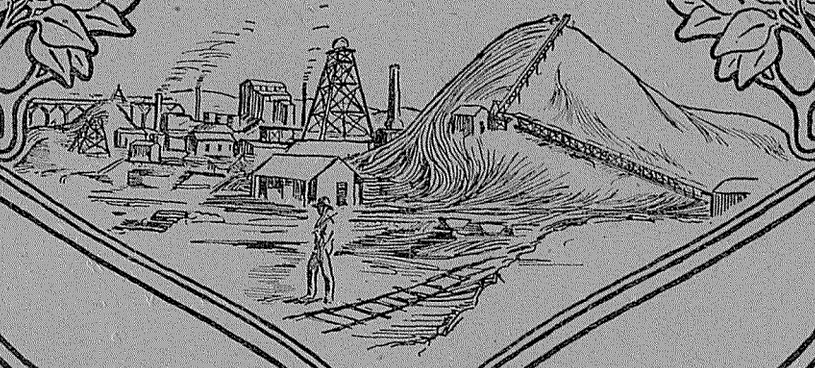
REPORT
OF THE
DEPARTMENT OF MINES
FOR THE YEAR
WESTERN · 1917. · AUSTRALIA



PRESENTED · TO · BOTH · HOUSES · OF · PARLIAMENT

BY · HIS · EXCELLENCY'S · COMMAND ·

1918.

WESTERN AUSTRALIA.

REPORT

OF THE

DEPARTMENT OF MINES

FOR THE YEAR 1917.

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

[SECOND SESSION OF 1918.]

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STATE OF WESTERN AUSTRALIA.

Report of the Department of Mines for the State of Western Australia, for the Year 1917.

To the Hon. the Minister for Mines.

Sir,

I have the honour to submit the Annual Report of the Department for the year 1917, with summaries of reports from the Wardens, and other officers, together with various comparative tables furnishing statistics relating to the Mining industry of the State.

Reports from the officers controlling the various Sub-Departments are also submitted.

I have, etc.,
M. J. CALANCHINI,
Acting Under Secretary for Mines.

Department of Mines, Perth, 30th March, 1918.

DIVISION I.

Summary by the Under Secretary for Mines.

PART I.—GENERAL REMARKS.
II.—MINERALS RAISED.
III.—LEASES AND OTHER HOLDINGS UNDER VARIOUS ACTS RELATING TO MINING.
IV.—MEN EMPLOYED.
V.—ACCIDENTS.
VI.—STATE AID TO MINING.
VII.—REMARKS ON THE GOLDFIELDS AND MINERAL DISTRICTS, AND SUMMARIES OF WARDENS' AND OTHER OFFICERS' REPORTS.
VIII.—EXISTING LEGISLATION.
IX.—INSPECTION OF MACHINERY.
X.—SCHOOL OF MINES.

PART I.—GENERAL REMARKS.

The value of the Mineral output of the State for the year 1917 was £4,629,027, being £264,390 less than that for the previous year.

Copper Ore exported showed an increase of 316 tons, and Copper Ingots of 78 tons. Tin showed a decrease, but Coal and Silver increases.

The value of the Gold yield was £4,121,645, being 89.04 per cent. of the total output.

The value of the Coal output was £191,822, of Copper £85,738, Silver £38,339, and Tin £45,288.

The dividends paid by mining companies amounted to £590,856, and in the preceding year £632,883, a decrease of £42,027.

The total dividends paid to the end of 1917 were £26,718,125.

To the same date the total mineral production was £139,905,852, and the total gold production £133,888,331.

GOLD.

The gold yield again shows a decline, being 386,887 fine ounces less than for 1916, which was 148,714 fine ounces less than for 1915.

The average value per ton of ore treated in the State as a whole has risen from 40.34 shillings in 1916 to 41.49 shillings in 1917, and in the East Coolgardie Goldfield, which, again, produced over 50 per cent. of the State's yield from 37.42 shillings to 39.53 shillings.

Comparing the tonnages of ore treated in 1916 and 1917 there is a decrease of 212,323 tons in the latter year, during which 1,960,451 tons were treated.

There were decreases in all fields excepting Peak Hill, Murchison, and Phillips River, where the increases were 256, 1,528, and 299 tons respectively.

Working costs show an increase, the average cost per ton of 2,000lbs. being as published by the Chamber of Mines:—In 1913, 19/6.6d.; in 1914, 20/6d.; in 1915, 19/9d.; in 1916, 22/3d., and in 1917, 23/7d.

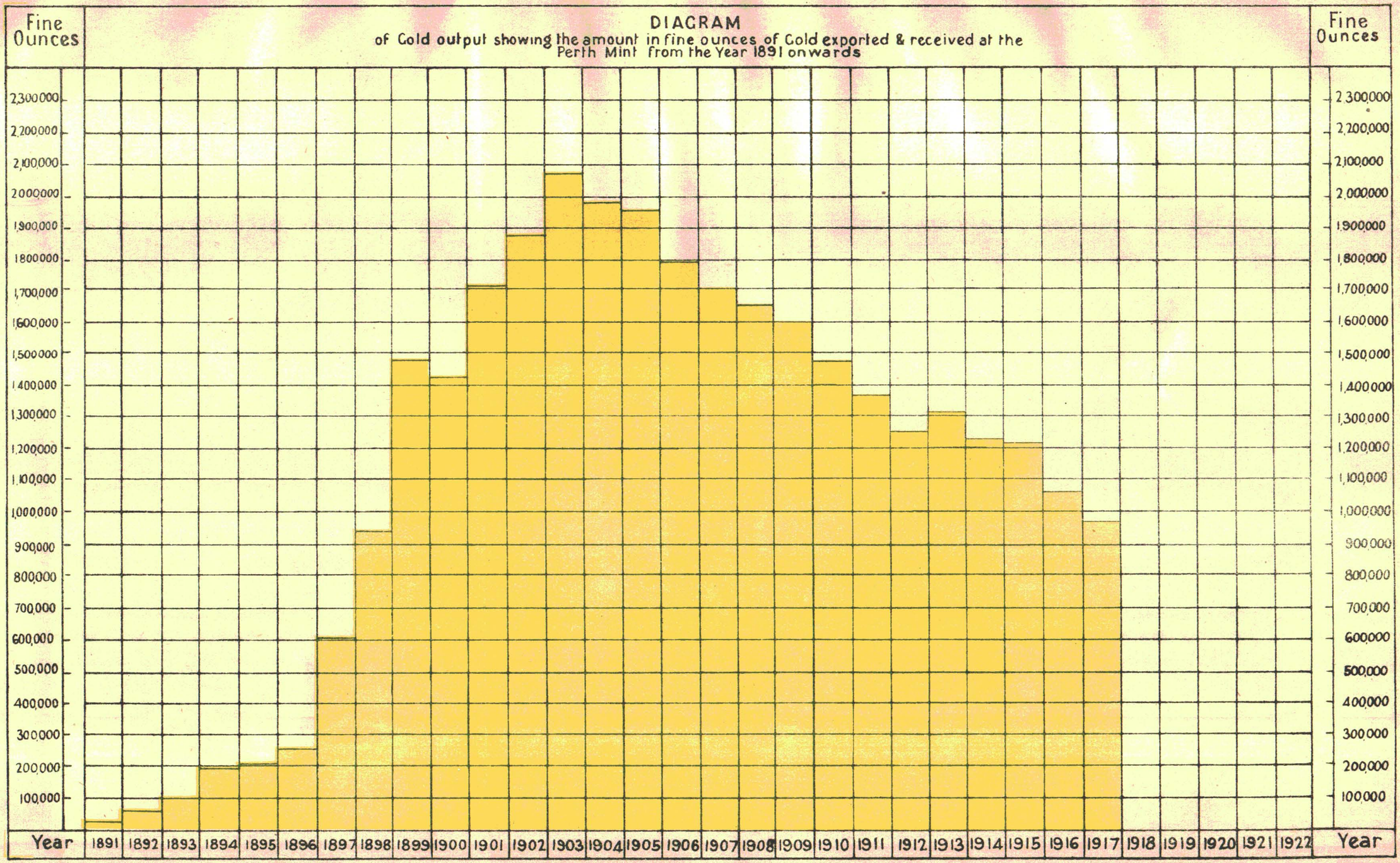
There were decreases in the gold outputs of all the fields excepting Mt. Margaret, which showed a slight improvement on the preceding year.

ERRATUM.

On page 2, Division I., Part I., under heading "Gold," second line, *for* 386,887 *read* 91,081.

DIAGRAM

of Gold output showing the amount in fine ounces of Gold exported & received at the Perth Mint from the Year 1891 onwards



1917

The acreage held under mining lease for all minerals is 53,190, being an increase of 2,679 acres when compared with 1916. The area leased for gold mining is less by 1,656 acres, but for minerals greater by 4,335 acres. The area held under prospecting areas is 15,800 acres, including 8,840 for Coal and Oil. This is a decrease of 1,720 acres on the area held in 1916, but during the year a number of Reserves were created principally along the South Coast, and rights of occupancy granted on special terms to persons desirous of searching for oil. At the close of the year the approximate area comprised in such reserves was 10,552 square miles.

The number of men engaged in all classes of mining is 10,041; a decrease of 862 on the figures for 1916, entirely owing to the absence of men at the Front, as at many centres there is a dearth of skilled miners.

The number of men engaged in mining for minerals other than gold increased by 210, the increases being in Copper, Lead, and Coal Mines. In gold mining there was a falling off of 1,072.

The average value of gold produced per man employed on gold mines has increased from £453.78 in 1916 to £471.67 in 1917. The average tonnage raised per man was 229.86 tons, and in the previous year 227.20 tons.

In the East Murchison Field there was a falling off, but in the Lawlers and Wiluna districts prospecting was active and the State plant at Wiluna continued to do good work. In the Black Range district things were very quiet.

The Murchison Field had a small decrease, due to a falling off in the outputs at Meekatharra and Mount Magnet.

The Cue and Day Dawn districts both recorded increases. Most of the mines at Meekatharra continued steady work and at Cue the Big Bell mine produced an increased tonnage for treatment.

Considerable activity was apparent in the Tuckabianna and Culculli centres.

The Mount Margaret Field has the distinction of being the only field which maintained its output, there being a small increase for the year.

In the Mt. Margaret district there was an improvement, the Lancefield and Ida H. Mines being consistent producers. The Mt. Morgans District recorded a falling off.

In the Mt. Malcolm District there was an increase, and the Sons of Gwalia Mine remains the principal producer. One or two other mines in the district give promise of becoming large producers.

The Coolgardie Field had a decrease. There was little change at most centres, the largest amount of work being done in the Kunanalling District. A new discovery was reported near Cave Rocks, about 26 miles South-East of Coolgardie, but at present the work done does not warrant an expression of opinion on its value.

The North Coolgardie Field had a decrease, the largest falling off being in the Menzies District, owing to reduced outputs from the mines at Comet Vale, which continues to be the most thriving centre. The Gladsome and Sand Queen leases, with the Menzies Consolidated Mine at Yunndaga, are the principal producers. The New Boddington, at Goongarrie, is producing regularly and this centre is promising.

At Mt. Ida matters are at a standstill.

In the Ularring District the Riverina South Mine is being vigorously worked, but elsewhere things are quiet.

In the Yerilla and Niagara Districts nothing of note transpired.

The North-East Coolgardie Goldfield had a small decrease and matters remained exceedingly quiet.

The Broad Arrow Goldfield had a decrease. The principal portion of the output came from the Ora Banda District, where a good deal of work was done. Towards the close of the year a new find was reported at the Dark Horse group of leases and looked promising. Prospecting throughout the field was fairly active.

In the East Coolgardie Field the number of men engaged in mining was 3,711, and in 1916, 4,081; a decrease of 370. This goldfield gave employment to over 42 per cent. of the number of men engaged in gold mining, and the reported production during the year was 557,983 fine ounces, over 58 per cent. of the total reported yield. The tonnage treated was 1,199,136 tons, being less than in 1916 by 116,117 tons. The average grade of the ore per ton improved from 37.42 shillings in 1916 to 39.53 shillings in 1917. The decrease in output is largely attributable to the absence of so many skilled miners on active service.

In the Yilgarn Field there was a decrease, but at most centres prospecting was vigorously pursued and at Westonia the large mines were actively worked. The Dundas Field had a decrease and there was little or no change. The existing mines have been steadily worked, but no important developments or discoveries were reported.

The Phillips River Field had a small decrease and there was little alteration in gold mining in this field.

In the Northern Goldfields, Kimberley, Pilbara, West Pilbara, Ashburton, and Gascoyne, little change was apparent.

In Pilbara the great shortage of miners and high cost of mining requisites is a considerable handicap, but a marked revival is anticipated after the war.

TIN.

The quantity of tin exported was 383 tons, valued at £45,288, being less tonnage than in 1916 by 80 tons, and in value by £3,813.

The Greenbushes Tinfield produced 237.92 tons, valued at £29,928; a decrease on the preceding year of 43.82 tons, but increase in value of £2,609; the Pilbara Field, 69.05 tons, valued at £9,264; a decrease on the preceding year in tonnage of 84.12 tons, and in value of £6,675.

None was produced on any of the other fields.

TANTALITE.

Seventeen tons of this mineral, valued at £2,513, were exported, and in the preceding year 47 tons, valued at £9,375. This was raised at Wodgina in the Pilbara Goldfield.

COPPER.

The value of the Copper exported was £85,738, being £20,905 in excess of that for 1916. The quantity raised in the West Pilbara Field was 783.61 tons, valued at £13,406; a decrease on the preceding year in tonnage of 165.26 tons, and in value of £2,710.

Operations were continued at the Whim Well Copper Mine, but there is little change to report.

In the Phillips River Field the production was 5,255.57 tons, valued at £66,868; a decrease in tonnage of 172.51 tons, but increase in value of £18,250. Progress on this field has been good, and operations have been well maintained at the State Smelter.

In the Peak Hill Field 287.84 tons, valued at £9,683; an increase in tonnage of 36.91 tons, and in value of £1,415.

The mines at Ilgarere continue to look promising, but as in the past development is retarded on account of the remoteness of the locality and consequent high costs of requisites and difficulties of transport.

Other fields producing were Ashburton, 3.71 tons, valued at £67. East Murchison, 75 tons, valued at £1,523, and Murchison, 82.92 tons, valued at £2,164.

The average number of men engaged in copper mining was 154, and in 1916, 113.

COAL.

The output of Coal for the year was 326,550 tons, being 25,024 tons more than in 1916.

All the mines, excepting the Scottish Collieries, were actively worked and the output is the largest on record.

The number of men employed, 571, is greater by 113 than in 1916, and the output per man was in 1916, 658 tons, and in 1917, 572 tons.

GRAPHITE.

Deposits of this mineral exist at Donnelly River, Kendenup, in the Plantagenet District, and Munglinup, between Ravensthorpe and Esperance.

Not much development work was done on any of them and none was exported.

OTHER MINERALS.

The quantity of Silver obtained as a by-product and exported was 222,075 ounces, valued at £38,339, and in the preceding year 173,012 ounces, valued at £22,258; an increase of 49,063 ounces, and in value of £16,081. Lead and Silver-Lead to the amount of 22 tons, valued at £593, were exported, and in the preceding year 428 tons, valued at £12,033, also 4,661 tons of Pig Lead, valued at £139,940, and in the preceding year 3,523 tons, valued at £74,930.

Pyritic Ore, amounting to 3,575 tons, valued at £1,752, was reported, and in the preceding year 4,409 tons, valued at £2,263. Magnesite, to the extent of 42 tons, valued at £50, was exported, and in the preceding year 12 tons, valued at £47.

Antimony, amounting to 12 tons, valued at £258, was exported, also small quantities of Bismuth and Scheelite.

No Asbestos, Mica, or Wolfram was exported or reported.

MINING GENERALLY.

The whole of the Australian States, including the Northern Territory and Papua, also New Zealand, each record a decreased gold output for the year.

The Western Australian production was 57.93 per cent. of the total for Australasia, and in the previous year 54.23 per cent.

The diminished output from practically every field in this State is largely attributable to the great shortage of competent miners consequent on enlistments and to the very great increase in the cost of every requisite to the industry. In mining for base metals the position is somewhat better on account of the excellent prices that have ruled for the ores, and centres such as Northampton and Phillips River have well maintained their prosperity.

The assistance to prospectors by loans of equipment and transport facilities has been continued, and the whole of the Department's outfits are in constant use.

The area held under prospecting areas for Gold and Minerals, viz., 6,960 acres, although less than in the previous year by 1,044 acres, is exceedingly satisfactory, indicating as it does that considerable interest still obtains in prospecting.

The assistance rendered under the provisions of the Mining Development Act, details of which are given in the Report of the State Mining Engineer published as Division II. of this Report, and which aims at assisting in the development of struggling mines, principally by equipping them with machinery, is evidence that the Government does its utmost to encourage and push ahead the industry. Assistance is also rendered by doing diamond drilling wherever there are reasonable prospects of success attending the efforts. The Conference of representatives interested in the industry, foreshadowed in the last Annual Report, was held at Kalgoorlie in April. Many suggestions were put forward and discussed and some of these have since been adopted.

PART II.—MINERALS RAISED.

TABLE 1.

Quantity and Value of all the Minerals produced during 1916, and 1917.

Description of Minerals.	1916.		1917.		Increase or Decrease for Year compared with 1916.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		£		£		£
1. Antimony (exported), statute tons	27	580	12	258	— 15	— 322
2. Bismuth (exported), statute tons	¼	133	½	24	+ ¼	— 109
3. Coal (raised), statute tons	301,526	147,823	326,550	191,822	+ 25,024	+ 43,999
4. Copper { Ore (exported), statute tons... ...	650	14,971	966	20,878	+ 316	+ 5,907
4. Copper { Ingot, Matte, etc., (exported), statute tons	457	49,862	535	64,860	+ 78	+ 14,998
5. Gold (exported and minted), fine ounces ...	1,061,398	4,508,532	970,317	4,121,645	— 91,081	— 386,887
6. Lead and Silver lead (ore and concentrates) (exported), statute tons	428	12,033	22	593	— 406	— 11,440
7. Lead, Pig (exported), statute tons	3,523	74,930	4,661	139,940	+ 1,138	+ 65,010
8. Magnesite (exported), statute tons	12	47	42	50	+ 30	+ 3
9. Mica (exported), statute tons	...	10	...	...	...	— 10
10. Molybdenite (exported), statute tons	...	...	14	158	+ 14	+ 158
11. Pyritic Ore (reported), statute tons	4,409	2,263	3,575	1,752	— 834	— 511
12. Scheelite (exported), statute tons	3	438	½	42	— 2½	— 396
13. Silver (exported), fine ounces	173,012	22,258	222,075	38,339	+ 49,063	+ 16,081
14. Tantalite (exported), statute tons	47	9,375	17	2,513	— 30	— 6,862
15. Tin (exported), statute tons	463	49,101	383	45,288	— 80	— 3,813
16. Wolfram (exported), statute tons	1	128	...	...	— 1	— 128
17. Zinc, Spelter, etc. (exported), statute tons ...	14	630	...	...	— 14	— 630
Unenumerated (exported), statute tons ...	...	303	...	865	...	+ 562
Total Values	...	4,893,417	...	4,629,027	...	— 264,390

TABLE 2.

Value and Percentage of Mineral Exports in relation to the value of Total Exports from Western Australia.

Year.	Total Exports.	Mineral Exports (exclusive of Coal).	Percentage.
	£	£	
1901	8,515,623	6,920,118	81·27
1902	9,051,358	7,530,319	83·20
1903	10,324,732	8,727,060	84·53
1904	10,271,489	8,625,676	83·98
1905	9,871,019	7,731,954	78·33
1906	9,832,679	7,570,305	76·99
1907	9,904,860	7,544,992	76·17
1908	9,518,020	7,151,317	75·13
1909	8,860,494	5,906,673	66·66
1910	8,299,781	4,795,654	57·78
1911	10,606,863	7,171,638	67·61
1912	8,941,008	5,462,499	61·09
1913	9,128,607	4,608,188	50·48
1914	8,406,182	3,970,182	47·23
1915	6,291,934	2,969,502	47·19
1916 *...	...	...	...
1917 *...	...	...	...
15 Years Total ...	137,824,649	96,686,077.	70·15

* Particulars not at present available.

TABLE 3.

Showing for every Goldfield the amount of Gold reported to the Mines Department as required by the Regulations; also the percentage for the several Goldfields of the total reported and the average value of the Gold per ton of ore treated.

Goldfield.	Reported Yield.					
	1916.	1917.	Percentage for each Goldfield.		Average Value of Gold per ton of Ore treated.	
			1916.	1917.	1916.	1917.
	fine ozs.	fine ozs.			shillings.	shillings.
1. Kimberley	162	**82**	·02	**·01**	...	...
2. Pilbara	5,882	**5,407**	·57	**·57**	149·79	**190·60**
3. West Pilbara	609	**305**	·06	**·03**	75·09	**72·17**
4. Ashburton	...	**7**	...	...	...	...
5. Gascoyne	14	...	...	...	33·04	...
6. Peak Hill	2,389	**1,744**	·23	**·18**	112·57	**71·95**
7. East Murchison	46,811	**32,857**	4·54	**3·43**	57·29	**47·90**
8. Murchison	84,423	**82,306**	8·18	**8·60**	51·54	**66·79**
9. Yalgoo	8,195	**5,813**	·79	**·61**	44·41	**66·75**
10. Mt. Margaret	100,612	**101,874**	9·75	**10·64**	32·16	**33·64**
11. North Coolgardie	45,147	**34,795**	4·38	**3·64**	59·20	**54·57**
12. Broad Arrow	22,216	**16,519**	2·15	**1·73**	41·19	**67·71**
13. North-East Coolgardie	6,678	**5,933**	·65	**·62**	54·23	**60·60**
14. East Coolgardie	579,344	**557,983**	56·15	**58·28**	37·42	**39·53**
15. Coolgardie	13,618	**10,286**	1·32	**1·07**	66·59	**56·09**
16. Yilgarn	87,994	**78,245**	8·53	**8·17**	41·09	**42·36**
17. Dundas	21,595	**18,419**	2·09	**1·92**	47·56	**45·62**
18. Phillips River	5,419	**4,734**	·53	**·49**	175·05	**137·31**
State generally	619	**111**	·06	**·01**	...	...
Totals and averages ...	1,031,727	**957,420**	100·00	**100·00**	40·34	**41·49**

The total gold yield of the State is as shown in Table 1, being the amount of gold exported and also that lodged at the Royal Mint, which total includes alluvial gold and gold not reported to the Department.

When comparisons are made as to the yield from any particular field with the preceding year, the figures reported to the Department are used.

TABLE 4.

Number of Gold-producing Mines in the several Goldfields and Districts during 1916 and 1917.

Goldfield.	District.	1916.		1917.		Increase or Decrease.
		District.	Goldfield.	District.	Goldfield.	
Kimberley	... ...	...	...	...	...	...
Pilbara	Marble Bar	17	24	12	19	— 5
	Nullagine	7		7		
West Pilbara	... ...	...	3	...	3	...
Ashburton	... ...	...	...	...	...	...
Gascoyne	... ...	...	1	...	...	— 1
Peak Hill	... ...	...	12	...	9	— 3
East Murchison	Lawlers	11	42	13	41	— 1
	Wiluna	13		13		
	Black Range	18		15		
Murchison	Cue	11	82	13	66	— 16
	Meekatharra	38		24		
	Day Dawn	5		4		
	Mt. Magnet	28		25		
Yalgoo	... ...	...	27	...	20	— 7
Mt. Margaret	Mt. Morgans	4	39	11	43	+ 4
	Mt. Malcolm	11		12		
	Mt. Margaret	24		20		
North Coolgardie	Menzies	20	49	19	37	— 12
	Ularring	10		6		
	Niagara	6		7		
	Yerilla	13		5		
Broad Arrow	... ...	...	24	...	23	— 1
North-East Coolgardie ...	Kanowna	13	15	10	11	— 4
	Kurnalpi	2		1		
East Coolgardie	East Coolgardie ...	45	49	50	52	+ 3
	Bulong	4		2		
Coolgardie	Coolgardie	33	46	27	41	— 5
	Kunanalling	13		14		
Yilgarn	... ...	...	58	...	47	— 11
Dundas	... ...	...	15	...	15	...
Phillips River	... ...	...	16	...	17	+ 1
	Totals	...	502	...	444	— 58

COMPARATIVE STATISTICAL DIAGRAMS

RELATING TO

OUTPUT AND VALUE OF GOLD AND OTHER MINERALS, LANDS LEASED FOR GOLD MINING

IN WESTERN AUSTRALIA

AND THE GOLD PRODUCTION OF AUSTRALASIA FOR THE YEAR 1917

Fig 1. Output of Gold from various Goldfields as reported to Mines Dept.

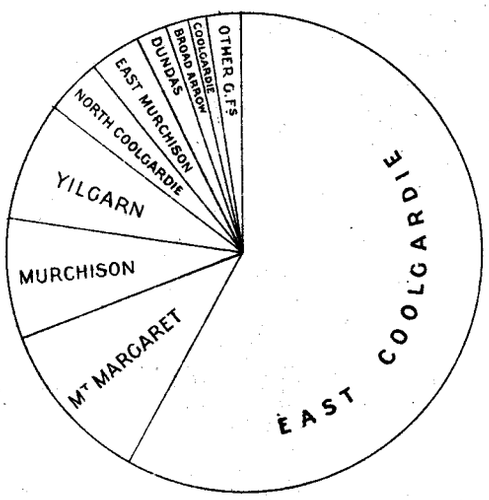


Fig 2. Gold produced from various Goldfields as given by the Export and Mint Returns.

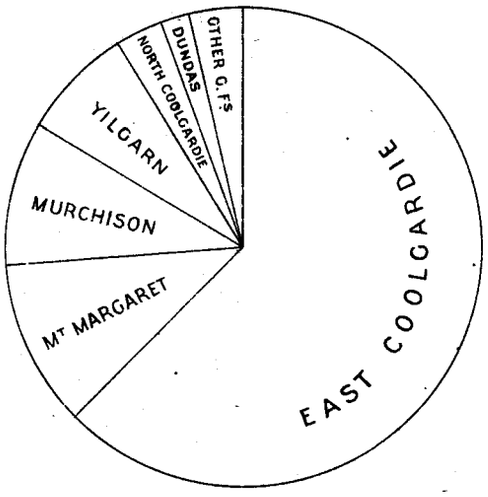


Fig 3. Value of Gold and other Minerals.

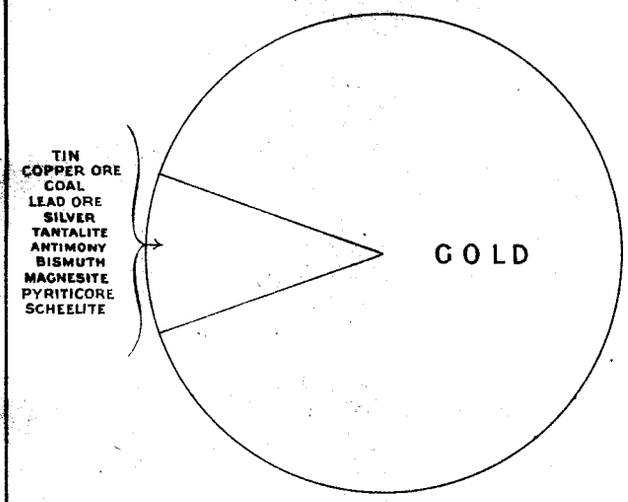


Fig 4. Value of Minerals other than Gold.

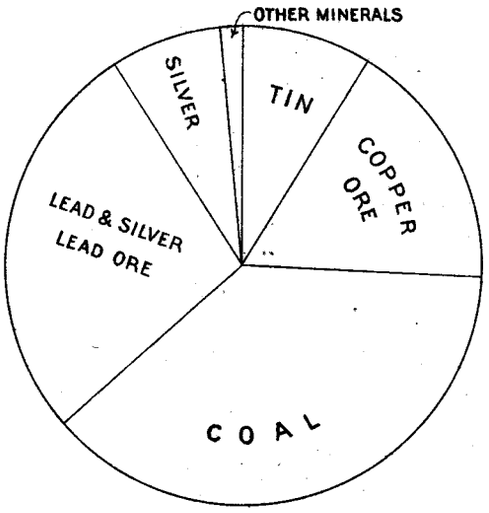


Fig 5. Areas of Land leased for Goldmining on various Goldfields.

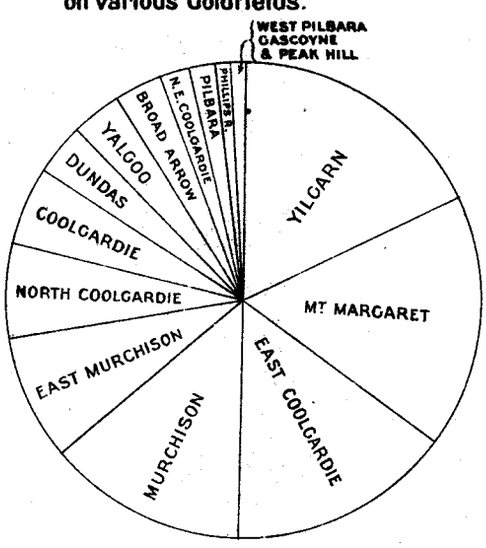
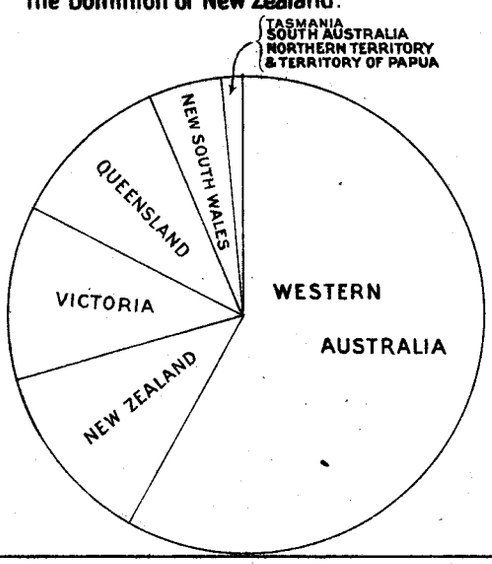
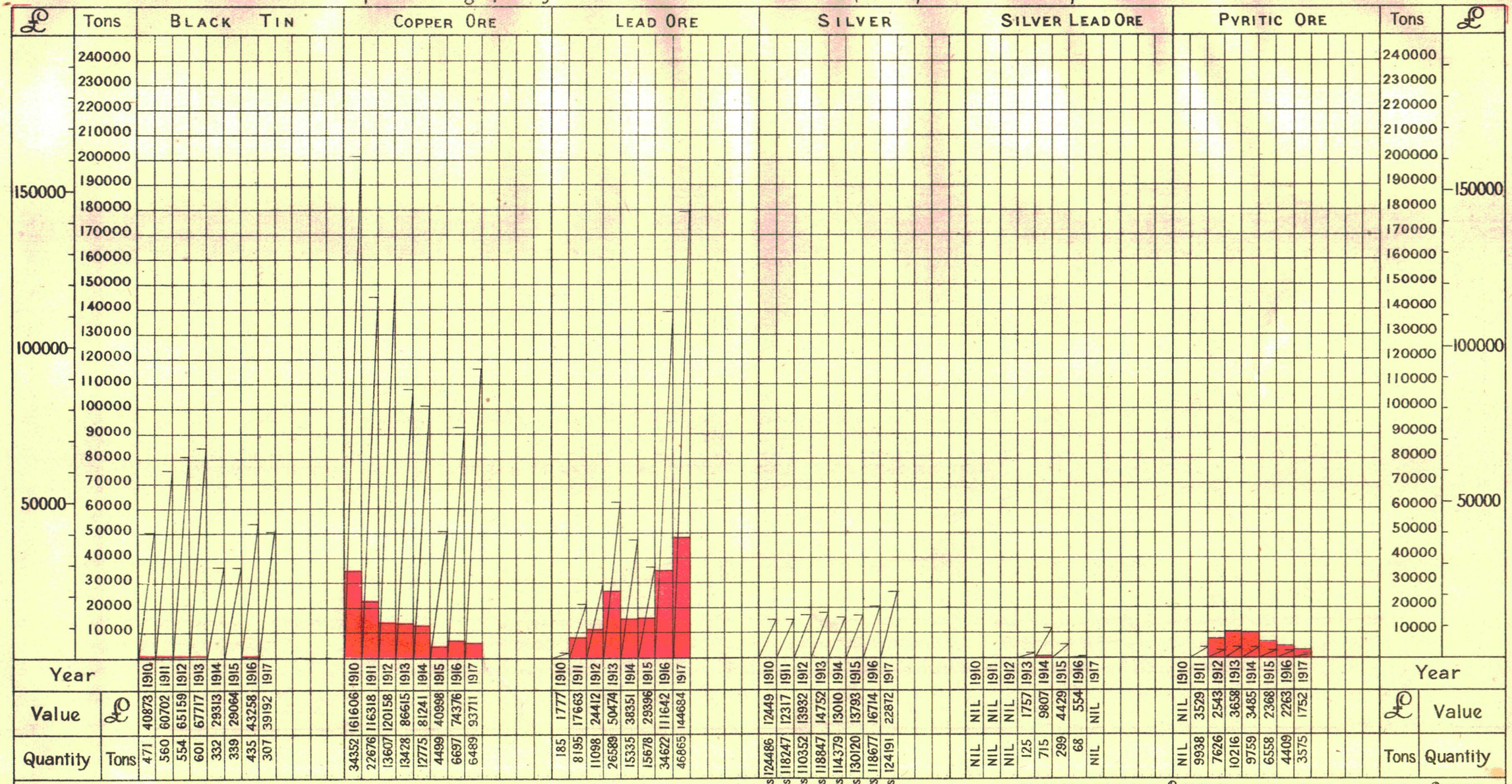


Fig 6. Output of Gold in the States of Australia and the Dominion of New Zealand.



DIAGRAM

of the Mineral Output - showing Quantity & Value of Minerals other than Gold & Coal reported to the Mines Dept from the Year 1910 onwards



NOTE. The Pink denotes Quantities produced and Diagonal lines Values thereof

(Various other Minerals not shewn above viz: Tantalite 12·5 Tons Value £1182; Magnesite 20·5 " " £21 were also reported in the year 1917)

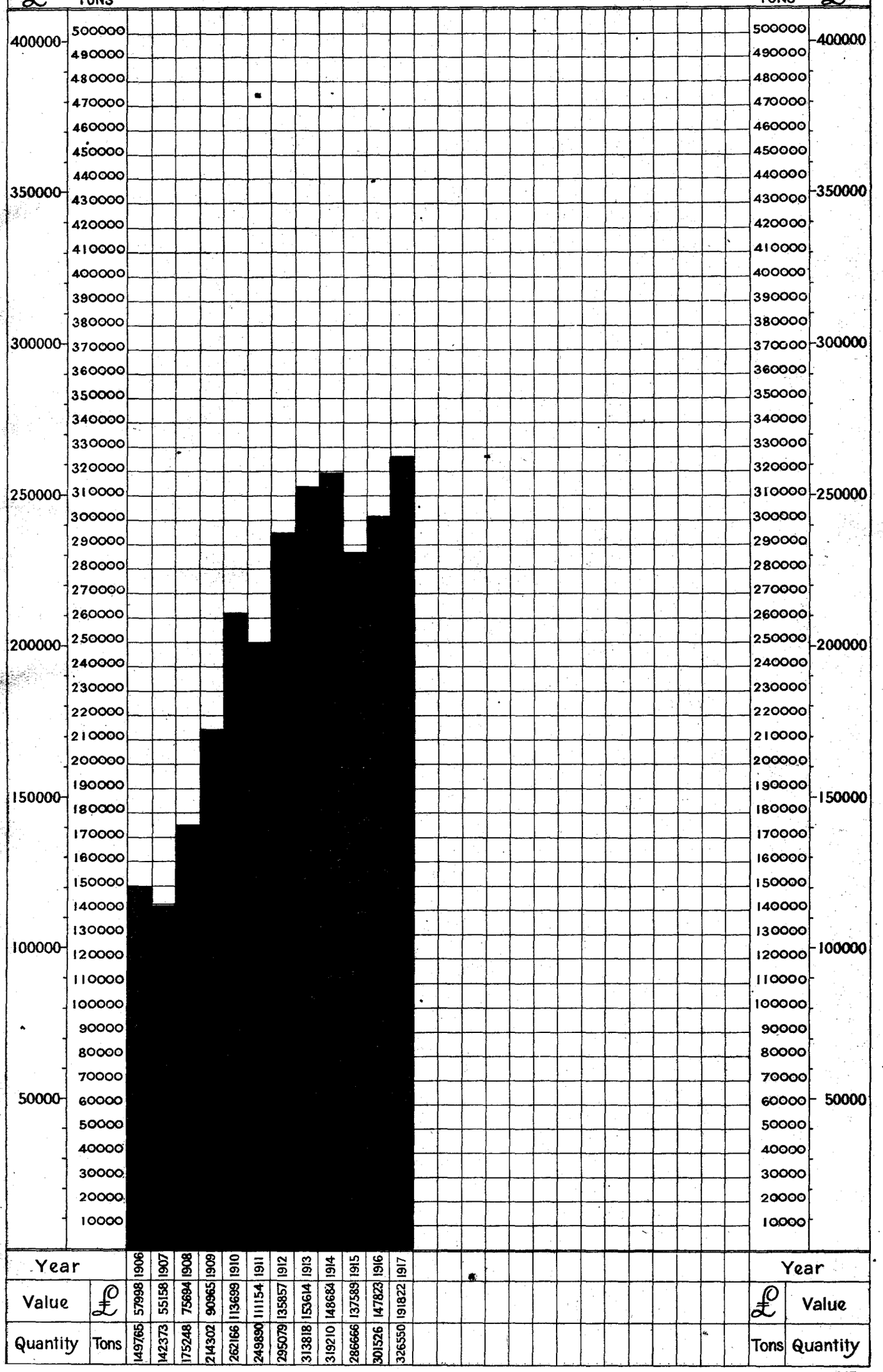
Previous to 1910 the Quantity & Value of various Minerals reported amounted to .....

Black Tin	11781	Tons	£ 879138	Silver Lead	1224	Tons	£ 10863
Copper	105041	"	688360	Tantalite	89	"	13486
Ironstone	57820	"	36695	Limestone	93706	"	18290
Lead	418	"	2034	Silver	951624	ozs	114386
Asbestos	43	"	1754	Total			£ 1765006

1917.

DIAGRAM

Of the Coal Output – Shewing Quantity & Value as reported to Mines Dept from 1906 onwards



Year		1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917
Value	£	57998	55158	75694	90965	113699	111154	135857	153614	148684	137589	147823	191822
Quantity	Tons	149765	142373	175248	214302	262166	249890	295079	313818	319210	286666	301526	326550

Year
£ Value
Tons Quantity

Table 5.

Gold Yield from Registered Gold Mining Companies and Gold Mining Leases for the Years 1914, 1915, 1916, and 1917.

Goldfield.	Registered Companies producing over 12,000ozs.								Registered Companies producing under 12,000ozs.								Leases, exclusive of Sundry Claims and Treatments.							
	1914.		1915.		1916.		1917.		1914.		1915.		1916.		1917.		1914.		1915.		1916.		1917.	
	No.	Fine ozs.	No.	Fine ozs.	No.	Fine ozs.	No.	Fine ozs.	No.	Fine ozs.	No.	Fine ozs.	No.	Fine ozs.	No.	Fine ozs.	No.	Fine ozs.	No.	Fine ozs.	No.	Fine ozs.	No.	Fine ozs.
Kimberley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilbara	...	...	...	...	...	...	...	...	1	727	1	90	...	...	...	...	29	3,233	29	5,598	24	4,208	19	2,811
West Pilbara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	917	4	1,168	3	508	3	249
Gascoyne	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	80	1	14	...	...
Peak Hill	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	1,635	13	1,747	12	1,601	9	1,328
East Murchison ...	3	49,456	2	36,364	1	18,362	1	14,591	9	6,334	8	8,830	8	11,154	5	8,302	54	9,878	36	7,393	33	8,440	35	6,703
Murchison	2	33,366	2	29.456	1	15,423	1	21,951	8	18,525	6	10,942	5	10,715	4	3,167	110	58,886	104	61,333	76	52,121	61	53,056
Yalgoo	...	...	...	...	...	...	...	...	3	1.403	3	4,801	3	3,705	1	1,788	25	3,351	23	3,222	24	3,397	19	3,696
Mt. Margaret ...	1	58,936	2	73,721	2	71,579	2	81,599	12	16,504	10	21,784	8	23,406	5	12,303	34	8,153	35	7,251	29	3,603	36	5,750
N. Coolgardie ...	2	35,941	2	35,348	1	14,134	1	12,531	10	5,851	5	2,180	6	13,029	5	11,053	80	21,813	64	12,609	42	12,584	31	7,019
Broad Arrow	...	...	1	14,531	1	12,674	...	...	2	2,840	1	405	...	...	1	9,398	28	5,034	24	5,715	23	6,888	22	6,048
N.E. Coolgardie ...	..	...	...	...	...	...	...	...	1	4,573	1	4,403	1	3,020	1	2,427	20	3,137	16	3,983	14	2,228	10	1,666
E. Coolgardie ...	9	597,946	9	603,851	9	524,189	9	508,073	21	31,363	15	24,828	12	18,673	14	14,880	26	40,849	25	33,132	28	27,409	29	26,290
Coolgardie	...	...	...	...	...	...	...	...	8	8,190	7	4,570	5	2,610	4	1,180	35	8,970	41	9,683	41	7,462	37	6,712
Yilgarn	2	54,439	2	59,100	2	54,647	2	45,197	10	20,898	11	16,886	10	18,212		19,208	48	8,181	49	7,995	46	9,417	38	9,393
Dundas	1	13,507	1	13,633	1	12,158	...	...	2	1,996	2	1,047	1	266	2	11,650	16	9,684	17	7,865	13	7,742	13	5,931
Phillips River ...	...	...	...	...	...	...	...	...	10	1,093	5	630	1	376	1	68	13	3,358	15	3,130	15	4,994	16	4,487
Total... ...	20	843,591	21	866,004	18	723,166	16	683,942	97	120,297	75	101,396	60	105,166	50	95,424	532	187,079	496	171,904	424	152,616	378	141,139

TABLE 6.

Increase or Decrease in Output of certain producing Gold Mines in 1917, as compared with 1916.

Goldfield.	District.	Name of Mine.	Gold Production.		Increase or Decrease for Year compared with 1916.
			1916.	1917.	
			Fine ozs.	Fine ozs.	Fine ozs
East Murchison ...	Lawlers	1. Waroonga G.M. Co., Ltd.	1,730·77	1,349·69	— 381·08
Do.	Wiluna	2. Moonlight leases	1,330·17	1,552·40	+ 222·23
Do.	do.	3. Western Machinery Co., Ltd.	3,814·19	4,802·36	+ 988·17
Do.	do.	4. Wiluna G.Ms., Ltd.	2,471·71	1,368·62	— 1,103·09
Do.	Black Range ...	5. Black Range West G.M. Co., N.L.	2,941·80	781·77	— 2,160·03
Do.	do.	6. Yuanmi G.Ms., Ltd. (Youanmi)	18,361·94	14,590·77	— 3,771·17
Murchison ...	Cue	7. Big Bell	484·30	1,629·35	+ 1,145·05
Do.	do.	8. Light of Asia and Queen of the May leases ...	2,794·54	4,134·55	+ 1,340·01
Do.	do.	9. Turn of the Tide	220·97	1,032·50	+ 811·53
Do.	Meekatharra ...	10. Commodore G.M. Co., N.L.	2,031·83	834·15	— 1,197·68
Do.	do.	11. Gwalia	478·74 *115·72	1,275·77 ...	+ 681·31 ...
Do.	do.	12. Fenian leases	22,363·08	21,178·42	— 1,184·66
Do.	do.	13. Ingliston Consols Extended leases	13,880·03	14,831·89	+ 951·86
Do.	do.	14. Ingliston Extended G.Ms., Ltd.	4,110·56	818·73	— 3,291·83
Do.	do.	15. Ingliston leases	1,229·19	2,042·50	+ 813·31
Do.	do.	16. Queenhills G.Ms., Ltd.	2,084·23	142·00	— 1,942·23
Do.	Day Dawn ...	17. Black Range Pinnacles Co., N.L.	2,488·00	1,372·21	— 1,115·79
Do.	do.	18. Great Fingall Consolidated, Ltd.	15,422·87	21,951·05	+ 6,528·18
Do.	Mt. Magnet ...	19. Empress leases	1,350·42	239·77	— 1,110·65
Yalgoo	...	20. Lake View: Payne's Find Development Co., N.L.	913·76 *15·58	1,787·61 ...	+ 858·27 ...
Do.	...	21. Bullrush Gold Estates, N.L.	2,774·49	...	— 2,774·49
Mt. Margaret ...	Mt. Morgans ...	22. Westralia Mt. Morgans Mines, N.L.	7,611·24	4,451·92	— 3,159·32
Do.	Mt. Malcolm ...	23. Sons of Gwalia, Ltd.	54,834·50	54,669·22	— 165·28
Do.	Mt. Margaret ...	24. Ida H. G.M. Co., Ltd.	6,549·11	7,652·39	+ 1,103·28
Do.	do.	25. Lancefield G.Ms., Ltd.	24,730·19	26,929·64	+ 2,199·45
North Coolgardie...	Menzies	26. Gladsome leases	5,887·97	3,983·03	— 1,904·94
Do.	do.	27. New Boddington G.M. Syndicate, Ltd. ...	1,467·08	3,298·59	+ 1,831·51
Do.	do.	28. Sand Queen G.Ms., Ltd.	11,418·80	7,580·78	— 3,838·02
Do.	do.	29. Menzies Consolidated G. Ms., Ltd.	14,133·56	12,531·09	— 1,602·47
Do.	Ularring	30. Riverina South G.M. Co., N.L.	967·14	66·63	— 900·51
Do.	Niagara	31. Cosmopolitan No. 2: Western Machinery Co., Ltd.	717·82	86·63	— 631·19
Broad Arrow ...	...	32. Associated Northern Blocks (W.A.), Ltd. ...	12,673·95	9,397·64	— 3,276·31
Do.	...	33. Oversight	1,158·48 *400·50	329·03 *800·12	— 429·83 ...
North-East Coolgardie	Kanowna ...	34. North White Feather G.Ms., Ltd.	3,019·92	2,426·83	— 593·09
East Coolgardie ...	East Coolgardie	35. Golden Ridge G.M. Co., Ltd.	5,836·80	4,435·22	— 1,401·58
Do.	do.	36. Associated G.Ms., of W.A., Ltd.	31,596·29	25,288·84	— 6,307·45
Do.	do.	37. Associated Northern Blocks (W.A.), Ltd. ...	5,384·39	3,707·29	— 1,677·10
Do.	do.	38. Golden Horseshoe Estates Co., Ltd.	89,009·78	95,654·11	+ 6,644·33
Do.	do.	39. Great Boulder Perseverance G.M. Co., Ltd.	47,920·80	38,699·06	— 9,221·74
Do.	do.	40. Great Boulder Proprietary G.Ms., Ltd. ...	123,336·91	125,412·19	+ 2,075·28
Do.	do.	41. Idaho leases	4,153·94	7,181·97	+ 3,028·03
Do.	do.	42. Ironsides North leases	15,746·22	12,820·85	— 2,925·37
Do.	do.	43. Ivanhoe Gold Corporation, Ltd.	89,840·68	91,349·26	+ 1,508·58
Do.	do.	44. Kalgurli G.Ms., Ltd.	45,684·42	36,005·27	— 9,679·15
Do.	do.	45. Lake View and Star, Ltd.	42,816·93	44,254·41	+ 1,437·48
Do.	do.	46. North Kalgurli (1912), Ltd.	1,493·85	843·13	— 650·72
Do.	do.	47. Oroya Links, Ltd.	23,960·98	23,065·16	— 895·82
Do.	do.	48. South Kalgurli Consolidated, Ltd.	31,021·63	28,345·00	— 2,676·63
Do.	do.	49. Adelaide Enterprise Prospecting Syndicate, N.L.	1,399·45	1,179·77	— 219·68
Do.	do.	50. Hannans Reward, Ltd.	2,164·59	2,668·35	+ 503·76
Coolgardie ...	Coolgardie ...	51. Burbanks Birthday G.Ms., Ltd.	911·99	398·88	— 513·11
Do.	do.	52. Hidden Secret North leases	58·61	544·47	+ 485·86
Do.	Kunanalling ...	53. Carbine leases	2,445·53	1,841·52	— 604·01
Yilgarn	... ...	54. Bullfinch Proprietary (W.A.), Ltd.	17,825·85	14,351·91	— 3,473·94
Do.	... ...	55. Corinthian North G.Ms., Ltd.	3,876·89	230·97	— 3,645·92
Do.	... ...	56. Great Victoria leases	1,830·63	1,926·22	+ 95·59
Do.	... ...	57. Edna May Battler G.M. Co., N.L.	1,713·39	915·44	— 797·95
Do.	... ...	58. Edna May Central G.M. Co., N.L.	11,811·79	11,141·59	— 670·20
Do.	... ...	59. Edna May Consolidated G.M. Co., N.L. ...	261·16	2,322·08	+ 2,060·92
Do.	... ...	60. Edna May Deep Levels G.M. Co., N.L. ...	1,146·32	6,894·71	+ 5,748·39
Do.	... ...	61. Edna May G.M. Co., N.L.	36,821·40	30,845·56	— 5,975·84
Dundas	... ...	62. Mararoa G.M. Co., N.L.	12,157·83	11,393·25	— 764·58
Do.	... ...	63. Princess Royal G.M. Co., N.L.	265·58	256·47	— 9·11
Do.	... ...	64. Viking No. 1 leases	5,737·72	3,438·93	— 2,298·79
Phillips River ...	... ...	65. Fair Play leases	2,127·76	402·73	— 1,725·03
Do.	... ...	66. Gem Consolidated leases	1,052·62	1,274·80	+ 222·18

* Dollied.

Table 7.

Averages of Gold Ore raised and treated, and Gold produced therefrom, per man employed on the several Goldfields of the State, during 1916 and 1917.

Goldfield.	1916.				1917.			
	Tons of Gold Ore raised and treated.		Fine Ounces of Gold produced therefrom.		Tons of Gold Ore raised and treated.		Fine Ounces of Gold produced therefrom.	
	Per man employed under ground.	Per man employed above and under ground.	Per man employed under ground.	Per man employed above and under ground.	Per man employed under ground.	Per man employed above and under ground.	Per man employed under ground.	Per man employed above and under ground.
	tons.	tons.	fine ozs.	fine ozs.	tons.	tons.	fine ozs.	fine ozs.
1. Kimberley	...	...	...	...	...	...	...	...
2. Pilbara	56·53	25·26	94·48	42·23	40·17	18·54	86·53	39·94
3. West Pilbara	114·83	53·00	91·28	42·13	59·83	39·89	41·10	27·40
4. Ashburton	...	...	...	...	...	...	...	...
5. Gascoyne	...	18·00	...	7·24	...	...	...	...
6. Peak Hill	180·35	90·17	229·63	114·81	205·95	102·98	170·28	85·14
7. East Murchison	235·30	129·02	155·57	85·30	301·95	150·97	166·65	83·33
8. Murchison...	237·06	128·37	141·17	76·44	232·15	133·35	133·77	76·84
9. Yalgoo	109·62	56·38	56·25	28·93	84·07	45·95	64·38	35·19
10. Mt. Margaret	521·20	280·69	195·85	105·47	509·35	280·51	199·95	110·12
11. North Coolgardie ...	156·11	90·48	108·61	62·95	180·56	97·42	115·60	62·37
12. Broad Arrow	318·21	194·16	139·95	85·39	165·80	101·59	107·79	66·05
13. North-East Coolgardie ...	120·24	67·05	75·71	42·22	124·15	67·08	87·99	47·54
14. East Coolgardie	579·15	323·87	254·16	142·13	584·66	324·01	271·11	150·28
15. Coolgardie	142·40	58·49	103·53	42·53	144·24	62·06	87·01	37·44
16. Yilgarn	363·89	214·81	175·86	103·81	298·26	194·17	148·75	96·84
17. Dundas	347·48	196·79	188·56	106·78	398·86	225·67	203·09	114·91
18. Phillips River	119·52	71·06	246·31	146·45	94·48	57·43	152·73	92·83
Total Averages ...	411·19	227·20	193·35	106·83	411·51	229·86	198·79	111·04

The average value of gold produced per man employed above and below ground was £453·78 in 1916, and £471·67 in 1917. The average tonnage of ore raised shows an increase from 227·20 tons to 229·86 tons. The average tonnage raised per man is again highest in the East Coolgardie Field, viz., 324·01 tons, average value £638·35, the next being Mt. Margaret Field, with 280·51 tons, average value £467·76.

Table 8.

Output of Gold from the Several States of Australia, the Northern Territory, the Territory of Papua, and the Dominion of New Zealand during 1917.

State.	Output of Gold.	Value.	Percentage of total Output of Australasia.
	Fine. ozs.	£	
1. Western Australia	970,317	4,121,645	57·93
2. Victoria	201,872	857,500	12·05
3. Queensland	179,305	761,639	10·70
4. New South Wales	82,171	349,038	4·91
5. Tasmania	14,497	61,577	·87
6. South Australia	7,145	30,334	·43
7. Northern Territory	339	1,440	·02
8. Territory of Papua	6,596	28,016	·39
9. New Zealand	212,793	903,888	12·70
Total	1,675,035	7,115,077	100·00

Table 9.

Dividends paid by Western Australian Gold Mining Companies during 1917 and Total to date.

(Compiled from information supplied by the Government Statistician's Office and the Chamber of Mines of W.A., Kalgoorlie.)

Goldfield.	Name of Company.	Capital.				Dividends.		
		Authorised.	No. of Shares issued.	Par Value Shares.	Paid up to.	Paid in 1917.		Grand Total paid to end of 1917.
						No.	Total Amount.	
		£		£ s. d.	£ s. d.		£	£
Peak Hill	Various Companies	...	...	...	...	...	...	160,666
East Murchison	Various Companies	...	...	...	...	...	...	437,968
Murchison	Various Companies	...	...	...	...	...	...	1,835,170
Mt. Margaret	Sons of Gwalia, Ltd.	350,000	325,000	1 0 0	1 0 0	4	32,500	1,055,363
Do.	Other Companies	...	...	...	...	...	...	376,213
North Coolgardie	Menzies Consolidated G.Ms., Ltd.	225,000	224,015	1 0 0	1 0 0	1	5,601	22,401
Do.	Other Companies	...	...	...	...	...	...	552,631
North-East Coolgardie	Various Companies	...	...	...	...	...	...	82,971
East Coolgardie	Golden Horseshoe Estates Co., Ltd.	1,500,000	300,000	5 0 0	5 0 0	2	82,500	3,375,000
Do.	Great Boulder Proprietary G.Ms., Ltd. ...	175,000	1,750,000	0 2 0	0 2 0	4	262,500	5,269,300
Do.	Ivanhoe Gold Corporation, Ltd.	1,000,000	200,000	5 0 0	5 0 0	4	105,000	3,633,750
Do.	Kalgurli G.Ms., Ltd.	120,000	120,000	1 0 0	1 0 0	2	30,000	1,615,500
Do.	South Kalgurli Consolidated, Ltd.	150,000	250,007	0 10 0	0 10 0	1	3,125	171,250
Do.	Other Companies	...	...	...	...	...	...	7,045,578
Coolgardie	Various Companies	...	...	...	...	...	...	339,495
Yilgarn	Edna May G.M. Co., N.L.	25,000	42,850	0 10 0	0 10 0	12	62,130	289,235
Do.	Other Companies	...	...	...	...	...	...	161,134
Dundas	Mararoa G.M. Co., N.L.	40,000	100,000	0 8 0	0 3 0	3	7,500	147,500
Do.	Other Companies	...	...	...	...	...	...	147,000
	Total Dividends paid during 1917 ...	...	...	...	...	...	£590,856	...
	Total Dividends paid to end of 1917 ...	...	...	...	...	...	...	£26,718,125

TABLE 10.

Value of Gold Production and Percentage of Dividends paid.

Year.	Value of Gold Production.	Dividends paid by Gold Mining Companies.	Dividends % of Total Production.	Value of Gold Production by Gold Mining Companies only.	Dividends % upon Production by Gold Mining Companies.
	£	£	%	£	%
Prior to 1908 ...	78,004,408	17,476,499	22·40	5,722,273	30·37
1908	6,999,882	1,487,303	21·24	5,503,784	27·01
1909	6,776,274	1,359,088	20·05	5,398,725	25·17
1910	6,246,848	1,028,393	16·46	4,815,541	21·36
1911	5,823,075	826,976	14·20	4,628,666	17·87
1912	5,448,385	814,092	14·94	4,304,161	18·91
1913	5,581,701	910,326	16·30	4,528,106	20·10
1914	5,237,353	799,392	15·26	4,094,336	19·52
1915	5,140,228	792,317	15·41	4,109,254	19·28
1916	4,508,532	632,883	14·04	3,518,531	17·99
1917	4,121,645	590,856	14·34	3,310,536	17·85
Total ...	133,888,331	26,718,125	19·96	*49,933,913	*21·99

* Eleven last years only.

TABLE 11.

Quantity and Value of Minerals, other than Gold and Coal, reported to the Mines Department during 1917.

Goldfield, District, or Mineral Field.	1917.		Increase or Decrease for Year compared with 1916.	
	Quantity.	Value.	Quantity.	Value.
	tons.	£	tons.	£
BLACK TIN.				
Pilbara Goldfield (Marble Bar District)	69·05	9,264	— 84·12	— 6,675
Greenbushes Mineral Field	237·92	29,928	— 43·82	+ 2,609
Total	306·97	39,192	— 127·94	— 4,066
TANTALITE.				
Pilbara Goldfield	12·50	1,782	+ 12·50	+ 1,782
PYRITIC ORE.				
Mt. Margaret Goldfield (Mt. Morgans District)	3,575·46	1,752	— 833·76	— 511
COPPER ORE.				
West Pilbara Goldfield	783·61	13,406	— 165·26	— 2,710
Ashburton Goldfield	3·71	67	+ 1·10	+ 40
Peak Hill Goldfield	287·84	9,683	+ 36·91	+ 1,415
East Murchison Goldfield	75·00	1,523	+ 11·58	+ 212
Murchison Goldfield	82·92	2,164	+ 82·92	+ 2,164
Phillips River Goldfield	5,255·57	66,868	— 172·51	+ 18,250
State generally	...	...	— 3·47	— 36
Total	6,488·65	93,711	— 208·73	+ 19,335
LEAD ORE.				
West Pilbara Goldfield	62·57	759	+ 18·57	— 11
Northampton Mineral Field	46,801·97	143,925	+ 12,223·63	+ 33,053
Total	46,864·54	144,684	+ 12,242·20	+ 33,042
MAGNESITE.				
East Coolgardie Goldfield (Bulong District)	20·50	21	— 77·00	— 76

The output of Black Tin shows decreases in tonnage of 127.94 tons and in value of £4,066. In Tantalite there were increases in tonnage of 12.50 tons and in value of £1,782. In Pyritic Ore there was a decrease of 833.76 tons and in value of £511. In Copper Ore there was a decrease in tonnage of 208.73 tons and an increase in value of £19,335. In Lead Ore there was an increase of 12,242.20 tons and in value of £33,042, while Magnesite shows decreases in tonnage of 77 tons and in value of £76.

The production of Tin was confined to Pilbara and Greenbushes Fields, while Copper Ore came from West Pilbara, Ashburton, Peak Hill, East Murchison, Murchison, and Phillips River Fields, and Pyritic Ore from Mt. Margaret Goldfield. Lead Ore came from West Pilbara Goldfield and Northampton Mineral Field. Tantalite was produced by Pilbara Goldfield and Magnesite by East Coolgardie Goldfield.

It will be observed that the figures in this table differ from those in Table 1. The figures above are those reported to the Department, and this table is published as an index to the amount of mining in each field named.

TABLE 12.

Quantity of Coal raised during 1916 and 1917, and estimated Value thereof, with Number of Men employed, and Output per Man.

Coalfield.	Year.	Quantity raised.	Estimated Value.	Men employed.		Quantity raised.	
				Above ground.	Under-ground.	Per Man employed underground.	Per Man employed above and underground.
		tons.	£			tons.	tons.
Collie	1916	301,526	147,823	102	356	847	658
	1917	**326,550**	**191,822**	**140**	**431**	**758**	**572**

The number of men employed at Collieries has increased by 113, and the output increased by 25,024 tons.

PART III.—LEASES AND OTHER HOLDINGS UNDER THE VARIOUS ACTS RELATING TO MINING.

TABLE 13.

Total Number and Acreage of Leases held for Mining on 31st December, 1916 and 1917.

Description of Leases.	1916.		1917.	
	No.	Acreage.	No.	Acreage.
Gold mining leases on Crown land	1,139	16,745	**1,027**	**15,089**
„ „ „ private property	...	...	...	...
Mineral leases on Crown land	235	33,670	**256**	**37,981**
„ „ private property	2	96	**3**	**120**
	1,376	50,511	**1,286**	**53,190**

The total number of leases held for mining decreased by 90 and the area increased by 2,679 acres, as compared with 1916. Leases for gold mining decreased by 112 and in area by 1,656 acres. The number of mineral leases increased by 22 and the area by 4,335 acres.

Table 14.

Number and Acreage of Gold-mining Leases in force each year for the Five Years ending the 31st December, 1917.

Goldfields.		Districts.		1913.		1914.		1915.		1916.		1917.		Percentage of Total Acreage.		Increase or Decrease for 1917 compared with 1916.		Goldfields.
Name.	Proclaimed.	Name.	Proclaimed.	Leases.	Acreage	Leases.	Acreage	Leases.	Acreage.	Leases.	Acreage.	Leases.	Acreage.	1916.	1917.	Increase.	Decrease.	
Kimberley ...	20–5–86	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Kimberley.
Yilgarn	1–10–88	...	...	174	3,288	153	2,932	218	4,381	153	2,985	144	2,702	17·83	17·91	...	283	Yilgarn.
Pilbara	1–10–88	Marble Bar ...	6–11–96	32	325	26	265	24	223	18	169	17	169	1·55	1·64	...	12	Pilbara.
		Nullagine ...	6–11–96	10	100	18	149	10	89	10	90	8	78					
Ashburton ...	11–12–90	...	...	2	48	...	...	...	...	...	...	...	...	...	...	...	...	Ashburton.
Murchison ...	24–9–91	Cue	7–12–94	45	577	29	321	24	242	29	323	46	539	12·68	13·45	...	94	Murchison.
		Meekatharra ...	7–12–94	93	1,226	94	1,227	98	1,317	80	1,052	60	819					
		Day Dawn ...	10–1–96	40	376	44	477	46	507	40	428	38	398					
		Mount Magnet ...	7–12–94	40	384	42	381	45	485	35	321	28	274					
Dundas	31–8–93	...	...	54	631	50	596	43	543	38	465	47	521	2·78	3·45	56	...	Dundas.
Coolgardie ...	6–4–94	Coolgardie ...	7–12–94	59	773	55	758	78	1,132	44	517	40	519	4·52	5·14	19	...	Coolgardie.
		Kunanalling ...	1–9–97	22	281	17	221	14	179	19	239	20	256					
East Coolgardie ...	1–10–94	East Coolgardie	7–12–94	168	2,353	155	2,140	149	2,028	153	2,186	157	2,269	13·78	15·24	...	7	East Coolgardie.
		Bulong	15–4–96	12	217	14	241	7	126	7	120	2	30					
Yalgoo	23–1–95	...	...	54	713	50	753	77	1,295	59	917	34	506	5·48	3·35	...	411	Yalgoo.
North Coolgardie...	28–6–95	Menzies	15–4–96	54	771	50	730	42	609	49	752	42	582	9·04	6·44	...	541	North Coolgardie.
		Ularring	15–4–96	30	383	21	299	21	232	23	250	18	198					
		Yerilla	15–4–96	42	542	29	400	26	401	24	356	5	84					
		Niagara	1–4–97	15	224	14	197	8	95	11	155	7	108					
		Lawlers	1–7–04	22	277	20	233	21	235	29	339	24	283					
East Murchison ...	28–6–95	Black Range ...	1–7–04	106	1,512	99	1,337	62	787	44	597	36	493	8·20	8·62	...	73	East Murchison.
		Wiluna	1–3–10	53	903	32	535	23	365	27	437	31	524					
North-East Coolgardie	15–4–96	Kanowna ...	15–4–96	46	602	31	381	25	313	34	512	20	275	3·29	2·03	...	243	N.E. Coolgardie.
		Kurnalpi ...	15–4–96	6	84	5	47	4	42	4	38	3	32					
Broad Arrow ...	20–11–96	...	...	79	1,296	43	610	44	651	39	591	30	453	3·52	3·00	...	138	Broad Arrow.
Peak Hill ...	1–4–97	...	...	23	299	14	159	15	156	14	144	13	123	·85	·81	...	21	Peak Hill.
Mount Margaret ...	1–4–97	Mount Margaret	1–4–97	59	1,043	70	1,197	75	1,303	65	1,074	52	941	15·09	17·47	108	...	Mount Margaret.
		Mount Malcolm...	1–4–97	83	1,535	79	1,462	65	1,290	66	1,287	66	1,311					
		Mount Morgans...	2–4–02	20	321	8	158	18	286	9	167	24	384					
West Pilbara ...	1–11–95	Crown Lands ...	...	7	82	4	42	3	36	3	42	3	36	·25	·24	...	6	West Pilbara.
Do. ...	...	Private Property	...	1	6	1	6	...	...	...	...	...	...	...	...	...	...	Do.
Phillips River ...	14–9–00	...	...	13	210	12	186	12	185	11	176	11	176	1·05	1·17	...	...	Phillips River.
Other Localities ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Other Localities.
Gascoyne	15–4–97	...	...	...	...	...	...	4	28	2	16	1	6	·09	·04	...	10	Gascoyne.
Totals ...	...	...	...	1,464	21,382	1,282	18,440	1,301	19,561	1,139	16,745	1,027	15,089	100·00	100·00	183	1,839	

Decrease for 1917: Leases 112, acres 1,656.

Taking all the Goldfields, the largest percentage of the area leased for Gold Mining is in the Yilgarn Goldfield, viz., 17.91; then Mt. Margaret, East Coolgardie, Murchison, East Murchison, and North Coolgardie, with percentages of 17.47, 15.24, 13.45, 8.62, and 6.44 respectively.

TABLE 15,

Number and Acreage of Mineral Leases in force 31st December each year, for the Five Years ending 31st December, 1917.

Mining Districts.		Sub-Districts.		1913.		1914.		1915.		1916.		1917.		Increase or Decrease for 1917, compared with 1916.		Mining Districts.
Name.	Proclaimed.	Name.	Proclaimed.	Leases.	Acreage.	Leases.	Acreage.	Leases.	Acreage.	Leases.	Acreage.	Leases.	Acreage.	Increase.	Decrease	
Ashburton	11–12–90	...	...	4	83	5	69	8	177	6	79	6	79	...	...	Ashburton.
		Cue	7–12–94	9	255	6	163	4	96	1	18	...	...			
		Meekatharra ...	7–12–94	...	...	...	...	...	...	1	12	1	24	...	6	Murchison.
Murchison	24–9–91	Day Dawn ...	10–1–96	1	6	1	6	1	6	1	6	1	6			
		Mt. Magnet ...	7–12–94	...	...	...	...	...	...	...	...	...	...			
Greenbushes ...	7–4–92	...	...	51	761	44	627	39	574	35	522	33	492	...	30	Greenbushes.
		Marble Bar ...	16–6–92	21	771	8	205	7	127	8	145	8	145	...	...	Pilbara.
Pilbara	16–6–92	Nullagine ...	6–11–96	...	...	...	...	...	...	...	...	...	...			
Yalgoo	23–1–95	...	...	11	320	11	256	4	84	6	144	11	318	174	...	Yalgoo.
Yilgarn	22–3–95	...	...	1	12	2	15	1	3	...	...	1	48	48	...	Yilgarn.
		Coolgardie ...	22–3–95	...	...	...	...	1	9	1	9	1	9	...	...	Coolgardie.
Coolgardie	22–3–95	Kunanalling ...	1–9–97	...	...	...	...	...	...	...	...	...	...			
		East Coolgardie	22–3–95	6	29	5	23	4	19	3	13	3	13	...	...	East Coolgardie.
East Coolgardie ...	22–3–95	Bulong	15–4–96	...	...	...	...	...	...	...	...	...	...			
		Lawlers	17–4–04	1	24	...	...	1	24	1	24	1	10			
East Murchison ...	28–6–95	Black Range ...	1–7–04	3	31	2	6	...	...	...	...	...	...	...	24	East Murchison.
		Wiluna	1–3–10	...	...	...	...	1	10	1	10	...	...			
		Menzies	15–4–96	...	...	...	...	...	...	...	...	...	...			
		Ularring	15–4–96	...	...	...	...	...	...	...	...	...	...		...	North Coolgardie.
North Coolgardie ...	16–8–95	Yerilla	15–4–96	...	...	...	...	...	...	...	...	...	...	...		
		Niagara	1–3–97	...	...	...	...	...	...	...	...	...	...			
West Pilbara ...	1–11–95	...	...	16	588	16	570	12	470	19	642	17	606	...	36	West Pilbara.
Dundas	27–12–95	...	...	1	48	1	48	1	48	...	...	...	...	...	...	Dundas.
Collie	21–2–96	...	...	89	27,417	91	28,057	97	29,897	100	30,602	113	34,647	4,045	...	Collie.
		Kanowna ...	15–4–96	...	...	...	...	...	...	...	...	...	...	...	...	North-East Coolgardie.
North-East Coolgardie	15–4–96	Kurnalpi ...	15–4–96	...	...	...	...	...	...	...	...	...	...			
Broad Arrow ...	20–11–96	...	...	1	20	...	...	...	...	1	20	1	20	...	...	Broad Arrow.
		Crown Lands ...	...	13	212	10	157	8	107	8	97	6	124	27	...	Northampton.
Northampton ...	1–1–97	Private Property	...	1	48	2	68	2	68	1	48	2	72	24	...	
Peak Hill	1–4–97	...	...	4	108	24	550	9	255	11	300	15	351	51	...	Peak Hill.
		Mt. Margaret ...	1–4–97	...	...	...	...	...	...	...	...	...	...			
		Mt. Malcolm ...	1–4–97	...	...	1	48	...	...	...	...	...	...	...	...	Mt. Margaret.
Mt. Margaret ...	1–4–97	Mt. Morgans ...	2–4–02	6	134	6	134	6	134	4	74	4	74			
Gascoyne	15–4–97	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Gascoyne.
		Crown Lands ...	...	...	...	...	...	...	...	...	...	...	...			
Yandanooka ...	1–12–97	Private Property...	...	...	...	...	...	...	...	...	...	...	...	...	...	Yandanooka.
Phillips River ...	1–7–99	...	...	22	561	23	559	13	407	15	409	18	443	34	...	Phillips River.
		Crown Lands ...	...	28	733	14	519	11	428	13	544	16	572	28	...	Other Localities.
Other localities ...	...	Private Property	...	...	...	...	...	...	...	1	48	1	48			
Totals ...	...	...	...	289	32,161	272	32,080	230	32,943	237	33,766	259	38,101	4,431	96	

Increases for 1917: 22 leases, for an increased area of 4,335 acres.

In the Collie Mineral Field the largest area is held, viz., 34,647 acres worked entirely for coal; then follow West Pilbara, 606 acres, for copper; Greenbushes, 492 acres for tin; Phillips River, 443 acres, and Peak Hill, 351 acres, for copper; and Yalgoo, 318 acres, for copper, wolfram, and molybdenite proportionately.

TABLE 16.

Number and Acreage of Mineral Leases in force on 31st December, 1917, showing Minerals for which they are worked.

Goldfield or Mineral Field.	District.	Minerals.															
		Coal.		Tin.		Copper.		Iron.		Clay.		Limestone.		Wolfram.		Silver and Lead.	
		Leases.	Acres.	Leases.	Acres.	Leases.	Acres.	Leases.	Acres.	Leases.	Acres.	Leases.	Acres.	Leases.	Acres.	Leases.	Acres.
Pilbara	Marble Bar	..	..	5	107	..	..	..	..	..	..	..	..	..	..	..	..
West Pilbara	..	..	..	..	..	16	588	..	..	..	..	..	..	..	..	1	18
Ashburton	..	..	..	..	..	2	34	..	..	..	..	..	..	..	..	3	35
Peak Hill	..	..	..	..	..	15	351	..	..	..	..	..	..	..	..	..	..
East Murchison	Lawlers	..	..	..	..	1	10	..	..	..	..	..	..	..	..	..	..
Murchison	Day Dawn	..	..	..	..	..	..	..	..	1	6	..	..	..	..	..	..
	Meekatharra	..	..	..	..	1	24	..	..	..	..	..	..	..	..	..	..
Yalgoo	..	..	..	..	..	2	36	..	..	..	..	..	..	5	168	..	..
Mt. Margaret	Mt. Morgans	..	..	..	..	3	69	..	..	..	..	1	5	..	..	..	..
Broad Arrow	..	..	..	..	..	1	20	..	..	..	..	..	..	..	..	..	..
East Coolgardie	East Coolgardie	..	..	..	..	..	..	..	..	3	13	..	..	..	..	..	..
Coolgardie	Coolgardie	..	..	1	9	..	..	..	..	..	..	..	..	..	..	..	..
Yilgarn	..	..	..	..	..	1	48	..	..	..	..	..	..	..	..	..	..
Phillips River	..	..	..	..	..	18	443	..	..	..	..	..	..	..	..	..	..
Collie	..	113	34,647	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Greenbushes	..	..	..	33	492	..	..	..	..	..	..	..	..	..	..	..	..
Northampton	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Northampton	(Private Property)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Northam	(Private Property)	..	..	..	..	..	..	1	48	..	..	..	..	..	..	..	..
Outside Proclaimed Fields	..	..	..	..	..	1	36	8	331	..	..	..	..	..	..	..	..
Totals	..	113	34,647	39	608	61	1,659	9	379	4	19	1	5	5	168	4	53

Goldfield or Mineral Field.	District.	Minerals.										Total No. of Leases.	Total Acreage.
		Tantalite.		Lead.		Scheelite.		Graphite.		Molybdenite.			
		Leases.	Acres.	Leases	Acres.	Leases.	Acres.	Leases.	Acres.	Leases.	Acres.	Leases.	Acres.
Pilbara	Marble Bar	2	20	..	..	1	18	..	..	..	..	8	145
West Pilbara	..	..	..	..	..	..	..	..	..	..	..	17	606
Ashburton	..	..	..	1	10	..	..	..	..	..	..	6	79
Peak Hill	..	..	..	..	..	..	..	..	..	..	..	15	351
East Murchison	Lawlers	..	..	..	..	..	..	..	..	..	..	1	10
Murchison	Day Dawn	..	..	..	..	..	..	..	..	..	..	1	6
	Meekatharra	..	..	..	..	..	..	..	..	..	..	1	24
Yalgoo	..	..	..	..	..	..	..	..	..	4	114	11	318
Mt. Margaret	Mt. Morgans	..	..	..	..	..	..	..	..	..	..	4	74
Broad Arrow	..	..	..	..	..	..	..	..	..	..	..	1	20
East Coolgardie	East Coolgardie	..	..	..	..	..	..	..	..	..	..	3	13
Coolgardie	Coolgardie	..	..	..	..	..	..	..	..	..	..	1	9
Yilgarn	..	..	..	..	..	..	..	..	..	..	..	1	48
Phillips River	..	..	..	..	..	..	..	..	..	..	..	18	443
Collie	..	..	..	..	..	..	..	..	..	..	..	113	34,647
Greenbushes	..	..	..	..	..	..	..	..	..	..	..	33	492
Northampton	..	..	..	6	124	..	..	..	..	..	..	6	124
Do.	(Private Property)	..	..	2	72	..	..	..	..	..	..	2	72
Northam	(Private Property)	..	..	..	..	..	..	..	..	..	..	1	48
Outside Proclaimed Fields	..	..	..	..	..	..	..	7	205	..	..	16	572
Totals	..	2	20	9	206	1	18	7	205	4	114	259	38,101

TABLE 17.

Number and Acreage of Miscellaneous Leases in force from 31st December, 1917.

Goldfield.	District.	Leases.										Total.	
		Tailings.		Tramway.		Water.		Machinery.		Residence.			
		No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.
Yalgoo	... ...	...	...	...	...	...	...	1	24	...	...	1	24
West Pilbara	... ...	...	...	2	25	...	...	...	...	...	...	2	25
East Murchison	Black Range	1	24	...	...	...	...	...	...	1	2	2	26
Murchison	Meekatharra	1	10	...	...	...	...	...	...	...	...	1	10
	Day Dawn	...	...	...	...	...	...	...	...	1	1	1	1
	Mt. Magnet	1	10	...	...	...	...	...	...	...	...	1	10
Mt. Margaret	Mt. Margaret	1	22	...	...	...	...	...	...	...	...	1	22
North Coolgardie	Menzies	1	12	...	...	2	6	...	...	...	...	3	18
East Coolgardie	East Coolgardie ...	17	346	...	...	2	47	3	21	1	2	23	416
Coolgardie	Coolgardie	...	...	...	...	1	13	...	...	...	...	1	13
Phillips River	... ...	...	...	2	3	...	...	...	...	...	...	2	3
	Total	22	424	4	28	5	66	4	45	3	5	38	568

TABLE 18.

Claims and Authorised Holdings under "The Mining Act, 1904," and Regulations existing on 31st December, 1916, and 1917.

Goldfield or Mineral Field.	District.	Prospecting Areas.				Water Rights.				Lode Claims.		Alluvial Claims.		Mineral Claims.	
		Number.		Acreage.		Number.		Acreage.							
		1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.
Northampton	... ...	23	5	303	43	...	...	...	...	...	...	...	...	...	...
Pilbara	Marble Bar ...	11	7	109	93	4	3	5	3	2	2	5	3	...	...
Do.	Nullagine	7	5	100	69	2	2	13	13	6	8	...	...	...	...
West Pilbara	... ...	1	9	18	147	1	1	5	2	1	...	...	...	...	...
Ashburton	... ...	3	...	40	...	...	...	...	...	...	...	...	...	...	...
Peak Hill	... ...	21	12	272	183	5	5	18	18	11	1	...	...	...	...
East Murchison	Lawlers	7	9	94	119	12	10	16	15	...	...	...	...	...	...
Do.	Wiluna	18	12	236	183	6	6	12	10	...	1	...	...	...	...
Do.	Black Range ...	10	10	167	135	2	2	6	6	...	...	...	1	...	...
Murchison	Cue	27	27	267	330	3	4	13	14	2	2	1	1	...	...
Do.	Meekatharra ...	25	20	357	233	2	1	2	1	...	...	...	...	...	...
Do.	Day Dawn ...	7	9	73	105	14	14	36	35	...	...	...	...	...	...
Do.	Mt. Magnet ...	29	14	270	177	3	3	3	3	...	...	...	...	...	...
Yalgoo	... ...	25	26	414	393	1	...	3	...	...	...	...	...	...	...
Mt. Margaret	Mt. Morgans ...	10	14	104	210	5	9	13	12	1	...	...	...	...	...
Do.	Mt. Malcolm ...	17	17	273	221	24	25	191	192	...	...	...	...	...	...
Do.	Mt. Margaret ...	22	18	287	211	24	25	59	59	...	...	...	...	...	...
North Coolgardie	Menzies	26	15	341	211	8	6	24	20	...	...	...	...	...	...
Do.	Ularring	9	7	102	74	1	2	1	2	...	...	...	...	...	...
Do.	Niagara	7	7	99	93	5	4	6	5	...	1	...	...	...	...
Do.	Yerilla	34	4	417	51	8	5	23	7	...	...	...	...	...	...
Broad Arrow	... ...	34	29	498	372	8	3	24	8	...	...	...	...	...	...
N.E. Coolgardie	Kanowna	3	10	42	117	4	3	6	5	4	3	...	...	...	...
Do.	Kurnalpi	...	2	...	15	...	...	...	...	...	...	...	...	...	...
East Coolgardie	East Coolgardie ...	64	47	932	707	9	9	29	31	6	9	2	2	...	...
Do.	Bulong	3	2	42	36	...	...	...	...	1	2	...	...	1	1
Coolgardie	Coolgardie	44	33	555	434	10	9	35	34	1	1	...	...	...	...
Do.	Kunanalling ...	9	8	139	128	7	8	42	44	...	...	...	...	...	...
Yilgarn	... ...	33	134	529	1,619	1	2	2	3	...	...	...	...	...	...
Dundas	... ...	10	6	141	47	14	15	81	90	2	2	...	...	...	...
Phillips River	... ...	15	17	227	262	2	2	22	22	...	...	...	...	...	...
Collie	... ...	1	...	2,900	...	...	...	...	...	...	...	...	...	...	...
Greenbushes	... ...	...	...	...	...	12	9	72	29	1	5	18	26	...	...
Gascoyne	... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Outside Proclaimed Fields	... ...	18	25	7,172	8,782	...	...	...	...	...	...	...	...	...	...
	Totals	573	560	17,520	15,800	197	187	762	683	38	37	26	33	1	1
Increase or Decrease for 1917 compared with 1916		— 13		— 1,720		— 10		— 79		— 1		+ 7		...	

Goldfield or Mineral Field.	District.	Dredging Claims.		Residence Areas.		Business Areas.		Machinery Areas.		Tailings Areas.		Garden Areas.		Washing Areas.	
		1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.
Northampton	... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pilbara	Marble Bar ...	...	...	1	1	12	7	2	2	1	1	4	5	...	...
Do.	Nullagine	3	3	3	3	2	2	1	1	...	...	3	4	...	...
West Pilbara	... ...	...	...	9	6	16	16	2	2	...	...	3	3	...	...
Ashburton	... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peak Hill	... ...	...	...	3	3	...	...	4	4	2	2	...	...	...	...
East Murchison	Lawlers	...	...	1	1	1	...	4	3	6	7	2	1	...	...
Do.	Wiluna	...	...	...	...	...	...	...	...	...	...	4	3	...	...
Do.	Black Range ...	...	...	76	77	1	2	4	3	1	1	8	8	...	...
Murchison	Cue	...	...	7	6	3	3	...	...	1	...	1	1	...	...
Do.	Meekatharra ...	...	...	4	4	9	...	3	2	2	2	1	1	...	...
Do.	Day Dawn ...	...	...	13	9	21	14	...	...	...	...	4	2	...	...
Do.	Mt. Magnet ...	...	...	1	1	1	1	2	2	1	1	7	7	...	...
Yalgoo	... ...	...	...	4	4	37	16	5	3	...	...	...	...	...	...
Mt. Margaret	Mt. Morgans ...	...	...	...	...	...	...	1	4	...	1	6	6	...	...
Do.	Mt. Malcolm ...	...	...	1	1	4	5	...	...	3	4	12	11	...	...
Do.	Mt. Margaret ...	...	...	8	8	15	14	5	5	1	1	11	9	...	...
North Coolgardie	Menzies	...	...	29	28	11	11	3	3	2	4	7	7	...	...
Do.	Ularring	...	...	...	...	4	5	1	...	...	...	...	...	...	...
Do.	Niagara	...	...	...	...	...	...	1	1	2	2	2	...	...	...
Do.	Yerilla	...	...	...	...	3	3	1	...	1	...	1	1	...	...
Broad Arrow	... ...	...	...	...	...	13	...	...	2	1	3	...	...	...	...
N.E. Coolgardie	Kanowna	...	...	...	...	...	...	3	3	2	2	3	3	...	...
Do.	Kurnalpi	...	...	...	...	...	...	1	1	...	...	...	...	...	...
East Coolgardie	East Coolgardie ...	...	...	1	1	4	3	4	3	6	6	23	25	...	...
Do.	Bulong	...	...	1	1	1	1	1	1	...	...	...	...	...	...
Coolgardie	Coolgardie	...	...	2	3	3	3	4	4	3	3	...	2	...	...
Do.	Kunanalling ...	...	...	2	2	4	3	2	2	...	...	...	...	...	...
Yilgarn	... ...	...	...	241	191	98	80	4	7	2	2	3	4	...	...
Dundas	... ...	...	...	...	...	1	1	4	4	2	2	3	3	...	...
Phillips River	... ...	...	...	...	...	...	...	2	2	2	2	4	4	...	...
Collie	... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Greenbushes	... ...	6	7	32	34	2	1	4	3	...	...	14	14	2	4
Gascoyne	... ...	...	...	1	1	1	1	...	...	...	...	...	...	...	...
Outside Proclaimed Fields	... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Totals	9	10	440	385	267	192	68	67	41	46	126	124	2	4
Increase or Decrease for 1917 compared with 1916		+ 1		— 55		— 75		— 1		+ 5		— 2		+ 2	

Last year the number of prospecting areas held was 573, the total acreage being 17,520 acres, which included six areas of 9,516 acres for coal and oil.

This year the number held is 560, of a total acreage of 15,800 acres, including five areas of 8,840 acres for coal and oil.

TABLE 19.

Miners' Rights issued during 1916 and 1917.

Place of Issue.	Miners' Rights.		Place of Issue.	Miners' Rights.	
	1916.	1917.		1916.	1917.
Albany	12	10	Mount Magnet	155	105
Boulder	48	28	Mount Morgans	36	35
Bridgetown	...	20	Mulline	8	4
Broad Arrow	115	86	Nannine	43	37
Broome	2	1	Narrogin	...	3
Bullfinch	28	30	Norseman	52	60
Bunbury	1	1	Northampton	42	39
Busselton	8	7	Northam	10	9
Carnarvon	10	14	Nullagine	41	39
Collie	5	2	Onslow	16	17
Coolgardie	206	170	Ora Banda	28	44
Cue	126	198	Payne's Find	16	20
Derby	5	7	Peak Hill	14	35
Esperance	3	3	Perth	164	157
Geraldton	3	11	Port Hedland	30	6
Greenbushes	100	164	Ravensthorpe	57	73
Hall's Creek	27	11	Roebourne	74	53
Kalgoorlie	504	427	Sandstone	86	59
Kanowna	51	35	Southern Cross	119	94
Kookynie	...	33	Wagin	1	1
Lake Darlot	10	8	Westonia	285	279
Laverton	119	119	Wiluna	58	33
Lawlers	43	31	Wyndham	2	2
Leonora	97	86	Yalgoo	75	29
Linden	16	27	Yarri	7	7
Marble Bar	90	74	York	3	...
Marvel Loch	37	37	Youanme	47	23
Meekatharra	123	96			
Menzies	121	120	Total	3,463	3,119

TABLE 20.

Number and Acreage of Miners' Homestead Leases in force on 31st December, 1916 and 1917.

