisfactory. In several cases improper handling and keeping of explosives were encountered in small mines. Attention was drawn to the advisability of effective storage. No difficulties were experienced in connection with detonators used, and frequent tests were made of safety fuses in use, no instances of faulty fuse being encountered. No explosive accidents occurred during the year. The landing of explosives at the Port of Strahan was supervised as occasion demanded, and nothing untoward ensued.

REPORT OF THE CHIEF INSPECTOR OF MAGAZINES AND EXPLOSIVES.

Hobart, 7th April, 1927.

SIR,

I HAVE the honour to submit my annual report for the year 1926 in connection with the administration of "The Explosives Act, 1915," and "The Inflammable Liquids Act, 1920."

The imports of explosives for the year were:—

	lb.
Monobel	25,750
Gelignite	280,000
Blasting gelatine	17,000
Ligdyn	20,350
Powder	46,325
	No.
Detonators	302,100

A new explosive was brought on to the market which, after very careful observation, has proved to be satisfactory. The quality of the explosives generally was very satisfactory, but towards the end of the year slight exudation was noticeable. Explosive of this character is kept under close supervision to ascertain deterioration, and to have it removed from use before it reaches the danger point. The quality of fuses supplied was satisfactory, as was also the quality of detonators used.

There were three accidents during the year due to explosives, one injuring two persons, one fatally, and the other seriously. The occurrence was due to the use of frozen explosives, and also to using a tamping stick of too small diameter for the hole being charged. A block jammed in the hole, and in endeavouring to force it clear an explosion occurred.

The other occurrence was due to a person opening a drum of carbide with a naked light in close proximity.

The importation of inflammable liquids continues to increase, and the question of future storage has had to be dealt with. One firm has commenced the erection of bulk storage, and their supplies will be received by oversea bulk ships. Tins will be filled locally, but, as far as possible, endeavours will be made to deal with bulk deliveries. This will be accomplished by tank waggons and railway waggons, with stations at different centres.

During the year there has been a very marked increase in the number of "bowsers" installed, these being placed in almost every part of the State.

Prosecutions.—During the year there were five prosecutions for breaches of the "Inflammable Liquid Act," two being for storing without licences, two for smoking on registered premises, and one for permitting a naked light in the hold of an oil ship. Convictions were obtained in four cases, and fines ranging from 8s. to £5 inflicted. In the other case there was a dismissal owing to lack of evidence.

Revenue.—

	£	s.	d.
Magazine licences (73)	73	0	0
Licences to store (197)	207	0	0
Permits to sell (296)	75	10	0
Permits to import (19)	37	10	0
Permits to convey (60)	15	0	0
Permits to sell fireworks only (49)	6	2	6
Registered premises (390)	97	10	0
	£511	12	6
Magazine rents	195	18	1
	£707	10	7

I have, &c.,

J. O. HUDSON, Chief Inspector of Explosives.

A. MCINTOSH REID, Esq., Director of Mines.

AID TO MINING.—YEAR ENDING 31ST DECEMBER, 1926.

DURING the year operations under "The Aid to Mining Act, 1921," have shown a steady decline.

The number of tributing parties working under the provisions of the Act have considerably decreased. At the end of the term under review five parties were employed, and of these only one maintained a regular output of ore.

The district of Zeehan, to which the operations of the Act are confined, formerly embraced an area with a radius of 5 miles, which was latterly extended to 8 miles. The extension of the area did not tend to increase prospecting or mining activities.

Since the commencement of constructional and productive operations by the Electrolytic Zinc Company at Zeehan, a steady demand for labour has occurred, and the greater number of men who, prior to that time, were engaged in the more or less precarious occupation of mining on their own account, or working as State tributors, gradually drifted into the service of those companies offering constant employment.

The decline in the number of tributors employed on the field had no serious effect on the gradual prosperity of the district. The town of Zeehan and the outlying centres are now in a more prosperous condition than for many years past, due solely to the operation of capitalised companies.

The outlook for a gradual expansion of the mining industry on a solidly established basis can be hopefully anticipated.