Goldfield.	District.	1916.		1917.		Increase.		Decrease.	
		Leases.	Acreage.	Leases.	Acreage.	Leases.	Acreage.	Leases.	Acreage.
West Pilbara	... ...	...	...	...	...	...	...	...	...
Greenbushes	... ...	11	986	9	956	...	...	2	30
Pilbara	Marble Bar ...	5	71	4	58	...	...	1	13
	Nullagine	...	...	...	...				
Dundas	... ...	28	1,427	29	1,447	1	20	...	...
Broad Arrow	... ...	4	70	2	40	...	...	2	30
Yilgarn	... ...	17	1,121	17	532	...	...	...	589
Mt. Margaret ...	Mt. Morgans ...	2	120	2	120	...	...	1	5
	Mt. Malcolm ...	6	1,079	6	1,079				
	Mt. Margaret ...	18	488	17	483				
Murchison ...	Cue	8	1,297	8	1,297	...	...	3	87
	Day Dawn ...	11	165	11	158				
	Meekatharra ...	18	1,958	16	1,898				
	Mt. Magnet ...	4	281	3	261				
Yalgoo	... ...	2	680	2	680	...	...	...	...
Coolgardie ...	Coolgardie	28	3,872	27	2,933	...	...	1	939
	Kunanalling ...	2	520	2	520				
East Coolgardie ...	... ...	102	3,632	95	3,118	...	...	7	514
Phillips River	... ...	150	21,490	150	21,493	...	3	...	...
Peak Hill	... ...	3	70	5	252	2	182	...	...
North-East Coolgardie ...	Kanowna	19	842	18	822	...	...	1	20
North Coolgardie	Menzies	8	719	8	719	...	...	...	...
	Yerilla	1	10	1	10				
	Niagara	1	20	1	20				
	Ularring	1	20	1	20				
East Murchison...	Lawlers	5	1,110	5	1,110	...	...	3	98
	Black Range ...	8	228	5	130				
	Wiluna	4	69	4	69				
	Total ...	466	42,345	448	40,225	3	205	21	2,325

As compared with the year 1916, the number of leases held has decreased by 18 and the area by 2,120 acres.

PART IV.—MEN EMPLOYED.

TABLE 21.

Average Number of Men engaged in Mining during 1916 *and* 1917.

Goldfield.	District.	Reef or Lode.		Alluvial.		Total.	
		1916.	1917.	1916.	1917.	1916.	1917.
1. Kimberley	... ...	...	...	12	12	12	12
2. Pilbara	Marble Bar	56	57	8	10	64	67
	Nullagine	76	73	18	17	94	90
3. West Pilbara	... ...	13	9	10	6	23	15
4. Ashburton	... ...	3	3	4	4	7	7
5. Gascoyne	... ...	2	2	4	4	6	6
6. Peak Hill	... ...	20	20	3	3	23	23
7. East Murchison ...	Lawlers	144	98	1	...	145	98
	Wiluna	123	87	...	...	123	87
	Black Range	271	201	...	...	271	201
8. Murchison	Cue	112	152	7	8	119	160
	Meekatharra	534	523	11	12	545	535
	Day Dawn	224	249	14	6	238	255
	Mt. Magnet	214	131	9	...	223	131
9. Yalgoo	... ...	278	161	...	...	278	161
10. Mt. Margaret	Mt. Morgans	116	109	...	...	116	109
	Mt. Malcolm	488	514	5	3	493	517
	Mt. Margaret	343	294	7	9	350	303
11. North Coolgardie ...	Menzies	368	341	5	5	373	346
	Ularring	88	70	2	...	90	70
	Niagara	86	62	12	12	98	74
	Yerilla	174	83	9	5	183	88
12. Broad Arrow	... ...	236	204	46	37	282	241
13. North-East Coolgardie	Kanowna	131	104	21	18	152	122
	Kurnalpi	25	20	10	8	35	28
14. East Coolgardie ...	East Coolgardie	4,022	3,683	14	8	4,036	3,691
	Bulong	39	17	6	3	45	20
15. Coolgardie	Coolgardie	218	171	13	18	231	189
	Kunanalling	79	80	10	15	89	95
16. Yilgarn	... ...	847	808	...	...	847	808
17. Dundas	... ...	196	152	...	...	196	152
18. Phillips River	... ...	37	51	...	...	37	51
State generally	... ...	...	...	...	...	...	...
Total—Gold Mining.		9,563	8,529	261	223	9,824	8,752
MINERALS OTHER THAN GOLD.							
Tin	Greenbushes	154	146	*4	*24	158	170
	Marble Bar	13	7	*64	*34	77	41
	West Pilbara	41	46	...	...	41	46
	Ashburton	...	...	...	...	...	...
	Phillips River	72	80	...	...	72	80
Copper	Peak Hill	...	28	...	...	...	28
	Meekatharra	...	...	...	...	...	...
	Yalgoo	...	...	...	...	...	...
	State generally	...	...	...	...	...	...
Pyritic Ore	Mt. Morgans	20	18	...	...	20	18
Lead Ore	Northampton	174	257	...	...	174	257
	Ashburton	6	...	...	...	6	...
	State generally	64	71	...	...	64	71
Coal	Collie River	458	571	...	...	458	571
Graphite	State generally	6	6	...	...	6	6
Magnesite	Bulong	3	1	...	...	3	1
	Total—Other Minerals ...	1,011	1,231	68	58	1,079	1,289
	GRAND TOTAL ...	10,574	9,760	329	281	10,903	10,041

*Classified elsewhere as employed at mines.

TABLE 22.

Average Number of Men employed at Mines during 1917.

Mineral.	Above Ground.	Under Ground.	Total.	Percentage of total men employed.	Increase or decrease compared with 1916.
Coal	140	431	571	5·82	+ 113
Copper	66	88	154	1·57	+ 41
Gold	3,765	4,764	8,529	86·87	— 1,034
Lead	132	196	328	3·34	+ 84
Pyritic Ore	5	13	18	·18	— 2
Tin	*203	8	211	2·15	— 24
Magnesite	1	...	1	·01	— 2
Graphite	3	3	6	·06	...
Total	4,315	5,503	9,818	100·00	— 824

* As the tin obtained is principally "stream tin" the average number of alluvial workers has been, in this case, included in the heading "above ground."

The above table deals with men working their own mines, or employed on wages, and is compiled from returns furnished to the Department by mine-owners.

TABLE 23.

Average Number of Men employed at Gold Mines during 1917, classified according to the several Goldfields and the proportion of Men employed in each Goldfield.

Goldfield.	Above Ground.	Under Ground.	Total.	Increase or Decrease, compared with 1916.	Percentage of total men employed.	
					1916.	1917.
1. Kimberley	...	...	...	...	...	...
2. Pilbara	70	60	130	— 2	1·38	1·53
3. West Pilbara	3	6	9	— 4	·14	·11
4. Ashburton	1	2	3	...	·03	·04
5. Gascoyne	2	...	2	...	·02	·02
6. Peak Hill	10	10	20	...	·21	·23
7. East Murchison...	193	193	386	— 152	5·63	4·53
8. Murchison	449	606	1,055	— 29	11·33	12·37
9. Yalgoo	73	88	161	— 117	2·91	1·89
10. Mt. Margaret	412	505	917	— 30	9·90	10·75
11. North Coolgardie	253	300	556	— 160	7·49	6·52
12. Broad Arrow	79	125	204	— 32	2·47	2·39
13. North-East Coolgardie ...	57	67	124	— 32	1·63	1·45
14. East Coolgardie	1,649	2,051	3,700	— 361	42·46	43·38
15. Coolgardie	143	108	251	— 46	3·10	2·94
16. Yilgarn	282	526	808	— 39	8·86	9·47
17. Dundas	66	86	152	— 44	2·05	1·78
18. Phillips River	20	31	51	+ 14	·39	·60
State generally	...	...	...	...	...	...
Total	3,765	4,764	8,529	— 1,034	100·00	100·00

TABLE 24.

Alluvial Gold Workers.

Goldfield.	1916.	1917.	Increase or decrease compared with 1916.
1. Kimberley	12	12	...
2. Pilbara	26	27	+ 1
3. West Pilbara	10	6	— 4
4. Ashburton	4	4	...
5. Gascoyne	4	4	...
6. Peak Hill	3	3	...
7. East Murchison	1	...	— 1
8. Murchison	41	26	— 15
9. Yalgoo	...	...	...
10. Mt. Margaret	12	12	...
11. North Coolgardie	28	22	— 6
12. Broad Arrow	46	37	— 9
13. North-East Coolgardie	31	26	— 5
14. East Coolgardie	20	11	— 9
15. Coolgardie	23	33	+ 10
16. Yilgarn	...	...	...
17. Dundas	...	...	...
18. Phillips River	...	...	...
Total	261	223	— 38

Table 25.

Rate of Wages in the Mining Industry.

Table showing Wages payable to Workers in Gold-mining and Copper-mining Industries under various Awards of the Court of Arbitration and Industrial Agreements up to 31st December, 1916.

Locality in which Award or Agreement has effect.		Date of Award or Agreement.	Term.	Miner (hand labour) in shafts.	Miner (hand labour) in rises.	Miner (hand labour) in winzes.	Miner (hand labour) in all other places	Millmen in Charge.	Roasterman in Charge.	Slimes Charger.	Slimes Platman (off-sider).	Repairman.	Men on Cracker.	Men in Dams.	Rock Drill Men and Chuckmen in Shafts.	Rock Drill Men and Chuckmen in rises.	Rock Drill Men and Chuckmen elsewhere.	Rock Drill Men in winzes.	Miners (Hammer and Drill men).	Miners (wet ground, extra allowance) per shift.	Bracemen and Platmen.	Skipmen.	Mullockers and Shovellers.	Shoveller.	Truckers.	Men working in Cyanide Vats and Filterpress Men.	Man in Charge of Dam.	Timbermen.	Surface Labourers.	Boiler Cleaners.	Horse Drivers (including looking after horses).	Drill and Tool Sharpeners.	Mechanics' Labourers.	Oilers and Greasers.	Riggers.	Firemen.	Pipe Fitters (underground).	Pitmen.	Fitters, Turners, and Blacksmiths.	Pattern-makers.	Planers, Slotters, and Shapers.	Radial Drillers.	Electricians.	Motor Attendants.	Linesmen.	Engine-driver. Surface Winding Engines.	Engine-driver. All other classes of Engines.	Engine-driver. Overtime. Week Day. Up to 4 hours.	Engine-driver. Overtime. Week Day. After 4 hours.	Hours of Work per week. Men on Surface (see also ‡‡16).	Hours of Work per week. Shiftmen and underground workers.
				s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Abbotts	(1)	27th February, 1903 ..	29th January, 1903, to 29th July, 1904 ..												15 6	15 9	14 4		13 6	0 10	13 0		12 4		13 6			14 4	11 10	13 6	12 10	14 9																	
	(2)	19th November, 1904 ..	29th July, 1904, to 31st January, 1906 ..												15 6	14 6	13 10		13 6	0 10	13 6		11 10		12 6			13 10	11 4	13 6	12 4	14 3														48	47
	†(3)	30th August, 1910 ..	30th August, 1910, to 30th August, 1911 ..												15 6	14 6	13 10		13 6	0 10	13 6		11 10		12 6			15 0	12 6	13 6	12 4	14 3	12 6													48	47
	†(4)	31st May, 1916 ..	31st May, 1916, to 30th May, 1919 ..	15 0	14 6	14 2	13 10	15 0	15 0	15 0	13 4	14 6	13 6	13 6	15 10	15 4	14 8	15 0	13 4	1 2	13 6		‡13 0		‡13 0			15 0	12 6	15 0	13 6	15 0	12 6													48	47
Black Range ..	(1)	4th July, 1905 ..	1st August, 1905, to 1st August, 1906 ..																13 4 / 13 10 / 12 4	1 3	12 4		11 4		11 4		12 4		14 0	10 10	12 6	11 10	13 4					13 0								48	47
	(2)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..																15 0 / 14 0 / 13 4	1 3	13 6		12 0		12 0	13 10		15 0	11 8	14 0	12 8	14 4						15 0							48	47
	(3)	17th May, 1907 ..	1st June, 1907, to 31st May 1910 ..																13 4	1 3	13 6		12 0		12 0	13 10		15 0	11 8	14 0	12 8	14 4							13 6	14 6						48	47
	(4)	20th May, 1908 ..	20th May, 1908, to 31st May, 1910												15 4	14 10	14 2			1 3																										48	47
	(5)	14th August, 1908 ..	8th August, 1908, to 31st May, 1910 ..																																										47 and 48	..
Broad Arrow, Paddington to Kanowna	(1)	19th December, 1904 ..	19th December, 1904, to 19th June, 1906 ..												14 4	13 10	13 4		11 8	1 8	11 8		10 6		10 6	11 8		13 4	10 0	11 10	11 0	12 8														15 8	15 0	1½	1½	48	
	(2)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..																12 8 / 11 8	..	11 8		11 0		11 0			13 4	10 0	..	11 8	..						13 0	14 0						48	47
	*(1)	28th July, 1911 ..	28th July, 1911, to 2nd August, 1911 ..												14 4	13 10	13 4																													48	47
Bulong	(1)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..												14 4	13 10	13 4		11 8		11 8		10 6		10 6	11 8		13 4	10 0								13 0	14 0						48	
	(2)	13th July, 1905 ..	1st August, 1905, to 31st December, 1905 ..																13 4	1 8	13 4										14 4													48	47
Burtville		4th September, 1909 ..	6th September, 1909, to 7th March, 1911 ..																														10 6											48	47
Comet Vale	‖	14th March, 1912 ..	14th March, 1912, to 14th March, 1913 ..												14 6	14 0	13 4		12 6	0 10	12 0		11 4		11 4	12 0		13 4	10 10	12 6	11 10	13 9												14 10	14 2	1½	1½	47 48	47
Cue–Nannine ..	(1)	27th February, 1903 ..	29th January, 1903, to 29th July, 1904 ..												14 6	14 0	13 4		12 6	0 10	12 0		11 4		11 4	12 0		13 4	10 10	12 6	11 10	13 9														48	47
	†(3)	18th December, 1908 ..	1st January, 1909, to 1st January, 1910 ..																																									48	47
Dundas	(1)	29th June, 1903 ..	29th June, 1903, to 1st March, 1904 ..												14 4	13 10	13 4		11 8 / 12 4	1 8	11 8		10 8		10 8	11 8		13 4	10 0	11 8	11 0	12 6												15 10 and 14 10	14 2	1½	1½	47 and 48	
	(2)	16th December, 1904 ..	16th December, 1904, to 16th June, 1906 ..												15 0	14 6	14 0		13 10 / 12 4	1 8	12 4		11 4		11 4	12 4		14 0	10 10	12 6	11 10	13 4	11 10													46	46
	(3)	13th July, 1905 ..	1st August, 1905, to 16th June, 1906 ..																13 0 / 12 6 / 12 0	1 8	12 0	13 8	11 2		11 2	12 0		13 8	10 8	12 2	11 8	13 0	11 8						13 6	14 6					14 0	13 0	1½	1½	48	
	(4)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..																																										48	
	(5)	16th June, 1910 ..	15th June, 1910, to 15th June, 1913 ..												14 8	14 2	13 8			1 8	12 0	13 8	11 2		11 2	12 0		13 8	10 8	12 2	11 8	13 0	11 8													48	47
	(6)	16th June, 1910 ..	16th June, 1910, to 16th June, 1911 ..																																											
	*(7)	11th December, 1913 ..	11th December, 1913, to 10th December, 1916 ..												14 8	14 2	13 8		13 0 / 12 6 / 12 0		12 0	13 8	11 4		11 4	12 0		13 8	10 9	12 2	11 9	13 4	11 8												14 4	13 8	1½	1½	47 and 48	
Glendalbie		10th November, 1908 ..	16th November, 1908, to 16th November, 1911 ..																																										48	47
Higginsville		5th October, 1906 ..	1st November, 1906, to 1st May, 1908 ..												15 0	14 6	14 0		13 4 / 12 10 / 12 4	1 8	12 4		11 4		11 4	12 4		14 0	10 10	12 6	11 10	13 4	11 10													48	47
Ida H.		8th October, 1917 ..	1st August, 1917, to 27th November, 1918 ..																															13 3 to 13 9										18 0				
Kalgoorlie	(1)	2nd September, 1902 ..	2nd September, 1902, to 2nd March, 1904 ..												14 4	13 10	13 4		11 8		11 8		10 6		10 6	11 8		13 4	10 0					13 4												48	48
	*(2)	5th March, 1904 ..	1st March, 1904, to 1st September, 1905 ..												14 4	13 10	13 4		11 8		11 8		10 6		10 6	11 8		13 4	10 0					10 6												48	47
	*(3)	5th March, 1904 ..	1st March, 1904, to 1st September, 1905 ..																														11 6												48	
	*(4)	5th March, 1904 ..	1st March, 1904, to 1st September, 1905 ..																																11 8		11 8								48	
	*(5)	5th March, 1904 ..	1st March, 1904, to 1st September, 1905 ..																																										48	
	(6)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..																																										48	
	*(7)	18th November, 1905 ..	1st September, 1905, to 1st January, 1907 ..												14 4	13 10	13 4		11 8		11 8		10 6		10 6	11 8		13 4	10 0								13 0	14 0						48	
	(8)	9th December, 1905 ..	1st September, 1905, to 1st January, 1907 ..																																										48	47
	*(9)	7th December, 1905 ..	1st September, 1905, to 1st January, 1907 ..																														10 0 to 11 0	10 6											48	
	*(10)	31st August, 1907 ..	31st August, 1907, to 30th June, 1909 ..												14 4	13 10	13 4		11 8		11 8		11 0		11 0			13 4	10 0																	48	
	*(11)	31st August, 1907 ..	31st August, 1907, to 30th June, 1909 ..																							11 8							10 6												48	47
	*(12)	31st August, 1907 ..	31st August, 1907, to 30th June, 1909 ..																														10 0 to 11 0	10 6											48	
	*(13)	31st August, 1907 ..	31st August, 1907, to 30th June, 1909 ..																																										48	
	*(14)	10th March, 1910 ..	10th March, 1910, to 30th September, 1912 ..																																									15 0 and 14 0	13 4	..	..	47 and 48	
	*(15)	10th March, 1910 ..	10th March, 1910, to 30th September, 1912 ..																																											
	*(16)	10th March, 1910 ..	10th March, 1910, to 30th September, 1912 ..																							11 8																				48	
	*(17)	10th March, 1910 ..	10th March, 1910, to 30th September, 1912 ..																														10 0 to 15 0												48	
Kalgoorlie (Engineers)	*(18)	10th March, 1910 ..	10th March, 1910, to 30th September, 1912 ..												14 4	13 10	13 4		11 8		11 8		11 0		11 0			13 4	10 0						10 6											48	47
	‖(19)	14th December, 1911 ..	14th December, 1911, to 30th September, 1912 ..												14 4	13 10	13 4		11 8		11 8		11 2		11 2			13 4											15 0	16 0				1	1½	48	
	*(20)	7th August, 1913 ..	16th April, 1913, to 16th April, 1916 ..																																										48	47
	*(21)	7th August, 1913 ..	16th April, 1913, to 16th April, 1916 ..																							11 8									10 9											48	
	*(22)	8th November, 1913 ..	16th April, 1913, to 16th April, 1916 ..																																									15 0 and 14 0	13 4	..	..	47 and 48	
	*(23)	22nd May, 1914 ..	22nd May, 1914, to 16th April, 1916 ..																																								15 0	16 0	14 0	13 4				
	*(24)	25th March, 1914 ..	25th March, 1914, to 16th April, 1916 ..																																										15 0	11 8	13 4	..	..	..
Kanowna (For Miners' rates *see* "Broad Arrow," etc.)		10th November, 1908 ..	16th November, 1908, to 16th November, 1911 ..																																										47 and 48	..
Kununalling		21st February, 1910 ..	21st February, 1910, to 30th September, 1912 ..																																										47 and 48	..
Lawlers and Mt. Sir Samuel	(1)	10th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..												13 4	12 10	12 4		12 8 / 12 4 / 12 0	1 3	12 0	12 0	11 4		11 4	11 8		13 0	10 10	12 0	11 10	13 4	11 0	11 0	11 8	11 8	11 0	12 6								48	47
	(2)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..												16 0	15 6	15 0		13 4		13 4	15 0	11 8		11 8	13 4		15 0	11 8	15 0	12 8	16 0							13 6	14 6						48	
Leonora, Kookynie, Laverton, etc.	(1)	28th February, 1903 ..	28th February, 1903, to 28th August, 1904 ..																																										48	47
	(2)	28th February, 1903 ..	29th August, 1904, to 28th February, 1906 ..												15 0	14 6	14 0		12 4	1 8	12 4	14 0	11 6		11 6	12 4		14 0	11 0	12 6	12 0	13 4	12 0											17 0	15 6	1½	1½	47	
	(3)	16th December, 1904 ..	29th August, 1904, to 28th February, 1906 ..																																								15 9	14 6	1½	1½	47	
	(4)	19th December, 1904 ..	29th August, 1904, to 28th February, 1906 ..																																											48	
	(5)	13th July, 1905 ..	1st August, 1905, to 28th February, 1906 ..																																11 8											48	47
	(6)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..																																								13 0	14 0			48	
	†(7)	19th January, 1909 ..	15th January, 1909, to 1st January, 1910 ..																																											48	
	†(8)	(a) 19th January, 1909 ..	15th January, 1909, to 1st January, 1910 ..																																											
		(b)																																										14 8 and 14 4	14 0 12 8	1½	1½	48 and 47	
Marvel Loch ..	(1)	27th January, 1910 ..	1st February, 1910, to 1st February, 1911 ..												13 6	13 0	12 6			1 8	10 10		10 10		10 10	10 10		12 0	10 6		11 6	12 6													48	
	(2)	21st October, 1912 ..	21st October, 1912, to 31st May, 1914 ..												14 0	13 6	13 0		12 6 and 11 6	1 8	11 6		11 0		11 0	11 4		13 0	10 6		11 0	12 6	11 0					10 6							48	47
Meekatharra (*see* "Abbotts")																																														
Menzies	(1)	28th February, 1903 ..	28th February, 1903, to 28th August, 1904 ..												15 2	14 8	14 2		12 6	1 8	12 6		11 4		11 4	12 6		14 2	10 10		14 2															48	
	(2)	28th February, 1903 ..	29th August, 1904, to 28th February, 1906 ..																																											48	47
	(3)	16th December, 1904 ..	29th August, 1904, to 28th February, 1906 ..												14 9	14 3	13 9		12 0	1 8	12 0		11 0		11 0	12 0		13 9	10 6	12 0	11 10	13 0	11 6											16 0	14 6	1½	1½	47	
	(4)	19th December, 1904 ..	29th August, 1904, to 28th February, 1906 ..																																								15 5	14 0	1½	1½	48	
	(5)	13th July, 1905 ..	1st August, 1905, to 28th February, 1906 ..																																11 8											48	47
	(6)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..																																								13 0	14 0			48	
Mt. Magnet	†(1)	18th December, 1908 ..	1st January, 1909, to 1st January, 1910 ..																																										47 and 48	..
Mt. Morgans ..	† (2)	28th November, 1909 ..	17th November, 1909, to 16th November, 1910												14 6	14 0	13 4		12 6	0 10	12 0								10 10	12 6	11 10	13 9													48	
	*(1)	17th August, 1903 ..	16th July, 1903, to 28th August, 1904 ..												16 0	15 6	15 0		13 4	1 8	13 4	15 0	11 8		11 8	13 4		15 0	11 8	15 0	12 8	15 0	12 4		13 4										48	47
	*(2)	16th December, 1904 ..	29th August, 1904, to 28th February, 1906 ..																																										48	47
	(3)	19th December, 1904 ..	29th August, 1904, to 28th February, 1906 ..												15 0	14 6	14 0		12 4	1 8	12 4	14 0	11 6		11 6	12 4		14 0	11 0	12 6	12 0	13 4	12 0											15 0	14 6	1½	1½	47	
	(4)	13th July, 1905 ..	1st August, 1905, to 28th February, 1906 ..																																11 8											48	47
	(5)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..																																								13 0	14 0			48	
	†(6)	19th January, 1909 ..	15th January, 1909, to 1st January, 1910 ..																																											48	
	†(7)	19th January, 1909 ..	15th January, 1909, to 1st January, 1910 ..																																											47 and 48	..
Northampton ..	†(1)	12th June, 1914 ; Amendment 10th Oct., 1916	1st June, 1914, to 1st June, 1917 ..												13 7	13 1	12 5				12 5			11 3	11 3		11 9	14 0	10 9	13 1	12 0	13 5													47 and 48	..
Norseman (*see* "Dundas.") Nullagine	*	16th January, 1905 ..	1st February, 1905, to 1st February, 1907 ..																14 2 / and / 13 4	1 8								16 8	13 4			16 8												‡16 8	‡15 0			44	44
Peak Hill ..	(1)	27th February, 1903 ..	29th January, 1903, to 29th July, 1904 ..												16 6	16 8	15 4		14 6	0 10	14 0		13 0		13 4	14 0		15 4	12 10	14 6	13 10	15 9														48	47
	(2)	19th November, 1904 ..	29th July, 1904, to 31st January, 1906 ..												15 6	15 0	14 4		13 6	0 10	13 0		12 4		12 4	13 0		14 4	11 10	12 6	12 10	14 9														48	47
	(3)	6th December, 1906 ..	1st October, 1906, to 1st October, 1909 ..												15 0	14 6	13 10		13 0	1 3	12 6		11 10		11 10	12 6		13 10	11 4	13 0	12 4	14 3														48	47
Southern Cross ..	(1)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..																																							12 0	13 0			48	
Whim Creek (Copper) ..		14th August, 1912 ..	14th August, 1912, to 14th June, 1913 ..																15 0 / 14 2 8 / 13 4	1 8	13 4		13 4		13 4			15 0	13 4																		48	
Wiluna	(1)	13th July, 1905 ..	1st August, 1905, to 1st February, 1907 ..												15 6	15 0	14 4		13 6 / 15 0	1 3	13 0	13 0	12 4		12 4	13 0		14 4	11 10	13 6	12 10	14 9							13 6	14 6						48	
	(2)	8th December, 1908 ..	1st January, 1907, to 1st January, 1910 ..																14 0 / 13 4 / 15 0	1 3	15 6		12 8		12 8	13 10		15 0	11 8	14 0	12 8	14 4	13 4													48	47
Youanme		22nd July, 1912 ..	22nd July, 1912, to 7th May, 1915 ..												15 4	14 10§	14 2		13 4		13 6		13 0		13 0			15 0	12 6	15 0	13 0													48	¶ 47
Do.		23rd March, 1917 ..	22nd March, 1917, to 21st March, 1920 ..	15 0	14 6	14 2	13 10	15 0	15 0	15 0	13 4	15 0	13 6	13 6	15 10	15 4	14 8	15 0																												

* Industrial Agreement. † Award continues in operation until amended or rescinded by Court. ‡ Hours of labour for engine-drivers and battery feeders agreed to at 47 per week. §Rises in winzes. ‖ Award and Agreement. ¶ Underground only.

PART V.—ACCIDENTS.

TABLE No. 26.

MEN EMPLOYED IN MINES KILLED AND INJURED IN MINING ACCIDENTS DURING 1916 AND 1917.

A.—*According to Locality of Accident.*

Goldfield.	Killed.		Injured.		Total Killed and Injured.	
	1916.	1917.	1916.	1917.	1916.	1917.
1. Kimberley	...	...	...	...	...	...
2. Pilbara	...	...	...	1	...	1
3. West Pilbara	...	...	...	...	...	...
4. Ashburton	...	...	...	...	...	...
5. Gascoyne	...	...	...	...	...	...
6. Peak Hill	...	...	...	...	...	...
7. East Murchison	4	...	12	20	16	20
8. Murchison	3	3	32	60	35	63
9. Yalgoo	...	...	3	1	3	1
10. Mt. Margaret	2	2	73	98	75	100
11. North Coolgardie	1	2	10	13	11	15
12. North-East Coolgardie	...	...	1	2	1	2
13. Broad Arrow	...	1	4	1	4	2
14. East Coolgardie	10	12	612	496	622	508
15. Coolgardie	...	...	...	...	...	...
16. Yilgarn	1	1	7	7	8	8
17. Dundas	...	...	1	2	1	2
18. Phillips River	...	...	3	7	3	7
MINING DISTRICTS—						
Northampton	...	...	1	4	1	4
Yandanooka	...	...	...	...	...	...
Greenbushes	...	...	...	...	...	...
Collie	...	...	86	121	86	121
Swan	1	...	2	1	3	1
Kendinup	...	...	...	...	...	...
Roelands	...	...	...	6	...	6
Total	22	21	847	840	869	861

From the above table it will be seen that the total number of fatal accidents for the year 1917 was one less than for 1916. The number of injured shows a decrease of seven compared with the preceding year. Details of these accidents will be found in the report of the State Mining Engineer, published as Division II. of this report.

B.—*According to causes of Accidents.*

	1916.		1917.		Comparison with 1916.	
	Fatal.	Serious.	Fatal.	Serious.	Fatal.	Serious.
1. Explosion	...	15	...	7	...	— 8
2. Falls of Ground	11	91	10	93	— 1	+ 2
3. In shafts	1	25	2	25	+ 1	...
4. Miscellaneous Underground	6	500	4	488	— 2	— 12
5. Surface	4	216	5	227	+ 1	+ 11
Total	22	847	21	840	— 1	— 7

The fatal accidents all occurred in gold mines.

The death rate per 1,000 men employed on gold mines was 2.40 as against 2.11 in 1916.

TABLE No. 27.

Deaths of Persons employed at Mines from Accidents during 1916 *and* 1917.

	1916.						1917.					
	Number of Persons killed.			Death Rate per 1,000 men employed.			Number of Persons killed.			Death Rate per 1,000 men employed.		
	Above Ground.	Under Ground.	Total.	Above Ground.	Under Ground.	Total.	Above Ground.	Under Ground.	Total.	Above Ground.	Under Ground.	Total.
Coal Mines	...	...	...	...	...	...	...	...	...	...	...	...
Men employed	(102)	(356)	(458)	...	...	...	(140)	(431)	(571)	...	...	...
Gold Mines	4	17	21	·88	3·22	2·14	5	16	21	1·25	3·36	2·40
Men employed	(4,540)	(5,284)	(9,824)	...	...	...	(3,988)	(4,764)	(8,752)	...	...	...
Other Mines	...	...	...	...	...	...	...	...	...	...	...	...
Men employed	(409)	(212)	(621)	...	...	...	(410)	(308)	(718)	...	...	...
Total for all Mines	4	17	21	·79	2·90	1·93	5	16	21	1·10	2·91	2·09
Total number of men employed	(5,051)	(5,852)	(10,903)	...	...	...	(4,538)	(5,503)	(10,041)	...	...	...

TABLE No. 28.

Deaths of Persons employed at Quarries from Accidents during 1916 *and* 1917.

Mining District.	Number of Persons employed.						Number of Persons killed.						Death Rate per 1,000 men employed.					
	Above Ground.		Under Ground.		Total.		Above Ground.		Under Ground.		Total.		Above Ground.		Under Ground.		Total.	
	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.	1916.	1917.
Swan	89	138	...	...	89	138	1	...	...	...	1	...	11·24	...	...	...	11·24	...
Roelands ...	84	83	...	...	84	83	...	...	...	...	...	...	...	...	...	...	...	...
Totals ...	173	221	...	...	173	221	1	...	...	...	1	...	5·78	...	...	...	5·78	...

(Figures for 1916 in 1916 Report are erroneous, and are now amended.)

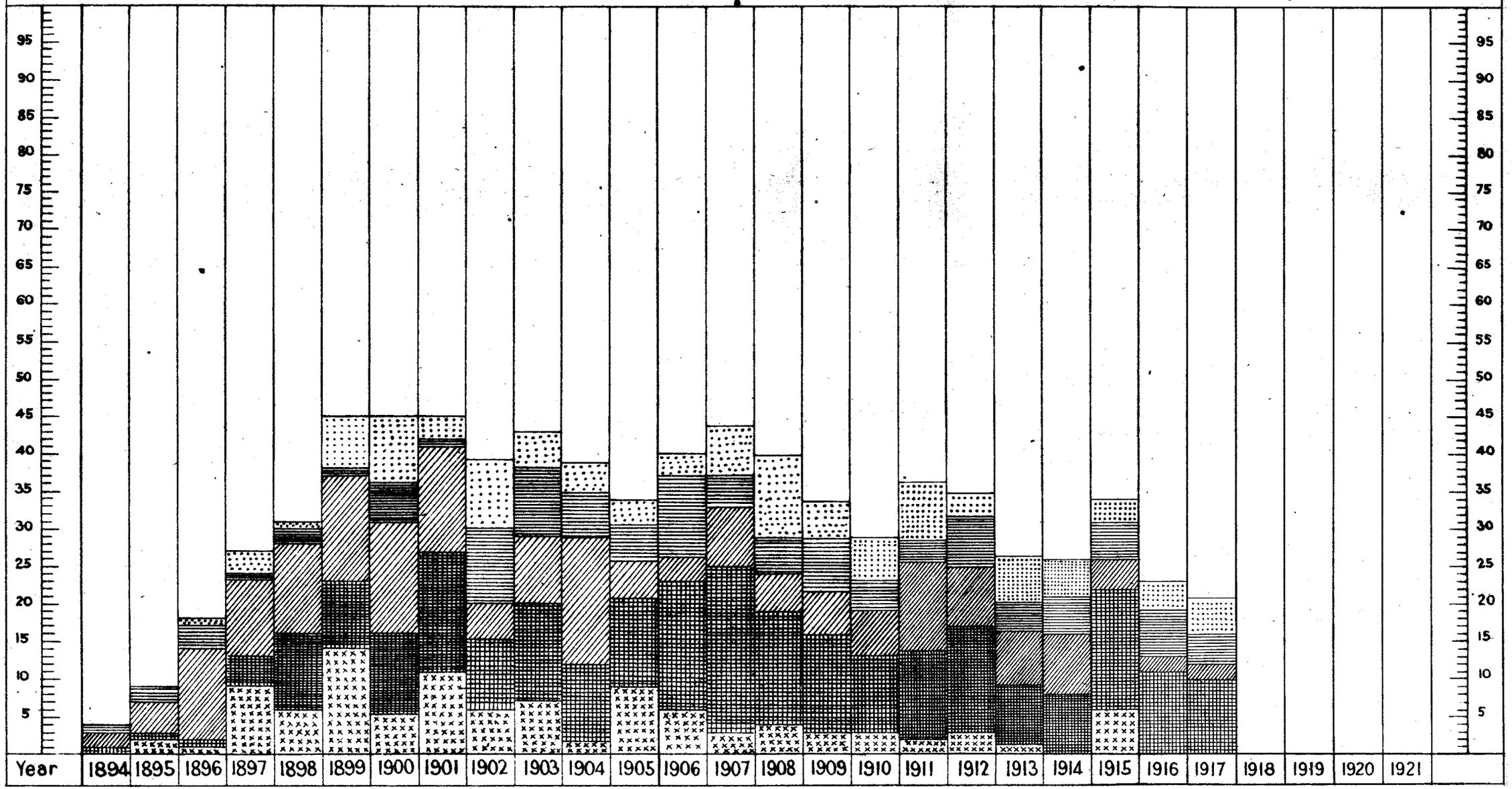
TABLE No. 29.

Deaths from Accidents of Persons employed in Gold Mines during 1917, *and the Death Rate per* 1,000 *men employed and per* 1,000 *tons of Gold Ore raised during* 1916 *and* 1917. (*Number of men taken as in Table No.* 23, *not including Alluvial Gold Workers.*)

Goldfield.	Number of Deaths.			Death Rate per 1,000 men employed.				Number of Deaths per 1,000 tons of Gold Ore raised.	
	1917.			1917.			1916.		
	Above Ground.	Under Ground.	Total.	Above Ground.	Under Ground.	Total.	Total.	1917.	1916.
1. Kimberley	...	...	...	...	...	...	...	...	...
2. Pilbara	...	...	...	...	...	...	...	...	...
3. West Pilbara	...	...	...	...	...	...	...	...	...
4. Ashburton	...	...	...	...	...	...	...	...	...
5. Gascoyne	...	...	...	...	...	...	...	...	...
6. Peak Hill	...	...	...	...	...	...	...	...	...
7. East Murchison	...	...	...	...	...	...	5·58	...	·043
8. Yalgoo	...	...	...	...	...	...	...	...	...
9. Mt. Margaret	2	...	2	4·85	...	2·18	2·11	·008	·008
10. North Coolgardie	...	2	2	...	6·67	3·60	1·40	·037	·015
11. North-East Coolgardie	...	...	...	...	...	...	...	...	...
12. Broad Arrow	...	1	1	...	8·00	4·90	...	·048	...
13. East Coolgardie	2	10	12	1·21	4·88	3·24	2·71	·010	·008
14. Coolgardie	...	...	...	...	...	...	...	...	...
15. Murchison	1	2	3	2·23	3·30	2·84	2·77	·021	·022
16. Yilgarn	...	1	1	...	1·90	1·24	1·18	·006	·005
17. Dundas	...	...	...	...	...	...	...	...	...
18. Phillips River	...	...	...	...	...	...	...	...	...
Total	5	16	21	1·33	3·36	2·46	2·11	·011	·010

The number of deaths per 1,000 men employed shows an increase from 2.11 in 1916 to 2.46 in 1917, and that per 1,000 tons of gold ore raised shows an increase, being .011, as against .010 for the preceding year.

DIAGRAM SHEWING THE NUMBER OF DEATHS FROM ACCIDENTS ARRANGED IN FIVE CLASSES, IN THE MINES OF WESTERN AUSTRALIA DURING THE YEARS 1894 AND ONWARDS.



PART VI.—STATE AID TO MINING.

The number of State Batteries existing at the close of the year was 32 (of which two were leased).

From inception to end of 1917 gold and tin, to the value of £4,918,389·76, have been recovered at the State plants.

1,157,406.69 tons of gold ore were treated and produced £4,085,920.09 worth of gold by amalgamation, £582,545 worth by cyanidation, £152,557.10 from slimes treatment, £8,920.18 from residues, and 72,087.75 tons of tin ore produced tin to the value of £88,186.31, and, in addition, a sum of £261.08 has been recovered from residues.

During the year the gold ore treated was 42,947.50 tons for 38,671.40ozs. of bullion from all processes.

The working expenditure for all plants during the year totalled £45,368 12s. 4d., and the revenue £37,814 11s. 11d., which shows a loss of £7,554 0s. 5d. on the year's operations.

The capital expenditure from the inception of the scheme was £366,538 11s. 9d., £91,981 1s. 8d. being paid from revenue and £274,557 10s. 1d. from loan.

The cost of administration for the year was £3,343 5s. 10d. as against £3,281 4s. 1d. for 1916.

The working expenditure from inception to the 31st December, 1917, exceeds the receipts by £73,741 17s. 9d.

GEOLOGICAL SURVEY.

The work of the Geological Survey Branch for the year 1917 was continued on the same lines as those adopted for previous years.

However, on account of an accumulation of field work completed during the past year, a somewhat unusual amount of time was occupied by the staff in writing reports.

The following field work was embraced in the year's operations:—

The continuation of the survey of the southern portion of the Yalgoo Goldfield. This work is still incomplete.

The investigation of the mineral resources of the South-West Division though further advanced, was discontinued owing to the sudden demise of Mr. Woodward.

The loss of Mr. Woodward is keenly felt by all his fellow officers, and the Survey loses one of its most experienced members.

Towards the middle of the year the detailed survey of the Comet Vale and Goongarrie Districts was completed.

A survey of the Southern portions of the Mount Margaret Goldfield was commenced in the early portion of the year and is in progress.

The Magnesite deposits of Bulong were thoroughly investigated and a detailed survey made, whereby their nature and extent have been defined.

In addition to the above, inspections have been made and short reports issued on the Ringing Bell Copper lode, Irwin's Peak; the occurrences of Wolfram at Grass Valley; Phosphatic deposits at Gingin; Graphite at Munglinup and Katanning, and Gold at Tuckabianna. There is an increasing demand for reports and inspections of this nature, more particularly since the phenomenal rises in price of the base metals and the shortage in supply of products manufactured from such minerals as magnesite, graphite, potash-bearing minerals, etc., due to war conditions.

During the year the following reports were completed:—

The Geology and Mineral Resources of the North-West Division between latitude 22°—28° south and longitudes 119°—123°.

A Geological Reconnaissance of the Country between Laverton and the South Australian Border, including part of the Mount Margaret Goldfield. Both these reports cover extensive portions of the State, and have laid bare the geological conditions of country hitherto comparatively unknown.

Incompleted reports, but in progress, embrace the following:—

The Western Australian Mining Handbook.

The Mining Geology of Niagara and Tampa.

The Mining Geology of Comet Vale and Goongarrie.

The Mining Centres of Quinns and Jasper Hill.

The Geology of Warriedar.

Excepting the first mentioned, the field work has been completed in each case.

The routine chemical and petrological work has continued as usual, with a considerable advance in the investigations into the occurrence of minerals and their economic value. The distribution of the minerals in the Westonia centre has been fully dealt with, and the information rendered on this subject should prove to be both of scientific interest and utility from a metallurgical and mining standpoint. Throughout the year there has been an exceptional call on the services of the Chemical Staff, in particular, for determination and valuation of minerals of economic value. This is indicative of the interest now being taken by prospectors in the exploitation of such, and is no doubt due to the reasons previously referred to. In this direction particular attention has been given to the occurrence of Tungsten and Molybdenum.

The experiments in the ceramic values of our Clays has been considerably advanced and materially helped by the addition to the staff of a pottery expert. During the ensuing year the results of this work should be available. Owing to the famine in potash for agricultural purposes, a search for local supplies has been started and will be vigorously pursued. Already the investigations have met with considerable success.

ASSISTANCE UNDER "THE MINING DEVELOPMENT ACT, 1902."

The following statement shows the sums advanced during the year 1917 under "The Mining Development Act":—

	£	s.	d.
Advanced in aid of mining work and equipment of mines with machinery	5,365	8	11
Subsidies paid on stone crushed for the public	1,016	18	3
Boring	128	18	2
Providing means of transport	136	15	5
	£6,648	0	9

In addition to the above, amounts totalling £3,022 4s. 3d. were expended from Mining Development Vote on various matters for the assistance of mining, such as water supply, subsidies to assist carting of

ore long distances and subsidies for development work done below 100ft. level in small mines, and rebates to prospectors working low-grades mines. The subsidies paid on stone crushed for the public amounting to £1,016 18s. 3d. are subsidies paid to owners of plants crushing for the public, the conditions being that they crush at fixed rates; in most cases a further requirement being imposed as to purchasing or treating tailings. The ore crushed at such plants during the year amounted to 7,347.25 tons.

The receipts under the Mining Development Act, exclusive of interest payments, amounted to £4,012 0s. 2d., and include:—

	£	s.	d.
Refunds of Advances	2,400	9	4
Sales of Securities	£1,447	3	9
Miscellaneous Refunds	164	7	1

PART VII.—REMARKS ON THE GOLDFIELDS AND MINERAL DISTRICTS AND SUMMARIES OF THE WARDENS' AND OTHER OFFICERS' REPORTS.

ASHBURTON GOLDFIELD.

Seven (7) ounces of gold were reported during the year but none in the preceding year, gold mining being at a standstill.

Copper ore to the extent of 3.71 tons, valued at £67, was also produced, and in the preceding year 2.61 tons, valued at £27; an increase in tonnage of 1.10 tons, and in value of £40.

BROAD ARROW GOLDFIELD.

The output of gold was 16,519 fine ounces, and in the preceding year 22,216 fine ounces; a decrease of 5,697 fine ounces.

The largest portion of the output was from the Ora Banda centre and the balance practically all from the Broad Arrow and Bardoc centres.

Towards the close of the year a new find was reported at the Dark Horse group of leases, which was promising and had the effect of infusing some spirit into the various centres.

A great number of prospecting areas are held, which is an encouraging sign.

COLLIE COAL FIELD.

The output of coal for the year was 326,550 tons, and for the preceding year 301,526 tons; an increase of 25,024 tons. This is the record output, the previous best being in 1914.

With the exception of the Scottish Collieries, all the mines have contributed to the output, and good work has been accomplished on most of them. Trade generally has been sound and the progress of the field satisfactory.

COOLGARDIE GOLDFIELD.

The output of gold was 10,286 fine ounces, and in the preceding year 13,618 fine ounces; a decrease of 3,332 fine ounces.

A new discovery was reported near Cave Rocks, about 26 miles south-east of Coolgardie, but at present it is not possible to forecast its value. A good number of leases have been taken up.

The most activity was in the Kunanalling District, where the existing mines were consistently worked. The other centres remained practically the same and nothing noteworthy was reported.

DUNDAS GOLDFIELD.

The output of gold for the year was 18,419 fine ounces, and for the preceding year 21,595 fine ounces; a decrease of 3,176 fine ounces. There has been no change in this field, the existing mines have been steadily working, but no new discoveries or important developments have been reported.

EAST COOLGARDIE GOLDFIELD.

The output of gold was 557,983 fine ounces, and in the preceding year 579,344 fine ounces; a decrease of 21,361 fine ounces.

20.50 tons of Magnesite, valued at £21, were raised in the Bulong District, and in the preceding year 97.50 tons, valued at £97.

The decrease in gold production is not much when the heavy costs of all requisites and scarcity of skilled labour are taken into consideration. The large mines have all continued working, but no noteworthy developments have transpired.

At Mount Monger a fair amount of gold was produced, and a good deal of prospecting undertaken.

The other centres were fairly quiet.

EAST MURCHISON GOLDFIELD.

The output of gold was 32,857 fine ounces, and in the preceding year 46,811 fine ounces; a decrease of 13,954 fine ounces.

Copper ore to the extent of 75 tons, valued at £1,523, was produced, and in the preceding year 63.42 tons, valued at £1,311.

In both the Lawlers and Wiluna Districts there was a good deal of prospecting, in some instances with encouraging results.

In the Black Range District matters remained very quiet, the principal producer being the big mine at Youanmi.

GASCOYNE GOLDFIELD.

No gold was reported from this field, and in the preceding year the output was only 14 ounces.

There is practically no mining going on.

GREENBUSHES MINERAL FIELD.

The output of black tin was 237.92 tons, valued at £29,928, and in the preceding year 281.74 tons, valued at £27,319; a decrease in tonnage of 43.82 tons but increase in value of £2,609.

There has been a good deal of activity consequent on the improved prices obtaining for tin, but practically all work has been confined to existing mines, there being no new finds recorded.

The district has been fairly prosperous.

KIMBERLEY GOLDFIELD.

The output of gold was 82 fine ounces, and in the preceding year 162 fine ounces; a decrease of 80 fine ounces. This was obtained by fossickers working alluvial, and although a couple of prospecting parties went out there was practically no change in the field.

MT. MARGARET GOLDFIELD.

The output of gold was 101,874 fine ounces, and in the preceding year 100,612; an increase of 1,262 fine ounces. In addition, 3,575.46 tons of pyritic ore, valued at £1,752, were raised, and in the preceding year 4,409.22 tons, valued at £2,263; a decrease in tonnage of 833.76 tons, and in value of £511.

In the Mt. Margaret District there was an increase, the Lancefield and Ida H. Mines being the most consistent producers. A good deal of prospecting was undertaken at the outlying centres but nothing noteworthy reported.

In the Mt. Morgans District there was a falling off, largely owing to the partial closing down of the Westralia Mt. Morgans Mine.

In the Mt. Malcolm District there was an increase, and the Sons of Gwalia Mine remains the principal producer. At the outlying centres matters have been quiet.

MURCHISON GOLDFIELD.

The output of gold was 82,306 fine ounces, and in the preceding year 84,423; a decrease of 2,117 fine ounces.

Copper ore to the extent of 82.92 tons, valued at £2,164, was also produced.

In the Meekatharra District there was a decrease, due to intermittent work on one, and total cessation on another mine.

The various centres were very quiet.

In the Mount Magnet District there was a large decline, and, although a good deal of prospecting was undertaken, no find of importance was reported.

In the Cue District there was an increase, the Big Bell Mine contributing an increased tonnage for treatment. Considerable activity was displayed in the centres of Tuckabianna and Culculli, and good crushings reported from each.

In the Day Dawn District there was an increase, but little change in previously existing conditions.

NORTHAMPTON AND YANDANOOKA MINERAL FIELDS.

No minerals were reported from Yandanooka.

In the Northampton Field the output of lead ore was 46,801.97 tons, valued at £143,925, and in the preceding year 34,578.34 tons, valued at £110,872; an increase in tonnage of 12,223.63 tons, and in value of £33,053. There has been steady progress in this field, and several mines have opened up splendidly. This is confidently expected to continue, and the outlook is most promising.

NORTH COOLGARDIE GOLDFIELD.

The output of gold was 34,795 fine ounces, and in the preceding year 45,147 fine ounces; a decrease of 10,352 fine ounces.

During the year the Mining Registrar's office at Kookynie was closed and the records for the Niagara and portion of the Yerilla District transferred to Menzies. A portion of the Yerilla District was attached to the Mount Morgans District of the Mount Margaret Goldfield.

In the Menzies District there was the largest decrease, mainly owing to reduced outputs from the mines at Comet Vale, which is still, however, the most thriving centre, the Sand Queen and Gladsome leases being the principal producers, together with the Menzies Consolidated Mine at Yunndaga.

At Goongarrie the New Boddington continues to produce well and this centre is promising.

At Mt. Ida mining is almost at a standstill.

In the Ularring District there was a decrease, and, as previously, the most activity was at Riverina, where one or two mines give some promise.

In the Niagara and Yerilla Districts there were decreases and matters remained very quiet.

NORTH-EAST COOLGARDIE GOLDFIELD.

The output of gold was 5,933 fine ounces, and in the preceding year 6,678 fine ounces; a decrease of 745 fine ounces.

At the latter end of the year the office at Kanowna was closed and the records transferred to Kalgoorlie. Mining throughout the field remained very quiet.

PEAK HILL GOLDFIELD.

The output of gold was 1,744 fine ounces, and in the preceding year 2,389 fine ounces; a decrease of 645 fine ounces.

Copper ore to the extent of 287.84 tons, valued at £9,683, was produced, and in the preceding year 250.93 tons, valued at £8,268; an increase in tonnage of 36.91 tons, and in value of £1,415.

Excepting at the centres of Kumarina and Ilgarere, where copper mining has been pretty brisk, mining throughout the field has been quiet.

PHILLIPS RIVER GOLDFIELD.

The output of gold was 4,734 fine ounces, and in the preceding year 5,419 fine ounces; a decrease of 685 fine ounces.

The production of copper was 5,255.57 tons, valued at £66,868, and in the preceding year 5,428.08 tons, valued at £48,618; a decrease in tonnage of 172.51 tons and an increase in value of £18,250.

There was not much change during the year, and no new finds were reported. The State Smelter continued operations and business generally was good.

PILBARA GOLDFIELD.

The output of gold was 5,407 fine ounces, and in the preceding year 5,882 fine ounces; a decrease of 475 fine ounces.

Black tin to the amount of 69.05 tons, valued at £9,264, was raised, and in the preceding year 153.17 tons, valued at £15,939; a decrease in tonnage of 84.12 tons, and in value of £6,675.

Tantalite to the extent of 12.50 tons, valued at £1,782, was also reported.

As in the previous year, there was very little prospecting, owing to the dearth of miners.

A find of Asbestos was reported from the Nullagine District and the deposit is said to be a good one.

Tantalite was mined at Wodgina, and if prices remain satisfactory and there are facilities for getting the ore to market a good deal of this mineral will be raised.

This field should have a revival when conditions become normal.

WEST PILBARA GOLDFIELD.

The output of gold was 305 fine ounces, and in the preceding year 609 fine ounces; a decrease of 304 fine ounces.

Copper ore amounting to 783.61 tons, valued at £13,406, was produced, and in the preceding year

948.87 tons, valued at £16,116; a decrease in tonnage of 165.26 tons, and in value of £2,710.

Lead ore to the extent of 62.57 tons, valued at £759, was also reported, and in the preceding year 44 tons, valued at £770; an increase in tonnage of 18.57 tons and decrease in value of £11.

There is no change to report from this field, mining remaining much as hitherto.

WEST KIMBERLEY MAGISTERIAL DISTRICT.

Although a small amount of prospecting was undertaken no finds were reported.

The iron leases at Yampi Sound remained unworked, exemption from labour covenants having been granted.

YALGOO GOLDFIELD.

The output of gold was 5,813 fine ounces, and in the preceding year 8,195 fine ounces; a decrease of 2,382 fine ounces. This is attributed to the closing down of the Standard Mine at Yuin.

A good deal of activity was apparent in the Warriedar District, where several leases were taken up for the working of Molybdenite. The other centres remained practically the same.

YILGARN GOLDFIELD.

The output of gold was 78,245 fine ounces, and in the preceding year 87,994 fine ounces; a decrease of 9,749 fine ounces.

At Westonia the various mines have been steadily producing and the district has been prosperous.

At the various other centres prospecting has been active. The prospects of this field are good.

TABLE 30.

Value of Mining Machinery and Number of Stamps and other Mills erected on the 31st December, 1917, compared with the previous Year.

Goldfield.	District.	Value of Mining Machinery.		Batteries, Number of Stamps.		Mills.															
						1916.								1917.							
		1916.	1917.	1916.	1917.	Prospecting.	Ball.	Griffin.	Huntington.	Puddlers.	Other Crushers.	Flint.	Grinding Pans.	Prospecting.	Ball.	Griffin.	Huntington.	Puddlers.	Other Crushers.	Flint.	Grinding Pans.
		£	£																		
1. Kimberley	... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Pilbara	Marble Bar	9,200	9,651	63	63	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Nullagine	32,025	31,729	28	28	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	1
3. West Pilbara	... ...	3,100	3,000	40	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
4. Ashburton	... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5. Gascoyne	... ...	1,100	1,100	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Peak Hill	... ...	7,963	7,963	40	40	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...
7. East Murchison ...	Lawlers	17,381	18,266	108	108	...	...	...	...	...	1	...	1	...	...	...	...	...	1	...	1
	Wiluna	61,412	58,507	85	85	2	...	...	...	...	3	1	11	1	1	...	...	...	3	5	9
	Black Range	111,234	110,657	140	120	...	1	...	...	...	3	1	10	...	1	...	...	...	1	2	5
	Cue	27,906	32,368	85	85	...	...	...	...	...	1	...	1	...	...	...	...	...	3	...	...
8. Murchison	Meekatharra	149,847	144,542	122	112	...	...	...	...	...	2	2	18	...	...	...	...	...	2	2	17
	Day Dawn	162,300	161,450	65	65	...	...	...	...	...	4	...	12	...	...	...	...	...	4	...	12
	Mt. Magnet	25,733	25,897	50	50	2	...	...	...	1	1	...	2	2	...	...	...	...	1	...	...
9. Yalgoo	... ...	35,320	32,090	73	70	...	...	...	...	...	...	...	9	...	...	...	...	...	...	...	5
10. Mt. Margaret	Mt. Morgans	7,559	14,824	55	75	...	...	...	...	...	...	...	3	...	...	...	...	...	1	...	3
	Mt. Malcolm	231,462	240,334	127	117	...	...	...	...	...	1	3	15	...	...	...	...	...	3	4	13
	Mt. Margaret	49,811	46,287	70	75	...	6	...	...	...	2	...	11	...	6	...	...	...	2	...	8
	Menzies	62,071	58,577	90	105	...	...	...	1	...	3	...	19	...	...	...	1	...	2	...	18
11. North Coolgardie ...	Ularring	11,977	34,245	40	50	...	...	...	1	...	...	...	4	...	...	...	1	...	1	1	2
	Niagara	7,137	6,220	60	50	...	1	...	...	...	...	...	5	...	1	...	...	...	...	...	4
	Yerilla	17,650	5,244	50	30	...	...	...	...	...	2	...	7	...	...	...	...	...	1	1	1
12. Broad Arrow	... ...	64,432	71,075	45	45	...	1	...	3	...	1	...	11	...	1	...	3	...	1	...	10
13. North-East Coolgardie	Kanowna	16,998	16,778	138	138	...	...	...	...	1	3	...	4	...	...	...	...	1	3	...	5
	Kurnalpi	170	150	5	5	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
14. East Coolgardie ...	East Coolgardie ...	1,331,478	1,376,294	545	535	2	43	13	8	2	43	33	169	1	39	13	7	3	40	33	165
	Bulong	9,800	8,000	40	20	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...
15. Coolgardie	Coolgardie	54,841	51,317	249	239	...	...	...	2	...	3	...	10	...	...	...	2	...	2	...	8
	Kunanalling	11,525	8,250	85	65	...	...	...	1	...	2	...	2	...	...	...	1	...	1	...	2
16. Yilgarn	... ...	244,273	227,343	177	197	...	2	...	...	1	2	4	18	...	2	...	...	...	...	4	20
17. Dundas	... ...	30,864	30,493	105	85	...	...	...	...	...	2	...	17	...	...	...	...	...	2	...	20
18. Phillips River	... ...	13,100	12,600	45	45	1	1	...	...	...	1	...	1	2	...	...	...	...	1	...	1
State generally	... ...	30,000	30,000	...	...	...	1	...	...	...	1	...	...	...	1	...	...	...	1	...	...
Total Gold-extracting Machinery		2,839,669	2,875,251	2,826	2,743	8	56	13	16	5	84	44	362	8	52	13	15	4	78	52	332
Total Machinery, other than Gold-extracting ...		323,606	320,631	10	10	...	...	...	2	3	22	...	2	...	...	...	2	1	23	...	...
TOTAL MINING MACHINERY		3,163,275	3,195,882	2,836	2,753	8	56	13	18	8	106	44	364	8	52	13	17	5	101	52	332

PART VIII.—EXISTING LEGISLATION.

At the close of the year the Acts in force relative to mining were:—

1. "The Mining Act, 1904."
2. "Sluicing and Dredging for Gold Act, 1899."
3. "Mines Regulation Act, 1906."
4. "Coal Mines Regulation Act, 1902."
5. "Mining Development Act, 1902."
6. "Mines and Machinery Act, 1911."
7. "Mines Regulation Act Amendment Act, 1915."

The following alterations, etc., regarding regulations were gazetted:—

Under "The Mining Act, 1904"—

An additional Regulation, 196a, relative to records being maintained of all bore holes put down on mining tenements.

An amendment of Regulations 93 and 167.

An additional Regulation 91a as to providing the maximum output where there is more than one workable seam of coal in a lease.

Under "The Mines Regulation Act, 1906"—

An additional General Rule 43 under Regulation 4—Use of intoxicating liquor.

An amendment of General Rule 43.

An additional amendment of Regulation 9, Clause 1, paragraph (c.).

Under "The Coal Mines Regulation Act, 1902"—

An amendment of Regulation 9, paragraph (a.) relating to Coal Mines Accident Relief Fund.

PART IX.—INSPECTION OF MACHINERY.

The Chief Inspector of Machinery reports that the number of useful boilers at the end of the year totalled 3,017, as against 3,026 total for the preceding year, showing a decrease, after all adjustments, of 9 boilers.

Of the total 3,017 useful boilers, 1,705 were out of use at the end of the year; 1,355 thorough and 182 working inspections were made, and 1,367 certificates were issued.

Permanent condemnations totalled 20, and temporary condemnations 49. There were 2 conversions, and 13 boilers were exported.

The total number of machinery plants in use was 5,301, against 4,874 for previous year, showing an increase of 427. Inspections made total 3,366, and 3,366 certificates were granted.

111 applications for engine-drivers' certificates were received and dealt with, and 81 certificates all classes were granted as follows:—

First Class Competency (including certificates issued under Regulation 27 and Section 63 of the Act)	6
Second Class Competency (including certificates issued under Regulation 27 and Section 63 of the Act)	15
Third Class Competency (including certificates issued under Regulation 27 and Section 63 of the Act)	33
Locomotive Competency (including certificates issued under Regulation 27 and Section 63 of the Act)	13
Traction Competency (including certificates issued under Regulation 27 and Section 63 of the Act)	2
Interim Competency (including certificates issued under Regulation 27 and Section 63 of the Act)	4
Copies Competency (including certificates issued under Regulation 27 and Section 63 of the Act)	8
	81

Total mileage travelled was 39,817 miles, of which 16,912 were by rail, 22,896 by road, and 9 by water.

PART X.—SCHOOL OF MINES.

Progress has been well maintained during this, the fourteenth year of the School's existence. The attendance showed an increase over the previous year, and the preparatory classes particularly continue to attract a large number of students, more, in fact, than can be adequately handled with the present staff and accommodation.

Good work was accomplished in all the departments of the School.

In the early part of the year the Associate who held the Robert Falconer Research Scholarship for 1916 handed in his report, which was deemed a very creditable one. Owing to the enlistment of senior students, there was no Research scholar for 1917.

The Senate of the University has notified the School that the question concerning mining and metallurgy courses, which was deferred twelve months ago, has been settled. The School is now in a position to arrange for class work for matriculated students desirous of preparing for the University Examinations in some of the first year Science subjects, and to conduct higher class work in Engineering subjects for fourth year University students, when the occasion arises.

The system of free assays for prospectors has been continued, and a total of 368 assays and determinations was made. The number of assays for gold and silver was the same as in the previous year, but there was a marked increase in the number of assays for other minerals, and in the determination of rocks and mineral samples. Prospectors have shown more interest in substances formerly little sought after, but which, owing to the war, have now an enhanced value.

CONCLUSION.

In dealing with the operations of the various departments, I have only briefly commented on the principal items. Full and detailed information will be found in the reports of the various officers controlling, published as Divisions II. to VII. of this report.

In conclusion, I desire to acknowledge the support received from all officers of the Department during the year. Since the outbreak of hostilities 38 of the staff have enlisted, eight of whom, I regret to say, have lost their lives.

M. J. CALANCHINI,
Acting Under Secretary for Mines.

Department of Mines,
Perth, 30th March, 1918.

DIVISION II.

REPORT OF THE STATE MINING ENGINEER FOR THE YEAR 1917.

The Under Secretary for Mines, Perth.

Office of the State Mining Engineer,
Perth, 31st January, 1918.

Sir,—

I have the honour to forward my Annual Report for the year 1917, for the information of the Hon. the Minister:—

INSPECTION OF MINES UNDER "THE MINES REGULATION ACT, 1906," and "THE COAL MINES REGULATION ACT, 1902."

During the year Mr. Robert McVee, Inspector of Mines for Collie, resigned his position, and Mr. James McVee was appointed in his stead. The position of Ventilation Inspector, Kalgoorlie, was rendered vacant by the regrettable death of Mr. William Hutchinson, and Mr. F. J. Price, late manager of the Westralian Coal Mine, was the successful candidate for the position.

Workmen's Inspectors of Mines.—Owing to Mr. A. L. Kemp enlisting in the A.I.F., his position as Workmen's Inspector for the Leonora District was filled by the appointment of Mr. C. Byfield as from March 27, 1917.

REPORTS OF INSPECTORS OF MINES.

Owing to the necessity to reduce printing expenses, the Annual Reports of the Inspectors of Mines are not this year submitted *in extenso,* but merely by a brief summary of their most important contents.

Report of Mr. W. M. Deeble, Inspector of Mines, Cue.

Murchison, Peak Hill, and Yalgoo Goldfields.

Mining has been seriously retarded by war conditions. Lack of miners prevents the working of low grade propositions, and adds to other conditions that make for high costs.

Peak Hill.—Small shows are being worked with payable results. The copper leases at Ilgarare and Kumerina are turning out high grade ore, and the owners are installing pumping machinery to get below water level. Better communication with markets is very necessary.

Holden's Find.—The Waterloo has crushed nearly 3,000 tons, and a few prospectors are working with fair results.

Meekatharra.—Reduction in output is shown owing to the closing down of two fair producers. The developments on the Gwalia lease will probably make up the deficiency in the coming year.

The Fenian is now down to 1,041 feet, and has up to the present produced £857,740 worth. The Ingliston Consols has intersected the lode carrying paying values at 922ft., and has large reserves of ore. The outlook for 1918 is most promising. The smaller mines, with the exception of perhaps two, have been disappointing.

Gabanintha, Quinn's, and Nannine have been very quiet during the year.

Gum Creek.—Good prospects are showing in the Alma mine, which should prove a payable proposition.

Cullculli.—Nothing sensational has been unearthed, but promising results are shown in various localities.

Cue.—The Light of Asia was the only regular producer, ore of an average value of 1 oz. over the plates being treated. The Big Bell has been hampered by shortage of water and breakdown in machinery. The lode is being cheaply worked by open cut.

Pinnacles.—The Black Range Pinnacles is now under exemption; under ordinary conditions should be a payable proposition.

Tuckabianna.—Fair prospects are being obtained. The taking over by the Government of the Triplicate battery has resulted in 570 tons being treated with good returns.

Day Dawn.—The Great Fingall, which is down to 2,424 feet vertical, treated 52,000 tons, but all development was suspended about the middle of the year owing to shortage of labour.

Lake Austin, Moyagee and Magnet.—Fair results are being obtained, mostly by men working their own shows.

Yalgoo.—Copper, bismuth, and molybdenite have been found, but not payable so far.

Report of Mr. A. W. Winzar, Inspector of Mines, Sandstone.

East Murchison.—Systematic inspection has been carried out. A general drop in the yield is shown by returns. The outlook is not good owing to shortage of labour. A splendid season has been experienced giving abundance of feed and water.

Black Range District.—A good deal of machinery has been installed, and the prospects of good returns from the Black Range West, Nancy's Reward, Black Range Mines, the Havilah, the Comedy King, the United, and the Red, White and Blue seem promising. The Youanmi G.M. has returned 14,591 ozs., the shortage of labour curtailing it somewhat. The bottom levels are opening up well, and widths and values are being maintained.

Barrambie.—A few prospectors are working with encouraging results in some cases.

Wiluna District.—The various mines in this district carried on. The State mill was kept going throughout the year, and various privately owned mills put through fair tonnages with satisfactory results.

Mt. Keith District.—The Miss Deal is crushing good ore, and various other shows in the district keep quite a number of men employed profitably.

Lawlers.—Little change on the aspect of affairs has occurred. A good deal of gold is still being ob-

tained. A copper show is being worked and promises well.

Yalgoo Goldfield.

Warriedar.—The Mugs' Luck is showing a fine body of ore; the Ironclad has obtained 17dwts. per ton from a small vein. Molybdenite shows promise well, but so far only prospecting has been done.

Field's Find and Payne's Find.—Good returns are being obtained from various mines working.

REPORT OF MR. H. P. ROCKETT, INSPECTOR OF MINES, LEONORA.

Mt. Margaret and North Coolgardie Goldfields.

Systematic inspection has been carried out. The dust nuisance has been thoroughly coped with by the use of sprays and other means of applying water.

Leonora Centre.—The Gwalia mine shows a reduced output of 54,669 ozs. owing to shortage of labour. The Leonora Gold Blocks and the Trump returns have not shown results as good as were hoped for. The Ping Pong has given fair returns, and the Rajah continued to produce high grade ore. The King of the Hills has worked intermittently, but is handicapped by water.

Morgans Centre.—The Mount Morgan mine has produced sufficient gold to pay wages while engaged on development work.

Linden.—The mines in this locality give promise of further improved conditions for the coming year.

Yundamindera.—A good deal of prospecting work has been done.

Murrin.—About 3,600 tons of copper ore was produced.

Laverton Centre.—The Lancefield produced 27,400 ozs., and should continue to give good returns. Ida H: Tributing work only has been done, the No. 16 level is expected to give good returns this year. A few shows are working with good prospects.

Burtvile and Duketon.—Developments do not call for special comment.

Kookynie and Niagara Centres.—Very little work is being done.

Menzies.—The Menzies Consolidated continues to produce a good return of gold, and fair quantities have been obtained from the Lady Shenton, the Robinson Crusoe and the Crusoe North. A large number of small shows have given returns during the year.

Comet Vale.—The Sand Queen and the Gladsome have again given satisfactory results. Good parcels of scheelite have been taken from near the Comet Tunnel Lease showing some very rich ore.

Goongarrie.—Very little being done except at the Boddington, which produced 3,396 ozs.

At *Mulwarrie, Mulline, and Ularring* practically nothing is being done.

Davyhurst.—The owner of the old North Pole is giving the mine a good trial, and is confident of success.

Riverina.—The Riverina South mine has been equipped at considerable expense, and much development has been done. A long period of successful operations is confidently anticipated by the owners.

Mt. Ida.—The Forest Belle, the Wild Rose, and the Unexpected continue to give small returns, and a local syndicate is re-opening the Unexpected South, and confidently anticipates striking the lode at 250 feet.

Yerilla and Yarri.—Very little work is being done.

Edjudina.—About half a dozen small shows are being worked, apparently with some success.

REPORT OF MR. J. CRABB, INSPECTOR OF MINES, COOLGARDIE.

Coolgardie, Yilgarn, and Dundas Goldfields.

Coolgardie Goldfield.—Output has not increased. Mining is still dull, although signs of revival are not entirely wanting.

Coolgardie.—There are a few shows working, and in December about 1,800 tons were treated at the State Mill. Prospectors have opened up a promising lode on the Bayleys.

Bonnie Vale.—Very dull; the Lorna, however, gave a fair return.

Carbine.—The Carbine G.M. still continues profitable with good promise for the future. The Never Can Tell, close to the Carbine, has treated 459½ tons of alluvial for 250 ozs. of gold.

Kintore.—A Huntingdon Mill erected here has treated a quantity of alluvial from the old cement leases satisfactorily.

Kunanalling.—The Turn of the Tide and the London are working on some very promising material.

Bonnie Vale.—The Lorna is the only show that has produced satisfactory returns.

Londonderry.—Good, though small returns have been taken from the Cheapside and Royal Standard.

Burbanks.—The Burbanks Ivanhoe produced 266 ozs. from 412 tons of stone.

Gibraltar.—The development work on the Lord George suggests that a plant for treating soft ore is worthy of consideration.

Widgiemooltha and Higginsville.—Very little being done. Trial parcels of scheelite from Higginsville are being tested.

Dundas Goldfield.

The output (from the Mararoa and Viking principally) was about the same as last year. Attention is being given to scheelite on the old Oversight and other old shows, and the tests made give promise of successful results.

Yilgarn Goldfield.

Westonia.—Westonia still continues to produce large quantities of payable stone, and the outlook for a lengthy continuance of this position is decidedly good.

Good development work has been done on the Edna May, the Deep Levels, and the Central. A milling plant has been erected on the Consolidated capable of treating 1,500 tons per month, and this started operations late in the year.

Fair development work has been done on the Greenfinch, Golden Point, and the smaller shows. At the Hill End a rock drill has been installed, and the sinking of the incline shaft resumed.

Forrestania.—A small milling plant has been erected, which will serve in helping test the locality.

Parker's Range.—Several shows in this locality have given promising returns from small parcels. The parties owning the Scots Grey, having located a good supply of water and erected a five-head mill, expect to treat a large amount of 10dwt. ore profitably.

Never Never.—Attention is still being given to several likely shows hereabouts.

Burbidge.—At the Great Victoria, 12,000 tons have been treated at a total cost for mining and milling of 6s. per ton. Consideration is being given to the adoption of a system of stoping to allow of keeping cost of mining at the lowest possible point consistent with safety, and ensure a profit.

Marvel Loch.—Good returns have been secured from various shows in this district.

Southern Cross.—The outlook is much brighter.

Bullfinch and Golden Valley.—The mines in these districts still continue to give fair results.

REPORT OF MR. W. F. GREENARD, INSPECTOR OF MINES, KALGOORLIE.

East Coolgardie, North-East Coolgardie, and Broad Arrow Goldfields.

Systematic inspection has been carried out. Constant attention was given to the improvement of the ventilation. Dust underground has been reduced to a minimum, and in the dry mills considerably reduced. Mining development has been retarded by war conditions. The Great Boulder is now down to 2,800 feet, the Ivanhoe 3,650 feet, and the Golden Horseshoe to 3,200 feet, the lode at that depth in the latter being large and well defined.

The dust from the Horseshoe dump is now suppressed.

The finding of payable values at 200 feet in the Corn Cob at the North end should have an important bearing on future mining in this locality.

REPORT OF MR. S. IRWIN, INSPECTOR OF MINES, KALGOORLIE.

Systematic inspections have been carried out.

Kalgoorlie.—Northern end satisfactory, and profitable work is being done on a large number of leases. Special attention is drawn to the following:—

Star of Aberdare, where a 10-head mill has worked continuously during the year, and 623 feet of driving has been done. The Oroya Links, where 100 tributers are employed, and the mill is kept running at full capacity. The Central Boulder, where a considerable number of tributers are employed profitably. The Associated Northern, also worked by tributers on rich telluride veins, and where highly payable returns are expected for a considerable time to come. The Hidden Secret, Mayman's Consols, the Creswick, Sassella Bros., and Hamilton leases near Williamstown, where a lot of profitable and praiseworthy prospecting has been done. The Hannans Reward, which is treating large bodies of low-grade ore, and is also worked by tributers at the lower levels. The Adelaide Enterprise, which is treating a large quantity of low-grade ore at a profit.

The Corn Cob.—Here a local syndicate has a well defined lode 7ft. wide at 200 feet, showing free gold, which it is hoped will give good results when machinery capable of dealing with the hard nature of the country is obtainable.

Golden Ridge District.—The Golden Ridge mine has been worked by tributers during the year, and a number of other shows in the district, and good prospecting work was done.

Kanowna District.—A number of mines have continued to work here with a good deal of success.

REPORT OF MR. W. PHOENIX, INSPECTOR OF MINES, KALGOORLIE.

Systematic inspection of the mines has been carried out. Endeavours continue to be made to improve and suppress the dust in sulphide mills and underground, close attention being given to water spraying. On the South Kalgurli mine a new ore body is being worked with good results and indicates a more permanent future. Extensive development work has continued in the Horseshoe, Ivanhoe, and Associated, while the Great Boulder has been more confined to stoping. In the Perseverance, operations were mostly confined to withdrawing a large amount of already broken ore, and the company has gone into liquidation. Operations in the other mines at Kalgoorlie have been continued generally much as usual.

Broad Arrow District.—Some excitement has been caused by the discovery of rich gold in the old Dark Horse leases, pointing to the locality deserving systematic attention. Good returns continue to come from prospecting shows near Broad Arrow; in one case £16,000 worth of gold has been obtained.

At *Ora Banda,* work at the Gimlet mine has been confined to development, while at the Victorious little work has been done.

REPORT OF MR. J. MCVEE, INSPECTOR OF MINES, COLLIE.

Five mines were in operation during the year producing coal, viz.:—Proprietary, Co-operative, Cardiff, Westralia, and Premier.

The total amount of coal produced for the year being 325,881 tons valued at £191,288.51 as against 294,525 tons valued at £137,633 for 1916. The average number of men employed being 554.

Of the total output the Government Railways took 190,844 tons large coal, 8,292 tons nuts, and 1,386 tons of small coal; the Government Tramways taking 14,249 tons of small, and making a total of 241,771 tons.

The Scottish Collieries have resumed work by opening a new tunnel, and expect to be producing coal early, and during the year the Co-operative Company have opened up a new mine.

REPORT OF MR. R. C. WILSON, INSPECTOR OF MINES, PERTH.

Northampton.—Increased mining activity is noticable; next year should give greater output of lead. The Narra Tarra and Baddera gave good returns, and show excellent prospects. The Wheal Ellen, Kirton's, Nooka, and Wheal Fortune started with encouraging results. On Kirton's a plant is now in working order.

At Ajana much prospecting has been done; two mines are developing very well.

Greenbushes.—Operations are mostly dredging and sluicing, dredges being in full swing in a number of localities so far as shortage of labour permits.

Smithfield.—Encouraging results obtained, indicating a new payable field.

Phillips River continues to turn out very profitable ore. Parties of tributers obtained good results in the Cattlin, Marion Martin, and Elverdton.

At *Kundip* the Fairplay, the Gem Consolidated, and Harbour View mines have good returns. Development was begun on the Flag.

Pilbara and West Pilbara Fields.—During the year little mining work has been done.

Kendinup.—Some good graphite has been exposed, but very little work is going on.

Systematic inspection has been carried out, including the various quarries in the Swan District and Roelands.

REPORT OF MR. C. H. BIRCHER, ELECTRICAL ADVISER TO THE MINES DEPARTMENT.

Electrical Plant.—Mr. C. H. Bircher, Electrical Adviser to the Mines Department, visited and ex-

amined all the principal electric plants on the metalliferous mines and collieries of the State during 1917, giving reports showing general good condition of the installations.

MINING ACCIDENTS.

The mining accidents for the year 1917 are tabulated in Tables 26, 27, 28, and 29, with the previous year's totals for comparison, and forwarded herewith for inclusion in your Annual Report, together with diagram of the fatal accidents year by year, and their causes.

The following statement shows the total number of fatal accidents recorded as having happened on mines, whether to persons employed on the mines or not, for the last five years:—

——	1913.	1914.	1915.	1916.	1917.
Total fatal accidents on mines reported	26	26	36	23	21
Less accidents to persons not engaged in mining, deaths in mines due to natural causes, and accidents to persons which were not due to their occupation as miners	...	...	2	1	...
Fatal accidents to men engaged in mining	26	26	34	22	21
Total men engaged in mining (average)	14,780	13,174	12,253	10,903	10,041
Accident death rate per 1,000 men engaged in mining ...	1·76	1·97	2·77	1·93	2·09

Table 26 classifies the accidents according to causes, from which it will be noted that during 1917 21 persons were killed and 840 seriously injured, as compared with 22 persons killed and 847 seriously injured during the previous year.

The diagram shows graphically the totals of fatal accidents year by year since 1891.

Table 27 shows the death rate per 1,000 persons employed on surface and underground in gold, coal, and other mines, the general average rate for 1917 being 2.09, as against 1.93 for 1916. The rates per 1,000 are based upon the figures in table No. 21 (Annual Report, Secretary for Mines, 1917), which shows a grand total for 1917 of 10,041 men employed at mines above and under ground, inclusive of alluvial workers.

Table 28 gives the average number of men employed above and under ground at quarries, and the death rate per 1,000 persons employed therein. The total number of men employed during 1916 was 173, as against 221 for 1917, and the death rate for 1916 was 5.78, as against *nil* for 1917. The number of men employed is too small to give a reliable rate per 1,000 unless the figures are taken over a number of years.

Table 29 summarises all the fatal accidents for 1917 above and below ground in gold mines only, with rates per 1,000 men employed, and per 1,000 tons of ore raised, similar figures for 1916 being given for comparison. The number of men on which these rates are based is taken from Table 23 (Annual Report, Secretary for Mines, 1917), and does not include alluvial workers.

In the following table all fatal and serious accidents reported to this office during 1917 are classified according to the gold or mineral field in which they occurred, and also according to causes, the totals from each cause for 1916 being shown for comparison.

——	Explosives.		Falls of Ground.		In shafts.		Miscellaneous Underground.		Surface.		Machinery.		Total.	
	F.	S.	F.	S.	F.	S.	F.	S.	F.	S.	F.	S.	F.	S.
1. E. Coolgardie ...	...	4	7	48	1	13	2	291	1	122	1	18	12	496
2. Mt. Margaret ...	...	1	...	7	...	5	...	52	1	25	1	8	2	98
3. Murchison ...	...	...	1	5	1	1	...	41	...	13	1	...	3	60
4. E. Murchison ...	...	...	...	2	...	...	...	7	...	9	...	2	...	20
5. Coolgardie ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6. Yilgarn	...	1	1	2	...	...	...	3	...	...	...	1	1	7
7. N. Coolgardie ...	...	...	1	2	...	1	1	7	...	2	...	1	2	13
8. N.E. Coolgardie	...	...	...	...	...	1	...	...	...	...	...	1	...	2
9. Broad Arrow ...	...	...	...	...	...	1	1	...	...	...	...	...	1	1
10. Dundas	...	...	...	...	...	...	...	2	...	...	...	...	...	2
11. Pilbara	...	...	...	...	...	...	...	...	...	1	...	...	...	1
12. Peak Hill ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13. Yalgoo ...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
14. Phillips River ...	...	...	...	...	...	2	...	...	...	5	...	...	...	7
15. Collie	...	...	...	24	...	...	...	81	...	16	...	...	...	121
16. Greenbushes ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
17. Northampton ...	...	1	...	1	...	...	...	2	...	...	...	...	...	4
18. W. Pilbara ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
19. Swan	...	...	...	1	...	...	...	...	...	...	...	...	...	1
20. Ashburton ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
21. Roelands ...	...	...	...	1	...	...	...	2	...	3	...	...	...	6
22. Kendinup ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total for 1917 ...	...	7	10	93	2	25	4	488	2	196	3	31	21	840
Total for 1916	...	15	11	91	2	25	6	500	1	195	3	21	23	847

FATAL ACCIDENTS.

The following are notes upon the various fatal accidents reported to this office during 1917:—

In Shafts.

An accident occurred at the Sons of Gwalia G.M., Mt. Margaret Goldfield, involving the death of one man and injury to another. The two men were riding on the bridle of the skip. They signalled to be hoisted to surface, but the cage descended instead. The engine-driver then noticing he had neglected to adjust the reversing lever put the brake on hard and stopped the falling skip with a jerk, causing both men to lose their hold. Deceased fell backwards into the skip and sustained fatal injuries. The Coroner's jury found that he came to his death through a skip accident due to the driver of the engine lowering the skip instead of hoisting it in accordance with the signal given. Proceedings were instituted against the engine-driver for manslaughter, but he was acquitted. It was the engine-driver's first shift on this particular engine, and the regular driver was standing with him while he operated it. (764/17.)

At the Associated G.M., East Coolgardie Goldfield, a man met his death while being lowered to the 500ft. level. The cage went down a little too low and deceased gave the signal to hoist again, but instead of a slow ring he snatched at the rope and tugged sharply, thereby giving the usual signal to pull to surface. The engine-driver started to hoist to surface, thinking the men were done with the cage, and deceased, who had started to step out, was caught under the cap of the opening set. The cage stopped six to 10 feet above the top of the plat. The Coroner's jury returned a verdict of accidental death. (3046/17.)

Falls of Ground.

An accident, causing fatal injuries to one man and serious injuries to another, occurred at the Kalgurli G.M., East Coolgardie Goldfield. At the time of the accident the men were working in the north stope at the 100ft. level, when a block of ground, weighing four or five tons, came away from the east wall and from round a "pigsty" or stack of timber. Every care appears to have been taken to ensure the safety of the men working in the stope, which was low and remarkably well timbered. At the Coroner's inquest the jury found that deceased came to his death by a fall of ground at the No. 1 north stope, the result of a pure accident. (1187/17.)

At the Redleap G.M., North Coolgardie Goldfield, a prospector received fatal injuries through being buried by a fall of ground in a stope. At the Coroner's inquest the jury brought in a verdict of accidental death with no blame attachable to anyone. Deceased and his mate had examined the ground before the former went to work, and considered it to be safe. (815/17.)

While three men were engaged in barring down loose ground after firing at the Ingliston Consols G.M., Murchison Goldfield, a large piece of rock fell and killed one of them. At the time of the accident deceased was testing the ground with his bar when it came away suddenly. The Coroner's jury returned a verdict of accidental death with no blame to anyone. (1906/17.)

At the Great Boulder Proprietary G.M., East Coolgardie Goldfield, a man was killed through a rock pillar extending from the 1,600ft. level to the 2,200ft. level being suddenly ruptured, most probably owing to an earth movement of the nature of a small earthquake shock. Deceased was at the foot of a ladder in a winze through which a lot of stone fell from the level above, and was caught by the falling rock and killed. Several other men received slight injuries. The Coroner's jury returned a verdict of death by a fall of ground caused by a snap in the country rock and that the accident was unavoidable. The case was very fully inquired into by the Coroner. (2154/17.)

Two men were killed at the Golden Horseshoe G.M., East Coolgardie Goldfield, through a large piece of ground falling from the back of the stope to which they and a third man, who was not hurt, had returned in order to bar down the loose ground after firing. The stope was well secured and filled to within four feet of the back, and all reasonable care seems to have been taken. The barring down of loose ground after firing is a necessity of mining. The Coroner's jury returned a verdict of accidental death. (2902/17.)

At the Golden Horseshoe G.M., East Coolgardie Goldfield, a man was killed through a quantity of rock falling on him from the back of the stope. He was timbering up at the time. The witnesses considered the place was safe until the accident proved the contrary. The Coroner's jury brought in a verdict of accidental death. (3063/17.)

An accident, causing the death of two men, occurred at the Great Boulder Proprietary G.M., East Coolgardie Goldfield. The deceased were employed shovelling when a heavy fall of ground occurred, killing one man and inflicting fatal injuries on the other. The piece of ground that fell had a soapy head at the back which could not be seen before the fall. Every precaution seems to have been taken to make the place safe to work under. It had been secured by a spreader eight inches in diameter, and examined by several competent persons. The Coroner's jury returned a verdict of accidental death. (3064/17.)

A heavy fall of ground occurred at the Edna May Consolidated G.M., Yilgarn Goldfield, causing the death of one man working under it. The Coroner's jury found that death was due to accident with no blame attributable to any person. The Inspector of Mines, however, considered that the place had been inadequately secured and proceedings were taken by him against the manager, who was fined (see list of Prosecutions). (3183/17.)

Miscellaneous Underground.

A fatal accident occurred at the South Kalgurli G.M., East Coolgardie Goldfield, from a man falling off the bucket used in sinking a winze. After shots had been fired in the winze deceased descended to spray it out, then returned to the top. He went down again and began shovelling, and later signalled the driver to hoist the bucket. When about halfway up the driver heard deceased call out, "Pull quick, I'm going off," up to this time he thought he was pulling dirt only. He then saw that the man was hanging on to the bucket by his hands. One of the men started down the ladder, but when within about two feet of him deceased fell and received fatal injuries. The men supposed he had been overcome by fumes from the shot-down rock, but it is not at all proved that this was so. The Coroner's

jury brought in a verdict of accidental death from being overcome by fumes, with no blame to anybody. (1363/17.)

At the Gimlet G.M., Broad Arrow Goldfield, a truck was being hoisted up an inclined track from an underhand stope when the rope broke, and the truck ran back on to a man underneath, killing him. The Coroner's jury returned a verdict of accidental death due to breakage of hauling rope, the said break being due to the faulty manner of attachment to truck, deceased being contributorily negligent in not carrying out the instructions of the management to stand clear while trucks are being hoisted. A circular has been sent to all Inspectors of Mines to pay particular attention to the condition of all ropes used under ground, and particularly to their attachments to skips, etc. (1480/17.)

A man was smothered by a run of sand at the Sand Queen G.M., North Coolgardie Goldfield. From evidence adduced at the Coroner's inquest it would appear that deceased was engaged shovelling sand, and to make it fall more easily he most probably undercut the sand, thus causing it to run in upon him. A verdict of accidental death was returned by the Coroner's jury. (2736/17.)

A fatal accident at the Ivanhoe G.M., East Coolgardie Goldfield, was brought about by the rash action of deceased in trying to get from the No. 10 to the No. 12 level by way of the sandpass, notwithstanding that warning notices were posted at the pass that sand was running. He was caught by a rush of sand and smothered. The Coroner's jury found that deceased came to his death by suffocation due to falling down a sand pass, and that no blame attached to anyone. (3062/17.)

Surface (including Machinery).

At the Commodore G.M., Murchison Goldfield, a man wearing a loose overcoat was standing near the shafting of the agitating plant after assisting to replace a belt, when the coat was suddenly caught by the revolving shaft and the man drawn in and whirled round the shaft. The accident was due to the dangerous practice of wearing loose clothing while in close proximity to revolving machinery. It is supposed that the loose coat was blown by a puff of wind against the shafting. The Coroner's jury returned a verdict of accidental death, with no blame attachable to any person or persons. (243/17.)

At the Golden Horseshoe G.M., East Coolgardie Goldfield, a man met his death in the mill through his coat being caught by revolving shafting, which carried him round with it. He was working at putting on a belt. The Coroner's jury returned a verdict of accidental death. The deceased was considered to be a skilful and experienced beltman, and the place was thought to be properly protected. (1339/17.)

A fatal accident occurred at the Great Fingall G.M., Murchison Goldfield, to a lad employed shovelling sand into a chute. The first intimation of the accident was the finding of the body buried in the sand when the chute was being cleared. From its position it would seem that deceased had either fallen into the chute or been swept into it by a rush of sand whilst he was working near the top of it. The Coroner's jury brought in a verdict of death by being accidentally smothered, with no blame attachable to anyone, and added the following rider, "That more precautions be taken in future to guard against a similar occurrence." After consideration of the evidence and reports upon this accident, it does not appear that any special precautions could be laid down in such a case, as only care on the part of the worker himself can prevent such occurrences. (2050/17.)

At the Lancefield G.M., Mt. Margaret Goldfield, a man was killed in the fitting shop through an emery wheel bursting and a portion of it striking him in the chest causing instant death. A nut which he was grinding most likely got jammed between the tool-rest and the wheel. The Coroner's jury returned a verdict of accidental death, with no blame to anyone. (2825/17.)

A fatal accident occurred at the Great Boulder Proprietary G.M., East Coolgardie Goldfield, in the engine-room. At the time of the accident the man was standing with one foot on the stairway and the other on the condenser when he suddenly fell on to the concrete floor, a distance of 12ft. 6in. The reason of his falling can only be surmised. The Coroner's jury returned a verdict of accidental death with no blame attachable to anyone, and found that all necessary precautions had been taken. (3047/17.)

Serious Accidents.

Under Section 26 of "The Mines Regulation Act, 1906," all accidents which incapacitate the sufferer from performing his ordinary duties for a period of 14 days or more are classified as "serious."

Of the 840 "serious" accidents during 1917, 496 were recorded from the East Coolgardie Goldfield, but only 42 cases out of the number were breakages of the larger bones, permanent injury to limbs, or injuries likely to have lasting disabling effects. The balance were injuries of a less serious nature, such as bruises, cuts, broken and crushed fingers and toes, scalds, burns, poisoned cuts, shocks, smaller dislocations, strains, wrenches, jars, etc., but sufficiently serious to require the injured person to be absent from his work for 14 days or more.

Explosions and Explosives.

During 1917 there were seven men seriously injured through explosions. In one instance the injuries were received from being struck by flying stones from shot-firing; in two through explosions resulting from men boring into old holes, and four through detonators exploding while being handled.

Falls of Ground.

Falls of ground accounted for 93 serious accidents during 1917. In 14 cases the injuries were received while the men were engaged in the dangerous but necessary work of pulling down loose ground after firing. The majority of these cases were of a purely accidental nature inseparable from mining and unpreventable, but in a few cases the Inspectors of Mines had to report that the accidents were due to want of ordinary care on the part of the workmen themselves.

In Shafts.

During 1917 the number of serious accidents to men classified as "In Shafts" amounted to 25. In 10 cases the injuries were received through objects falling down shafts, such as buckets, stones, timber.

and a drill; in one from being caught between the skip and the shaft; in three through accidents to cages and skips whilst men were riding on them; in two through falling off ladders. One man was hurt by being struck by a winch handle rebounding; two fell down the shaft, and two fell from stages. Two accidents were through men slipping, and one from a man being struck by the knocker line, while one man received a scratched finger, which became poisoned.

Miscellaneous Underground.

488 men received serious injuries classified as miscellaneous underground. In 135 cases the injuries were received while handling and loading skips and trucks, through fingers and bodies being jammed against chutes and other trucks, toes and feet run over, bodies struck by upsetting of trucks, men slipping and straining themselves while trucking, or lifting derailed trucks or material into trucks, and so on, the injuries being mostly wrenches, sprains, bruises, jars, fractures of fingers and toes, and cuts. In 87 cases the injuries were caused through falling and rolling loose rocks and stones, such as runs of ore and mullock, while shovelling, or stones running down rills and ore chutes, and 28 men received severe cuts and bruises while handling sharp stones. 48 men were injured handling rock drills and coal-cutting machines, and parts of same, and nine by the stages on which machines were erected collapsing. Other falls in the workings from stages and ladders in rills and passes, and so on, caused injury to 56 persons, and 38 were hurt by falling tools and pieces of machinery. Flying splinters of stone and steel were responsible for 26 men being injured, and 10 were hurt while handling timber, while 10 men were injured through falling down ore passes. The remaining 41 cases were due to various accidental causes—jarring of hands and feet, blows from tools, strains, burns, and so on.

Surface (including Machinery).

Under the above classification 227 men were seriously injured during 1917. Ten men were burnt in various ways, 29 sustained injuries from falls in the course of their work; 25 were hurt by trucks and skips, by being jammed or struck by them, by them capsizing, or by the men sustaining strains while working them. Flying splinters injured four men, and two got their hands jarred. Falls of timber and pieces of machinery while being handled accounted for 12 cases of injury; 53 cases were caused by machinery in motion, 13 of these being caused by handling belts in motion. 53 men were hurt while handling timber, seven were struck by stones, and six men received injuries through falling from stages and ladders. One man had his foot run over by a dray, while another man's hand became poisoned through handling cyanide solution. Other causes of 24 accidents were strains from lifting heavy weights, tools slipping and inflicting cuts and bruises, and so on.

WINDING MACHINERY ACCIDENTS.

(without serious injury to persons).

Regulation 11, Mines Regulation Act, 1906.

Brief particulars are given hereunder of accidents which happened to winding machinery during 1917.

Overwinding.

At the Fenian G.M., Murchison Goldfield, an engine-driver overwound the cage through neglecting to reverse the engine after hauling; no damage was done except to the rope, which had to be cut and reshod. (839/17.)

A similar accident to above occurred at the Ingliston Consols, Murchison Goldfield, the cage being wound up to the wheel through neglect to reverse the engine. No damage. (1487/17.)

An engine-driver at the Great Fingall G.M., Murchison Goldfield, internal shaft left his lever on the wrong side, thus causing the engine to overwind; no damage resulted. (2897/17.)

At the Baddera Mine, Northampton Mineral Field, an overwind occurred through the engine-driver inadvertently pulling the cage to the top of the poppet heads. The safety hook acted well and no damage resulted. (1179/17.)

At the Menzies Consolidated G.M., North Coolgardie Goldfield, an engine-driver overwound both cages, the north one striking the head sheave. No damage resulted. The matter was dealt with by the Board of Examiners for Engine-drivers, who restricted the engine-driver to driving geared winding engines only. (2694/17.)

At the Sons of Gwalia, Mt. Margaret Goldfield, an engine-driver overwound the skip through failing to note the mark on the indicator. No damage resulted. (542/18.)

At the internal shaft of the Great Fingall G.M., Murchison Goldfield, the engine was overwound through the key holding the chain wheel of indicator coming out and causing the indicator to register incorrectly. The bearers and gin wheel were broken. The Inspectors of Mines and Machinery agreed that more clearance was necessary between the tipping position of the skip and the sheave. (2832/17.)

At the Golden Horseshoe G.M., East Coolgardie Goldfield, the safety hook sheared in the ring and released the rope, which fell to the surface. The grips acted and no other damage resulted. (335/17.)

Accidents to Skips and Cages in Shafts.

At the Great Fingall G.M., Murchison Goldfield, the skip came off the rails in the inclined shaft through a stone falling out of the skip. Some damage was caused to the skip, shaft runners and rails. (2831/17.)

In the same mine, while a full skip was being hauled to top of the internal shaft the drum shaft broke and considerable damage was done to the shaft timbers. On examination of the drum shaft it showed flaws, and was replaced by a new one. (8/18.)

At the Ingliston Consols Extended G.M., Meekatharra, the cage got out of control of the engine-driver while changing gear, owing to failure of the brake to hold the load and the bearers being removed. The engine-house was wrecked, the lagging of the drum torn away, and the head gear top frame damaged. The braceman was hit by the rope and received a nasty wound. Pillar brakes were put on after the accident. (3159/17.)

An accident occurred at the main shaft of the Great Boulder Perseverance G.M., East Coolgardie Goldfield. While a full skip was ascending it left the guides and caught in the side of the shaft. The

safety hook was broken and the side wall plates and centres damaged. (3013/17.)

At the Lake View G.M., East Coolgardie Goldfield, while the loaded skip was being raised the nut attached to the king bolt became detached, thus releasing the skip from the rope and precipitating it to the bottom of the shaft, the safety catches failing to act. (2812/17.)

At the Sons of Gwalia G.M., Mt. Margaret Goldfield, there were 11 cases of derailment of skips, one from the skip bumping over a stone on the road, and in another case the skip was lowered on to the penthouse. Inquiry was made into these accidents by the Inspector of Mines, who considered they were caused through excessive speed in driving, and the management was instructed to limit the speed. (539/18, 540/18, 541/18, 543/18, 544/18, 545/18, 547/18, 548/18, 549/18, 550/18, 551/18, 552/18.)

Miscellaneous Accidents.

While hoisting a full cage at the main shaft of the Gwalia G.M., Murchison Goldfield, the loose and fast drum pin worked out. No damage resulted. After the accident the pin was clamped in. (163/18.)

PROSECUTIONS FOR BREACHES OF THE MINES REGULATION ACTS AND REGULATIONS.

During the year under review proceedings were taken against 10 men for breaches of the Act and Regulations.

The following are brief particulars of each case:—

Section 32, *General Rules* 22 *and* 31.

The manager and roper of a mine were proceeded against for neglecting to test skips in accordance with the Act, a skip having fallen through the safety catches failing to act. The case against the roper was dismissed without costs, and that against the manager was thereupon withdrawn. The cases failed owing to insufficient proof of negligence. (2812/17.)

Section 32, (3) (*g*).

A manager was fined £3 and 4s. costs for failure to enforce the provisions of above section, a man being found by the Inspector of Mines with a packet and some loose plugs of explosives in an open case in the level. On appealing to the manager for a proper canister none were to be found. (824/17.)

Section 57.

A miner having placed some packets of dynamite in a truck with the intention of taking them to the magazine forgot all about them and filled his truck with ore, and was only reminded of his negligence on an explosion occurring when the contents of the truck were being tipped into the bin. He was fined £1 with costs. (2214/17.)

For neglecting to give proper warning before firing shots, a miner was proceeded against and fined £4, with costs £1 5s. The man pleaded guilty. (1066/17.)

Regulation 52.

An owner of a mine was proceeded against for neglecting, after being called upon to do so by the Inspector of Mines, to provide covering for a shaft on his lease, near a main road, thereby endangering the public safety. He was fined 5s. and costs, the Resident Magistrate taking into consideration the fact of the shaft having been covered before the summons was served. (4863/95.)

Section 32, *General Rules, Section* 1, *Sub-section* (*c*).

The manager of a mine was fined £1 and 11s. costs for contravention of the General Rules under the Mines Regulation Act, in neglecting to improve the ventilation of the mine after being required to do so by the Inspector of Mines. (76/17.)

General Rule 32 (3) (*u*).

In November, 1916, a miner was proceeded against for neglecting to give warning before firing, thereby causing serious injury to another man. The injured man being unable to appear the case was adjourned and came on for hearing again in April, 1917. At the re-hearing the solicitor for the defence claimed that the adjournment was *ultra vires* as he was not in Court when the adjournment was granted, and the Resident Magistrate upholding him the case was struck out. The costs to the Department amounted to 26s. 8d., being witnesses' fees. (2848/16.)

Section 50.

Information was laid against a miner for contravention of the Mines Regulation Act for working in a dangerous place, but up to the end of the year the police were unable to locate the man and serve the summons. (3037/17.)

Section 64 *Coal Mines Regulation Act,* 1902.

Special Rule No. 15, *Proprietary Colliery.*

Two men were proceeded against for neglecting to comply with Special Rule No. 15 in regard to securing skips while being loaded. The Magistrate dismissed the case owing to there being insufficient proof that the men had charge of the particular skip said to have been left unsecured. (1565/17.)

EXEMPTIONS FROM SECTION 31.

Under Sub-section 4 *of "The Mines Regulation Act,* 1906."

Twenty-one persons were granted Exemption Permits during 1917. Before such permits were granted the Inspector of Mines for the Districts examined the applicants on the machinery for which the permit was required, and were satisfied that they were capable of handling it. One condition of these exemptions is that no renewals will be granted unless the holder presents himself for examination for at least a Third Class Engine-driver's Certificate, and lowering or raising of men is strictly forbidden.

SUNDAY LABOUR IN MINES.

Forty-one Sunday Labour Permits were issued to various mines during 1917 in order to enable the ordinary work of the mine to be carried on without interruption during the week days. Several of these permits were necessitated by the shortage of men owing to the war, while others were for erection of ore bin, mullocking to secure the stopes, stope filling, cleaning the mine, road making and cleaning, timbering the workings, cleaning tunnel, splicing electric cables, and laying new flats, etc.

AMENDMENTS AND ADDITIONS DURING 1917 TO THE REGULATIONS UNDER "THE MINES REGULATION ACT, 1906," "THE MINES REGULATION AMENDMENT ACT, 1915," "THE COAL MINES REGULATION ACT, 1902," "THE COAL MINES REGULATION ACT, 1915," AND "THE MINING DEVELOPMENT ACT, 1902."

M.R. Act, 1906, *Regulation* 4, *New General Rule No.* 42.

Relating to use of intoxicating liquors in or on mines. Gazetted 26/1/17. (2908/16.)

Amendment of above rule from No. 42 to No. 43. Gazetted 20/7/17. (2908/16.)

Section 32, *General Rule* 43.

Amendment of rule relating to the breaking strain of winding ropes. Gazetted 22/8/17. (1655/17.)

Mining Development Act, 1902.

Extension for twelve months of Subsidies for the Production of Mica. Gazetted 17/1/17. (3871/08.)

Development of Mining.

Bonus for the production of Graphite. Gazetted 30/5/17. (3871/08.)

COAL MINES REGULATION ACT, 1902.

Accident Relief Fund.

Amendment of Regulation 9, paragraph A, relating to giving notice of the nature and cause of accidents. Gazetted 3/10/17. (984/15.)

SPECIAL RULES FOR THE USE OF ELECTRICITY IN COAL MINES.

Early in the year notice was given to the various mine owners that certain parts of the Special Rules as fixed by the arbitrators were *ultra vires*, and that it was the intention of the Minister to move in the Supreme Court for these parts to be set aside. Several conferences have been held through the year to arrive at agreement of all parties concerned on a satisfactory set of electrical rules, and good progress has been made, but the matter was still uncompleted at the end of the year. The latest draft follows the rules in force in Great Britain very closely.

PHILLIPS RIVER SMELTING WORKS.

Report of the Manager, Mr. Richard Shepherd, dated 30th June, 1918:—

"I have the honour to submit the following report on the State Smelter at Ravensthorpe, and the working results for the year 1917.

"In accordance with previous custom the year's work was divided into two smelting campaigns, the fifth and sixth, since the commencement of smelting under departmental control in 1914.

"The combined results of the two campaigns, representing the year's work, were as follows, those for 1916 being given in brackets for purposes of comparison:—

	1917.	1916.
Total Ore and Concentrates smelted	7,420 tons	(6,769 tons).
Pure copper in blister sent to Refinery	486·34 „	(475·64 „)
Gold recovered from blister ...	4,656·22 ozs.	(5,376·8 ozs.).
Silver recovered from blister	4,894 ozs.	(4,543 „).

"From the above it will be seen that the 1917 figures show a slight, but definite, improvement on those of the previous year, except the gold recoveries, which were inflated for 1916 by the purchase of an exceptionally rich parcel at the end of the year.

"The metal recoveries per ton of ore for the two years were:—

	1917.	1916.
Copper	6·49 %	(7·02 %).
Silver	13·06 dwts.	(13·42 dwts.).
Gold	12·43 „	(15·88 „)

"The increase in tonnage and corresponding slight fall in assay values were due to the fact that careful picking to a higher grade is not so necessary, with treatment on the field and high metal prices, as for shipment to customs works in the Eastern States.

"Owing to the substantital increase in the costs of coke and freights and the rise in local wages, together with the continued fall in the price paid by the British Munitions Department for refined copper, the financial results of the year's work are not so good as formerly.

	1917. £ s. d.	1916. £ s. d.
Gross value of metals sold ...	74,772 5 5	(81,714 6 3).
Cost of treatment, realisation and interest	49,050 15 2	(45,665 7 6).
Advances against ore and final payments	25,721 10 3	(36,048 18 9).

"The reduction in the net proceeds paid to ore sellers during the year, compared with that for 1916 and amounting to £10,327 8s. 6d., was largely due to the fall in the price of copper; the price for the output for the first half of 1916 being some £22 15s. per ton higher than that obtainable at the close of 1917.

"The concentrating mill was closed down early in the year after having put through all the accumulated dumps of low-grade copper ore suitable for water concentration.

"Summarising the figures for the four years' work under departmental control the results were as follows:—

Ore and Concentrates smelted	27,071 tons.
Copper recovered in blister	1,912·5 tons.
Silver	17,405 ozs.
Gold	18,152 „
Cost of treatment and total realisation charges	£165,843 4 10
Net proceeds returned to ore sellers ...	£126,301 9 4
Gross value of copper, silver, and gold sold	£292,144 14 2

"The metals recovered averaged 7.04 per cent. of copper, 12.82dwts silver, and 13.37dwts. of gold, of a gross value of £10 15s. 3d. per ton of ore treated.

Of this, 43.23 per cent., equal to £4 13s. 1d. per ton of ore, was paid to the ore sellers in advances, at time of delivery at the Smelter, and as dividends on the final realisation.

"Though numerous and exceptionally rich, the ore lenses of the field are generally small and irregularly distributed in the various lode channels, both at Ravensthorpe and Kundip. The enclosing lode formation is usually too low grade to be worth breaking, even for concentration. For this reason the mill is not so valuable an adjunct to the Smelter as on most fields. All the ore so far treated has been won from quite shallow workings; the deepest, with the exception of the Elverdton and Mt. Cattlin Mines, being 300 feet, and 75 per cent. of the tonnage mined has been from above the water level. The mechanical equipment of the larger mines is not well

suited to the class of mining necessary, and all the smaller claims are destitute of plant, the ore being broken and raised by hand labour only.

"Under the circumstances the results have been remarkably successful. But it will be necessary to equip the various claims with light portable winding, pumping, and air compressing plants of good modern type if mining and smelting are to continue profitable while the known lenses are followed down from 100 feet to 300 feet, and for the cheaper and more expeditious development of those places along the line of ore channel which have not so far been worked. As far as yet ascertained the assay values of the ore lenses are being well maintained below the water level, and the chemical composition of the ores makes for cheaper smelting in the blast furnace than the oxidised bodies nearer the surface."

ADVANCES ON ORES.

The scheme of making advances on marketable ores sent to the Department for realisation has been continued throughout 1917 with a great measure of success, the advances enabling prospectors to carry on until the final payments came in from the sale of the ore. After having put them into the way of marketing their ores, it has been the policy of the Department to encourage the producers to deal directly with the Smelting Works themselves, and many who are sending in ore regularly now do so instead of through the Department. Most of the lead ores from the Northampton district therefore now go directly to the Fremantle Smelter.

Numerous inquiries are constantly made by prospectors about market values of various minerals, and many samples of these have been sent in to obtain information upon them, which has been given as far as possible.

Twenty-four parcels of copper ore, aggregating 200 tons 0cwt. 1qr. 27lbs. net dry weight have been completely realised upon for prospectors during 1917, on which advances have been made amounting to £3,403, and final balances paid to the owners of £1,893 10s. 7d. The expenses paid by the Department were £294 5s. 6d., making the total net value of the ore £5,590 16s. 1d., as per buyers' returns. This is an average of nearly £28 per ton.

There were also, however, 24 other parcels of copper ore dealt with, aggregating 204 tons 18cwt. 1qr. 12lbs. net dry weight, of which the final settlement figures are not yet available. On these advances have been made of £2,536, and expenses have been paid amounting to £306 6s. 7d.

Twenty-one parcels of lead ore, weighing 218 tons 9cwt. 0qr. 23lbs. net dry weight, have been handled on which advances were made of £1,163 10s. 10d. Expenses paid, £48 16s. 11d., and final payments made of £1,272 4s. 5d., making a total value received from the Smelters of £2,486 12s. 2d.

Three parcels of antimony ore were sold, equal to 18 tons 11cwt. 2qr. 7lbs. net dry weight, on which advances were made of £111 16s. 10d., expenses paid, £31 15s., and final payments made (on two parcels only, the third being still unfinalised) of £323 17s.

One lot of molybdenite ore, 4½ tons in weight, realised £9 0s. 1d., paid for expenses and £42 0s. 2d. paid to the owners, equal to total net value from the Treatment Works of £51 0s. 3d.

The total value of sales of ores through the Mines Department for 1917, will be found to have been in the neighbourhood of £12,000 when all figures have been completed.

LOANS AND SUBSIDIES UNDER THE MINING DEVELOPMENT ACT AND MINING DEVELOPMENT VOTE.

The usual appendix giving particulars of each of the transactions under the above heading has been omitted on this occasion owing to the necessity to economise in printing. The usual tables, however, showing the transactions in tabulated form are appended.

I have, etc.,
A. MONTGOMERY,
State Mining Engineer.

APPENDIX I.

SUMMARY OF EXPENDITURE FROM MINING DEVELOPMENT VOTE FROM 1ST JANUARY, 1917, TO 31ST DECEMBER, 1917.

Mine or Owner.	Mining Centre.	Amount.	Total.
		£ s. d.	£ s. d.
Advances in Aid of Mining Work and Equipment.			
Flag Gold Mine	Ravensthorpe	2,089 2 8	
A. and S. Polson	Yilgarn	200 0 0	
P. W. Neville	Mt. Magnet	330 0 0	
E. Taylor	Menzies	600 0 0	
Nooka Lead Mining Company, N.L.	Northampton	500 0 0	
Golden Spinifex Syndicate	Kalgoorlie	162 15 0	
J. Currie (Yellow Aster Mine)	Lawlers	500 11 0	
Bulletin Mine—T. R. Byass	Marble Bar	255 17 7	
J. McCarthy—Pyx Gold Mine	do.	515 12 2	
Perron and Party—Carpathia G.M.	Menzies	95 0 6	
Colreavy and Party	Forestonia	79 0 0	
Outridge and Hunter	Coolgardie	20 0 0	
Butcher Bird Gold Mine	Yilgarn	17 10 0	
		5,365 8 11	
Less Repayments credited to Vote.	£ s. d.		
Waterloo	Meekatharra 250 6 6		
McHugh	Lawlers 42 9 6		
Flag Gold Mine	Ravensthorpe 0 15 0		
		293 11 0	
			5,071 17 11
Miscellaneous Expenditure.			
Lease of Marda Tank		165 0 0	
Robates *re* Water Supply		61 12 2	
Preliminary Investigations—Sampling Mines		326 18 10	
			553 11 0
Boring.			
Mt. McMahon			128 18 2
Providing Transport for Prospectors.			
Purchase of Horses, Camels, etc.			136 15 5
Subsidies Development Work.			
Bennet, E. A.	Coolgardie		13 7 9
Subsidies to Batteries—Crushing for the Public.			
Patterson, W. A.	832¾ tons Parker's Range	83 5 6	
Santa Claus G.M. Co.	26 „ Randalls	1 19 0	
Garland, J. P.	3,120 „ Holden's Find	535 15 0	
Trude, F. B.	77 „ Ruby Well	7 14 0	
Branson, H.	54 „ Lawlers	5 8 0	
Lang, S. C.	1,079½ „ Golden Valley	179 14 9	
Buhlmann, F. T.	261 „ Mulgarria	26 2 0	
Red, White, and Blue Syndicate	54 „ Curran's Find	5 8 0	
Hastedt, Robt.	107 „ Leonora	8 0 6	
Greenfinch G.M. Prop., N.L.	810½ „ Westonia	81 1 0	
Edna May G.M. Co., N.L.	70 „ Westonia	7 0 0	
La Grange and Juett	454½ „ Tuckabianna	45 9 0	
Mandelstam, A. S.	146½ „ Edjudina	10 19 9	
Graham, S.	254½ „ Southern Cross	19 1 9	
			1,016 18 3
Rebates to Prospectors—Crushing at State Batteries (War Rates)			1,571 3 3
Subsidies Carting Long Distances to Batteries.			
Thomas, Jas.	Edjudina	7 0 3	
Connolly, J.	do.	1 12 3	
Brewer, D.	do.	4 19 0	
Robertson, A. B.	do.	28 2 6	
Thompson, N.	do.	3 1 6	
Bonnie Venture G.M. Co., Ltd.	Mt. Singleton	62 17 2	
Hodges and Party	Forestonia	45 0 0	
			152 12 8
Warburton Range Expedition			731 9 7
Total (according to net Treasury figures for year)			£9,376 14 0

Appendix I—*continued.*

SUMMARY OF EXPENDITURE FROM MINING DEVELOPMENT VOTE, ETC.—*continued.*

Mine or Owner.	Amount.	Total.
	£ s. d.	£ s. d.
ADVANCES REFUNDED.		
"Balkis" Gold Mine	45 0 0	
Try It	42 9 6	
New Boddington G.M. Co.	232 3 9	
"Waterloo" Gold Mine	368 17 8	
Red, White, and Blue	138 6 0	
"Globe" Gold Mine	18 16 3	
Lady Pratt G.M.	10 10 1	
Havilah	115 6 11	
Flag Gold Mine	0 15 0	
Gem Consolidated G.M.	300 0 0	
Neil McNeil	1,071 10 4	
Triplicate Lease	46 13 10	
Bulletin Lease	0 16 11	
Kirton's South	9 3 1	
		2,400 9 4
RECOVERED FROM SALE OF SECURITIES.		
Dostmund Lease	8 11 6	
Britannia Gold Mine	6 10 0	
Hawk	0 10 0	
Chinderloo Gold Mine	272 0 0	
Lubra Queen G.M.	70 0 6	
Santa Claus G.M.	1,089 11 9	
		1,447 3 9
MISCELLANEOUS REFUNDS.		
Frasers Gold Mine	137 10 0	
Paynes' Find Development Co.	23 12 3	
Refund Account—Preliminary Investigation—Sampling Mines	3 4 10	
		164 7 1
Total (inclusive of refunds shown in foregoing table credited to M.D. Vote; balance having been paid to Government Property Sales Fund Receipts)	...	£4,012 0 2

THE MINING DEVELOPMENT ACT, 1902, ADVANCES WRITTEN OFF TO 31ST DECEMBER, 1917.

	£ s. d.
Previously reported (1914 Annual Report)	16,366 4 1
Year 1915	*Nil*
Year 1916	*Nil*
Year 1917	*Nil*
Total	£16,366 4 1

MINING DEVELOPMENT EXPENDITURE.

Advances Outstandiny, 31st December, 1917.

No. of File.	Name of Lease, Mine, or Borrower.	No. of Lease.	District.	Amount authorised.	Principal Moneys advanced		Principal Moneys		Interest		Total Principal and Interest outstanding at 31st December, 1917.
					Previous to 1917.	During 1917.	Repaid, including Sale of Securities, etc.	Balance outstanding.	Paid.	Outstanding.	
				£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
	A.—PIONEER MINING AND PROSPECTING.										
90/12	Alicia	254F	Mt. Morgans ...	245 0 0	195 0 0	...	...	195 0 0	4 2 6	54 14 8	249 14 8
854/14	Auckland	1473C	Leonora	140 0 0	29 10 0	...	29 10 0	...	0 6 7	...	...
909/12	Brittania	953M	Mt. Magnet ...	150 0 0	114 12 6	...	43 10 0	71 2 6	...	9 4 6	80 7 0
3016/11	Balkis	8354Z	Menzies	300 0 0	266 0 0	...	149 17 5	116 2 7	62 18 3	6 4 5	122 7 0
123/16	Bulletin	795	Marble Bar ...	600 0 0	...	255 17 7	0 16 11	255 0 8	0 3 1	5 8 1	260 8 9
...	Colreavy and Party	... ...	... ...	200 0 0	...	79 0 0	...	79 0 0	...	0 19 8	79 19 8
2257/12	Champion South	817N, 1039N ...	Nannine	400 0 0	400 0 0	...	350 0 0	50 0 0	29 11 8	19 19 8	69 19 8
3323/08	Coolgardie P.D. and Mining Syndicate ...	4093, 4117 ...	Coolgardie	1,500 0 0	904 10 5	...	110 0 0	794 10 5	19 19 10	67 16 9	862 7 2
2334/12	Creme D'Or	389, 421, 4220 ...	Day Dawn	1,001 0 0	1,001 0 0	...	1,001 0 0	...	186 6 11	...	...
1986/10	Coolgardie Redemption	3918, 4052 ...	Coolgardie	1,020 16 9	1,020 16 9	...	220 18 0	799 18 9	...	73 2 8	873 1 5
427/11	Comstock	1079Y	Randall's	200 0 0	144 7 6	...	6 15 0	137 12 6	7 0 1	10 13 3	148 5 9
29/05	Dostmund	788R	Yerilla	360 0 0	360 0 0	...	151 12 7	208 7 5	20 17 2	5 6 9	213 14 2
1444/12	Eclipse	1047X	Gindalbie	498 19 1	498 19 1	...	252 5 0	246 14 1	62 8 11	...	246 14 1
2208/08	Elverdton	... ...	Ravensthorpe ...	3,500 0 0	3,498 17 10	...	2,570 8 2	928 9 8	392 13 0	...	928 9 8
3166/09	Emily	1510	Day Dawn	400 0 0	372 1 9	...	...	372 1 9	...	44 7 10	416 9 7
624/11	Glideaway	2272	Yilgarn	200 0 0	140 0 0	...	...	140 0 0	10 0 7	3 11 4	143 11 4
3594/09	Globe G.M.	912M	Nannine	500 0 0	444 12 9	...	145 18 2	298 14 7	77 17 10	15 8 1	314 2 8
838/13	Griffiths	4048	Coolgardie	334 2 0	334 2 0	...	...	334 2 0	...	5 4 10	339 6 10
3056/15	The Golden Spinifex	2035T, 2044T ...	... ...	750 0 0	...	162 15 0	...	162 15 0	...	1 0 3	163 15 3
4689/06	Havilah Development	345B	Black Range ...	600 0 0	553 2 1	...	180 16 11	372 5 2	109 0 9	11 12 0	383 17 2
3786/12	Hanby & Lugg	4543E	Kalgoorlie	130 0 0	130 0 0	...	52 13 8	77 6 4	1 18 6	4 1 0	81 7 4
4738/09	Hawk	725G	Desdemona ...	116 12 2	116 12 2	...	20 5 11	96 6 3	3 7 10	...	96 6 3
1963/16	Hassell and Others (Flag)	136/7/8	... ...	2,100 0 0	...	2,088 7 8	...	2,088 7 8	...	42 2 2	2,130 9 10
319/12	Jupiter	771M	Mt. Magnet ...	401 0 0	401 0 0	...	109 14 1	291 5 11	5 0 0	45 11 3	336 17 2
2255/11	Kalgoorlie North End Development Co. ...	3380, 4146E ...	Kalgoorlie	1,500 0 0	1,500 0 0	...	25 0 0	1,475 0 0	20 11 3	41 11 7	1,516 11 7
110/09	Kanowna Prospecting Co.	323X	Kanowna	750 0 0	666 9 3	...	7 0 0	659 9 3	...	...	659 9 3
2825/07	Kingdom Come	M.L. 112 ...	Northampton ...	204 14 0	204 14 0	...	...	204 14 0	5 8 6	15 11 0	220 5 0
4548/11	Klondyke Boulder	604	Warrawoona ...	1,000 0 0	999 10 7	...	88 5 6	911 5 1	34 5 4	150 12 7	1,061 17 8
2186/14	Kirkland, A. G.	M.A. 12N ...	Nannine	500 0 0	500 0 0	...	256 14 5	243 5 7	20 17 4	12 12 5	255 18 0
1035/10	Kineen and Party	625B	Black Range ...	100 0 0	86 6 6	...	...	86 6 6	...	2 13 0	88 19 6
363/06	Lady Florence	1265	Cue	1,000 0 0	1,000 0 0	...	...	1,000 0 0	...	259 19 9	1,259 19 9
3751/10	Lubra Queen	734/5, 744, 749G	Kookynie	1,500 0 0	1,500 0 0	...	673 8 2	826 11 10	3 16 10	166 19 10	993 11 8
3507/13	Loader & Nevill	711	Yalgoo	200 0 0	135 0 0	...	...	135 0 0	14 11 0	6 18 0	141 18 0
2167/14	Lake View Extended	4536E	... ...	1,050 0 0	892 15 5	...	...	892 15 5	...	54 11 1	947 6 6
2977/15	Little Dele	972U	Ularring	600 0 0	...	600 0 0	...	600 0 0	...	18 7 3	618 7 3
3444/10	Mars	1013	... ...	1,000 0 0	1,000 0 0	...	1,000 0 0	...	...	...	...
278/12	Morning Star	4484E	Boulder	368 0 0	284 19 4	...	105 0 0	179 19 4	...	6 8 9	186 8 1
4000/05	Mindeloo	1518	Mindoolah	300 0 0	198 17 0	...	10 0 0	188 17 0	...	8 1 1	196 18 1
2549/14	Mt. Germatong	1481C	Mt. Magnet ...	100 0 0	34 19 5	...	...	34 19 5	...	...	34 19 5
2126/11	Mt. Rankin Gold Mines, N.L.	2416	Yilgarn	535 6 3	...	535 6 3	...	535 6 3	6 10 6	13 12 1	548 18 4
4164/12	Metzke and Others	P.A. 647 ...	Lake Darlot ...	200 0 0	189 7 6	...	6 9 5	182 18 1	1 19 7	23 0 5	205 18 6
3461/08	North End Mines	4054, 4037, 4039, 4231	Kalgoorlie	1,000 0 0	436 10 0	...	...	436 10 0	...	...	436 10 0
174/13	Nevill, P. W.	680	... ...	500 0 0	...	330 0 0	...	330 0 0	...	14 5 1	344 5 1
2983/16	Nooka Lead Mining Company	M.L. 142 ...	Northampton ...	500 0 0	...	500 0 0	...	500 0 0	...	17 10 6	517 10 6
3202/13	Pearl	1095M	Meekatharra ...	76 0 0	76 0 0	...	...	76 0 0	...	11 19 1	87 19 1
444/16	Perron and Party	772G	... ...	200 0 0	...	95 0 6	...	95 0 6	...	1 16 0	96 16 6
3573/12	Princess Royal	106, 187, 587, 840, 972	Norseman	2,000 0 0	2,000 0 0	...	...	2,000 0 0	...	367 7 4	2,367 7 4
2898/11	Princess Royal	222, 653, 1016, 1048, 1114	Cue	1,000 0 0	1,000 0 0	...	3 10 0	996 10 0	80 0 0	14 16 8	1,011 6 8
3612/15	Premier Coal Mining Company, Ltd. ...	260/1/2, 363/4/5/6, and 271	Collie	500 0 0	500 0 0	...	1 1 10	498 18 2	30 3 8	18 18 7	517 16 9
289/13	Pyx, G.M.	789B	... ...	600 0 0	...	515 12 2	...	515 12 2	...	8 19 5	524 11 7
3409/12	Rupe & Young	M. Area	Nannine	848 17 5	848 17 5	...	500 0 0	348 17 5	...	24 13 5	373 10 10
1373/12	Riverina	123N	Mulgarrie	500 0 0	468 19 10	...	468 19 10	...	101 16 11	...	...
1240/12	Richards & Poole	1163	Lawlers	300 0 0	300 0 0	...	50 0 0	250 0 0	21 18 9	26 1 6	276 1 6
697/09	Sunbeam	1121X	Kanowna	1,038 4 4	1,038 4 4	...	899 14 0	138 10 4	116 16 8	45 13 9	184 4 1
3212/15	Sunset	... ...	do.	500 0 0	500 0 0	...	...	500 0 0	...	...	500 0 0
499/11	do.	2253, 2240 ...	Southern Cross ...	100 0 0	90 0 0	...	5 17 0	84 3 0	...	...	84 3 0
977/12	South Cornwall	567	Greenbushes ...	1,170 2 0	1,170 2 0	...	26 0 0	1,144 2 0	...	...	1,144 2 0
2376/10	Stanley G.M.	1271X	Kanowna	150 0 0	112 0 0	...	...	112 0 0	2 6 0	27 13 5	139 13 5
461/17	Shamrock	8718	... ...	150 0 0	...	74 11 10	...	74 11 10	...	0 6 0	74 17 10
2425/15	Try It	1188	... ...	328 9 8	328 9 8	...	42 9 6	286 0 2	...	18 9 5	304 9 7
97/15	The Scots Greys	2801	Yilgarn	200 0 0	...	200 0 0	...	200 0 0	...	7 2 6	207 2 6

MINING DEVELOPMENT EXPENDITURE.—*Advances Outstanding, 31st December, 1917*—continued.

No. of File.	Name of Lease, Mine, or Borrower.	No. of Lease.	District.	Amount authorised.	Principal Moneys advanced		Principal Moneys		Interest		Total Principal and Interest outstanding at 31st December, 1917.
					Previous to 1917.	During 1917.	Repaid, including Sale of Securities, etc.	Balance outstanding.	Paid.	Outstanding.	
				£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
	A.—PIONEER MINING AND PROSPECTING —*continued.*										
2426/11	V's United	271F	Mt. Morgans	672 2 0	578 16 1	...	170 0 0	408 16 1	3 19 5	34 14 1	443 10 2
2239/12	Williamson & Pender	...	Kanowna	180 0 0	180 0 0	...	...	180 0 0	7 0 0	12 18 1	192 18 1
4286/10	W.E.G. Gold Mine	505G	Niagara	500 0 0	297 13 1	...	...	297 13 1	...	89 10 4	387 3 5
2427/11	Westralia Tasmania	1665, 1745T	Erlistoun	300 0 0	300 4 9	...	51 0 0	249 4 9	90 2 8	54 15 8	304 0 5
1807/09	Wheal May	Loc. 6	Northampton	302 4 6	302 4 6	...	40 0 0	262 4 6	5 15 9	14 9 8	276 14 2
2416/99	Yellow Aster	...	...	600 0 0	...	500 11 0	...	500 11 0	2 16 8	12 8 2	512 19 2
				...	30,646 5 6	5,937 2 0	9,826 11 6	26,756 16 0	1,564 10 4	2,031 16 8	28,788 12 8
	B.—ASSISTANCE IN ERECTING BATTERIES AND TREATMENT PLANTS TO BE USED FOR CRUSHING FOR THE PUBLIC.										
2344/05	Allsop & Don	...	Kalgoorlie	1,000 0 0	1,000 0 0	...	1,000 0 0	...	71 12 1	...	...
2120/09	Battlesville Mine	931R	Yundamindera	1,063 16 2	1,063 16 2	...	...	1,063 16 2	82 3 6	290 17 2	1,354 13 4
5651/10	Butcher Bird	1933 O.L.	Yilgarn	1,560 17 9	1,560 17 9	...	17 16 2	1,543 1 7	132 3 10	121 1 6	1,664 3 1
...	do.	...	...	302 16 5	285 6 5	17 10 0	...	302 16 5	...	8 4 11	311 1 4
3145/12	Donovan's Find	768	Jacoletti	1,000 0 0	1,000 10 0	...	50 10 0	950 0 0	382 2 7	141 12 5	1,091 12 5
509/15	Eastern G.M.	1171	Murchison	300 0 0	141 10 0	...	141 10 0	...	3 15 5	...	...
3522/14	Gem Consolidated	151, 156	Phillips River	300 0 0	300 0 0	...	300 0 0	...	29 2 1	...	...
3155/11	Great Victoria Leases	719, 944/5, 1229	Southern Cross	2,000 0 0	1,642 5 0	...	1 7 9	1,640 17 3	398 1 10	85 11 2	1,726 8 5
1343/07	Hodder, E.	Mach. Area 64	Randall's	253 3 2	253 3 2	...	148 13 0	104 10 2	6 8 4	35 11 3	140 1 5
2106/12	Johnson and Party	1086/7/8	Bulong	1,500 0 0	1,484 16 0	...	1,096 6 9	388 9 3	285 7 5	...	388 9 3
2322/11	King's Sound M. Co.	M.L. 164H	Derby	500 0 0	500 0 0	...	...	500 0 0	...	28 10 11	528 10 11
4475/11	Lady Pratt	1228X	Mulgarrie	205 4 10	205 4 10	...	167 6 1	37 18 9	42 12 10	2 2 4	40 1 1
3785/08	Lady Agnes	910Y	Bulong	486 12 3	486 12 3	...	93 4 9	393 7 6	...	27 7 5	420 14 11
3215/05	Langford, F.	910 E.M.	Lawlers	800 0 0	585 17 0	...	29 7 0	556 10 0	92 1 9	14 3 7	570 13 7
4416/11	Malcolm Prospecting Co.	1175C	Malcolm	1,500 0 0	1,550 0 0	...	...	1,550 0 0	402 0 8	560 6 7	2,110 6 7
2985/13	Mandelstam, A. S.	1010R	Edjudina	200 0 0	200 0 0	...	13 14 5	186 5 7	21 16 7	8 5 2	194 10 9
363/12	McCahon and Party	...	Mt. Ida	400 0 0	400 0 0	...	...	400 0 0	...	27 14 5	427 14 5
15947/10	McDermott & Soanes	1084N	Nannine	2,032 12 8	1,730 10 2	...	330 19 5	1,399 10 9	...	218 16 2	1,618 6 11
4224/11	Never Never	665	Yilgarn	1,150 0 0	1,223 7 8	...	991 2 9	232 4 11	258 4 6	...	232 4 11
2911/10	Phœnix	622N	Quinn's	250 0 0	250 0 0	...	22 5 9	227 14 3	17 2 1	17 5 11	245 0 2
2235/11	Ravensthorpe Battery Co.	...	Ravensthorpe	1,300 0 0	1,038 8 2	...	...	1,038 8 2	...	326 1 2	1,364 9 4
1353/10	Red, White, and Blue	641B	Curran's Find	2,676 9 0	2,676 9 0	...	138 6 0	2,538 3 0	540 13 6	65 16 4	2,603 19 4
919/14	Rocklee G.M.	...	Yaloginda	350 0 0	350 0 0	...	...	350 0 0	12 2 0	21 14 1	371 14 1
3551/10	Randwick	978C	Malcolm	584 14 0	577 3 5	...	43 4 6	533 18 11	...	45 3 5	579 2 4
4726/11	Southern Cross and Southern Cross S.	1067, 1067WR, 27Y	Bulong	1,000 0 0	1,000 0 0	...	792 12 3	207 7 9	31 12 6	202 8 10	409 16 7
3362/11	Spring Hill	721	Parker's Range	655 16 5	655 16 5	...	19 2 0	636 14 5	286 0 10	91 9 0	728 3 5
4222/07	Star of Fremantle	645S	Kunnalling	325 0 0	320 10 0	...	0 10 0	320 0 0	48 3 1	44 4 6	364 4 6
1525/13	Thring Bros. & Dwyer	127	Northampton	2,050 0 0	2,028 2 9	...	9 3 1	2,018 19 8	284 2 7	51 13 10	2,070 13 6
3791/15	Triplicate G.M.	1914	Murchison	500 0 0	378 17 7	...	47 13 10	322 3 9	19 14 2	0 9 5	322 13 2
1301/15	Waterloo G.M.	1291N	Meekatharra	500 0 0	500 0 0	...	372 19 1	127 0 11	26 2 4	...	127 0 11
				...	25,389 3 9	17 10 0	5,836 14 7	19,569 19 2	3,473 6 6	2,436 11 6	22,006 10 8
	C.—BORING.										
	Mt. Mahon	...	...	...	343 1 10	128 8 2	...	471 10 0	...	...	471 10 0
	D.—MISCELLANEOUS ADVANCES.										
	Mararoa	...	...	...	394 4 3	...	...	394 4 3	...	...	394 4 3
	McCulloch	...	...	...	50 0 0	...	...	50 0 0	...	...	50 0 0
	North Baddera	...	...	...	40 0 0	...	...	40 0 0	...	...	40 0 0
	Payne's Find Development Co.	...	...	...	98 6 6	...	82 4 3	16 2 3	...	...	16 2 3
	Ryan, A. H.	...	...	...	100 0 0	...	...	100 0 0	...	...	100 0 0
	Boni Venture G.M.	...	...	...	...	62 17 2	...	62 17 2	...	...	62 17 2
				...	682 10 9	62 17 2	82 4 3	663 3 8	...	...	663 3 8
	A.—PIONEER MINING AND PROSPECTING	...	...	...	30,646 5 6	5,937 2 0	9,826 11 6	26,756 16 0	1,564 10 4	2,031 16 8	28,788 12 8
	B.—ASSISTANCE ERECTING BATTERIES, ETC.	...	...	...	25,389 3 9	17 10 0	5,836 14 7	19,569 19 2	3,473 6 6	2,436 11 6	22,006 10 8
	C.—BORING	...	...	...	343 1 10	128 8 2	...	471 10 0	...	...	471 10 0
	D.—MISCELLANEOUS ADVANCES	...	...	...	682 10 9	62 17 2	82 4 3	663 3 8	...	...	663 3 8
				...	57,061 1 10	6,145 17 4	15,745 10 4	47,461 8 10	5,037 16 10	4,468 8 2	51,929 17 0

Annual Report of the Board of Examiners for Colliery Managers' and Under Managers' Certificates under "The Coal Mines Regulation Act, 1902."

Office of the State Mining Engineer, Mines Department,
Perth, 25th April, 1918.

The Secretary for Mines, Perth, W.A.

Sir,

I have the honour to submit for the information of the Hon. the Minister the Annual Report of the Board of Examiners for the year 1917.

During the year under review two ordinary meetings and one examination for certificates were held.

There were two applicants for 1st Class Certificates of Competency without examination, viz.:—Messrs. J. Paterson and P. Hunter, the former holding a British and the latter a Victorian 1st Class Certificate of Competency. Their papers being satisfactory, the Board issued certificates under the Western Australian Act.

Mr. Andrew Watson was successful in gaining a 1st Class Certificate of Competency at the October Examination, he being the only applicant to sit for examination during the year.

Copy of the papers set for the examination held in October attached hereto.

We have, etc.,

A. MONTGOMERY,
State Mining Engineer, Chairman.

A. GIBB MAITLAND,
Government Geologist, Member.

JAS. McVEE,
Inspector of Mines, Member.

F. A. LANE,
Secretary.

THE COAL MINES REGULATION ACT, 1902.

Examination for First-Class Certificates of Competency.

SUBJECT: ARITHMETIC.

Wednesday, 3rd October, 1917; 10 a.m. to 11 a.m.

Possible Marks.	
15	1.—Calculate the interest on £747 18s. 1d. for 93 days at 8 per cent.
15	2.—How many gallons of water can be held in a cylindrical tank 8 feet 2 inches high and 6 feet 4 inches in diameter?
15	3.—Express .0025, .142857, and .003 as vulgar fractions, and $\frac{7}{7}$ $\frac{7}{8}$,, and $7\frac{31}{25}$ as decimals.
25	4.—Extract the square root of 3764.313316 and the cube root of 404,239,118.984.
15	5.—If 5 men can get 850 cubic yards of ballast in 17 shifts, how many men would it take to get 2,000 cubic yards in 20 shifts? What is the cost per cubic yard if the men earn 10s. per shift?
15	6.—What is the value of 676 tons 7cwt. 2qrs. of coal at 12s. 10d. per ton?
100	

SUBJECT: SURVEYING.

Wednesday, 3rd October, 1917; 11 a.m. to 1 p.m.

Possible Marks.	
40	1.—Describe the method of making an ordinary colliery survey without a Miner's Dial.
30	2.—What are the precautions to be taken when using the Miner's Dial to ensure accuracy?
30	3.—How many tons of coal per acre will there be contained in a seam 3 feet 9 inches in thickness, dipping at an angle of 9°, after allowing 20 per cent. deduction for faults?
30	4.—A drive rising 1 in 27 intersects a seam of coal dipping at 49°, the dip of the seam and the drive being in opposite directions. The width of the coal seam, as measured along the floor of the drive, is 12 feet. What is the true width of the seam?
40	5.—Describe the method of making Colliery plans. If a plan is drawn to the scale of 4 chains per inch, what is the proportion between the actual area surveyed and the area shown on the plan?
170	

SUBJECT: GEOLOGY.

Wednesday, 3rd October, 1917; 2 p.m. to 4 p.m.

Possible Marks.	
20	1.—What are the characteristics of the different classes of Coal; how would you distinguish them, and what are their economic uses?
20	2.—Write a succinct account of the salient geological features of any Australasian Coalfield with which you may be acquainted, illustrating such by a geological section of the field.
15	3.—Knowing the apparent dip of a coal seam, show how the full dip may be arrived at.
15	4.—What are the chief points to be ascertained before commencing operations to prove the existence of a buried coalfield?
15	5.—Explain the following terms:—Anticline, Heave, False bedding, Basalt, Formation.
15	6.—State the reasons why a knowledge of the distinct characters of the fossils met with in the different geological formations is of value in coal mining.
100	

SUBJECT: THE COAL MINES REGULATION ACT, 1902.

Wednesday, 3rd October, 1917; 4 p.m. to 5 p.m.

Possible Marks.	
15	1.—What are the requirements of the Act in regard of mine-owners contributing to the Accident Relief Fund?
10	2.—To what sort of mines does the Act apply?
20	3.—What are the requirements of the Act in regard to— (a) the periods of employment of persons underground? (b) the periods of employment of persons in charge of machinery?
20	4.—What are the provisions of the Act relating to check-weighers?
20	5.—What are the provisions of the Act with respect to plans of mines?
15	6.—What are Special Rules, and how are they brought into operation?
100	

SUBJECT: MACHINERY.

Thursday, 4th October, 1917; 10 a.m. to 1 p.m.

Possible Marks.	
40	1.—Describe an electric installation with which you are familiar for operation of coal-cutting machines. What class of cables should be used, and how should they be fixed in the workings? How should flexible trailing cables from machines be attached to main cables?
40	2.—Describe a suction gas-producer, and explain its operation, showing how the gases are cooled and purified. What is the approximate composition of producer-gas?
40	3.—Describe a water-tube boiler, and discuss the relative advantages and disadvantages of water-tube and Lancashire boilers for colliery work.
40	4.—What horse-power is required to raise 100 tons of coal per hour at a speed of six miles an hour up an incline rising 1 in 8? Describe a type of steam-driven hoist suitable for the work, boiler pressure being 90lbs. per square inch.
25	5.—The lever of a safety valve is 36 inches long, and the distance between fulcrum and valve 4 inches; the diameter of the valve is 2½ inches. What weight would be required on the end of the lever to give a pressure of 90lbs. per square inch on the valve?
40	6.—Describe safety appliances applicable to hoisting coal in a vertical shaft (a) to prevent fall of cage down the shaft, (b) to detach cage from rope in case of over-winding. Give your views on the applicability of safety appliances in cases where the winding is done at high speed.
40	7.—What horse-power is required to pump 240,000 gallons of water per day from a depth of 600 feet, allowing 20% extra for friction and slip, and 55% for contingencies? Describe a pumping plant suitable for this work.
35	8.—Describe a ventilating fan suitable for use underground in a mine at a point distant from the pit mouth, and show by sketches how it should be set in the workings.
300	

SUBJECT: MINING OF COAL.

Thursday, 4th October, 1917; 2 p.m. to 5 p.m.

Possible Marks.	
40	1.—Describe a method of boring for coal by hand power, with sketches of tools and appliances used.
40	2.—Describe various sorts of tubing used in shaft-sinking, showing by sketches how they are set in the shafts.
35	3.—State the general principles which would guide you in determining whether to work a colliery on the Longwall or Bord and Pillar system.
40	4.—A seam of coal dipping 1 in 6 to the south is thrown down 20 feet vertically by a fault running N.E. and S.W. Describe with aid of sketches how you would proceed to carry the workings beyond the fault.
40	5.—Explain the operations necessary in the extraction of pillars, and the precautions to be taken. What are the main objections to extraction of pillars in the Collie Coalfield?
30	6.—Explain how the "cleat" or cleavage affects the working of coal.
40	7.—Describe the system of hydraulic packing of worked out areas in coal mines, and give your views on the suitability or otherwise of this method for the Collie field.
35	8.—Explain the composition of blasting powder, gelignite, and roburite, and the circumstances in which each is most suitable for use in coal mines. Explain how each is charged and exploded.
300	

SUBJECT: VENTILATION AND DANGEROUS GASES.

Friday, 5th October, 1917; 10 a.m. to 1 p.m.

Possible Marks.	
30	1.—What is "Fire-damp"? Describe its principal properties, and the method you would employ in testing for its presence in a mine.
35	2.—A downcast shaft 12 feet in diameter is 1,200 feet deep and the average temperature of the air in it is 60° F; the upcast shaft of same size and depth has an average temperature of 80° F. What is the "motive column"? Express this also as a water-gauge reading.
35	3.—State and explain the formula expressing the coefficient of friction, K., in terms of pressure, sectional area, rubbing surface, and velocity of air. What is the value ordinarily taken for the coefficient of friction in coal mines, expressed (a) in inches of water-gauge, (b) in lbs. per square foot.
35	4.—Explain with diagrams what is meant by "splitting" an air current, and for what reasons this operation is carried out, also how it is done in practice.
25	5.—What is the percentage of useful effect of a fan 30 feet in diameter running at 60 revolutions per minute and producing a water gauge of 2 inches?
25	6.—There are 10,000 cubic feet of air passing through an airway. What increase of power will be required to make 20,000 cubic feet pass through the same airway?
35	7.—What are the principal causes of fires in coal mines? A fire having broken out, what means would you adopt to try to bring it under control and extinguish it? What precautions would have to be taken for safety of the men in the mine?
25	8.—A fan using 125 horse-power circulates 300,000 cubic feet of air per minute. What quantity of air will be given by 64 horse-power?
30	9.—Explain what is the action of coal dust in causing explosions in coal mines and increasing their violence. What are the best means of rendering dust innocuous in this regard?
25	10.—The air-current in a mine is 2,000 cubic feet a minute and contains 4 per cent. of fire-damp. How much fresh air would be required to be mixed with it to reduce the fire-damp to one-half per cent.?
300	

DIVISION III.

REPORT OF SUPERINTENDENT OF STATE BATTERIES.

Department of Mines,
State Batteries Branch,
Perth, 30th April, 1918.

The Acting Under Secretary for Mines.

Sir,

I have the honour to submit my report for the year 1917, being the 20th Annual Report on State Battery operations.

MILLING.

There were 29 batteries under departmental control for the reduction of auriferous ores, 11 ten-head mills, and 18 five-head mills, a total of 200 stamps. In addition one 10-head mill (Tuckanarra) was leased during the year, and was operated by the lessee under State Battery conditions.

Tonnage milled.—42,947½ tons were milled at 27 batteries, the 10-head mill at Burtville and the 5-head mill at Yerilla not being worked on account of scarcity of ore. The tonnage handled was made up of 595 separate parcels of ore, a mean of 72.18 tons per parcel. During 1916 there were 737 parcels handled, having a mean tonnage of 64.18 and a total tonnage of 47,304¼ tons. Milling operations show a decline of 4,356¾ tons compared with the figures for 1916. At Wiluna 12,438¼ tons of lode ore were milled, or over 29 per cent. of the total tonnage (Schedules 1 to 5, and 8).

Duty per Stamp.—Milling conditions generally were practically the same during the year as they were during 1916. The 5-head mills gave a stamp duty of 4.30 tons and the 10-head mills 4.85 tons, whilst the stamp duty at all mills was 4.58 tons per 24 hours. During 1916 the stamp duty at all mills was 4.39 tons per 24 hours.

Amalgamation.—30,252¼ tons of ore were treated in the first stage of reduction by amalgamation, the Wiluna lode ore being treated by a process that does not embrace amalgamation. The recovery was 76.08 per cent. of the gross value of the ore, which was estimated at 29,167.39 fine ozs., the estimated amalgamation recovery being 22.192.51 fine ozs. The percentage recovery from amalgamation during 1916 was 76.7 (Schedule 5).

Charges.—On the 25th June, charges were altered somewhat. Clauses 2, 3, and 4 of the scale of crushing charges at State batteries in force prior to the date above mentioned were cancelled. They read as follows (Appendix A):—

> (2) On all ore yielding two (2) ounces and over of gold per ton (including resultant tailings based on their agreed assay value, less 3 dwts. per ton), add 5 per cent. to above charges; 3 ounces and over, 10 per cent.; 5 ounces and over, 15 per cent.
>
> *Bamboo Creek, Marble Bar, and 20-Mile Sandy Creek.*
>
> 2 ounces to 3 ounces, add 5 per cent.; 3 ounces to 4 ounces, add 10 per cent.; over 4 ounces, add 15 per cent.
>
> These increases apply to stone treated per hour or per ton.
>
> (3) One parcel of ore, not exceeding 25 tons, may be crushed per quarter from each lease at the minimum rate, provided the value of same, including tailings, is not over five ounces per ton.
>
> (4) When any small parcel of high-grade ore, not exceeding 25 tons, can be shown to have been obtained at great expense, the Superintendent of State Batteries may allow the same to be treated at the minimum charge.

And were replaced by the following clauses (Appendix B):—

> (2) Parcels of ore not exceeding 25 tons may be crushed free of charge at any State Battery provided that the battery manager is satisfied the ore has been obtained from *bona fide* mining operations from ground that has not previously been held as a mining tenement.
>
> (3) Notwithstanding that the battery manager many not be satisfied of the payable nature of ore, he may accept for treatment parcels of ore not exceeding 50 tons from any mining tenement newly acquired, provided that he shall be satisfied such ore has been obtained by the holder from *bona fide* mining operations. Should the gold won from treatment be insufficient to cover crushing charges, the battery manager shall retain such gold, which shall be divided *pro rata* between the battery and any person having a claim for cartage charges.
>
> (4) In the cases provided for in Clauses 2 and 3, the holders of mining tenements affected shall notify the battery manager of their intention to raise ore, to allow him to inspect the workings.

It will be noticed that the charges per ton and charges per hour in Clause 1, Appendix A, have not been altered, but the department loses revenue previously obtained from the impost of extra percentage charges made for high-grade ores. Although the alteration will reduce revenue to the extent of a few hundred pounds a year, it is anticipated the new clauses will be of genuine assistance to those engaged in mining operations at State Battery centres.

The concessions allowed to customers relative to "Reductions in the Scale of Crushings Charges for

Low-Grade Ores at State Batteries during the War Period," and which became effective on the 1st October, 1914, were availed of to a good extent during the year; 9,348¾ tons of low-grade ore were crushed, the rebates allowed amounting to £1,442 13s., which amount was refunded to this branch of the department's accounts from the Development of Mining Vote (Appendix C).

Expenditure.—Milling expenditure amounted to £26,047 18s. 9d., inclusive of £3,044 19s. 5d. spent on repairs and renewals, or 12/1.56 per ton, a decrease of 5.21 pence per ton compared with the expenditure for 1916.

Revenue.—Milling revenue amounted to £19,333 8s. 10d., or 9/0.04 per ton, a decrease on last year's revenue of 1.93 pence per ton.

A loss of £6,714 9s. 11d. was made on milling operations, the loss during 1916 being £8,017 15s. 5d., so that this important branch of our operations showed an improvement to the extent of £1,303 5s. 6d. (Schedule 8).

TIN TREATMENT.

Two tin dressing plants at Greenbushes were operated, but the quantity of ore offered for treatment was very small. The plant situated at South Greenbushes consists of steam power, Huntington mill for crushing the ore, Phœnix Weir concentrator for saving the black tin, and of course the necessary appurtenances. The plant at Salt Water Gully comprises steam power, Chilian mill, Phœnix Weir concentrator and appurtenances.

During the year 36 parcels of ore were treated, aggregating 1,118 yards; and 144 yards of residues were re-treated. Almost immediately after residue re-treatment was commenced, in the early part of the summer, heavy rain flooded the accumulations and compelled operations to be stopped, no suitable opportunity having since presented itself to continue this work. Re-treatment will undoubtedly be undertaken when favourable conditions prevail.

Expenditure.—On the treatment of ore the expenditure amounted to £628 7s. 8d., equal to 11s. 2.90d. per yard, whilst residue re-treatment expenses were £72 16s. 11d.

Revenue.—Revenue from ore treatment totalled £206 4s. 4d., and from residue re-treatment £32 2s. 2d.

The total loss at the Greenbushes plants was £462 18s. 1d. (Schedules 5, 8, and 9).

TAILING TREATMENT.

Our system of tailing treatment—mixing the slime with the sand, and leaching—requires dry weather. We therefore accumulate during the winter months, and treat during the summer months. Last summer rather heavy rainstorms passed over the goldfields at intervals and retarded our operations to such an extent that costs were unduly inflated and the customary profit considerably reduced. It was the third wet summer in succession, a matter of no little disappointment. Sixteen leaching plants were intermittently operated, the tonnage handled being 24,674 tons; we had hoped to treat at least 10,000 tons more; during 1916, 35,665 tons were treated. At Marble Bar and Mt. Ida, tailings are neither purchased nor treated on account of their refractory nature, whilst at Mt. Egerton, Peak Hill, and Quinns they are sold to contractors at Government rates.

The tonnage milled during the year was 4,356¾ tons less than during 1916, the tailings produced therefrom being correspondingly less; the total accumulations on hand at 31/12/17 amounted to 31,500 tons, or 2,800 tons less than at 31/12/16.

Expenditure. — The expenditure amounted to £10,209 16s. 10d., equal to 8s. 3.31d. per ton, an increase of 13.52 pence per ton on 1916 results, when 35,665 tons were treated. The smaller tonnage, frequent stoppages on account of unfavourable weather conditions, and increased cost of stores were responsible for the higher cost.

Revenue.—The revenue rose from 8s. 7.34d. per ton during 1916 to 8s. 10.37d. per ton, and totalled £10,937 6s. 10d., a profit of £727 10s. being recorded (Schedule 9).

SLIME TREATMENT.

At Wiluna 13,249 tons of slime were treated in the Ridgeway plant, and at Mulwarrie 2,159 tons were mixed with 2,231 tons of sand residues and leached, a total of 15,408 tons slime.

Expenditure.—The expenditure was £7,479 2s. 10d., equal to 9s. 8.50d. per ton, an increase of 12.26 pence per ton compared with the expenditure for 1916. Expenditure on residue treatment totalled £930 9s. 4d.

Revenue.—The revenue amounted to £6,375 0s. 5d., equal to 8s. 3.18d. per ton, which figure was 4.19 pence per ton less than in 1916. Revenue from residue treatment was £930 9s. 4d., which balanced the expenditure (Schedule 9).

REPAIRS AND RENEWALS.

£3,136 14s. 8d. was expended on repairs and renewals to batteries and tin-dressing plants, and is included in the working expenditure. £1,074 16s. 5d. was expended in repairs and renewals to tailing and slime plants, Wiluna accounting for £906 17s. 5d. of the total.

The total expenditure under this heading was £4,211 11s. 1d. (Schedules 8 and 9).

The total cost of repairs and renewals to batteries and treatment plants during 1916 was £4,599 17s. 9d.

TOTAL OPERATIONS.

The total tonnage treated in all operations at all batteries amounted to 86,522½ tons, compared with 103,266¼ tons during 1916 and 99,933½ during 1915.

Gross Expenditure.—The expenditure for all operations for the year totalled £45,368 12s. 4d., or 10s. 5.84d. per ton. During 1916 the expenditure amounted to 9s. 10.94d. per ton.

Note.—The item "Expenditure" in the "Comparative Synopsis" and in Schedules 8 and 9 includes all expenses incurred during the year.

Gross Revenue.—The revenue from all operations amounted to £37,814 11s. 11d., or 8s. 8.89d. per ton. The revenue during 1916 was 8s. 9.18d. per ton.

Operations for the year showed a loss of £7,554 0s. 5d., compared with a loss of £6,189 2s. 4d. during 1916.

Comparative Synopsis of Results of State Batteries for twelve months ending 31st December, 1917 and 1916.

	1917.			1916.		
	Tonnage.	Expenditure per ton.	Revenue per ton.	Tonnage.	Expenditure per ton.	Revenue per ton.
		s. d.	s. d.		s. d.	s. d.
Milling	42,947½	12 1·56	9 0·04	47,304¼	12 6·77	9 1·97
Tailing Treatment ...	24,674	8 3·31	8 10·37	35,665	7 1·79	8 7·34
Slime Treatment ...	15,408	9 8·50	8 3·18	15,536	8 8·24	8 7·37
Residue Treatment ...	2,231	8 4·08	8 4·08	2,793	7 7·74	7 9·77
Tin Treatment	1,118	11 2·90	3 8·27	943	11 11·61	4 0·36
Tin Residue Treatment	144	10 1·41	4 5·52	1,025	4 6·73	4 5·61

RECEIPTS AND EXPENDITURE, 1917.

Operation.	Tonnage.	Expenditure.	Revenue.	Profit.	Loss.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.
Milling	42,947½	26,047 18 9	19,333 8 10	...	6,714 9 11
Tailing Treatment	24,674	10,209 16 10	10,937 6 10	727 10 0	...
Slime Treatment	15,408	7,479 2 10	6,375 0 5	...	1,104 2 5
Residue Treatment	22,231	930 9 4	930 9 4	...	...
Tin Treatment	1,118	628 7 8	206 4 4	...	422 3 4
Tin Residue Treatment	144	72 16 11	32 2 2	...	40 14 9
	86,522½	45,368 12 4	37,814 11 11	727 10 0	8,281 10 5
			Less Profit	... ...	727 10 0
			Gross Loss	... ...	7,554 0 5

PURCHASE OF TAILING.

The department completed the purchase of 26,799 tons of tailing during the year for the sum of £27,898 16s. net (Schedule 7).

At Mt. Egerton, Peak Hill, and Quinn's 1,667¼ tons of tailing were purchased by contractors at Government rates for the sum of £1,017 4s.

The amount of tailing (net weight) produced from 42,947½ tons of ore crushed was 37,105½ tons, classified as follows:—

25,309¾ tons, worth over 3 dwts. per ton, purchased by the department for £26,471 8s.

1,667¼ tons, worth over 3 dwts. per ton, purchased by contractors for £1,017 4s.

854¼ tons, worth over 3 dwts. per ton, but being refractory were neither purchased nor treated.

9,274¼ tons, worth under 3 dwts. per ton, reverted to the department under the provisions of Regulation 11.

Wiluna Lode Ore.—12,438¼ tons of lode tailing were purchased at Wiluna during the year for £14,799 16s. 8d.

RECOVERY FROM AURIFEROUS ORE TREATED.

1. 30,252¼ tons of auriferous ore were treated in the first instance by amalgamation for 26,187¼ ozs. gold bullion, valued at £94,271 18s.

The gross value of the tailing was £29,628 14s.; the gross value of the ore being valued at £123,900 12s., or 77s. 5d. per ton (Schedule 5).

Milling charges amounting to £19,333 8s. 10d. were received by the department, leaving £74,938 9s, 2d. net to customers from milling operations.

Net amount due and paid for the tailing above mentioned, £11,202.

The net return received by customers was therefore £86,140 9s. 2d., or 69.52 per cent. of the gross value of the ore. The net return received by customers from quartz during 1916, 70.97 per cent. of the gross value.

2. *Wiluna Lode Treatment.*—12,438¼ tons of lode ore were treated during the year having a gross value of £30,803; treatment charges absorbed £9,153 17s. 7d., and customers received £14,791 16s. 8d. net.

OUTPUT SINCE INCEPTION.

Since the State Battery system was inaugurated in 1898 to the end of 1917, gold and tin to the value of £4,918,389.76 have been recovered. 1,157,406.69 tons of auriferous ore were milled and produced £4,085,920.09 worth of gold bullion from amalgamation, £582,545 from sand and tailing treatment, £152,557.1 from slime treatment, £8,920.18 from retreatment of residue.

72,087.75 tons of tin ore were treated for a return of black tin valued at £88,186.31, whilst additional values to the amount of £261.08 were recovered from residues.

NEW PLANT.

During February a 5-head battery complete with all appurtenances started crushing operations at Warriedar, the work of construction having been started late in the preceding year. 1,644¾ tons were milled, and although the results from crushings did not altogether confirm anticipations it is too early to make a forecast relative to future operations.

PLANT CLOSED.

The 5-head battery and tailings plant at Pingin which had been leased for two years, reverted to the department and was closed down, the district at present being practically abandoned.

STAFF.

During the year only one change was made in the personnel of the staff. Mr. F. B. Merritt, who succeeded Mr. M. R. Conigrave as check assayer, resigned to take a better position outside the service and was succeeded by Mr. A. E. M. Kildahl, late chief assayer to the Ivanhoe G. M. Corporation, Limited.

Practically all officers, comprising Head Office and Goldfields staffs, have been in the Department's service for a considerable number of years. Their numbers have been reduced owing to altered circumstances; their work has been proved by the test of time with gratifying results. An almost entire absence of complaints speaks for itself. I take this opportunity of thanking them for their good work and loyalty to the Department's interests.

GENERAL REMARKS.

The year's operations show a decline in tonnage of ore offered for treatment and also a decline in value. During 1917 the mean value of ore brought to our plants was 72s. per ton, compared with 73s. 5d. per ton during 1915 and 77s. 8d. per ton during 1916. The value of the ore treated during the year is the lowest on record. In view of this fact, it is practically gratifying to note that the net recovery for treatment of quartz should have only declined 1.45 per cent. compared with last year's results, when the value of the ore was 5s. 8d. per ton higher. The Wiluna Battery crushed 13,110¼ tons (lode and quartz), Coolgardie 4,965 tons, Boogardie 3,018, four batteries each over 2,000 tons, three batteries each over 1,000 tons, and 17 batteries under 1,000 tons each, whilst two batteries were unoperative through want of ore to crush. As the ore milled showed a falling off of 4,356¾ tons compared with the tonnage for 1916, it is pleasing to know the cost per ton was reduced by 5.21 pence, a matter for which managers deserve great credit.

An unexpected disappointment relative to our operations was met in regard to wet weather during summer months. The two previous summers were far from being dry, and it was hoped we would get the usual dry spell this year in order that a large quantity of tailing accumulations could be handled. Such was not the case and only 24,674 tons were treated. Much expense was incurred in continually stopping and starting operations, and this, combined with the comparatively small tonnage handled and the very high price of cyanide, zinc shavings and chemicals, had the effect of increasing the cost of treatement by 13.52 pence per ton.

For over two years after the war started we were able to draw upon stores purchased at pre-war rates, but these have all been used, and stores at current prices, which show an enormous rise, are now being consumed.

In two previous reports mention was made of the scarcity of efficient labour at centres in which State Batteries operate. This matter has now become really serious, and although we have to the present been able to crush all the ore offered for treatment, it has not been an easy matter to do so.

Costs for heavy work, such as tailing shifting, have risen considerably on this account, and there are indications that they will continue to rise. The position has been brought about by enlistments for the Australian Imperial Forces; it is well known that the eligible men on the goldfields have responded to their country's call in a praiseworthy manner.

At the time of writing, a notification has come to hand that the sphere of our operations is to be extended. Heretofore they have been confined to the tratment of auriferous and tin ores. A plant will be designed and constructed at Coolgardie for the treatment of scheelite and other heavy minerals. On account of the great demand for scheelite, wolfram, molybdenite, copper and lead, it is particularly gratifying to know the system will in future handle ores containing those minerals and metals. Industries using the heavy minerals have been given a great impetus on account of the war, and it seems certain that their demand will continue to be very great after the much longed-for peace has been proclaimed.

The scarcity of galvanised iron may affect the operation of the tailing treatment plants, as the leaching vats are constructed of it, their life being comparatively short, and most of them are over three years old. If galvanised iron cannot be procured as required, it may become necessary to curtail or even stop tailing treatment operations until better markets prevail. Such a contingency would be regrettable, for the reason that it is the only source of profit we have at present.

Most of the plants were in good order and condition at the close of the year, although some of the old machinery at certain centres is worn but still capable of much useful work.

I have, etc.,

A. M. HOWE,
Superintendent State Battteries.

APPENDIX A.

WESTERN AUSTRALIA.

Department of Mines,
State Batteries Branch,
Perth, 1st September, 1914.

SCALE OF CRUSHING CHARGES AT STATE BATTERIES.

THE HON. THE MINISTER FOR MINES has authorised the following differential scale of crushing charges, and conditions attached to same, to take effect at the various State Batteries and Tin Dressing Plants on and after 1st September, 1914.

(1.)

Battery.	No. of Stamps.	Rate per ton.	Rate per hour 10-head.	Rate per hour 5-head.
		s. d.	s. d.	s. d.
Laverton, Leonora, Menzies, Niagara	10	10 0	16 0	8 6
Black Range, Coolgardie ...	10	10 0	16 6	8 6
Burtville, Darlot, Linden, Mulline, Mulwarrie, Wiluna, Yarri	10	10 6	16 6	8 6
Boogardie, Meekatharra, Mt. Ida, Mt. Sir Samuel, Norseman, Pinjin, Quinn's, Siberia, Yerilla	5	10 6	...	8 6
Mt. Keith, Ora Banda, Payne's Find, Ravelstone, Youanmi	5	10 6	...	9 0
Mt. Egerton	5	10 6	...	10 0
Bamboo Creek, Marble Bar, 20-Mile Sandy Creek	5	12 0	...	10 0

(2.) On all ore yielding two (2) ounces and over of gold per ton (including resultant tailings based on their agreed assay value, less 3dwts. per ton), add 5 per cent. to above charges ; 3 ounces and over, 10 per cent. ; 5 ounces and over, 15 per cent.

BAMBOO CREEK, MARBLE BAR, AND 20-MILE SANDY CREEK.

2 ounces to 3 ounces, add 5 per cent. 3 ounces to 4 ounces add 10 per cent. Over 4 ounces, add 15 per cent.

These increases apply to stone treated per hour or per ton.

(3.) One parcel of ore, not exceeding 25 tons, may be crushed per quarter from each lease at the minimum rate, provided the value of same, including tailings, is not over 5 ounces per ton.

(4.) When any small parcel of high-grade ore, not exceeding 25 tons, can be shown to have been obtained at great expense, the Superintendent of State Batteries may allow the same to be treated at the minimum charge.

(5.) In the event of any small parcel of exceptionally high-grade ore being treated, the Manager may make a special charge ; but the customer may, if he considers he has been overcharged, appeal to the Superintendent of State Batteries, whose decision shall be final.

(6.) Batteries will be closed down until 500 tons of ore are available for crushing at 10-head mills and 300 tons at 5-head mills, but in the event of any prospector desiring to crush during such period, feeders' wages, in addition to above rates, will be charged. The employment and control of feeders in such cases shall be solely in the control of the Battery Manager.

TIN DRESSING PLANTS.

(7.)

Plant.	Rate per hour.	Rate per ton.
Greenbushes, Bunbury End	6s. 3d. plus feeders' wages	...
Greenbushes, Salt Water Gully	8s. 6d.	...
Wodgina	...	10s.

A. M. HOWE,
Superintendent of State Batteries.

APPENDIX B.

WESTERN AUSTRALIA.

Department of Mines,
State Batteries Branch,
Perth, 1st May, 1918.

SCALE OF CRUSHING CHARGES AT STATE BATTERIES.

THE HON. THE MINISTER FOR MINES has authorised the following differential scale of crushing charges, and conditions attached to same, to take effect at the various State Batteries and Tin Dressing Plants on and after 25th June, 1917.

(1.)

Battery.	No. of Stamps.	Rate per ton.	Rate per hour 10-head.	Rate per hour 5-head.
		s. d.	s. d.	s. d.
Laverton, Leonora, Niagara ...	10	10 0	16 0	8 6
Black Range, Coolgardie ...	10	10 0	16 6	8 6
Burtville, Linden, Mulline, Mulwarrie, Wiluna, Yarri	10	10 6	16 6	8 6
Boogardie, Meekatharra, Mt. Ida, Mt. Sir Samuel, Norseman, Quinn's, Siberia	5	10 6	...	8 6
Mt. Keith, Ora Banda, Payne's Find, Peak Hill, Warriedar, Youanmi	5	10 6	...	9 0
Mt. Egerton	5	10 6	...	10 0
Bamboo Creek, Marble Bar, 20-mile Sandy Creek	5	12 0	...	10 0

(2.) Parcels of ore not exceeding 25 tons may be crushed free of charge at any State Battery, provided that the Battery Manager is satisfied the ore has been obtained from *bona fide* mining operations from ground that has not previously been held as a mining tenement.

(3.) Notwithstanding that the Battery Manager may not be satisfied of the payable nature of ore, he may accept for treatment parcels of ore not exceeding 50 ton from any mining tenement newly acquired, provided that he shall be satisfied that such ore has been obtained by the holder from *bona fide* mining operations. Should the gold won from treatment be insufficient to cover crushing charges, the Battery Manager shall retain such gold, which shall be divided *pro rata* between the battery and any person having a claim for cartage charges.

(4.) In the cases provided for in Clauses 2 and 3, the holders of mining tenements affected shall notify the Battery Manager of their intention to raise ore, to allow the Battery Manager to inspect the workings.

(5.) In the event of any small parcel of exceptionally high-grade ore being treated, the Manager may make a special charge ; but the customer may, if he considers he has been overcharged, appeal to the Superintendent of State Batteries, whose decision shall be final.

(6.) Batteries will be closed down until 250 tons of ore are available for crushing at 10-head mills and 150 tons at 5-head mills, but in the event of any prospector desiring to crush during such period, feeders' wages, in addition to above rates, will be charged. The employment and control of feeders in such cases shall be solely in the control of the Battery Manager.

TIN DRESSING PLANTS.

(7.)

Plant.	Rate per hour.	Rate per ton.
Greenbushes, Bunbury End	6s. 3d. plus feeders' wages	...
Greenbushes, Salt Water Gully	8s. 6d.	...

A. M. HOWE,
Superintendent of State Batteries

APPENDIX C.

Department of Mines,
State Batteries Branch,
Perth, 5th September, 1914.

REDUCTIONS IN SCALE OF CRUSHING CHARGES AT STATE BATTERIES DURING THE WAR PERIOD.

The Hon. the Minister for Mines has authorised the following reductions in the Scale of Crushing Charges, and conditions attached to same, to take effect at the various State Batteries on and after 1st October, 1914:—

1. The following substantial reductions in the crushing charges at all State Batteries will be made only during the War period, and may be determined at any time whatsoever by the Hon. Minister for Mines, without notice.

2. The reductions outlined in Clause 4 relate only to "low grade ores." "Low grade ores" shall mean ores having a *gross value* of under 9 dwts. per ton, including the return of bullion per ton plus the agreed assay value of tailings less 3 dwts. per ton.

3. No reduction in charges shall be allowed at any battery unless the following tonnages are crushed in one continuous run of a battery. The tonnage required can be made up of all ores crushed from any number of leases or areas, whether worth under or over 9 dwts. per ton gross value:—

5-head batteries	500 tons.
10-head batteries	1,000 tons.

4. The following reductions will be allowed on all ores worth under 9 dwts. per ton gross value, as outlined in Clause 2:—

Gross value per ton.	Reduction in present charges.
(a) 8 dwts. and under 9 dwts. ..	10 per cent.
(b) 7 dwts. and under 8 dwts. ..	20 per cent.
(c) 6 dwts. and under 7 dwts. ..	30 per cent.
(d) Under 6 dwts.	40 per cent.

Note.—In cases where delays occur in connection with agreement of tailings assays, full charges shall be paid. Rebates, in such cases, will be forwarded to customers entitled thereto through Battery Managers, after assay returns are received at Head Office.

In cases where customers elect to accept the Battery Manager's assays as final, those entitled to reductions will have such deducted from their accounts.

5. There shall be no reduction in charges for the purchase of tailings. Tailings from ores worth under 9 dwts. per ton gross which have an agreed assay value of more than 3 dwts. per ton will be purchased at ordinary rates.

6. No reduction in crushing charges shall be allowed on any ore having a gross value of 9 dwts. per ton or over.

A. M. HOWE,
Superintendent of State Batteries.

Schedule 1.

Return showing the number of tons crushed, gold yield average per ton in shillings, and total value for year ending 31st December, 1917.

Battery.	Tons Crushed.	Gold Yield, Bullion.	Average per ton in shillings.	Total Value.
		ozs.		£
Bamboo Creek ...	635·25	1,398·85	158·54	5,035·60
Black Range ...	2,327·75	2,383·52	73·72	8,580·67
Boogardie	3,018·00	1,902·60	45·40	6,849·36
Coolgardie	4,965·00	2,747·40	39·84	9,890·64
Laverton	458·00	539·55	84·82	1,942·38
Leonora	819·25	1,148·85	109·66	4,135·86
Linden...	839·00	1,048·37	89·96	3,774·13
Meekatharra	2,219·00	2,637·06	85·56	9,493·41
Marble Bar	658·00	889·95	97·38	3,203·80
Mt. Egerton	1,515·50	395·90	18·80	1,425·24
Mt. Ida	413·00	296·70	51·72	1,068·00
Mt. Keith	1,243·00	1,020·65	59·12	3,674·30
Mt. Sir Samuel ...	348·00	179·40	37·11	645·84
Mulline	250·25	257·40	74·05	926·55
Mulwarrie	307·00	260·60	61·12	938·15
Niagara	261·50	179·55	49·43	646·38
Norseman	453·75	1,045·20	165·85	3,762·70
Ora Banda	2,231·75	947·70	30·57	3,411·70
Payne's Find	2,236·00	2,968·30	95·53	10,685·81
Quinns	544·00	1,098·55	145·39	3,955·78
Siberia	304·75	540·75	127·75	1,946·70
Sandy Creek	386·25	446·25	83·18	1,606·50
Warriedar	1,644·75	673·65	29·48	2,425·14
Wiluna	455·00	344·35	54·49	1,239·66
Yarri	667·50	610·95	65·90	2,199·40
Youanmi	892·00	177·90	14·36	640·45
...	30,252·25	26,214·35	62·39	94,371·56
Wiluna Lode ...	12,438·25	No Amalgamation.		

Tin Plants.

Plant.	Yards of Tin ore treated.	Yield.
		Tons.
Greenbushes, Bunbury End	856	6·438
Greenbushes, Salt Water Gully	262	2·025
	1,118	8·463

Schedule 2.

Return showing the number of tons crushed, gold yield, average per ton, and value since inception to 31st December, 1917.

Battery.	Tons Crushed.	Gold Yield, Bullion.	Average Gold per ton.		Value.
		ozs.	dwts.	grs.	£
Bamboo Creek ...	6,025·25	8,870·41	29	11	31,933·48
Black Range ...	65,547·40	68,801·35	21	0	247,880·19
Boogardie	56,157·40	34,678·09	12	9	126,235·31
Burtville	30,458·00	66,078·71	43	10	239,189·17
Coolgardie	81,938·00	65,052·57	15	21	234,242·73
Darlot	33,210·00	37,637·74	22	16	138,928·25
Laverton	15,004·50	16,086·76	21	11	59,084·06
Leonora	52,849·95	58,052·64	21	23	212,469·83
Linden	17,282·00	19,388·08	22	10	69,797·18
Meekatharra	70,579·50	80,445·54	22	19	292,283·33
Marble Bar	9,443·50	12,026·90	25	11	43,296·79
Mt. Egerton	7,114·25	3,839·86	10	19	13,090·32
Mt. Ida	40,025·98	52,867·11	26	10	193,623·77
Mt. Keith	6,977·25	6,161·90	17	16	22,182·84
Mt. Sir Samuel ...	8,618·25	6,867·25	15	22	24,722·09
Mulline	75,687·95	97,595·24	25	19	350,513·01
Mulwarrie	31,153·90	36,075·91	23	4	133,129·97
Niagara	62,610·75	55,713·59	17	19	202,757·12
Norseman	54,273·70	58,266·62	21	11	212,942·30
Ora Banda	11,208·50	5,190·74	9	6	18,686·64
Payne's Find	14,533·00	17,051·26	23	11	61,384·53
Peak Hill	15,948·80	17,665·22	22	4	64,766·03
Pinjin	17,088·65	12,912·63	15	3	46,485·04
Quinn's	11,170·50	6,190·13	11	2	22,284·47
Siberia	14,793·75	16,284·04	22	0	58,547·87
20-Mile Sandy ...	11,864·40	18,656·22	31	11	67,491·96
Tuckanarra	15,476·85	21,276·06	27	11	78,217·50
Warriedar	1,644·75	673·70	8	4	2,425·32
Wiluna	54,161·75	29,113·72	10	18	104,954·57
Yarri	44,811·50	29,321·11	13	2	105,555·82
Yerilla	14,346·25	13,048·00	18	5	44,171·72
Youanmi	25,378·00	8,605·51	6	19	30,979·83
Batteries closed ...	153,242·04	133,589·03	17	10	488,030·06
	1,130,626·19	1,114,083·64	19	17	4,042,283·13
Wiluna Lode ...	26,780·50	12,031·68	9	0	43,636·96
	1,157,406·69	1,126,115·32	19	11	4,085,920·09

Tin Plants.

Plant.	Tons.	Yield Tons Black Tin.
Greenbushes—Bunbury End	51,169·50	691·934
Greenbushes—Salt Water Gully	5,114·00	46·812
Plants Closed	15,804·25	189·531
	72,087·75	928·277

Milling.

	Tons.		ozs.
Up to 1901 (3 years)	68,791	...	75,533
1902	39,517	...	57,255
1903	49,233	...	58,305
1904	71,616	...	78,309
1905	85,018	...	92,327
1906	95,831	...	94,187
1907	95,280	...	97,962
1908	95,624	...	89,875
1909	94,218	...	83,127
1910	89,278	...	80,074
1911	59,373	...	56,265
1912	56,636	...	53,868
1913	60,573	...	52,515
1914	56,570	...	45,641
1915	49,595	...	39,095
1916	47,330	...	31,734
1917	42,947	...	38,015

Cyaniding Sands.

	Tons.
Up to 1902	29,255
1903	33,369
1904	42,559
1905	54,420
1906	60,422
1907	63,778
1908	62,081
1909	61,265

Cyaniding Sands—continued.

	Tons.
1910	43,915
1911	27,444
1912	18,599
1913	18,300
1914	6,219

Tailings.

	Tons.
1913	13,078
1914	32,723
1915	31,887
1916	34,725
1917	24,890

Slimes Treatment.

	Tons.
Up to 1904	691
1905	7,028
1906	...
1907	8,220
1908	5,818
1909	16,848
1910	28,819
1911	20,821
1912	8,085
1913	6,089
1914	6,246
1915	3,454
1916	15,536
1917	13,086

Schedule 3.

Sands Treatment for 1917.

Battery.	Tons.	Yield.	Value.
		Fine ozs.	£
Bamboo Creek	1,008	274·94	1,167·77
Black Range	1,320	402·60	1,710·46
Boogardie	2,726	709·74	3,014·51
Coolgardie	3,442	532·59	2,262·32
Laverton	600	163·89	696·15
Leonora	1,484	240·15	1,020·10
Linden	800	508·33	2,159·36
Meekatharra	5,370	910·18	3,866·15
Mt. Keith	790	65·55	278·40
Mulline	990	181·92	772·76
Norseman	174	153·91	653·80
Ora Banda	980	330·08	1,402·48
Payne's Find	2,040	223·80	950·68
Sandy Creek	1,606	465·48	1,977·09
Yarri	1,020	143·22	608·07
Youanmi	540	94·99	403·31
	24,890	5,401·37	22,943·41

Slimes Treatment for 1917.

Battery.	Tons.	Yield.	Value.
		Fine ozs.	£
Mulwarrie	1,057	152·51	648·67
Wiluna	12,029	4,631·74	19,672·45
	13,086	4,784·25	20,321·12

Residues Treatment for 1917.