J. B. SCOTT, Government Mining Engineer.

5th April, 1927.

The amount received from ore sales was £1863 6s. 6d., which was distributed, as follows:—

	£	s.	d.
Paid to tributors	1,726	4	4
Royalty paid to State	137	2	2
	£1,863	6	6

EXPENDITURE.

	£	s.	d.
Salary and wages	229	10	0
Assistance to prospectors, under Part I.	32	10	0
Assistance to prospectors, under Part III.	802	12	8
Travelling expenses	8	9	6
Loan to the Miner's Dream Gold Mining Company	500	0	0
Assay material	13	11	9
Insurance	9	18	0
Office expenses	1	0	6
Miscellaneous expenses	3	14	0
Refund of royalties	4	13	6
	£1,605	19	11

RECEIPTS.

	£	s.	d.
Royalty paid by tributors	137	2	2
Assay fees	19	1	10
Sale of chemicals	15	6	4
Sale of materials	7	10	0
Interest on loans	55	18	4
Refund of expenses	0	3	9
Refund of salary	9	13	7
Grant from Commonwealth Government under "The Precious Metals Prospecting Act, 1926"	1,000	0	0
	£1,254	15	2

MOUNT CAMERON WATER-RACE: REPORT FOR THE YEAR ENDED 31st DECEMBER, 1926.

Gladstone,
Manager's Office, February 24, 1927.

SIR,

I BEG to submit my annual report relative to the working of the race for the year ended the 31st December, 1926.

Race.—It was found necessary to clean and scrub races to convey water to Higgs' and Kerrison's claim at a cost of £29 1s. Portions of the race will need to be cleaned and scrubbed during next summer.

Flumings and Syphons.—The Fly-by-Night syphon has given trouble, some of the pipes having come apart, and bands have had to be put round them. The iron fluming across the Chum Creek is becoming the worse for wear, and some of the timber on same will have to be replaced during the current year.

General.—The interior of the manager's residence has been painted. Spouting and downpipe attached to Channel-keeper Keegan's cottage. New gate put in race near No. 2 Government dam. Three new gauge-boxes (two large and one small) have been purchased, and are in use.

I have, &c.,

D. SHIELDS, Manager.

A. MCINTOSH REID, Director of Mines, Hobart.

Revenue.—The revenue for the year amounted to £1615 0s. 3d., an increase of £522 3s. 5d. on the previous year.

Expenditure.—The expenditure amounted to £814 0s. 7d., being a decrease of £193 16s. 4d on that of the previous year.

Statistics.—The statistics for the year are as follow:—

Average number of claims supplied per week	13	
Greatest number supplied in any one week	17	
Total number of sluiceheads supplied—		
Under royalty scale	1,368	
Under fixed or cash scale	959	11/12
Total	2,327	11/12

Tin ore raised—
Under fixed scale—38 tons 10 cwt.
Under royalty scale—17 tons 11 cwt. 1 qr. 16 lb.
Total—56 tons 1 cwt. 1 qr. 16 lb.
Average number of men employed, per week, 24.

Receipts.—

	£	s.	d.
Water sold under fixed scale	808	9	10
Water sold under royalty scale	791	7	10
Water sold for domestic and sanitary purposes	10	0	0
Sale of old material	5	0	0
Surplus unaccounted for	0	2	7
	£1,615	0	3

Expenditure.—

	£	s.	d.
Salaries and wages	716	16	10
Travelling expenses	16	15	0
Gauge boxes (3)	26	9	6
Insurance	6	12	1
Riding saddle and bridle	6	10	0
Painting and repairs to cottages	5	10	0
Tar for syphons	3	11	0
Stationery	5	19	9
Repairs to race	14	11	4
Refund	1	6	10
Miscellaneous	9	18	3
	£814	0	7

Paid to the public debt sinking fund for the year ended 30th June, 1926 (including moiety of rents of mineral lands served by the race, £3 15s.) ... ... £270 1s. 10d.