Battery.	Tons.	Yield.	Value.
		Fine ozs.	£
Mulwarrie	1,143	163·44	695·42
Linden	670	95·14	349·34
	1,813	258·58	1,044·76

Schedule 4.

Sand and Tailing Treatment since Inception to 31st December, 1917.

Battery.	Tons.	Yield.	Value.
		Fine ozs.	£
Bamboo Creek	3,976·00	1,059·58	4,500·88
Black Range	40,438·00	10,864·55	45,865·97
Boogardie	37,508·00	10,262·92	43,063·44
Burtville	16,788·75	5,464·13	22,793·76
Coolgardie	45,921·00	7,113·72	29,894·00
Darlot	23,654·00	2,699·17	11,042·16
Devon	261·50	120·44	511·64
Duketon	2,083·50	250·51	1,025·77
Laverton	13,796·00	2,245·06	9,341·00
Lennonville	24,309·00	6,592·43	26,653·23
Leonora	37,139·50	9,056·71	37,699·89
Linden	14,337·00	4,600·79	19,544·63
Meekatharra	45,590·00	8,751·47	36,556·46
Menzies	31,487·50	7,975·80	33,434·78
Mt. Ida	3,570·00	357·97	1,423·64
Mt. Keith	4,953·00	551·05	2,340·31
Mt. Sir Samuel	5,886·00	1,355·67	5,758·89
Mulline	43,504·50	12,011·11	48,800·53
Mulwarrie	23,809·25	4,675·53	19,220·11
Nannine	3,650·00	410·12	1,742·50
Niagara	41,514·00	6,418·45	26,685·25
Norseman	37,739·50	7,809·61	32,416·10
Ora Banda	4,311·00	934·30	3,969·20
Payne's Find	11,253·00	1,379·69	5,860·86
Pig Well	11,379·00	2,373·25	9,962·50
Pinjin	11,718·00	1,243·07	5,256·01
Quinn's	7,486·00	686·56	2,916·43
Randells	791·00	56·05	224·80
Sandy Creek	10,644·25	3,280·57	13,653·77
Siberia	5,550·00	1,201·56	5,105·20
Southern Cross	3,471·00	452·75	1,815·18
Wiluna	17,852·00	7,930·79	33,590·87
Yarri	43,550·00	4,077·62	17,057·36
Yerilla	13,620·00	1,622·66	6,892·92
Youanmi	1,0685·00	2,829·48	12,015·71
Yundamindera	4,977·00	920·33	3,909·25
	659,203·25	139,635·47	582,545·00

Slime Treatment since Inception to 31st December, 1917.

Battery.	Tons.	Yield.	Value.
		Fine ozs.	£
Black Range	13,040·00	2,604·59	11,064·71
Boogardie	2,100·00	426·35	1,811·08
Burtville	1,643·00	519·00	2,204·71
Darlot	570·00	52·61	223·55
Laverton	273·00	45·24	192·19
Leonora	12,440·00	2,198·09	9,338·73
Linden	419·00	87·30	370·90
Meekatharra	1,980·00	462·78	1,966·08
Menzies	21,905·50	5,454·53	23,171·45
Mulline	21,576·75	6,833·05	24,557·11
Mulwarrie	3,415·50	547·53	2,326·54
Niagara	13,875·00	2,175·45	9,242·12
Norseman	16,177·50	3,577·15	15,195·06
Pig Well	340·00	64·65	274·57
Sandy Creek	293·50	75·00	318·68
Siberia	347·00	104·47	443·73
Wiluna	31,258·00	11,328·65	48,119·94
Yarri	3,792·00	364·06	1,546·62
Yerilla	424·00	44·55	189·33
	145,869·75	36,965·05	152,557·10

Residue Treatment from Inception to 31st December, 1917.

Battery.	Tons.	Yield.	Value.
		Fine ozs.	£
Menzies	24,270	1,579·26	6,679·01
Mulwarrie	3,936	444·88	1,891·83
Linden	670	95·14	349·34
	28,876	2,119·28	8,920·18
Lubra Queen	2,196	375·95	1,596·74

Schedule 5.

Return showing Number of Parcels treated and Tons crushed at State Batteries for Year 1917.

Number of Parcels crushed.	Name of Lease or Holding.	Tons.	Yield by Amalgamation. Bullion.	Yield by Amalgamation. Fine Gold.	Gross Contents of Tailings. Fine Gold.	Total Contents of Ore. Fine Gold.	Average per ton. Fine Gold.	Gross Value of Ore per ton.
			ozs.	ozs.	ozs.	ozs.	dwt. grs.	£ s. d.
12	Bamboo Creek	635·25	1,398·85	1,185·47	222·41	1,407·88	44 15	9 9 8
40	Black Range	2,327·75	2,383·52	2,019·93	1,126·08	3,146·01	27 0	5 14 8
102	Boogardie	3,018·00	1,902·60	1,612·37	662·38	2,274·75	15 3	3 4 2
47	Coolgardie	4,965·00	2,747·40	2,328·30	904·09	3,232·39	12 0	2 10 11
22	Laverton	458·00	539·55	457·22	180·65	637·87	27 20	5 17 11
23	Leonora	819·25	1,148·85	973·60	189·58	1,163·18	28 9	6 0 3
29	Linden	839·00	1,048·37	888·45	317·23	1,205·68	28 17	6 1 8
35	Meekatharra	2,219·00	2,637·06	2,234·80	391·41	2,626·21	23 16	5 0 4
10	Marble Bar	658·00	889·95	754·19	59·54	813·73	24 17	5 4 9
3	Mt. Egerton	1,515·50	395·90	335·51	396·51	732·02	9 16	2 1 0
7	Mt. Ida	413·00	269·70	228·56	77·03	305·59	14 19	3 2 1
16	Mt. Keith	1,243·00	1,020·65	864·96	137·16	1,002·12	16 1	3 7 10
15	Mt. Sir Samuel	348·00	179·40	152·03	55·35	207·38	11 22	2 10 6
11	Mulline	250·25	257·40	218·13	35·56	253 69	20 6	4 5 3
9	Mulwarrie	307·00	260·60	220 85	75 32	296·17	19 7	4 1 9
7	Niagara	261·50	179·55	152·16	52·57	204·73	16 15	3 6 2
12	Norseman	453·75	1,015·20	885·76	263·74	1,149·50	50 16	10 14 9
30	Ora Banda	2,231·75	947·70	803·13	364·67	1,167·80	10 11	2 4 1
47	Payne's Find	2,236·00	2,968·30	2,515·50	207·15	2,722·65	24 8	5 4 10
8	Quinn's	159·00	74·30	62·96	19·83	82·79	10 10	2 4 2
14	Peak Hill	544·00	1,098·55	930·97	181·13	1,112·10	40 21	8 13 4
9	Siberia	304·75	540·75	458·26	62·52	520·78	34 4	7 4 2
11	Sandy Creek	386·25	446·25	378·18	77·32	455·50	23 14	5 0 0
19	Warriedar	1,644·75	673·65	570·89	502·80	1,073·69	13 1	2 12 10
42	Wiluna	455·00	344·35	291·82	167·77	459·59	20 5	4 5 8
14	Yarri	667·50	610·95	517·75	144·06	661·81	19 20	4 4 1
1	Youanmi	892·50	177·90	150·76	101·02	251·78	5 15	1 3 10
569		30,252·25	26,187·25	22,192·51	6,974·88	29,167·39	18 6	3 17 5
26	Wiluna Lode	12,438·25	No. Amalgamation.		7,251·32	7,251·32	11 15	2 9 3
595		42,690·50			14,226·20	36,418·71		
	Less estimated tonnage under treatment, 31-12-16	108·00						
		42,582·50						
	Estimated—Add tonnage under treatment, 31-12-17	365·00						
		42,947·50		...	...	...	...	3 12 0

Tin Plants.

No. of Parcels.	——	Yards of Tin ground treated.	Yield. Tons.	Average per yard.
26	Greenbushes—Bunbury End	856·00	6,438·00	16·85
10	Greenbushes—Salt Water Gully	262·00	2,025·00	17·33
36		1,118·00	8,463·00	17·02

Schedule 6.

Estimate from Consolidated Revenue Vote and Loan Expenditure Funds on Erection of State Batteries for year ending 31st December, 1917, and totals since Inception.

Battery.	From Revenue.	From Loan.	Total.
	£ s. d.	£ s. d.	£ s. d.
Wiluna Slime Plant—Erection	...	22 12 0	22 12 0
20-Mile Sandy Creek—Erection of 5-head Mill	...	17 19 0	17 19 0
Laverton Tailing Plant and General Overhaul	...	3 4 8	3 4 8
Warriedar Battery — Water Supply	...	420 14 9	420 14 9
Warriedar Battery—Erection	...	898 7 9	898 7 9
Tazewell Automatic Samplers	...	392 0 7	392 0 7
Linden Cyanide Plant—Reconstruction	...	268 12 0	268 12 0
	...	2,023 10 9	2,023 10 9
Erection of State Batteries—			
Expenditure to 31st December, 1907	91,981 1 8	...	...
Loan Expenditure to 31st December, 1916	...	272,533 19 4	364,515 1 0
Grand Totals	91,981 1 8	274,557 10 1	266,538 11 9

Schedule 7.

Direct Purchase of Tailing for 1917.

Battery.	Tons.	Amount.
		£ s. d.
Bamboo Creek	1,117·50	1,204 17 8
Black Range	1,820·25	3,213 9 8
Boogardie	1,640·25	1,142 11 6
Coolgardie	1,909·50	1,396 6 4
Laverton	413·25	256 6 8
Leonora	243·50	80 3 1
Linden	681·25	852 2 5
Meekatharra	1,428·25	759 16 0
Mt. Keith	295·50	51 14 3
Mt. Sir Samuel	222·75	136 4 0
Mulline	220·75	76 3 8
Mulwarrie	243·75	127 17 9
Niagara	261·25	68 8 6
Norseman	422·00	945 3 4
Ora Banda	681·50	633 13 6
Payne's Find	482·00	99 7 8
Quinn's	106·50	56 4 9
20-Mile Sandy Creek	257·00	68 7 1
Siberia	128·25	102 9 8
Wiluna	12,457·25	15,327 18 2
Warriedar	1,219·75	918 4 3
Yarri	475·50	266 9 7
Yerilla	44·00	10 14 6
Mt. Jackson	32·50	4 2 0
	26,799·00	27,898 16 0

Schedule 7a.

Return showing Tailing payable and unpayable and Gross Contents.

Battery.	Tailing purchased.				Unpayable.				Total.			
	Tons.	Gross Contents.			Tons.	Gross Contents.			Tons.	Gross Contents.		
		ozs.	d.	grs.		ozs.	d.	grs.		ozs.	d.	grs.
Bamboo Creek	384¾	202	14	12	121⅞	19	13	18	506½	222	8	6
Black Range	1,656¾	1,088	2	9	314¼	37	19	8¼	1,970¾	1,126	1	17¼
Boogardie	1,604¾	582	11	16¾	808¼	79	16	1	2,413	662	7	17¾
Coolgardie	2,200¾	690	8	5	2,014¼	213	13	16½	4,215	904	1	21½
Laverton	360¼	177	0	9¾	28¾	3	12	16	388¾	180	13	1¼
Leonora	428½	163	16	23	268⅞	25	14	16	697¼	189	11	15
Linden	553	300	8	8½	158⅛	16	16	7¾	711½	317	4	16
Marble Bar	358¼	44	11	6½	166	14	19	16¼	524¼	59	10	22¾
Meekatharra	1,221¾	342	10	18½	608	48	17	12	1,829¾	391	8	6¾
Mt. Egerton	1,180	393	19	13½	32	2	10	16	1,212	396	10	5½
Mt. Ida	207¼	61	10	23¼	122½	15	9	18½	330	77	0	17¾
Mt. Keith	388½	86	16	6	605¾	50	6	23½	994¼	137	3	5¾
Mt. Sir Samuel	216¾	55	7	1½	...	...			216¾	55	7	1½
Mulline	136¼	29,	17	19½	64	5	13	12	200¼	35	11	7½
Mulwarrie	220¼	75	6	10½	...	...			220¼	75	6	10½
Niagara	207	52	0	23	8½	0	10	15	215½	52	11	14
Norseman	373¾	262	11	20	11½	1	3	0	385¼	263	14	20
Ora Banda	608¾	286	4	3½	1,157¾	78	9	6¼	1,766½	364	13	9¾
Payne's Find	361	85	1	15½	1,429½	122	1	8¾	1,790½	207	3	0¼
Quinn's	66½	15	11	4	57	4	5	11	123½	19	16	5
Peak Hill	420¾	179	12	7¼	20	1	10	8	440¾	181	2	15¼
Sandy Creek	256¼	61	6	19	49	15	19	16	305¼	77	6	11
Siberia	128¼	53	8	2½	115¾	9	2	8	244	62	10	10½
Warriedar	1,191½	483	9	10¾	142¾	19	6	14	1,334¼	502	16	0¾
Wiluna	314¾	161	17	19	55½	5	17	15¼	370	167	15	10¼
Yarri	347¼	127	18	12¾	201	16	2	17¾	548¼	144	1	6¼
Youanmi	...	...			713½	101	1	14	713½	101	1	14
Wiluna Lode	15,393·00	6,064	5	8¼	9,274¼	910	15	3½	24,667¼	6,975	0	11¾
	12,438·25	7,251	6	13¼	No amalgamation				12,438¼	7,251	6	13¼
Totals	27,831·25	13,315	11	21½	9,274¼	910	15	3½	37,105¼	14,226	7	1

SCHEDULE 8.

Report 1917.—Statement of Receipts and Expenditure for Year ending 31st December, 1917.

MILLING AND TIN.

Plant.	Tonnage.	Management.	Wages.	Stores.	Total Working Expenditure.	Cost per ton.	Repairs and Renewals.	Sundries.	Gross Expenditure.	Cost per ton.	Receipts.	Per ton.	Profit.	Loss.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	s. d.	£ s. d.	£ s. d.	£ s. d.	s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Bamboo Creek	635·25	91 16 11	283 5 11	207 13 3	582 16 1	18 4·20	76 7 8	84 13 6	743 17 3	23 5·01	402 16 10	12 8·18	...	341 0 5
Black Range	2,327·75	200 0 0	497 2 3	405 1 9	1,102 4 0	9 5·64	240 3 1	117 9 3	1,459 16 4	12 6·50	1,192 0 10	10 2·9	...	267 15 6
Boogardie	3,018	260 1 10	839 6 7	532 10 8	1,631 19 1	10 9·76	176 9 2	230 3 2	2,038 11 5	13 6·12	1,429 3 5	9 5·64	...	609 8 0
Burtville	...	25 14 2	74 11 1	1 6 11	101 12 2	...	...	24 9 9	126 1 11	...	...	...	...	126 1 11
Coolgardie	4,965	290 13 0	497 0 0	772 8 6	1,560 1 6	6 3·43	359 9 4	377 11 6	2,297 2 4	9 3·04	2,199 14 5	8 10·32	...	97 7 11
Darlot	...	44 17 1	49 12 8	...	94 9 9	...	...	...	94 9 9	...	...	...	...	94 9 9
Laverton	458	104 10 0	169 1 11	175 0 3	448 12 2	19 7·12	21 9 11	51 6 7	521 8 8	22 9·24	263 19 10	11 6·33	...	257 8 10
Leonora	819·25	98 0 0	220 16 9	212 13 8	531 10 5	12 11·71	72 19 4	90 5 6	694 15 3	16 11·52	390 9 0	9 6·38	...	304 6 3
Linden	839	119 0 0	184 0 1	169 1 7	472 1 8	11 3·26	79 15 9	134 14 9	686 12 2	16 4·41	477 5 10	11 4·53	...	209 6 4
Marble Bar	666	136 5 9	276 0 8	213 19 7	626 6 0	18 9·69	110 16 1	45 18 3	783 0 4	23 6·16	394 16 0	11 10·27	...	388 4 4
Meekatharra	2,219	191 0 10	438 17 3	230 3 1	860 1 2	7 9·02	94 0 3	196 1 1	1,150 2 6	10 5·47	805 13 1	7 3·14	...	344 9 5
Menzies	...	13 2 10	46 3 9	21 0 6	80 7 1	...	...	22 16 11	103 4 0	...	...	...	...	103 4 0
Mt. Egerton	1,407·50	218 2 9	340 4 11	279 0 7	837 8 3	11 9·64	35 6 0	155 18 10	1,028 13 1	14 7·39	738 18 9	11 11·04	...	289 14 4
Mt. Ida	413	78 6 10	207 17 4	65 9 10	351 14 0	17 0·38	10 3 4	23 5 8	385 3 0	18 8·25	240 11 11	12 1·03	...	144 11 1
Mt. Jackson	...	...	...	...	...	...	...	...	...	...	38 0 0	...	38 0 0	...
Mt. Keith	1,234	81 16 0	483 1 7	184 9 11	749 7 6	12 0·69	75 19 11	120 15 11	946 3 4	15 2·69	624 19 4	10 0·65	...	321 4 0
Mt. Sir Samuel	348	45 0 0	260 7 1	81 7 5	386 14 6	22 2·71	15 5 8	50 9 2	452 9 4	26 0·05	184 6 6	10 7·13	...	268 2 10
Mulline	250·25	103 11 5	50 10 3	75 12 11	229 14 7	18 4·29	169 17 11	49 14 9	449 7 3	35 10·94	165 9 3	13 2·73	...	283 18 0
Mulwarrie	307	19 14 3	98 14 6	63 14 11	182 3 8	11 10·41	114 6 6	31 5 9	327 15 11	21 4·26	156 12 11	10 2·45	...	171 3 0
Niagara	261·50	215 0 0	99 4 1	76 9 7	390 13 8	29 10·56	89 19 11	47 12 1	528 5 8	40 4·84	129 3 0	9 10·52	...	399 2 8
Norseman	453·75	205 9 4	171 4 9	110 19 2	487 13 3	21 5·23	10 16 0	51 17 1	550 6 4	24 3·07	247 9 7	11 4·25	...	302 16 9
Ora Banda	2,231·75	256 1 6	493 8 2	281 4 10	1,030 14 6	9 2·83	49 1 2	186 0 5	1,265 16 1	11 4·10	923 15 1	8 3·34	...	342 1 0
Payne's Find	2,236	210 0 0	576 4 5	366 17 8	1,153 2 1	10 3·76	79 7 10	159 7 3	1,391 17 2	12 5·37	1,181 6 11	10 6·79	...	210 10 3
Pinjin	...	...	...	...	...	...	...	...	...	...	6 12 0	...	6 12 0	...
Peak Hill	544	152 0 0	112 0 3	53 8 2	317 8 5	11 8·04	38 5 2	33 5 1	388 18 8	14 3·59	265 2 8	9 9·09	...	123 16 0
Quinn's	159	3 0 0	144 10 8	56 10 10	204 1 6	25 9·04	15 13 4	47 19 10	267 14 8	33 8·07	101 3 8	12 8·72	...	166 11 0
Sandy Creek	526·25	95 16 4	226 0 7	95 15 2	417 12 1	15 10·46	20 1 0	56 14 9	494 7 10	18 9·48	329 7 0	12 6·19	...	165 0 10
Siberia	304·75	34 0 0	82 8 9	47 0 2	163 8 11	10 8·71	13 19 6	44 2 0	221 10 5	14 6·45	132 6 11	8 8·46	...	89 3 6
Tuckanarra	...	...	...	...	...	...	...	...	...	...	12 11 10	...	12 11 10	...
Warriedar	1,644·75	213 2 6	499 16 8	511 3 4	1,224 2 6	14 10·63	17 17 6	105 14 4	1,347 14 4	16 4·65	1,175 14 10	14 3·55	...	171 19 6
Wiluna	13,110·25	212 10 6	1,458 12 9	816 5 3	2,487 8 6	3 9·52	843 4 7	800 16 1	4,131 9 2	6 3·62	4,481 9 8	6 10·03	350 0 6	...
Yarri	667·50	45 0 0	192 8 3	111 2 0	348 0 3	10 5·16	163 12 11	86 17 1	599 0 3	17 11·37	348 19 9	10 5·47	...	250 0 6
Youanmi	892	28 0 0	249 8 7	124 16 0	402 4 7	9 0·21	50 10 7	115 4 7	567 19 9	12 8·82	293 8 0	6 6·94	...	274 11 9
Yerilla	...	...	...	4 4 7	4 4 7	...	...	...	4 4 7	...	...	...	...	4 4 7
Black Range Sales	...	...	...	58 3 9	58 3 9	...	...	...	58 3 9	...	58 3 9	...	...	...
Darlot Sales	...	...	...	3 0 0	3 0 0	...	...	...	3 0 0	...	3 0 0	...	...	...
Leonora Sales	...	...	...	1 0 0	1 0 0	...	...	...	1 0 0	...	1 0 0	...	...	...
Linden Sales	...	...	...	1 15 0	1 15 0	...	...	...	1 15 0	...	1 15 0	...	...	...
Meekatharra Sales	...	...	...	12 8 6	12 8 6	...	...	...	12 8 6	...	12 8 6	...	...	...
Menzies Sales	...	...	...	18 12 0	18 12 0	...	...	...	18 12 0	...	18 12 0	...	...	...
Mt. Keith Sales	...	...	...	7 8 6	7 8 6	...	...	...	7 8 6	...	7 8 6	...	...	...
Mulwarrie Sales	...	...	...	0 12 0	0 12 0	...	...	...	0 12 0	...	0 12 0	...	...	...
Peak Hill Sales	...	...	...	97 9 9	97 9 9	...	...	...	97 9 9	...	97 9 9	...	...	...
Quinn's Sales	...	...	...	22 12 2	22 12 2	...	...	...	22 12 2	...	22 12 2	...	...	...
30-Mile Sandy	...	...	...	3 15 0	3 15 0	...	...	...	3 15 0	...	3 15 0	...	...	...
Warriedar Sandy	...	...	...	22 15 7	22 15 7	...	...	...	22 15 7	...	22 15 7	...	...	...
	42,947·50	3,791 13 10	9,322 2 6	6,596 4 4	19,710 0 8	9 2·13	3,044 19 5	3,542 10 11	26,297 11 0	12 2·95	19,583 1 1	9 1·42	407 4 4	7,121 14 3
TIN PLANTS.														
Greenbushes—Bunbury End ...	856	153 18 6	53 7 4	51 2 5	258 8 3	6 0·43	80 17 9	57 9 2	396 15 2	9 3·24	152 9 1	3 6·74	...	244 6 1
do. S.W.G.	262	180 0 0	23 6 6	12 7 6	215 14 0	16 5·59	10 17 6	5 1 0	231 12 6	17 8·16	53 15 3	4 1·25	...	177 17 3
	44,065·50	4 125 12 4	9,398 16 4	6,659 14 3	20,184 2 11	91 1·92	3,136 14 8	3,605 1 1	26,925 18 8	12 2·64	19,789 5 5	8 11·78	407 4 4	7,543 17 7

SCHEDULE 9.

Annual Report, 1917.—Statement of Receipts and Expenditure for 12 Months ending 31st December, 1917.

TAILING, SLIME, AND RESIDUE.

Plant.	Tonnage.	Management.	Wages.	Assays.	Stores.	Total Working Expenses.	Cost per ton.	Repairs and Renewals.	Sundries.	Gross Expenditure.	Cost per ton.	Receipts.	Per ton.	Profit.	Loss.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	s. d.	£ s. d.	£ s. d.	£ s. d.	s. d.	£ s. d.	s. d.	£ s. d.	£ s. d.
Bamboo Creek ...	1,008	61 2 2	176 7 9	19 5 1	169 15 1	426 10 1	8 5·54	3 7 6	78 19 7	508 17 2	10 0·96	468 14 1	9 0·30	...	40 3 1
Black Range ...	1,320	115 0 0	195 8 0	41 12 9	206 13 2	558 13 11	8 4·66	28 11 3	63 4 2	650 9 4	9 8·56	666 19 7	10 1·06	16 10 3	...
Boogardie	3,090	111 1 0	348 0 0	47 7 4	453 3 11	959 12 3	6 2·12	12 0 0	112 17 8	1,084 9 11	7 0·20	1,421 7 10	9 2·00	336 17 11	...
Coolgardie	3,442	105 9 11	435 4 10	53 15 5	481 13 5	1,076 3 7	6 2·54	12 17 0	161 16 2	1,250 16 9	7 2·68	1,547 10 0	8 9·78	296 13 3	...
Laverton	600	42 10 0	78 10 10	16 10 5	76 16 1	214 7 4	7 1·46	...	27 4 3	241 11 7	8 0·52	336 18 6	11 2·30	95 6 11	...
Leonora	1,484	68 10 0	223 18 10	22 2 11	198 13 9	513 5 6	6 9·16	7 16 2	89 16 1	610 17 9	8 2·32	670 4 6	9 0·32	59 6 9	...
Linden	800	35 0 0	138 19 2	29 15 10	141 14 8	345 9 8	8 6·36	12 16 6	71 2 10	429 9 0	10 7·36	385 0 0	9 1·25	...	44 9 0
Meekatharra ...	5,370	165 0 0	787 14 8	20 18 2	626 15 10	1,600 8 8	5 9·60	18 19 0	262 19 7	1,882 7 3	7 0·10	2,121 19 7	7 8·99	239 12 4	...
Mt. Keith	790	32 4 0	82 17 6	21 16 3	82 19 4	219 17 1	5 5·66	1 14 2	51 13 5	273 4 8	6 9·12	311 2 5	7 8·76	37 17 9	...
Mulline	990	...	278 9 9	33 4 1	186 13 0	498 6 10	10 0·68	23 14 4	72 17 10	571 4 8	11 5·40	454 19 4	9 1·91	...	116 5 4
Niagara	...	...	10 10 8	...	...	10 10 8	...	23 14 4	10 8 9	44 13 9	...	26 1 2	...	...	18 12 7
Norseman	174	42 8 7	20 6 11	14 16 8	34 11 1	112 3 3	12 8·92	...	14 16 9	127 0 0	14 5·96	74 16 8	8 6·02	...	52 3 4
Ora Banda	1,040	74 18 9	103 10 0	70 16 11	154 7 0	403 12 8	7 7·62	...	72 8 4	476 1 0	9 1·54	532 3 5	10 2·34	56 2 5	...
Payne's Find ...	2,040	125 0 0	235 11 4	16 5 8	277 14 10	654 11 10	6 4·16	13 5 1	134 15 11	802 12 10	7 8·68	694 18 7	6 8·12	...	107 14 3
Quinn's	...	...	...	0 5 11	...	0 5 11	...	...	...	0 5 11	...	...	...	...	0 5 11
Sandy Creek ...	966	97 4 5	261 15 6	16 13 1	178 14 1	554 7 1	11 4·76	8 1 3	90 6 0	652 14 4	13 5·14	509 2 5	10 5·40	...	143 11 11
Yarri	1,020	41 0 0	148 0 4	30 14 11	116 13 2	336 8 5	6 5·96	12 12 3	64 9 0	413 9 8	8 1·08	393 18 4	7 7·24	...	19 11 4
Yerilla	...	...	...	...	...	...	...	...	9 0 0	9 0 0	...	15 13 10	...	6 13 10	...
Youanmi	540	17 0 0	49 10 0	14 7 3	41 15 2	122 12 5	4 6·48	10 9 7	42 10 1	175 12 1	6 6·07	239 11 8	8 10·46	63 19 7	...
Mt. Sir Samuel ...	...	...	...	...	...	...	...	...	4 19 2	4 19 2	...	66 4 11	...	61 5 9	...
	24,674	1,133 8 10	3,574 16 1	470 8 8	3,428 13 7	8,607 7 2	6 11·84	166 4 1	1,436 5 7	10,209 16 10	8 3·31	10,937 6 10	8 10·36	1,270 6 9	542 16 9
SLIMES.															
Mulwarrie	2,159	61 0 11	285 7 11	22 17 4	515 10 1	884 16 3	8 1·96	1 3 0	79 4 0	965 3 3	8 9·40	1,018 1 1	9 4·30	52 17 10	...
Wiluna	13,249	207 18 8	2,078 1 8	369 16 7	2,260 19 3	4,916 16 2	7 5·06	906 17 5	690 6 0	6,513 19 7	9 10·00	5,356 19 4	8 1·03	...	1,157 0 3
RESIDUES.															
Greenbushes ...	144	26 1 6	25 17 8	...	11 5 10	63 5 0	8 7·84	0 11 11	9 0 0	72 16 11	10 1·18	32 2 2	4 4·58	...	40 14 9
Linden	670	30 0 0	67 13 8	16 9 9	36 18 8	151 2 1	4 5·10	...	44 6 7	195 8 8	5 0·82	195 8 8	5 8·34	...	...
Mulwarrie	1,561	35 0 6	215 19 3	23 1 10	387 9 4	661 10 11	8 4·76	...	73 9 9	735 0 8	9 4·18	735 0 8	9 4·18	...	...
	42,457	1,493 10 5	6,247 16 3	902 14 2	6,640 16 9	15,284 17 7	7 2·40	1,074 16 5	2,332 11 11	18,692 5 11	8 9·67	18,274 18 9	8 7·29	1,323 4 7	1,740 11 9

SCHEDULE 10.

STATE BATTERIES.

Balance Sheet from Inception of Scheme to 31st December, 1917.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To Capital Expenditure—			By Batteries, Cyanide and Slimes Plants ..	366,538 11 9	
From General Loan Fund	274,557 10 1		Less depreciation	272,603 18 11	
From Consolidated Revenue	91,981 1 8				93,934 12 10
		366,538 11 9			
To Treasury		94,041 19 6	By Stores		12,575 5 8
To Interest and Sinking Fund ..		217,044 5 9	By Sundry Debtors		8,999 2 2
To Sundry Creditors		2,990 18 4	By Profit and Loss		565,106 14 8
		£680,615 15 4			£680,615 15 4

Profit and Loss Account.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To Expenditure—			By Revenue ..	1,053,735 10 3	
Head Office and all Batteries ..	1,129,194 0 3		Less working carried down ..	75,458 10 0	
		1,129,194 0 3			1,129,194 0 3
To loss on working brought down ..	75,458 10 0				
To interest at 3½ per cent. and Sinking Fund at 1¼ per cent. on capital expenditure ..	217,044 5 9				
To Depreciation ..	272,603 18 11				
		565,106 14 8	Gross Loss		565,106 14 8

SCHEDULE 11.

Working Profit and Loss for Year ending 31st December, 1917.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To Expenditure as per attached Statement—			By Revenue as per Statement	19,539 13 2	
Batteries and Tin Plants	26,676 6 5		Tailings and Slimes charges	18,274 18 9	
Tailings and Slimes Plants	18,692 5 11				37,814 11 11
		45,368 12 4	Net loss on year's operations ..		7,554 0 5
		£45,368 12 4			£45,368 12 4

DIVISION IV.

ANNUAL PROGRESS REPORT

OF THE

GEOLOGICAL SURVEY

For the Year 1917,

WITH TWO MAPS.

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The Hon. C.A. Hudson M.L.A.
Minister for Mines.

MAP OF
WESTERN AUSTRALIA

Showing
The Chief Localities at which useful Minerals occur;
and
The Boundaries of the Goldfields & other Mining Districts.

Scale of Miles
50 40 30 20 10 0 50 100 150 200

REFERENCE

Railways ..... shown thus
Telegraph Lines & Stations ... "
Stock Routes ..... "
Steamer Routes ..... "

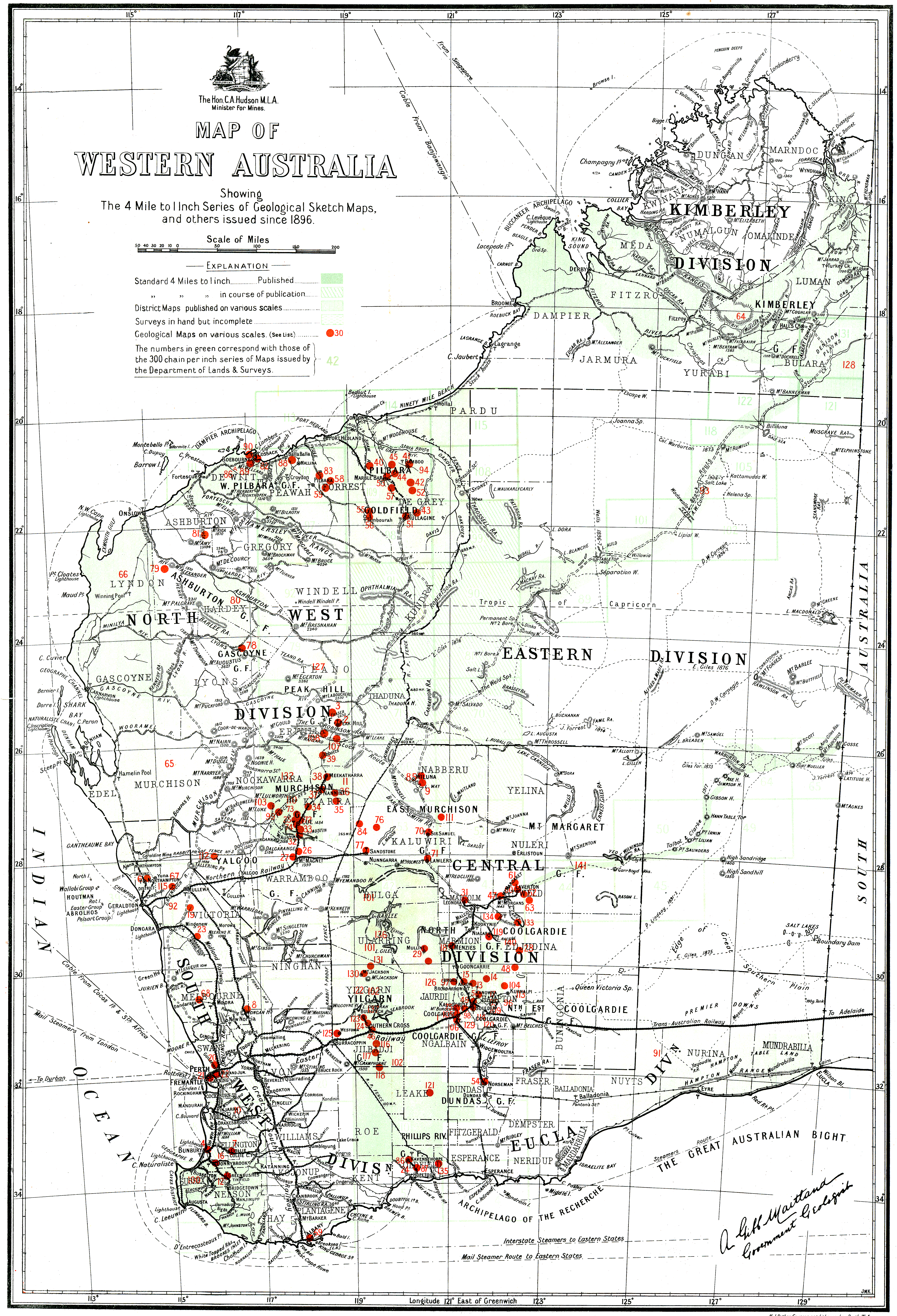
REFERENCE TO MINERAL SIGNS

GOLD (other than Goldfields)	Au	LEAD	Pb
DIAMONDS	Cd	TIN	Sn
COPPER	Cu	ANTIMONY	Sb
IRON	Fe	ASBESTOS	Ab
MICA	M	GUANO AND ROCK PHOSPHATE	Gn
COAL	CC	GRAPHITE	CG
SILVER	Ag	COBALT	Co
ALUMINIUM	Al	BISMUTH	Bi
MANGANESE	Mn	DIATOM-EARTH	Si
OTHER GEMSTONES	Gm	TANTALUM	Ta
ZINC	Z	TUNGSTEN	W
SALT	Na	NICKEL & COBALT	Ni Co
MOLYBDENUM	Mo	CORUNDUM	Cm

Interstate Steamers to Eastern States
Mail Steamer Route to Eastern States

Longitude 121° East of Greenwich

H.J. Pether, Government Lithographer, Perth, W.A.



LIST OF GEOLOGICAL MAPS.

Geological Maps of Individual Centres.

No.	Map	Annual Report	Plate	No. of Bulletin	Plate	No. of Bulletin	Plate
1.	Coolgardie	1897	VII.	3	II.		
2.	Peak Hill	,,	II.				
3.	Horseshoe	,,	III.				
4.	Bunbury	,,	IV.				
5.	Kanowna	,,	VI.	47	I.		
6.	Northampton	1897	I.	9			
7.	Collie Coal Field	1898	I.	64	I.		
8.	Wongan Hills	,,	IV.				
9.	Lake Way	,,	VI.				
12.	Greenbushes	1899	I.	32	V.		
13.	Mulgarrie	,,	II.				
14.	Lindsay's and Hayes' New Find	,,	III.				
15.	Bardoc	,,	IV.				
16.	Donnybrook	,,	V.				
17.	Kanowna	,,	VI.	47	I.		
18.	Menzies	,,	VII.	22	VII.		
19.	Irwin Coal Field	1899	III.	38	I.		
20.	Wanneroo	,,	IV.				
21.	Canning River Valley	,,	V.				
22.	Helena River Valley	,,	VI.				
23.	Arrino	,,	I. and II.				
25.	Auriferous Reefs, Cue and Day Dawn	...		7	I.		
26.	Lennonville	...		8	I.	59	IX.
27.	Mt. Magnet and Boogardie	...		8	II.	59	IX.
28.	Edjudina and Yarri	...		11	I.		
29.	Mulline	...		12	I.	64	XVI.
30.	Mulwarrie and Davyhurst	...		12	II.		
31.	Leonora	...		13	I.		
32.	The Island	...		14	II.		
33.	The Mainland	...		14	III.		
34.	Tuckanarra	...		14	IV.		
35.	Quinns	...		14	V.		
36.	Gabanintha and Star of the East	...		14	VI.		
37.	Nannine	...		14	VII.		
38.	Meekatharra	...		14	VIII.	68	IV., XIII., XXII., XXIII., XXIV.
39.	Abbotts	...		14	IX.		
40.	Lalla Rookh	...		15	II.	40	II.
41.	Bamboo	...		15	IV.	40	IV.
42.	Yandicoogina	...		15	V.	40	V.
43.	Mosquito Creek	...		15	VI.	40	VI.
44.	Moolyella	...		15	VII.	40	VII.
45.	Talga Talga	...		15	III.	40	III.
46.	Southern Cross	...		17	I.	32, VI.; 48, I.; 49, II.	
47.	Mt. Morgans	...		18	I.		
48.	Mulgabbie	...		18	II.		
49.	Kalgoorlie	Separately					
50.	Boulder Belt	Separately					
51.	Nullagine	...		20	I.	40	VIII.
52.	Warrawoona	...		20	III.	40	X.
53.	Marble Bar	...		20	VII.	40	XIV.
54.	Norseman	...		21	VI.		
55.	Tambourah	...		23	I.	40	XV.
56.	Western Shaw	...		23	II.	40	XVI., XVII.
57.	Just in Time	...		23	IV.	40	XVIII.
58.	Wodgina	...		23	V.	40	XIX.
59.	Stannum	...		23	VI.	40	XX.
60.	Laverton	...		24	I.		
61.	Lancefield	...		24	II.		
62.	Heaphy's Find	...		24	III.		
63.	Burtville	...		24	IV.		
68.	Dandaraga	...		26	III.		
69.	Princess Royal Harbour	...		26	IV.		
70.	Sir Samuel	...		28	VI.		
71.	Lawlers	...		28	VII.		
72.	Cue	...		29, Pt. 1	XVI.		
73.	Cuddingwarra	...		29, Pt. 1	XVII.		
74.	Day Dawn	...		29, Pt. 2	IX.		
75.	Bonnievale	...		31, Pt. 1	VI.		
76.	Birrigrin	...		31, Pt. 2	III.		
77.	Sandstone and Nungarra	...		31, Pt. 2	IV.	62	V.
78.	Bangemall	...		33	II.		
79.	Uaroo	...		33	V.		
81.	Red Hill	...		33	IX.		
82.	Roebourne	...		33	XI.		
83.	Station Peak	...		33	XII.		
84.	Barrambi	...		34	I.		
85.	Wiluna	...		34	II.		
86.	Ravensthorpe	...		35	I.		
87.	Mt. Desmond and Kundip	...		35	II.		
88.	Whim Creek	...		41	II.		
89.	Glenroebourne	...		41	IV.		
90.	Weerianna	...		41	V.		
95.	Kalgoorlie	...		42	I.		
96.	Kalgoorlie (Sheets)	...		51	XII.	Sheets 1, 2, 5, 6, 7, 10, 11. [illegible]	
				69	XII.	Sheets 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21.	
97.	Ora Banda	...		54	I.		
98.	Binduli	...		56	II.		
99.	Coodardie	...		57	IV.		
103.	Poona	...		57	V.		
104.	Kurnalpi	...		59	II.		
107.	Ruby Well	...		59	IV.		
108.	Mikhaburra	...		59	VII.		
111.	Mt. Keith	...		59	VIII.		
112.	Royal Standard G.M.	...		59	XII.		
113.	Woodline Rush	...		59	XIII.		
114.	Golden Ridge	...		59	XV.	66	III.
115.	Narra Tarra Mines	...		59	XXIII.		
116.	Marvel Loch	...		63	II.		
117.	Gt. Victoria and Parker's Range	...		63	III.		
118.	Olga, Dulcie, and Cheritons	...		63	IV.		
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120.	Golden Ridge	...		66	III.		
122.	Eenuin Centre	...		71	VI.		
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130.	Jackson	...		71	XVII.		
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133.	Linden	...		73	II.		
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135.	Munglinup	...		76	I.		

District Geological Maps.

No.	Map	Annual Report	Plate	No. of Bulletin	Plate	No. of Bulletin	Plate
10.	South-Western Districts	1898	III.				
11.	Murchison and Sandford Rivers	,,	V.				
24.	Phillips River	...		5	I.		
64.	Kimberley	...		25	I.		
65.	Artesian Water North of Northampton	...		26	I.		
66.	Artesian Water between the Minilya and Ashburton Rivers	...		26	II.		
67.	Greenough River District	...		26	V.	59	I.
80.	Ashburton and Gascoyne G.Fs.	...		33	II.		
86a.	West Pilbara G.F.	...		33	X.		
91.	Country along Transcontinental Railway	...		37	I.		
92.	Country between Arrino and Northampton	...		38	I.	2 sheets	
93.	Wiluna to Hall's Creek	...		39	I.		
94.	Pilbara G.F.	...		40	I.	52	X.
100.	Portion of South-Western Division	...		44	I.	65	I., II.
101.	Maps (2) of the Country around Lake Barlee	...		45	I.-II.		
102.	Portion of Yilgarn G.F.—Maps (2)	...		46	I.	63	I.
105.	Between Coolgardie and Londonderry	...		53	I.		
106.	Tindall's and Londonderry	...		53	II.		
109.	Between Coolgardie and Boulder	...		56	I.		
110.	Part of the Murchison G.F.	...		57	III.		
121.	Bremer Range	...		59	XIX.		
126.	Kalgoorlie and Mulline	...		64	XV.		
127.	Peak Hill G.F.	...		48	II.		
128.	Hall's Creek to South Australian Border	...		39	II.		
129.	Part of Coolgardie and East Coolgardie G.Fs.	...		66	I.-II.		
132.	Meekatharra District and Country to East	...		68	II.		
136.	...	...		71	II.		
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138.	...	...		71	IV.		
139.	...	...		71	V.		
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141.	...	...		75	I., II., III.		

The Bulletins referred to in the above list may be perused at the Geological Bureaus, and many of the Public Libraries and Scientific Institutions throughout the world.

Copies may be purchased from the Agent General for Western Australia at Savoy House, 115–116 Strand, London, England, or at the offices of the Geological Survey of Western Australia, Beaufort Street, Perth.

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Annual Progress Report of the Geological Survey for the Year 1917.

Compared with previous years, a greater proportion of the Staff's time for the calendar year 1917 was devoted to writing reports rather than field work. This was due mainly to the accumulation of information, which had been previously collected, assuming such proportions that it was found necessary to write it up ready for the printer before a fresh programme could be undertaken.

The results are evidenced by the fact that during the year six new publications have been issued; two are complete for the printer, and eight more are in hand and mostly completed.

Throughout the year the work has been carried out on similar lines to those adopted in previous years. More attention, however, is being given to the study of the occurrences of base metals and minerals of economic value. In conjunction with the latter, experiments are being carried on in the Laboratory with regard to our Clays, Potash minerals, etc., the results of which will be felt in the near future, and which should be of great value to intending manufacturers.

An increase in the Chemical Staff and a more extensive Laboratory would greatly augment this section of the work, and no doubt tend to establishment of industries at present non-existent in the State.

THE STAFF.

In the early part of the year the Survey met with a serious loss in its Staff by the death, after a very brief illness, of Harry Page Woodward, the Assistant Government Geologist. As one of our pioneer geologists, Mr. Woodward possessed a personal knowledge of the greater portion of the State such as few men, if any, possess, and though many of his writings will continue to stand out in bold relief, by his death the State loses one of its leading geologists and a source of information difficult to replace.

C. S. Honman is now on the Western Front doing his bit "for us" and his country. We congratulate him in being one of three to pass all examinations before leaving for a Commission in the Engineers.

There has been no other change in the personnel of the permanent Staff.

FIELD WORK.

Owing to Mr. Woodward's demise, the field work of the South-Western Division was suspended, but his notes and maps are in the hands of the Director of the Survey, and being prepared by him for publication.

The Director of the Survey was also engaged for portions of the year on field work in the Yalgoo Goldfield, which he had commenced in the previous year.

Otherwise he was engaged in compiling a Mining Handbook and other publications enumerated in the list accompanying this report, and in the ordinary administrative work of the office. For the remainder of the field Staff the enclosed list sets out the district in which each officer worked, also the number of days occupied in each district.

The following brief description of the work done by each officer, with the short reports and *résumés* of Bulletins written during the year, shows clearly the work accomplished for the period under review, and needs no further comment on my part.

Lists of publications issued, ready for printer, or in progress, together with a description of Specimens donated, are appended.

Table showing the Distribution of Field Work for the Year 1917.

Goldfield or Land Division.	T. Blatchford.		J. T. Jutson.		H. W. B. Talbot.		E. de C. Clarke.		F. R. Feldtmann.	
	No. of days in the field.	Percentage of working days.	No. of days in the field.	Percentage of working days.	No. of days in the field.	Percentage of working days.	No. of days in the field.	Percentage of working days.	No. of days in the field.	Percentage of working days.
Northam	3	·82		...	...	...	...	...	...	...
Esperance District	23	6·3	...	...	...	...	...	...	...	...
Gingin	4	1·09	...	...	...	...	...	...	...	...
Northampton	9	2·46	...	...	...	...	...	...	...	...
Katanning	3	·82	...	...	...	...	...	...	...	...
Cue	8	2·1	...	...	...	...	...	...	...	...
Yilgarn and Phillips River...	5	1·37	...	...	...	...	...	...	...	...
North Coolgardie Goldfield	...	...	151	41·4	...	...	...	...	...	...
South-West Division ...	...	...	...	...	17	4·65	...	...	...	...
Yalgoo Goldfield	...	...	...	...	34	9·31	...	...	...	...
Mt. Margaret Goldfield ...	...	...	...	...	...	...	184	50·41	...	...
East Murchison Goldfield ...	...	...	...	...	...	...	14	3·83	...	...
East Coolgardie Goldfield ...	...	...	...	...	...	...	...	...	13	3·56
North-East Coolgardie Goldfield	...	...	...	...	...	...	...	...	17	4·66
Totals	56	15·06	151	41·4	51	13·96	198	54·29	30	8·22

ANNUAL REPORT.

T. Blatchford, Assistant Geologist:

The first two months of the year were occupied in completing Bulletin 71. This work was materially hampered by a severe illness. In April an inspection was made of a discovery of wolfram at Grass Valley, five miles east of Northam. A short report has been supplied relative to this occurrence.

Portions of the months of May and June were taken up by an inspection of the graphite deposits at Munglinup, in the Eucla division. During this trip he was accompanied by Mr. H. P. Herbert, the representative of the Morgan's Battersea Crucible Co. The sampling of the various graphite veins was undertaken conjointly, and on our return to Perth the samples were treated in accordance with modern commercial methods. Through the courtesy of Mr. Herbert much useful knowledge was obtained in this direction, and since his departure a small separation plant designed by him has been erected in the Chemical Laboratory attached to the Geological Survey Department for treating subsequent samples. The results of the sampling and an interim report on the graphite deposits at Munglinup are embodied in Bulletin 73.

During July two short visits were made to Gingin in connection with the Phosphatic lime deposits on Molecap Hill. During those inspections the workings were sampled and a report and the results of the sampling have been furnished.

An endeavour was made in September to inspect several reported graphite deposits at Northampton, but owing to the inclement weather this work had to be temporarily abandoned. One outcrop, however, some three or four miles north of the Murchison River, opposite Mr. Glass's Station-house, showed graphite flake of a very promising nature, and since my visit the ground has been applied for and is now being prospected.

An inspection of a reputed deposit at Katanning containing coarse graphite was made, with disappointing results. There is certainly graphite at Katanning, but lodes containing payable quantities have yet to be found.

The new centre, Tuckabianna, five miles north of Pinnacles in the Cue district, was visited in November and a report furnished.

Owing to the sampling of the Munglinup graphite deposits in May and June, a syndicate was formed to thoroughly prospect the property. In December an attempt was made to take a hurried trip down to see the latest developments, but this was frustrated by heavy rain when *en route*.

In addition to the field work above mentioned a considerable amount of time was spent in the office in connection with the various reports and publications as well as attending to the administrative duties of the Government Geologist during his absence in the field.

J. T. Jutson, Field Geologist:

Returning from annual leave on 8th January, Mr. Jutson was engaged on various office matters, including the preparation of a Progress report on Comet Vale, correction of proofs, and obtaining further data for Comet Vale and Goongarrie work, until the 20th January, when he left for Comet Vale, and from that date until the 7th June he was engaged on the detailed survey of Comet Vale and Goongarrie. He then returned to Perth on account of illness, and from the middle of June until July was engaged on various office work, including the plotting of maps, correction of proofs, and bringing up to date the article for the Mining Handbook, on the relation of the Law to prospecting and mining in Western Australia. During the month he returned to Goongarrie and completed the detailed geological survey of Goongarrie and Comet Vale, returning to Perth on the 30th July. From this date, until the commencement of his annual leave, on the 17th December, he was engaged on the multifarious matters connected with the maps and reports of the Niagara-Kookynie-Tampa District, and the Comet Vale-Goongarrie District, as well as correction of proofs for the printer, the bringing up to date the article for the Mining Handbook by Mr. P. J. Atkins, late Clerk-in-Charge, on Assistance to Prospecting and Mining Development; and also the preparation, in conjunction with Mr. Farquharson, and with the aid of Messrs. Simpson and Blatchford, of a Glossary of field and mining geology terms for the Mining Handbook.

Attached is an epitome of the results of the geological survey of Goongarrie, and some further notes on Comet Vale.

During the year Mr. Jutson spent 151 days in the field.

H. W. B. Talbot, Field Geologist:

On his return from annual leave on the 8th January, and until the end of the month, Mr. Talbot's time was occupied, in collaboration with Mr. Clarke, on the completion of the report on the expedition to the South Australian border. Work was then commenced on the maps, sections, and reports of his three years (1911-14) in the North-West, Central, and Eastern Divisions of the State. With a few interruptions, this work occupied his time until November.

From the 26th February to the 3rd March, Mr. Talbot made a short trip to the Darling Range to map the laterite in the vicinity of Swan River; and from the 11th to 21st April he was engaged running a section across Toolbrunup, in Stirling Range.

From the 15th November to 18th December, Mr Talbot accompanied the Government Geologist on an examination of several centres in the southern portion of the Yalgoo Goldfield.

The total number of days spent on work in the field amounted to 51.

E. de C. Clarke, Field Geologist:

Mr. Clarke was engaged from January to June in correcting the final proofs and making the Index of Bulletin 68 and preparing plans, figures, and text of Bulletin 75.

The remainder of the year was occupied in field work in the South-West parts of the Mt. Margaret Goldfield.

Mr. Clarke was engaged on field work during the year under review 198 days.

F. R. Feldtmann, Field Geologist:

On his return from annual leave, and the completion of the Annual Report for 1916, Mr. Feldtmann spent the greater part of the year at head-quarters on the reports on the centres at Quinn's and Jasper Hill, in the Murchison Goldfield, and in the preparation of maps and diagrams thereon,

In addition to work on the above reports, a good deal of time was spent during the earlier part of the year in the revision of proofs of Bulletin 69, since published.

On the 7th November Mr. Feldtmann left Perth for Kalgoorlie to examine the Hidden Secret Mine, and the 14th of the same month proceeded to Bulong to inspect the magnesite deposits there, returning to Kalgoorlie on the 1st December to examine the magnesite-bearing country west of Hannan's Lake.

The remainder of the year was spent in the preparation of the report on the Hidden Secret Mine and other work connected with the trip.

The number of days spent on work in the field amounted to 30.

THE RINGING BELL COPPER LODE, TWIN PEAKS.

(A. GIBB MAITLAND.)

The Ringing Bell Copper Lode is situated not far from the head station at Twin Peaks, on the Yalgoo Goldfield.

The lode, which lies in close proximity to a well-defined pegmatite, or porphyry dyke, can be followed continuously for about 1,300 feet on an average bearing of north 5 degrees east, has a high underlay to the east of between 80 and 90 degrees. At both ends of the outcrop the lode gradually tapers out into the enclosing country rock.

The ore-carrying matrix is a more or less siliceous ironstone passing in places into an almost pure quartz; it contains small quantities of malachite and chrysocolla.

The lode has been opened out in five localities. Mining operations, however, have been confined to the central portion of the outcrop, where a vertical shaft has been put down to a depth of 35 feet. The lode, as seen, varies from 6 to 18 inches in thickness. A drive from the foot of the shaft has been put in from the north along the ore channed for a distance of about 10 or 12 feet, but there is very little ore showing in it. The owners had raised about 3 tons of ore, which yielded 16 per cent. of copper, and were just despatching (22nd October, 1917) to the coast a further parcel of 3 tons, obtained from the shoot in the main shaft. An average sample, taken by myself from the 3 tons, yielded on assay in the Survey Laboratory, copper 15.54 per cent.; iron 28.64, and of silica 21.41 per cent., in addition to 1oz. 11dwts. 23grs. per ton of silver, and of gold a trace. The ore would appear to be self-fluxing.

Some distance to the north of the main shaft the lode, which is two feet wide, has been opened up to a depth of 3 feet, and at this point consists of a mass of magnetite in a siliceous limonite matrix. The northernmost end of the outcrop, where it had been opened up, was found to consist of quartz stained with green carbonate of copper but destitute of other minerals. The southernmost extremity of the outcrop showed merely copper stains over a width of about 5 feet.

The richest portion of the lode seems to be that upon which the deepest workings are situated, and it does not appear at all likely that the deposit is capable of yielding any large quantity of copper ore.

The total quantity of copper raised from the abandoned copper lode, situated about a mile and a half to the south, and which was worked during 1907-08, amounted to 19½ tons; this, with the 8 tons from the Ringing Bell Lode, brings the total yield of the district up to 27½ tons of copper.

INTERIM REPORT ON THE OCCURRENCE OF GRAPHITE IN THE KATANNING DISTRICT.

(T. BLATCHFORD.)

For some time past samples of rock containing small quantities of graphite have been forthcoming from Katanning. As the graphite in these samples was usually of the flake variety, an inspection was made on the present trip of the more important spots where it occurred. In all, five places were examined. The following is a description of the various localities.

Block 299.—On this block four shafts have been sunk of varying depths, from 47 to 10 feet.

Of these, the most northern, 47 feet in depth, was sunk in decomposed granite. At the surface, nodules of ironstone had been broken which showed fine graphite flake. Small specks of graphite were also found in much of the granite intersected in the shaft, but definite veins were absent.

As most of the surface ironstone nodules containing graphite were to the west of the shaft, it is likely the prospectors will put in a crosscut to the westward in the hope of intersecting veins in that direction.

East of this shaft is another shaft some 25 feet deep, sunk on the east side of an ironstone hill. A little graphite is also showing in some of the stone here.

The main shaft, 47 feet deep, in the southern end of the block had fallen in.

A shallow shaft to the west of the main shaft showed a little graphite in the rock, and an indefinite irregular vein containing slightly more flake was cut at the bottom of the shaft. The dip of this vein was apparently to the south-east. These workings are in a highly oxidised and decomposed kaolin rock, probably of granitic origin.

Further to the west, on the same block, a shallow shaft has been sunk in a coarse-grained granitic rock, probably a pegmatite.

Scattered over the surface near these shafts graphite may be found in the ferruginous laterite.

In the adjoining block to the north (block 362) two shafts have been sunk to vertical depths of 47 and 26 feet in decomposed granite.

Small specks of flake may be seen in some of the rock pierced by these shafts, but again definite veins were absent.

Small specks of flake were also visible in some quartz, probably portion of a pegmatite dyke.

To the west of these shafts graphite specks occur in a very altered basic dyke, probably a highly weathered dolerite. Practically no work has been done in this locality.

On Block 296, specks of graphite were found in a lateritic rock, but nothing definite has been exposed here.

Near the Warren Road on Block 4285, graphite has been found in the laterite and also in a very fine-grained, possibly granitic rock, too much decomposed for accurate determination.

As far as could be seen from the various workings, the country rock is granite relatively unfoliated, through which numerous basic dykes have intruded. These basic dykes have been examined and classified as quartz dolerites.

In the vicinity of the dykes, graphite occurs in the form of minute flakes disseminated through the granite and also in the dykes themselves. It seems

highly probable that the graphite is at least an original mineral in the basic dykes, and probably largely so in some of the granitic rocks (it is to be seen included in the quartz of the pegmatites).

Up to the present no graphite veins have been found, or have any definite channels in the granite been intersected. In consequence, though it is quite possible further developments may expose shear zones, etc., containing graphite deposits, there is no evidence at present of such existing.

NOTES ON THE TUCKABIANNA MINING CENTRE.

(T. BLATCHFORD.)

Introductory.—In accordance with your verbal instructions to make a general inspection of the Tuckabianna Centre, I beg to submit the following preliminary report on that field:—

Location.—Tuckabianna lies at a distance of four to five miles north-east of the Pinnacles (Jasper Hill). The Pinnacles is situated 12 miles south-west of Cue.

Communications, etc.—A bi-weekly mail service by motor car runs between Cue and Jasper Hill, but at present none at Tuckabianna.

Geology.—In general, the geological features of Tuckabianna resemble those of the Pinnacles and Webb's Patch.

Broadly speaking, they consist of extensive well defined bands of quartz-haematite schists (locally known as jaspers or ironstone bars) in foliated greenstone, the latter being bounded on both sides by granite.

Intruding the greenstones, and possibly the quartz haematite schists, are hornblende quartz porphyries. Any available specimens of greenstones at Tuckabianna were so highly weathered as to be useless for accurate determination. It is therefore impossible at present to state definitely whether the greenstones there will link up with those of Webb's Patch or the Pinnacles. However, Webb's Patch is on the same strike as Tuckabianna. Porphyrite dykes occur both at Tuckabianna and Webb's Patch and not at the Pinnacles, so that there is a probability of the former being the case, and that Webb's Patch and Tuckabianna are the same series. Though highly weathered, the porphyrite dykes are distinguishable at Tuckabianna as white or yellowish rocks, through which are scattered numerous grains of original quartz. In several of the mines this form of rock is known as the "white footwall rock." It differs only in appearance from much of the weathered greenstone in that it is not foliated, and is gritty to the touch on account of the quartz grains.

Quartz-Haematite Schists.—There is a large development of this class of rock at Tuckabianna. It occurs as parallel bands of varying thickness in the greenstones. Some of the bands have a thickness of at least 60 feet, possibly more. They vary in composition from a siliceous ironstone to one almost wholly quartz. The gold occurs in certain portions of the quartz-haematite schists, and not in quartz reefs. There are two geological features closely associated with the occurrence of the gold which are worthy of special notice.

1. The bands in which the gold occurs are much contorted or even brecciated. This is particularly noticeable in the Italians claim (G.M.L. 1931).

2. Porphyrite dykes occur as one of the walls of the gold-bearing band, *e.g.*, the Blue Streak (G.M.L. 1928) and Cameron and Wards (G.M.L. 1929). These dykes are locally known as the "white footwall."

It is not evident whether porphyrite dykes occur in the Italians claim or Faherty's, for up to the present time there has not been any crosscutting in either of these mines into the footwall.

There seems little doubt that the higher grade ore occurs in pipes or shoots with a dip to the north, but as the greater portion of the surface is more or less obscured by an over-burden of surface detritus, and as up to date there has been very little driving along the course of any of the lodes, the extent of the payable portions is not determinable.

It is evident, however, that highly payable ore has been mined at several points along an extended line, and that there is still ample room for further prospecting. That payable ore will be found only in narrow shoots, though probable, is still problematical, and there is ample good ore opened up to encourage further development. Many of the prospectors now in the field seemed anxious to know how the "jasper bars" were running, and at present have no map of any kind to guide them. For this reason the present appears to be a case in which a thorough survey should be made at an early date, as no doubt such would be of considerable value, saving the sinking of shafts in disadvantageous portions and preventing much crosscutting in wrong directions.

The following is a list of the crushings compiled from official records. As in some cases almost half the gold contents pass into tailings, the assay value of the tailings, where known, has been added in a footnote.

Name of Mine.	G.M.L.	Tons crushed.	Gold in fine ozs.
Blue Streak	1928	70·00	44·73
Gold Streak	1939	13·00	3·13
Nigel	1926	39·00	182·44*
Tosiana	1931	385·00	849·76†
Tuckabianna North ...	1929	32·50	33·54
Triplicate (Syndicate) ...	1914	439·00	116·71

* Gold in tailings, 126ozs. † Gold in tailings, 877ozs.

DISCOVERY OF WOLFRAM AT GRASS VALLEY.

Near Northam, South-West Division.

(T. BLATCHFORD.)

Location.—The wolfram found at Grass Valley occurred as "floaters" in a ploughed field on Location 2809‡, situated some three miles due north of the township of Grass Valley. Grass Valley lies on the Great Eastern Railway some few miles east of Northam.

Geology.—The principal rock of the Grass Valley district is undoubtedly granite. There are, however, a network of apparently recent (?) dolerite dykes occurring in the granite mass. The fertility of the district is due to the weathering of these more basic rocks. Except on the crest of the hills, outcrops are rare. The nature of the underlying rocks can, however, be fairly well determined by the soils, the

‡ Lands Department 40-chain litho., §27C.

granitic portions being very sandy and light coloured as compared with red or chocolate loam derived from the dolerites.

In the immediate vicinity of where the wolfram was picked up, both the granite and dolerite outcrop, and, in addition, the surface is covered with broken fragments of rock which are not too weathered to prevent an accurate determination of their origin. It was impossible, however, to map the various rocks or ascertain definitely their relationship, for the surface is almost invariably covered with surface débris, varying in thickness from a few inches on the crest of the hill to several feet in the valleys.

From the evidence obtainable, however, it was found that though there are only two main classes of rock, both have several representatives. Thus the granites vary in composition from normal microcline biotite to a true hornblendic form, with minor modifications, due to the presence of garnets and tourmaline. In structure all gradations from massive to gneissic granite may be seen. Pegmatites are common and, as a rule, are coarse in grain. They are inclined to be felspathic rather than quartzose. In one instance minute traces of the green chrome-mica, fuchsite, were detected. Some of the quartz derived from one of these dykes was also stained green with chromium.

The dolerites vary very much in structure, some being extremely coarse-grained, whilst others are of the fine-grained basaltic variety. These have not yet been examined petrologically.

Wolfram.—Nothing definite is known about the occurrence of the wolfram except that numerous pieces were picked upon the slope of a hill, the area covered having a length of some 30 to 40 yards, and that one piece at least was attached to a fragment of granitic rock, which is probably a piece of the matrix. However, as a system of trenching is in process, there is a possibility of the source being discovered at an early date. As wolfram has been commonly found in Western Australia associated with granitic rocks, more particularly pegmatites, and that a rock of this nature has probably been found associated with the wolfram here, it is more than probable that if the matrix be discovered it will turn out to be a pegmatite. The prospectors were apprised of these conclusions, and should be able to recognise the different forms of rock from our conversation on the spot.

COMET VALE.

(J. T. JUTSON.)

A progress report of the uncompleted survey of Comet Vale appeared in the Annual Report for 1916. As the field work has now been completed, and the rocks have been microscopically examined by the Petrologist, a more complete account of the general geology of the district can now be stated than was given in the 1916 Report. The description of the topography, vegetation, water supply, and lodes comprised in such report needs no amplification here, except to mention as regards water supply, that samples of the underground waters of the Sand Queen and Happy Jack mines have been analysed, and that they show over 11 and 25 per cent. total solids respectively, of which common salt forms nearly 8 per cent. and over 20 per cent. respectively. The Happy Jack mine water is therefore a particularly saline one.

General Geology.—The rocks of the district may be divided into two great groups, the basic and ultra-basic, and the acid, the acid rocks being younger than the basic and ultra-basic.

1. Basic and Ultra-basic Rocks.—These comprise (1) fine-grained epidiorites and amphibolites, (2) fine-grained hornblende schists and associated rocks, (3) a grey serpentine, (4) amphibolites, hornblendites and altered peridotites, (5) talc-chlorite schists.

(1) The fine-grained epidiorites and amphibolites comprise the belt of greenstones covered mostly by ironstone wash and sand, in which the principal line of lode (the Sand Queen-Gladsome) of the district is situated. On account of the superficial covering, the northern, southern, and western boundaries of this belt have not been determined, but it abuts on the east of the grey serpentine presently referred to. These epidiorites and amphibolites are dense, fine-grained, and mostly massive rocks, and at the present time are the most important economic group on the field.

(2) The fine-grained hornblende schists form the chief rocks of the north-west trending line of reefs, known as the Lady Margaret line, which lies to the west of the town and the railway. They are tough, dense, fine-grained rocks, and are associated with some amphibolites or epidiorites.

(3) The grey serpentine occurs to the east of the fine-grained epidiorites and amphibolites. Outcrops are scarce, as the surface of the ground is almost completely covered by ferruginous laterite, which has been derived from the underlying serpentine. The latter occupies but a narrow belt, trending north-north-west. The rock is very distinctive both in its fresh and in its weathered appearance. In places it has been altered into a talc-schist. The Happy Jack lode occurs in the serpentine. The lode is a lode-formation, and is probably merely the country rock (grey serpentine) changed to a schist and otherwise much altered, in which gold has been deposited from solution. Chromate of lead occurs in the Happy Jack lode, and chromium has been found by analysis in the serpentine and in the overlying laterite.

(4) The amphibolites, hornblendites, and altered peridotites from a north-north-west trending belt of rocks between the grey serpentine and the western shores of Lake Goongarrie. Without defining the actual boundaries, this group of rocks can be divided into three main groups—(a) actinolitic hornblendites which form the main belt of rocks along the west-north-west trending Tunnel line of reefs, (b) serpentines and actinolitic amphibolites forming a belt south-east of the Tunnel line of reefs, and along the western shore of Lake Goongarrie, and (c) talc-chlorite carbonate rocks derived from peridotites or hornblendites in an area south of (a) and west of (b). The actinolitic hornblendites (a) are of some economic value as the reefs of the Tunnel line occur in them, but (b) and (c) are, so far, of practically no value.

(5) Talc-chlorite schists occur as thin bands associated with, and derived from, various basic and ultra-basic rocks.

At present there is no evidence available to indicate the relative ages of groups (1) to (5) to one another, but they are all apparently older than the acid rocks now to be described.

II. Acid Rocks.—These consist of a quartz porphyry, an aplite, and a hornblende, and a biotite granite.

(6) The quartz porphyry occurs as a series of dykes in the various rocks of group I. It is found both massive and foliated, and is associated with the principal lodes of the field, i.e., the Sand Queen-Gladsome line, the Lady Margaret line, the Happy Jack, and the Tunnel line. At the Sand Queen mine it is considered that where it abuts the reef, values become poor, but elsewhere this effect has not been noticed.

(7) The aplite is usually a fine-grained rock, but has in places a pegmatitic phase. It occurs as small dykes and veins in the rocks of group I. and in the porphyry.

(8) The granite occurs as small dykes and masses. Along the Tunnel line a hornblende granite outcrops as thin dykes, while to the north and west of Comet Vale a biotite granite is occasionally found. There is evidently a larger belt of it, but the country outside the mining area has not yet been mapped. The granites are of no economic value, except that a very decomposed one is quarried at the northern end of the town for building purposes.

GOONGARRIE.

(J. T. JUTSON.)

The following is a brief statement of the mining geology of Goongarrie:—

Area.—The area surveyed in detail represents the long and narrow mining field of Goongarrie, the length being about five miles and its width one mile.

Position.—Goongarrie is 55 miles north of Kalgoorlie on the main railway line from Kalgoorlie to Laverton, and was formerly known as the "90-Mile," 90 miles being in the early days the estimated distance of the field from Coolgardie. The mining belt lies immediately to the east of the railway.

Topography.—The topographical features may be summarised as follows:—(1) Three small isolated belts of high land arranged in a north-north-west direction, all three belts being deeply dissected by steep narrow valleys. (2) Intermediate areas of either gently sloping or flat land, broken by isolated hills and ridges of quartz and other rocks. (3) To the west of (1) and (2) is a somewhat elevated belt of country. In the centre of the field this belt has a gentle unbroken slope to the west, and cliffs facing the east, these cliffs being broken by short gullies trending eastward; the western gentle slope is covered in part by a thin (about six inches or less in places) deposit of sand, which in places has been blown over the brow of the slope into the heads of the small eastward-trending gullies just referred to. At the southern end of the field this elevated country is practically a tableland, whilst at the northern end it is broken into ridges and valleys. (4) To the east of (1) and (2) lies Lake Goongarrie (including the "lake country" and lake proper) with numerous low sand ridges and rock floors. Many quartz reefs and "blows" rise from these floors, forming conspicuous objects in the landscape; and their *débris* often so litters the ground that in places the latter is entirely covered by fragmental white quartz, producing "stone fields" and "desert pavements." Silts of various thickness occur on the eastern side of the lake. The lake is bounded on the east by sand ridges and low sandy country, and on the west in places by cliffs of hard rock at the foot of which rest the rock floors referred to above. The wind has played an important part in the shaping of the form of the land here.

There is hardly any drainage to the west on account of the sandy nature of the country. Almost all the drainage which in the upper portions of the valleys of the dissected isolated high lands flows—broadly speaking—north and south, ultimately finds its way eastward to the lake, which is the lowest portion of the country.

A study of the physiography shows that in the dissected isolated high lands, the longitudinal valleys are almost always in and running parallel to the belt of schists, whilst the separating ridges are steep and composed of hard unweathered rocks. Most of the quartz reefs are also in the schists, so that here there is a clear illustration of the relation of geological structure to surface relief, and to the occurrence of lodes.

Vegetation.—The vegetation is mostly stunted "mulga" with a few oaks, dwarf eucalypts, and some salt bush and samphire flats.

Water Supply.—A large dam has been built by the Government about two miles north of the township of Goongarrie and just to the east of the railway line. The water is pumped from the dam to a tank close to the town, erected at a high point, and from here it is distributed to various places, including the New Boddington Gold Mine. Surface water has to be entirely depended upon, as the underground water is extremely salt.

General Geology.—The rocks of the district may be divided into three groups, (1) Basic and ultra-basic, (2) Altered sediments associated with thin acid dykes, and (3) Other acid dykes. The determination of the individual specimens is the work of the Petrologist.

I. *Basic and Ultra-basic Rocks.*—These comprise a great group of greenstones which are divided into fine-grained epidiorite, porphyritic epidiorite, hornblendite and serpentine associated together, three types of amphibolised quartz dolerite, quartz carbonate-chlorite schist, and a porphyritic quartz epidiorite.

The fine-grained epidiorite forms a considerable portion of the isolated belts of high land already referred to; and also forms a north and south-trending band of rock at the northern end of the field. The rock is a fine-grained, dense, and generally massive rock, but with a rough schistosity developed through it in many places. It is of little economic value, as, although a moderate number of reefs occur in it, they appear not to be payably auriferous.

The porphyritic epidiorite extends as a long narrow tapering band of rock to the east of and abutting the fine-grained epidiorite and the schists to be presently described. The rock has large cream-coloured phenocrysts of felspar in a fine-grained grey ground mass. It is roughly schistose or cleaved in most places, but would not be classed as a schist. It abuts on its eastern boundary the great belt of altered sediments later described. There are a moderate number of mostly small quartz reefs in this rock, but they have hitherto not been proved to be of much economic value.

The hornblendite and serpentine form a long broad band to the west of the town and of the schists to be presently described; and they constitute the somewhat elevated country already referred to. As the rock apparently possesses no economic possibilities (beyond the occurrence of some asbestos) no attempt has been made to separate the hornblendite and the serpentine.

The amphibolised quartz dolerites outcrop as bold ridges and small knobs and bands associated with the fine-grained epidiorite and the quartz-carbonate-chlorite schists. The dolerites appear to be intrusive into the epidiorite and some of the schists, and occur as long masses roughly parallel to the general strike of the schists, and of the field generally, that is, a few degrees to the west of north. The outcrops vary from three or four feet to seven or eight chains in width. The rocks are usually hard and massive, but are occasionally roughly schistose. A few quartz reefs, which are apparently non-auriferous, occur in them, and the rocks may be said to be of no economic value. The amphibolised dolerites have been divided into three series, which are very similar to one another in mode of occurrence and mineralogical composition. They probably represent a series of intrusives from one magna, such intrusions taking place perhaps either simultaneously as differentiated products or at very short intervals of time.

The quartz-carbonate-chlorite schists are, economically, the most important rocks in the field. The New Boddington reefs and most others that have been worked to any extent, occur in these rocks. They form a practically continuous narrow belt through the whole length of the field, are mainly between the fine-grained epidiorite and the hornblendite-serpentine area, and generally occupy low ground on account of their easily weathered nature. The strike of the rocks is usually a few degrees to the west of north, but in places is more to the west, and occasionally in other directions. The dip is high and to the west or south-west. The rocks are mostly fine-grained, but some are medium and coarse-grained. The field relations of the various rocks suggest that the schists have been derived by dynamic metamorphism chiefly from the fine-grained epidiorite, but partly by one or other of the amphibolised quartz dolerites.

The porphyritic quartz epidiorite occurs as thin dykes in the porphyritic epidiorite.

II. *Altered Sediments and Associated Rocks.*—A great series of altered sediments with which are associated some (apparently numerous) thin acid dykes, forms a second main group of rocks. They occur on the floor of Lake Goongarrie, and probably have a width across their strike of about two miles or more. They consist of shales, grits and conglomerates, all more or less soft and considerably decomposed. Many of the conglomerate pebbles, which are mostly quartz porphyries, have been so stretched by dynamic metamorphism that they are now very lenticular. In addition to the true aqueous conglomerates, it is probable that crush conglomerates also occur. The strike of the sediments is usually a few degrees to the west of north, although some outcrops show local contortion. The dip is high and to the west. Thus the sediments generally conform both in strike and dip to the strike and dip of the schists above described.

At their western margin numerous quartz reefs and "blows," usually conforming in strike and dip to the sediments, occur. Some work has been done, but on the whole these reefs do not appear to have been payable, many of the "blows" being, as usual, "buck" quartz reefs.

Associated with the sediments and evidently intrusive into them either as dykes or sills are thin bands of acid rocks, some of which are foliated quartz porphyries. At the junction of the porphyritic epidiorite and altered sediments a long but thin (up to 10 or 12 inches) and broken band (or two or three bands in places) of siliceous ironstone outcrops.

III. *Acid Intrusions in the Basic and Ultra-basic Rocks.*—The third group of rocks comprise a series of acid intrusions, which are associated with the basic and ultra-basic rocks. They are divided into two types, a quartz porphyry and a hornblende-felspar porphyry. The quartz porphyry is foliated in places and forms a rather long, narrow, north and south-trending band at the northern end of the field, intrusive into the fine-grained epidiorite. It contains several small quartz reefs, but they do not seem to be payably auriferous, as practically no work has been done on them. The hornblende-felspar porphyry occurs as a series of thin short dykes in the hornblendite-serpentine area close to the junction of the latter with the quartz-carbonate-chlorite schists.

IV. *Recent Superficial Deposits.*—These require but brief mention. The most important from an economic standpoint are the alluvial deposits in the beds of the creeks and gullies in portions of the high lands, which have been a good deal worked for gold with apparently in some cases excellent results.

Ferruginous laterite caps some of the hills at the southern end and western side of the field, but throughout the main mining belt it is absent. In places a ferruginous "quartzite" occurs in small patches. Clays occur on the flats, and low sand ridges on the lake floor. On the latter at the foot of some of the quartz reefs and "blows" some alluvial gold was found in the early days.

The Lodes.—The auriferous lodes are almost entirely quartz reefs. Gold has been found in places in the soft decomposed schists adjacent to the reefs, but lode-formations practically do not exist. The quartz reefs are very abundant through the whole field, but unfortunately many of them appear to be quite barren. Many are large quartz "blows" or hills which form prominent features in the landscape. These "blows" are usually non-auriferous, except that occasionally a thin band may carry payable gold.

The strike varies, as the reefs trend in all directions, but the greatest number bear between north and south and north-west and south-east. Some are parallel to, and some cut across, the strike of the schists. The direction of underlie varies considerably.

In thickness the quartz reefs and veins range from an inch or less to "blows" up to 14 feet thick, but no average thickness can be stated. Some reefs are many chains in length, but many are very short.

The quartz contains as a rule but few minerals, pyrites being the most abundant.

The reefs occur in most of the rocks in the field but most abundantly in the quartz-carbonate-chlorite schists, and the altered sediments above described, and it is to these rocks, and especially to the schists, that the gold-bearing reefs are almost wholly confined.

The most important reefs of the present time are those being worked by the New Boddington G.M. Co. There are two reefs, roughly parallel to one another, Kearman's and the Boddington. Kearman's is the more easterly reef. There are numerous other reefs that have been more or less worked, but the workings are mostly inaccessible. One of the principal lines appears to have been the series of reefs about 10 chains to the east of the New Boddington, known as Hicks's line. At Gull's Blow, a prominent quartz outcrop to the south-east of the town, a long tunnel was driven under the hill, but apparently with no satisfactory results. Shallow workings exist on various reefs around the hill. To the west of Gull's Blow in the valley of the gully running southward from the Boddington mine some shallow sinking has recently been done and some good specimen gold was said to have been obtained.

A copper lode occurs to the north-east of the township at the old workings in the old Providence lease. Several shafts and open cuts have been sunk and apparently a moderate amount of ore raised, but no work has been done for some time. So far as could be seen in the workings, from the surface, the ore, which is chiefly the common green carbonate, (malachite), occurs in a band of ironstone from six to 18 inches thick, standing nearly vertical, in and conformable to soft gray schists which are also slightly impregnated with the ore at their junction with the ironstone. The writer was told that the latter had much thickened below in some places, but whether for any distance or not is unknown.

An asbestos lode associated with magnesite and dolerite occurs a little over two miles to the north of the town and nearly half a mile west of the railway. Where a face can be seen the lode is 18 inches thick and occurs in fibrous serpentine rock. An open cut about 50 feet long, 7 feet deep and 10 feet wide, has been excavated, and some of the asbestos has apparently been disposed of. It is only, however, of the actinolitic type.

Mode of occurrence of Gold.—There seems to be a tendency throughout the field for the gold to occur in very rich pockets or small shoots in the main lodes and for some small leaders to be prolific gold bearers. Apart from these features, the gold is apparently rather sparingly distributed.

Nature of the Field.—As the field is an old one, and the reefs mostly outcrop at the surface, its future will depend on deep workings, and payable concerns of this character have not yet been proved. If the New Boddington mine should be payable at depth, an impetus will be given to test other reefs at depth, and capital will no doubt be forthcoming for this purpose. It does not, however, necessarily follow should the New Boddington reefs not be payable at depth that other reefs are also unpayable. The main mining belt has been disturbed by intrusions, with the result that the reefs are frequently irregular, short, and probably of no great depth. Still there can be no doubt that many will live to a reasonable mining depth, although there will probably be considerable difficulty in places in picking up the reefs at various depths. In this district particularly, it is advisable to keep to the reefs as closely as possible, by means of winzes. Nothing definite can be said as to the probable gold contents.

E. DE C. CLARKE.

From the 3rd January to 4th June I was engaged in correcting the final proofs and making the index of Bulletin 68, and (in collaboration with Mr. H. W. B. Talbot) in preparing plans, figures and text of Bulletin 75, on the country between Laverton and the South Australian border.

The rest of the year till 18th December, when I returned to Perth to take annual leave, which began on 21st December, was occupied with broad field work in the south-west parts of the Mt. Magnet Goldfield and in the east part of the East Murchison Goldfield, the object being to map on a scale of 4 miles to the inch a block of country about 13,000 square miles in area covered by the Lands Department map 43/300 and by the south part of 52/300. This work, when complete, will link up similar surveys by H. W. B. Talbot to the north, and by C. S. Honman to the south.

Of this block of 13,000 square miles about half has already been examined, therefore the work should be completed during the 1918 season.

In the area under review there are at present six or eight centres in which mining is active. There are, in addition, a very large number of abandoned mining camps.

A revival of mining in the district may be confidently expected, and a detailed account both of the workings and history of these centres of former activity would be of value to those who prefer modern to antiquated methods of prospecting, but such a detailed examination is beyond the scope of the survey at present in progress, which has as its object the broad geological mapping of the country, so that the various belts which should be further searched for valuable minerals may be clearly indicated, and the general trend and character of known ore-bodies may be briefly stated. No attempt at prospecting likely localities could be undertaken during the course of the present survey.

In a report such as this, which is not illustrated by maps, any but the most general remarks on the distribution of the various formations would be unintelligible. The following statement, sufficient for present purposes, may have to be modified when the survey has been completed.

The oldest rocks are sediments, highly altered near Leonora, where they constitute Mt. Leonora and most of the country for 8 or 10 miles to the east, highly altered also much farther north, near Duketon, less changed from their original state near Pyke Hill, just west of Lake Carey. Whether or not these two lots (highly altered and less altered) of sediments are of the same age has not yet been proved.

Next in age are the greenstones, which vary a good deal in structure, composition and general appearance in the southern part of the country under review, but seen, farther north, to be very uniformly of the fine-grained type usually described as "diorite." Intrusions of greenstones into the sedimentary rocks already described are seen in a few places, proving that the former are younger than the latter.

On the other hand, granitic rocks frequently intrude the greenstones, and are therefore of later age than the greenstones.

In the greenstones are long lines of "Jasper Bars," such as those running from Leonora through Mounts George and Davis, from Mt. Margaret through Mt. Morgans to Mt. Zephyr, and those running north from the neighbourhood of Laverton.

As in other parts of the State the greenstones with their Jasper Bars are the chief auriferous formation, nevertheless, considerable quantities of gold have been got from granite, as at Wilson's Patch, Mt. Stirling, and the "Linger and Die," and a galena-bearing vein near the Teutonic Well. Further search for valuable minerals other than gold is to be recommended in the granite country near Mt. Waite, on Erlistoun Creek.

Until official records have been examined it would be unsafe to particularise, but the impression gained in conversation with prospectors is that many mines at present closed down will, when capital is available, be profitably re-opened. Moreover, much of the country near famous rich "shows," such as the "Victory" and Wilson's Patch, has yet to be systematically prospected.

RECENT DEVELOPMENTS AT THE MAGNESITE DEPOSITS OF BULONG.

(F. R. Feldtmann.)

The magnesite deposits at Bulong were examined and mapped early in 1915, and a description of them together with a brief account of the general geology of the area was given in the Annual Report for 1915. The deposits were visited in November, 1917, to examine the progress made in working them since my previous visit. This is described in the following report which is supplementary to that given in the Annual Report for 1915.

General Geology.—As stated in the previous report, the town of Bulong is situated in a greenstone complex composed mainly of serpentine—from augite-peridotite-gabbro and amphibolites derived therefrom, with local development of talcose rocks; this complex extends to the extreme western edge of Lake Yindarlgooda, 2½ miles to the east. The eastern part of the greenstone area is more ultrabasic in character than that round Bulong itself, and it is in this eastern part, near the lake and composed almost wholly of serpentine, that the magnesite deposits occur.

Intruding the greenstones are several large dykes of hornblende-porphyrite with north-south strike, and some smaller dykes of somewhat similar rock with east-west strike.

East of the main greenstone area is a belt of schists and sheared conglomerates, also striking north-south. This belt is much wider to the north than to the south; east of the northern end of the magnesite area it is fully two miles, and probably more in width, and a couple of miles further south is apparently only three-eighths of a mile wide.

Underlying the flat south of the Government Tank is another area of schistose rock, probably also of clastic origin. Owing to lack of sufficient data, they were not mentioned in the present report. These rocks are almost entirely obscured by superficial deposits and the few outcrops are too much weathered for determination in the field. Part of the western boundary of these schists can be mapped with some degree of accuracy, but the eastern is entirely obscured and their full extent cannot be ascertained with any certainty.

East of the main area of schists and sheared conglomerates, and forming the country round Mt. Yindarlgooda is another greenstone area somewhat less basic in composition than the rocks of the magnesite area; this greenstone belt has also been intruded by numerous small dykes of porphyry or porphyrite.

The Magnesite Deposits and Workings.—The work done since my previous visit confirms the occurrence of the magnesite as comparatively short and very irregular veins in the serpentine rock, which is much decomposed where the veins are numerous. In places the veins are so numerous as to form, roughly, about one-sixth of the whole mass of the rock. None of the veins approach those of the Grecian and Californian deposits in size, rarely reaching two feet in width, and the majority being under a foot and usually only a few inches.

As stated in the previous report the magnesite occurs in places, in particular immediately south of the main or "Magnesite" creek, running eastward through M^{l}. C^{m}. 1^{Y}. to the lake, as a surface deposit; this may be in part due to its formation as a "cement" comparable to the travertine associated with decomposed amphibolitic rocks, but is probably largely due in the first place to the occurrence of large flat veins of the mineral. This surface covering of magnesite is, in a few places, over a foot thick.

Since my previous visit, two mineral claims, Nos. 1^{Y} and 2^{Y}, of 300 and 150 acres respectively, have been taken up by the Permasite Manufacturing Co.; these cover the greater part of the northern half of the magnesite area and include the best of the deposits.

Several trial holes a few feet in depth have been sunk on the deposit, particularly to the south of Magnesite Creek; most of these were sunk during my previous visit, but three or four others have since been sunk near the southern end of M^{l}. C^{m}. 1^{Y}., veins of magnesite being cut in each.

There are now three quarries on M^{l}. C^{m}. 1^{Y}. of which one, 300 feet north of the main creek and east of a large watercourse running into it, is over 40 feet in length by about 25 in width, and varies from 10 to 15 feet in depth. The other two quarries are from about 80 to 220 feet south of the creek, the easternmost and largest being about 1,000 feet south-west of the north-east corner of the claim; this quarry is 140 feet long by an average width of 26 feet and reaches 20 feet in depth at its southern end. The third quarry, about 90 feet west of the last, is about 55 feet long by 15 feet wide, on the average, and is 12 feet deep at the southern end.

According to the estimate of the company's manager at Bulong, the magnesite "at grass" is as follows:—

7 tons of "firsts" bagged and ready for carting.
496 tons of "firsts" broken and stacked at quarries, and
70 tons of "seconds" broken and stacked at quarries.

In addition 688½ tons were quarried and exported in 1915 and 10½ in 1916. In 1917 73 tons were sent away from Bulong, of which some 20 were treated in Western Australia.

The value of the mineral is estimated at £1 per ton on the ground, the export value being estimated at a trifle under £4 per ton.

Magnesite in the Vicinity of Hannan's Lake.—During my recent visit to Kalgoorlie a brief examination was made of the western shore of Hannan's Lake, where the occurrence of magnesite was known. In this locality the mineral occurs only as a few small and scattered veins in the low hills near "Serpentine Bay," about 4½ miles S.S.E. of Boulder City, and a mile east of Mt. Hunt. The country here bears a general resemblance to that of the Bulong deposits, and the rock is serpentine, in which a few veins of asbestos occur in places. The veins of magnesite appear to be too small and sparsely distributed to be of any commercial value.

NOTES ON RECENT MINING AT THE NORTH END, KALGOORLIE.

(F. R. Feldtmann.)

A request having been made by the owners of the Hidden Secret Mine at the "North End," Kalgoorlie, for a geological examination, having in view the possibilities of picking up another shoot of payable ore, I was instructed to visit the mine on my way to Bulong; these instructions were carried out in November. Advantage was also taken of the visit to Kalgoorlie to examine briefly recent developments on other mines at the North End.

Hidden Secret G.M.L. 4001E.

At the time of my previous survey of this mine, carried out during the general examination of the "North End," a drive was being put in to the south at the 404ft. level; this drive had then reached a point approximately 180 feet south of the crosscut from the main shaft.

The drive has since been carried another 20 feet to the south, but has left the main lode channel, which should lie about 12 feet farther east from the face. At the end of the drive a vertical winze has been sunk in the hopes of cutting the lode near the downward continuation of a small patch, carrying good values, in the face of the south drive at 436 feet, from the winze 50 feet north. The hanging wall of the lode was cut at about 20 feet below the 404ft. level, the winze being then continued through the main lode and the "green" or fuchsite lode, on the footwall side of the former, to a depth of 42 feet below the level; thence the winze was continued on a dip of 47°, along the footwall of the "green" lode for a distance of 35 feet. From this point, at a depth of 473 feet from the surface, a somewhat tortuous drive was put in to the south for about 90 feet; this drive is partly in the main lode, partly in the fuchsite lode, the face being in the hanging wall side of the main lode.

Owing to the low values obtained, some doubt arose as to whether the formations cut in the winze and followed in the drive were the main and "green" lodes—the latter not being so well defined at this level—or whether these should not be farther east.

A crosscut was therefore driven to the north-east for 59 feet, but with the exception of a small seam carrying low values, which was cut at 48 feet and driven on for 26 feet to the south, with unsatisfactory results, this crosscut is entirely in dolerite greenstone country.

A drive was then put in to the north-west for about 40 feet, from a point in the south drive about 16 feet south from the bottom of the winze from the 404ft. level. At a point in this drive, about 24 feet from the south drive, samples assaying about 2 dwts. were obtained from the footwall of the main lode, at its junction with the fuchsite lode. A winze was then sunk to a depth of 52 feet on a dip of 56°, the bottom of this winze being approximately 516 feet below the level of the surface at the main shaft; this winze has followed the dip of the lode, and not the values, which pitch to the south, and leave the winze at about 10 feet below the level. A drive south from the bottom of the winze should cut this shoot at about 12 feet.

The main points on which the members of the syndicate desired information were:—

(1) Whether the formation cut in the winze from the 404ft. level and followed in the south and north-west drives at the 473ft. level are the main and "green" lodes, or whether these should lie to the east of the present workings.

(2) What are the possibilities regarding the existence of another shoot, and

(3) If such is likely to exist, in what direction it should be sought.

(1) From the results of my survey I consider that the formations cut in these workings are the main and "green" lodes, which, however, are not too well defined at the 473ft. level, particularly at the southern end.

(2) There appear to be no reasons why another shoot of payable ore should not be found, but it is impossible to say at what distance below the present workings it might occur. I doubt, however, whether anything so rich as the previous shoot is likely to be found.

(3) Though experience has shown that the ore shoots of the Kalgoorlie field occur irregularly, I think the best general direction to follow is the downword projection of the pitch of the rich shoot; that values are likely to occur along this line is shown by the occurrences in the south drive at 436 feet, and at the top of the winze from the 473ft. level.

In future operations I consider it advisable to follow the gold, when found, rather than sink a vertical winze or one in the direction of the dip of the lode, in order to avoid unnecessary driving and crosscutting. For example, a winze from the small patch at the 436ft. level, approximately following the direction of pitch of the shoot, would have cut the patch at the 473ft. level and saved most of the work at the latter level.

Creswick G.M.L. 4585E.—The present lease on this ground covers the south-western part of the former Creswick G.M.L. 454E and the western part of the original lease 547E (later 4515E).

At the time of the general survey of the "North End," Messrs. Nelson Bros., the holders of G.M.L. 4515E, were working on a formation striking north-west and running into the main N.-S. lode (*vide* Bull. 69, p. 61 *et seq.*) from the south-east about a chain south-east of the south corner of the present Fair Play G.M.L 4609E; this formation was being worked from an open-cut close to the junction of the two formations.

Since taking up the present lease, the holders, Messrs. Bennet and party, have done a good deal of work on a new formation parallel to and a few

feet north of that worked by Nelson Bros. The new lode appears to be similar in character to Nelson's lode, and probably connects the N.-S. lode with the Isabel west lode; it should thus cut the junction of the fine-grained and the quartz-dolerite greenstones.

Though usually yielding good patches of ore near their junction with the N.-S. lode, these cross formations are seldom payable for any great distance from it.

The discovery of other patches of this nature was anticipated on p. 63 and elsewhere in Bulletin 69.

Official returns up to the end of November, 1917, show a total for G.M.L. 4585E of 88 tons of ore treated for a return of 78.65 fine ounces; from G.M.L. 4545E, 58 tons were treated for 107.59 fine ounces, an additional 30.89 fine ounces being obtained by dollying.

FAIR PLAY G.M.L. 4609E.—This lease covers the whole of the former Fair Play G.M.L. 4052E, as well as the greater portion of G.M.L. 4063E, Fair Play Extended. The holders, Messrs. McPherson and Rae, have been following a narrow cross formation or shear zone between the surface and the 107ft. level; this formation is apparently parallel to and, roughly, some 20 feet south of the green shear zone shown on Fig. 16 of Bulletin 69; it had not been worked by the previous holders of the ground. A small parcel from the present shoot has given an average of over 3¾ ounces to the ton, but payable values do not seem to extend for any distance where the formation cuts the main lode channel, the ore body thus forming a small irregular pipe at the junction of the two formations.

As the work on the new "make" of ore has been confined to the oxidised zone, it is impossible to say how much of the gold content is due to secondary deposition.

This formation or shear zone is probably subsidiary to the green shear zone which formed the southern limit of the shoots previously worked on this mine.

Official returns for G.M.L. 4609E, to the end of November, show 16.60 tons treated for 62.56 fine ounces.

RISING SUN G.M.L. 455E.—The present lease covers the same ground as former G.M.L. 4039E, of the same name. The holders are working the downward continuation of the formation discovered by Messrs. Regan and Lowe, from which a small parcel of particularly rich oxidised ore was obtained. As stated on page 135 of Bulletin 69, this formation is probably a spur joining the southerly continuation of the Westralia Limited lode, the patch being of a similar nature to those of the Creswick lease.

Since the mine was previously visited a good deal of work has been done from the bottom (d. 94 feet) of the vertical shaft and the party has connected through to the east crosscut at the 96ft. level from the old "Sunrise" shaft.

The workings, which are entirely in the oxidised zone, must be near the junction of the dolerite greenstones with the fine-grained greenstone; the exact position of the junction in this lease is, however, uncertain, owing to lack of exposures below the oxidised zone.

From G.M.L. 4559E, according to official returns, a total of 102 tons has been treated for 63.80 fine ounces.

P.A. 955E.—This ground, which formed that part of former G.M.L. 4293E, Milanese, south of the Great Western Railway, is held by a local syndicate, who are at present sinking a shaft to cut the easternmost of the four lodes running through the western part of G.M.L. 4293E; this shaft is a short distance south-east of the 125ft. shaft on the same lode (p. 91, Bulletin 69).

Although fair prospects are said to have been obtained from this lode in the 125ft. shaft, only very poor prospects were obtained in the drives from the same shaft, and I do not think that any great quantity of payable ore is likely to be obtained along this line, although, oxidation having extended to a very considerable depth, there should be a fair body of easily treated material.

As may be seen by a reference to Bulletin 69, one of the most likely places for the occurrence of a payable ore-body in this vicinity is along the eastern edge of the large albite-porphyrite dyke. This dyke is, unfortunately, entirely obscured in this ground, but its eastern edge should cross the northern boundary about 4 chains west of the northern corner of G.M.L. 4293E.

THE OCCURRENCE OF ASBESTOS AT BULONG.

(F. R. FELDTMANN.)

Asbestos is found near Bulong occurring sporadically in short veins and lenses, mainly in the serpentine rocks which, with the derivatives of gabbros and allied rocks, make up the greenstone complex. Both the hornblende and serpentine (chrysotile) varieties are present, but the latter has so far only been found as minute veinlets, usually less than one-eighth of an inch in width, in the massive serpentine. A little work has been done on an occurrence of this nature, on a low ridge about half-a-mile south-east of the south-west corner of Mineral Claim 1Y, and about 2¾ miles east-south-east of the town, in the hopes of striking larger veins of the mineral, but nothing encouraging was found and it is not considered likely that payable veins of the chrysotile occur.

Only a few veins of the hornblende asbestos, of any size, have been found up to the present. One, two or three inches in width, was seen by the writer about 18 chains south-west by west from the south-east corner of Mineral Claim 1Y. The asbestos forming this vein was soft and silky and apparently of fair quality at the surface; the vein was tried by the holders of the above mineral claim, but at a very shallow depth the asbestos became much harder and enclosed many impurities and the work was therefore discontinued.

The only vein of hornblende asbestos which has been given a serious trial was found to the north of the town, about 36 chains east-north-east of the north-west corner of Reid and Colin Streets. This is probably within the area covered by former P.As. 515Y and 516Y, although the position of these areas as given in the description do not exactly coincide with that of the vein as fixed by the writer; no other workings were, however, seen in the neighbourhood. The vein has been tried in three shallow shafts, of which the middle and deepest shaft is about 10 feet; the second shaft is about 30 feet south-west, and the third 50 feet north-east of the first shaft.

The asbestos vein has been cut in all three and has therefore been proved over a length of 80 feet, but it appears to be pinching in the north-eastern shaft; it is about three inches wide in the middle shaft. The strike is about 52° and the dip north-west at about 60°.

The most marked feature is the length of the fibre, some of which reach three feet. The fibres strike with instead of across the vein, and pitch north-east at about 47° in the plane of the vein. The asbestos is hard and stiff and appears to be practically useless for commercial purposes, and there is but little chance of the quality improving at depth. The rock in the vicinity appears to be serpentine.

To sum up, none of the asbestos veins of any size have so far proved of sufficiently good quality for commercial purposes, and it is doubtful whether such are likely to occur.

LABORATORY REPORT, 1917.

During the past year the routine work of the Laboratory, as indicated in the accompanying table, has consisted largely in classifying and valuing minerals, in making assays for the commercially important constituents of various ores, and in making physical and metallurgical tests and analyses of minerals, rocks, and ores. The total number of samples registered was 1,671, being an increase of 20 per cent. on those received during the previous twelve months. Included in these figures are the assays made for the State Batteries Branch, which keep one member of the staff almost fully occupied in determining the values of tailings, etc. An increasing amount of laboratory work is required by the State Mining Engineer in connection with the State advances against base metal ore in transit to smelters. This and other matters submitted by this officer occupy almost the whole time of a second member of the staff. The work done free for prospectors and others continues to increase in volume, and should have a very beneficial effect in helping to locate new mineral deposits and to bring to the productive stage other previously known deposits. Without this system, to a certain extent, only the most obvious deposits and those of whose value there is plainly no uncertainty would be opened up, whilst many valuable minerals, whose appearance is not generally known, would be overlooked altogether.

The main objects of the Geological Survey Laboratory are to stimulate and extend in already established directions the commercial utilisation of the minerals of the State, and to endeavour to open up new lines of economic application for minerals at present lying unused, as well as to discover and keep records of deposits of all minerals now valueless but likely to be of value in the future.

These objects are attained by several interdependent methods:—

(1.) Collections of minerals are made in every part of the State by all the officers of the Survey, and are systematically catalogued and kept for reference.

(2.) Notes are kept of the approximate quantity of such minerals in sight, and their availability in regard to transport, etc.

(3.) Examinations and working tests are made with a view to determining their chemical and physical properties and their applicability to industrial purposes, the best means of separating them from their worthless associates, as well as their beneficial or deleterious effect upon existing processes.

(4.) Contact is established between manufacturers requiring various crude minerals and individuals in a position to supply their wants from local sources.

With the increasing price and greater scarcity of many common materials necessary to the every day life of the community, efforts have been redoubled to assist in the substitution of local minerals and mineral products for imported ones. Amongst such substances which are so plentiful in Western Australia and so accessible that there is no excuse for importing either the crude minerals or their more readily manufactured products, may be mentioned many pigments, such as red and yellow ochre, raw and burnt sienna and barium white (barite). Ground chalk has been imported in large quantities in the past and used for whitewashing or distempering and putty making; for the former purpose any of the several pure white and fine-grained local clays makes an excellent substitute, and for the latter certain local marls are well suited. Both are now undergoing commercial trials. Heat insulating materials have been brought to this country over thousands of miles of ocean, whilst within a few miles of Perth one can get in large quantities one of the best insulators known, viz., a pure diatomite. Abrasive materials of many grades of hardness are plentiful in the State, ranging from the fine and soft infusorial earths (diatomite and spongolite), through felspar, quartz, and garnet to corundum, as well as sandstones suitable for grindstones, and "oilstones" of the quality of Turkey Stone suitable for making whetstones for the finest edged tools.

Large quantities of crude arsenious oxide and other arsenic compounds are imported for use as sheep dips, insecticides, etc., at the same time as hundreds of tons of the same oxide are wasted in the fume from roasting furnaces in various parts of the country, or lost for the want of a simple roasting and condensing. The information available in this Laboratory regarding arsenic ores was so complete that during the year inquirers for arsenic deposits for the production of commercial compounds were enabled to locate suitable supplies of ore, and take over leases with the object of working them for this material.

For many years past experimental work has been going on in this Laboratory with a view to testing the value of local clays for industrial uses. Preliminary physical and, in some instances, chemical tests have thus been made in the past of very many clays with useful results. In order, however, to convince manufacturers of the possibilities of these clays and to induce the expenditure of capital on new or extended plants for their utilisation, something more than these preliminary tests are necessary. During the current year therefore, under the aegis of the Hon. Minister for Industries, Mr. T. Rafferty, a practical potter, who possesses personal experience of the various stages of the pottery industry, has been attached to the Laboratory temporarily with a view to further testing on practical lines the capabilities of the many and varied clays known to exist in large quantities throughout the south-western por-

tion of the State. A model kiln having been built, the co-operation of the public was invited to the extent of collecting samples of clay for testing purposes to supplement the collection already in the possession of the Department. The response met with was not too satisfactory, up to the end of the year only 41 clays representing 13 districts having been sent in. Samples are, however, still coming to hand, and it is hoped that many other districts may yet be represented, and that the services of field officers of the Survey may be utilised to obtain samples from known deposits from which no samples are at hand. From the preliminary tests made up to the present it would appear that local equivalents are available of china clay, fireclay of normal types, cornish stone, felspar, flint and terra cotta, but there may be a difficulty in obtaining a white ball clay of the highest degree of plasticity.

As opportunity occurs a series of monographs are being written giving detailed information regarding all the minerals of a particular mining district. The first of them to appear was that on the Minerals of Kalgoorlie, which was published in 1912 in Bulletin 42. In 1916 a full account of the Minerals of Meekatharra appeared in Bulletin 68. In 1917 the third of the series, "The Minerals of Westonia," was published in Bulletin 71. Westonia has proved to be unique in some respects so far as Western Australia is concerned in the mode of occurrence of gold, and further, has yielded a number of minerals of interest both economically, such as molybdenite, scheelite and wolfram, and scientifically, such as a tungsten-bearing variety of wulfenite, (molybdate of lead) and miloschite, the rare chromiferous variety of kaolinite. In continuance of this series, there is now in hand an investigation of the minerals of Comet Vale and Goongarrie, a district presenting several unusual features in regard to gold occurrence, and noted for its many interesting minerals. These investigations pave the way for a more thorough understanding of the source and distribution of the gold and other exploitable minerals, as well as for a more effective metallurgical treatment of the ores in sight.

Owing to the controversy which has arisen over the fertility of the soils in the area lying between Esperance and Norseman, a large number of these soils were handed over to the Laboratory in the early part of the year for a thorough investigation of the water soluble minerals ("salts") present in them. The details of this investigation occupied the time of a specially appointed officer for three months and yielded results not only applicable to the study of the fertility of this particular area but also to the study of the past history of this area of the State, including its geologically recent (Miocene) submergence by the sea, and also to the study of the more general question of the effect of surface solutions on the oxidation and enrichment of the upper portions of ore deposits. Evidence was given regarding this investigation to the Royal Commission on the Mallee Belt and Esperance Lands.

The unusual demand for graphite, principally for steel melting crucibles in munition plants, continues to prevail, and desultory prospecting has gone on over large areas of the State, and an unusually large number of samples have been tested to determine their value. For this work the Department now uses a plant specially designed by the Morgan Crucible Company, which, working on the principles of a full-sized commercial washing plant, gives results indicating the quantity and quality of marketable flake which is recoverable. The quality demanded for crucible making is such that the flake shall be large enough to be held on an 80-mesh (linear) screen, and shall in bulk contain not less than 80 per cent. carbon. In practice it will probably be found that ores yielding less than 10 per cent. of such flake will not pay to work. The only localities already known to yield such ore are the Munglinup River, Kendenup and the Northampton District, including an area extending from the Murchison Railway to the lower Murchison River. Amorphous (finely granular) graphite, which is valueless, is much more widely distributed throughout extra-tropical Western Australia.

A report was prepared during the year upon the utility as fertilisers of the Cretaceous chalk, coprolite and glauconite occurring in association at Gingin. The existence of these substances at Gingin has been known for many years, an hydraulic lime having been burnt from the cream-coloured chalk about 20 years ago, and attempts having been since made on several occasions to have the chalk used as a source of Portland cement. For this purpose it is too irregular in grade and too high in general average of silica percentage to be satisfactory, typical samples showing:—

Lime, CaO	39.50	42.46
Magnesia, MgO ..	1.27	1.52
Alumina, Al_2O_3 ..	3.40	1.95
Iron oxide, Fe_2O_3 ..	2.53	1.90
Silica, SiO_2	20.28	16.72
Carbonic acid, CO_2 ..	32.34	35.03
	99.32	99.58

The demand which now exists for agricultural lime has caused a new interest to be taken in this material, since such a soft rock with an average of 75 per cent. carbonates is well suited for making agricultural "ground limestone." In certain fairly extensive portions of this area the chalk is associated with an appreciable quantity of coprolite (nodular lime phosphate) averaging 23 per cent. phosphoric oxide, whilst potash in the form of glauconite is not only concentrated in an extensive bed of greensand beneath the chalk but is distributed also through both chalk and coprolite. The presence of this phosphoric oxide and potash should add to the fertilising power of the material from these beds. Very little is known of the chemistry of glauconite beyond the fact that it contains 7½ per cent. of potash, all of which is readily soluble in moderately dilute hydrochloric acid, and that while it resists weathering when surrounded by abundant calcium carbonate, in non-alkaline situations it fails to resist the action of air and rain. It seems highly probable that the potash in this mineral would be available as plant food, a most important matter in the present famine in potash for agriculture. The chemical properties of this mineral should be thoroughly investigated to ascertain if this is so and if there is any inexpensive means of concentrating the potash contained in it. Another possible source of agricultural potash, viz., Jarosite, is described below under Mineral Notes.

	Pay.	Free.	G.S., W.A.	O.D.	Totals.
Samples.	126	323	195	1,027	1,671
Gold assay	99	115	15	872	11,10
Silver assay	33	56	5	93	187
Copper assay ...	31	52	5	54	142
Tin assay	1	17	...	11	29
Lead assay	19	15	1	9	44
Bismuth assay ...	...	5	4	...	9
Antimony assay ...	1	...	...	2	3
Iron assay	...	10	1	...	11
Manganese Assay ...	...	16	...	1	17
Tungsten assay ...	...	11	3	3	17
Lime assay	...	2	5	1	8
Arsenic assay ...	...	...	...	5	5
Phos. Oxide assay ...	...	4	6	...	10
Tantalum assay ...	...	6	...	...	6
Niobium assay ...	...	6	...	...	6
Molybdenum assay ...	1	4	...	2	7
Silica assay	...	7	2	...	9
Carbon assay ...	2	...	...	...	2
Sulphur assay ...	...	...	...	4	4
Petroleum assay ...	...	10	1	...	11
Lithia assay	...	...	...	1	1
Tellurium assay ...	...	1	...	...	1
Titanium assay ...	...	...	3	...	3
Zinc assay	...	4	...	...	4
Nickel assay	...	...	1	...	1
Chromium assay ...	...	...	1	...	1
Potash assay ...	...	2	...	...	2
Sodium Chloride assay	...	...	...	17	17
Soil analyses	...	...	...	40	40
Proximate analyses ...	...	30	30	24	84
Complete analyses ...	2	3	39	1	45
Partial analyses ...	1	4	37	4	46
Determinations ...	6	184	50	37	277
Practical Clay Tests	...	5	2	39	46
Graphite Flotation Tests	...	16	6	6	28
Metallurgical Tests ...	1	...	...	4	5
Microphotos	...	...	12	...	12
Lime burning Tests ...	...	...	16	...	16
Calorific Value ...	...	...	...	11	11
Gold Valuation ...	...	...	4	...	4
Miscellaneous ...	1	9	19	7	36
Totals	198	594	268	1,248	2,308

MINERAL NOTES.

During the year several new mineral discoveries of importance were made, of which the following are brief descriptions:—

Jarosite (hydrous sulphate of potassium and iron), Northampton and Nullagine.—This mineral, only once previously recorded from Australia (hundred of Coghlin, S.A.), and but rarely from foreign localities, has been found in considerable amount in association with graphite at Northampton. In an outcrop a little to the north of the town it is in the form of firm yellow granular masses, which under the microscope are seen to consist of groups of bright yellow hexagonal crystals. The molecular ratio of potash to soda in the mineral from this lode is 4½ to 1.

During the present year the same mineral has been shown by Mr. H. Bowley, Assistant Mineralogist and Chemist, to be an important constituent of some portions of the oxidised auriferous conglomerate (banket) at Nullagine, forming no less than 11 per cent. of a large specimen which was analysed. The mineral is in microscopic crystals or granular masses of sulphur-yellow colour, scattered throughout the cementing material of the conglomerate and the more porous pebbles in it, or constituting pseudomorphs after pyrite. The molecular ration of potash to soda is about 3½ to 1.

Tests have shown that jarosite is of some metallurgical interest in gold ores, since it acts as a "latent acid" capable of interacting with alkaline solutions and decomposing alkaline cyanides. Its chief interest at the present time lies in its potash contents, which, provided the mineral could be found in sufficient quantities, could be made available for agricultural purposes at an extremely low cost.

It is quite probable that jarosite, which up till now has been looked upon as a rare mineral, may in reality be of wide distribution, since it easily escapes recognition, being in mass not unlike an ordinary yellow ochre (xanthosiderite, Fe_2O_3, $2H_2O$). It should be looked for in the outcrops of all highly pyritic lodes.

Natroalunite (hydrous sulphate of aluminium and sodium), Kalgoorlie.—This mineral belongs to the same group as jarosite and alunite, and, like them, acts as a "latent acid" towards cyanide solutions, and is therefore of interest to gold metallurgists. It has been detected in veinlets of tough granular structure, opaque and white in colour, in weathered rock on the Maritana Lease, Kalgoorlie, and between Tailings Leases 15 and 19, Boulder. In appearance it closely resembles a tough white clay, the plasticity of which, however, it lacks. Quantitative analyses and tests of its chemical and physical properties have confirmed its identity. This is the first record of its occurrence in Australia.

Apatite (Fluophosphate of calcium), Greenbushes.—The bright blue, semi-transparent variety of apatite known as "lazurapatite" has been detected in crystalline masses up to one inch (25mm.)in diameter in a somewhat fine-grained pegmatite from Greenbushes.

Molybdenite (sulphide of molybdenum), Darling Ranges.—Many years ago this now valuable mineral was discovered in a fractured grey granite one mile north of Swan View Station, in the Darling Ranges. A small open cut was made on the outcrop, but no serious attempts have ever been made to determine the average grade or extent of the deposit. (*Vide* An. Prog. Rept. G.S., W.A., for 1914, p. 23). Later, traces of molybdenite were detected at North Dandalup, about 45 miles south of Swan View (*vide* An. Prog. Rept., G.S., W.A., for 1916, p. 11), and at Clackline, 37 miles east of Swan View. Recently small quantities have been found in a pegmatite vein at Mahogany Creek, six miles south-east of Swan View, and quite encouraging prospects at Mokine, near Clackline. These numerous occurrences over an area of granite country between 40 and 50 miles square suggest the advisability of thoroughly prospecting this area for molybdenite, a mineral indispensable to our Munitions Department and at the present time quoted at an abnormally high figure, viz., £5 per unit for concentrates at point of production, equal to about 4s. 6d. per pound.

Molybdenite (sulphide of molybdenum), Mulgine (near Warriedar).—The occurrence of molybdenite in this locality was noted in my Annual Report for 1915, and a description of the deposits by the Government Geologist appears in the Annual Report of the Survey for 1916. Although only a few hundredweight of concentrates from this locality have been marketed, specimens of rich ore continue to reach Perth from it. Recently blocks of ore have been exhibited with a width not less than twelve inches

(30 cm.) and consisting of a fine white microcline granite, through which coarse flakes and rosettes of molybdenite are very evenly distributed to the extent of forming about 20 per cent. of the whole mass. These are by far the most promising specimens of molybdenum ore ever obtained in Western Australia.

Powellite (molybdate of calcium), Mahogany Creek and Mulgine.—This rare mineral has been found in both localities in pegmatite veins in the form of milk-white or pale grey pseudomorphs after molybdenite. They are soluble in strong hydrochloric acid and the solution reacts strongly for calcium and molybdenum, but not for tungsten or water.

Magnesite (carbonate of magnesium), Coolgardie and Bandimup.—About one and a half miles east of the township of Coolgardie a deposit of very high-grade magnesite has been opened up during the year. This mineral is white in colour and very dense and finely granular in structure. A bulk sample was analysed with the following results:—

	Per cent.
Magnesium carbonate, $MgCO_3$ ..	98.18
Lime, CaO	nil.
Silica, SiO_2	.63
Alumina and iron oxide, Al_2O_3, Fe_2O_3	1.04
Water, H_2O	trace.
	99.85

The magnesite from Bandimup Water Reserve, 21 miles east of Ravensthorpe, was similar in appearance and had the following composition:—

	Per cent.
Magnesia, MgO	46.63
Equal to $MgCO_3$, 97.50 per cent.	
Lime, CaO	1.34
Iron oxide, FeO	.10
Alumina, Al_2O_3	.19
Carbonic acid, CO_2	51.13
Silica, SiO_2	.28
Water and organic matter ..	.99
	100.66

The minerals from both these deposits are above average quality and are well suited for the manufacture of sorel cement, for which there is now a big demand, as well as for calcined magnesia, epsom salts, and other magnesium compounds.

Talc (hydrous silicate of magnesium), Kundip.—The occurrence of talc in the Phillips River District has been known for some years, but only recently has any attempt been made to put it to practical use. An analysis of a typical sample collected during the year showed its composition to be:—

	Per cent.
Silica, SiO_2	63.39
Magnesia, MgO	30.22
Ferrous oxide, FeO	1.24
Manganese oxide, MnO	nil.
Nickel oxide, NiO	.29
Lime, CaO	nil.
Ferric oxide, Fe_2O_3	.08
Alumina, Al_2O_3	nil.
Water combined, H_2O	4.56
Water hygroscopic, H_2O	.20
	99.98

Density, 2.70.

This is a pure talc possessing a coarsely foliated structure and pale green colour. It yields a dead white powder entirely free from grit, which could be used in the rubber trade, for filling in paper making, and for toilet purposes. Such material, after fine grinding, was selling in the United States at £3 to £3 15s. per ton in December, 1917, and was worth considerably more in Australia.

Fluorite (fluoride of calcium), Mulgine.—Early in the year fluorite was detected in microscopic violet-coloured granules in a rich molybdenum ore from Mulgine. The ore resembled a greisen in appearance, and was composed (in decreasing order of frequency) of yellow muscovite, microcline, oligoclase, quartz, molybdenite, pyrite, fluorite, zircon, and sphene. The fluorite granules were sometimes interstitial, sometimes embedded in the felspar. At the end of the year the Government Geologist collected some specimens of ore from the molybdenite lode on M.L. 40, which exhibited coarse cleavable masses of the same mineral up to three-quarters of an inch (20 mm.) in diameter. These also are purple in colour, mostly very deep in shade up to purplish-black, but shading off occasionally to a lighter shade of the same colour. Fluorite occurs under very similar conditions at Poona (Murchison Division), where, however, molybdenite is absent.

Prehnite (hydrous silicate of calcium and aluminium), Comet Vale and Coolgardie.—The presence of this mineral, which is related to the zeolites, in association with calcite and gypsum in the vughs of the lode of the Sand Queen Gold Mine at Comet Vale, indicate that the concluding conditions of vein-filling in this deposit were distinctly different to those which obtained in all other West Australian gold deposits of which descriptions are available, excepting the lode at Sherlaw's Mine at Coolgardie, where the same combination of minerals is found.

Chrysotile (hydrous silicate of magnesium), Hale's Well, north of Nullagine.—Asbestos of the actinolite species is widely distributed throughout the older greenstones of the State, but is unfortunately almost valueless. The commercially valuable asbestos, chrysotile, has only been known in the past at Soanesville, a most inaccessible locality in the North-West. During this year a small tonnage of high-grade chrysotile has reached Fremantle from M.L. 16, two miles south-east of Hales' Well, and about 15 miles north of Nullagine. The mineral is pale greenish-yellow in colour, and is easily divisible into fine, soft, and tough fibres. The maximum width of vein noted was 3¾ inches (9½ cm.), and the maximum length of fibre 3 inches (7½ cm.).

Sillimanite and *Andalusite* (both silicates of aluminium), Kunanoppin.—The detection of these minerals in garnetiferous mica schists, the latter with much graphite also, is of importance, since similar rocks with the same conjunction of minerals occur in association with auriferous lodes at Marvel Loch, 80 miles to the east-south-east. There is thus a possibility of gold deposits being found farther to the west and north-west of Westonia, which has hitherto been looked upon as the westerly limit of the Yilgarn auriferous area.

Coal, Irwin River.—After having been abandoned for some years, the coalfield near the head of the Irwin River has again been prospected this year by means of three shafts, and the latest sample from the seam at a depth of 42 feet showed the lowest percentage of ash yet recorded from this field, viz.,

8.76 per cent., as against a previous average of 14.52 per cent. Partly because of this low ash, but more largely because the coal, which in the seam carries about 20 per cent. of moisture, had been thoroughly aid-dried before being submitted for analysis, a record calorific value was shown by this sample, viz., 10,494 B.T.U. The sample had the following composition:—

	Per cent.
Moisture	9.48
Volatile	32.59
Fixed carbon	49.17
Ash	8.76
	100.00

Assuming the freshly mined coal to have 20 per cent. of moisture, reduced to 15 per cent. by two or three days' air-drying, the fresh coal would have a calorific value of 9,274 B.T.U., and the coal put on the market after a few days' exposure, 9,854 B.T.U. If this high grade can be maintained, the possibility of using this coal as a fuel throughout the Murchison area should be seriously considered.

Meteorite, Youanmi District. — Another large metallic meteorite was acquired by the Department during the year. This is a somewhat flattened mass of nickel-iron, deeply pitted on both sides and evidently a complete boloid. It weighs 268lbs. (121 kg.) and measures 22 inches (56 cm.) in greatest diameter and 6 inches (15 cm.) in greatest thickness. It appears to belong to the group of "medium octahedrites," which is a common type. This makes the thirteenth metallic meteorite discovered in the State, of which seven have been "medium octahedrites," three "broad octahedrites," one "broadest octahedrite," and two "finest octahedrites."

E. S. SIMPSON,
Government Mineralogist and Chemist.
Perth, 1st February, 1918.

PETROLOGICAL WORK.

(R. A. FARQUHARSON.)

The petrological work carried out during the past year may be most conveniently summarised under the following heads:—

I. Determinations and Reports for the Geological Survey Staff.
II. Determinations and Reports for mine managers, for other departments, for prospectors, and for the general public.
III. Miscellaneous.

I.—Determinations and Reports for the Geological Survey Staff.

While a number of identification and short descriptions have been made of specimens brought in by members of the staff, with the object of obtaining information that would throw light on some particular geological or mining problem, the chief work of the year has been the determination, description, and correlation of rocks collected by the officers in the field, and discussions, with the officer concerned, of the geological problems of the various districts.

The total number of sections cut during the year was 713, while 435, exclusive of many duplicates, were added to the slide collection. The suites of specimens treated include those from:—

A.—The Warburton Range and the country to the east of it so far as the South Australian Border.

The results of the examination of the rocks—which was begun in December, 1916—have proved both interesting and important, but as a general account of them with a section comprising detailed description has been given in Bulletin 75, now in the Press, only a brief resumé is called for here. The rocks have been classified as follows:—

(1) Acid Porphyries.
(2) Granites both of pink and grey colour.
(3) Granulites and gneisses of Cohn Hill and Mt. Aloysius.
(4) Greenstones.
(5) Basic plutonic and dyke rocks.
(6) Rocks of volcanic origin.
(7) Rocks of classic and sedimentary origin.

1. The acid porphyries, which include quartz porphyries, with and without quartz phenocrysts, granite porphyries, granular porphyries in some cases garnetiferous, and micropegmatite, are genetically connected, being of one rock mass, due to differences in the conditions of solidification in different portions of the mass.

2. Both pink and grey granites are usually very coarse-grained with large crystals of microcline. In some specimens greenish-brown hornblende is present, and in the grey granites not only is granular garnet frequently found, but also the evidence of the operation of severe dynamic stress in the rock. Though the similarities between the two granites are strong, there is doubt whether they are facies of one magma, and whether the pink is not younger than the grey.

3. The granulites and gneisses of Cohn Hill and Mount Aloysius are different from any rocks yet found in other parts of Western Australia. The granulites, which are hypersthene granulites, show certain marked resemblances to the acid members of the Charnockite Series in India. The gneisses are garnet-sillimanite gneiss mineralogically similar to the Saxon granulites.

4. The greenstones are, on the whole, very similar to those found in association with the auriferous deposits in different parts of the State, *e.g.,* at Meekatharra. One specimen, about the mode of occurrence of which there is some doubt, is noteworthy for the presence in it of seapolite partially replacing felspars.

5. The basic plutonic and dyke rocks include (a) plutonic intrusives or rocks of plutonic habit occurring apparently as large masses, (b) rocks of doleritic habit occurring as dykes. The former, (a), are olivine norites with the characteristic minerals in varying proportions. They are very similar both in mode of occurrence and in composition to the olivine norites from India and South Africa. The latter, (b), comprise micropegmatitic quartz-dolerites, ophitic olivine dolerites, ophitic dolerites and fine-grained amphibolised dolerites.

6. Rocks of volcanic origin. Specimens which, from the presence of vesicles are undoubtedly of volcanic origin, were obtained from a few localities, notably Mt. Herbert and Table Hill. They are all

fine-grained basaltic dolerites considerably altered by epidotisation and chloritisation.

7. The rocks of clastic and sedimentary origin include decomposed tuffs or agglomerates, grits, quartzites, conglomerates, and volcanic conglomerates, and some metamorphosed sediments of doubtful character.

As one of the objetes of the expedition to the Warburton Range was the examination of the country for any greenstone areas likely to prove worthy of prospecting, special attention has been paid to the correlation of the greenstone specimens with those from the goldfields of the State, and the results of this have been set out in a separate chapter of the Appendix to the Bulletin. Further, the results of the investigation of the rocks collected on the expedition, together with the facts gleaned from a critical perusal of the various publications hitherto issued relating to the geology of Central Australia, have enabled a general correlation to be made of the rocks of the most important features of this little-known region, and some conclusions to be drawn as to its general geological constitution. The details of the correlation, the resultant conclusions, and a digest of the previous papers dealing with different parts of the region have been set out in another separate chapter.

B.—Parts of the North-West, Central, and Eastern Divisions between Long. 119deg. and 122 deg. E., and Lat. 22deg. and 28deg. S.

The numerous specimens collected by Mr. Talbot from this region have been fully described in Bulletin 77, which is ready for the press. They include rocks of the following type:—

1. Sedimentary rocks.
   - (a) Sandstones.
   - (b) Grits or arkoses.
   - (c) Shales and slates.
   - (d) Quartzites, haematite-quartz rocks, and quartz-schists.
   - (e) Limestones.
   - (f) Jaspers.
2. Granites and quartz-porphyries.
3. Basic igneous rocks.
   - (a) Older greenstones.
     - (i.) Quartz-amphibolites, serpentines, epidiorites, hornblendites.
     - (ii.) Older amphibolised and zoisitsed dolerites.
   - (b) Basic and doubtful acid lavas; and tuffs and agglomerates making volcanic vents.
   - (c) Basaltic dolerite sills, dykes and bosses.

Of the sedimentary rocks, the sandstones are in three localities glauconitic; the shales are in many instances indurated by constant metamorphic action of the basic sills; the limestones are in some localities magnesian and even dolomitic. The jaspers are remarkable in that they have been undoubtedly derived from sedimentary rocks by silicification. Outcrops have been found in which a gradual change can be traced from the jasperoid material to a finely banded true soft sediment.

The Basic Igneous rocks are chiefly noteworthy owing to the fact that included amongst them are not only sills and dykes but undoubted vesicular and non-vesicular lavas. The sills and dykes, which consist of basaltic dolerite and micropegmatitic quartz-dolerite, occur in some places—as in the Lofty Range—in very large numbers; and the lavas, if, as is probable, they extend as far as the coast at Roebourne, attain an enormous thickness and extent. These flow rocks are chiefly basaltic dolerite.

Associated with the lavas are small patches of volcanic agglomerates and scoriaceous tuffs, which, in two instances at least, mark the vents from which lava has issued.

C.—Goongarrie and Comet Vale.

Goongarrie.—The rocks described from this district for Mt. Jackson have been grouped as follows:—

1. Fine-grained epidiorites.
2. Porphyritic epidiorites with large zoisitised felspars.
3. Hornblendites and serpentines.
4. Amphibolised quartz-dolerites, some coarse-grained, some fine-grained, some with quartz, some without quartz.
5. Quartz-carbonate-chlorite schists.
6. Altered sediments (conglomerates, grits, and shales, with associated acid rocks).
7. Porphyries, (a) quartz porphyry, (b) Hornblende-felspar porphyry.

Comet Vale.—The rocks illustrating the district are very similar to those from Goongarrie; they have been thus classified:—

1. Fine-grained epidiorites and amphibolites.
2. Fine-grained hornblende schists and associated rocks.
3. Grey serpentine.
4. Amphibolites, hornblendites, and altered peridotites, including serpentines and talc-chlorite-carbonate rocks.
5. Talc-chlorite schists.
6. Quartz-porphyries.
7. Aplites and granites.

The above classifications are the result of discussions between Mr. Jutson and myself, discussions which were desirable owing, on the one hand, to the petrological resemblance between many of the greenstones, and, on the other, to the peculiarities of their occurrence in the field.

D.—Quinn's, Jasper Hill and Warriedar.

Quinn's.—The rocks from this locality comprise greenstones that are chiefly schistose epidiorites, microcline aplites and pegmatites, and rocks which had formerly been described as granitic schists, but which, owing to the absence of felspar, and the very large content of granular quartz, appear rather to be of clastic origin. These latter seemingly vary very considerably in composition, for some are white, others yellowish white, and others dark-green and of dioritic character. Some are much sheared, others almost massive. Apparently associated with them are finely foliated talcose chloritic schists, of which some show decomposed white knots.

Jasper Hill.—The chief rock types collected from this area are:—

Greenstones—

1. Massive epidiorites and amphibolites.
2. Sheared or foliated epidiorites and hornblende schists.
3. Fine-grained massive epidiorites or amphibolites with thin acicular felspars.
4. Finely foliated hornblende-epidote-quartz rocks.

Granites and Porphyries—

5. Granular aplites with veins of quartz and fibrous tourmaline.
6. Biotite and garnetiferous muscovite granite.
7. Chloritic quartz porphyry or poryhyrite.
8. Finely foliated black tourmaline hornfels.

There is little doubt that the massive and the sheared and foliated epidiorites are genetically identical. They may have been intrusions from the same magma differing slightly in age, or the massive varieties may represent only portions of the same rock mass as the foliated rocks, that have escaped the shearing stresses. The latter now appears to be more probable.

The fine-grained massive epidiorites (3) differ so much in structure from the others, and so closely resemble the fine-grained amphibolites of Kalgoorlie, that they have been separated as a distinct group, though whether they are altered forms of an old lava or of the chilled margin of a dolerite mass is not at present clear.

Warriedar.—The country is this neighbourhood surveyed by Mr. Feldtmann consists mostly of—

1. Fine-grained fibrous amphibolite.
2. Coarse-grained amphibolite.
3. Fine-grained amphibolised ophitic dolerite or epidiorite.
4. Amphibolised ophitic gabbro.
5. Platy and prismatic hornblendites.
6. Banded zoisitised and amphibolised quartz-dolerite.
7. Quartz diorite.
8. Micacised and granulated quartz porphyry.
9. Phyllitic shale.

E.—Esperance District, in praticular the neighbourhood of the Munglinup Graphite Deposit.

These rocks, collected by Mr. Blatchford and Mr. Herbert (the representative of the Morgans Battersea Crucible Company), were submitted to me for determination, and at Mr. Herbert's request, for detailed description and investigation of the nature and origin of the lode material. The chief rocks were found to be:—

1. Foliated granular hornblende gneiss.
2. Garnetiferous hornblende gneiss.
3. Decomposed specimens mostly impregnated by graphite.

In the decomposed rocks the evidence obtained showed that—

(a) There are undoubted pegmatite veins impregnated by graphite in the zone in which the shafts occur.
(b) The lode material not only contains pegmatite veins, is in places composed of a kaolinic quartz mass derived from the alteration of a quartz-felspar intrusion.
(c) In one shaft, the graphitised material is a fine granular carbonate rock consisting largely of magnesite.

It is probable that the lode material is in part the alteration product of a granitic pegmatite, in part an extremely weathered basic rock of serpentine or gabbro character.

At Mr. Herbert's request, microphotographs were taken to show the interlamination of rock material with the graphite flakes, a phenomen which is frequently the cause of unexpectedly low results in the mechanical separation of the graphite.

F.—Kojonup, Tuckabianna, etc.

The rocks from these localities, which were mostly very decomposed, were collected only for determination and for confirmation of their relationships.

II.—Determinations and Reports for Mine Managers, for other Departments, for Prospectors, and for the general public.

During the last year or two, there has been evinced by mine managers and mining companies an increasing desire to take advantage of the facilities afforded by the Geological Survey Department for the determination of rocks and bore cores that are of importance from the point of view of mining geology. This is distinctly encouraging as an indication that the value of an accurate knowledge of the character and relation of the rocks of any mine, and the influence of these factors on the devolopment and future of the mine becoming more and more generally realised by those responsible for mining operations.

During the year examinations have been made—

1. Of two parcels of specimens from the manager of the Youanmi Mine.

The specimens were determined and their relationship to one another described. Nearly all were granites metamorphosed, to a greater or less extent, by heat and pressure.

2. Of two parcels of bore cores from the Sons of Gwalia Mine.

The first parcel consisted of cores from No. 21 level, bores No. 83 W. and No. 84 E. The facies in No. 83 were chiefly chlorite-carbonate schists and fibrous, more or less sheared epidiorites. The facies in No. 84 E. were distinctly dioritic or epidioritic rocks, carbonated, sheared and foliated epidioritic rocks, and chlorite-carbonate schists.

The second parcel comprised cores from No. 21 level, bores Nos. 91 W. and 92 E. No. 91 W. consisted of carbonate-chlorite quartz schist and sheared fibrous epidiorites, in some cases carbonated and zoisitised. No. 92 E. showed fibrous epidiorite sheared or foliated, and carbonate-chlorite-quartz rock.

3. Of specimens from the Edna May Consolidated and from the Edna May Golden Point Mine. These were examined to determine their relationship to the rocks of the Edna May Mine, Edna Central and Edna May Deep Mines.

Determinations for other departments consisted chiefly of those for the State Mining Engineer and for Wardens and Mining Registrars.

For prospectors and for the general public, 190 determinations have been made of rocks and minerals, and, when desired, the determinations have been supplemented by short notes on the value of the specimens.

III. *Miscellaneous.*—A considerable amount of time and labour has been spent in connection with the following:—

1. The preparation and despatch of collections of rocks and minerals to Mining Registrars, the Royal Military College, Duntroon, etc.
2. The correction of typed and printed proofs of the various reports for pubilcation.
3. Microphotography.
4. In conjunction with Mr. Blatchford, the preparation of a rock classification with colours, rulings

and symbols, to simplify and introduce a further degree of uniformity into the geological maps of the Survey.

5. With the assistance of Mr. Jutson, the correction and amplification of the Glossary of geological and mining terms to be issued with the Mining Handbook.

6. Reporting on the quality of specimens of asbestos.

7. Bringing up to date the registration of the rock-sections in the Survey collection. In this duty, I have been assisted by Mr. Welsh.

GEOLOGICAL SURVEY MUSEUM AND COLLECTIONS.

The addition to the Survey Collection during the year amounted to 621, bringing the total number of registered specimens in the collection at the end of the year to 15,525. In the last Annual Report the total registered was given as 15,595, but this number included duplicates and many rocks examined but not registered.

The total number of sections cut and registered was 435, and of those cut but not registered 288.

Special acknowledgment must be made of the donation to the collection of:—

1/1161 Graphite, from four miles north of Northampton—(H. P. Herbert);
1/1185 Scheelite in Auriferous Quartz, Hill End Gold Mine, Norseman—(State Mining Engineer);
1/1186 Coorongite, Estuary of the Pallingup River, South-West Division—(State Mining Engineer);
1/1219 American Pumice, Sydney—(C. Gudahy);
1/1247 Galena Crystals (four), from Nooka Mine, Northampton—(J. Reynolds);
1/1248 Collie Fossils (17), from Brown's Collieries, Collie—(Inspector McVee);
1/1270 Obsidianite, Preston ?—(Rev. Vaughan);
1/1274 Scheelite and Wolfram in Pegmatite, Edna May Deeps, Westonia—(N. Stuckey);
1/1322 Lepidolite, Ubini Railway Station, Coolgardie—(State Mining Engineer);
1/1323 Gneiss, between Kulin and Skulin Railway Stations, Kondinin Railway Line—(Wood. Railway Engineer);
1/1324 Quartz with Garnets, Grass Valley—(J. W. Regan);
1/1349 Micaceous Haematite, Mt. Gould, Peak Hill Goldfield—(J. W. Regan);
1/1382 Gold specimen, Kanowna, Coolgardie Goldfield—(Hopkins);
1/1383 Artesian Bore Cores, G. H. Gooch's Wandagee Station, *via* Carnarvon—(Davis Hankinson & Co.);
Goldfield—(C. F. Connelly);
1/1386 Micaceous Haematite, Mt. Gould, Peak Hill
1/1387 Pyritic Conglomerate, Nullagine, Pilbarra Goldfield—(F. S. Cooke);
1/1388 Plumbago—(R. Boyce & Co., Melbourne);
1/1390 Fossil Shell (Voluta)? Wagin Townsite, South-West Division—(W. E. Wood);
1/1435 Obsidianite, Karralie, Yilgarn Goldfield—(J. McIlwraith);
1/1346 Meteorite, 50 miles South of Youanme—(Mines Department);
1/1440 Bore Cores (Artesian), Byro Station, 200 miles North of Yalgoo—(Darlot Bros.);
1/1484 Vesicular Basalt, Bunbury—(W. Atkins);
1/1511 Gold in Quartz-Haematite Schist, G.M.L. 1926, Tuckabianna, Murchison Goldfield—(T. Faherty);
1/1522 Coal, Irwin River—(Barnett Bros.);
1/1231 Ore (12 specimens), from Dutch-Sweeney Mine, California—(F. A. Moss);
1/1244 Fossils (29 specimens), Murrawiginn Cave, 120 miles North of Cliffs of the Bight, South Australia—(Mrs. D. Bates).

LIBRARY.

The Geological Survey Library received during the year 1917 1,690 publications from other cognate institutions throughout the world; in addition 115 volumes were added by purchase, and 16 volumes bound.

The distribution of the official publications of the Survey issued during the year amounted to 3,248 as against 3,063 of the previous year.

PUBLICATIONS.

The publications for the year have been as follows:—

Annual Progress Report for the year 1916.

Bulletin 71—The Geology and Mineral Resources of the Yilgarn Goldfield, Part III.—The Districts North of Southern Cross: by T. Blatchford and C. S. Honman.

Bulletin 71—Palæontological Contribution to the Geology of Western Australia, Series VI., Nos. XI. and XII.: by F. Chapman and R. Etheridge.

Bulletin 73—The Geology of the North Coolgarlie Goldfield, Part I.—The Yerilla District: by C. S. Honman.

Bulletin 74—Miscellaneous Reports, Series V., No. 61-68.

Bulletin 75—A Geological Reconnaissance in the country between Laverton and the South Australian border, including part of the Mount Margaret Goldfield: by H. W. B. Talbot and E. de C. Clarke.

Bulletin 76—Interim Report on the Graphite Deposits at Munglinup, Eucla Division: by Torrington Blatchford.

In addition to these, there are now ready for the Printer:—

Bulletin 70—The Western Australian Mining Handbook: by A. Gibb Maitland and Staff.

Bulletin 77—The Geology and Mineral Resources of the North-West Division, between Latitude 22deg. and 28deg. South and Longitudes 119-123: by H. W. B. Talbot.

The following are in hand:—

The Artesian Water Resources of Western Australia: by A. Gibb Maitland.

The Geology and Mineral Resources of Western Australia, with a four-sheet geological map: by A. Gibb Maitland.

The Geology and Mineral Resources of the Yalgoo Goldfield: by A. Gibb Maitland.

The South-West Division; its Geological Structure and mineral Resources: Commenced by the late H. P. Woodward, to be completed by the Government Geologist.

The Mining Geology of Niagara, Kookynie, and Tampa, North Coolgardie Goldfield: by J. T. Jutson.

The Mining Geology of Comet Vale and Goongarrie, North Coolgardie Goldfield: by J. T. Jutson.

The Mining Centres of Quinn's and Jasper Hill, Murchison Goldfield: by F. R. Feldtmann.

The Geology of Warriedar, Yalgoo Goldfield: by F. R. Feldtmann.

The Magnesite Deposits of Western Australia: by F. R. Feldtmann.

T. BLATCHFORD,
Acting Government Geologist.

30th May, 1918.

DIVISION V.

SCHOOL OF MINES OF W.A.

School of Mines,
Kalgoorlie, 14th March, 1918.

To the Under Secretary for Mines.

I beg to forward, for the information of the Hon. the Minister, my Report for the year 1917.

It was necessary to carry on the class work in Engineering subjects and in Mathematics at the beginning of 1917 with temporary Instructors, but at the end of March, Mr. J. H. Tate, who has had wide experience in large engineering works in England and in the Colonies, took up his duties as Lecturer in Engineering, and in the middle of April, Mr. George Irving, M.A., received appointment as Lecturer in Mathematics. As the Mathematics Classes during the past few years have been particularly unfortunate in not having a Lecturer in charge for more than a short period at a time, it is hoped that under the present Lecturer, who is a graduate with the requisite qualifications to comply with the terms of affiliation with the University, the classes will steadily progress.

The Senate of the University has notified the School that the proposals *re* affiliation of the School of Mines have been adopted, and that the question concerning Mining and Metallurgy courses, which was deferred twelve months ago pending a report from the Professor of Engineering, has been settled. The School is now in a position to arrange for class-work for matriculated students desirous of preparing for the University Examinations in some of the first year Science subjects, and to conduct higher class-work in Engineering subjects for fourth year University students, when the occasion arises. It is not expected that there will be any great demand upon the School for some time to come for additional class-work in this direction.

The attendance at classes during 1917 showed an increase over the previous year. The preparatory classes continue to attract a large number of students, more in fact than the present staff can adequately manage, and a demand has arisen for additional class-rooms and more assistance. The preparatory classes give students entering the School a training in Mathematics, Physics, Chemistry, Geology, and Drawing, which is particularly valuable as an introduction to the regular courses in Mining, Metallurgy, and Engineering. They deserve every encouragement for it is evident that the greater the provision that can be made to bring the younger students up to a fair standard in preliminary science work, the greater will be their progress, and this will result in increased benefit to the industry when the students take up responsible positions.

Between 40 and 50 per cent. of the students are over 21 years of age. Nearly all of them are in occupations connected with the mines and batteries, and as only a limited number of students can devote their whole time to study, most of the class-work is held in the evening with duplication of classes during the day to suit those working shifts.

Students who have been through courses of instruction at the School have, year by year, secured lucrative positions, the duties of which they have discharged in a creditable manner. During the past three years the majority of the advanced students on leaving the School have enlisted on active service or have taken up munitions or other work where technical knowledge has been of special value.

The Honour List, which is necessarily incomplete, contains the names of 164 students and members of the staff who have enlisted. Two former lecturers and several students have been engaged upon munitions work in England, and one student has been attached to the aircraft works.

A special feature of the year's work was a journey to Perth undertaken by the lecturer and members of the Electrical Engineering class with the object of viewing some of the larger electric power plants of the State—particularly the up-to-date equipments of those recently erected. Visits were made to the Perth Power House, the Midland Junction Railway Workshops, the State Implement Works, the Fremantle Power House and Substation, the Claremont Asylum, and the Observatory. The students were afforded special opportunities of gaining an insight into the various machines, operations and processes, they were shown many details and practical operations not met with on the Goldfields, and altogether had a most interesting and instructive week. The educative value of such a visit under the direction of a competent lecturer is undoubted, and the students returned to Kalgoorlie thoroughly satisfied that the personal sacrifices made for the trip were amply repaid by the information secured from the inspection of the different installations. They have expressed their appreciation of the care and attention bestowed upon them by the management of the institutions visited.

During the early part of the year, the Associate who held the Robert Falconer Research Scholarship for 1916, handed in his report, in which he summarised in a comparatively small compass, a very wide literature on the corrosion of iron and steel, and presented in a compact form the modern ideas on the subject. He gave the results of a large number of experiments he had performed to illustrate the various theories. From these he drew his own conclusions, he made various suggestions concern-

ing Boiler Feed Water, the subject of his investigation, and produced a creditable thesis. A copy of this has been forwarded to the Department. Owing to the enlistment of senior students there was no Research scholar in 1917.

At the inauguration of the School of Mines the chief departments were Mining and Metallurgy, but additions made from time to time, besides providing a good Mineral Museum for the Geology department, have brought Mechanical and Electrical Engineering into prominence. With a good staff and equipment, and satisfactory material in the shape of students upon which to work, the School has succeeded in establishing for itself a creditable reputation, which rests upon the efficient manner in which past students have discharged the responsible duties entrusted to them in their various occupations.

In order that the School may continue to perform its functions satisfactorily, the class-work must be maintained in a high state of efficiency. During the past few years financial considerations have retarded the normal expansion of the School, so that at the present time there is an accumulated demand for extensions in all departments. In several directions conditions have changed during recent years. The establishment of the University of Western Australia has created a demand for University instruction which has been responded to by educational institutions in the State, and the co-ordination of the work of the School of Mines with that of the University, in order that goldfields residents may benefit, necessitates various modifications in the class-work. New metallurgical, mining and engineering processes and methods have come into operation, equipment for the demonstration and teaching of which should find a place in the School but which, up to the present, has not been secured. Although the local mines afford splendid object lessons which supplement the lecture work of the School, it must not be forgotten that they are concerned with gold, whereas the School must, in addition, give instruction in the extraction and treatment of other metals of economic value. To be best fitted to assist in the development of the Mining industry, students should have a comprehensive training embracing demonstrations of processes which are not in operation near the School, and for this an experimental plant and equipment are a necessity. In view of the suggestion that has been made that an experimental concentration plant, one suitable for the treatment of minerals and base metal ores, should be erected in the district, the staff have requested that consideration be given to the School of Mines as a suitable location for such a plant. The analytical and assay laboratories of the School would be a useful adjunct, members of the staff are competent to give valuable assistance, and students would be afforded opportunities of gaining practical instruction in new processes.

The war has brought into prominence the need of widely extending technical instruction as well as the necessity of developing to the utmost the natural resources of all parts of the Empire, and it is recognised that increased expenditure devoted to increasing the skill of the artisan and the efficiency of the scientific worker will be amply repaid in the future. In view of the growing demand for metals other than gold and for various mineral substances found in Western Australia, it is felt that increased provision is required at the School of Mines to enable it to more fully discharge its function of training students so as to increase the efficiency of the men and methods employed in the Mining industry.

During 1917, 368 free assays and mineral determinations were made for prospectors, of material from Crown lands not held under lease for mining purposes:—

	No.
Assays for Gold and Silver	206
Assays for Copper, Lead, Tin, etc ..	62
Determinations of Rocks, Minerals, etc.	100
	368

The number of assays for gold and silver was the same as for the previous year, but there has been a marked increase in the number of assays for other metals, and in the determinations of rocks and mineral samples. Prospectors have shown more interest in substances formerly little sought after, which owing to the war, have now an enhanced value.

Throughout the year the Assistant Director and the members of the School staff have rendered excellent service, and my thanks are due to them for their cordial co-operation in the proper conduct of the work of the School.

F. B. ALLEN,
Director, School of Mines.

DIVISION VI.

OPERATIONS OF "THE INSPECTION OF MACHINERY ACT, 1904."

Office of the Chief Inspector of Machinery,
Treasury Buildings, Perth, 15th April, 1918.

Annual Report of the Chief Inspector of Machinery and Chairman of the Board of Examiners for Engine-drivers, for the Year ending 31st December, 1917, with Statistics.

The Under Secretary for Mines.

Sir,—

I have the honour to submit, for the information of the Hon. the Minister for Mines, the following report on the operations of "The Inspection of Machinery Act, 1904," in the districts proclaimed thereunder, together with statistical tables for the year ending 31st December, 1917.

For convenience of reference I have divided the report as follows:—

(1.) Inspection of boilers.
(2.) Explosions and interesting defects.
(3.) Inspection of Machinery.
(4.) Prosecutions under the Act.
(5.) Accidents to persons caused by machinery.
(6.) Engine-drivers' examinations and kindred matters.
(7.) General.

DIVISION I.

Inspection of Boilers.

The number of boilers useful as steam generators on the register at the end of the year was 3,017, as against 3,026 at the end of 1916, showing a decrease of nine boilers. There were 24 new boilers registered during the year. As against this there were 20 permanently condemned, and 13 transferred beyond the jurisdiction of the Act. Of these 13, nine were exported to the Eastern States.

Operations in the various districts.

The following return shows the operations in the various proclaimed districts in connection with boilers, as compared with 1916:—

Return showing operations in the Proclaimed Districts (Boilers only) during the year ending 31st December, 1917.

	Totals.	
	1917.	1916.
Total number of boilers registered and capable of being used as steam generators ...	3,017	3,026
New boilers registered during the year	24	34
Inspections for year—Thorough	1,355	1,339
Working	182	171
Boilers condemned during year—Temporarily	49	60
Permanently	20	22
Boilers converted into tanks, air receivers, etc., during the year	2	...
Boilers transferred beyond the jurisdiction of this Act	13	7
Number of Notices issued for repairs during the year	303	312
Number of certificates issued (including those issued under Sec. 30) during the year ...	1,367	1,349
Number of useful boilers out of use at end of the year	1,705	1,719
	£ s. d.	£ s. d.
Total amount of fees for 1917	2,806 4 9	...
Total amount of fees for 1916	...	3,018 9 11
Total number of Inspectors	*7	7

*Six only for five months.

On 15th April one of the inspectors resigned and his successor was not appointed until the 11th September. The Department was therefore without the services of one inspector for nearly five months.

This necessarily had an effect on the amount of work done and the revenue produced.

The number of thorough and working inspections was 1,355 and 182 respectively, making a total of 1,537, showing an increase of 16 thorough inspections and 11 working inspections.

In the South-Western District 1,007 inspections were made, or rather over 65½ per cent. of the total number. There was an increase of 105 or 11½ per cent. in the number of inspections made in this district, which, following a decrease of 228 last year, shows a satisfactory revival of trade.

In the Kalgoorlie group there was a drop of 26 inspections, being 6.7 per cent.

In the North Coolgardie and Mount Magnet Districts the decrease was 30 inspections or 23.8 per cent. In the East Murchison and Murchison and Yalgoo Districts the decrease was 22, being nearly 23 per cent. The considerable decrease on the latter two groups is to some extent accounted for by the fact that for five months there was no inspector regularly available for these districts, as explained in a previous paragraph.

The total number of boilers out of use at the end of the year was 1,705, as against 1,719 in 1916, thus showing a slight improvement.

The revenue from boiler inspections was £2,806 4s. 9d., as against £3,018 9s. 11d. for the previous year, showing a decrease of rather more than £212, although there was an increase in the number of inspections made. This is probably accounted for by an increased use of small boilers against larger ones producing higher fees.

The number of boilers permanently condemned was 20, or two less than last year, and 13 boilers, most of them large water tube boilers, were removed from the jurisdiction of the Act, nine of these being exported to the Eastern States where the demand for boilers became somewhat acute owing to war conditions.

The following table shows the number of boilers temporarily or permanently condemned as a percentage of inspections, made since the inception of the Act:—

Number of temporarily and permanently condemned boilers per 100 *inspections made since* 1899.

Year.	Temporarily.	Permanently.
	%	%
1899	2·64	1·42
1900	2·21	·498
1901	4·34	·511
1902	5·00	·958
1903	2·43	·697
1904	3·08	·389
1905	2·84	·388
1906	3·98	·960
1907	4·36	·802
1908	3·18	·599
1909	2·89	·797
1910	4·49	1·382
1911	3·54	8·070
1912	3·93	2·471
1913	2·64	2·431
1914	2·97	2·178
1915	4·72	1·538
1916	3·97	1·456
1917	3·19	1·301

DIVISION II.

Explosions and interesting defects.

Again I am in the position of being able to make the somewhat monotonous remark that there has been no explosion of any boiler under the jurisdiction of the Act. Considering the conditions, bad water, etc., this continued absence of anything like an explosion is high testimony to the efficacy of the inspection work.

No defect worthy of mention occurred during the year.

DIVISION III.

Inspection of Machinery.

The following return shows a classification of the power-driven machinery in the proclaimed districts. This year the number of groups driven by oil engines (including kerosene, petrol, and benzine engines) takes for the first time the highest place. There are now 1,910 registered groups of such engines as against 1,532 last year, showing an increase of 378. I have no doubt that a large percentage of these new registrations have been working for some years. They were, however, situated in outlying districts and have hitherto been practically inaccessible. Now that an additional motor car has been provided, these districts can be economically reached, and I have no doubt that next year there will be a further large increase. This class of engine is rapidly becoming an indispensable adjunct to almost every agriculturalist, and the marked increase is evidence of considerable and successful land settlement.

Electrically-driven groups take second place with 1,787, showing an increase of 75. Steam-driven groups take third place with 1,311 as against 1,335 last year, showing a decrease of 24. Suction gas groups have decreased by three, ordinary town gas groups have increased by one, hydraulic groups have decreased by one, and compressed air groups have increased by one.

Return showing classification of various sources of power-driven machinery in use or likely to be used again in proclaimed districts during the year ending 31*st December,* 1917.

Classification.	Totals.	
	1917.	1916.
No. of groups driven by steam engines	1,311	1,335
No. of groups driven by oil engines	1,910	1,532
No. of groups driven by ordinary gas engines	27	26
No. of groups driven by suction gas engines	220	223
No. of groups driven by compressed air engines	38	37
No. of groups driven by electric motors	1,787	1,712
No. of groups driven by hydraulic pressure	8	9
Totals	5,301	4,874

The number of lift registrations increased from 167 to 169, which shows a smaller increase than for many years past. The fact that the alternating current installation in Perth is still incomplete, and that very few large buildings are going up fully accounts for the small increase.

The following table shows the number and description of all the lifts in this State:—

Passenger Lifts—

Electrically driven	61
Hydraulically driven	0

Goods Lifts—

Electrically driven	79
Hydraulically driven	8
Belt driven	21
Total	169

If the present conditions do not greatly improve very soon, I think it probable that several lifts will have to be put out of commission during 1918 for want of wire ropes, the supply of which is becoming practically non-existent.

The following return shows the work done in connection with machinery inspections:—

Return showing operations in the proclaimed districts (machinery only) during the year ending 31st December, 1917.

	Totals.	
	1917.	1916.
Total registrations of useful machinery	5,301	4,874
Total inspections made	3,366	2,874
Certificates, bearing fees	2,752	2,243
„ (steam), without fees	614	629
Notices issued "Machinery dangerous"	412	355
	£ s. d.	£ s. d.
Total amount of fees for 1917	1,079 11 7	...
Total amount of fees for 1916	...	923 9 7
Number of Inspectors	*7	7

* *See* note on boiler returns.

There has again been a satisfactory increase in machinery registrations. In the South-Western District the increase was 442, or from 3,299 to 3,741.

In the Kalgoorlie groups the registrations dropped from 871 to 855, showing a decrease of 16. In the remaining districts there was an increase of one, making a total increase of 427. The total number of inspections made shows an increase of 492, or 35 more than the increased number of registrations, showing that about this number of plants which were out of use last year have been again put into commission.

Dangerous machinery.

Four hundred and twelve notices were issued ordering various guards and fences to be erected. The number of notices issued being about 12¼ per cent. of the number of inspections made.

DIVISION IV.

Prosecutions under the Act.

Proceedings were taken against the proprietor of a printing works in the Yilgarn District, under Section 16 of the Act, for employing a young person under 14 to work a machine. The defendant was fined 5s. and costs, amounting altogether to £3 12s. 10d., for which a warrant of execution had to be issued costing the defendant another 6s. 6d. This was the only prosecution during the year.

DIVISION V.

Accidents to persons caused by machinery.

During the year there have been 63 accidents, including three which ended fatally. This shows an increase of nine in the total number and a decrease of two fatals.

The following table shows the number of accidents and the percentage of these based on the total number recorded, caused by the various kinds of machinery mentioned:—

No. of Accidents.	Class of Machinery.	Percentage of Total Accidents.
3	Circular Saws	4·76 per cent.
3	Buzzers	4·76 per cent.
5 (1)	Ore treating machinery	8·00 per cent. including 1 fatal.
7 (1)	Fly-wheels, Pulleys, and Shafting	11·00 per cent, including 1 fatal.
10	Belting	16·00 per cent.
3	Belt Conveyors	4·76 per cent.
5	Winding Engines	8·00 per cent.
4	Pumps	6·30 per cent.
2 (1)	Emery Wheels	3·16 per cent., including 1 fatal.
2	Printers' Machinery	3·16 per cent.
2	Chaff-cutters	3·16 per cent.
2	Passenger Lifts	3·16 per cent.
2	Goods Lifts	3·16 per cent.
13	Other sources	20·62 per cent. or about 1·6 per cent. each.
63 (3)		

The accidents from circular saws are lower than for some years past, while belting accidents account for 16 per cent. of the total. Fly wheels, pulleys, and shafting caused 11 per cent., and were accountable for one fatal accident; ore-treating machinery caused 8 per cent., with one fatal; and the third fatal accident was caused by a bursting emery wheel which was well guarded. The majority of the accidents were caused through carelessness on the part of the injured persons, and no guards that could be devised would have prevented them.

It is a yearly source of surprise to find that so many men take such a number of entirely unnecessary risks.

DIVISION VI.

Engine-drivers' Examinations and kindred matters.

During the year four examinations were held in Perth, two in Kalgoorlie and one in Bunbury. Examinations were advertised to be held at Southern Cross, Leonora, Mt. Magnet, Geraldton, and Albany, but fell through owing to the necessary number of candidates not being forthcoming.

The following table shows the certificates granted and their classifications:—

Return showing total number of Engine-drivers' Certificates (all classes) granted in 1917 *and compared with* 1916.

Class of Certificate.	Number granted.	
	1917.	1916.
First Class Competency (including certificates issued under Reg. 27 and Sec. 63 of the Act)	6	4
Second Class Competency (including certificates issued under Reg. 27 and Sec. 63 of the Act) ...	15	24
Third Class Competency (including certificates issued under Reg. 27 and Sec. 63 of the Act) ...	33	41
Locomotive Competency	13	10
Traction Competency	2	4
Interim	4	9
Copies	8	8
Total	81	100

There is again a decrease in the number of certificates granted, the total number being 19 less than last year. This is undoubtedly caused by the large number of men at the Front.

The total number of certificates granted under this Act up to 31st December, 1917, is 2,592.

The revenue from engine-drivers' fees for the year was £109 2s. 10d. as against £120 10s. 3d. for 1916.

Inquiries, Prosecutions, etc.

There was no prosecution in connection with engine-drivers during the year.

The Board dealt with a few overwinds and similar accidents, none of which had any very serious result.

In some of these overwinds it was found that the amount of "head room" was so exceedingly small that the only wonder is there have not been more accidents. In one case the cross bar of the bridle on the skip had to be brought up hard against the bearers carrying the gin wheel at each wind. Such a condition of things gives a driver no chance.

DIVISION VII.

General.

For some time past difficulty has been experienced with regard to second-hand boilers imported from other States. In many cases boilers were bought by steam users in this State on the strength of reports made by licensed inspectors, not responsible departmental officers, in other States, particularly Victoria. On arrival of the boilers, in some instances, much disappointment was caused through this department discovering defects or errors in construction, which made it impossible to issue certificates for the pressures for which the boilers were guaranteed.

The great European war has so disorganised the ordinary channels of commerce that it is now practically impossible to import new steam boilers from abroad or raw material from which to make them. The question of exchange of second-hand boilers within the Commonwealth has therefore assumed an unusual importance, and the matter of reliable inspection of such boilers became pressing. With a view to easing the situation, I was instructed last June to arrange for two departmental officers in Victoria to inspect and report on any boilers intended for this State, in accordance with the methods adopted by this department. This was satisfactorily accomplished and the cost of any work done by the inspectors will not be charged against our State.

A mutual arrangement was also made whereby we undertook, when required, to do work for Victoria on the same basis.

I was informed that our report would be accepted in the case of any boiler exported from here. This arrangement has proved most satisfactory.

I was also instructed to visit the other States, which I did, with the exception of Tasmania, with a view of conferring with officers holding similar positions to my own, on various questions affecting the work and methods adopted in connection with the administration of our respective Acts. I was most courteously received in every case, and every assistance was rendered me.

After my return I received requests from the officers above mentioned for all forms, blue prints and copies of instructions to inspectors containing the various formulæ adopted here.

I feel sure that the opportunity thus afforded me for the interchange of opinions will be mutually beneficial to this department and the kindred departments in other States.

Work done for other Departments.

Early in the year I was requested to confer with the Chief Resident Medical Officer at Wooroloo Sanitorium on the matter of reducing the annual working costs of the engine-room staff. After due consideration recommendations were made which resulted in an annual saving of approximately £400. Several boilers and power plants of various kinds were inspected on behalf of other departments, and in some cases valuations made and advice given.

Inspectorial Staff.

In April last Inspector McCulloch resigned in order to take up munition work in the United Kingdom. It was not until 11th September that a new inspector was appointed to take his place, and naturally this delay has affected the year's work detrimentally. With the above exception the staff remains as in 1916.

Clerical Staff.

No change of any importance was made during the year, with the exception that the Clerk-in-Charge resumed duty after active service.

Revenue.

The total revenue from all sources during the year was £4,063 7s. 1d., made up as follows:—

	£	s.	d.
Fees for boilers	2,806	4	9
Fees for machinery	1,079	11	7
Fees, Engine-drivers' certificates	109	2	10
Incidentals (being fees for special inspections, special expenses, etc.)	68	7	11
Total	£4,063	7	1

This shows a decrease of £114 7s., which considering the depressed condition of many of the industries, is less than might have been expected. Almost

the whole of the decrease may be considered due to the state of the timber trade. The *decrease* has been entirely in connection with boilers and engine-drivers' fees, there being an *increase* of about £146 in fees received from machinery inspection. During the year seven items totalling £3 10s. have been written off as bad debts. The amount represents only .08 per cent. of the total revenue.

Mileage.

The total distance travelled by inspectors during the year was 39,817 miles, of which 16,912 were by rail, 22,896 by road and 9 by water. The distance travelled shows a decrease of 4,036 miles as against 1916, with an increase of 1,012 in the number of inspections made. The average miles travelled per inspection were 7.37, showing a reduction of 2.62 miles per inspection as against last year. This result has been brought about by the close attention in arranging inspections, bringing into line many groups which formerly needed a special visit, and the increased use of motor cars, which enables inspectors to sometimes do more than double the number of inspections possible with a horse and trap in any one day, and thus avoid revisiting the same district on another day.

During the last few years very close attention has been given to this matter of mileage travelled, and I think the result achieved, viz., the great reduction in the average miles per inspection, and consequent considerable economy in the matter of travelling allowances as against work done, fully justifies the small amount of time spent in making a tabulation of this kind. Without such records no satisfactory check is possible.

Conclusion.

In conclusion, I wish to again tender my sincere thanks for kindly assistance rendered by the officers attached to the Crown Law, Police and Postal Departments in various districts, in matters connected with the administration of the Act.

My staff have continued to carry out their duties efficiently and to them also my thanks are due.

I have, etc.,

C. J. MATHEWS, M.Inst.C.E.,
Chief Inspector of Machinery
and
Chairman of the Board of Examiners.

DIVISION VII.

Annual Report of the Government Analyst, Chief Inspector of Explosives, and Agricultural Chemist, for 1917.

The Under Secretary for Mines.

I have the honour to submit, for the information of the Honourable the Minister for Mines, my twenty-second Annual Report dealing with the work of my Department during the year 1917.

Judged by the mere statistical evidence of number of analyses conducted the work of the Department shows a falling-off during the twelve months under review as compared with previous years, but numbers only are misleading in judging work of this kind, and the staff has been very busily engaged on a number of special investigations, the labour connected with which cannot very well be represented by figures.

The work of the Department was seriously affected by the departure of Messrs, Hoare, Hood, and Hill for London at the beginning of May in order to take up work as munition chemists under the Imperial Government. Including Mr. Malloch, who had gone on similar work the previous year, there were four of my officers thus absent on special leave for work under the British Government. The shortage thus created was partly made up by the temporary appointment of junior officers, of whom two (Messrs. Southern and Roeder) are still at work at the end of the year, but though these officers have done exceedingly good work, and have shown the greatest interest and earnestness in their duties it is, of course, some time before junior assistants entering the laboratory can acquire sufficient experience to relieve the pressure to any extent.

Just at the close of the year Mr. Hoare returned again to duty, but in October last one of my senior analysts (Mr. Geary) left the Department in order to take up the position of City Analyst to the Perth Municipal Council, so that the year closes with the staff considerably weakened.

Only those who are accustomed to conducting varied work of the character carried out in this laboratory and who have to be prepared to meet sudden and urgent demands of an unexpected character can realise how difficult it is to maintain effective work with sudden changes and fluctuations of staff. All the officers have, however, striven in the most loyal and earnest manner to meet emergencies as they arose, and to assist me in preventing undue congestion and delay, and have cheerfully responded to any unusual calls which have had to be made upon both their time and energy.

A number of special matters which have engaged attention during the year are worthy of comment.

Commonwealth Advisory Council of Science and Industry.

The calls of my departmental duties have prevented me from taking so active or extended a part in the work of the Executive Committee of the above Council as was possible during the previous year, and in fact I have taken little personal share at all in this work, except during the month of June last when, owing to a special summons from the Prime Minister, the Advisory Council was brought together in Melbourne to confer with the Prime Minister, and to consider the question of the permanent organisation of the proposed institute of Science and Industry.

I was absent from Western Australia for a month attending important meetings in Melbourne, and took part in the interviews between the Executive Committee and the Prime Minister, as well as the subsequent discussions amongst members of the Advisory Council.

The result of these negotiations was the grant of a certain amount of money by the Commonwealth Government to continue the activities of the Executive Committee, but up to the present no further steps have been taken with regard to the establishment of the permanent Institute.

Throughout the year I have taken a regular part in the work of the Western Australian State Committee, which acts under the leadership of the Melbourne Executive, and I also acted as special representative of the Executive on the Interstate Forestry Conference held in Perth during the month of December.

As a result of my experiences in connection with the work of the Commonwealth organisation, I became convinced that it was highly desirable that this State should, if possible, have permanent representation at the regular meetings held in Melbourne, and in September last I submitted the matter to the State Government urging that they should arrange for such representation, and offering my resignation as a member of the Executive if that would in any way facilitate any arrangement which they might desire to make with a view to appointing any other officer who could be better spared than myself. I have not, however, had any further communication on this matter.

Meanwhile the endeavours of the State Government have been directed towards the encouragement of local industries as much as possible, and several matters have been referred to me in connection with the proposals for local industrial development.

Commercial utilisation of Blackboy Gum.

This matter, which has been the subject of representation on my part for a number of months, is still in a very unsatisfactory state. Apparently a commercial enterprise has been opened up in South Australia through communications from the Imperial

Munitions Department, but correspondence with the Agent General's Office with regard to Western Australian supplies failed to lead to any satisfactory conclusion. The Hon. J. D. Connolly, who has during the year entered upon the office of Agent General, is, however, taking the matter up, and it is hoped that something definite will soon eventuate.

Use of W.A. Clays for Pottery-making.

At the instance of an experienced pottery-maker, at present resident in this State, the Hon. the Minister for Industries took this matter up and referred it to me for report. Inquiries seemed to indicate that a very useful field for investigation existed, and I recommended the erection of a small trial furnace for experimental work under the guidance of the expert in question (Mr. Rafferty). Just as my suggestion had been approved and work was about to be commenced I ascertained that a considerable amount of investigation into our local clays had already been carried out by Mr. E. S. Simpson, the Government Mineralogist, in connection with the Department of Geological Survey. With the approval of the Hon. the Minister for Industries I therefore handed over the whole matter to Mr. E. S. Simpson, who is conducting an inquiry into what should prove a most valuable and interesting industrial question.

Salt.

The shortage of many domestic supplies owing to the war has amongst other things led to a fresh inquiry into the supplies of domestic salt locally available.

In past years considerable quantities of salt have been gathered in this State (notably from the Salt Lakes at Rottnest), and have been commercially utilised, but of late the market seems to have been chiefly supplied by imported stocks.

Samples taken from various parts of the State and examined in this laboratory indicate that there are ample supplies for all local requirements in Western Australia, and that some attain a very high degree of purity, while others require very little purification to render them suitable for all domestic purposes.

Forest Products Laboratory.

Ever since the establishment of the Commonwealth Advisory Council of Science and Industry strong representations have been made as to the need for a Forest Products Laboratory, and the claims possessed by this State for the establishment of such an institution in Western Australia.

This matter formed the subject of considerable discussion at the Interstate Forestry Conference, and need not be dwelt upon here except so far as to point out the undoubted evidence which exists for the need of scientific investigation in connection with the full development of the important timber industry in this State. Two important directions in which this has been evident have come under my notice during the year and call for some comment.

Powellising of Timber in connection with State Sawmills.—A considerable number of tests have been made in this Department on behalf of the State Sawmills Department in connection with the process of preserving timber by powellising, and various questions have arisen which require full and careful investigation.

A previous inquiry, extending over about six months and conducted by a member of my staff (Mr. Southern) in 1914 revealed clearly how scientific investigation could be of assistance to the commercial work of the mills, and it is highly desirable that many other questions then opened up should be further inquired into. The difficulties due to shortage of staff, however, have hitherto militated against this work being undertaken properly, but I am glad to say that negotiations are at present being carried on with a veiw to provision of the necessary assistance to enable this Department to take up the inquiry thoroughly.

Tannin Investigation.—Early in the year a special committee was appointed under the Executive of the Commonwealth Advisory Council of Science and Industry to investigate the question of Red-gum tannage in this State and the preparation of tanning extracts from some of our local barks.

The effective utilisation of the tanning material which exists in the form of a kino obtainable from the Red-gum (*Eucalyptus callophylla*) presents serious practical difficulties which have not yet been overcome, while there are a number of barks obtainable from our local flora which contain good tannin but not in sufficient proportion to render them of direct commercial value.

The Special Committee proceeded with their inquiry up to a certain point and then recommended that a special Tanning Chemist should be engaged in America to conduct local inquiries into these questions. The State Government, however, determined that before taking this step further investigations into the matter should be conducted in this Laboratory, and these inquiries are now going on.

I have already furnished one report that the preparation of tanning extracts from many of our barks presents no serious commercial or practical difficulty, and that this work could be undertaken by using extraction plants which are known to be adapted for this work. The inquiry into Red-gum tannage is not yet completed but, it is hoped, will be sufficiently advanced by the end of January to indicate whether the utilisation of this product is commercially practicable or not. I understand the Government will then reconsider the question of the appointment of a chemist from outside the State.

AGRICULTURAL MATTERS.

At the close of the year, while this report is being prepared, I have received instructions that, owing to the re-organisation of the Agricultural Department, the work of the Botanical and Chemical Sections concerned with the development of agriculture are to be brought into closer co-ordination, and with that end in view the Botanical Laboratory will be brought under the administrative control of this Department.

The close relation between the work of these two sections on such questions as Wheat selection and improvement, Poison plants, Bacteriological and chemical soil studies, etc., indicate that such a combination may lead to a greater efficiency, but this change has not yet taken place, and the result must be judged at a later date.

Meanwhile the year has seen one or two events of considerable importance from the point of view of this Department in its relation to agriculture.

ROYAL COMMISSION ON ESPERANCE SOILS.

The report of this Commission has been completed and presented during the year, and the result is im-

portant in relation to the question of the occurrence of salt in the Esperance Mallee Lands, which has been so much discussed as the result of my report thereon in the year 1912. This report has been made the subject of much public controversy, and I have been severely criticised for the view therein expressed that the presence of salt in the areas was a matter of grave concern.

Although the members of the Commission came to the conclusion that there was not a harmful proportion of salt in the Esperance lands, in expressing this opinion they went directly counter to the report and advice of Professor Paterson of the University, whom they employed as their scientific assessor in the matter. After the fullest inquiry, supported by analyses from two other laboratories besides that attached to this Department, Professor Paterson, although adopting a much less stringent standard than myself, came to the general conclusion that about one-third of the agricultural area in the district does not contain too much salt for settlement, about one-sixth is doubtful, and one-half of the area contains too much salt for profitable farming. It is, therefore, satisfactory to find that the warning which I uttered nearly seven years ago has been justified by the exhaustive inquiry now completed.

ROYAL COMMISSION ON AGRICULTURAL INDUSTRIES.

This Commission, which has been sitting during the year, has also presented an interim report in which amongst other things they have urged a greater application of scientific inquiry to the study of soils and development of agriculture in this State. This recommendation confirms recommendations which I have made from time to time urging that the nature of the soil conditions in this State call for extended and varied scientific investigation.

There is probably no tract of country which, owing to its peculiar characteristics, so greatly needs the application of scientific principles for the full and profitable development of its agricultural resources. Such principles, however, cannot be evolved without the combination of the knowledge of what has been accomplished elsewhere, with extensive and persistent local experimentation. This experimentation, however, must be systematic, well-planned, and uniform in its control and administration, and it is to be hoped that the light which has recently been thrown upon these matters will lead to a fuller realisation of the facts and a sound organisation on a broad-minded plan.

EXAMINATION OF WHEATS.

The experimental mill in this Department, though not fully employed during the year, has carried out a good deal of work, especially on samples of wheat submitted in connection with the Royal Agricultural Show, and other samples which have resulted from local crossbreeding or selection; while the services of the Department have also been made use of by the State Wheat Marketing Scheme for the examination of the quality of local flours.

In connection with the examination of flours some questions were raised during the year by the Commissioner for the Wheat Belt as to the methods employed for the determination of the comparative strength of flours. In consequence of these representations I entered into communication with the Agricultural Chemists of the various States and a valuable and interesting interchange of samples has taken place between the various Agricultural Laboratories, and co-operative tests have been carried out to determine the nature and extent of the variation introduced into such tests by personal factors, with a view to procuring uniformity of results. This interchange is not yet completed, but has already brought out some interesting information which, as the inquiry is continued, it is hoped will lead to the establishment of uniformity both in testing and in results.

DAIRY FEEDING.

Many practical difficulties have been encountered in this State for years past, both by the Health Department and by the Agricultural Department, in trying to bring about a satisfactory standard in connection with the public milk supplies. The character and quality of the dairy herds, climatic conditions, the supplies of natural or introduced fodders, and the dietary scales used in connection with dairy feeding, have all come in for criticism and inquiry, and during the year a special Departmental Committee was formed under the presidency of the Commissioner of Public Health to inquire into the question of the public milk supplies, especially having reference to the methods of feeding in dairy herds. I was appointed a member of this Committee, and during the spring months a large number of feeding tests were carried out at the State dairy connected with the Claremont Hospital for the Insane, under the supervision of Mr. Kerr, the farm manager.

A large number of analyses of feeding stuffs and milks relative to these experiments were conducted in this Laboratory, under my direction, by Mr. V. S. Rawson, but in order to complete the investigations entered upon a second series is required to be carried out in the summer months when the herd is entirely maintained by artificial feeding. This series will be commenced early in the New Year, but it is too early to judge as to whether definite results of value will be forthcoming.

GENERAL ANALYTICAL WORK.

The following table gives a summary of the Laboratory work carried out in the Department during the last twelve months:—

TABLE No. 1.

General Classification of Analyses.

Explosives	1,557
Spirits	54
Waters	291
Soils	108
Fertilisers	73
Foodstuffs	40
Sewage	461
Wheats and Flours	112
Criminal	85
Vinegar	6
Medicinal Compounds	26
Milks	339
Powellising	96
Gums, Barks, etc.	124
Miscellaneous	113
Total	3,485

TABLE No. 2.

Departments for which work was performed.

State Hotels	39
Police	126
Public Works	96
Health	280
Commonwealth	4
Railways	26
Agricultural	249
Explosives	1,557
Mines	19
Forestry	124
Water Supply	656
Private	102
Miscellaneous	207
Total	3,485

Explosives.

The year's experience in explosives has been a busy and interesting one.

Owing to the influences of the war the transport of explosives has been difficult and expensive, with the result that importations have had to be concentrated in a few very large shipments; as a matter of fact, the year's requirements were met by only five consignments during the twelve months.

This has introduced special problems in connection with the question of storage accommodation, and the magazine space available throughout the State has at times been taxed to its utmost. All the practical difficulties connected with handling and transport, however, have been commercially overcome and the steady and continuous operation of our gold-mining industry has been ensured. Such difficulties as have arisen have come from other directions, and some of them appear to have been quite unnecessary, while others were unavoidable. One of the difficulties which might have been avoided is that with which the mining industry has been contending throughout the year owing to the

Attitude of the Commonwealth Government with reference to Explosives imported.