Rainfall.—The registered rainfall for the year was as follows:—

	In.	Pts.
Great Mussel Roe intake	26	51
Little Mussel Roe intake	26	12

The manager's report for the working of the race for the year is attached.

Mount Cameron Water-race.—The control of the Mount Cameron Water-race has been vested in a board since it was purchased from the Mount Cameron Hydraulic Tinmining Company in 1887. By an Act of Parliament which received the Royal Assent on the 29th November, 1926, the board was abolished, and the management and control of the race vested in the Minister.

NOTES ON REPORT BY C. HOWARD ON THE COUNTRY BETWEEN LOW ROCKY POINT AND FITZGERALD.

Mr. Howard accompanied Mr. P. B. Nye, Government Geologist, as field assistant, on an expedition to the country in the neighbourhood of Low Rocky Point, West Coast. The other members of the party travelled by boat. Howard, on the return journey, travelled overland alone. The report of his trip, *inter alia*, is as follows:—

No doubt prospecting has been performed in this district at long intervals, especially along the coast line, but information is very meagre with respect to the country between the nearest settlement (Fitzgerald) and Low Rocky. That fact was the cause of my decision to explore the intervening country.

The first day out I reached Little Rocky River, which leads from a southern spur of Lawson Range called Review Hill. Next day, after a first effort failure, I reached the summit of Lawson Range, which is extensive, and, on its eastern slope, precipitous. The following day I walked in the direction of Counsel or Prospecting Range in expectation of finding Hales' Crossing of Hardwood River, but later realised that I would have to follow the range southward in order to find any easy descent, not into the Hardwood, but into Giblin River Valley. Giblin River is fringed with an almost impenetrable tangle of tea-tree and bauera, and its flood-plain is very boggy, wide, and long.

Having arrived at the foothills of a belt of broken country, between Counsel and Lawson Ranges, I saw the pegged line of Moore's track. It appeared to me that Moore had skirted the flat country and had crossed the headwaters of Giblin River at much easier points. I continued my journey through the broken country in a northerly direction, and late in the day reached the hills overlooking Hardwood Valley, with its barren broken spars of schist on one side and its wooded ridges on the other. I had come out near View Hill, which I could have reached in a much easier way by going around the northern bend of Lawson Range. I was pleased to find the pegged line of Hales' track on the floor of Hardwood Valley, which I followed southward until I lost sight of them.

Continuing my southward journey towards a sharp bend in the river I found the old crossing of Jones and Hales. At this point the Hardwood River is 60 feet wide, deep, slow-flowing, and its plain is subject to floods. Middle Ground plain is a large tract of open button-grass country lying between Hardwood and Davey Rivers. Davey River, at the point of crossing, is fringed with Huon pine, which, I venture to say, will be found in extensive forests near the headwaters. Next day I left the eastern bank of the river, and crossed several minor tributaries before reaching

Doherty's Ground. Keeping Cinder Hill to the south, I crossed two large tributaries of Davey River, which are 30 to 40 feet wide and fast-flowing. I then followed the long spur leading to Jones' Pass 1800 feet above sea-level. As the pass appeared to be thickly clothed with scrub, I first attempted to find a way along the steep slopes of Mount Giblin, but finding it too rough I returned to the pass, and after some time came to a blazed trail leading towards Huon Plains. This I followed some distance, then continuing on the northern side of Mount Giblin, and noticing Scott Peak directly in front decided to camp. (Before proceeding with this account I should like to state that an isolated hill, 1½ miles long and 600 feet high, guards the mouth of Jones' Pass As this is a prominent landmark I named it Sentinel Hill. The scrub through the pass contains a large proportion of pine.) I followed a spur off Frankland Range to Huon Plains, passing several small lakes on the way, and ultimately reached the track leading from Port Davey to the South Gordon track, about 8 miles away.

Observations made on the overland trip lead me to believe that the possibilities of finding mineral deposits of commercial value are decidedly good.

To open this country well-designed tracks are first essentials, but not for the carriage of provisions to the far western areas, because the cost is prohibitive. The sea-route is the only economical way at present to those parts.