This matter has already been given publicity, but I think it is as well to recapitulate the facts as follows:—

In 1915, at the instance of the Imperial Government, the Prime Minister of Australia requested the Government of this State to use its influence in every possible way to bring about economy in the use of nitro-glycerine. The Imperial Government by order also re-organised the trade by substituting for the major portion of the explosive used a grade of lower strength than had hitherto been employed. This low grade explosive, however, was not sufficient to meet the requirements of development work in the mines of this State and, in order to meet this difficulty, a certain proportion of the shipment was allowed to consist of a higher grade explosive, viz., gelatine dynamite.

By a proclamation issued on March 1st, 1916, by the Commonwealth Government the quantity of gelatine dynamite so imported was restricted to 10 per cent. of the whole shipment. Although from the first it was felt in this State that this was insufficient for the requirements of our mines the position was accepted temporarily, it being understood from the Commonwealth Director of Munitions (the officer appointed by the Commonwealth Government to deal with the matter) that on the production of experimental evidence in support of the claims of this State the matter would be reconsidered.

This Department then entered upon an extensive series of experiments on the mines at Kalgoorlie, which occupied several months, and, as a result of these experiments, we were able to demonstrate that additional expense was incurred by the mines through the restrictions of the Commonwealth Proclamation, and that by a re-arrangement of grades more satisfactory commercial results could be obtained without at all increasing the consumption of nitro-glycerine. The report embodying these results did not receive sympathetic consideration from the Commonwealth officials, and a copy was therefore sent to the Agent General to be made the basis of representations to the Imperial Government direct.

After certain negotiations, the result was that in May last a cable was received from London conveying the assent of the Imperial Munitions Department to the importation of a larger proportion of gelatine dynamite than that prescribed by the Commonwealth Proclamation.

In accordance with this advice the importers of Western Australia brought out shipments containing a larger proportion of high-grade explosive, but the Commonwealth Government have refused to allow the limit imposed by their Proclamation to be exceeded and have held up the excess proportion. The result has been that portions of two shipments have been under restraint in our magazines at Fremantle for over three months because the Commonwealth Government refuse to release them, although these high-grade explosives are badly needed by the mines and have been imported with the knowledge and approval of the Imperial Government.

It will thus be seen that it has taken two years' lengthy and persistent representation to get the matter considered, and that a further seven months have elapsed since the consent of the Imperial Government was obtained, and the explosives required on the mines are still being restrained at the coast. Further comment is, I think, needless.

This Department has carried out an extensive and expensive series of tests and has done all it can to meet the reasonable requirements of the Imperial Government. Further action with regard to the matter must be in the hands of the Government, but it seems desirable that this statement should be made here so that those concerned in the maintenance and development of our important mining industry should thoroughly understand the source of the difficulties which have arisen.

Quality of Explosives Imported.

Although I am not at liberty, owing to instructions from the Commonwealth Government, to publish particulars of the explosives imported into this State, as is naturally to be expected, the importations have fallen considerably below those of previous years, but in spite of this fact, when the particulars given below are examined, it will be found that there has been a larger quantity of explosives condemned and destroyed during this year than in any previous year since this Department was first established. This has been due to more than one cause.

In the first instance the substitution of Sodium Nitrate for Potassium Nitrate in most of our explosives owing to war conditions has a very pronounced effect. The experience of the year shows that these Sodium Nitrate explosives are naturally much more prone to the absorption of moisture, leading to deliquescence and exudation, and requiring greater care in their storage and handling.

There is no doubt in my mind that there is a greater tendency also in these explosives towards the development of inertness, but this phase of the question will be dealt with under a separate heading.

A large quantity of explosives had to be condemned and destroyed owing to accidental circumstances leading to the leakage of a lighter at Fremantle. Nevertheless the nature of these explosives renders them much more susceptible to the influence of conditions of moisture by which Potassium Nitrate explosives would remain practically unaffected. This commercial aspect of the question will, no doubt, have a great influence upon manufacturers when normal conditions are re-established.

Inspection Work.

Although the record of inspections throughout the State is not so great this year as last, the conditions have nevertheless required more unceasing and vigilant supervision of stocks than hitherto. The activities of the Department have been confined more particularly to the two main centres of the explosive trade, viz., Kalgoorlie and Fremantle, where large stocks are assembled.

Another cause of considerable anxiety to the Department during the year was the importation of a considerable quantity of explosives of non-British manufacture. On account of their chemical deterioration, due to the fact that the composition of these explosives was not so well adapted to local conditions and that their packing was not performed with the same rigid attention to details to which British manufacturers are accustomed, a considerable quantity of this importation had to be condemned and destroyed, but I have no doubt that the care and trouble taken by manufacturers in response to representations by this Department would have led to a speedy and satisfactory correction of these faults had not war developments intervened to prevent such importations.

The above remarks will be sufficient to indicate some of the special difficulties with which the Department has been faced during the year, and the facts herein disclosed will demonstrate, I think, that its efforts have been successful in maintaining, so far as possible, a high degree of purity and efficiency in the explosives which are finally allowed to go into consumption on the mines.

There is one important direction, however, in which up to the present the Department's efforts have not met with much success—

Inertness of Explosives.

In previous Annual Reports and in special reports issued by this Department I have referred at some length to the loss of efficiency (that is, power) caused by the development in explosives on storage in this State of a condition of inertness. This is apparently the cause of many complaints received from time to time from the mines, and I have advocated the establishment of a testing station in this State and the amendment of the Explosives Act in certain directions to enable such changes in physical characteristics to be brought within the scope of this Department.

To apply tests of the character necessary to determine the limits which should be set upon such development of inertness is a new departure in official explosives control, but increasing experience confirms my belief that more practical assistance would be rendered by this Department if supervision of this nature is undertaken than by following the traditional course of merely checking that species of chemical deterioration which is detected by the application of the official "Heat Test."

This matter has been receiving considerable attention during the year with a view to studying how far that composition of explosives which has been rendered necessary by war conditions contributes towards this physical change, and some important tests have been made on the mines in order to throw light on the subject. A large amount of data has now been accumulated, and I consider this is of sufficient importance to be embodied in a special departmental report. This report is now being compiled, and will be presented within a few weeks. Much of the evidence contained therein will, I think, be found of a nature which has never hitherto been published, and will be of extreme interest both on theoretical and practical grounds.

It is hoped that the evidence which has been collected, and which has now been accumulating since I commenced the study of this subject in connection with the investigations of the Royal Commission on the Ventilation and Sanitation of Mines in 1904 will bear some fruit in the near future by leading to a complete recasting of the explosives legislation and control in this State. An amended Explosives Act has now been prepared for over three years, and I have endeavoured on various occasions to get it brought under the consideration of Parliament, but for various reasons into which I need not now enter, it has not yet been brought up for discussion. I intend to submit the whole matter afresh during the coming year, and I trust that finality will be reached.

Heat Test Papers.

The official heat test depends upon certain reactions brought about by explosives (under standardised conditions of test) in papers specially prepared for the purpose. These heat test papers have for years past been obtained under a special arrangement through the Home Office in London, and the courtesy of the Imperial Department has been of the greatest aid in thus enabling me to obtain tests comparable with those recorded in England.

Owing to war conditions the supplies of these papers have for some time been unobtainable, and I have been faced with considerable difficulty in meeting the requirements of routine testing. Every endeavour is being made through the Agent General in London to meet the emergency, and it is hoped that these efforts will be successful, but if not, it is probable that until the conclusion of the war we may have to temporarily abandon the present method of testing.

What I have said above indicates that possibly this may be done without any immediate or great risk, but even so no effort will be spared to ensure by every means of investigation in our power that

none but explosives of a reliable quality shall be introduced to our mines.

Fremantle Magazine Reserve.

For the last two or three years considerable anxiety has been caused with regard to the permanency of the Fremantle Explosives Reserve owing to encroachments by the resumptions made by the Federal Government for the purposes of the Naval Base. The portions of the reserve which were alienated at length became so extensive that further diminution of the powder area would practically involve the closure of the depôt.

Representations have, therefore, been made for many months past to the Federal Authorities asking for some definite statement, or permanent understanding with regard to the future of this reserve, and the disposal of the magazines in case of removal. I am glad to say that in October last a definite undertaking was given by the Commonwealth Government that there would be no further encroachment upon the reserve as far as can be seen for a period of five years, but the question will come up for review about the end of 1921.

This matter is of considerable importance, because through the large areas which have been taken over by the Federal Government for the purposes of the Naval Base, practically all the available coast line has been absorbed, and it is a matter of grave concern if they are removed from their present position where the magazines could be located without involving such very heavy initial and maintenance expense as will constitute a practically prohibitive tax upon the mining industry.

It has to be borne in mind that in a large terminal depôt of this kind provision has to be made for rapid, cheap, and safe transport from ships to the magazines, and also for easy and rapid communication with the main railway system. For commercial reasons the site must be convenient to population, and at the same time sufficiently remote for reasons of safety. All the required conditions are not easy to fulfil, and unless some practical working agreement can be entered into with the Federal Government as to the future site of the magazines, this State will be involved in an expense which may amount to a very heavy sum. The establishment of the present reserve cost about £20,000, but if another site contiguous to the sea coast cannot be obtained within a short distance, the expense involved may easily amount to several times that sum.

Inspection Work.

There were only 97 inspections of magazines and licensed premises made during the year owing to the absence of the Assistant Inspector of Explosives on long service leave, and I have already stated other reasons for this diminution in inspectorial work,

The following places were visited:—Kalgoorlie, Coolgardie, Norseman, Broad Arrow, Comet Vale, Menzies, Kookynie, Malcolm, Laverton, Leonora, Lawlers, Wiluna, Sandstone, Meekatharra, Cue, Day Dawn, Yalgoo, Geraldton, Northampton, Moora, Perth, Fremantle, Bridgetown, Albany, and Bunbury.

The prosecutions are as follows:—

Date, Defendant, Offence, and Penalty.

8/3/17.—F. G. Tuffen; Smoking in jetty shed while explosives were stored therein. Fined 2s. 6d.; costs £1 6s. and £1 8s. 6d. Heard before R.M.

20/9/17.—Drew, Robinson, & Co., Albany; Storing explosives in magazine for which license had not been renewed. Fined £8 10s.; costs £2 3s. Heard before R.M.

20/9/17.—Drew, Robinson, & Co., Albany; Storing explosives in magazine for which license had not been renewed. Fined 15s.; costs £2 3s.

The following is a list of explosives destroyed during the year:—

Date.	Locality.	Kind and Quantity.	Remarks.
9–7–17	Fremantle	100 lbs. Gelignite	Owing to having been damaged by water.
,,	do.	100 ,, Gunpowder ...	do. do.
,,	do.	250 ,, Gel. Dynamite ...	do. do.
,,	do.	1,250 ,, Gelignite	do. do.
,,	do.	12,750 ,, Gel. Dynamite ...	do. do.
,,	do.	28,850 ,, Gelignite	do. do.
25–7–17	Kalgoorlie	65 ,, Gelignite ...	Owing to defective packing.
4–8–17	Perth	20 ,, B. Powder ...	Owing to having absorbed moisture.
10–8–17	Fremantle	1,000 ,, Gelignite	Owing to defective packing.
30–8–17	Albany	5 ,, Gelignite	Owing to chemical deterioration.
6–9–17	Mahogany Creek	50 ,, Gunpowder ...	Owing to having absorbed moisture.
21–9–17	Fremantle	7,000 ,, Gelignite	Low heat test and chemical deterioration.
19–12–17	Fremantle	1,058 coils of fuse	Owing to having been damaged by water.
30–11–17	Bunbury	1 lb. Gelignite	Owing to having absorbed moisture.

Storage of Explosives.

On the explosive reserves throughout the State there are 75 magazines, owned by private firms; also three Government magazines, the total storage capacity being 1,118 tons.

There are 57 magazines licensed for explosives but not situated on special explosive reserves. These have a storage capacity of 46½ tons.

STAFF.

The changes and fluctuations in my Staff during the year have already been referred to.

At the end of the year the work of the Department is being carried on by five permanent and two temporary technical officers in addition to Mr. C. E. Stacy, Assistant Government Analyst, and Mr. T. N. Kirton, Inspector of Explosives.

The office staff has been diminished during the year by the transfer of Mr. F. H. Maslin to another department, and I would like specially here to record the extremely able, zealous, faithful, and loyal service which has been accorded to the Department by Mr. Maslin throughout his connection therewith. Mr. Maslin became a member of my staff soon after I established the Department, and has been associated with it in all its developments and changes for a period of over twenty years, and I must record my sense of loss at the removal of an officer who has been associated with me for such a long term. His removal was necessitated entirely by financial con-

siderations, and his services in this Department reflect the greatest credit upon him.

The magazine staffs have been considerably changed during the year, Mr. Gauntlett, Magazine Keeper at Kalgoorlie, being appointed to the vacancy caused at Fremantle through the retirement of Captain Chalmers. J. Faithful has been appointed in charge of the Kalgoorlie Reserve. These changes have had most satisfactory results and both reserves are at present working with a smoothness and efficiency which has not hitherto been obtained.

As in past years, the Commissioner of Police and his officers and the State Mining Engineer have given me frequent and most valuable assistance, of which I desire to express my appreciation.

E. A. MANN,
Government Analyst, Chief Inspector of Explosives, and Agricultural Chemist.

31st January, 1918.

By Authority: FRED. WM. SIMPSON, Government Printer, Perth.

WESTERN AUSTRALIA.

DEPARTMENT OF MINES.

MINING STATISTICS,

1917.

L 68/18.

MINING STATISTICS TO 31st DECEMBER, 1917.

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EXPLANATIONS OF SIGNS AND ABBREVIATIONS.

Gf. Goldfield.
Mf. Mineral field.
D. District.
G.M.L. Gold Mining Lease.
M.L. Mineral Lease.
Loc. Location.
L.C. Lode Claim.
Q.C. Quartz Claim.
R.C. Reward Claim.
M.R.C. Mineral Reward Claim.
M.A. Machinery Area.
Mach. L. Machinery Lease.
P.A. Prospecting Area.
T.A. Tailings Area.
T.L. Tailings Lease.
W.R. Water Right.
S.L. Special License.

SUMMARY OF MINERAL PRODUCTS.

GOLD AND OTHER MINERALS PRODUCED DURING 1917, AND THE ESTIMATED VALUE THEREOF, TOGETHER WITH A COMPARISON FOR PREVIOUS YEARS, AND THE TOTAL PRODUCTION TO DATE.

DESCRIPTION OF MINERAL.	1917.		1916.		1915.		1914.		Previous to 1914.		Total to date.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		£		£		£		£		£		£
1. Antimony ... ... (Exported) statute tons	12	258	27	580	...	...	...	...	47	860	86	1,698
2. Asbestos ... ... (Reported) do.	...	...	...	...	...	...	...	...	43	1,754	...	1,754
3. Bismuth ... ... (Exported) do.	½	24	¼	133	1	37	9	635	...	...	11	829
4. Coal ... ... (Reported) do.	326,550	191,822	301,526	147,823	286,666	137,859	319,210	148,684	2,636,955	1,223,049	3,870,907	1,849,237
5. Copper { Ore ... ... (Exported) do.	966	20,878	650	14,971	737	13,768	3,913	33,654	61,467	717,209	67,733	800,480
5. Copper { Ingot and Matte... (Exported) do.	535	64,860	457	49,862	946	77,401	183	4,520	8,751	537,503	10,872	734,146
6. Gadolinite ... ... (Reported) do.	...	...	...	...	...	...	...	...	1	112	1	112
7. Gold ... ... (Exported and Minted) fine ounces	970,317	4,121,645	1,061,398	4,508,532	1,210,112	5,140,228	1,232,977	5,237,353	27,045,168	114,880,573	31,519,972	133,888,331
8. Ironstone ... ... (Reported) statute tons	...	...	...	...	...	...	...	...	57,830	36,695	57,830	36,695
9. Lead (Ore and Concentrates) (Exported) do.	...	...	...	...	...	...	3,554	46,285	40,478	462,463	44,032	508,748
10. Lead and Silver Lead (Ore and Concentrates) (Exported) do.	22	593	428	12,083	2,883	39,032	...	...	940	8,071	4,273	59,729
11. Lead (Pig) ... ... (Exported) do.	4,661	139,940	3,523	74,930	13	302	...	...	684	13,306	8,881	228,478
12. Limestone ... ... (Reported) do.	...	...	...	...	...	...	...	...	93,706	18,290	93,706	18,290
13. Magnesite ... ... (Exported) do.	42	50	12	47	688	1,196	...	...	...	...	742	1,293
14. Mica ... ... (Exported) do.	...	...	*	10	*	26	4	323	*	304	...	663
15. Molybdenite ... ... (Exported) do.	14	158	...	...	...	...	...	...	...	...	14	158
16. Pyritic Ore ... ... (Reported) do.	3,575	1,752	4,409	2,263	6,558	2,368	9,759	3,485	27,781	9,730	52,082	19,598
17. Scheelite ... ... (Exported) do.	½	42	3	438	...	...	...	...	4	140	8	620
18. Silver ... ... (Exported) fine ounces	222,075	38,339	173,012	22,258	222,159	24,295	193,057	23,227	2,615,239	310,640	3,425,542	418,759
19. Tantalite ... ... (Exported) statute tons	17	2,513	47	9,375	...	...	...	...	18	6,129	82	18,017
20. Tin ... ... (Exported) do.	383	45,288	463	49,101	429	41,391	363	35,649	12,643	1,132,457	14,281	1,303,886
21. Wolfram ... ... (Exported) do.	...	...	1	128	¼	25	½	40	13	1,202	15	1,395
22. Zinc ... ... (Exported) do.	...	...	14	630	7	143	22	379	141	4,285	184	5,437
Unenumerated ... ... (Exported)	...	865	...	303	...	78	7	40	...	6,213	...	7,499
TOTAL VALUES	...	£4,629,027	...	£4,893,417	...	£5,478,149	...	£5,534,274	...	£119,370,985	...	£139,905,852

* Weight not stated.

AUSTRALASIAN MINERAL PRODUCTION.

COMPARATIVE TABLE showing the Output of all Mineral Products from the Several States of Australia and the Dominions of New Zealand during 1917.

Description of Mineral.	Western Australia.		New South Wales.		Queensland.		Victoria.		Tasmania.		South Australia.		New Zealand.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		£		£		£		£		£		£		£
Gold ... ... fine ounces	970,317	4,121,645	82,171	349,038	179,305	761,639	201,872	857,500	14,497	61,577	7,145	30,334	212,793	903,888
Copper ... ... statute tons	535	64,860	6,576	814,154	19,062	2,208,232	...	...	6,599	847,754	7,213	902,495	...	...
Copper Ore ... do.	966	20,878			...	...	...	...	...	...	...	...	6	163
Pyritic Ore ... do.	3,575	1,752	...	...	...	...	...	...	...	...	...	...	...	...
Lead and Silver Lead do.	4,683	140,533	255,698	4,781,855	480	14,407	...	...	9,576	152,122	622	12,018	...	...
Manganese ... ... do.	...	...	...	...	21	105	...	...	...	...	264	1,597	...	...
Platinum ... ... fine ounces	...	...	259	2,072	...	...	...	...	...	...	...	...	...	...
Silver ... ... do.	220,075	38,339	1,782,004	328,241	241,639	40,774	7,669	1,406	...	...	1,825	333	787,152	105,299
Tin ... ... statute tons					1,177	160,600	139	19,709	...	...	...	...	...	...
Black Tin ... do.	383	45,288	2,072	373,696	...	...	...	...	...	...	...	...	...	...
Tin Ore ... ... do.					...	...	...	...	2,637	427,917	...	...	...	...
Tantalite ... ... do.	17	2,513	...	...	...	...	...	...	...	...	...	...	...	...
Scheelite ... ... do.	½	42	127	23,419	9	1,523	...	...	69	12,130	...	...	161	28,972
Wolfram ... ... do.	...	...	118	21,682	485	79,720	1	3,600	172	28,714	...	30	...	...
Zinc (Spelter and Concentrates) do.	...	...	113,531	441,486	...	...	...	...	48	1,968	...	...	...	...
Antimony (Metal and Ore) do.	12	258	301	3,738	...	...	2,572	58,489	...	...	...	...	...	...
Bismuth (Metal and Ore) do.	½	24	20	9,391	4	1,297	...	...	4	895	...	...	...	...
Alunite ... ... do.	...	...	1,788	10,728	...	...	...	...	...	...	29	145	...	...
Coal ... ... do.	326,550	191,822	8,292,867	4,422,740	1,048,473	597,360	505,334	343,895	63,412	38,673	...	...	2,068,419	1,223,815
Coke ... ... do.	...	...	455,587	541,093	...	...	...	...	...	...	...	...	...	...
Shale (Oil) ... do.	...	...	31,661	36,565	...	...	...	...	...	...	...	...	...	...
Iron ... ... do.	...	...	45,025	247,637	...	...	...	...	...	...	327,454	359,443	...	...
Iron "Oxide" ... do.	...	...	1,431	1,267	...	...	...	...	...	...	...	...	...	...
Ironstone ... do.	...	...	4,482	3,498	25,065	23,611	...	...	...	...	932	280	...	...
Lime ... ... do.	...	...	26,090	40,865	...	...	...	...	...	...	...	...	...	...
Limestone ... do.	...	...	74,440	25,746	135,703	56,926	...	...	...	...	68,464	21,395	...	...
Magnesite ... ... do.	42	50	...	...	...	...	74	222	...	...	150	300	...	...
Molybdenite ... do.	14	158	70	31,608	111	48,618	50	500	...	...	1	359	...	...
Phosphate Rock ... do.	...	...	...	...	...	...	1,525	1,525	...	...	5,101	6,064	...	...
Precious Stones ... do.	...	...	...	14,528	...	14,308	...	...	...	...	...	500	...	...
Mica ... ... do.	...	...	...	...	...	...	...	...	...	...	2	337	...	...
N.E.I.	...	865	...	427,672	...	3,857	...	5,459	...	12,540	...	125,044	...	299,946
Total Values	...	£4,629,027	...	£12,952,719	...	£4,012,977	...	£1,292,305	...	£1,584,290	...	£1,460,674	...	2,562,083

PART I.—GOLD.

TABLE I.

MONTHLY PRODUCTION OF GOLD, IN FINE OUNCES, SHOWING THE QUANTITY REPORTED TO THE MINES DEPARTMENT DURING 1917.

GOLDFIELD.	DISTRICT.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.		JULY.	
		District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.
		ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Kimberley ...	... ...	...	...	...	1·41	...	...	...	29·61	...	...	...	9·58	...	...
Pilbara ...	Marble Bar ...	5·12	65·06	10·00	115·91	12·12	494·87	2·31	153·28	682·15	703·40	733·47	747·81	101·91	120·13
Do. ...	Nullagine ...	59·94		105·91		482·75		150·97		21·25		14·34		18·22	
West Pilbara ...	... ...	...	1·37	...	58·45	...	4·59	...	7·69	...	93·24	...	4·84	...	34·85
Ashburton ...	... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gascoyne ...	... ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peak Hill ...	... ...	...	128·89	...	...	...	14·06	...	172·94	...	679·23	...	363·60	...	...
East Murchison ...	Lawlers ...	337·43	2,138·16	465·68	2,606·12	366·09	1,896·68	470·85	2,304·83	374·55	3,621·81	231·23	3,228·62	461·03	3,077·08
Do. ...	Wiluna ...	484·45		802·41		...		404·72		1,252·93		786·36		1,438·88	
Do. ...	Black Range	1,316·28		1,338·03		1,530·59		1,429·26		1,994·33		2,211·03		1,177·17	
Murchison ...	Cue	761·12		883·64		876·70		1,319·11		1,070·64		487·39		384·34	
Do. ...	Meekatharra...	3,779·05	7,606·25	3,710·02	6,864·43	3,597·99	6,759·63	3,585·97	7,051·60	3,708·28	7,366·61	3,703·76	6,063·42	3,509·95	6,245·81
Do. ...	Day Dawn ...	2,675·94		1,678·60		1,882·18		1,851·59		2,026·33		1,632·99		2,252·47	
Do. ...	Mt. Magnet ...	390·14		592·17		402·76		294·93		561·36		239·28		99·05	
Yalgoo	... ...	...	112·04	...	146·33	...	879·45	...	802·75	...	498·85	...	255·29	...	112·91
Mt. Margaret ...	Mt. Morgans...	646·39	8,604·42	591·26	7,872·57	559·19	8,039·59	559·14	7,853·71	606·86	9,320·03	519·30	9,287·25	316·33	10,091·65
Do. ...	Mt. Malcolm...	4,911·78		4,437·62		4,406·19		5,050·83		5,312·29		5,364·62		5,856·12	
Do. ...	Mt. Margaret	3,046·25		2,843·69		3,074·21		2,243·74		3,400·88		3,403·33		3,919·20	
North Coolgardie	Menzies ...	2,397·63		2,178·22		3,017·24		2,474·35		2,730·04		2,923·43		2,234·99	
Do. ...	Ularring ...	231·74	2,717·19	180·63	2,499·93	32·25	3,343·74	121·31	2,718·90	...	3,310·70	...	3,379·67	228·47	2,931·92
Do. ...	Niagara ...	24·79		74·24		221·97		28·83		88·04		40·30		262·63	
Do. ...	Yerilla ...	63·03		66·84		72·28		94·41		492·62		415·94		205·83	
Broad Arrow ...	... ...	...	1,914·01	...	951·20	...	1,037·33	...	1,253·27	...	1,163·44	...	1,271·07	...	3,378·46
N.E. Coolgardie ...	Kanowna ...	290·90	290·90	453·22	453·22	461·93	462·78	484·62	484·62	514·79	514·79	590·50	590·50	600·38	600·38
Do. ...	Kurnalpi ...	...		...		·85		...		...		...		...	
East Coolgardie ...	East Coolgardie	49,160·28	49,160·28	46,401·57	46,401·57	48,545·59	48,568·75	44,184·08	44,209·63	49,517·67	49,517·67	46,146·93	46,151·72	46,610·70	46,610·70
Do. ...	Bulong ...	...		...		23·16		25·55		...		4·79		...	
Coolgardie ...	Coolgardie ...	542·44	683·27	365·52	387·68	709·88	1,047·12	1,005·19	1,224·58	259·11	797·77	333·63	567·56	563·00	1,005·58
D. ...	Kunanalling ...	140·83		22·16		337·24		219·39		538·66		233·93		442·58	
Yilgarn	... ...	...	6,370·53	...	5,853·13	...	6,748·73	...	6,128·15	...	6,161·84	...	5,776·25	...	5,743·61
Dundas	... ...	...	1,292·60	...	1,401·96	...	1,578·12	...	1,599·56	...	1,497·38	...	1,506·15	...	1,637·12
Phillips River ...	... ...	...	529·97	...	249·76	...	405·36	...	187·57	...	368·86	...	441·20	...	372·50
State generally ...		...	...	...	...	...	...	...	23·45	...	...	...	87·96	...	...
TOTAL	Fine Ounces ...	...	81,614·94	...	75,863·67	...	81,280·80	...	76,206·14	...	85,615·62	...	79,732·49	...	81,962·70
	Sterling Value	£346,678		£322,248		£345,259		£323,703		£363,672		£338,682		£348,156	

TABLE I.—*Monthly Production of Gold in Fine Ounces*—continued.

GOLDFIELD.	DISTRICT.	AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.		Total for 1917.	
		District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.
		ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Kimberley ...	... ...	...	...	...	23·52	...	18·13	...	...	...	...	...	82·25
Pilbara	Marble Bar ...	14·64	333·74	102·41	434·01	485·01	666·26	264·84	991·14	49·68	581·14	2,463·66	5,406·75
Do. ...	Nullagine ...	319·10		331·60		181·25		726·30		531·46		2,943·09	
West Pilbara ...	... ...	...	3·06	...	1·42	...	5·33	...	...	...	89·93	...	304·77
Ashburton ...	... ...	...	...	...	...	...	·59	...	5·91	...	...	...	6·50
Gascoyne	... ...	...	...	...	...	...	...	...	...	...	...	...	...
Peak Hill ...	... ...	...	...	...	...	...	49 94	...	165·69	...	169·37	...	1,743·72
East Murchison ...	Lawlers	396·95	2,625·53	319·02	2,722·02	475·62	2,596·79	405·43	3,225·71	480·62	2,813·21	4,784·50	32,856·56
Do. ...	Wiluna	621·41		798·01		811·10		1,154·09		969·29		9,523·65	
Do. ...	Black Range ...	1,607·17		1,604·99		1,310·07		1,666·19		1,363·30		18,548·41	
Murchison ...	Cue	588·55	7,877·28	741·40	6,135·64	745·87	7,928·04	373·79	6,464·45	1,457·26	5,942·67	9,689·81	82,305·83
Do. ...	Meekatharra ...	4,643·69		3,010·46		4,016·46		3,505·01		3,498·36		44,269·00	
Do. ...	Day Dawn ...	2,312·32		2,172·93		2,426·87		1,968·30		866·41		23,746·93	
Do. ...	Mt. Magnet ...	332·72		210·85		738·84		617·35		120·64		4,600·09	
Yalgoo	... ...	...	130·88	...	1,507·43	...	573·38	...	352·43	...	441·00	...	5,812·74
Mt. Margaret ...	Mt. Morgans ...	230·29	8,304·45	612·84	8,681·73	604·79	7,966·62	322·22	7,743·14	745·60	8,109·38	6,314·21	101,874·54
Do. ...	Mt. Malcolm ...	5,163·89		5,156·00		4,880·20		4,350·09		4,598·41		59,488·04	
Do. ...	Mt. Margaret ...	2,910·27		2,912·89		2,481·63		3,070·83		2,765·37		36,072·29	
North Coolgardie...	Menzies	2,503·92		2,750·20		2,473·44		2,343·14		2,698·53		30,725·13	
Do. ...	Ularring	211·39	2,885·59	...	2,859·34	...	2,638·07	...	2,556·19	84·56	2,954·31	1,090·35	34,795·55
Do. ...	Niagara	96·97		98·58		58·87		83·45		106·50		1,185·17	
Do. ...	Yerilla	73·31		10·56		105·76		129·60		64·72		1,794·90	
Broad Arrow ...	... ...	...	1,751·31	...	1,089·27	...	467·81	...	330·07	...	1,911·40	...	16,518·64
N.E. Coolgardie ...	Kanowna ...	539·03	556·51	717·20	717·20	411·49	413·94	420·59	420·59	427·74	427·74	5,912·39	5,933·17
Do. ...	Kurnalpi ...	17·48		...		2·45		...		...		20·78	
East Coolgardie ...	East Coolgardie ...	47,367·28	47,371·84	44,052·08	44,052·08	45,955·42	45,959·41	45,979·61	46,017·59	43,953·62	43,962·13	557,874·83	557,983·37
Do. ...	Bulong	4·56		...		3·99		37·98		8·51		108·54	
Coolgardie ...	Coolgardie ...	697·79	742·77	515·15	647·94	259·61	296·77	706·03	911·73	1,023·33	1,972·91	6,980·68	10,285·68
Do. ...	Kunanalling ...	44·98		132·79		37·16		205·70		949·58		3,305·00	
Yilgarn	... ...	...	7,363·69	...	6,814·52	...	6,687·54	...	6,460·05	...	8,136·73	...	78,244·77
Dundas	... ...	...	1,624·96	...	1,376·66	...	1,607·48	...	1,466·02	...	1,831·00	...	18,419·01
Phillips River ...	... ...	...	317·02	...	533·16	...	477·67	...	378·76	...	472·69	...	4,734·52
State generally ...	...	...	...	...	...	...	...	...	...	...	...	...	111·41
TOTAL	**Fine ounces** ...	...	**81,888·63**	...	**77,595·94**	...	**78,353·77**	...	**77,489·47**	...	**79,815·61**	...	**957,419·78**
	Sterling value	**£347,841**		**£329,607**		**£332,826**		**£329,154**		**£339,035**		**£4,066,861**	

The total gold yield of the State is as shown at page 5, being the amount of gold exported and also that lodged at the Royal Mint, which total includes alluvial and other gold not reported to the Department.

TABLE II.

TOTAL YEARLY PRODUCTION OF GOLD, IN FINE OUNCES, AS REPORTED TO THE MINES DEPARTMENT, TO 31ST DECEMBER, 1917.

GOLDFIELD.	DISTRICT.	1917.		1916.		1915.		1914.		1913.		1912.	
		District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.
		ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Kimberley	... ...	...	82·25	...	161·91	...	144·34	...	453·29	...	...	...	271·63
Pilbara	Marble Bar ...	2,463·66	5,406·75	3,515·58	5,881·60	6,462·36	8,541·97	3,304·94	5,177·46	3,845·81	5,598·21	3,441·44	5,999·11
Do.	Nullagine ...	2,943·09		2,366·02		2,079·61		1,872·52		1,752·40		2,557·67	
West Pilbara ...	... ...	...	304·77	...	608·84	...	1,507·02	...	1,022·70	...	1,421·15	...	1,118·20
Ashburton	... ...	...	6·50	...	...	...	...	...	...	...	11·70	...	38·73
Gascoyne	... ...	...	...	...	14·48	...	80·85	...	3·76	...	31·45	...	6·55
Peak Hill	... .	...	1,743·72	...	2,389·29	...	2,823·13	...	2,602·62	...	2,765·59	...	1,861·64
East Murchison ...	Lawlers	4,784·50		6,579·41		6,055·13		4,324·57		4,843·05		7,307·72	
Do.	Wiluna*	9,523·65	32,856·56	14,472·13	46,811·44	6,746·78	58,082·36	6,936·34	70,808·46	7,501·11	87,977·47	7,728·33	99,130·78
Do.	Black Range ...	18,548·41		25,759·90		45,280·45		59,547·55		75,633·31		84,094·73	
Murchison	Cue	9,689·81		6,011·29		6,185·89		4,491·02		6,525·65		8,993·26	
Do.	Meekatharra ...	44,269·00		51,322·56		73,834·57		80,400·07		72,701·81		50,558·20	
Do.	Day Dawn ...	23,746·93	82,305·83	18,134·71	84,422·89	19,168·14	108,049·78	18,926·64	115,722·42	27,126·72	122,027·56	28,283·42	105,372·78
Do.	Mt. Magnet ...	4,600·09		8,954·33		8,861·18		11,904·69		15,673·38		17,537·90	
Yalgoo	... ...	...	5,812·74	...	8,194·69	...	8,841·88	...	6,025·92	...	8,163·47	...	6,165·92
Mt. Margaret ...	Mt. Morgans ...	6,314·21		8,439·99		7,463·52		4,880·95		1,255·47		3,438·55	
Do.	Mt. Malcolm ...	59,488·04	101,874·54	57,541·13	100,612·34	63,995·64	106,563·01	66,071·07	96,792·51	72,738·73	91,272·70	34,288·81	102,969·60
Do.	Mt. Margaret ...	36,072·29		34,631·22		35,103·85		25,840·49		17,278·50		25,242·24	
North Coolgardie ...	Menzies	30,725·13		36,756·35		49,096·24		53,789·52		44,227·89		36,126·25	
Do.	Ularring ...	1,090·35		2,989·66		2,474·10		5,026·09		7,710·48		9,526·65	58,270·47
Do.	Niagara	1,185·17	34,795·55	1,790·01	45,146·57	3,155·13	59,513·22	6,724·42	72,188·05	6,941·08	68,526·60	6,342·67	
Do.	Yerilla	1,794·90		3,610·55		4,787·75		6,648·02		9,647·15		6,274·90	
Broad Arrow ...	... ...	...	16,518·64	...	22,215·92	...	22,290·03	...	9,285·98	...	34,739·33	...	13,375·43
N.E. Coolgardie ...	Kanowna ...	5,912·39	5,933·17	6,392·00	6,678·02	10,077·23	10,860·98	9,560·02	10,134·10	11,133·30	12,392·88	11,364·53	13,855·71
Do.	Kurnalpi ...	20·78		286·02		783·75		574·08		1,259·58		2,491·18	
East Coolgardie ...	East Coolgardie...	557,874·83	557,983·37	578,183·41	579,344·34	668,913·16	670,788·24	680,494·61	682,895·41	719,323·42	719,928·72	755,368·56	756,795·14
Do.	Bulong	108·54		1,160·93		1,875·08		2,400·80		605·30		1,426·58	
Coolgardie	Coolgardie ...	6,980·68	10,285·68	8,768·13	13,618·32	11,990·23	18,314·77	17,009·37	20,981·45	28,407·27	31,891·49	37,246·77	42,181·59
Do.	Kunanalling ...	3,305·00		4,850·19		6,324·54		3,972·08		3,484·22		4,934·82	
Yilgarn	... ...	...	78,244·77	...	87,993·68	...	91,123·57	...	88,744·72	...	82,333·96	...	30,675·40
Dundas	... ...	...	18,419·01	...	21,594·78	...	23,884·18	...	26,590·76	...	27,039·47	...	25,314·35
Phillips River ...	... ...	...	4,734·52	...	5,418·97	...	3,816·76	...	4,665·42	...	2,788·47	...	4,201·36
†Donnybrook ...	... ...	...	...	...	...	...	...	...	...	...	...	...	...
State generally ...	...	...	111·41	...	618·78	...	272·59	...	144·16	...	178·60	...	240·40
TOTAL	**Fine Ounces** ...	...	**957,419·78**	...	**1,031,726·86**	...	**1,195,498·68**	...	**1,214,239·19**	...	**1,299,088·82**	...	**1,267,844·79**
	Sterling Value	**£4,066,861**		**£4,382,497**		**£5,078,156**		**£5,157,760**		**£5,518,179**		**£5,385,462**	

* Previous to 1st March, 1910, included in Lawlers District. † Abolished 4th March, 1908.

TABLE II.—*Total Yearly Production of Gold, in Fine Ounces, etc.*—continued.

GOLDFIELD.	DISTRICT.	1911.		1910.		1909.		1908.		Previous to 1908.		Total to December 31st, 1917.	
		District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.	District.	Goldfield.
		ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Kimberley	... ...	...	171·45	...	265·53	...	134·52	...	150·16	...	16,019·46	...	17,854·54
Pilbara	Marble Bar ...	2,346·74	4,608·08	2,613·40	5,369·94	2,523·16	6,764·49	3,179·76	6,965·61	86,079·01	137,206·98	119,775·86	197,520·20
Do.	Nullagine ...	2,261·34		2,576·54		4,241·33		3,785·85		51,127·97		77,744·34	
West Pilbara ...	... ...	...	983·17	...	1,483·62	...	1,539·62	...	1,005·60	...	16,471·77	...	27,466·46
Ashburton	... ...	...	256·33	...	247·63	...	436·32	...	161·71	...	7,724·32	...	8,883·24
Gascoyne	... ...	...	7·87	...	26·31	...	...	...	...	...	505·27	...	676·54
Peak Hill	... ...	...	1,747·01	...	4,327·02	...	7,918·79	...	7,980·10	...	214,478·98	...	250,637·89
East Murchison ...	Lawlers	27,193·85		45,203·50		77,542·23		72,109·75		642,364·38		898,308·11	
Do.	Wiluna	7,829·83	102,390·79	14,258·17	130,371·21	*	155,908·60	*	144,792·31	*	764,698·70	74,996·34	1,693,828·68
Do.	Black Range ...	67,367·11		70,909·54		78,366·37		72,682·56		122,334·32		720,524·23	
Murchison	Cue	11,455·56		9,576·29		21,271·13		24,702·50		238,734·09		347,636·49	
Do.	Meekatharra ...	54,241·79	119,653·40	50,046·60	124,351·38	50,992·21	133,105·86	38,820·52	157,848·40	241,191·54	1,690,122·50	808,378·87	2,842,982·80
Do.	Day Dawn ...	37,947·41		46,474·13		44,447·89		84,422·44		949,284·02		1,297,962·45	
Do.	Mt. Magnet ...	16,008·64		18,254·36		16,394·63		9,902·94		260,912·85		389,004·99	
Yalgoo	... ...	...	1,162·04	...	1,332·72	...	1,805·31	...	551·03	...	64,333·49	...	112,389·21
Mt. Margaret ...	Mt. Morgans ...	5,484·08		10,331·24		25,722·76		28,912·13		396,433·88		498,676·78	
Do.	Mt. Malcolm ...	92,811·29	152,474·39	97,689·68	160,281·18	90,436·33	155,864·99	86,018·61	153,597·15	746,232·89	1,512,992·92	1,507,312·22	2,735,295·33
Do.	Mt. Margaret ...	54,179·02		52,260·26		39,705·90		38,666·41		370,326·15		729,306·33	
North Coolgardie ...	Menzies	39,062·97		40,247·69		35,851·38		37,023·37		523,229·88		926,136·67	
Do.	Ularring	9,472·85	64,759·69	8,669·96	72,747·55	15,286·66	79,398·99	21,598·97	91,251·59	198,385·20	1,259,202·77	282,230·97	1,905,801·05
Do.	Niagara	8,423·55		12,007·07		17,061·87		21,477·90		414,610·35		499,719·22	
Do.	Yerilla	7,800·32		11,882·83		11,199·08		11,151·35		122,977·34		197,714·19	
Broad Arrow ...	... ...	...	7,152·73	...	15,481·88	...	17,121·70	...	18,429·97	...	287,117·48	...	463,729·09
N.E. Coolgardie ...	Kanowna ...	17,958·07	19,554·75	22,203·96	23,027·27	23,785·63	25,462·38	26,355·22	27,072·72	536,575·08	555,095·56	681,317·43	710,067·54
Do.	Kurnalpi ...	1,596·68		823·31		1,676·75		717·50		18,520·48		28,750·11	
East Coolgardie ...	East Coolgardie	775,050·60	776,493·74	777,893·88	778,479·54	896,900·15	899,289·27	888,415·37	890,772·70	9,115,854·44	9,262,554·56	16,414,272·43	16,575,325·03
Do.	Bulong	1,443·14		585·66		2,389·12		2,357·33		146,700·12		161,052·60	
Coolgardie	Coolgardie ...	28,982·04	33,753·71	31,928·00	37,911·04	28,382·62	34,134·90	32,820·61	40,029·39	730,181·84	884,894·50	962,697·56	1,167,996·84
Do.	Kunanalling ...	4,771·67		5,983·04		5,752·28		7,208·78		154,712·66		205,299·28	
Yilgarn	... ...	...	18,811·40	...	27,857·93	...	20,909·12	...	22,162·87	...	287,353·77	...	836,211·19
Dundas	... ...	...	28,989·86	...	29,627·34	...	29,549·27	...	28,643·63	...	319,221·01	...	578,873·66
Phillips River ...	... ...	...	5,656·54	...	8,194·90	...	6,713·52	...	4,404·69	...	28,868·23	...	79,463·38
†Donnybrook ...	... ...	...	...	...	...	...	...	...	...	...	841·76	...	841·76
State generally ...	... ...	...	359·99	...	847·41	...	348·09	...	271·13	...	4,072·71	...	7,465·27
TOTAL	**Fine Ounces** ...	...	**1,338,986·94**	...	**1,422,231·40**	...	**1,576,405·74**	...	**1,596,090·76**	...	**17,313,776·74**	...	**30,213,309·70**
	Sterling Value ...	**£5,687,655**		**£6,041,254**		**£6,696,146**		**£6,779,763**		**£73,544,249**		**£128,337,982**	

* Previous to March, 1910, included in Lawlers District. † Abolished 4th March, 1908.

TABLE III.

GENERAL RETURN.

RETURN SHOWING, FOR THE RESPECTIVE GOLDFIELDS AND DISTRICTS, THE AREA IN SQUARE MILES, LEASES IN FORCE, PARTICULARS OF PLANT, MEN EMPLOYED AND DIGGERS, ALLUVIAL, DOLLIED, AND SPECIMEN GOLD AND ORE TREATED, WITH GOLD AND SILVER YIELD, IN FINE OUNCES, AS REPORTED TO THE MINES DEPARTMENT FOR THE YEAR 1917.

Goldfield.	District.	Date of Proclamation of Goldfield.				Area in Square Miles.		Leases in force.		Particulars of Plant.					Average Number of Men engaged in Gold Mining.		
										Milling.		Cyaniding.			Men employed.		
		Proclamation gazetted.	To take effect from.	Latest Amendment of Boundaries gazetted.	To take effect from.	Goldfield.	District.	No.	Area in Acres.	Stamps.	Other Mills.	Leaching Vats.	Agitating Vats.	Vacuum Filters and Presses.	Above Ground.	Under Ground.	Diggers.
Kimberley	... ...	20–5–86	20–5–86	31–10–02	1–11–02	33,833	...	...	...	...	...	...	...	...	...	...	12
Pilbara	Marble Bar ...	1–10–88	1–10–88	1–3–07	1–3–07	32,696	25,809	17	169	63	...	16	...	...	20	37	10
	Nullagine ...						6,887	8	78	28	1	13	...	...	50	23	17
West Pilbara	... ...	20–9–95	1–11–95	1–3–07	1–3–07	10,843	...	3	36	40	2	2	...	...	3	6	6
Ashburton	... ...	11–12–90	11–12–90	18–10–01	14–10–01	14,230	...	...	...	...	...	...	...	...	1	2	4
Gascoyne	... ...	25–6–97	15–4–97	...	...	5,313	...	1	6	1	...	...	...	...	2	...	4
Peak Hill	... ...	19–3–97	1–4–97	13–11–14	1–12–14	23,650	...	13	123	40	2	13	3	...	10	10	3
East Murchison ...	Lawlers ...	28–6–95	28–6–95	1–11–12	1–1–13	28,746	9,379	24	283	108	2	32	...	...	45	53	...
	Wiluna ...						10,496	31	524	85	19	26	26	7	43	44	...
	Black Range						8,871	36	493	120	9	47	3	2	105	96	...
Murchison	Cue	24–9–91	24–9–91	28–11–13	1–1–14	25,474	8,593	46	539	85	3	20	1	...	93	59	8
	Meekatharra						12,250	60	819	112	21	32	16	5	204	319	12
	Day Dawn ...						896	38	398	65	16	22	17	26	87	162	6
	Mt. Magnet ...						3,735	28	274	50	3	36	7	1	65	66	...
Yalgoo	... ...	8–2–95	23–1–95	30–7–15	9–8–15	23,230	...	34	506	70	5	11	4	...	73	88	...
Mt. Margaret	Mt. Morgans	12–3–97	1–4–97	7–9–17	17–9–17	57,230	14,007	24	384	75	4	27	2	1	59	50	...
	Mt. Malcolm						3,330	66	1,311	117	20	9	12	2	218	296	3
	Mt. Margaret						39,893	52	941	75	16	15	6	3	135	159	9
North Coolgardie ...	Menzies ...	28–6–95	28–6–95	7–9–17	17–9–17	13,746	6,805	42	582	105	21	75	4	2	148	193	5
	Ularring ...						3,093	18	198	50	5	16	4	...	44	26	...
	Niagara ...						688	7	108	50	5	31	...	2	28	34	12
	Yerilla ...						3,160	5	84	30	3	6	4	...	36	47	5
Broad Arrow	... ...	17–11–96	20–11–96	8–6–06	1–7–06	1,038	...	30	453	45	15	14	5	2	79	125	37
North-East Coolgardie ...	Kanowna ...	20–3–96	15–4–96	27–3–08	1–4–08	20,604	1,094	20	275	138	9	50	...	...	44	60	18
	Kurnalpi ...						19,510	3	32	5	1	...	...	...	13	7	8
East Coolgardie ...	East Coolgardie	21–9–94	1–10–94	27–3–08	1–4–08	1,800	810	157	2,269	535	301	160	155	110	1,640	2,043	8
	Bulong ...						990	2	30	20	1	...	...	...	9	8	3
Coolgardie	Coolgardie ...	6–4–94	6–4–94	1–3–07	1–3–07	11,702	9,384	40	519	239	12	54	...	...	98	73	18
	Kunanalling						2,318	20	256	65	4	22	...	...	45	35	15
Yilgarn	... ...	1–10–88	1–10–88	28–1–16	1–2–16	17,700	...	144	2,702	197	26	88	8	5	282	526	...
Dundas	... ...	31–8–93	31–8–93	1–3–07	1–3–07	11,430	...	47	521	85	22	52	10	2	66	86	...
Phillips River	... ...	21–9–00	14–9–00	28–1–16	1–2–16	5,078	...	11	176	45	4	4	...	...	20	31	...
State generally ...	... ...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...
	Total	...	...	...	...	338,343	...	1,027	15,089	2,743	554	893	287	170	3,765	4,764	223

TABLE III.—*Return showing for the respective Goldfields and Districts, etc.*—continued.

Goldfield.	District.	1917 GOLD AND SILVER YIELD—DISTRICTS.						1917 GOLD AND SILVER YIELD—GOLDFIELDS.					
		Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Total Gold.	* Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Total Gold.	*Silver.
		Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.
Kimberley ...	...	...	...	...	...	...	...	82·25	...	...	...	82·25	...
Pilbara	Marble Bar ...	86·50	1·28	1,372·25	2,375·88	2,463·66	...	185·68	29·39	2,410·25	5,191·68	5,406·75	...
Do.	Nullagine ...	99·18	28·11	1,038·00	2,815·80	2,943·09	...						
West Pilbara ...	...	...	...	...	...	...	...	55·56	2·62	359·00	246·59	304·77	28·26
Ashburton ...	...	...	...	...	...	...	...	6·50	...	...	...	6·50	...
Gascoyne	...	...	...	...	...	...	...	...	...	...	...	....	...
Peak Hill ...	...	...	...	...	...	...	...	40·91	...	2,059·50	1,702·81	1,743·72	...
East Murchison ...	Lawlers ...	...	203·31	12,720·74	4,581·19	4,784·50	203·88						
Do. ...	Wiluna ...	...	...	18,006·75	9,523·65	9,523·65	...	·59	691·96	58,275·74	32,164·01	32,856·56	268·62
Do.	Black Range	·59	488·65	27,548·25	18,059·17	18,548·41	64·74						
Murchison ...	Cue	29·28	99·36	15,232·50	9,561·17	9,689·81	...						
Do.	Meekatharra ...	142·24	183·93	68,021·71	43,942·83	44,269·00	29·71						
Do.	Day Dawn ...	...	319·05	50,065·25	23,427·88	23,746·93	3,190·77	175·32	1,066·02	140,684·71	81,064·49	82,305·83	3,220·48
Do.	Mt. Magnet ...	3·80	463·68	7,365·25	4,132·61	4,600·09	...						
Yalgoo	...	...	...	...	...	...	...	130·88	16·68	7,397·75	5,665·18	5,812·74	...
Mt. Margaret ...	Mt. Morgans ...	...	...	23,069·61	6,314·21	6,314·21	·68						
Do.	Mt. Malcolm ...	68·15	164·67	148,499·79	59,255·22	59,488·04	4,615·88	99·80	798·22	257,223·48	100,976·52	101,874·54	9,226·55
Do.	Mt. Margaret...	31·65	633·55	85,654·08	35,407·09	36,072·29	4,609·99						
North Coolgardie	Menzies ...	7·78	26·84	49,377·09	30,690·51	30,725·13	1,196·58						
Do.	Ularring ...	...	2·21	1,327·63	1,088·14	1,090·35	80·31						
Do.	Niagara ...	9·11	70·99	1,828·91	1,105·07	1,185·17	...	16·89	100·04	54,167·84	34,678·62	34,795·55	1,276·89
Do.	Yerilla ...	...	...	1,634·21	1,794·90	1,794·90	...						
Broad Arrow ...	...	...	...	...	...	...	...	66·92	2,977·97	20,725·13	13,473·75	16,518·64	...
N.E. Coolgardie ...	Kanowna ...	10·11	6·76	8,317·72	5,895·52	5,912·39	...	12·56	25·09	8,317·72	5,895·52	5,933·17	...
Do.	Kurnalpi ...	2·45	18·33	...	...	20·78	...						
East Coolgardie ...	East Coolgardie	214·98	1,676·92	1,199,110·01	555,982·93	557,874·83	106,568·35	223·76	1,715·35	1,199,135·51	556,044·26	557,983·37	106,568·35
Do.	Bulong ...	8·78	38·43	25·50	61·33	108·54	...						
Coolgardie ...	Coolgardie ...	105·75	673·51	10,433·63	6,201·42	6,980·68	...	150·68	737·86	15,578·13	9,397·14	10,285·68	...
Do.	Kunanalling ...	44·93	64·35	5,144·50	3,195·72	3,305·00	...						
Yilgarn	...	...	...	...	...	...	...	...	...	156,885·64	78,244·77	78,244·77	1,926·68
Dundas	...	...	...	...	...	...	...	...	953·32	34,301·87	17,465·69	18,419·01	1,438·20
Phillips River ...	...	...	...	...	...	...	...	...	...	2,928·77	4,734·52	4,734·52	...
State generally		...	...	...	...	...	...	...	...	...	111·41	111·41	237·06
Total for 1917		...	...	...	...	...	...	**1,248·30**	**9,114·52**	**1,960,451·04**	**947,056·96**	**957,419·78**	**124,191·09**

* By-product in the treatment of auriferous ore, except Ashburton and State generally.

TABLE III.—*Return showing for the respective Goldfields and Districts, etc.*—continued.

Goldfield.	District.	TOTAL GOLD AND SILVER YIELD—DISTRICTS.						TOTAL GOLD AND SILVER YIELD—GOLDFIELDS.					
		Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Total Gold.	* Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Total Gold.	* Silver.
		Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.
Kimberley ...	...	...	...	...	...	...	...	3,727·29	...	17,597·50	14,127·25	17,854·54	...
Pilbara ...	Marble Bar ...	11,766·25	3,280·13	69,291·43	104,729·48	119,775·86	574·01	18,039·90	3,683·63	109,515·67	175,796·67	197,520·20	574·01
Do. ...	Nullagine ...	6,273·65	403·50	40,224·24	71,067·19	77,744·34	...						
West Pilbara ...	...	...	...	...	...	...	...	5,522·05	264·72	18,855·71	21,679·69	27,466·46	1,246·50
Ashburton ...	...	...	...	...	...	...	...	8,567·60	315·64	...	...	8,883·24	7,787·69
Gascoyne	...	...	...	...	...	...	...	320·20	18·51	356·70	337·83	676·54	...
Peak Hill ...	...	...	...	...	...	...	...	1,911·77	3,919·09	483,550·26	244,807·03	250,637·89	2,287·59
East Murchison ...	Lawlers ...	5,614·49	6,927·93	1,987,770·86	885,765·69	898,308·11	25,316·60	7,158·00	22,164·67	3,240,087·82	1,664,506·01	1,693,828·68	40,360·94
Do. ...	Wiluna ...	90·79	197·27	146,110·50	74,708·28	74,996·34	232·00						
Do. ...	Black Range ...	1,452·72	15,039·47	1,106,206·46	704,032·04	720,524·23	14,812·34						
Murchison... ...	Cue	1,026·78	4,412·40	396,647·80	342,197·31	347,636·49	400·11	15,184·56	34,186·87	4,013,179·68	2,793,611·37	2,842,982·80	175,028·87
Do.	Meekatharra ...	10,121·15	9,741·44	1,135,364·65	788,516·28	808,378·87	4,789·38						
Do.	Day Dawn ...	2,285·32	6,242·19	1,954,957·81	1,289,434·94	1,297,962·45	168,665·20						
Do.	Mt. Magnet ...	1,751·31	13,790·84	526,209·42	373,462·84	389,004·99	1,174·18						
Yalgoo	...	...	...	...	...	...	...	1,451·29	1,740·09	166,859·64	109,197·83	112,389·21	167·40
Mt. Margaret ...	Mt. Morgans ...	1,716·26	3,469·94	894,214·35	493,490·58	498,676·78	5,759·11	7,455·32	16,908·98	5,101,685·73	2,710,931·03	2,735,295·33	113,120·48
Do.	Mt. Malcolm ...	2,512·97	6,967·96	2,844,635·92	1,497,831·29	1,507,312·22	63,943·32						
Do.	Mt. Margaret...	3,226·09	6,471·08	1,362,835·46	719,609·16	729,306·33	43,418·05						
North Coolgardie	Menzies ...	989·51	2,899·91	1,066,998·60	922,247·25	926,136·67	16,862·93	3,732·50	13,012·23	2,460,027·04	1,889,056·32	1,905,801·05	28,147·41
Do.	Ularring ...	21·46	1,144·32	282,785·77	281,065·19	282,230·97	5,618·02						
Do.	Niagara ...	1,475·19	1,400·01	895,923·04	496,844·02	499,719·22	5,603·42						
Do.	Yerilla ...	1,246·34	7,567·99	214,319·63	188,899·86	197,714·19	63·04						
Broad Arrow ...	...	...	...	...	...	...	...	18,985·59	10,554·67	794,193·01	434,188·83	463,729·09	2,181·96
N.E. Coolgardie ...	Kanowna ...	104,353·90	10,768·48	919,243·85	566,195·05	681,317·43	2,522·12	116,341·23	15,387·29	924,325·06	578,339·02	710,067·54	2,533·34
Do.	Kurnalpi ...	11,987·33	4,618·81	5,081·21	12,143·97	28,750·11	11·22						
East Coolgardie ...	East Coolgardie	26,948·50	30,391·68	25,411,897·26	16,356,932·25	16,414,272·43	1,451,818·78	53,461·43	45,336·26	25,565,880·68	16,476,527·34	16,575,325·03	1,451,831·70
Do.	Bulong ...	26,512·93	14,944·58	153,983·42	119,595·09	161,052·60	12·92						
Coolgardie ...	Coolgardie ...	8,587·87	10,336·37	1,488,898·19	943,773·32	962,697·56	881·79	9,238·31	15,369·91	1,752,612·16	1,143,388·62	1,167,996·84	930·46
Do.	Kunanalling ...	650·44	5,033·54	263,713·97	199,615·30	205,299·28	48·67						
Yilgarn	...	...	...	...	...	...	...	89·88	1,394·70	1,809,223·61	834,726·61	836,211·19	22,813·54
Dundas	...	...	...	...	...	...	...	2,027·12	10,882·82	832,009·42	565,963·72	578,873·66	36,392·90
Phillips River ...	...	...	...	...	...	...	...	472·20	775·33	84,755·39	78,215·85	79,463·38	15,688·17
†Donnybrook ...	...	...	...	...	...	...	...	23·24	...	1,653·30	818·52	841·76	...
State generally		...	...	...	...	...	...	124·89	155·90	27·00	7,184·48	7,465·27	9,829·22
Total to 31st December, 1917 ...		...	...	...	...	...	...	**273,834·37**	**196,071·31**	**47,376,395·38**	**29,743,404·02**	**30,213,309·70**	**1,910,922·18**

* By-product in the treatment of auriferous ore except Ashburton and State generally. † Abolished 4th March, 1908.

TABLE IV.

PRODUCTION OF GOLD AND SILVER FROM ALL SOURCES, SHOWING IN FINE OUNCES THE OUTPUT AS REPORTED TO THE MINES DEPARTMENT DURING 1917, AND THE TOTAL PRODUCTION TO DATE.

Kimberley Goldfield.

MINING CENTRE.	NUMBER OF LEASE.	REGISTERED NAME OF COMPANY OR LEASE.	TOTAL FOR 1917.					TOTAL PRODUCTION.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Hall's Creek...	...	Voided leases	...	...	...	...	...	...	...	423·00	477·76	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	94·55	62·68	...
Mt. Dockrell...	...	Voided leases	...	...	...	...	...	...	...	44·00	435·93	...
Ruby Creek ...	...	Voided leases	...	...	...	...	...	...	...	12,633·50	9,435·13	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	151·00	127·28	...
The Brockman	...	Voided leases	...	...	...	...	...	...	...	1,352·75	1,404·40	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	2,462·00	1,820·33	...
The Mary ...	...	Voided leases	...	...	...	...	...	...	...	399·00	210·03	...
The Panton ...	...	Voided leases	...	...	...	...	...	...	...	34·70	138·70	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	3·00	15·01	...
		From Goldfield generally :—										
		Reported by Banks and Gold Dealers	82·25	...	...	...	...	3,727·29	...	...	...	...
		Total	**82·25**	...	...	...	...	**3,727·29**	...	**17,597·50**	**14,127·25**	...

Pilbara Goldfield.

MARBLE BAR DISTRICT.

Bamboo Creek	733	Bamboo Queen	...	...	80·75	28·36	...	...	...	499·00	746·93	...
Do. ...	(777)	Blue Bell	...	...	83·50	48·30	...	...	...	411·25	268·55	...
Do. ...	(732)	Bonnie Doon	...	...	...	...	...	...	...	944·75	683·59	...
Do. ...	795	Bulletin	...	...	6·00	4·71	...	...	...	6·00	4·71	...
Do. ...	707	Kitchener	...	...	153·00	411·39	...	...	...	1,611·25	3,501·02	...
Do. ...	740	Mount Prophecy	...	...	171·50	461·40	...	...	1·11	756·50	1,270·82	...
Do. ...	794	Perseverance	...	...	57·50	104·37	...	...	...	114·50	183·15	...
Do. ...	789	Princess May and Charlie ...	...	...	23·75	69·91	...	...	...	51·75	134·51	...
Do. ...	(796)	True Bill	...	...	...	...	...	...	...	8·50	8·77	...
Do. ...	...	Voided leases	...	...	...	...	...	...	454·61	12,738·50	20,991·61	...
Do. ...	...	Sundry claims	...	...	59·25	70·31	...	...	307·83	765·85	962·88	...
Boodalyerrie...	...	Voided leases	...	...	...	...	...	...	292·07	120·25	587·86	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	7·16	...	...	...
Breen's Find	...	Voided leases	...	...	...	...	...	...	...	14·00	66·82	...

Elsie ...	792	... ...	Trio	...	...	10·00	7·06	...	...	...	43·00	35·75	...
Do. ...		...	Voided leases	...	...	...	...	...	...	...	135·00	316·31	...
Do. ...		...	Sundry claims	...	...	...	...	...	...	...	2·75	9·22	...
Lalla Rookh...		...	Voided leases	...	...	...	...	...	...	...	224·50	2,186·65	574·01
Do. ...		...	Sundry claims	...	...	...	...	...	...	...	6,908·00	6,806·72	...
Marble Bar ...	694	... ...	Jo–Jo	...	...	69·00	129·15	...	...	...	1,898·00	2,059·80	...
Do. ...	790	... ...	Rufus Henry	...	...	144·00	181·86	...	...	...	306·50	692·02	...
Do. ...	762	... ...	True Blue	...	...	15·50	21·60	...	...	...	190·25	324·19	...
Do. ...	722	... ...	Viking	...	...	170·00	262·41	...	...	...	1,361·00	1,442·88	...
Do. ...		...	Voided leases	...	...	...	...	...	...	147·90	15,742·20	20,754·29	...
Do. ...		...	Sundry claims	...	1·28	328·50	321·04	...	38·68	148·07	4,271·64	4,752·63	...
North Pole ...		...	Voided leases	...	...	...	...	...	...	...	474·00	340·75	...
Do. ...		...	Sundry claims	...	...	...	...	...	...	...	50·50	69·56	...
North Shaw ...		...	Voided leases	...	...	...	...	...	7·53	...	351·45	674·72	...
Do. ...		...	Sundry claims	...	...	...	...	...	...	567·06	...	...	...
Sharks ...		...	Sundry claims	...	...	...	...	...	145·08	19·37	24·50	93·14	...
Shaw River ...		...	Voided leases	...	...	...	...	...	...	...	101·00	49·63	...
Talga Talga		...	Voided leases	...	...	...	...	...	...	83·83	574·50	975·98	...
Do. ...		...	Sundry claims	...	...	...	...	...	50·26	68·99	204·65	520·25	...
Tambourah ...		...	Voided leases	...	...	...	...	...	...	...	1,438·50	1,739·44	...
Do. ...		...	Sundry claims	...	...	...	...	...	...	79·29	639·25	797·44	...
Warrawoona...		...	Voided leases	...	...	...	...	...	...	16·99	10,072·80	18,136·84	...
Do. ...		...	Sundry claims	...	...	...	...	...	44·30	362·50	1,127·04	2,163·74	...
Western Shaw		...	Voided leases	...	...	...	...	...	...	...	1,222·50	957·80	...
Do. ...		...	Sundry claims	...	...	...	...	...	12·52	67·47	...	...	...
Wyman's Well	744	... ...	Euro	...	...	...	...	...	...	...	340·00	352·55	...
Do. ...		...	Voided leases	...	...	...	...	...	...	33·55	115·04	493·98	...
Do. ...		...	Sundry claims	·62	...	...	...	...	·62	16·72	355·86	592·18	...
Yandicoogina		...	Voided leases	...	...	...	...	...	...	140·76	2,733·20	5,824·23	...
Do. ...		...	Sundry claims	...	...	...	...	...	...	238·35	103·75	120·34	...
			From District generally :—	...	...								
			Sundry Parcels treated at :										
			State Battery—Bamboo Creek	...	...	...	254·01	...	...	...	...	796·26	...
			State Battery—Marble Bar	...	...	...	...	...	...	...	...	34·06	...
			Various Works	...	...	...	...	...	...	...	237·95	1,204·91	...
			Reported by Banks and Gold Dealers	85·88	...	...	...	...	11,467·26	226·50	...	...	...
			Total	**86·50**	**1·28**	**1,372·25**	**2,375·88**	**...**	**11,766·25**	**3,280·13**	**69,291·43**	**104,729·48**	**574·01**

NULLAGINE DISTRICT.

Eastern Creek	180L	Crescent	...	...	39·00	145·04	...	...	...	899·75	1,625·07	...
Do. ...	176L	(Doherty Reward)	...	...	...	...	...	...	...	142·25	171·43	...
Do. ...	176L	Doherty Reward	...	...	90·00	390·84	...	...	...	1,265·00	2,081·65	...
Do. ...	176L, (177L) ...	(Doherty Reward leases) ...	...	...	...	...	...	...	...	219·00	1,007·68	...
Do. ...	203L	Harp	...	...	38·00	161·46	...	...	...	271·00	676·66	...
Do. ...	182L	Morning Star	...	...	...	...	...	...	4·19	367·00	834·03	...
Do. ...	205L	Rose	...	...	71·25	63·70	...	...	...	157·25	150·36	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

PILBARA GOLDFIELD—continued.

NULLAGINE DISTRICT—*continued.*

Mining Centre.	Number of Lease	Registered Name of Company or Lease	Total for 1917.					Total Production.				
			Alluvial	Dollied and Specimens	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs	Fine ozs	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Eastern Creek	178L	Shamrock	...	...	...	...	...	...	4·00	395·25	683·06	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	267·50	214·00	...
Do. ...	...	Sundry claims	...	...	6·50	7·65	...	...	3·77	301·50	523·27	...
Elsie ...	...	Voided leases	...	...	...	...	...	...	...	408·25	1,323·85	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	24·00	27·48	...
McPhee's Creek	...	Voided leases	...	...	...	...	...	...	...	113·00	137·92	...
Middle Creek	106L	Barton	...	...	25·00	24·01	...	...	...	5,652·65	7,324·01	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	559·25	1,109·67	...
Do. ...	...	Sundry claims	...	...	85·00	111·77	...	...	...	286·00	408·82	...
Mosquito Creek	...	Voided leases	...	...	...	...	...	1·07	21·42	7,259·80	12,464·00	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	166·47	2,188·94	3,116·77	...
Nullagine ...	...	Voided leases	...	...	...	...	...	...	13·96	7,453·25	11,335·12	...
Do. ...	...	Sundry claims	...	28·11	73·00	924·65	...	104·70	130·40	3,984·75	9,271·81	...
Twenty-Mile Sandy	195L	Billjim	...	...	458·50	288·13	...	...	...	2,458·50	2,064·92	...
Do. ...	(136L)	Little Wonder	...	...	...	...	...	...	...	1,050·00	3,859·26	...
Do. ...	(211L)	Mountain Maid	...	...	22·00	6·84	...	...	...	22·00	6·84	...
Do. ...	...	Voided leases	...	...	...	...	...	...	3·20	1,563·20	1,855·97	...
Do. ...	...	Sundry claims	...	...	129·75	201·61	...	33·10	20·55	2,802·65	3,855·08	...
		From District generally:										
		Sundry Parcels treated at:—										
		Doherty's Works	...	...	...	210·68	...	...	...	...	703·81	...
		Fremantle Trading Co.'s Works	...	...	...	8·29	...	...	...	...	8·29	...
		State Battery—Twenty-Mile Sandy	...	...	...	271·13	...	...	...	62·00	1,584·69	...
		Various Works	...	...	...	...	...	...	...	50·50	2,641·67	...
		Reported by Banks and Gold Dealers	99·18	...	...	...	...	6,134·78	35·54	...	...	...
		Total	**99·18**	**28·11**	**1,038·00**	**2,815·80**	...	**6,273·65**	**403·50**	**40,224·24**	**71,067·19**	...

West Pilbara Goldfield.

Croydon ...	...	Voided leases	...	...	...	...	...	...	...	8·00	5·44	...
Hong Kong ...	...	Voided leases	...	...	...	...	...	...	...	331·00	442·45	...
Do. ...	...	Sundry claims	...	...	...	...	...	21·40	·02	9·00	3·15	...

Lower Nicol ...	...	Voided leases	...	...	...	...	...	...	1·10	653·20	402·22	...
Do. ...	...	Sundry claims	...	...	...	...	...	10·44	2·71	10·00	11·51	...
Mallina ...	...	Voided leases	...	...	...	...	...	...	...	141·60	128·44	...
Nicol ...	...	Voided leases	...	...	...	...	...	...	...	30·00	11·47	...
Pilbara ...	167	Mountain Maid	...	...	4·00	5·74	...	...	...	4·00	5·74	...
Do. ...	...	Voided leases	...	...	...	...	...	...	48·12	148·00	293·42	...
Do. ...	...	Sundry claims	...	...	...	...	...	1·11	86·24	68·00	101·06	...
Roebourne ...	M.L. 174 ...	Good Fortune	...	...	...	...	*28·26	...	...	...	·41	28·26
Do. ...	...	Voided leases	...	...	...	...	...	...	...	113·36	573·91	237·91
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	108·60	93·85	96·53
Station Peak	165	Belladonna	...	...	220·00	62·97	...	...	17·93	763·00	213·85	...
Do. ...	...	Voided leases	...	...	...	...	...	177·74	23·44	9,993·00	11,084·49	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	37·50	48·19	...
Towranna ...	155	Tauri Tom Tit	...	2·62	135·00	177·88	...	...	2·62	1,996·00	3,020·17	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	1,934·80	2,088·26	...
Upper Nicol	...	Sundry claims	...	...	...	...	...	...	...	6·50	2·57	...
Weerianna ...	...	Voided leases	...	...	...	...	...	...	...	2,436·15	3,079·81	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	64·00	62·90	...
Whim Creek	M.L. 172 ...	Cumstock	...	...	...	...	...	...	...	...	...	883·80
		From Goldfield generally :—										
		Reported by Banks and Gold Dealers	55·56	...	...	...	...	5,311·36	82·54	...	6·38	...
		Total	**55·56**	**2·62**	**359·00**	**246·59**	**28·26**	**5,522·05**	**264·72**	**18,855·71**	**21,679·69**	**1,246·50**

* From Copper Ore.

Ashburton Goldfield.

Mt. Mortimer ...	...	Sundry claims	...	...	...	...	...	354·37	315·64	...	...	74·47
Uaroo ...	M.L. 43, M.L. 49	Uaroo Silver-Lead Mines, Ltd.	...	...	...	...	...	...	...	...	...	7,551·20
Do. ...	...	Voided leases	...	...	...	...	...	...	...	...	...	162·02
		From Goldfield generally :—										
		Reported by Banks and Gold Dealer	6·50	...	...	...	...	8,213·23	...	...	...	...
		Total	**6·50**	**...**	**...**	**...**	**...**	**8,567·60**	**315·64**	**...**	**...**	**7,787·69**

Gascoyne Goldfield.

Bangemall ...	32	Gem	...	...	...	...	...	...	...	114·00	95·33	...
Do. ...	...	Voided leases	...	...	...	...	...	...	6·22	236·70	218·49	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	12·29	6·00	24·01	...
		From Goldfield generally :—										
		Reported by Banks and Gold Dealers	...	...	...	...	...	320·20	...	...	...	...
		Total	**...**	**...**	**...**	**...**	**...**	**320·20**	**18·51**	**356·70**	**337·83**	**...**

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

Peak Hill Goldfield.

Mining Centre	Number of Lease.	Registered Name of Company or Lease.	Total for 1917. Alluvial. Fine ozs.	Dollied and Specimens. Fine ozs.	Ore treated. Tons (2,240lbs.)	Gold therefrom. Fine ozs.	Silver. Fine ozs.	Total Production. Alluvial. Fine ozs.	Dollied and Specimens. Fine ozs.	Ore treated. Tons (2,240lbs.)	Gold therefrom. Fine ozs.	Silver. Fine ozs.
Egerton ...	(460P)	Dorothy	...	...	...	...	...	...	...	90·00	129·00	...
Do. ...	352P	Hibernian	...	...	1,420·00	316·22	...	...	...	3,671·00	1,454·52	...
Do. ...	...	Voided leases	...	...	...	...	...	...	·91	225·25	231·00	...
Do. ...	...	Sundry claims	...	...	17·00	8·30	...	...	23·51	1,053·75	491·16	...
Horseshoe ...	...	Voided leases	...	...	...	...	...	...	1,950·96	728·38	1,973·46	2·00
Do. ...	...	Sundry claims	...	...	...	...	...	...	632·37	16·05	45·14	...
Mt. Fraser ...	...	Voided leases	...	...	...	...	...	...	...	389·50	320·96	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	80·00	55·41	...
Peak Hill ...	459P	Atlantic	...	...	10·00	44·44	...	...	...	80·50	287·50	...
Do. ...	462P	Enterprise	...	...	12·00	67·28	...	...	...	69·00	333·75	...
Do. ...	448P	Evening Star	...	...	40·00	493·87	...	...	...	521·00	2,135·38	...
Do. ...	364P, [1261N] ...	Harder to Find	...	...	...	...	...	...	46·29	14·00	30·62	...
Do. ...	5P, 306P ...	No. 1 North leases	...	...	136·00	272·12	...	...	...	973·50	1,107·85	...
Do. ...	455P	North Star	...	...	40·00	52·45	...	...	...	131·00	143·17	...
Do. ...	461P	Patriotic	...	...	...	...	...	...	...	199·00	346·51	...
Do. ...	(1P), (2P,) (4P), 5P, (6P), (8P), (9P), (13P), (15P), (16P), (26P), (27P), (28P), (29P), (35P), (36P), (43P), (53P), (54P), (63P), (146P), (152P), (190P), (213P), (222P), (239P), (248P), (252P), (262P), (274P), 306P, (313P)	(Peak Hill Goldfields, Ltd.)	...	...	...	...	...	...	191·46	462,057·01	223,273·59	2,285·59
Do. ...	(456P)	Reefers	...	...	33·00	12·90	...	...	...	151·00	139·47	...
Do. ...	398P	Temperance	...	...	32·00	32·58	...	...	6·65	591·00	498·24	...
Do. ...	465P	Wowser	...	...	18·00	36·49	...	...	...	18·00	36·49	...
Do. ...	...	Voided leases	...	...	...	...	...	...	475·25	4,786·62	4,011·09	...
Do. ...	...	Sundry claims	...	...	301·50	71·58	...	...	118·29	2,710·75	1,968·91	...
Ravelstone ...	...	Voided leases	...	...	...	...	...	...	101·64	4,219·85	3,117·68	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	553·60	283·17	...
Wilgeena ...	...	Voided leases	...	...	...	...	...	...	23·54	128·50	146·79	...
Wilthorpe ...	...	Voided leases	...	...	...	...	...	...	...	47·00	20·93	...
		From ... dfiel ... enerally :—										
		Sundry Parcels treated ...										
		Purcell's Works, ...	...	...	...	294·58	...	...	...	...	294·58	...

State Battery—Egerton	...	...	...	...	...	...	...	...	...	...	...	294·87	...
State Battery—Ravelstone	...	...	...	...	...	...	...	3·05	15·00	1,315·82	...
Various Works	...	...	...	...	...	...	...	...	30·00	319·97	...
Reported by Banks and Gold Dealers	40·91	...	...	...	...	1,911·77	345·17	...	...	...
Total	**40·91**	...	**2,059·50**	**1,702·81**	...	**1,911·77**	**3,919·09**	**483,550·26**	**244,807·03**	**2,287·59**

East Murchison Goldfield.

LAWLERS DISTRICT.

NOTE.—From the 1st March, 1910, the Lawlers District was subdivided into Wiluna and Lawlers. The gold produced after that date by the mines at Wiluna will be found in the Wiluna District, and the lease numbers of both districts are shown in each case.

Bronzewing ...	...	Voided leases	...	...	...	...	...	...	...	468·00	318·03	1·94
Cork Tree ...	...	Voided leases	...	...	...	...	...	...	29·90	3,767·00	3,292·87	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	25·50	13·00	9·32	...
Kathleen Valley	382	(Yellow Aster)	...	...	...	...	...	...	...	37,605·00	27,051·42	...
Do. ...	382	Yellow Aster	...	...	783·00	482·36	...	...	...	1,468·00	817·18	...
Do. ...	382	(Yellow Aster: Yellow Aster G.M. Co., N.L.)	...	...	...	...	...	...	...	10,359·75	5,425·26	...
Do. ...	...	Voided leases	...	...	...	...	...	...	141·57	23,291·50	11,350·24	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	478·40	1,429·75	855·82	...
Lake Darlot...	626	Filbandint	...	...	...	...	...	...	...	999·00	918·19	...
Do. ...	648	Monte Cristo	...	...	...	...	...	...	...	71·25	54·08	...
Do. ...	648, (654), (852)	(Monte Cristo leases)	...	...	...	...	...	...	...	6,762·60	3,279·52	...
Do. ...	(1193)	New Year's Gift	...	...	...	...	...	...	251·20	...	...	...
Do. ...	273	St. George	...	127·08	...	...	...	...	3,099·86	890·00	7,954·64	...
Do. ...	633	(Zangbar)	...	...	...	...	...	...	...	997·00	505·75	...
Do. ...	633	Zangbar	...	...	...	167·54	...	...	...	...	167·54	...
Do. ...	633, (823) ...	(Zangbar leases)	...	...	...	...	...	...	...	20,340·00	7,664·55	...
Do. ...	...	Voided leases	...	...	...	...	...	...	945·92	35,096·45	28,005·72	...
Do. ...	...	Sundry claims	...	...	...	...	...	1·16	474·45	3,794·64	3,302·72	...
Lawlers ...	M.L. 29	Bungarra	...	...	...	...	*152·88	...	...	...	...	152·88
Do. ...	(22), (37), 58, 62, (70), (155), (156), (157), (158), (376), (377), (381), (385), (399), (426), (427), (459), (474), (500), (508), (509), (510), (511), (512), (552), (562), (563), (573), (811), (840)	(East Murchison United, Ltd.) ...	...	...	...	...	...	...	...	291,797·00	155,594·26	900·48
Do. ...	1171	(Great Eastern)	...	...	...	...	...	...	...	927·00	337·72	...
Do. ...	1171, 1186 ...	Great Eastern leases	...	...	146·74	74·97	...	...	...	996·74	723·87	...
Do. ...	(37), 58, 62, (70), (155), (156), (157), (158), (376), (377), (381), (385), (399), (426), (427), (459), (474), (500), (508), (509), (510), (511), (512), (552), (562), (563), (573), (811), (840)	(London and Western Australian Exploration Co., Ltd.)	...	...	...	...	...	...	...	179,563·00	40,438·14	2,560·31

* From copper ore.

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

East Murchison Goldfield—*continued.*

LAWLERS DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Lawlers ...	1163	(May Bee)	...	...	...	...	...	...	...	4,157·00	1,270·06	...
Do. ...	1163, (1189) ...	May Bee leases	...	...	916·00	264·22	...	...	...	935·00	303·93	...
Do. ...	(22), (37), 58, 62, (70), (155), (156), (157), (158), (376), (377), (385), (459), (508), (509), (562), (563), (811), (840), (918), (1053), (1106), (1109), (1110), (1123), (1160)	(Northern Mines, Ltd.)	...	...	...	...	...	...	...	398,856·50	102,005·52	8,356·89
Do. ...	1172	Queen	...	...	288·00	326·25	36·60	...	...	1,754·50	2,055·88	84·21
Do. ...	1204	Selina	...	76·23	17·00	119·14	...	...	76·23	17·00	119·14	...
Do. ...	(1198)	Scottish Lass	...	...	1·50	5·66	...	...	...	1·50	5·66	...
Do. ...	910, 923 ...	Sunrise Leases	...	...	355·00	91·51	...	...	...	8,644·00	4,076·63	...
Do. ...	1188	Try It	...	...	357·00	90·15	...	...	...	936·00	264·77	...
Do. ...	58, 62, 918 ...	Waroonga G.M. Co., Ltd.	...	...	8,974·00	1,349·69	...	...	...	20,863·00	3,973·67	...
Do. ...	62, (562), (563) ...	(Waroonga South leases) ...	...	...	...	...	...	...	...	42,150·00	14,?29·48	...
Do. ...	58	(Woronga: London and Western Australian Exploration Co., Ltd.)	...	...	...	...	...	...	...	2,438·50	2,755·45	...
Do. ...	...	Voided leases	...	...	...	...	...	...	584·59	284,140·48	146,941·55	1,794·21
Do. ...	...	Sundry claims	...	...	534·50	210·34	...	14·81	119·17	10,209·48	6,334·84	268·34
New England	...	Voided leases	...	...	...	...	...	...	57·54	899·00	720·25	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	4·32	554·50	465·23	...
Sir Samuel ...	1175	Bellevue North	...	...	...	...	...	...	4·45	53·75	37·46	...
Do. ...	1190	Bellevue South	...	...	...	...	...	...	...	156·00	114·46	...
Do. ...	(1202)	Canberra	...	...	66·00	29·19	...	...	...	66·00	29·19	...
Do. ...	1192	Isadore	...	...	132·00	60·37	...	...	...	289·00	186·56	...
Do. ...	...	Voided leases	...	...	...	...	...	...	9·04	264,965·75	138,192·35	10,225·58
Do. ...	...	Sundry claims	...	...	150·00	54·84	...	...	21·37	3,432·00	2,583·16	...
Wiluna ...	(140), ([2J]), 162, [4J], (163), ([5J])	(Golden Age Consolidated, Ltd.) ...	...	...	...	...	...	...	...	42,521·00	19,750·45	...
Do. ...	542, [6J], 548, [7J], 550, [8J], (906), ([11J]), (930), ([13J]), (931), ([14J]), (932), ([15J]), (937), ([17J]), (938), ([18J]), (943),	(Gwalia Consolidated, Ltd.)	...	...	...	...	...	...	...	210,230·32	74,536·14	69·03

		([21J]), (944), ([22J]), (952), ([26J])]													
Do.	...	162, [4J], (163), ([5J])	(Lake Way leases)	...	...	...	...	...	...	...	...	630·00	369·60	...
Do.	...	162, [4J] ...	(Lake Way: Western Australian Goldfields, Ltd.)	...	...	...	...	...	...	...	...	2,786·00	1,238·44	...
Do.	...	870, [10J] ...	(Moonlight)	...	...	...	...	...	...	...	...	1,856·00	787·66	...
Do.	...	917, [12J] ...	(Squib)	...	...	...	...	...	...	...	...	276·50	67·00	...
Do.	...	...	Voided leases	...	...	...	...	...	...	...	537·27	58,149·75	41,452·53	124·00
Do.	...	...	Sundry claims	...	...	...	...	...	5·30	...		2,841·15	1,516·76	...
			From District generally :—											
			Sundry parcels treated at :											
			Cinderella Battery	...	...	...	...	...	...	...	...	1,218·00	3,297·53	26·00
			Great Eastern Battery	...	...	...	851·50	...	...	...	...	...	1,808·54	...
			Lawlers Public Battery	...	...	...	...	...	...	...	...	284·00	2,730·80	...
			Parry's Cyanide Plant	...	...	...	...	...	...	...	...	...	155·36	...
			Queen Works	...	...	...	403·46	14·40	...	...	...	...	403·46	14·40
			State Battery—Lake Darlot	...	...	...	...	...	...	...	...	315·00	1,097·09	...
			State Battery—Sir Samuel	...	...	...	...	...	...	...	...	...	1,289·77	...
			State Battery—Wiluna	...	...	...	...	...	...	...	...	390·00	2,047·17	20·00
			Various Works	...	...	...	...	...	...	...	...	117·50	8,379·57	718·33
			Reported by Banks and Gold Dealers	...	...	...	...	...	5,593·22	67·15	...	...	5·74	...
			Total	...	203·31	12,720·74	4,581·19	203·88	5,614·49	6,927·93	1,987,770·86	885,765·69	25,316·60	

WILUNA DISTRICT.

Note.—Previous to the 1st March, 1910, Wiluna formed part of the Lawlers District. The gold produced by mines at Wiluna previous to that date will be found in the Lawlers District, and the lease numbers of both districts are shown in each case.

Collavilla	...	...	Voided leases	...	...	...	...	...	...	...	...	1,518·00	496·28	...
Do.	...	...	Sundry claims	...	...	...	...	...	...	...	...	30·00	21·47	...
Mt. Keith	...	201J	Aurora	...	...	322·50	176·32	...	...	...	...	1,149·50	849·59	...
Do.	...	205J i	Dunbar	...	...	26·50	37·95	...	...	...	...	37·25	84·21	...
Do.	...	220J	Gem	...	...	32·50	13·56	...	...	...	...	32·50	13·56	...
Do.	...	207J	Miss Deal	...	...	443·00	515·56	...	...	...	...	674·50	738·14	...
Do.	...	...	Voided leases	...	...	...	...	...	...	8·29	...	3,896·50	3,294·62	...
Do.	...	...	Sundry claims	...	...	418·00	127·53	...	...	78·26	...	1,302·25	810·84	...
New England		...	Voided leases	...	...	...	...	...	...	...	...	952·00	309·11	...
Do.	...	...	Sundry claims	...	...	...	...	...	...	...	...	115·00	100·62	...
Wiluna	...	91J, [940] ...	Adelaide	...	...	...	...	...	...	...	...	401·00	33·29	...
Do.	...	215J	Butcher	...	...	27·00	16·98	...	...	...	...	27·00	16·98	...
Do.	...	218J	Great Zig Zag	...	...	174·25	120·70	...	...	...	...	174·25	120·70	...
Do.	...	6J, 7J, 8J, (11J), (13J), (14J), (15J), (17J), (18J), (21J), (22J), (24J), (25J), (26J), (39J), (161J), (163J)	(Gwalia Consolidated, Ltd.)	...	...	...	...	...	...	...	...	29,774·50	10,780·42	20·29
Do.	...	119J	(Happy Jack)	...	...	...	...	...	...	...	...	743·00	236·41	...
Do.	...	202J	Happy Jack South	...	...	945·75	492·01	...	...	...	...	1,364·75	767·50	...
Do.	...	210J	Just-in-Time	...	...	114·25	88·55	...	...	...	...	993·75	770·15	...
Do.	...	216J	Killarney	...	...	43·50	20·42	...	...	...	...	43·50	20·42	...
Do.	...	4J, [162], (5J), ([163])	Lake Way leases: Wiluna G.Ms., Ltd.	...	...	...	...	...	...	...	...	2,044·00	975·78	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

EAST MURCHISON GOLDFIELD—*continued.*

WILUNA DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs-	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Wiluna ...	10J, [870] ...	(Moonlight)	...	...	...	...	...	...	...	5,181·00	1,078·40	...
Do. ...	10J, 37J, 91J, 109J, (123J)	Moonlight leases	...	...	3,871·00	1,552·40	...	...	...	18,968·00	7,168·89	...
Do. ...	(212J)	Prairie Belle	...	...	38·75	28·40	...	...	...	165·75	62·87	...
Do. ...	6J, 7J, 8J, (11J), (13J), (14J), (15J), (17J), (21J), (161J), (163J)	Western Machinery Co., Ltd. ...	...	...	9,317·75	4,802·36	...	...	...	29,927·00	14,211·42	...
Do. ...	12J, (23J), (28J), (30J), (33J), (36J), (43J), (76J), 113J, 119J, 124J, (137J)	Wiluna Gold Mines, Ltd.	...	...	2,033·00	1,368·62	...	...	...	23,935·25	10,412·94	...
Do. ...	...	Voided leases	...	...	...	...	...	...	27·92	16,804·25	6,825·01	...
Do. ...	...	Sundry claims	...	...	152·00	82·53	...	87·59	79·88	5,654·00	2,468·73	·33
		From District generally :										
	Sundry Parcels treated at :—											
	State Battery—Mt. Keith		...	...	...	65·22	...	...	...	...	556·95	12·68
	State Battery—Wiluna		...	...	47·00	14·54	...	...	...	202·00	11,482·98	198·70
	Reported by Banks and Gold Dealers		...	...	...	...	...	3·20	2·92	...	...	...
		Total	...	...	**18,006·75**	**9,523·65**	...	**90·79**	**197·27**	**146,110·50**	**74,708·28**	**232·00**

BLACK RANGE DISTRICT.

Barrambie ...	(773B), ([1458]), (774B), ([1459]), ([1484]), ([1486]), ([1560])	Barrambie Ranges G.M. Co., N.L. ...	...	...	...	...	...	...	...	159·50	1,528·41	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	296·00	333·83	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	16·01	120·00	88·21	...
Bellchambers	...	Sundry claims	...	...	...	...	...	...	...	45·00	36·62	...
Birrigrin ...	...	Voided leases	...	...	...	...	...	...	820·68	11,958·16	14,945·20	...
Do. ...	...	Sundry claims	...	...	...	105·95	...	...	34·52	731·00	670·65	...
Curran's Find	641B	Red, White, and Blue	...	...	1,312·00	391·90	...	...	24·58	6,028·00	2,023·45	...
Do. ...	...	Voided leases	...	...	...	...	...	...	107·70	164·50	71·82	...
Do. ...	...	Sundry claims	...	22·91	...	...	...	...	27·20	380·50	200·83	...
Errolls ...	...	Voided leases	...	...	...	...	...	14·17	18·54	67·00	388·58	...
Do. ...	...	Sundry claims	...	202·81	...	8·15	...	...	230·92	219·50	256·92	...

Hancock's ...	382B	(Bull Oak)	...	...	...	...	...	...	...	...	725·00	956·77	...
Do. ...	382B	Bull Oak	...	4·31	...	...	...	...	8·02	60·50	39·97	...
Do. ...	837B	Comedy King	...	...	178·00	207·82	...	...	365·90	512·00	995·91	...
Do. ...	(369B), (379B), 382B, (383B)	Comrades leases	...	...	...	...	...	...	...	4,641·50	3,443·73	...
Do. ...	(389B)	(Faugh-a-ballagh)	...	...	...	...	...	...	...	139·00	109·31	...
Do. ...	(389B), (495B), (710B)	Faugh-a-ballagh leases	...	14·01	42·00	15·53	...	...	376·16	2,397·00	2,808·76	...
Do. ...	858B	Mystery	...	...	155·00	70·09	...	...	...	155·00	70·09	...
Do. ...	(369B), (379B), 382B, (383B)	(Royal Oak Mining Co., N.L.) ...	...	...	...	...	...	...	...	1,832·75	1,006·72	...
Do. ...	...	Voided leases	...	...	...	...	...	...	5,739·76	15,945·50	17,299·07	52·08
Do. ...	...	Sundry claims	...	2·66	108·25	69·37	...	...	113·79	1,310·00	736·62	...
Maninga Marley	203B	Havilah	...	...	129·00	175·45	...	...	...	167·00	202·19	...
Do. ...	203B	(Havilah)	...	...	...	...	...	...	...	1,507·50	2,315·74	...
Do. ...	203B, (243B), (249B), (254B), (287B), (288B), (289B), (305B), (350B), (504B)	(Havilah G.M. Co., N.L.)	...	...	...	...	...	...	...	36,508·00	20,052·80	22·55
Do. ...	203B, (243B), (287B), (289B), (350B) ...	(Havilah G.M. Co., N.L.)	...	...	...	...	...	...	...	6,026·00	5,029·69	...
Do. ...	203B, (243B), (249B), (254B), (287B), (288B), (289B), (305B)	(Havilah leases)	...	...	...	...	...	...	...	2,240·00	2,432·48	...
Do. ...	203B, (243B), (289B)	(Havilah leases: Tailings Treatment, Ltd.)	...	...	...	...	...	...	...	371·00	2,086·50	...
Do. ...	...	Voided leases	...	...	...	...	...	...	195·20	11,977·23	14,442·35	...
Do. ...	...	Sundry claims	...	...	15·00	6·36	...	...	158·16	853·50	669·68	...
Montagu ...	...	Voided leases	...	...	...	...	...	...	94·39	9,133·40	7,223·46	...
Do. ...	...	Sundry claims	...	...	...	9·03	...	...	45·67	794·50	471·76	...
Nungarra ...	(849)	Doris	...	...	...	...	...	...	106·77	20·50	15·90	...
Do. ...	...	Voided leases	...	...	...	...	...	25·94	879·32	12,142·25	8,777·53	3·64
Do. ...	...	Sundry claims	...	...	70·00	35·09	...	46·67	1,455·98	3,387·90	2,116·02	...
Sandstone ...	4B	(Adelaide)	...	...	...	...	...	...	7·21	7,443·00	12,675·94	...
Do. ...	4B, 5B, (11B), (17B), (26B), (70B), (140B), (150B)	(Adelaide leases)	...	...	...	...	...	...	...	21,010·00	30,255·28	...
Do. ...	5B	(Black Range)	...	...	...	...	...	...	152·68	637·00	1,477·66	5·60
Do. ...	4B, 5B, (9B), (11B), (17B), (26B), (70B), (140B), (150B), (256B), (494B), (509B), (620B), (627B)	(Black Range Mining Co., N.L.) ...	...	...	...	...	...	4·75	199·90	227,485·00	159,278·43	1,315·00
Do. ...	4B, 5B, (11B), (70B), (140B)	(Black Range Pinnacles Co., N.L.) ...	...	...	608·00	695·57	...	...	...	1,228·50	1,684·82	...
Do. ...	255B	(Black Range West G.M. Co., N.L.) ...	...	...	...	...	...	...	...	1,077·65	1,035·43	...
Do. ...	255B, 332B, 562B, (601B)	(Black Range West G.M. Co., N.L.) ...	...	...	...	...	...	...	51·62	613·00	377·95	...
Do. ...	4B, 5B, 255B, 332B, 562B, (601B), 850B	Black Range West G.M. Co., N.L. ...	...	...	74·50	86·20	...	...	...	74·50	86·20	...
Do. ...	854B	Entente	...	10·83	450·00	418·88	...	...	10·83	450·00	418·88	...
Do. ...	(815B)	Jumbo	...	53·83	13·00	9·27	...	...	443·56	134·25	79·24	...
Do. ...	(844B)	Nancy's Reward	...	...	...	...	...	...	2·05	224·50	439·66	...
Do. ...	856B	Nancy's Reward	...	...	243·00	131·45	...	...	...	243·00	131·45	...
Do. ...	853B	Orsova	...	...	45·50	13·12	...	...	...	45·50	13·12	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

EAST MURCHISON GOLDFIELD—*continued.*

BLACK RANGE DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Sandstone ...	789B	Pyx	...	...	...	...	...	...	...	849·50	685·42	13·50
Do. ...	(855B)	Sandstone	...	...	52·00	59·83	...	...	...	52·00	59·83	...
Do. ...	848B	Wanderie	...	...	...	...	...	...	...	21·00	9·45	...
Do. ...	...	Voided leases	...	...	...	...	...	...	2,239·66	423,482·37	230,864·04	10,420·12
Do. ...	...	Sundry claims	...	177·29	284·00	304·70	...	24·01	972·03	2,568·50	1,651·37	...
Youanme ...	622B	(Edna)	...	...	...	...	...	...	...	320·00	210·17	...
Do. ...	526B	(Great Western)	...	...	...	...	...	...	9·71	553·75	417·43	...
Do. ...	564B	(Junction)	...	...	...	...	...	...	...	975·50	668·33	...
Do. ...	630B	(Oversight)	...	...	...	...	...	...	...	132·00	37·05	...
Do. ...	521B	(Peru)	...	...	...	...	...	...	...	98·00	126·86	...
Do. ...	514B	United	...	...	892·00	149·26	...	...	11·86	13,947·50	3,744·48	...
Do. ...	518B, 521B, 522B, 525B, 526B, 564B, 585B, 603B, 605B, 611B, 618B, 622B, 626B, 630B, 636B, 688B, 692B	Yuanmi G.Ms., Ltd.	...	...	22,877·00	14,590·77	64·74	...	...	260,141·00	120,499·01	2,920·32
Do. ...	...	Voided leases	...	...	...	...	...	·36	105·35	7,429·50	1,963·52	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	2·31	1,714·75	442·34	...
		From District generally:—										
		Sundry Parcels treated at:										
		Reply Works	...	...	...	...	...	...	...	37·00	2,531·55	...
		State Battery—Black Range	...	...	...	410·58	...	...	...	202·00	12,525·25	59·53
		State Battery—Youanme	...	...	...	94·80	...	...	...	...	2,661·08	...
		Various Works	...	...	...	...	...	...	...	...	3,133·23	...
		Reported by Banks and Gold Dealers	·59	...	...	...	...	1,336·82	11·43	...	...	...
		Total	**·59**	**488·65**	**27,548·25**	**18,059·17**	**64·74**	**1,452·72**	**15,039·47**	**1,106,206·46**	**704,032·04**	**14,812·34**

Murchison Goldfield.

CUE DISTRICT.

Barrambie ...	(1458), ([773B]), (1459), ([774B]), (1484), (1486), (1560)	Barrambie Ranges G.M. Co., N.L. ...	...	...	...	...	...	...	...	15,665·33	13,566·97	125·60
Do. ...	(1458), ([773B])...	(Golden Treasure)	...	...	...	...	...	...	6·54	...	...	...
Do. ...	...	Voided leases	...	...	...	...	...	...	15·95	1,238·59	771·55	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	70·50	35·81	...

Cuddingwarra	1860	Big Bell	...	...	10,041·00	1,629·35	...	...	...	12,999·36	2,273·50	...
Do. ...	...	Voided leases	...	...	...	...	...	10·59	124·53	35,855·75	43,796·59	15·42
Do. ...	...	Sundry claims	...	...	...	45·68	...	...	11·86	487·54	898·15	...
Cue	203, 1148 ...	(Cue Consolidated G.Ms. Ltd.) ...	...	...	...	...	...	...	...	23,427·50	18,382·10	...
Do. ...	203	Cue No. 1	...	...	...	...	...	...	...	7,753·00	12,772·46	...
Do. ...	(1901)	Flowers of May	...	...	...	...	...	...	65·55	116·00	198·15	...
Do. ...	(1637)	Gem of Cue	...	...	...	...	...	...	...	962·00	928·03	...
Do. ...	(1637)	(Gem of Cue)	...	...	...	...	...	...	...	214·50	233·79	...
Do. ...	(1637), (1663) ...	(Gem of Cue leases)	...	...	...	...	...	...	...	3,264·50	1,941·52	...
Do. ...	(1783)	Hidden Treasure...	...	...	...	...	...	...	...	10,676·50	11,898·78	...
Do. ...	1148	(Light of Asia)	...	...	...	...	...	...	...	10,175·00	7,302·20	...
Do. ...	1148, (1299), (1300), (1634), (1666), (1667)	(Light of Asia leases)	...	...	...	...	...	...	...	14,024·00	9,078·43	...
Do. ...	1148, 1151, 1252, (1300), 1362, 1498, (1634), (1667)	Light of Asia and Queen of the May leases	...	...	4,156·00	4,134·55	...	...	...	16,221·00	12,046·35	...
Do. ...	1151, 1252, 1362, (1391), 1498, (1689)	(Queen of the May leases) ...	...	...	...	...	...	...	...	6,926·00	6,974·06	...
Do. ...	(1248)	Rising Sun	...	...	...	...	...	...	...	1,585·50	1,135·23	...
Do. ...	1853	(Vera)	...	...	...	...	...	...	...	418·00	432·64	...
Do. ...	1853, 1855 ...	Vera leases	...	...	88·50	59·79	...	...	...	641·50	635·13	...
Do. ...	(1918)	Volunteer	...	...	...	...	...	...	...	238·00	109·49	...
Do. ...	...	Voided leases	...	...	...	...	...	34·72	463·90	164,254·62	111,691·63	43·35
Do. ...	...	Sundry claims	10·45	48·76	107·00	287·68	...	20·95	373·95	14,606·59	9,336·44	...
Eelya... ...	...	Voided leases	...	...	...	...	...	...	8·78	966·00	1,774·03	...
Do. ...	...	Sundry claims	...	28·21	12·00	24·06	...	...	101·86	517·15	584·79	...
Errolls ...	...	Voided leases	...	...	...	...	...	...	20·25	14,098·50	8,902·24	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	227·00	92·86	...
Mindoolah ...	...	Voided leases	...	...	...	...	...	3·07	...	7,935·50	4,773·33	42·97
Do. ...	...	Sundry claims	...	...	...	...	...	...	9·81	1,004·00	1,123·77	...
Reedy's Find	1923	Turn of the Tide	...	4·00	81·50	1,032·50	...	...	4·00	91·50	1,253·47	...
Do. ...	...	Voided leases	...	...	...	...	...	...	210·65	540·00	673·20	...
Do. ...	...	Sundry claims	...	...	27·00	8·17	...	136·94	20·56	222·05	124·69	...
Tuckabiano ...	1928	Blue Streak	...	...	172·00	113·47	...	...	...	172·00	113·47	...
Do. ...	1939	Gold Streak	...	...	13·00	3·13	...	...	...	13·00	3·13	...
Do. ...	1926	Nigel	...	...	39·00	182·44	...	...	...	39·00	182·44	...
Do. ...	1931	Tosiana	...	...	313·00	685·79	...	...	...	385·00	849·76	...
Do. ...	1929	Tuckabianna North	...	...	32·50	33·54	...	...	...	32·50	33·54	...
Do. ...	1914	Triplicate	...	...	...	...	...	...	...	439·00	167·71	...
Do. ...	...	Voided leases	...	...	...	...	...	...	146·77	2·00	43·18	...
Do. ...	...	Sundry claims	18·83	8·17	...	...	...	18·83	17·19	27·50	14·20	...
Tuckanarra ...	1932	Culculli	...	...	41·00	297·80	...	...	...	41·00	297·80	...
Do. ...	1337	Nemesis	...	10·22	...	...	...	...	619·00	2,214·00	6,077·07	...
Do. ...	(1920)	Welcome	...	...	8·00	25·46	...	...	...	8·00	25·46	...
Do. ...	1941	Wild Rabbit	...	...	31·00	33·18	...	...	...	31·00	33·18	...
Do. ...	...	Voided leases	...	...	...	...	...	14·65	2,095·42	15,576·10	14,379·82	172·77
Do. ...	...	Sundry claims	...	...	70·00	274·08	...	31·60	88·29	2,800·70	5,961·50	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

MURCHISON GOLDFIELD—*continued.*

CUE DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917. Alluvial. Fine ozs.	Dollied and Specimens. Fine ozs.	Ore treated. Tons (2,240lbs.)	Gold therefrom. Fine ozs.	Silver. Fine ozs.	Total Production. Alluvial Fine ozs.	Dollied and Specimens. Fine ozs.	Ore treated. Tons (2,240lbs.)	Gold therefrom. Fine ozs.	Silver. Fine ozs.
		From District generally :—										
		Sundry Parcels treated at :										
		Cue No. 1 Works	...	...	...	383·37	...	...	...	1,870·50	6,605·93	...
		Gem of Cue Extended Works	...	...	...	...	...	...	...	...	875·19	...
		State Battery—Tuckanarra	...	...	...	...	...	...	...	518·50	2,791·95	...
		Triplicate Works	...	...	...	307·13	...	...	...	...	307·13	...
		Various Works	...	...	...	...	...	...	...	5,055·02	17,693·47	...
		Reported by Banks and Gold Dealers	...	...	...	...	...	755·43	7·54	...	...	...
		Total	**29·28**	**99·36**	**15,232·50**	**9,561·17**	...	**1,026·78**	**4,412·40**	**396,647·80**	**342,197·31**	**400·11**
		MEEKATHARRA DISTRICT.										
Abbott's	1394N	White Horse Extended	...	26·45	19·00	11·91	...	...	26·45	19·00	11·91	...
Do.		Voided leases	...	...	...	...	...	...	...	35,165·60	37,103·60	...
Do.		Sundry claims	...	...	11·00	27·31	...	...	...	55·60	90·87	...
Burnakura		Voided leases	...	...	...	...	...	...	3,239·43	38,480·95	30,579·03	26·90
Do.		Sundry claims	...	...	...	...	...	12·51	81·11	137·00	111·87	...
Chesterfield		Voided leases	...	...	...	...	...	29·02	409·15	6,756·26	7,445·01	·80
Do.		Sundry claims	...	...	...	...	...	...	38·83	428·60	472·64	...
Gabanintha	(1397N)	Birthday	...	...	...	...	...	...	16·93	4·50	11·33	...
Do.	1408N	Grafton	...	...	200·00	57·61	...	...	...	200·00	57·61	...
Do.	1324N	Hamburg Belle	...	...	...	30·60	...	...	...	790·50	437·12	...
Do.	1360N	Leviathan	...	...	80·00	87·92	26·39	...	...	154·00	104·17	26·39
Do.	(1175N)	Unexpected	...	...	...	...	...	...	...	193·00	94·51	25·00
Do.		Voided leases	...	...	...	...	...	...	...	20,266·00	12,624·42	524·66
Do.		Sundry claims	...	34·22	...	...	...	1·33	71·56	1,050·50	700·83	...
Garden Gully	(1344N)	Kyarra G.M., N.L.	...	...	...	...	...	...	...	3,436·00	1,466·87	203·99
Do.		Voided leases	...	...	...	...	...	26·36	74·91	26,418·06	19,968·50	898·60
Do.		Sundry claims	...	...	...	...	...	...	3·32	238·10	306·16	...
Gum Creek	1386N	Alma May	...	...	457·00	118·62	...	...	...	490·00	137·30	...
Do.		Voided leases	...	...	...	...	...	25·27	88·12	2,557·08	3,110·73	...
Do.		Sundry claims	...	...	...	...	...	...	...	338·00	278·36	...
Holden's Find	(1311N)	Grand Junction	...	...	...	...	...	...	...	22·00	13·77	...
Do.	(1278N)	Junction	...	...	...	...	...	...	5·10	628·00	454·36	...
Do.	(1338N)	Moa	...	...	52·00	18·97	...	...	...	157·00	50·98	...
Do.	1291N	Waterloo	...	...	2,863·00	880·96	...	...	...	2,948·00	907·52	...
Do.	(1277N)	Woodrow	...	...	78·50	43·22	...	...	...	430·25	438·63	...

Do. ...	...	Voided leases	...	...	...	...	...	...	9·67	...	...	...
Do. ...	...	Sundry claims	...	...	16·50	9·58	...	...	...	36·50	17·96	...
Jillawarra ...	...	Voided leases	...	...	...	...	...	...	1,134·68	1,499·55	2,801·53	...
Do. ...	...	Sundry claims	...	11·98	...	...	...	169·02	138·25	23·50	53·81	...
Meeka Pools	...	Voided leases	...	...	...	...	...	...	...	111·58	82·27	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	2·84	211·72	184·83	...
Meekatharra...	1357N	Britannia	...	...	181·00	150·82	...	...	16·53	876·00	728·71	...
Do. ...	597N	(Commodore)	...	...	...	...	...	...	...	498·00	1,268·71	...
Do. ...	597N, 915N, 1041N, 1365N	Commodore G.M. Co., N.L.	...	...	3,944·00	834·15	3·32	...	...	39,675·00	15,928·23	3·32
Do. ...	1382N	Danube	...	...	20·00	5·50	...	...	...	30·00	8·68	...
Do. ...	477N	(Fenian)	...	...	...	...	...	...	...	8,831·75	18,289·22	...
Do. ...	477N, 814N ...	Fenian leases	...	...	27,298·00	21,178·42	...	...	...	213,088·00	186,435·39	...
Do. ...	(1354N)	Fenian West	...	...	...	...	...	...	...	169·00	25·66	...
Do. ...	912N	Globe	...	...	66·00	48·26	...	...	...	1,122·98	1,553·80	...
Do. ...	1331N	Gwalia	...	...	700·00	1,275·77	...	...	115·72	1,194·00	1,830·85	...
Do. ...	(635N)	Halcyon Extended	...	24·24	74·00	66·00	...	...	27·84	2,338·50	1,287·55	...
Do. ...	1345N	Haveluck	...	11·12	186·00	55·09	...	...	20·04	1,675·50	585·41	...
Do. ...	555N	(Ingliston)	...	...	...	...	...	...	...	1,202·49	2,332·27	...
Do. ...	475N	(Ingliston Consols Extended) ...	...	...	...	...	...	...	...	1,536·25	4,248·25	·30
Do. ...	475N, 515N, 729N, 822N	Ingliston Consols Extended leases	...	...	27,510·71	14,831·89	...	...	...	164,449·22	97,913·50	...
Do. ...	398N	(Ingliston Extended)	...	...	...	...	...	...	...	1,320·25	1,106·46	...
Do. ...	398N, 437N, 462N, (529N), (539N), (847N), (881N), (1033N)	Ingliston Extended G.Ms., Ltd. ...	...	...	198·00	818·73	...	...	...	109,768·95	57,274·44	...
Do. ...	555N, 1239N ...	Ingliston leases	...	...	3,074·00	2,042·50	...	...	...	8,287·85	7,721·71	...
Do. ...	902N	Ingliston North	...	...	...	...	...	...	...	10·00	25·05	...
Do. ...	1202N.	Ingliston Proprietary South ...	...	...	...	...	...	...	...	54·00	89·12	...
Do. ...	637N	(Ingliston South Extended) ...	...	...	...	...	...	...	...	10·00	10·60	...
Do. ...	507N	(Ingliston United)	...	...	...	...	...	...	...	293·25	147·95	...
Do. ...	507N, 637N, 931N, 933N, 964N, 1071N, 1142N	(Lake View and Oroya Exploration, Ltd.)	...	...	...	...	...	...	...	117,650·26	45,208·20	2,448·42
Do. ...	915N	(Macquarrie)	...	...	...	...	...	...	40·05	4,315·08	1,148·10	...
Do. ...	533N	Marmont	...	...	...	...	...	...	...	54,205·00	37,996·53	...
Do. ...	580N	(Marmont Extended)	...	...	...	...	...	...	...	43·00	38·03	...
Do. ...	580N, 888N ...	Marmont Extended leases ...	...	...	...	...	...	...	...	152·00	129·61	...
Do. ...	372N	Pioneer	...	...	...	...	...	...	38·17	6,943·68	6,319·22	...
Do. ...	507N, 637N, 931N, 933N, 964N, 1071N, 1142N, 1366N	Queenhills Gold Mines, Ltd.	...	...	93·00	142·00	...	...	...	200·00	146·52	...
Do. ...	931N	(Queen of the Hill)	...	...	...	...	...	...	...	549·00	158·59	...
Do. ...	...	Voided leases	...	...	...	...	...	3·88	241·91	35,668·45	25,664·13	3·00
Do. ...	...	Sundry claims	...	34·80	508·00	142·63	...	181·83	174·41	3,758·55	1,910·55	...
Munara Gully	...	Voided leases	...	...	...	...	...	...	...	13,167·75	6,489·65	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	11·62	80·00	40·02	...
Nannine ...	166N	Nannine	...	37·47	60·00	39·11	...	...	37·47	60·00	39·11	...
Do. ...	(16N), (25N), 166N	Nannine leases	...	...	...	...	...	...	8·71	23,649·60	24,385·66	127·60
Do. ...	...	Voided leases	...	...	...	...	...	34·02	361·95	68,097·02	43,048·73	39·85
Do. ...	...	Sundry claims	...	...	...	...	...	7·63	243·73	2,309·20	1,796·34	...
Quinn's ...	(1389N)	Nowthanna	...	...	...	...	...	...	...	184·00	77·44	...
Do. ...	...	Voided leases	...	...	...	...	...	7·30	1,186·50	18,628·16	8,790·60	90·70
Do. ...	...	Sundry claims	...	3·65	159·00	62·29	...	2·25	666·88	1,586·50	1,247·94	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

MURCHISON GOLDFIELD—*continued.*

MEEKATHARRA DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Ruby Well ...	(1264N)	Golden Grindstone	...	...	13·00	10·37	...	...	...	211·00	229·55	...
Do. ...	1261N, [364P] ...	Harder to Find	...	...	...	200·60	...	...	...	6,885·00	3,528·12	...
Do. ...	1368N	Rubyanna	...	...	21·50	20·02	...	...	...	67·50	98·72	...
Do. ...	...	Voided leases	...	...		...	...	...	...	279·50	131·97	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	8·48	261·00	341·66	...
Stake Well ...	...	Voided leases	...	...	...	...	...	...	200·12	21,342·00	9,536·07	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	31·79	186·00	192·00	...
Star of the East	...	Voided leases	...	...	...	...	...	...	...	27,244·00	20,305·40	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	127·62	94·97	...
Yaloginda ...	...	Voided leases	...	...	...	...	...	...	597·91	25,711·52	13,026·52	8·68
Do. ...	...	Sundry claims	...	...	138·50	113·90	...	10·89	357·47	1,937·67	1,467·87	...
		From District generally :—										
		Sundry Parcels treated at :										
		Connecticut Battery	...	...	...	...	...	...	...	...	173·61	...
		Hornsby Battery	...	...	...	...	...	...	...	33·00	111·31	...
		Margueritta Cyanide Works...	...	...	...	...	...	...	...	...	31·37	...
		Ruby Well Battery	...	...	...	409·66	...	...	...	...	661·54	...
		State Battery, Meekatharra	...	...	...	208·42	...	...	...	14·00	10,242·65	19·00
		State Battery, Quinn's	...	...	...	...	...	...	...	...	618·79	...
		Various Works	...	...	...	...	...	...	...	139·75	4,159·13	342·17
		Reported by Banks and Gold Dealers	142·24	...	...	...	...	9,609·84	13·79	...	...	...
		Total	**142·24**	**183·93**	**68,021·71**	**43,942·83**	**29·71**	**10,121·15**	**9,741·44**	**1,135,364·65**	**788,516·28**	**4,789·38**
		DAY DAWN DISTRICT.										
Day Dawn ...	389D	(Creme D'or)	...	...	...	...	...	...	...	150·00	175·18	...
Do. ...	389D, 421D, 422D	Creme D'or leases	...	...	...	...	...	2·49	...	4,693·62	3,321·19	...
Do. ...	1D, 2D, 86D, 87D, 99D, 119D, 129D, 158D, 159D, 170D, 185D, 191D, 209D, 210D, 211D, 212D, 213D, 224D, 225D, (249D), 424D, 453D, (455D), (467D)	Great Fingall Consolidated, Ltd. ...	...	...	45,958·00	21,951·05	3,190·77	...	...	1,854,088·01	1,177,656·97	168,664·96
Do. ...	119D	(West Fingall No. 6)	...	...	...	...	...	...	...	43·00	15·32	...

Do. ...	...	Voided leases	...	...	...	...	...	...	123·81	511·03	40,196·76	27,253·15	·24
Do. ...	...	Sundry claims	...	...	22·00	3·97	...	...	132·06	1,873·58	1,351·00	...
Jasper Hill ...	513D, 517D, 518D, 520D, 535D	Black Range Pinnacles Co., N.L. ...	...	...	3,904·00	1,372·21	...	...	...	9,158·00	3,860·21	...
Do. ...	513D	(Comet)	...	...	...	...	...	...	...	67·20	36·23	...
Do. ...	...	Voided leases	...	...	...	...	...	4·90	781·28	6,058·55	5,040·17	...
Do. ...	...	Sundry claims	...	5·51	20·00	5·32	...	...	361·43	104·00	329·73	...
Lake Austin (Island)	537D	Good Luck	...	...	23·00	25·28	...	...	498·70	44·00	120·93	...
Do. ...	543D	Haig	...	262·78	...	...	...	...	262·78	...	...	...
Do. ...	...	Voided leases	...	...	...	...	...	590·52	672·01	29,715·87	45,240·25	...
Do. ...	...	Sundry claims	...	50·76	138·25	70·05	...	17·74	230·68	474·89	278·00	...
Mainland ...	...	Voided leases	...	...	...	...	...	·41	2,706·26	7,272·13	23,129·51	...
Do. ...	...	Sundry claims	...	...	...	...	...	3·24	65·87	77·45	89·03	...
		From District generally :—										
		Sundry Parcels treated at :										
		Various Works	...	...	...	...	...	...	16·61	940·75	1,537·30	...
		Reported by Banks and Gold Dealers	...	...	...	...	...	1,542·21	3·48	...	... ·77	...
		Total	...	**319·05**	**50,065·25**	**23,427·88**	**3,190·77**	**2,285·32**	**6,242·19**	**1,954,957·81**	**1,289,434·94**	**168,665·20**

MOUNT MAGNET DISTRICT.

Lennonville ...	964M	(Empress)	...	...	...	...	...	...	...	1,649·00	7,361·81	...
Do. ...	964M, 1078M, 1079M, (1115M), (1116M). (1117M)	Empress leases	...	...	729·00	239·77	...	...	...	4,405·00	3,010·17	...
Do. ...	1158M	Galtee Moore	...	...	75·50	68·61	...	...	...	75·50	68·61	...
Do. ...	...	Voided leases	...	...	...	...	...	...	3,196·79	133,314·98	112,492·50	458·82
Do. ...	...	Sundry claims	...	...	10·75	30·93	...	7·11	78·66	1,797·42	1,147·19	...
Mt. Magnet ...	1164M	Antares	...	...	126·50	30·37	...	...	...	126·50	30·37	...
Do. ...	1167M	Bell Bird	...	227·91	120·50	210·25	...	...	227·91	120·50	210·25	...
Do. ...	1169M	Early Bird	...	...	14·00	44·42	...	...	...	14·00	44·42	...
Do. ...	(1032M)	Early Bird	...	...	30·00	190·09	...	...	114·00	1,212·00	1,723·73	...
Do. ...	1149M	Ethel May	...	...	2,599·75	571·59	...	...	...	6,634·75	1,465·97	...
Do. ...	1144M	Fortune of War	...	...	561·50	154·14	...	...	...	881·00	328·75	41·75
Do. ...	1155M	Gift	...	...	20·75	33·01	...	...	250·89	71·00	376·79	...
Do. ...	1156M	Leap Year	...	...	178·00	215·00	...	...	...	223·00	264·23	...
Do. ...	1013M	Mars	...	...	...	22·19	...	...	...	8,078·15	1,856·35	...
Do. ...	1168M	Mayflower	...	...	162·25	78·62	...	...	...	162·25	78·62	...
Do. ...	1151M	Morning Star	...	...	367·50	187·12	...	...	...	610·25	286·82	...
Do. ...	445M	Neptune	...	...	35·75	14·91	...	...	927·80	2,436·81	2,963·33	...
Do. ...	1075M	New Havelock	...	...	362·00	100·01	...	...	...	1,271·00	404·68	...
Do. ...	(1046M)	New Year	...	...	9·00	6·18	...	...	...	1,716·00	2,614·14	...
Do. ...	1095M	Pearl	...	...	...	...	...	...	2·36	221·82	214·19	...
Do. ...	(1102M)	Ready Money	...	...	49·50	55·92	...	...	596·39	435·00	600·34	...
Do. ...	696M	Sirdar	...	...	40·75	8·63	...	...	...	17,852·85	6,225·14	...
Do. ...	1131M	Sirdar South	...	...	31·00	4·24	...	...	...	31·00	4·24	...
Do. ...	(1119M)	Sovereign	...	...	...	...	...	...	...	111·25	137·75	...
Do. ...	(1041M)	St. Patrick	...	10·54	...	...	...	...	14·85	619·35	774·87	...
Do. ...	1159M	Tame Cat	...	...	31·25	15·42	...	...	...	41·75	20·47	...
Do. ...	1124M	Tattersalls	...	...	53·00	34·18	...	...	47·55	383·75	389·45	...
Do. ...	(1147M)	Ticket	...	...	...	...	...	...	...	162·50	51·23	...
Do. ...	(1157M)	Tide of Fortune	...	195·90	...	3·18	...	...	572·45	10·25	19·68	...
Do. ...	1165M	Trevallen	...	...	465·75	111·35	...	...	...	572·50	141·12	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

MURCHISON GOLDFIELD—*continued.*

MOUNT MAGNET DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Mt. Magnet ...	1069M	Turning Point	...	...	...	...	...	...	8·35	100·50	118·95	...
Do. ...	(1058M)	Two Phills	...	...	...	...	...	...	38·51	147·25	223·87	...
Do. ...	...	Voided leases	...	...	...	...	...	27·83	5,550·08	315,758·15	180,858·91	672·61
Do. ...	...	Sundry claims	...	29·33	1,167·25	413·72	...	·45	1,104·38	15,923·41	9,659·27	...
Mt. Magnet, East	...	Voided leases	...	...	...	...	...	63·29	764·53	5,522·28	2,811·75	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	37·22	214·50	144·10	...
Moyagee ...	1099M	Moyagee	...	...	124·00	416·00	...	...	...	526·50	1,265·58	...
Do. ...	...	Voided leases	...	...	...	...	...	...	5·08	2,053·15	2,416·74	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	98·33	533·98	633·68	...
Paynesville ...	(1139M)	Aftermath	...	...	...	...	...	...	5·84	9·75	20·35	...
Do. ...	...	Voided leases	...	...	...	...	...	...	147·06	10·00	6·27	...
Do. ...	...	Sundry claims	...	...	...	51·41	...	...	1·46	27·75	518·10	...
Youanme ...	...	Sundry claims	...	...	...	...	...	...	...	33·00	44·58	...
		From District generally :—										
		Sundry Parcels treated at :										
		Early Bird Works	...	...	...	100·67	...	...	...	...	100·67	...
		Fremantle Trading Co.'s Works	...	...	...	...	...	...	...	...	143·80	...
		Longreef Treatment Works	...	...	...	...	...	...	...	...	2,114·05	...
		Morning Star Battery	...	...	...	...	...	...	...	...	863·23	...
		State Battery—Boogardie	...	...	...	720·68	...	...	...	65·01	12,606·23	...
		State Battery—Lennonville	...	...	...	...	...	...	...	18·06	6,576·77	...
		Various Works	...	...	...	...	...	...	...	25·00	7,028·75	1·00
		Reported by Banks and Gold Dealers	3·80	...	...	...	...	1,652·63	·35	...	...	...
		Total	**3·80**	**463·68**	**7,365·25**	**4,132·61**	...	**1,751·31**	**13,790·84**	**526,209·42**	**373,462·84**	**1,174·18**

Yalgoo Goldfield.

Adavale ...	...	Sundry claims	...	...	...	...	...	...	...	10·00	12·56	...
Bilberatha ...	...	Voided leases	...	...	...	...	...	...	...	554·00	200·07	...
Do. ...	...	Sundry claims	...	2·90	...	...	...	...	2·90	...	...	...
Carlaminda ...	...	Voided leases	...	...	...	...	...	...	...	947·32	524·72	3·30
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	114·00	71·96	...
Field's Find ...	848	Alma	...	...	...	...	...	...	...	43·00	6·27	...
Do. ...	850	Commodore	...	...	68·00	185·34	...	...	...	92·00	201·98	...

Do. ...	680	Field's Extended	...	...	511·00	438·19	...	...	...	1,453·50	1,458·84	...
Do. ...	(844)	Golden roo	...	...	...	...	...	...	...	2·50	44·14	...
Do. ...	845	Lliven	...	...	...	...	...	...	...	...	2·90	...
Do ...	...	Voided le ses	...	...	...	...	...	...	204·26	33,847·80	24,651·93	...
Do. ...	...	Sundry claims	...	...	...	...	...	5·77	157·03	276·75	345·04	...
Goodingnow...	681	Aster Consolidated	...	...	114·00	61·66	...	...	2·77	1,275·00	986·15	...
Do. ...	603	Carnation	130·88	...	478·50	516·73	...	130·88	...	2,794·50	3,364·13	...
Do. ...	606	(Lake View)	...	...	...	...	...	...	...	163·00	185·46	...
Do. ...	606	Lake View: Payne's Find Development Co., N.L.	...	...	1,735·00	1,787·61	...	...	15·58	5,155·50	4,902·76	...
Do. ...	854	Marguerite	...	...	100·00	57·25	...	...	...	130·00	77·32	...
Do. ...	(630)	Marraposa	...	...	...	...	...	...	...	804·00	772·76	...
Do. ...	871	Olive	...	...	...	5·11	...	...	...	...	5·11	...
Do. ...	613	Orchid	...	...	225·00	403·59	...	...	...	1,264·00	2,429·33	...
Do. ...	849	Princess Mary	...	...	74·50	105·46	...	...	...	172·00	290·91	...
Do. ...	607	Sweet William	...	5·51	320·50	451·15	...	...	75·56	1,242·50	1,597·94	...
Do. ...	607	(Sweet William)	...	...	...	...	...	...	2·16	4·85	81·59	...
Do. ...	607, (608), (662)	(Sweet William Consolidated Mines, N.L.)	...	...	...	...	...	...	7·68	907·46	1,564·84	...
Do. ...	...	Voided leases	...	...	...	...	...	15·82	168·98	2,484·50	2,166·34	...
Do. ...	...	Sundry claims	...	...	31·50	48·00	...	148·00	4·32	1,971·00	1,068·89	...
Gullewa ...	(744)	Mugga King	...	...	...	...	...	...	...	265·00	230·35	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	21,679·50	14,334·31	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	629·50	531·62	...
Kirkalucka ...	...	Sundry claims	...	...	...	...	...	...	...	8·80	4·01	...
Messenger's Patch	...	Voided leases	...	...	...	...	...	...	315·99	587·20	305·89	...
Do. ...	...	Sundry claims	...	...	6·50	8·40	...	463·12	315·11	438·55	273·71	...
Mt. Farmer ...	...	Voided leases	...	...	...	...	...	...	...	64·00	40·19	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	5·00	6·22	...
Mt. Gibson ...	(855)	Gibsonite	...	...	...	...	...	...	...	5·00	17·67	...
Ninghan ...	(694)	Boni Venture G.M. Syndicate, N.L.	...	...	...	...	...	...	...	10·00	1·41	...
Do. ...	722, 723 ...	Golden Harp leases	...	...	13·00	31·52	...	...	6·44	16·00	388·07	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	5·00	17·89	...
Noongal ...	...	Voided leases	...	...	...	...	...	...	15·86	3,086·95	1,847·66	...
Do. ...	...	Sundry claims	...	...	20·00	13·68	...	11·55	64·97	286·50	198·64	...
Nyounda ...	...	Voided leases	...	...	...	...	...	...	217·63	416·00	183·91	...
Do. ...	...	Sundry claims	...	4·28	...	...	...	...	4·28	18·00	21·67	...
Pinyalling ...	...	Voided leases	...	...	...	...	...	...	1·36	2,281·60	902·03	...
Do. ...	...	Sundry claims	...	2·59	...	...	...	...	2·59	42·50	22·14	...
Rothesay ...	749	British Queen	...	...	...	...	...	...	...	...	31·08	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	8,971·00	3,300·07	...
Wadgingarra	...	Voided leases	...	...	...	...	...	...	...	541·61	600·91	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	71·50	38·21	...
Warriedar ...	(843)	Black Jack	...	...	...	...	...	...	...	16·00	3·96	...
Do. ...	(822)	Golden Bar	...	...	147·00	17·41	...	...	...	191·00	39·64	...
Do. ...	863	Golden Bar Extended	...	...	167·75	119·09	...	...	...	174·75	132·23	...
Do. ...	841	Highland Chief	...	...	344·50	185·01	...	...	...	344·50	185·01	...
Do. ...	699	Iron Clad	...	...	243·00	214·40	...	...	...	1,307·50	634·37	7·30

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

YALGOO GOLDFIELD—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Warriedar ...	745	Ironclad South	...	...	127·75	37·08	...	...	...	127·75	37·08	...
Do. ...	708	Mug's Luck	...	...	1,994·00	629·51	...	...	...	5,194·00	1,539·98	...
Do. ...	731	Porcupine	...	...	43·25	8·28	...	...	...	66·25	12·73	...
Do. ...	739	Porcupine South	...	...	...	...	...	...	...	81·00	16·99	...
Do. ...	727	Warriedar	...	...	393·25	91·47	...	...	...	677·25	225·72	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	95·00	42·20	...
Do. ...	...	Sundry claims	...	...	193·75	59·80	...	...	1·80	286·25	122·45	...
Yalgoo ...	(851)	Relience	...	...	7·00	·93	...	...	...	19·50	4·01	...
Do. ...	... ...	Voided leases	...	...	...	...	...	...	3·23	6,295·00	9,961·17	...
Do. ...	...	Sundry claims	...	1·40	39·00	13·95	...	...	17·77	820·50	498·62	...
Yuinmi ...	712,(735) ...	Bullrush Gold Estates, N.L. ...	...	...	...	...	...	...	...	23,690·00	7,302·83	130·13
Do. ...	...	Voided leases	...	...	...	...	...	...	127·12	31,381·50	14,957·04	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	4·70	276·50	57·88	...
		From Goldfield generally :—										
		Sundry Parcels treated at :										
		Field's Find Extended Treatment Works ...	...	...	...	...	...	...	...	...	152·40	...
		Goodingnow (Payne's Find) State Battery ...	...	...	...	174·56	...	...	...	13·00	1,316·54	...
		Yuanmi G.Ms., Ltd., Works (Warriedar Options)	...	...	...	...	...	...	...	...	310·93	26·67
		Various Works	...	...	...	...	...	9·42	...	664·00	1,332·45	...
		Reported by Banks and Gold Dealers	...	...	...	...	...	666·73	...	...	...	...
		Total	**130·88**	**16·68**	**7,397·75**	**5,665·18**	...	**1,451·29**	**1,740·09**	**166,859·64**	**109,197·83**	**167·40**

Mount Margaret Goldfield.

MOUNT MORGANS DISTRICT.

NOTE.—Prior to 31st August, 1917, the mining centres of Eucalyptus, Linden, Mt. Celia, Mt. Howe, and Yundamindera were included in Yerilla District and the output is recorded in that District. From 1st September, 1917, the output from these centres is shown in Mt. Morgans District to which they were transferred.

Australia United ...	...	Voided leases	...	...	...	...	...	...	1,911·63	15,913·69	2,3305·76	1·76
Do. ...	...	Sundry claims	...	...	...	...	...	...	357·86	793·55	2,057·32	...
Federation Well	...	Voided leases	...	...	...	...	...	...	...	1,248·50	1,782·71	...
Do. ...	...	Sundry claims	...	...	44·57	31·48	...	...	...	108·07	64·68	...
Korong ...	...	Voided leases	...	...	...	...	...	17·95	72·23	2,722·00	3,473·45	...
Do ...	...	Sundry claims	...	...	21·28	65·83	...	...	34·97	279·28	232·89	...
Linden ...	348F, [1035R] ...	Danube	...	...	22·75	15·16	...	...	...	22·75	15·16	...
Do ...	340F, [871R] ...	Democrat	...	...	126·00	96·64	...	...	...	126·00	96·64	...
Do ...	342F, [942R] ...	Great Junction	...	...	79·00	104·48	...	...	...	79·00	410·48	...

Do. ...	352F, [1049R] ...	Lady Edith	...	...	57·00	64·70	...	...	...	57·00	64·70	...
Do. ...	345F, [1005R] ...	Olympic	...	...	55·00	55·21	...	...	...	55·00	55·21	...
Do. ...	341F, [903R], 343F, [985R]	Torquay leases	...	...	341·38	233·29	·68	...	...	341·38	233·29	·68
Do. ...	...	Sundry claims	...	...	244·75	150·58	...	...	...	244·75	150·58	...
Mt. Margaret	339F	Golden Cliffs	...	...	6·00	2·52	...	...	...	6·00	2·52	...
Do. ...	314F	Mt. Morven	...	...	250·00	311·11	...	...	...	2,224·00	1,472·42	...
Do. ...	...	Voided leases	...	...	...	...	...	·37	...	3,963·00	2,697·10	12·55
Do. ...	...	Sundry claims	...	...	...	...	...	16·61	44·03	365·50	281·86	...
Mt. Morgans...	6F	(Lily of the Valley South : Westralia Mt. Morgans G.M. Co., Ltd.)	...	...	...	...	...	...	...	1,587·50	808·18	...
Do. ...	6F	(Lily of the Valley South : Westralia Mt. Morgans Syndicate, Ltd.)	...	...	...	...	...	...	...	3,002·00	1,022·90	...
Do. ...	325F	Millionaire	...	...	...	...	...	...	...	144·00	675·80	...
Do. ...	5F, (10F), (19F), (22F), (32F), (73F)	(Westralia Mt. Morgans G.M. Co., Ltd.)	...	...	...	...	...	...	...	575,148·00	294,758·28	5,552·63
Do. ...	7F, (20F), (21F) ...	(Westralia Mt. Morgans G.M. Co., Ltd.)	...	...	...	...	...	...	...	18,261·00	8,127·69	...
Do. ...	5F, 6F, 7F, (10F), (19F), (20F), (22F), (32F)	Westralia Mt. Morgans Mines, N.L. ...	...	...	21,610·00	4,451·92	...	...	...	100,111·00	22,341·70	...
Do. ...	...	Voided leases	...	...	...	...	...	...	76·56	34,.27·75	20,210·28	77·86
Do. ...	...	Sundry claims	...	...	35·00	20·14	...	6·61	22·66	1,346·50	1,585·25	...
Murrin Murrin	...	Voided leases	...	...	...	...	...	10·43	222·93	127,364·72	100,606·89	29·60
Do. ...	...	Sundry claims	...	...	...	...	...	...	154·48	846·75	852·31	...
Redcastle ...	...	Voided leases	...	...	...	...	...	4·49	436·54	2,509·95	2,169·63	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	103·58	139·00	163·01	...
Yundamindera	351F, [1048R] ...	General Cadorna	...	...	74·50	63·30	...	...	...	74·50	63·30	...
Do. ...	...	Sundry claims	...	...	86·50	89·18	...	...	...	86·50	89·18	...
		From District generally :—										
		Sundry Parcels treated at :										
		Hainault Sulphide Plant—Kalgoorlie	...	...	15·88	9·82	...	...	...	127·21	83·91	...
		Mt. Morven Cyanide Works	...	...	...	...	...	...	...	...	129·48	...
		State Battery—Linden	...	...	...	548·85	...	...	...	...	548·85	...
		Westralia Mt. Morgans Works	...	...	...	...	...	...	...	...	153·10	...
		Various Works	...	...	...	...	...	...	...	788·50	3,010·07	84·03
		Reported by Banks and Gold Dealers	...	...	...	...	...	1,659·80	32·47	...	...	...
		Total	...	...	**23,069·61**	**6,314·21**	**·68**	**1,716·26**	**3,469·94**	**894,214·35**	**493,490·58**	**5,759·11**

MOUNT MALCOLM DISTRICT.

Cardinia ...	...	Voided leases	...	...	...	...	...	...	1,568·29	1,628·24	3,550·42	...
Diorite King...	1459C	King of the Hills	...	...	859·00	305·21	...	...	44·49	1,649·00	1,390·35	24·05
Do. ...	1499C	Life of Hope	...	...	34·00	58·28	...	...	...	34·00	58·28	...
Do. ...	...	Voided leases	...	...	...	...	...	...	744·66	32,607·53	29,653·61	...
Do. ...	...	Sundry claims	...	64·07	52·00	53·95	...	...	129·57	2,390·30	2,890·25	...
Dodger's Well	...	Voided leases	...	...	...	...	...	...	57·90	1,299·30	1,927·94	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	3·37	786·25	644·95	...
Leonora ...	1473C	Auckland	...	...	...	...	...	...	...	226·50	82·22	...
Do. ...	198C	(Eastern)	...	...	...	...	...	...	...	302·00	321·72	...
Do. ...	1482C	Leonora Gold Blocks	...	...	4,370·50	1,525·48	...	...	10·15	4,594·00	1,774·83	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

MT. MARGARET GOLDFIELD—*continued.*

MOUNT MALCOLM DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Leonora ...	1494c	No 2 North Gwalia	...	...	185·50	49·13	...	...	...	185·50	49·13	...
Do. ...	(1493c)	Optimist	...	...	5·00	1·33	...	...	...	5·00	1·33	...
Do. ...	1485c	Ping Pong	...	61·53	308·75	290·79	...	...	79·35	445·25	450·35	...
Do. ...	1486c	Rajah	...	3·55	39·00	158·88	...	...	91·36	99·00	446·59	...
Do. ...	190c, 198c, 207c, 352c, 353c, 380c, 446c, 447c, 450c, 476c, 489c, 490c, 504c, 523c, 741c, 742c, 807c, 809c, 811c, 812c, 813c, 814c, 980c, 981c, 1082c, 1225c, 1226c, 1227c, 1228c, 1229c, 1230c, 1231c, 1232c, 1259c, 1291c, 1292c, 1341c, 1342c, 1343c, 1344c, 1345c, 1346c, 1347c	Sons of Gwalia, Ltd	...	...	142,318·00	54·669,22	4,615·88	...	...	2,290,656·50	1,109,884·09	62,219·33
Do. ...	198c, 1082c ...	(Sons of Gwalia South G.M. Co., N L.)	...	...	...	...	...	...	...	631·00	903·61	...
Do. ...	198c, 1082c, (1257c), (1258c), 1259c, (1284c), (1285c), (1300c), (1301c)	(Sons of Gwalia South G.Ms., Ltd.)	...	...	...	...	...	...	...	98,239·00	51,593·99	8·66
Do. ...	198c, 1082c, 1259c	(Sons of Gwalia South G.Ms., Ltd.) ...	...	...	...	...	...	...	...	9,909·00	3,169·89	...
Do. ...	263c	(Trump)	...	...	...	...	...	...	...	562·50	2,393·40	...
Do. ...	263c	Trump: Gwalia Central G.Ms., Ltd.	...	...	90·00	187·85	...	...	...	698·00	2,467·71	...
Do. ...	263c, (774c), (793c)	(Trump leases)	...	...	...	...	...	...	...	21,794·45	16,002·07	...
Do. ...	...	Voided leases	...	...	...	...	...	...	1,661·47	131,606·50	62,126·05	10·71
Do. ...	...	Sundry claims	...	3·02	119·50	218·94	...	...	193·64	8,422·05	7,692·93	...
Malcolm ...	1175c	North Star: Malcolm Prospecting Co., N L	...	...	...	...	...	...	...	26,232·50	14,734·95	...
Do. ...	...	Voided leases	...	...	...	...	...	...	47·07	36,069·28	32,690·59	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	8·88	2,981·90	2,085·85	...
Mertondale ...	...	Voided leases	...	...	...	...	...	...	...	88,663·00	60,840·00	1,497·58
Do. ...	...	Sundry claims	...	...	...	317·50	...	...	55·24	1,051·00	1,400·41	...
Mt. Clifford	1329c	Victory No. 1	...	...	20·00	504·24	...	...	...	665·46	7,002·53	...
Do. ...	...	Voided leases	...	...	...	...	...	...	1,364·45	3,265·50	6,996·22	...

Do. ...	...	Sundry claims	...	32·50	1·25	66·81	...	9·75	240·94	749·50	1,267·66	...
Pig Well ...	1295c	(Starlight)...	...	...	...	...	...	...	...	181·50	695·73	...
Do. ...	1295c, 1324c, 1461c, 1475c	Starlight G.M. Syndicate, N.L. ...	...	...	·25	3·54	...	...	...	151·25	154·98	...
Do. ...	1295c, 1324c ...	(Starlight leases)	...	...	...	...	...	...	...	75·50	235·87	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	12,982·07	13,538·20	63·68
Do. ...	...	Sundry claims	...	...	36·00	9·57	...	...	34·61	2,503·40	1,086·97	...
Randwick ...	(1484c)	Black Chief	...	...	...	...	...	...	4·12	13·00	20·04	...
Do. ...	1401c	Triangle	...	...	6·50	209·12	...	...	...	112·90	1,427·82	...
Do. ...	...	Voided leases	...	...	...	...	...	...	235·37	7,931·75	7,150·18	...
Do. ...	...	Sundry claims	...	...	18·04	21·37	...	66·57	111·18	1,282·14	928·17	...
Webster's Find	...	Voided leases	...	...	...	...	...	30·30	...	21,760·00	13,970·17	...
Do. ...	...	Sundry claims	...	...	16·50	13·39	...	36·37	15·73	1,381·80	929·86	...
Wilson's Creek	...	Voided leases	...	...	...	...	...	...	...	333·50	168·27	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	4·24	5·00	19·04	...
Wilson's Patch	...	Voided leases	...	...	...	...	...	...	99·38	26,348·10	12,475·57	1·05
Do. ...	...	Sundry claims	...	...	20·00	307·26	...	...	1·50	658·00	1,015·02	...
		From District generally :—										
		Sundry Parcels treated at :										
		Fremantle Trading Co.'s Works	...	...	...	...	...	...	...	...	1·42	...
		King of the Hills Works	...	...	...	46·00	...	...	...	19·00	835·24	...
		State Battery—Leonora	...	...	...	237·36	...	...	...	95·50	10,370·34	98·14
		Various Works	...	...	...	...	...	...	...	352·50	6,314·48	20·12
		Reported by Banks and Gold Dealers	68·15	...	...	...	...	2,369·98	131·00	...	...	...
		Total	**68·15**	**164·67**	**148,499·79**	**59,255·22**	**4,615·88**	**2,512·97**	**6,967·96**	**2,844,635·92**	**1,497,831·29**	**63,943·32**

MOUNT MARGARET DISTRICT.

Burtville ...	(1935t), (2005t), (2006t), (2016t)	Amalgamated Westralia G.M. Co., N.L.	...	...	...	...	...	...	...	165·00	51·66	...
Do. ...	(1935t)	(Black Swan)	...	...	...	...	...	...	...	683·00	986·83	50·97
Do. ...	(2049t)	Edith Hope	...	...	...	52·16	...	...	...	...	52·16	...
Do. ...	2034t	General Bridges	...	...	...	...	...	...	...	58·00	43·39	...
Do. ...	(2021t)	(Joffre)	...	...	...	...	...	...	...	241·00	372·10	...
Do. ...	(2021t)	Joffre : Yilgarn Consols G.M. Co., Ltd.	...	...	...	...	...	...	...	120·00	67·63	...
Do. ...	1044t	Nil Desperandum	...	...	130·00	47·57	...	...	...	7,970·00	11,931·76	...
Do. ...	1841t	Redeemed...	...	11·58	47·00	58·13	...	...	258·98	1,155·00	1,434·09	...
Do. ...	...	Voided leases	...	...	...	...	...	2·29	152·48	55,275·18	86,086·91	224·30
Do. ...	...	Sundry claims	...	...	...	...	...	...	54·75	3,136·40	2,833·32	...
Duketon ...	1938t	Great Dolerite, No. 1	...	213·50	9·00	27·37	...	3·54	1,447·08	48·00	187·81	...
Do. ...	2018t	Hemitite	...	120·58	25·00	41·67	...	...	215·23	49·50	93·93	...
Do. ...	2029t	Limonite	...	95·94	...	16·59	...	...	272·03	...	16·59	...
Do. ...	...	Voided leases	...	...	...	...	...	...	542·68	31,305·00	21,768·64	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	19·00	238·50	301·05	...
Eagle's Nest	...	Voided leases	...	...	...	...	...	...	145·34	331·00	1,215·78	...
Do. ...	...	Sundry claims	...	...	...	...	...	4·00	·43	70·00	45·65	...
Erlistoun ...	...	Voided leases	...	...	...	...	...	...	11·66	27,012·07	18,461·35	...
Do.	...	Sundry claims	...	...	...	...	...	1,179·43	116·81	2,118·90	1,815·75	...
Euro	1984t	(Lone Star)	...	...	200·00	28·00	...	...	...	2,840·00	714·96	...
Do. ...	1984t, 1991t, 2009t, 2014t	Lone Star leases	...	...	95·00	17·14	...	...	...	95·00	17·14	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

MT. MARGARET GOLDFIELD—*continued.*

MOUNT MARGARET DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Euro ...	...	Voided leases	...	...	...	...	...	...	65·14	83,964·25	35,957·12	...
Do. ...	...	Sundry claims	...	...	16·50	7·38	...	...	...	259·50	116·69	...
Laverton ...	2063T	Allies	...	159·45	28·00	72·73	...	...	159·45	28·00	72·93	...
Do. ...	2058T	Augusta	...	...	84·50	93·00	...	...	...	113·50	104·44	...
Do. ...	(1918T)	Bega	...	...	9·10	6·70	...	...	73·18	104·10	391·64	...
Do. ...	(1999T)	British Flag	...	...	...	...	...	...	468·97	211·25	1,030·22	...
Do. ...	2085T	British Flag	...	...	31·50	12·44	...	...	...	31·50	12·44	...
Do. ...	(1979T), (1985T)	British Lion leases	...	...	39·00	16·77	...	...	2·62	394·75	81·91	...
Do. ...	2076T, 2077T ...	British Lion North leases ...	...	...	80·00	34·90	...	...	...	80·00	34·90	...
Do. ...	(1985T)	(British Lion South)	...	...	...	...	...	...	...	95·50	38·83	...
Do. ...	(2028T)	Bulldog	...	...	30·00	45·84	...	...	...	317·50	382·11	...
Do. ...	838T	(General Wabash)	...	...	...	...	...	...	...	100·00	288·72	...
Do. ...	2070T	Golden Orbit	...	...	8·00	3·50	...	...	...	8·00	3·50	...
Do. ...	829T	(Ida H.)	...	...	...	...	...	...	...	111·00	285·13	...
Do. ...	829T, 838T, 846T, 1219T, 1310T, 1671T, 1894T	Ida H. G.M. Co., Ltd.	...	...	8,332·48	7,652·39	...	...	...	217,794·48	161,994·63	4,674·69
Do. ...	715T, 806T, 1206T, (1207T), (1483T), 1523T, 1524T, 1525T, 1542T, (1544T), (1548T)	(Kalgoorlie and Boulder Firewood Co., Ltd.)	...	...	...	...	...	...	...	71,802·00	25,003·11	3,364·01
Do. ...	1897T	(Lady Harriet)	...	...	...	...	...	...	...	991·00	98·94	...
Do. ...	715T, 806T, 1206T, (1207T), (1483T), 1523T, 1524T, 1525T, 1542T, (1544T), (1548T)	(Lancefield G.M. Co., Ltd.)	...	...	...	...	...	...	...	102,179·78	39,402·81	...
Do. ...	715T, 806T, 1206T, (1207T), (1483T), 1523T, 1524T, 1525T, 1542T, (1544T), (1548T)	(Lancefield G.M. Co., Ltd.)	...	...	...	...	...	...	...	153,829·00	58,842·47	5,824·39
Do. ...	715T, 806T, 1206T, (1207T), (1483T), 1523T, 1524T, 1525T, 1542T, (1544T), (1548T)	(Lancefield G.M. Co., Ltd.)	...	...	...	...	...	...	...	260,749·00	103,535·54	21,612·29
Do. ...	715T, 806T, 1206T, 1523T, 1524T, 1525T, 1542T, 2050T, 2051T	Lancefield Gold Mines, Ltd.	...	...	76,453·00	26,929·64	4,609·99	...	...	123,515·00	43,674·02	7,667·40

Do. ...	1897T, 1900T, (1948T), 1949T, (1950T), 1962T, (1974T), (1996T), (1997T)	Mary Mac G.M. Co., N.L.	...	...	...	7·06	...	...	...	28,743·00	6,823·37	...
Do. ...	(2061T)	Mistico	...	...	...	...	...	...	...	60·00	39·55	...
Do. ...	1949T	(Pinnacles)	...	...	...	...	...	...	...	96·00	36·51	...
Do. ...	(2048T)	Queen Mary	...	2·14	...	...	...	...	2·14	...	...	...
Do. ...	...	Voided leases	...	...	...	...	...	17·66	1,313·80	179,753·85	77,637·53	...
Do. ...	...	Sundry claims	...	30·36	36·00	71·79	...	46·35	1,149·31	3,651·45	3,409·04	...
Mt. Barnicoat	...	Voided leases	...	...	...	...	...	...	...	652·00	359·12	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	23·00	23·37	...
Quartz Hill ...	...	Voided leases	...	...	...	...	...	...	...	10·00	3·86	...
Red Hill ...	...	Sundry claims	...	...	...	...	...	...	...	27·00	13·76	...
		From District generally :—										
		Sundry Parcels treated at :										
		Brown Hill Consols Works—Kalgoorlie	...	...	...	...	...	...	...	...	13·70	...
		Craiggiemore Works	...	...	...	...	...	...	...	...	110·28	...
		Mulga Queen Works	...	...	...	...	...	...	...	...	178·93	...
		State Battery—Burtville	...	...	...	15·20	...	...	...	62·00	6,437·91	...
		State Battery—Laverton	...	...	...	148·92	...	...	...	77·50	1,726·69	...
		Various Works	...	...	...	...	...	...	...	89·00	2,944·94	...
		Reported by Banks and Gold Dealers	31·65	...	...	...	...	1,972·82	...	...	...	...
		Total	**31·65**	**633·55**	**85,654·08**	**35,407·09**	**4,609·99**	**3,226·09**	**6,471·08**	**1,362,835·46**	**719,609·16**	**43,418·05**

North Coolgardie Goldfield.

MENZIES DISTRICT.

Comet Vale ...	5431z, (5432z), (5434z)	Edna May Golden Point, N.L. ...	...	...	...	...	...	...	...	94·00	12·24	...
Do. ...	5217z	(Gladsome)	...	...	...	...	...	...	...	10,879·50	8,678·16	95·29
Do. ...	5217z, 5333z, 5380z	Gladsome leases	...	...	5,500·00	3,983·03	99·60	...	...	54,620·00	39,952·50	1,242·12
Do. ...	5300z	(Happy Jack)	...	...	...	...	...	...	...	1,363·50	776·10	...
Do. ...	5300z, 5325z ...	Happy Jack leases	...	...	...	...	...	...	...	7,341·50	3,804·86	...
Do. ...	5325z	(Iron King)	...	...	...	...	...	...	...	41·50	20·62	...
Do. ...	5410z	Lake View	...	...	47·89	13·26	...	...	...	234·71	87·37	...
Do. ...	5312z	(Sand King)	...	...	...	...	...	...	...	35·50	30·33	...
Do. ...	5211z	(Sand Queen)	...	...	...	...	...	...	...	3,436·75	3,639·12	2·00
Do. ...	(5208z), 5211z, 5224z, 5320z	(Sand Queen G.Ms., Ltd.)	...	...	...	...	...	...	...	6,803·50	2,949·83	...
Do. ...	5211z, 5224z, 5312z, 5320z	Sand Queen G.M.s, Ltd.	...	...	7,789·00	7,580·78	1,096·98	...	...	104,803·62	91,279·13	3,033·73
Do. ...	...	Voided leases	...	...	...	...	...	...	409·70	9,960·60	5,513·14	2·00
Do. ...	...	Sundry claims	...	...	...	...	...	...	31·91	614·75	423·69	...
Goongarrie ...	5441z	Boddington Star	...	...	31·00	12·60	...	...	...	31·00	12·60	...
Do. ...	(5448z)	Mul's Boddington Gold Mine ...	...	...	9·00	6·61	...	...	...	9·00	6·61	...
Do. ...	5414z	(New Boddington)	...	...	...	...	...	...	191·83	412·70	1,785·68	...
Do. ...	5414z, (5428z), (5435z), 5430z	New Boddington Gold Mining Syndicate, Ltd.	...	...	6,818·00	3,298·59	...	...	...	6,818·00	3,298·59	...
Do. ...	(5437z)	New Boddington North Extended	...	12·27	3·80	42·90	...	...	12·27	3·80	42·90	...
Do. ...	(5461z)	Viking	...	5·15	...	...	...	...	5·15	...	...	...
Do. ...	...	Voided leases	...	...	...	...	...	·94	446·13	14,905·29	9,878·41	...
Do. ...	...	Sundry claims	...	...	61·90	41·68	...	33·72	115·73	826·25	657·51	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

NORTH COOLGARDIE GOLDFIELD—*continued.*

MENZIES DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917					Total Production				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Menzies ...	5433z	Alpha	...	...	150·00	64·11	...	...	...	235·00	101·07	...
Do. ...	5354z	Balkis	...	...	...	...	...	...	...	2,615·25	2,370·59	...
Do. ...	5440z	Crusoe North	...	...	490·50	369·76	...	...	...	607·50	474·27	...
Do. ...	5457z	Fish	...	...	28·00	50·15	...	...	...	28·00	50·15	...
Do. ...	5302z	Lady Harriet	...	...	...	...	...	...	6·15	3,738·00	3,829·00	...
Do. ...	5423z	Lady Shenton	...	...	896·00	612·18	...	...	...	3,164·75	2,041·71	...
Do. ...	5462z	Mabel	...	...	50·00	58·56	...	...	...	50·00	58·56	...
Do. ...	4931z, 4934z, 4935z, 4936z, 5074z, 5075z, 5260z, 5261z, 5315z	Menzies Consolidated G.Ms., Ltd. ...	...	...	26,421·00	12,531·09	...	...	...	388,282·00	207,379·23	78·67
Do. ...	(2832z), (2844z), 3100z, (3138z), (4966z), 5392z	Menzies Mining and Exploration Corporation, Ltd.	...	...	...	...	...	...	...	26,340·25	29,943·03	...
Do. ...	5392z	(Revival)	...	...	...	...	...	...	...	22·50	5·90	...
Do. ...	2823z	Robinson Crusoe	...	...	399·00	286·23	...	...	13·24	4,364·75	2,335·42	...
Do. ...	2823z	(Robinson Crusoe: Crusoe Gold Claims, Ltd.)	...	...	...	...	...	...	...	33,135·00	32,978·74	1,038·47
Do. ...	(5453z)	Teglio	...	...	10·00	21·85	...	...	...	10·00	21·85	...
Do. ...	...	Voided leases	...	...	...	...	...	45·42	1,029·65	300,281·96	350,286·88	10,224·59
Do. ...	...	Sundry claims	...	9·42	241·50	526·55	...	6·69	356·03	16,149·25	11,703·61	...
Mt. Ida ...	5250z	Forest Belle	...	...	283·00	170·02	...	...	...	4,809·00	4,133·48	...
Do. ...	5290z	(Unexpected South)	...	...	...	...	...	...	...	1,136·00	714·65	8·25
Do. ...	5290z, (5329z), (5381z)	(Unexpected South leases) ...	...	...	...	...	...	...	...	4,524·00	8,179·29	35·64
Do. ...	5290z, 5454z ...	Unexpected South leases ...	...	...	23·00	7·24	...	...	...	23·00	7·24	...
Do. ...	5292z	Wild Rose	...	...	34·00	32·61	...	...	...	1,150·79	934·59	...
Do. ...	...	Voided leases	...	...	...	...	...	...	77·07	44,306·58	52,958·33	62·74
Do. ...	...	Sundry claims	....	...	73·00	23·51	...	...	9·57	4,217·50	2,595·28	...
		From District generally:—										
		Sundry Parcels treated at:										
		Balkis Battery	...	...	17·50	496·95	...	...	...	50·75	3,174·55	...
		Crusoe Wedderburn Cyanide Works	...	...	...	...	...	...	...	...	1,497·89	...
		Fremantle Trading Co., Ltd.	...	...	...	...	...	...	...	...	212·98	...
		Lady Harriet Battery	...	...	...	460·25	...	...	...	232·50	2,551·32	...
		Menzies Mining and Exploration Corporation, Ltd., Works	...	...	...	...	...	...	...	639·50	732·04	...
		Mt. Ida Meteor Works	...	...	...	...	...	...	...	...	1,916·49	...
		State Battery—Mt. Ida	...	...	...	...	...	...	...	1,842·25	4,484·34	...
		Various Works	...	...	...	...	...	...	...	1,807·05	21,725·38	...
		Reported by Banks and Gold Dealers	7·78	...	...	...	...	902·74	195·48	...	...	1,039·43
		Total	**7·78**	**26·84**	**49,377·09**	**30,690·51**	**1,196·58**	**989·51**	**2,899·91**	**1,066,998·60**	**922,247·25**	**16,862·93**

Davyhurst ...	(459U)	(Golden Pole)	...	...	...	...	...	...	...	...	34·00	47·51	...
Do. ...	(459U)	Golden Pole	...	...	...	...	...	...	...	...	202·75	137·10	...
Do. ...	(459U), (461U), (468U), (484U), (786U), (873U)	(Golden Pole G.Ms., Ltd.)	...	...	...	...	...	...	...	...	74,110·90	71,961·09	...
Do. ...	(459U), (461U), (468U)	(Golden Pole G.Ms., Ltd.)	...	...	...	...	...	...	...	...	3,344·00	2,298·79	...
Do. ...	(459U), (461U), (468U), (484U)	(Golden Pole G.Ms., N.L.) ...	...	...	...	...	...	...	...	...	970·00	2,321·69	...
Do. ...	972U	Little Dele	...	...	800·00	67·27	...	...	...	...	3,408·00	339·00	...
Do. ...	(984U)	Waihi	...	...	13·75	39·28	...	...	...	...	13·75	39·28	...
Do. ...	...	Voided leases	...	...	...	...	...	2·93	138·99	...	68,084·33	45,525·08	5,403·14
Do. ...	...	Sundry claims	...	...	216·50	98·40	...	...	30·12	...	5,856·85	3,061·06	...
Diemel's Find	...	Sundry claims	...	...	...	...	...	...	7·37	...	102·50	119·13	...
Mulline ...	(955U)	Belle Maie	...	...	...	...	...	...	...	...	199·50	313·38	...
Do. ...	139U, 235U, (555U), (670U), (671U), (679U), (732U), (862U)	(Lady Gladys G.M., Co., N.L.) ...	...	...	...	...	...	...	...	...	16,871·50	17,777·42	...
Do. ...	139U, 235U, (555U), (670U)	(Lady Gladys G.M. Co., N.L.) ...	...	...	...	...	...	...	...	...	1,220·50	512·52	...
Do. ...	139U, 235U, (555U)	(Lady Gladys leases)	...	...	...	...	...	...	170·89	...	7,741·00	15,025·05	...
Do. ...	139U, 235U, (555U), (670U	Lady Gladys leases	...	...	...	...	...	...	...	...	973·50	475·83	...
Do. ...	324U, 600U, 730U, 969U, 970U, 974U, 975U	Riverina South G.M. Co., N.L. ...	...	...	...	66·63	80·31	...	...	...	710·00	787·98	185·11
Do. ...	324U, 600U, 730U	(Riverina South leases) ...	...	...	...	...	...	...	43·87	...	18,480·50	13,442·65	...
Do. ...	763U	Young Australian	...	...	126·75	122·17	...	...	...	...	406·25	520·86	...
Do. ...	763U	(Young Australian)	...	...	...	...	...	...	...	...	1,295·00	3,609·26	...
Do. ...	763U, (938), (939U)	(Young Australian leases) ...	...	...	...	...	...	...	...	...	2,672·25	5,763·88	...
Do. ...	...	Voided leases	...	...	...	...	...	...	59·33	...	39,556·72	33,646·27	2·71
Do. ...	...	Sundry claims	...	...	50·01	41·08	...	...	35·53	...	5,276·76	4,363·51	·69
Mulwarrie ...	919U	Mulwarrie	...	...	...	...	...	...	...	...	627·50	392·15	...
Do. ...	(979U)	Mulwarrie Main Reef	...	...	45·25	23·61	...	...	...	...	128·50	104·76	...
Do. ...	...	Voided leases	...	...	...	...	...	...	56·84	...	17,641·64	25,030·68	26·37
Do. ...	...	Sundry claims	...	2·21	32·87	82·26	...	...	21·45	...	1,993·87	1,763·93	...
Ularring ...	954U	Cardinal	...	...	32·50	45·96	...	...	36·71	...	452·50	577·57	...
Do. ...	...	Voided leases	...	...	...	...	...	...	526·63	...	8,963·85	13,051·86	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	...	143·00	113·15	...
	From District generally :—												
	Sundry Parcels treated at :												
	Expansion Battery		...	...	...	...	...	...	...	...	96·50	188·65	...
	Hannan's Central Battery—Kalgoorlie		...	...	...	...	...	...	...	...	18·40	4·66	...
	State Battery—Mulline		...	...	10·00	185·41	...	...	...	...	504·00	12,832·29	...
	State Battery—Mulwarrie		...	...	...	316·07	...	...	...	...	595·20	4,451·43	...
	Various Works		...	...	...	...	...	...	15·82	...	90·25	465·72	...
	Reported by Banks and Gold Dealers		...	...	...	...	...	18·53	·77	...	...	...	...
	Total		...	**2·21**	**1,327·63**	**1,088·14**	**80·31**	**21·46**	**1,144·32**	**282,785·77**	**281,065·19**	**5,618·02**	

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

NORTH COOLGARDIE GOLDFIELD—*continued.*

NIAGARA DISTRICT.

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Desdemona ...	...	Voided leases	...	...	...	...	...	...	5·73	9,585·25	7,471·39	12·04
Do. ...	...	Sundry claims	...	...	...	...	...	...	8·99	1,331·70	634·19	...
Kookynie ...	772G	Carpathia	...	...	218·00	120·31	...	...	...	313·00	145·52	...
Do. ...	(320G)	Champion	...	...	11·00	110·83	...	...	...	20,326·00	10,156·98	2·28
Do. ...	(320G)	(Champion: Champion Proprietary, Ltd.)	...	...	...	...	...	...	...	36,310·00	18,381·09	425·32
Do. ...	(320G), (335G), (347G)	(Champion leases)	...	...	...	...	...	...	...	2,157·50	2,554·15	...
Do. ...	(320G), (335G), (347G)	(Champion leases: Guthrie & Co., Ltd.)	...	...	...	...	...	...	...	2,705·00	1,556·16	...
Do. ...	756G	(Cosmopolitan No. 1: Cosmopolitan Proprietary, Ltd.)	...	...	...	...	...	...	...	578·00	793·00	...
Do. ...	756G	Cosmopolitan No. 1: Western Machinery Co., Ltd.	...	...	37·00	19·91	...	...	...	277·59	262·22	...
Do. ...	757G	(Cosmopolitan No. 2: Cosmopolitan Proprietary, Ltd.)	...	...	...	...	...	...	...	710·00	909·66	...
Do. ...	757G	Cosmopolitan No. 2: Western Machinery Co., Ltd.	...	...	148·50	86·63	...	...	...	2,484·50	2,917·72	...
Do. ...	769G	(Two "Ds")	...	...	...	...	...	...	...	100·00	14·01	...
Do. ...	769G, 770G, 771G	Two "Ds" leases	...	...	...	40·21	...	...	...	...	40·21	...
Do. ...	...	Voided leases	...	...	...	...	...	...	257·33	666,943·97	349,511·68	4,948·37
Do. ...	...	Sundry claims	...	5·92	646·96	245·36	...	30·59	80·71	4,662·96	4,260·03	...
Niagara ...	(768G)	Justice Extended	...	...	...	...	...	...	...	171·50	201·26	...
Do. ...	775G	Lubra Queen	...	...	174·00	42·76	...	...	...	174·00	42·76	...
Do. ...	(776G)	Pine Lodge	...	...	89·00	42·10	...	...	...	89·00	42·10	...
Do. ...	...	Voided leases	...	...	...	...	...	...	104·54	84,018·00	51,600·01	...
Do. ...	...	Sundry claims	...	...	476·45	193·70	...	13·27	70·23	9,457·70	5,778·52	...
Tampa ...	...	Voided leases	...	...	...	...	...	...	15·66	49,271·87	22,173·80	174·24
Do. ...	...	Sundry claims	...	65·07	28·00	12·82	...	5·07	69·44	4,090·00	1,829·74	...
		From District generally :—										
		Sundry Parcels treated at:										
		Lubra Queen G.M. Co., N.L., Works	...	...	...	100·64	...	...	...	...	100·64	...
		Grafter Battery	...	...	...	89·80	...	...	...	82·00	407·66	...
		State Battery—Niagara	...	...	...	...	...	...	...	622·50	8,703·09	...
		Various Works	...	...	...	...	...	...	...	451·00	6,356·43	41·17
		Reported by Banks and Gold Dealers	9·11	...	...	...	...	1,426·26	787·38	...	...	...
		Total	**9·11**	**70·99**	**1,828·91**	**1,105·07**	**...**	**1,475·19**	**1,400·01**	**895,923·04**	**496,844·02**	**5,603·42**

YERILLA DISTRICT.

NOTE.—Prior to 31st August, 1917, the mining centres of Eucalyptus, Linden, Mt. Celia, Mt. Howe, and Yundamindera were included in Yerilla District, and the output is recorded in that district. From 1st September, 1917, the output from these centres is shown in Mt. Morgans District, to which they were transferred.

Edjudina ...	1046R	Admiral Jellico	...	...	68·53	42·66	...	...	...	109·53	74·25	...
Do. ...	(994R)	Digger	...	...	...	...	...	...	...	97·50	76·06	...
Do. ...	1018R	Neta Extended	...	...	116·50	68·81	...	...	...	534·75	581·54	...
Do. ...	1010R, 1011R ...	Neta leases	...	...	148·00	152·94	...	...	...	394·00	318·14	...
Do. ...	1015R	Senate	...	...	252·00	323·44	...	...	...	973·00	1,255·87	...
Do. ...	...	Voided leases	...	...	...	...	...	...	14·06	29,380·09	38,902·53	37·79
Do. ...	...	Sundry claims	...	...	54·00	43·64	...	...	21·26	2,749·50	2,316·11	...
Eucalyptus ...	...	Voided leases	...	...	...	...	...	...	2,864·77	1,351·35	3,020·68	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	367·50	362·50	381·82	...
Linden ...	998R	Bindah	...	...	...	...	...	...	...	1,462·50	531·95	...
Do. ...	871R	Democrat	...	...	82·50	266·22	...	...	9·01	2,245·25	5,026·30	...
Do. ...	1040R	Great Billjim	...	...	...	...	...	...	...	32·75	19·36	...
Do. ...	1024R	Great Carbine	...	...	...	...	...	...	...	67·75	20·30	...
Do. ...	942R	Great Junction	...	...	31·50	34·12	...	...	6·11	1,086·75	1,030·90	...
Do. ...	(971R)	Linden Star	...	...	...	...	...	...	22·00	197·25	329·40	...
Do. ...	1005R	Olympic	...	...	...	...	...	...	...	442·50	655·11	...
Do. ...	903R, 985R ...	Torquay leases	...	...	229·93	88·85	...	...	...	325·68	107·45	...
Do. ...	903R, (904R), 985R, (992R)	(Westralia United Goldfields, Ltd.) ...	...	...	...	...	...	...	...	1,995·00	1,452·42	...
Do. ...	...	Voided leases	...	...	...	...	...	7·53	516·04	11,712·60	14,505·72	...
Do. ...	...	Sundry claims	...	...	127·50	110·02	...	77·81	35·11	6,493·25	4,798·42	...
Mt. Celia ...	...	Voided leases	...	...	...	...	...	...	...	14·00	5·39	...
Mt. Howe ...	...	Sundry claims	...	...	...	...	...	...	...	5·00	11·13	...
Mt. Remarkable ...	...	Voided leases	...	...	...	...	...	...	17·74	528·72	415·09	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	4·00	1·32	...
Pingin ...	...	Voided leases	...	...	...	...	...	...	46·99	14,637·80	10,306·68	...
Do. ...	...	Sundry claims	...	...	88·00	61·22	...	...	99·36	3,422·35	2,297·51	...
Yarri ...	(581R)	Yarri Proprietary	...	...	146·00	27·69	...	...	41·36	12,719·50	4,365·49	...
Do. ...	...	Voided leases	...	...	...	...	...	6·30	45·72	24,103·25	14,758·61	2·00
Do. ...	...	Sundry claims	...	...	128·00	57·39	...	...	5·31	5,252·10	2,795·47	...
Yerilla ...	...	Voided leases	...	...	...	...	...	...	3,089·51	15,619·21	12,313·06	13·93
Do. ...	...	Sundry claims	...	...	...	...	...	19·30	15·88	2,375·00	1,323·59	...
Yilgangie ...	...	Voided leases	...	...	...	...	...	...	...	218·75	295·45	...
Do. ...	...	Sundry claims	...	...	...	...	...	121·67	29·83	25·50	46·17	...
Yundamindera	1041R	Queen of the May	...	...	93·75	68·88	...	...	...	535·25	520·21	...
Do. ...	...	Voided leases	...	...	...	...	...	...	80·47	68,532·60	45,484·66	5·82
Do. ...	...	Sundry claims	...	...	68·00	45·52	...	...	85·22	3,151·25	2,740·75	...
	From District generally :—											
	Sundry parcels treated at :											
	Battles Ville Battery...		...	...	...	222·37	...	...	...	...	621·83	...
	Fremantle Trading Co.'s Works		...	...	...	...	...	...	...	...	4·92	...
	Neta Battery		...	...	...	...	...	...	...	...	325·69	...
	State Battery—Linden		...	...	...	51·53	...	...	...	72·00	4,030·90	...
	State Battery—Pingin		...	...	...	...	...	...	...	125·50	1,278·16	...
	State Battery—Yarri...		...	...	...	129·60	...	...	...	231·50	4,297·19	3·50
	State Battery—Yerilla		...	...	...	...	...	2·17	...	72·00	1,257·22	...
	Various Works		...	...	...	...	...	...	...	660·85	3,999·04	...
	Reported by Banks and Gold Dealers		...	...	...	...	...	1,011·56	154·74	...	...	...
	Total		...	...	**1,634·21**	**1,794·90**	...	**1,246·34**	**7,567·99**	**214,319·63**	**188,899·86**	**63·04**

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

Broad Arrow Goldfield.

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Bardoc ...	1807w	Birthday	...	...	8·34	8·32	...	...	...	8·34	8·32	...
Do. ...	(1791w)	Desideratum	...	...	1·71	15·07	...	...	...	1·71	15·07	...
Do. ...	(1786w)	Dream	...	...	3·97	4·28	...	...	...	3·97	4·28	...
Do. ...	(1773w)	Hillside	...	...	14·00	145·95	...	...	85·66	43·10	273·48	...
Do. ...	(1743w)	Zoroastrian	...	241·92	...	...	...	...	592·79	48·14	58·59	...
Do. ...	1803w	Zoroastrian	...	812·06	12·00	310·02	...	...	812·06	12·00	310·02	...
Do. ...	1806w	Zoroastrian North	...	...	5·45	35·97	...	...	...	5·45	35·97	...
Do. ...	...	Voided leases	...	...	...	...	...	...	256·68	72,971·08	50,875·63	203·60
Do. ...	...	Sundry claims	...	19·85	40·14	57·75	...	...	521·73	2,879·60	2,495·91	...
Black Flag ...	(1783w)	New Lady Bountiful	...	...	141·00	35·02	...	...	...	209·25	63·41	...
Do. ...	(1778w)	Suvla Bay	...	...	...	...	...	...	...	25·00	5·15	...
Do. ...	...	Voided leases	...	...	...	...	...	27·81	373·99	40,097·88	24,382·92	...
Do. ...	...	Sundry claims	...	...	...	...	...	686·51	165·78	1,971·06	1,848·31	...
Broad Arrow ...	(1744w)	Arrow Star	...	...	...	...	...	...	84·78	22·41	163·15	...
Do. ...	1790w	Duke	...	...	355·00	708·00	...	...	...	355·00	708·00	...
Do. ...	1771w	North Duke	...	102·89	23·50	131·58	...	...	164·77	84·30	373·58	...
Do. ...	(1772w)	Oversight	...	...	...	...	...	...	1,083·30	292·30	1,158·48	...
Do. ...	1799w	Oversight	...	800·12	98·00	329·03	...	...	800·12	98·00	329·03	...
Do. ...	1794w	Railway	...	...	17·00	28·46	...	...	...	33·00	35·12	...
Do. ...	1735w	Tara	...	903·04	61·50	236·73	...	...	1,579·22	213·90	995·15	...
Do. ...	...	Voided leases	...	...	...	...	...	54·85	1,145·81	116,999·78	95,460·47	15·85
Do. ...	...	Sundry claims	...	42·78	234·81	151·73	...	967·96	1,215·11	7,629·56	5,573·06	...
Carnage ...	1795w	Shepherd King	...	...	80·00	74·64	...	...	...	98·00	241·09	...
Paddington ...	(1733w)	Mount Eddy	...	...	...	...	...	...	...	381·50	560·88	...
Do. ...	(1747w)	Mt. Eddy Extended	...	...	...	...	...	...	...	637·65	173·90	...
Do. ...	1801w	Mt. Eddy United	...	...	303·00	84·05	...	...	...	303·00	84·05	...
Do. ...	...	Voided leases	...	...	...	...	...	5,557·72	257·75	173,488·87	81,244·97	18·96
Do. ...	...	Sundry claims	...	...	5·99	6·25	...	1,714·16	...	10,162·35	6,536·38	...
Siberia ...	1399w, 1424w, 1429w, 1442w, 1655w	Associated Northern Blocks (W.A.), Ltd.	...	...	17,785·50	9,397·64	...	...	...	207,601·59	71,533·11	1,664·70
Do. ...	(1781w)	Blue Streak	...	...	...	...	...	...	...	132·25	78·40	...
Do. ...	1774w	Christmas Lone Hand ...	...	...	...	...	...	...	...	39·00	187·70	...
Do. ...	1811w	Dark Horse	...	...	15·07	530·48	...	...	...	15·07	530·48	...
Do. ...	1371w	Gimblet South	...	...	...	...	...	...	...	68,552·50	11,397·58	...
Do. ...	1399w	(Gimblet South Extended) ...	...	...	...	...	...	...	...	525·00	835·44	...
Do. ...	1399w, 1424w, 1429w, 1442w	(Gimblet South Extended leases)	...	...	...	...	...	...	...	215·00	39·98	...
Do. ...	1338w	(Gimblet West)	...	...	...	...	...	...	...	680·50	482·83	...
Do. ...	(1286w), 1403w	(Golden leases)	...	...	...	...	...	...	374·82	205·73	538·82	...
Do. ...	1289w, (1308w)	Lady Evelyn leases	...	...	...	...	...	...	25·26	5,376·25	5,267·70	...