As regards the geological formations of the country traversed, the following remarks are submitted:—

Over Little Rocky River crossing is a 20-chain wide belt of granite (probably of Ordovician porphyroid series), succeeded by slates, quartzite slates, and schists. Lawson range is composed of quartzite and coarse conglomerate from Giblin Valley, which is occupied by schists, quartzite, stained red, and continues to Hardwood Valley; an erosion channel is fossiliferous limestone. The country between Hardwood Valley and Frankland Range is composed of schists, quartz, and mica varieties. Crossing Doherty's Ground is a band of slate, succeeded by a high ridge of sandstone veined with quartz. The spur leading to Jones' Pass is quartzite, which continues to the southern fall of Mount Wedge. Here occur conglomerate, sandstone, purple schists, limestone, and a black undermined rock. It is not basalt. It would not surprise me if this was a particular mineral belt similar to Adamsfield. The country is worthy of careful attention.

Taking for granted that tracks are going to be put down and will be used in future, I would like to suggest a track that would enable prospecting to be carried out properly in the tract of country first mentioned. The Tyenna track to the South Gordon and Davey junction could be utilised, and the Davey track to a point opposite South Peak. Part of this track is in a very bad state and part of it is very good. The question of a proper crossing at the Huon would have to be gone into. Horses, if properly handled, are good swimmers, and a wire rope and cage would suffice for men and stores. Timber is plentiful in this locality. A good hut could be erected for a small amount, and would indeed be welcome.

Turning off into Hales' exploration survey, the new track to be continued to View Hill, west of the Frankland Range. In this stretch the scrub leading through Jones' Pass is bad, but the slope is good. The highest point would be 1800 feet. Dropping down on its western side the slopes are fairly steep, but by continuing along the top of the spur the going would not be bad. Continuing along the first branch of Davey the grade is good. This branch would not be difficult to cross at the worst of times; these branches rise rapidly and fall likewise. Continuing, the track would cross Doherty's Ground, and then a second tributary of the Davey. The track crosses a high button-grass ridge, but by keeping towards its southern end a good grade could be got. Going down its western side the track crosses a small creek, and a little further on the Davey River. Provision for crossing this river would also have to be made, and as there is fine timber here a hut could be built. The track crosses the middle ground, which is fairly flat, and crosses the Hardwood River. The banks of this river are about six to eight feet high, but not difficult for horses. The track would then cross the Hardwood Valley to foot of broken country, and continued north hugging these spurs crossing four branches of the Hardwood (which are not difficult), and would come on to the saddle between the head of the Olga and Hardwood. This main track could be taken right to Moore's Landing on the Gordon River, which appeared to be from View Hill a continuous valley. This track would tap a large scope of country all the way, but there still remains the country further west. View Hill must be the junction of a track leading to it. I would suggest that the summit be followed along Jones' track bearing a distance of seven or eight miles through buttongrass broken country, but not difficult, to Frederick Hill. Crossing over this down on to a branch of the Mainwaring River, lying in between Frederick Hill and Moore's Look-out and the southern end of Lyons' Range. Following the southern bank of this tributary 2½ miles, the track would come in contact with Moore's survey. Following this the track would cross the headwaters of the Mainwaring River. Easy crossing can be got, and the country is very open and not difficult.

Continuing along this survey of Moore's to the headwaters of the Wanderer River the country is more difficult but not bad. My knowledge of the country north ends here, but from a height does not look bad right through to Birch's Inlet. This would give prospectors a chance to prospect a large tract of country in this locality. Until tracks are put into these inaccessible parts they must remain unknown. The track that I have tried to sketch out is practically the result of the efforts of four men's work—Marsden, Hales, Jones, and Moore.

Money has been spent on Marsden's track, which was for packing. The others appears to be only surveys, but I have used them in outlining a main track and branch that would, when completed, open up a tremendous scope of country for prospecting. And one important find would repay the cost.

JOHN VAIL,
GOVERNMENT PRINTER, TASMANIA.