Do.	(1293w)	Mexico	...	...	...	...	...	...	...	...	270·50	314·20	...
Do.	(1293w), (1298w)	(Mexico leases)	...	...	...	...	...	...	...	...	457·00	999·75	...
Do.	1403w	Nuggety Hill	...	30·35	11·64	18·30	...	...	55·83	77·14	38·28	...
Do.	1736w	Pole	...	...	...	...	...	...	...	60·00	15·62	...
Do.	(1789w)	Siberia	...	24·96	27·50	31·68	...	...	55·56	27·50	31·68	...
Do.	1375w	(Siberia Consols)	...	...	...	...	...	...	41·58	1,013·50	3,136·03	...
Do.	1375w	Siberia Consols	...	...	158·00	404·65	...	...	...	581·25	1,236·74	...
Do.	1375w, (1610w), (1720w)	(Siberia Consols G.M. Co., N.L.)	...	...	...	...	...	...	39·23	352·50	598·52	...
Do.	1336w	(Slippery Gimblet)	...	...	...	...	...	...	...	26,110·50	8,217·79	...
Do.	1336w, 1338w, (1419w)	Slippery Gimblet leases	...	...	...	...	...	...	...	4,697·00	1,774·52	...
Do.	...	Voided leases	...	...	...	...	...	...	261·96	22,347·18	10,203·88	...
Do.	...	Sundry claims	...	...	1,236·82	396·37	...	126·49	537·09	6,699·24	6,565·58	...
Smithfield	...	Voided leases	...	...	...	...	...	...	...	1,027·00	200·90	...
Do.	...	Sundry claims	...	...	...	...	...	...	23·79	49·50	149·47	...
		From Goldfields generally :—										
		Sundry parcels treated at :										
		Brown Hill Consols Works—Kalgoorlie	...	...	...	...	...	...	...	38·99	15·32	...
		Fremantle Trading Coy's Works	...	...	...	...	...	...	...	...	80·10	...
		Hannan's Central Works—Kalgoorlie	...	...	...	...	...	...	...	8·70	15·47	...
		Pole Works	...	...	...	...	...	...	...	...	356·07	...
		Regan's Carnage Battery	...	...	...	...	...	...	...	27·00	598·81	...
		State Battery—Ora Banda	...	...	20·00	298·23	...	...	...	47·00	925·95	...
		State Battery—Siberia	...	...	...	...	...	...	...	40·00	746·57	...
		Zoroastrian Works	...	...	...	...	...	...	...	116·50	1,082·23	...
		Various Works	...	...	...	...	...	2,271·17	...	16,622·68	31,760·91	278·85
		Cement from Alluvial Claims at Paddington	...	...	·99	2·11	...	...	...	50·94	8·72	...
		Cement from Alluvial Claims at Siberia	...	...	64·20	31·44	...	...	...	1,052·30	209·31	...
		Reported by Banks and Gold Dealers	...	66·92	...	...	...	7,578·92	...	...	...	...
		Total	...	**66·92**	**2,977·97**	**20,725·13**	**13,473·75**	...	**18,985·59**	**10,554·67**	**794,193·01**	**434,188·83**	**2,181·96**

North-East Coolgardie Goldfield.

KANOWNA DISTRICT.

Black Swan	...	Voided leases	...	...	...	...	...	...	...	...	160·00	141·76	...
Gambier	...	Voided leases	...	...	...	...	...	...	...	38·73	12,729·00	6,638·30	·07
Do.	...	Sundry claims	...	...	...	...	...	24·70	245·94	858·75	750·42	...
Gindalbie	...	Voided leases	...	...	...	...	...	...	19·94	43,605·08	39,435·32	38·31
Do.	...	Sundry claims	...	...	...	...	...	...	674·82	1,017·75	1,207·80	...
Gordon	...	(1365x)	Red, White, and Blue	...	...	...	...	...	...	18·16	25·00	28·78	...
Do.	...	(891x)	(Sirdar)	...	...	...	...	...	...	32·60	168·50	1,319·35	...
Do.	...	(891x)	Sirdar	...	...	...	238·24	...	...	12·32	2,855·00	3,243·31	...
Do.	...	(891x), (1222x), (1223x), (1229x)	(Sirdar G.M. Co., Ltd.)	...	...	...	...	...	...	...	35,988·00	5,759·77	...
Do.	...	Voided leases	...	...	...	...	...	...	205·17	1,570·80	1,074·78	...
Do.	...	Sundry claims	...	...	...	...	...	...	54·65	630·50	577·80	...
Kanowna	...	1362x	Beck's Reward	...	...	143·00	118·15	...	...	...	635·00	333·82	...
Do.	...	(1358x)	Dreadnought	...	...	...	...	...	...	...	77·00	5·51	...
Do.	...	1019x	Kanowna	...	...	266·00	194·89	...	...	691·94	8,098·50	9,695·02	...
Do.	...	1299x	(Kanowna Consol)	...	...	...	...	...	...	...	713·50	129·30	...
Do.	...	1299x	Kanowna Consol	...	...	339·00	207·36	...	...	...	339·00	207·36	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

NORTH-EAST COOLGARDIE GOLDFIELD—*continued.*

KANOWNA DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Kanowna ...	1299x, (1300x) ...	(Kanowna Consol leases) ...	...	6·76	312·00	261·31	...	...	6·76	312·00	261·31	...
Do. ...	1353x	Leila M.	...	...	...	...	...	...	...	100·00	81·33	...
Do. ...	18x, (19x) ...	(Lily Australia G.Ms., Ltd.) ...	...	...	...	...	...	...	...	197·00	119·18	...
Do. ...	(1295x)	Louisa	...	...	...	...	...	...	48·09	707·00	232·73	3·31
Do. ...	(1364x)	Mascotte	...	...	39·00	29·17	...	...	...	237·50	253·86	...
Do. ...	1360x, 1361x ...	New Moon leases	...	...	494·00	453·31	...	...	...	494·00	453·31	...
Do. ...	(3x), 14x, 15x, 18x, (19x), (60x), (81x), (938x), 974x, 1035x, (1103x), (1263x)	(North White Feather G.Ms., Ltd.) ...	...	...	...	...	...	...	...	147,974·75	74,343·01	159·19
Do. ...	14x, 15x, 18x, (19x), 974x, 1035x, (1103x), (1263x), (1276x), (1278x)	(North White Feather G.Ms., Ltd.) ...	...	...	...	...	...	...	...	37,768·50	10,594·79	...
Do. ...	12x, 13x, 14x, 15x, 18x, (19x), (72x), 855x, 974x, 1035x, (1103x), (1263x), (1278x)	North White Feather G.Ms., Ltd. ...	...	...	5,969·37	2,426·83	...	...	...	51,880·27	23,171·15	...
Do. ...	(1330x)	Robinson	...	...	105·00	55·42	...	...	...	3,307·00	2,527·04	...
Do. ...	(1300x)	(Sunset)	...	...	...	...	...	...	2·27	1,248·50	638·41	...
Do. ...	12x, 13x, 14x, 15x, 855x, (1001x), (1012x), (1103x), (1107x), (1108x), (1109x)	(White Feather Main Reefs, Ltd.) ...	...	...	...	...	...	...	...	123,327·56	82,334·52	1,675·68
Do. ...	(9x), (10x), 12x, 13x, (72x), (83x), (201x), 855x, (1001x), (1012x), (1108x), (1249x)	(White Feather Main Reefs (1906), Ltd.)	...	...	...	...	...	...	20·45	24,393·00	9,138·31	...
Do. ...	...	Voided leases	...	...	...	...	...	3·59	3,615·98	238,862·46	132,630·29	644·06
Do. ...	...	Sundry claims	...	...	353·35	202·95	...	88·95	1,355·29	13,028·91	6,380·79	1·50
Mulgarrie ...	1355x	Palm	...	...	65·00	84·20	...	...	...	842·00	680·03	...
Do. ...	...	Voided leases	...	...	...	...	...	...	1,216·63	4,885·26	2,824·33	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	13·29	795·00	495·38	...
Six-Mile ...	...	Voided leases	...	...	...	...	...	...	1,595·63	559·00	767·72	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	31·44	117·50	84·79	...

			From District generally :—											
			Sundry Parcels treated at :											
			Kalgoorlie Foundry Ltd., Works	...	...	...	...	...	...	...	...	553·56	...	
			Lady Pratt Works	...	...	...	...	...	...	...	16·00	277·83	...	
			Old Cement Works	...	...	...	1,501·47	...	...	...	70·00	11,392·90	...	
			Riedel and Norton's Works	...	...	...	30·32	...	...	...	642·00	2,114·06	...	
			Various Works	...	...	...	...	...	25·01	...	903·10	23,131·41	...	
			Total for Leases and Quartz Claims ...	...	6·76	8,085·72	5,803·62	...	142·25	9,900·10	762,139·69	456,030·44	2,522·12	
			Cement from Alluvial claims :—											
			Reported by Owners	...	...	...	...	...	305·41	867·52	26,376·40	12,715·90	...	
			Treated locally (not reported by owners) at :—											
			Kalgoorlie Foundry, Ltd., Works	...	...	...	...	...	...	...	50·00	12·75	...	
			Lady Pratt Works	...	...	...	...	...	...	...	15·00	3·18	...	
			Old Cement Works	...	...	112·00	50·06	...	...	...	10,791·00	3,527·94	...	
			Riedel and Norton's Works	...	...	120·00	41·84	...	...	...	14,717·00	2,190·47	...	
			Various Works	...	...	...	...	...	...	...	77,350·21	54,918·51	...	
			Treated outside District (not reported by owners) ...	...	...	...	...	...	...	...	27,804·55	36,711·17	...	
			Reported by Banks and Gold Dealers	10·11	...	...	...	...	103,906·24	·86	...	84·69	...	
			Total	**10·11**	**6·76**	**8,317·72**	**5,895·52**	...	**104,353·90**	**10,768·48**	**919·243,85**	**566,195·05**	**2,522·12**	

KURNALPI DISTRICT.

Jubilee ...		...	Voided leases	...	...	...	...	...	...	145·13	1,821·25	1,408·51	...	
Do. ...		...	Sundry claims	...	...	...	...	...	18·87	...	46·00	28·91	...	
Kurnalpi ...	423K	... ...	Kurnalpi Pride	...	...	...	...	...	...	578·45	...	...	...	
Do. ...		...	Voided leases	...	...	...	...	...	371·18	1,785·95	2,805·31	2,245·39	6·27	
Do. ...		...	Sundry claims	...	·85	...	...	...	226·49	77·08	130·00	157·19	...	
Mulgabbie ...	424K	... ...	John Bull	...	17·48	...	...	...	...	17·48	2·00	212·98	...	
Do. ...	312K	... ...	Mulgabbie Perseverance ...	...	...	...	...	...	...	...	34·40	2,936·37	4·95	
Do. ...	(421K)	... ...	Star	...	...	...	...	...	...	12·94	3·75	404·05	...	
Do. ...		...	Voided leases	...	...	...	...	...	...	549·37	44·50	3,737·29	...	
Do. ...		...	Sundry claims	...	...	...	...	...	6·50	1,432·79	137·50	820·13	...	
			From District generally :—											
			Sundry Parcels treated at :											
			Various Works	...	...	...	...	...	...	...	56·50	193·15	...	
			Reported by Banks and Gold Dealers	2·45	...	...	...	...	11,364·29	19·62	...	...	...	
			Total	**2·45**	**18·33**	...	...	...	**11,987·33**	**4,618·81**	**5,081·21**	**12,143·97**	**11·22**	

East Coolgardie Goldfield.

EAST COOLGARDIE DISTRICT.

Binduli ...		...	Voided leases	...	...	...	...	...	...	...	175·80	97·60	...	
Do. ...		...	Sundry claims	...	...	...	...	...	...	...	138·47	74·34	...	
Boorara ...	4569E	... ...	Elsie May	...	...	308·92	166·61	...	...	...	420·92	317·64	...	
Do. ...	4610E	... ...	Eva	...	...	16·50	66·64	...	...	...	16·50	66·64	...	
Do. ...	3908E, 3910E, 3912E, (4033E), 4045E, (4327E)		Golden Ridge G.M. Co., Ltd.	...	...	5,641·48	4,435·22	99·57	...	...	239,238·10	132,399·79	408·36	
Do. ...	3908E, 3910E, 3912E, (4033E)		(Waterfall leases)	...	...	...	...	...	...	...	2,849·00	2,389·48	...	

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

EAST COOLGARDIE GOLDFIELD—*continued.*

EAST COOLGARDIE DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Boorara ...	...	Voided leases	...	...	...	...	...	...	268·28	56,602·63	31,233·31	...
Do. ...	...	Sundry claims	...	...	64·50	111·66	...	·49	2·30	279·00	288·64	...
Boulder ...	392E	(Acrobat : Paringa Consolidated Mines, Ltd.)	...	...	...	...	...	...	...	10·25	37·15	...
Do. ...	392E	Acrobat : Paringa Mines (1909), Ltd.	...	...	241·63	133·34	...	...	...	13,562·96	6,356·03	...
Do. ...	38E, 71E, 72E, (101E)	Associated G. Mines of W.A., Ltd. ...	...	...	74,049·00	25,288·84	874·00	...	8·49	1,711,745·70	967,781·32	29,826·38
Do. ...	49E, (4211E) ...	Associated Northern Blocks (W.A.), Ltd.	...	...	6,005·54	3,707·29	...	...	524·18	349,848·87	432,665·63	4,844·50
Do. ...	(682E), 902E, 923E, 986E, (1064E), 1124E, 1196E, 4075E	(Boulder Deep Levels, Limited) ...	...	...	...	...	...	...	...	3,043·00	1,778·10	26·71
Do. ...	902E, 923E, 986E, 1124E, 1196E, 4075E	(Boulder Deep Levels (1907), Ltd.) ...	...	...	...	...	...	...	...	787·50	210·30	...
Do. ...	281E	(Brookman Bros. : Boulder G.M. Co., Ltd.)	...	...	...	...	...	...	...	8,655·00	8,417·00	...
Do. ...	989E	(Brown Hill Central G.Ms., Ltd.) ...	...	...	...	...	...	...	...	2,957·50	2,071·92	...
Do. ...	558E, (1175E), 3961E	Brown Hill Extended, Ltd.	...	...	24·34	20·03	...	...	...	34,746·58	45,535·84	...
Do. ...	1163E	(Cassidy's North)	...	...	...	...	...	...	...	67·00	7·95	...
Do. ...	24E, (888E), 949E	Central and West Boulder G.Ms., Ltd.	...	...	1,647·73	660·35	...	...	...	64,723·50	32,789·05	...
Do. ...	352E	(Chaffer's G.M. Co., Ltd.)	...	...	...	...	...	...	...	4,256·00	1,299·03	161·50
Do. ...	352E, 873E, 4334E,	(Chaffer's G.M. Co., Ltd.)	...	...	...	...	...	...	...	111,111·00	44,796·77	...
Do. ...	352E, 873E, 4334E	(Chaffers G.M. Co. (1913), Ltd.) ...	...	...	...	...	...	...	...	13,350·00	3,334·91	129·57
Do. ...	1621E	(Croesus Proprietary G.M. Co.) ...	...	...	...	...	...	...	...	79·00	45·87	...
Do. ...	13E, 90E, 302E, 989E	(Croesus South G.Ms., Ltd.)	...	...	...	...	...	...	...	71,882·07	26,984·05	...
Do. ...	13E, 90E, 302E, 989E	Croesus South leases	...	...	974·46	229·32	...	...	...	2,262·16	617·63	...
Do. ...	(4564E)	Croesus View	...	...	39·00	20·44	...	...	...	39·00	20·44	...
Do. ...	351E, 1001E, 1002E, 1085E, 1113E, 1219E, 1326E, 1397E	Golden Horseshoe Estates Co., Ltd....	...	...	176,028·00	95,654·11	47,455·02	...	...	3,876,398·00	2,479,665·98	416,673·12
Do. ...	750E	(Golden Link Consolidated G.Ms., Ltd.)	...	...	...	...	...	...	...	10,729·00	6,096·80	...
Do. ...	2325E, 2326E ...	(Golden Link Consolidated G.Ms., Ltd.)	...	...	...	...	...	...	...	1,525·00	733·48	...
Do. ...	750E, 1621E ...	(Golden Links, Ltd.)	...	...	...	...	...	...	...	87,115·02	43,504·60	19·06
Do. ...	873E	(Great Boulder Main Reefs, Ltd.) ...	...	...	...	...	...	...	...	143,292·39	119,541·14	761·98
Do. ...	50E	Great Boulder No. 1, Ltd.	...	...	180·75	123·33	...	...	...	17,912·93	14,095·42	...
Do. ...	66E	Great Boulder Perseverance G.M. Co., Ltd.	...	...	153,357·00	38,699·06	8,618·21	...	...	2,929,298·23	1,560,192·55	148,449·09

Do.	...	16E, 51E, 61E, 102E, 280E, 1109E, 4366E	Great Boulder Proprietary G.Ms., Ltd.	...	...	182,265·00	125,412·19	22,291·00	...	...	2,911,594·00	2,656,893·58	258,810·36
Do.	...	902E, 1124E ...	(Great Boulder South G.M, Co., Ltd.)	...	...	...	...	...	...	...	437·00	122·11	...
Do.	...	3643E	(Hainault G.M., Ltd.)	...	...	...	...	...	...	...	517,345·70	184,570·02	113·30
Do.	...	6E	(Hannans Block 45, Ltd.)	...	...	...	...	...	...	...	2,343·55	3,226·69	...
Do.	...	131E, 245E, 269E, 743E, 794E, 969E	(Hannans Central G.Ms., Ltd.) ...	...	...	...	...	...	...	...	6,098·00	3,360·33	...
Do.	...	789E	(Hannan's Croesus G.M. Co., Ltd.) ...	...	...	...	...	...	...	...	4,256·75	4,416·90	...
Do.	...	1004E	(Hannan's North Croesus G.M. Co., Ltd.)	...	...	...	...	...	...	...	50·00	13·21	...
Do.	...	15E, 60E, 902E, 923E, 986E, 1116E, 1124E, 1196E, 4075E	(Hannan's Star Consolidated, Ltd.) ...	...	...	...	...	...	...	...	360·00	175·59	...
Do.	...	15E, 60E, 1116E	(Hannan's Star G.M. Co., Ltd.) ...	...	...	...	...	...	...	...	85,652·75	40,438·85	2,142·59
Do.	...	15E, 60E, 1116E ...	(Hannan's Star, Ltd.)	...	...	...	...	...	...	...	13,470·50	4,716·66	191·22
Do.	...	4317E, 4318E, 4442E	Idaho leases	...	815·52	17,055·00	7,181·97	...	...	3,738·90	81,611·77	37,565·28	...
Do.	...	946E, (4370E), 4531E	Ironsides North leases	...	...	5,755·00	12,820·85	...	...	...	56,013·05	96,932·21	...
Do.	...	946E	(Ironsides North G.M. Co., N.L.) ...	...	...	...	...	...	...	...	1,348·00	807·48	...
Do.	...	31E, 1357E, 1413E, 1507E, 4399E, 4445E, 4476E	Ivanhoe Gold Corporation, Ltd. ...	...	...	208,677·00	91,349·26	20,304·70	...	...	3,372,029·00	2,152,667·80	328,742·51
Do.	...	1507E, (2899E), (3712E), (3713E)	(Ivanhoe Junction G.M. Co., N.L.) ...	...	...	...	...	...	...	...	1,764·00	121·43	...
Do.	...	6E, 131E, 245E, 269E, 301E, 739E, 743E, 794E, 969E	(Kalgoorlie Amalgamated, Ltd.) ...	...	...	...	...	...	...	...	32,589·00	8,859·95	...
Do.	...	6E, 131E, 245E, 269E, 301E, 739E, 743E, 794E, 969E	(Kalgoorlie Amalgamated (new), Ltd.)	...	...	...	...	...	...	...	27,145·00	6,265·27	...
Do.	...	6E, 131E, 245E, 269E, 301E, 739E, 743E, 794E, 969E	(Kalgoorlie Amalgamated (1909), Ltd.)	...	...	...	...	...	...	...	7,940·50	1,568·40	...
Do	...	33E	(Kalgoorlie Bank of England G.M. Co., Ltd.)	...	...	...	...	...	...	...	11,775·50	7,080·49	...
Do.	...	73E, (74E) ...	(Kalgoorlie Mint and Iron King Gold Estates, Ltd.)	...	...	...	...	...	...	...	3,020·00	1,762·00	...
Do.	...	73E, (74E) ...	(Kalgoorlie Mint and Iron King G.Ms., Ltd.)	...	...	...	...	...	...	...	3,647·00	7,454·80	...
Do	...	1004E	(Kalgurli Golden Eagle) ...	...	...	...	...	...	...	...	4,891·50	1,289·65	...
Do.	...	1004E	(Kalgurli Golden Eagle : Golden Links, Ltd.)	...	...	...	...	...	...	...	193·00	31·63	...
Do.	...	22E, 34E ...	Kalgurli G.Ms., Ltd.	...	...	82,673·00	36,005·27	...	...	...	1,545,943·25	1,007,418·91	188·24
Do.	...	15E, 25E, 32E, 60E, 352E, 873E, 902E, 923E, 986E, 1116E, 1124E, 1196E, 2325E, 2326E, 4075E, 4334E, (4432E), (4433E), (4434E), 4493E	Lake View and Star, Ltd.	...	...	140,131·99	44,254·41	3,241·28	...	...	1,287·676·84	416,171·29	43,654·67
Do.	...	25E, 32E, 2325E, 2326E	(Lake View Consols, Ltd.)	...	...	...	...	...	...	...	1,179,303·55	1,016,875·27	38,491·89
Boulder	...	75E	(Lake View South G.M. (W.A.), Ltd.)	...	...	...	...	...	...	...	10,712·98	11,393·57	...
Do.	...	75E	Lake View South, Ltd.	...	...	731·97	209·77	...	...	...	17,364·55	4,463·40	...
Do.	...	33E, 35E, 975E ...	New North Boulder G.Ms., Ltd. ...	...	...	1,598·49	840·99	...	...	...	22,442·28	13,822·97	...
Do.	...	33E, 35E, 975E ...	(North Boulder G.M. Co., Ltd.) ...	...	...	...	...	...	...	...	33,549·15	47,532·52	...
Do.	...	33E, 35E, 975E ...	(North Boulder G.Ms., Ltd.) ...	...	...	...	...	...	...	...	4,542·50	4,256·55	·63

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

EAST COOLGARDIE GOLDFIELD—*continued.*

EAST COOLGARDIE DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Boulder ...	281E, 287E, 444E	(North Kalgurli Co., Ltd.)	...	...	...	...	...	43·99	...	104,116·49	60,229·47	7,202·47
Do. ...	281E, 287E, 444E	North Kalgurli (1912), Ltd.	...	...	2,280·08	843·13	...	...	...	23,534·61	9,164·40	...
Do. ...	73E, 410E, 448E, 532E, 578E, 698E 944E, 1395E, (3031E), (4180E)	(Oroya Brownhill Co., Ltd.)	...	...	...	...	...	...	...	1,075,862·55	1,163,881·77	61,682·30
Do. ...	6E, 73E, 131E, 245E, 169E, 301E, 410E, 448E, 532E, 578E, 698E, 739E, 743E, 750E, 794E, 944E, 969E, 1004E, 1395E, 1621E, (3031E), (4180E)	Oroya Links, Ltd.	...	...	24,607·34	23,065·16	670·41	...	...	804,557·80	273,302·36	26,847·33
Do. ...	392E	(Paringa Mines (1909), Ltd.) ...	...	...	...	...	...	...	...	26,890·74	12,599·54	...
Do. ...	1208E, 3612E, 3643E	South Kalgurli Consolidated, Ltd. ...	...	...	98,711·00	28,345·00	2,195·69	...	...	457,673·00	142,679·78	10,412·30
Do. ...	1208E, 3612E ...	(South Kalgurli G.Ms., Ltd.) ...	...	...	...	...	...	...	...	826,909·00	347,222·75	17,609·67
Do. ...	4537E	Union Jack	...	...	...	...	...	...	...	110·00	41·00	...
Do. ...	...	Voided leases	...	...	...	...	...	109·90	5,780·86	66,838·97	42,137·25	...
Do. ...	...	Sundry claims	...	...	13·35	17·42	...	24·58	...	1,377·31	1,070·64	...
Feysville ...	Block 48 ...	Hampton Plains Estate, Ltd. ...	...	21·59	...	...	...	4,565·62	21·59	20,583·40	2,413·76	...
Do. ...	Block 50 ...	(Hampton Plains Estate (1906), Ltd.)	...	...	...	...	...	...	...	85·00	108·82	...
Do. ...	Block 41 ...	Hampton Properties, Ltd.	...	...	41·00	22·66	...	...	...	41·00	22·66	...
Do. ...	Block 45 ...	Hampton Properties, Ltd.	...	...	...	...	...	...	52·75	51·75	76·63	...
Do. ...	Block 50 ...	(Hampton Properties, Ltd.)	...	...	...	...	...	...	7·26	6,348·00	3,956·22	...
Do. ...	Block 50 ...	Hampton Properties, Ltd.	...	...	1·00	14·56	...	...	91·40	623·73	554·69	...
Do. ...	...	Voided leases	...	...	...	...	...	...	22·86	305·70	111·90	...
Do. ...	...	Sundry claims	...	...	2·86	8·29	...	...	...	158·87	57·02	...
Kalgoorlie ...	4509E, 4530E, 4539E, 4551E	Adelaide Enterprise Prospecting Syndicate, N.L.	...	...	6,380·00	1,179·77	...	...	...	19,645·00	4,119·99	...
Do. ...	4560E	Belgravia Hill	...	...	144·00	33·10	...	...	...	213·00	47·67	...
Do. ...	796E, 1228E ...	(Bonnie Lass leases)	...	...	...	...	...	...	160·69	6,011·00	5,945·22	...
Do. ...	796E, 1228E, (3771E)	Bonnie Lass leases	...	...	1,657·00	363·63	...	...	...	15,619·65	8,079·38	...
Do. ...	(4088E)	Bonnie Play	...	...	...	...	...	...	...	107·61	14·65	...
Do. ...	4E	Cassidy's Hill	...	818·56	424·50	691·79	...	...	4,800·89	4,549·50	6,255·29	13·90
Do. ...	4E	(Cassidy's Hill: Paringa Mines (1909), Ltd.)	...	...	...	...	...	...	734·99	638·50	3,079·51	...
Do. ...	4557E	Corn Cob	...	...	22·00	5·90	...	...	...	73·42	32·94	...
Do. ...	(4545E)	Creswick	...	...	...	...	...	...	3·89	158·00	107·59	...
Do. ...	4585E	Creswick	...	...	88·00	78·65	...	...	...	88·00	78·65	...

Do.	4509E	(Enterprise)	...	...	...	...	...	...	...	219·00	76·49	...
Do.	4609E	Fair Play	...	...	34·60	83·90	...	...	...	34·60	83·90	...
Do.	4539E	(Gordon)	...	...	...	...	...	...	...	64·89	14·24	...
Do.	14CE, 415E, 1163E	Hannan's Consols leases	...	...	...	...	...	2·84	276·35	45,428·67	6,142·22	...
Do.	14CE, 415E, 1163E	(Hannan's Consols, Ltd.)	...	...	...	...	...	...	...	6,584·00	3,806·65	...
Do.	4546E, 4547E, 4548E	Hannan's Reward, Ltd.	...	...	5,608·00	2,668·35	...	...	...	20,557·00	5,263·68	...
Do.	796E, 1228E	(Hannan's Reward North G.M. Co., N.L.)	...	...	...	...	...	...	16·87	334·00	247·34	...
Do.	4001E, 4035E, 4036E	Hidden Secret Leases	...	...	...	...	...	...	105·65	10,695·95	15,290·55	43,383·29
Do.	(4320E)	Ivy	...	...	...	...	...	...	...	600·00	303·87	...
Do.	(4345E)	(Lone Hand)	...	...	...	...	...	...	...	6,092·00	408·02	...
Do.	(4345E)	Lone Hand	...	...	...	...	...	...	...	...	628·02	...
Do.	(4345E), (4459E), (4461E)	(Lone Hand leases)	...	...	...	...	...	...	...	6,560·00	1,721·71	...
Do.	4477E	Lord Nelson	...	21·25	217·40	249·75	...	...	123·27	2,542·64	1,240·49	...
Do.	4550E	Marion Catherine	...	...	...	...	...	...	...	286·00	54·30	...
Do.	(4565E)	Napoleon	...	...	...	13·90	...	...	...	255·00	90·10	...
Do.	(4482E)	North Collier	...	...	...	...	...	...	...	371·60	1,572·69	...
Do.	4E, (501E), (1591E), (2988E)	(Paringa Consolidated Mines, Ltd.)	...	...	...	...	...	...	...	216·00	157·80	...
Do.	4E, (501E), 1591E), (2988E)	(Paringa Mines, Ltd.)	...	...	...	...	...	...	...	37,962·98	16,779·96	...
Do.	1228E	(Red, White, and Blue)	...	...	...	...	...	...	...	130·00	25·56	...
Do.	4559E	Rising Sun	...	...	102·00	63·80	...	...	...	102·00	63·80	...
Do.	4542E	Successful	...	...	...	...	...	...	...	20·00	10·12	...
Do.	(4289E), (4230E)	(Union Club leases)	...	...	...	...	...	...	53·28	4,626·00	1,437·28	...
Do.	4499E	Williamstown	...	...	204·40	88·45	...	...	...	2,104·95	662·21	...
Do.	...	Voided leases	...	...	...	...	...	239·64	2,202·93	729,749·69	281,842·72	619·93
Do.	...	Sundry claims	...	...	650·58	219·02	...	207·69	284·60	16,114·60	4,310·96	...
Wombola	4592E	Annie May	...	...	5·00	4·32	...	...	...	5·00	4·32	...
Do.	4608E	Black Hill	...	...	3·50	276·92	...	...	...	3·50	276·92	...
Do.	4578E	Business Risk	...	...	73·35	378·54	...	...	...	103·35	647·77	...
Do.	(4599E)	Caledonian	...	...	15·25	136·65	...	...	...	15·25	136·65	...
Do.	4574E	Creedon's Welcome	...	...	122·15	766·76	...	...	...	141·45	865·20	...
Do.	4600E	Daisy	...	...	52·20	266·94	...	...	...	52·20	266·94	...
Do.	4555E	Dinnie	...	...	37·85	222·43	...	...	...	62·45	474·76	...
Do.	4567E	I.V.M.	...	...	9·50	23·08	...	...	...	9·50	23 08	...
Do.	4582E	Jerry	...	...	13·00	93·65	...	...	...	13·00	93·65	...
Do.	4607E	Little Jean	...	...	19·00	131·63	...	...	...	19·00	131·63	...
Do.	4561E	Southern Cross	...	...	34·35	121·78	...	...	...	34·35	121·78	...
Do.	...	Voided leases	...	...	...	...	...	...	613·86	4,721·98	1,978·31	...
Do.	...	Sundry claims	...	...	26·55	34·28	...	...	...	526·91	154·82	...
		From District generally:—										
		Sundry claims	...	...	...	...	...	10,907·93	431·95	5,208·00	1,560·12	...
		Sundry Parcels treated at:										
		Adeline Works	...	...	29·90	81·97	...	42·64	35·12	127·90	20,894·30	...
		Associated Northern Works	...	...	...	...	...	...	...	...	287·41	...
		Bonnie Lass leases	...	...	...	...	...	...	...	55·00	1,297·73	...
		Brown Hill Consols Works	...	...	13·00	153·37	...	...	...	753·26	45,147·87	...
		Dunstan & Cummings' Works	...	...	...	1,116·75	...	...	...	...	5,886·80	1,194·00
		Fremantle Trading Co.'s Works	...	...	...	1,331·98	597·85	...	...	...	6,235·97	7,028·62
		Hainault Sulphide Plant	...	...	...	192·05	220·62	...	...	35·66	768·92	220·62
		Hannan's Central Lakeside Works	...	...	...	1·29	...	...	...	58·06	4,782·59	...
		Hannan's Central Works	...	...	...	5,201·36	...	...	...	142·80	50,823·71	...
		North Kalgoorlie Battery	...	...	...	...	...	...	...	...	810·22	...
		Various Works	...	...	...	...	...	...	...	...	...	...
		Reported by Banks and Gold Dealers	...	...	...	...	...	341·72	15·15	38,756·72	75,908·77	1,968·67
				214·98	...	...	...	10,461·46	9,013·32	...	4·57	...
		Total	...	**214·98**	**1,676·92**	**1,199,110·01**	**555,982·93**	**106,568·35**	**26,948·50**	**30,391·68**	**25,411,897·26**	**16,356,932·25**	**1,451,818·78**

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

EAST COOLGARDIE GOLDFIELD—*continued.*

BULONG DISTRICT.

Mining Centre	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Balagundi ...	(1080Y)	Balagundi	...	...	6·00	23·16	...	...	542·52	27·00	182·23	...
Do. ...	...	Voided leases	...	...	...	...	...	...	1,866·46	1,083·68	1,291·50	12·92
Do. ...	...	Sundry claims	...	7·83	5·00	29·66	...	...	77·49	211·40	179·10	...
Bulong ...	1110Y	Green Lode	...	30·60	...	...	...	...	69·48	...	...	...
Do. ...	...	Voided leases	...	...	...	...	...	107·54	8,364·22	99,601·22	82,404·30	...
Do. ...	...	Sundry claims	...	...	14·50	8·51	...	1,648·60	987·93	6,834·10	14,490·68	...
Hogan's Find	...	Voided leases	...	...	...	...	...	...	908·82	309·50	276·51	...
Majestic ...	...	Voided leases	...	...	...	...	...	...	...	1,001·25	318·78	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	43·20	17·00	7·42	...
Mt. Monger ...	...	Voided leases	...	...	...	...	...	...	1,862·57	1,121·35	969·69	...
Do. ...	...	Sundry claims	...	...	...	...	...	215·60	...	369·80	302·47	...
Randall's ...	(1079Y)	Comstock, W.A.	...	...	...	...	...	...	...	643·04	259·72	...
Do. ...	(1086Y), (1087Y), (1088Y)	Transcontinental leases ...	...	...	...	...	...	...	...	19,723·90	4,794·10	...
Do. ...	...	Voided leases	...	...	...	...	...	...	60·04	11,453·10	5,592·16	...
Do. ...	...	Sundry claims	...	...	...	...	...	20·45	...	1,893·55	486·04	...
Sudden Jerk	...	Voided leases	...	...	...	...	...	...	63·91	14·25	53·67	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	·15	10·23	...
Taurus ...	...	Voided leases	...	...	...	...	...	2·06	3·70	1,678·15	760·83	...
Do. ...	...	Sundry claims	...	...	...	...	...	112·69	...	276·00	411·01	...
Woodline ...	...	Voided leases	...	...	...	...	...	...	...	792·75	610·57	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	39·33	61·57	...
		From District generally :— Sundry claims	...	...	...	...	...	5·64	41·85	790·75	284·26	...
	Sundry Parcels treated at: Various Works		...	...	...	...	...	...	...	6,102·15	5,848·25	...
	Reported by Banks and Gold Dealers		8·78	...	...	...	...	24,400·35	52·39	...	...	...
		Total	**8·78**	**38·43**	**25·50**	**61·33**	...	**26,512·93**	**14,944·58**	**153,983·42**	**119,595·09**	**12·92**

COOLGARDIE DISTRICT.

Bonnievale ...	4554	Lorna	...	...	217·25	151·12	...	...	...	254·75	216·59	...		
Do. ...	4558	New Victoria	...	9·00	108·74	329·98	...	...	9·00	219·49	556·68	...		
Do. ...	...	Voided leases	...	...	...	...	...	...	7·64	350,240·60	187,077·36	...		
Do. ...	...	Sundry claims	...	...	122·00	81·35	...	...	23·54	1,680·78	965·10	...		
Bulla Bulling	(4548)	Golden Gate	...	...	...	...	...	...	...	48·75	6·14	...		
Do. ...	...	Voided leases	...	...	...	...	...	...	...	563·63	340·01	...		
Do. ...	...	Sundry claims	...	...	...	...	...	...	12·82	314·60	182·17	...		
Burbanks ...	(4460)	Aurifer	...	...	...	...	...	...	12·13	259·00	390·20	...		
Do. ...	4484	Belgian Queen	...	36·50	82·25	136·40	...	...	127·68	235·35	367·22	...		
Do. ...	134, 135, 136, 1527, (1705), 2761, (3571), (3661), (3806), (3996), (4025), (4032)	(Burbanks Birthday Gift G.M., Ltd.)	...	...	...	...	...	...	...	132,706·00	126,351·59	...		
Do. ...	134, 135, 136, 1527, (1705), 2761, (3571), (3661), (3806), (3996), (4025), (4032)	(Burbanks Birthday G.Ms., Ltd.) ...	...	...	...	...	...	...	...	36,677·20	25,186·99	334·85		
Do. ...	134, 135, 136, 1527, 2761, (3571), (3661)	Burbanks Birthday G.Ms., Ltd. ...	...	...	18·75	398·88	...	...	...	34,966·73	21,285·50	89·38		
Do. ...	4409	Burbanks Mainstay	...	...	35·00	9·06	...	...	...	1,984·00	550·27	...		
Do. ...	(4168)	Glenloth South	...	...	...	...	...	...	79·67	892·00	1,288·48	...		
Do. ...	4471	Ivanhoe Burbanks	...	...	461·50	283·97	...	...	...	1,613·75	1,104·97	...		
Do. ...	4442	Ivanhoe North	...	...	...	...	...	...	...	81·75	39·27	...		
Do. ...	2160	Lady Robinson	...	...	453·00	123·81	...	...	...	5,292·00	1,970·70	...		
Do. ...	2160	(Lady Robinson)	...	...	...	...	...	...	...	5,315·40	3,327·12	...		
Do. ...	2160, (3950), (4125)	(Lady Robinson G.M. Co., N.L.) ...	...	...	...	...	...	...	...	16,823·50	7,797·88	...		
Do. ...	4469	Lord Bobs	...	...	133·00	25·99	...	...	...	535·75	116·49	...		
Do. ...	...	Voided leases	...	...	...	...	...	13·36	105·24	168,266·48	108,716·06	96·83		
Do. ...	...	Sundry claims	...	58·29	142·75	140·70	...	43·37	127·98	3,418·75	2,488·30	...		
Coolgardie ...	4444	Benjamin George	...	59·93	273·75	143·86	...	...	134·03	1,581·25	2,931·84	...		
Do. ...	4577	Bird-in-hand	...	...	70·00	11·04	...	...	...	70·00	11·04	...		
Do. ...	4559	Cockshot	...	...	90·25	152·71	...	...	29·38	113·75	581·78	...		
Do. ...	4555	Dreadnought	...	...	470·94	650·15	...	...	...	867·85	870·10	...		
Do. ...	4566	Eureka	...	14·25	136·00	34·37	...	...	14·25	136·00	34·37	...		
Do. ...	4567	Griffiths G.M.	...	1·70	450·00	102·62	...	...	1·70	450·00	102·62	...		
Do. ...	Block 35 ...	Hampton Plains Estate, Ltd. ...	...	...	...	...	...	...	...	100·50	28·76	...		
Do. ...	Block 49 ...	Hampton Plains Estate, Ltd. ...	...	10·94	134·50	143·32	...	...	10·94	150·00	157·31	...		
Do. ...	Block 53 ...	Hampton Plains Estate, Ltd. ...	...	...	...	...	...	...	358·42	67·00	112·49	...		
Do. ...	Block 59 ...	Hampton Plains Estate, Ltd. ...	...	...	...	...	...	...	4·12	7,594·25	6,972·36	...		
Do. ...	4443	King Solomon	...	...	1,670·00	352·50	...	...	35·27	4,677·50	1,091·50	...		
Do. ...	4556	Lady Carmen	...	2·75	283·50	126·32	...	...	13·40	555·00	256·30	...		
Do. ...	(4560)	Last Chance	...	31·15	...	...	...	...	210·50	7·00	13·37	...		
Do. ...	4435	Prosperity	2·52	220·97	630·25	204·03	...	2·52	294·72	3,739·25	1,677·91	...		
Do. ...	4479	Rio Tinto	...	...	12·00	3·87	...	...	...	220·00	86·55	...		
Do. ...	...	Voided leases	...	...	...	...	...	1,296·50	3,418·30	525,318·73	309,774·18	·96		
Do. ...	...	Sundry claims	8·74	221·40	1,867·45	606·87	...	71·48	1,821·35	29,356·10	12,616·72	...		
Eundynie ...	4253	(Hidden Secret North)	...	...	...	...	...	...	...	68·00	60·72	...		
Do. ...	4253, 4266, 4351, (4405), (4406), 4462	Hidden Secret North leases ...	...	...	1,016·00	544·47	...	...	...	27,637·00	13,800·20	...		

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

COOLGARDIE GOLDFIELD—*continued.*

COOLGARDIE DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Eundynie ...	...	Voided leases	...	...	...	...	...	...	...	1,473·50	644·31	1·75
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	117·00	31·11	...
Gibraltar ...	4530	Bulla Bulling	...	...	137·50	44·26	...	...	...	366·50	211·25	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	541·25	378·65	...
Do ...	...	Sundry claims	...	...	28·00	11·19	...	...	41·49	349·25	273·50	...
Gnarlbine ...	...	Voided leases	...	...	...	...	...	...	10·94	1,899·75	1,049·90	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	1·31	184·75	97·36	...
Higginsville ...	4184, (4185), (4191), (4206,) (4207)	(Red Hill Westralia G.Ms., Ltd.) ...	...	...	...	...	...	...	...	16,983·00	6,848·02	127·78
Do. ...	4184	(Sons of Erin: Forwood, Down & Co., Ltd.)	...	...	...	...	...	...	...	117·00	1,000·35	...
Do. ...	4184, (4185) ...	(Sons of Erin G.M. Co., N.L.) ...	...	...	...	...	...	...	285·20	4,742·00	2,938·77	...
Do. ...	4184, (4185), (4191), (4206), (4207)	(Sons of Erin leases)	...	...	...	...	...	...	...	1,394·00	911·95	...
Do. ...	4184, 4428, (4432)	Sons of Erin leases: Forwood, Down & Co., Ltd.	...	...	746·00	363·95	...	...	...	3,131·00	2,029·22	7·01
Do. ...	...	Voided leases	...	...	...	...	...	...	2·06	5,274·00	1,020·45	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	16·52	720·90	492·89	...
Londonderry...	(3834)	Cheapside	...	...	163·25	99·92	...	...	...	5,012·00	2,814·93	...
Do. ...	4545	Royal Standard	...	...	133·00	137·62	...	...	...	284·00	364·86	...
Do. ...	(4475)	Vice Regal	...	...	...	...	...	...	...	129·00	552·92	...
Do. ...	...	Voided leases	...	...	...	...	...	...	46·25	21,096·66	14,142·46	...
Do. ...	...	Sundry claims	...	...	164·50	41·08	...	...	6·00	1,277·60	1,189·22	...
Mungari ...	...	Voided leases	...	...	...	...	...	...	17·71	735·00	331·78	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	107·82	340·01	200·77	...
Red Hill ...	...	Voided leases	...	...	...	...	...	...	1,541·48	40,793·20	31,064·05	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	34·62	160·42	287·90	...
Ryan's Find	(4500)	Ryan's Reward	...	...	...	...	...	...	...	46·79	81·25	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	·44	13·00	21·43	...
Widgiemooltha	4028	Flinders	...	6·63	15·50	50·33	...	...	37·86	464·60	2,477·37	...
Do. ...	4553	Tourmalin G.M.	...	...	42·00	9·22	...	...	...	42·00	9·22	...
Do. ...	...	Voided leases	...	...	...	...	...	...	763·97	8,636·28	3,646·98	·17
Do. ...	...	Sundry claims	...	...	125·00	34·98	...	9·21	27·58	2,975·68	1,213·47	...

From District generally:—													
Sundry Parcels treated at:													
Burbanks Main Lode Works	...	...	...	...	...	...	2·77	...	557·50	1,261·60	114·17
Carswell's Cyanide Works	...	...	...	...	...	...	...	...	...	668·99	...
Fremantle Trading Co.'s Works	...	...	...	...	...	...	...	...	...	20·08	...
Highgate Works	...	...	...	...	...	...	...	...	100·00	321·11	...
Lady Robinson Cyanide Works	...	...	...	...	...	...	...	...	70·00	348·28	...
New Victoria Works	...	...	...	...	...	...	...	...	...	98·56	...
Pickering's Cyanide Works	...	...	...	...	...	...	...	...	...	177·10	...
State Battery, Coolgardie	...	...	...	651·48	...	...	...	...	687·50	8,372·58	...
Various Works	...	...	...	...	...	4·98	...	3,083·61	14,673·47	108·89
Reported by Banks and Gold Dealers	94·49	...	...	...	...	7,143·68	543·04	...	...	...
Total	**105·75**	**673·51**	**10,433·63**	**6,201·42**	**...**	**8,587·87**	**10,336·37**	**1,488,898·19**	**933,773·32**	**881·79**

KUNANALLING DISTRICT.

Balgarrie ...	...	Voided leases	...	...	...	...	...	10·94	75·48	5,124·25	4,805·74	1·38
Do. ...	...	Sundry claims	...	...	118·00	19·67	...	...	18·57	1,030·25	377·68	...
Carbine ...	33s	(Carbine)	...	...	...	...	...	...	10·85	2,401·00	1,164·53	...
Do. ...	33s, 710s, 711s ...	Carbine leases	...	...	3,395·00	1,841·52	...	...	677·13	32,950·50	21,305·60	...
Do. ...	866s	Never Can Tell	...	...	459·50	260·98	...	...	...	823·00	514·06	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	2,524·00	2,719·54	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	55·00	30·82	...
Carnage ...	...	Voided leases	...	...	...	...	...	176·04	659·31	2,402·00	2,170·67	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	61·00	27·50	...
Cashman's ...	716s, [1289w] ...	Lady Evelyn	...	...	...	...	...	...	...	241·75	479·81	...
Do. ... (Siberia)	...	Voided leases	...	...	...	...	...	67·51	793·44	7,187·90	6,395·33	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	6·16	116·00	67·61	...
Chadwin ...	...	Voided leases	...	...	...	...	...	...	...	1,111·75	2,062·12	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	8·87	507·00	449·22	...
Dunnsville ...	...	Voided leases	...	...	...	...	...	...	181·12	17,407·10	7,982·23	...
Do. ...	...	Sundry claims	...	61·63	...	...	...	·43	89·26	293·09	265·11	...
Jourdie Hills	369s, (661s) ...	(Jourdie Hills G.M. Co., Ltd.) ...	...	...	...	...	...	...	...	9,635·00	7,868·08	...
Do. ...	369s, (661s) ...	(Jourdie United G.Ms., Ltd.) ...	...	...	...	...	...	...	...	1,520·00	1,027·63	...
Do. ...	369s	(Pride of the Jourdies) ...	...	...	...	...	...	...	...	410·74	465·47	...
Do. ...	369s	Pride of the Jourdies: Forwood, Down & Co., Ltd.	...	...	165·00	263·06	...	...	...	1,219·00	2,545·68	28·45
Do. ...	...	Voided leases	...	...	...	...	...	...	18·00	15,225·00	7,484·22	...
Do. ...	...	Sundry claims	...	...	...	13·61	...	...	...	760·50	418·61	...
Kandana ...	...	Voided leases	...	...	...	...	...	...	...	465·00	68·12	...
Kintore ...	878s	Albury	...	...	95·00	15·85	...	...	...	95·00	15·85	...
Do. ...	(869s)	Hilton	6·66	...	...	2·04	...	6·66	...	65·00	14·75	...
Do. ...	(864s)	Old Dyke	...	...	50·00	3·53	...	...	...	50·00	3·53	...
Do. ...	(868s)	Ormuz	...	...	...	...	...	...	...	700·00	65·95	...
Do. ...	(870s)	Revenue	...	...	125·00	12·49	...	...	...	125·00	12·49	...
Do. ...	(865s)	Verdun	...	...	...	...	...	...	...	14·00	6·50	...
Do. ...	...	Voided leases	...	...	...	...	...	...	143·66	43,027·14	31,747·44	...
Do. ...	...	Sundry claims	...	...	61·00	68·01	...	100·30	·78	1,055·70	1,123·57	...
Siberia ...	(728s), ([1293w])	Mexico	...	...	...	...	...	...	...	216·50	427·07	...

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

COOLGARDIE GOLDFIELD—*continued.*

KUNANALLING DISTRICT—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs-	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Siberia ...	...	Voided leases	...	...	...	...	...	1·07	1,557·81	8,000·35	10,103·07	...
Do. ...	...	Sundry claims	...	...	...	...	...	30·91	...	223·00	349·86	...
25-Mile ...	696s	(Blue Bell)	...	...	...	...	...	...	8·05	697·00	429·47	...
Do. ...	727s	(Blue Bell Extended)	...	...	...	...	...	...	...	113·00	71·32	...
Do. ...	696s, 727s ...	Blue Bell leases	...	...	...	...	...	...	...	1,563·00	1,625·44	...
Do. ...	877s	Catherwood	...	...	142·00	25·80	...	...	...	142·00	25·80	...
Do. ...	876s	Premier	...	...	42·50	27·65	...	...	...	42·50	27·65	...
Do. ...	845s	Sadie	...	...	99·00	50·72	...	...	...	1,425·00	1,218·64	...
Do. ...	871s	Shamrock	...	...	111·00	69·66	...	...	...	111·00	69·66	...
Do. ...	645s	Star of Fremantle	...	...	16·00	7·55	...	...	...	5,275·00	3,503·31	...
Do. ...	603s	Sydney Mint	...	...	133·00	107·14	...	...	229·72	1,342·25	3,084·75	...
Do. ...	847s	Turn of the Tide	...	2·72	90·00	164·65	...	...	2·72	1,283·50	1,710·44	...
Do. ...	...	Voided leases	...	...	...	...	...	...	453·30	86,893·99	66,340·25	18·84
Do. ...	...	Sundry claims	6·60	...	42·50	17·76	...	13·22	98·21	6,031·95	3,141·53	...
		From District generally:—										
		Sundry parcels treated at:										
		Blue Bell Battery	...	...	...	196·60	...	...	...	72·00	1,410·63	...
		Hands Across the Sea Battery	...	...	...	12·93	...	...	...	...	37·44	...
		Stanley Works	...	...	...	14·50	...	14·86	...	402·60	384·93	...
		Various Works	...	...	...	...	...	9·22	...	1,276·66	1,968·58	...
		Reported by Banks and Gold Dealers	31·67	...	...	...	...	219·28	1·10	...	...	...
		Total	**44·93**	**64·35**	**5,144·50**	**3,195·72**	...	**650·44**	**5,033·54**	**263,713·97**	**199,615·30**	**48·67**

Yilgarn Goldfield.

Blackbourne...	...	Voided leases	...	...	...	...	...	...	...	1,282·50	341·37	...
Bullfinch ...	914, 915, 916, 926, 928, 942, 960	(Bullfinch leases)	...	...	...	...	...	...	...	1,027·52	10,958·88	...
Do. ...	914, 915, 916, 926, 928, 842, 960	Bullfinch Proprietary (W.A.), Ltd. ...	...	...	55,359·00	14,351·91	1,926·68	...	...	302,752·42	120,797·29	18,369·11
Do. ...	...	Voided leases	...	...	...	...	...	...	...	360·65	364·67	...
Do. ...	...	Sundry claims	...	...	11·90	11·70	...	...	...	11·90	11·70	...
Corinthian ...	(893)	Corinthian	...	...	...	...	...	...	...	2,684·50	1,123·80	...
Do. ...	896, (934), (946)	Corinthian North G.Ms., Ltd. ...	...	...	...	230·97	...	...	...	131,222·00	27,795·29	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	601·50	405·74	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	73·50	73·29	...
Ennuin ...	(2803)	Star of Ennuin	...	...	...	...	...	...	...	118·16	342·89	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	16·40	18·45	...

Do. ...	...	Sundry claims	...	...	16·50	11·54	...	...	...	117·00	72·12	...				
Forrestonia ...	2909	Great Southern	...	...	52·00	40·80	...	...	...	52·00	40·80	...				
Golden Valley	2272	Glide Away	...	...	511·00	575·17	...	...	...	1,362·00	1,577·00	...				
Do. ...	2948	Greenharp New	...	...	48·00	55·14	...	...	...	196·50	253·13	...				
Do. ...	3039	Lake View	...	...	54·00	29·57	...	...	...	88·00	66·07	...				
Do. ...	2790	Manxman Consols	...	...	30·25	53·55	...	...	...	71·25	102·86	...				
Do. ...	(2389)	(Marie's Find)	...	...	...	...	...	...	...	336·00	460·51	...				
Do. ...	(2389), (2390) ...	New Marie's Find G.Ms., N.L.	...	...	...	...	...	...	...	226·00	144·35	...				
Do. ...	2994	Radio	...	...	73·00	418·01	...	...	...	115·00	663·46	...				
Do. ...	2739	Rosalie	...	...	...	...	...	...	...	120·75	122·27	...				
Do. ...	2653	Violet	...	...	106·50	56·50	...	...	...	190·14	112·62	...				
Do. ...	...	Voided leases	...	...	...	...	...	...	18·05	3,758·60	3,848·35	2·00				
Do. ...	...	Sundry claims	...	...	200·50	193·82	...	...	2·75	1,794·07	1,472·08	...				
Greenmount...	(2992)	Searchlight	...	...	...	...	...	...	...	32·00	17·44	...				
Do. ...	550	(Sunbeam)	...	...	...	...	...	14·00	...	4,472·00	1,427·25	...				
Do. ...	550	Sunbeam	...	...	...	...	...	...	...	200·00	100·14	...				
Do. ...	550, (565) ...	(Sunbeam leases)	...	...	...	...	...	...	...	3,191·00	816·42	...				
Do. ...	536	(Transvaal)	...	...	...	...	...	...	...	30,233·00	7,340·62	579·78				
Do. ...	536, 1358 ...	Transvaal leases	...	...	...	...	...	...	...	78·00	15·37	...				
Do. ...	...	Voided leases	...	...	...	...	...	31·99	21·62	70,297·00	17,459·88	364·72				
Do. ...	...	Sundry claims	...	...	...	...	...	...	4·12	632·50	263·70	...				
Hope's Hill ...	2544	Colleen Bawn	...	...	22·00	172·01	...	...	...	309·20	1,291·78	...				
Do. ...	...	Voided leases	...	...	...	...	...	...	56·97	129,884·85	33,899·78	1·00				
Do. ...	...	Sundry claims	...	...	305·00	38·66	...	...	25·38	1,622·50	506·06	...				
Kennyville ...	(776)	Cornishman	...	...	256·00	146·83	...	...	13·18	2,304·00	1,927·36	...				
Do. ...	570	(Great Leviathan)	...	...	...	...	...	...	...	3,821·85	2,948·67	...				
Do. ...	570	Great Leviathan	...	...	132·00	67·57	...	...	...	4,205·00	3,259·89	...				
Do. ...	570	(Great Leviathan: Northern Blocks Syndicate, Ltd.)	...	...	...	...	...	...	...	10,705·00	2,974·64	...				
Do. ...	911	Trafalgar	...	...	425·00	236·78	...	...	...	1,762·00	1,348·30	...				
Do. ...	...	Voided leases	...	...	...	...	...	...	5·58	1,183·50	477·89	·09				
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	277·00	151·42	...				
Koolyanobbing	...	Voided leases	...	...	...	...	...	...	...	308·00	116·74	...				
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	55·00	11·24	...				
Marvel Loch	3069	Banker	...	...	73·00	89·38	...	...	...	73·00	89·38	...				
Do. ...	923	Bohemian	...	...	60·00	24·29	...	...	17·44	3,409·00	3,288·14	...				
Do. ...	1689	(Bronco)	...	...	...	...	...	...	...	217·00	22·17	...				
Do. ...	1689	Bronco: Bronco Horseshoe Proprietary Mining Co., N.L.	...	...	...	...	...	...	...	1,776·00	591·76	...				
Do. ...	(1463)	Eclipse	...	...	190·00	84·06	...	...	...	2,193·00	1,558·44	...				
Do. ...	(3006)	Firelight	...	...	...	...	...	...	6·87	15·00	26·20	...				
Do. ...	719	(Great Victoria)	...	...	...	...	...	...	...	1,356·00	281·53	...				
Do. ...	719, 944, 945, 1227, 1228, 1606	Great Victoria leases	...	...	18,103·00	1,926·22	...	...	...	79,091·00	8,983·02	...				
Do. ...	852	May Queen	...	...	54·00	180·10	...	...	4·07	680·50	3,793·58	...				
Do. ...	3030	Never Never	...	...	1,109·00	223·16	...	...	...	1,194·00	271·41	...				
Do. ...	3017	Pro Patria	...	...	108·00	244·62	...	...	...	415·00	606·76	...				
Do. ...	1011	Rising Star	...	...	...	...	...	...	...	140·00	11·48	...				
Do. ...	(2993)	Sandfly	...	...	100·00	17·84	...	...	...	410·00	320·14	...				
Do. ...	2998	St. George	...	...	877·00	295·01	...	...	...	1,585·00	589·91	...				
Do. ...	(3042)	Triumph	...	...	610·00	39·89	...	...	...	610·00	39·89	...				
Do. ...	3071	Ulverston	...	...	602·00	585·13	...	...	...	602·00	585·13	...				
Do. ...	3011	Victory	...	...	380·00	299·23	...	...	...	525·00	382·86	...				
Do. ...	...	Voided leases	...	...	...	...	...	...	73·91	226,018·00	78,311·20	771·03				
Do. ...	...	Sundry claims	...	...	1,123·74	591·18	...	7·72	68·81	6,549·49	3,962·44	...				

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

YILGARN GOLDFIELD—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production.				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Mt. Jackson...	1979	Allen's Find	...	...	130·00	59·20	...	...	...	1,641·05	837·02	...
Do. ...	1933	Butcher Bird No. 1	...	...	18·00	7·42	...	...	...	2,686·50	1,985·01	...
Do. ...	2053	Great Unknown ...	...	...	169·50	138·81	...	...	37·22	1,394·93	3,608·73	...
Do. ...	...	Voided leases ...	...	...	...	...	...	...	77·66	31,358·55	21,191·86	2,305·28
Do. ...	...	Sundry claims	...	...	43·00	83·22	...	4·42	25·43	1,461·25	1,000·53	...
Mt. Rankin ...	...	Voided leases ...	...	...	...	...	...	3·84	5·20	496·00	122·17	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	170·00	54·38	...
Parker's Range	2978	Gift	...	...	...	...	...	...	...	96·00	71·39	...
Do. ...	2656	Golden Dream ...	...	...	164·25	173·98	...	...	37·10	540·25	809·83	...
Do. ...	3063	King of the Range	...	...	12·50	28·00	...	...	...	12·50	28·00	...
Do. ...	2801	Scots Greys ...	...	...	25·00	17·79	...	...	...	35·00	24·04	...
Do. ...	2546	South Side ...	...	...	...	...	...	...	4·82	112·00	42·21	...
Do. ...	724	(Spring Hill) ...	...	...	...	...	...	...	...	3,232·00	607·21	...
Do. ...	724, (760)	(Spring Hill leases)	...	...	...	...	...	...	...	8,910·00	2,215·59	...
Do. ...	724, 2633	Spring Hill G.M. Co., N.L. ...	...	...	39·00	10·41	...	...	...	1,215·00	123·29	...
Do. ...	2806	Star of the Range	...	...	29·25	23·90	...	...	...	121·75	213·11	...
Do. ...	2951	White Horseshoe	...	...	291·75	248·98	...	...	...	833·50	733·00	...
Do. ...	...	Voided leases ...	...	...	...	...	...	...	63·22	12,778·75	8,832·75	...
Do. ...	...	Sundry claims	...	...	59·00	28·98	...	...	...	1,635·75	1,059·51	...
Southern Cross	3010	Central	...	...	11·00	12·05	...	...	...	178·00	63·30	...
Do. ...	3016	Central Extended	...	...	84·00	26·91	...	...	...	99·00	36·88	...
Do. ...	3082	Frances	...	...	346·00	124·70	...	...	...	346·00	124·70	...
Do. ...	(2987)	Sunset	...	...	...	...	...	...	...	300·00	38·35	...
Do. ...	...	Voided leases ...	...	...	...	...	...	2·13	211·22	431,498·20	210,969·01	364·41
Do. ...	...	Sundry claims	...	...	820·00	268·65	...	3·73	595·45	3,112·10	953·03	...
Weston's ...	2769	(Battler)	...	...	...	...	...	...	...	115·00	170·64	...
Do. ...	2180	(Edna May)	...	...	...	...	...	...	...	581·00	919·27	...
Do. ...	2769, 3004, 3040	Edna May Battler G.M. Co., N.L. ...	...	...	1,386·00	915·44	...	...	...	3,374·00	2,824·80	...
Do. ...	2291, 2585, 2615	Edna May Central G.Ms., N.L. ...	...	...	25,436·00	11,141·59	...	...	...	89,554·00	29,824·08	19·38
Do. ...	2570, 2617, 2644	Edna May Consolidated G.M. Co., N.L.	...	...	5,184·00	2,322·08	...	...	...	5,852·00	2,583·24	...
Do. ...	2168, 2238, 2777	Edna May Deep Levels G.M. Co., N.L.	...	...	3,540·00	4,402·74	...	...	...	3,540·00	4,402·74	...
Do. ...	2180, 2605	Edna May G.M. Co., N.L. ...	...	...	34,749·00	30,845·56	...	...	...	145,232·00	140,866·69	...
Do. ...	2775	Emma May	...	...	...	...	...	...	...	40·00	20·31	...
Do. ...	(3026)	Florence Mabel ...	...	...	63·00	48·56	...	...	...	80·00	68·50	...
Do. ...	3004	(Great Battler)	...	...	...	...	...	...	...	50·50	68·86	...
Do. ...	(2086), 2087, 2088, (2635)	Greenfinch Proprietary G.M., N.L. ...	...	...	310·00	184·60	...	...	...	8,185·00	3,038·55	...
Do. ...	2807	Hill End	...	...	...	...	...	...	...	194·00	136·87	...
Do. ...	3015	Kitty	...	...	11·00	5·07	...	...	...	11·00	5·07	...
Do. ...	2291	(Myrtle Central) ...	...	...	...	...	...	...	...	751·00	243·96	...
Do. ...	2168, 2238	(Myrtle Consols leases) ...	...	...	2,757·00	2,491·97	...	...	...	4,009·00	3,696·32	·20
Do. ...	2570	(Myrtle East)	...	...	...	...	...	...	...	202·00	116·12	...
Do. ...	2816	Pertha M.	...	...	167·00	123·71	...	...	...	559·00	387·12	...

Do.	2724	(Weston's Reward)										35·00	57·24		
Do.	2724, 2761	Westons Reward G.Ms., N.L.										473·50	424·66		
Do.		Voided leases									4·06	207·75	135·30		
Do.		Sundry claims					48·00	109·29			11·04	776·75	819·34		
		From Goldfield generally :—													
		Sundry parcels treated at :													
		Australia Battery										38·00	124·94		
		Donovan's Find Battery						251·66					2,787·99		
		Fremantle Smelting Works										21·28	592·34	33·90	
		Great Victoria Cyanide Works						1,106·00					4,401·38		
		Greenfinch Proprietary G.M. Works						106·05					2,293·91		
		Hainault Sulphide Works						18·58					18·58		
		Hope's Hill Cyanide Works						28·90					1,203·47		
		Jacoletti Works											2,062·82		
		Marvel Loch Mining Co., N.L.						669·30					4,303·07		
		Never Never Works						299·00					445·00		
		Spring Hill Works						62·00					328·26		
		Sunbeam Works						523·06				8·00	5,765·34		
		Violet Works						45·17					968·68		
		Various Works										59·00	11,637·23	2·64	
		Reported by Banks and Gold Dealers								22·05	3·53				
		Total					**156,885·64**	**78,244·77**	**1,926·68**	**89·88**	**1,394·70**	**1,809,223·61**	**834,726·61**	**22,813·54**	

Dundas Goldfield.

Buldania		Voided leases								3·02	846·05	708·99		
Do.		Sundry claims								36·53	341·27	519·77		
Dundas		Voided leases									4,543·23	2,208·48		
Do.		Sundry claims								385·37	182·50	143·88		
Killaloe		Voided leases									20·65	6·88		
Norseman	987, (1113)	(After Years leases)									2,065·50	978·92		
Do.	1216	Anzac					68·50	245·69			68·50	245·69		
Do.	(1173)	Benson									380·00	243·08		
Do.	1229	Bonnie Lois					34·00	51·90			34·00	51·90		
Do.	1199	Crown					169·50	364·70		27·72	761·50	1,179·93		
Do.	1183	Edith Eleanor					71·00	187·86		272·76	266·50	542·17		
Do.	966	(Esperanza No. 2)								·96	689·00	948·88		
Do.	(938), (945), (988)	(Hampton Plains Estate (1906), Ltd.)								9·50	8,493·00	2,229·24		
Do.	(938), (945), (988)	Hampton Uruguay, Ltd.									34,018·00	8,192·98		
Do.	1209	Hoffman's Gold Mine					127·00	200·83			327·75	369·12		
Do.	1231	Lake View		86·97						86·97				
Do.	852	(Mararoa)									9,167·00	4,484·90		
Do.	852, 912, 966, 977, 979, 980, 985, 987, (1031), 1166, (1190), (1192), 1203	Mararoa G.M. Co., N.L.					28,484·00	11,393·25	1,295·86		271,180·50	133,110·13	24,310·24	
Do.	1211	New King					112·00	8·12			879·00	85·24		
Do.	903	(O.K.)								21·23	1,147·25	1,293·01		
Do.	903, 1138	O.K. leases					120·00	203·09			1,763·00	1,891·03		
Do.	106, 187, 587, 840, (972)	Princess Royal G.M. Co., N.L.					222·83	256·47			169,205·33	143,575·84	9,364·14	
Do.	187	(Princess Royal South									358·00	568·05		
Do.	1092	(Sun)								142·26	655·50	737·49		
Do.	1092	Sun					290·00	151·04			758·00	1,058·08		

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

DUNDAS GOLDFIELD—*continued.*

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917. Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Total Production. Alluvial	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Norseman ...	1092, (1125) ...	(Sun leases)	...	...	...	...	...	...	...	337·00	692·34	...
Do. ...	1210	Surprise	...	459·25	...	...	...	...	899·62	...	46·43	6·48
Do. ...	986	Vini Vidi Vici	...	355·04	12·25	38·79	...	...	2,482·06	330·50	794·88	...
Do. ...	1016	(Viking Extended)	...	...	...	...	...	...	133·35	72·50	419·67	4·90
Do. ...	990	(Viking No. 1)	...	...	...	...	...	...	...	1,274·00	3,095·95	...
Do. ...	990, 1060 ...	(Viking No. 1 leases)	...	...	...	...	...	...	...	775,50	1,176·13	16·89
Do. ...	990, 1016, 1060 1117, 1194	Viking No. 1 leases	...	...	4,223·00	3,438·93	142·34	...	...	39,762·25	36,139·97	242·83
Do. ...	1180	Viking South	...	...	72·75	138·40	...	...	...	439·00	440·04	...
Do. ...	...	Voided leases	...	...	...	...	...	4·23	4,234·22	255,799·70	183,976·85	914·97
Do. ...	...	Sundry claims	...	52·06	236·75	163·89	...	996·60	2,075·12	16,491·15	9,138·53	·59
Peninsula ...	...	Voided leases	...	...	...	...	...	...	17·61	7,764·00	4,705·10	...
		From Goldfield generally :—										
		Sundry Parcels treated at :										
		Lady Mary Works	...	...	58·29	71·69	...	...	...	74·29	1,055·73	...
		Mararoa Crushing and Cyanide Works	...	...	...	...	...	...	...	232·50	2,543·56	38·75
		Rawlings, Bullen, and Rumble's Works	...	...	...	383·88	...	...	...	27·00	3,141·61	...
		State Battery—Norseman	...	...	...	167·16	...	...	...	376·00	10,274·76	885·41
		Various Works	...	...	...	...	...	...	54·52	103·00	2,947·45	607·70
		Reported by Banks and Gold Dealers	...	...	...	...	...	1,026·29	...	...	1·04	...
		Total	...	**953·32**	**34,301·87**	**17,465·69**	**1,438·20**	**2,027·12**	**10,882·82**	**832,009·42**	**565,963·72**	**36,392·90**

Phillips River Goldfield.

Kundip ...	147, 179 ...	Fair Play leases	...	...	158·20	402·73	...	...	...	3,597·47	6,187·58	12·63
Do. ...	136, 137, 138, (139)	(Flag Gold and Copper Mining Co., Ltd.)	...	...	...	...	...	...	...	7,031·50	4,729·53	1,078·38
Do. ...	136, 137, 138 ...	Flag leases	...	...	481·53	368·90 *150·36	...	...	...	2,732·18	2,524·05	...
Do. ...	184	Gem	...	...	668·26	351·43	...	...	...	1,713·45	1,370·20	...
Do. ...	151	(Gem Consolidated)	...	...	...	...	...	...	...	,777·50	616·30	...
Do. ...	151, 156 ...	Gem Consolidated leases ...	...	...	869·66	1,273·99 *·81	...	...	...	5,282·73	4,188·67	8·00
Do. ...	M.Ls. 52, 94 ...	Harbour View Gold and Copper Co., Ltd.	...	...	...	*67·68	...	...	...	1,206·67	1,645·41	360·11
Do. ...	M.Ls. 52, 94 ...	(Harbour View leases)	...	...	...	...	...	...	379·86	3,619·25	1,560·86	61·41
Do. ...	M.Ls. 52, 94 ...	(Harbour View leases)	...	...	...	...	...	...	...	3,403·50	2,227·62	1·88
Do. ...	98	Hillsborough	...	...	133·94	181·38	...	...	...	2,246·45	4,519·85	118·03
Do. ...	185	Mt. Iron	...	...	50·66	16·61 *7·12	...	...	...	160·66	44·86	...
Do. ...	M.L. 370 ...	North Harbour View	...	...	...	*7·67	...	...	...	...	7·67	...

Do. ...	M.L. 52, 94 ...	(Ravensthorpe G.M. Syndicate, N.L.)	...	...	...	...	...	...	...	1,124·00	433·94	164·98
Do. ...	74	Two Boys	...	...	512·00	856·03	...	...	3·90	10,834·72	7,690·64	...
Do. ...	...	Voided leases	...	...	...	...	...	113·28	172·41	16,014·80	9,274·49	1,991·82
Do. ...	...	Sundry claims	...	...	17·68	18·96	...	79·05	71·58	759·61	444·49	15·45
Mt. Desmond	M.L. 203 ...	(British Flag)	...	...	...	...	...	...	...	...	7·76	...
Do. ...	M.L. 203 ...	(British Flag: Phillips River Gold and Copper Co., Ltd.)	...	...	...	...	...	...	...	...	4·08	...
Do. ...	M.L. 208 ...	(Desmond)	...	...	...	...	...	...	...	...	·77	...
Do. ...	M.L. 208 ...	Desmond	...	...	...	*55·36	...	...	...	...	116·29	...
Do. ...	M.L. 208 ...	(Desmond: Phillips River Gold and Copper Co., Ltd.)	...	...	...	...	...	...	...	...	219·59	14·55
Do. ...	M.L. 95	Elverdton	...	...	...	*134·19	...	...	...	...	451·75	...
Do. ...	M.L. 95	(Elverdton: Phillips River Gold and Copper Co., Ltd.)	...	...	...	...	...	...	...	...	2,569·38	6,537·35
Do. ...	M.L. 95	(Elverdton: Phillips River Option Syndicate, N.L.)	...	...	...	...	...	...	...	...	9·63	...
Do. ...	M.L. 168 ...	(Elverton South: Phillips River Gold and Copper Co., Ltd.)	...	...	...	...	...	...	...	...	·94	...
Do. ...	M.L. 109 ...	(Mt. Desmond)	...	...	...	...	...	...	1·40	...	36·97	...
Do. ...	M.L. 109 ...	Mt. Desmond: Phillips River Gold and Copper Co., Ltd.	...	...	...	...	...	...	...	...	228·19	180·06
Do. ...	M.L. 199 ...	(P.L.P.)	...	...	...	...	...	...	...	...	13·69	7·41
Do. ...	M.L. 199 ...	(P.L.P.: Phillips River Gold and Copper Co., Ltd.)	...	...	...	...	...	...	...	...	3·14	...
Do. ...	...	Voided leases	...	...	...	...	...	...	...	9·00	129·10	152·22
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	...	31·21	51·01
Mt. Purchas...	...	Voided leases	...	...	...	...	...	...	4·38	346·05	293·13	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	4·75	4·68	...
Ravensthorpe	M.L. 368 ...	Lady Nina	...	...	28·77	25·29	...	...	...	28·77	25·29	...
Do. ...	M.L. 361 ...	Last Chance	...	...	...	*1·37	...	...	...	...	4·28	...
Do. ...	M.L. 16	(Marion Martin)	...	...	...	...	...	...	...	...	20·09	...
Do. ...	M.L. 16	Marion Martin	...	...	...	*84·06	...	...	...	...	138·07	...
Do. ...	M.L. 16	(Marion Martin: Phillips River Gold & Copper Co., Ltd.)	...	...	...	...	...	...	...	...	275·33	205·97
Do. ...	M.L. 363 ...	Mt. Benson	...	...	...	*16·74	...	...	...	...	92·34	...
Do. ...	M.L. 15	(Mt. Cattlin)	...	...	...	...	...	...	·49	200·00	85·50	...
Do. ...	M.L. 15	Mt. Cattlin	...	...	...	*546·11	...	...	...	...	636·86	...
Do. ...	M.L. 15	(Mt. Cattlin: Mt. Cattlin Copper Mining Co., Ltd.)	...	...	...	...	...	...	...	...	1,496·92	52·92
Do. ...	M.L. 15	(Mt. Cattlin: Phillips River Gold & Copper Co., Ltd.)	...	...	...	...	...	...	...	...	387·33	...
Do. ...	M.L. 15	(Mt. Cattlin: Phillips River Gold & Copper Co., Ltd.)	...	...	...	...	...	...	...	...	3,077·08	3,814·45
Do. ...	M.L. 342 ...	Surprise	...	...	...	*6·61	...	...	...	...	28·79	...
Do. ...	...	Voided leases	...	...	...	...	...	...	141·31	21,687·99	18,575·72	310·73
Do. ...	...	Sundry claims	...	...	8·07	36·55	...	157·82	...	1,974·34	1,141·94	20·65
West River ...	...	Voided leases	...	...	...	...	...	...	...	...	10·34	31·06
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	...	2·95	3·44
		From Goldfields generally :—										
		Sundry Parcels treated at:										
		Gem Battery	...	...	...	...	...	...	...	...	138·89	...
		Phillips River Smelter	...	...	...	124·57	...	...	...	...	385·96	493·66
		Two Boys Works	...	...	...	...	...	...	...	...	100·95	...
		Various Works	...	...	...	...	...	...	...	...	4·76	...
		Reported by Banks and Gold Dealers	...	...	...	...	...	122·05	...	...	...	...
		Total	...	...	**2,928·77**	**4,734·52**	...	**472·20**	**775·33**	**84,755·39**	**78,215·85**	**15,688·17**

* From Copper Ore.

TABLE IV.—*Production of Gold and Silver from all sources, etc.*—continued.

† Donnybrook Goldfield.

Mining Centre.	Number of Lease.	Registered Name of Company or Lease.	Total for 1917.					Total Production				
			Alluvial.	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.	Alluvial	Dollied and Specimens.	Ore treated.	Gold therefrom.	Silver.
			Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Tons (2,240lbs.)	Fine ozs.	Fine ozs.
Donnybrook...	...	Voided leases	...	...	...	...	...	23·24	...	1,613·30	816·23	...
Do. ...	...	Sundry claims	...	...	...	...	...	...	...	40·00	2·29	...
		Total	...	...	...	...	...	**23·24**	...	**1,653·30**	**818·52**	...

State generally.

	Sundry parcels treated at :—											
	Fremantle Trading Co., Ltd.—Fremantle	...	...	...	...	111·41	237·06	...	...	...	2,752·06	9,347·45
	Hainault Sulphide Mill—Kalgoorlie	...	...	...	...	...	...	...	...	...	21·28	...
	Various Works	...	...	...	...	...	...	...	...	27·00	4,411·14	481·77
	Sundry Specimens	...	...	...	...	...	...	...	2·87	...	...	...
	Reported by Banks and Gold Dealers	...	...	...	...	...	...	124·89	153·03	...	...	...
	Total	...	...	...	...	111·41	237·06	**124·89**	**155·90**	**27·00**	**7,184·48**	**9,829·22**

† Abolished 4th March, 1908.

TABLE V.

COMPARATIVE RETURN OF GOLD BULLION ENTERED FOR EXPORT AND RECEIVED AT THE PERTH BRANCH OF THE ROYAL MINT, DURING THE YEARS 1915, 1916, AND 1917, SHOWING IN FINE OUNCES THE QUANTITY RECORDED EACH MONTH, AND ITS VALUE.

MONTHS AND QUARTERS.	1915.				1916.				1917.			
	EXPORT.	MINT.	TOTAL.	VALUE.	EXPORT.	MINT.	TOTAL.	VALUE.	EXPORT.	MINT.	TOTAL.	VALUE.
	fine ozs.	fine ozs.	fine ozs.	£ s. d.	fine ozs.	fine ozs.	fine ozs.	£ s. d.	fine ozs.	fine ozs.	fine ozs.	£ s. d.
JANUARY	561·61	98,195·84	98,757·45	419,494 19 8	1,861·01	92,124·30	93,985·31	399,224 4 5	1,756·00	83,961·77	85,717·77	364,105 18 10½
FEBRUARY	606·80	103,664·48	104,268·28	442,903 10 0½	2,831·61	65,138·38	67,969·99	288,718 3 3¾	1,893·97	81,810·13	83,704·10	355,552 8 4
MARCH	1,892·11	91,872·09	93,764·20	398,285 0 1½	5,600·04	88,393·07	93,993·11	399,257 7 0¾	428·07	76,170·86	76,598·93	325,371 11 5½
1st *January to* 31st *March* ...	**3,060·52**	**293,729·41**	**296,789·93**	**1,260,683 9 9½**	**10,292·66**	**245,655·75**	**255,948·41**	**1,087,199 14 9½**	**4,078·04**	**241,942·76**	**246,020·80**	**1,045,029 18 7¾**
APRIL	1,016·95	101,591·99	102,608·94	435,855 1 5½	2,926·27	87,601·49	90,527·76	384,537 9 7½	...	82,143·56	82,143·56	348,923 13 3½
MAY	2,310·83	101,359·11	103,669·94	440,361 18 3½	576·78	83,300·89	83,877·67	356,289 13 10¾	1,269·38	78,165·27	79,434·65	337,416 18 11
JUNE	1,273·33	100,035·78	101,309·11	430,333 14 11	2,069·83	92,612·31	94,682·14	402,184 3 4	268·67	82,600·54	82,869·21	352,006 0 7
1st *January to* 30th *June* ...	**7,661·63**	**596,716·29**	**604,377·92**	**2,567,234 4 5¼**	**15,865·54**	**509,170·44**	**525,035·98**	**2,230,211 1 7¾**	**5,616·09**	**484,852·13**	**490,468·22**	**2,083,376 11 5¼**
JULY	554·79	98,859·42	99,414·21	422,284 14 5¼	912·48	91,725·00	92,637·48	393,499 0 0¾	384·62	81,165·80	81,550·42	346,404 3 3¾
AUGUST	1,079·11	99,941·49	101,020·60	429,108 4 8	2,212·39	89,522·54	91,734·93	389,665 4 3½	889·66	80,181·01	81,070·67	344,366 6 4
SEPTEMBER	2,018·92	100,833·07	102,851·99	436,887 9 8	3,892·46	85,978·47	89,870·93	381,747 8 11	...	81,760·81	81,760·81	347,297 16 11
1st *January to* 30th *September* ...	**11,314·45**	**896,350·27**	**907,664·72**	**3,855,514 13 2⅓**	**22,882·87**	**776,396·45**	**799,279·32**	**3,395,122 14 11**	**6,890·37**	**727,959·75**	**734,850·12**	**3,121,444 18 0**
OCTOBER	2,345·81	100,238·47	102,584·28	435,750 6 5¾	958·74	82,732·46	83,691·20	355,497 12 5	...	73,900·90	73,900·90	313,911 1 4¾
NOVEMBER	797·16	99,205·88	100,003·04	424,785 18 3½	1,015·45	87,322·27	88,337·72	375,234 15 8	...	80,641·12	80,641·12	342,541 14 1
DECEMBER	2,883·05	96,976·61	99,859·66	424,176 17 5¾	1,885·11	88,204·69	90,089·80	382,677 2 11	2,132·12	78,792·90	80,925·02	343,747 12 8½
Total	**17,340·47**	**1,192,771·23**	**1,210,111·70**	**5,140,227 15 5¼**	**26,742·17**	**1,034,655·87**	**1,061,398·04**	**4,508,532 5 11**	**9,022·49**	**961,294·67**	**970,317·16**	**4,121,645 6 2¼**

TOTAL OUTPUT OF GOLD BULLION ENTERED FOR EXPORT, AND RECEIVED AT THE PERTH BRANCH OF THE MINT, AND QUANTITY OBTAINED EACH YEAR FROM THE RESPECTIVE GOLDFIELDS.

Year.	KIMBERLEY.			PILBARA.			*a* WEST PILBARA.			ASHBURTON.		
	Export.	Mint.	Total.	Export.	Mint.	Total.	Export.	Mint.	Total.	Export.	Mint.	Total.
	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.
1886	270·17		270·17									
1887	4,359·37		4,359·37									
1888	3,124·82		3,124·82									
1889	2,204·28		2,204·28	9,992·63		9,992·63						
1890	4,002·42		4,002·42	14,363·01		14,363·01						
1891	2,415·07		2,415·07	10,623·32		10,623·32				750·31		750·31
1892	974·08		974·08	11,533·84		11,533·84				·63		·63
1893	1,450·77		1,450·77	10,465·43		10,465·43				418·43		418·43
1894	526·59		526·59	14,541·20		14,541·20				255·20		255·20
1895	784·27		784·27	17,464·65		17,464·65				483·76		483·76
1896	797·85		797·85	10,565·27		10,565·27				598·64		598·64
1897	495·67		495·67	10,695·67		10,695·67				928·75		928·75
1898	257·54		257·54	10,433·27		10,433·27	1,814·48		1,814·48	402·46		402·46
1899	728·52	275·94	1,004 46	17,888·69	473·96	18,362·65	1,749·39		1,749·39	214·26	252·10	466·36
1900	29·16	576·14	605·30	8,629·83	6,703·99	15,333·82	522·76	122·85	645·61	44·82	424·27	469·09
1901		601·26	601·26	36·68	10,223·75	10,260·43	78·38	357·46	435·84	7·70	50·24	57·94
1902	1·48	378·02	379·50		9,199·50	9,199·50		2,822·20	2,822·20			
1903		433·71	433·71	2·26	12,049·52	12,051·78		5,493·23	5,493·23		114·67	114·67
1904		31·51	31·51		6,931·27	6,931·27		4,320·82	4,320·82		125·96	125·96
1905		545·95	545·95	48·33	13,353·49	13,401·82		1,164·92	1,164·92		42·05	42·05
1906		647·77	647·77		4,956·14	4,956·14		755·35	755·35		138·84	138·84
1907		362·06	362·06		4,130·48	4,130·48		332·30	332·30		41·85	41·85
1908		338·00	338·00		8,172·26	8,172·26		1,076·68	1,076·68		45·87	45·87
1909		168·95	168·95		5,529·19	5,529·19		1,396·22	1,396·22		228·16	228·16
1910		487·25	487·25		5,894·32	5,894·32	63·66	1,387·66	1,451·32		173·06	173·06
1911		148·53	148·53		4,874·00	4,874·00	58·00	819·35	877·35		270·68	270·68
1912		294·55	294·55		6,274·04	6,274·04		747·34	747·34		38·73	38·73
1913		266·41	266·41		4,207·37	4,207·37		1,237·85	1,237·85		39·26	39·26
1914		196·46	196·46		5,544·64	5,544·64		1,262·73	1,262·73		46·14	46·14
1915		220·94	220·94		7,411·06	7,411·06	·64	1,239·94	1,240·58		16·63	16·63
1916		249·58	249·58		6,700·93	6,700·93		560·79	560·79		31·16	31·16
1917		108·90	108·90		4,673·40	4,673·40	63·80	559·95	623·75		21·21	21·21
Total	**22,422·06**	**6,331·93**	**28,753·99**	**147,284·08**	**127,303·31**	**274,587·39**	**4,351·11**	**25,657·64**	**30,008·75**	**4,104·96**	**2,100·88**	**6,205·84**

Year.	*d* YALGOO.			*c* MT. MARGARET.			*e* NORTH COOLGARDIE.			*f* BROAD ARROW.		
	Export.	Mint.	Total.	Export.	Mint.	Total.	Export.	Mint.	Total.	Export.	Mint.	Total.
	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.
1886												
1887												
1888												
1889												
1890												
1891												
1892												
1893												
1894												
1895												
1896							15,351·71		15,351·71			
1897	1,819·81		1,819·81	7,770·22		7,770·22	66,697·57		66,697·57	3,720·87		3,720·87
1898	3,360·44		3,360·44	38,706·19		38,706·19	63,181·09		63,181·09	22,035·17		22,035·17
1899	5,089·83	4,643·00	9,732·83	58,064·19	15,128·98	73,193·17	54,489·26	40,059·43	94,548·69	32,224·04	7,607·18	39,831·22
1900	462·55	7,918·53	8,381·08	65,998·38	60,607·45	126,605·83	15,660·11	79,340·01	95,000·12	29,955·07	12,860·80	42,815·87
1901	6·80	8,330·42	8,337·22	65,352·46	114,840·17	180,192·63	6,620·82	122,806·58	129,427·40	9,313·50	17,066·09	26,379·59
1902	483·32	4,396·91	4,880·23	61,846·01	124,306·49	186,152·50	4,064·18	156,856·06	160,920·24	2,128·49	13,665·52	15,794·01
1903	47·08	1,430·59	1,477·67	65,416·09	125,437·19	190,853·28	1,348·74	167,153·90	168,502·64	5,201·12	18,245·41	23,446·53
1904		2,796·23	2,796·23	63,180·89	119,889·93	183,070·82	1,614·64	139,518·37	141,133·01	318·83	20,660·78	20,979·61
1905	76·75	4,549·25	4,626·00	34,949·75	153,203·05	188,152·80	1,193·71	145,615·47	146,809·18	603·66	15,300·58	15,904·24
1906		4,883·17	4,883·17	21,869·88	137,022·23	158,892·11	1,140·45	107,890·76	109,031·21	1,245·75	16,841·70	18,087·45
1907		3,199·60	3,199·60	23,989·43	154,059·92	178,049·35	13,240·87	72,701·05	85,941·92	4,292·34	13,610·81	17,903·15
1908		456·43	456·43	19,324·02	147,879·90	167,203·92	6,701·28	76,700·77	83,402·05	3,613·64	7,946·35	11,559·99
1909		626·80	626·80	24,123·15	135,914·94	160,038·09	6,389·19	66,631·79	73,020·98	6,711·37	4,863·50	11,574·87
1910		725·79	725·79	28,507·31	131,976·01	160,483·32	1,889·24	60,886·71	62,775·95		321·40	321·40
1911		294·80	294·80	21,302·54	131,280·97	152,583·51	209·17	60,270·42	60,479·59	176·57	280·54	457·11
1912		1,169·18	1,169·18	4,835·73	101,353·79	106,189·52	53·68	49,946·08	49,999·76		4·33	4·33
1913		2,837·97	2,837·97	157·14	89,408·71	89,565·85		60,855·69	60,855·69		8,947·58	8,947·58
1914		1,403·35	1,403·35	184·66	103,550·71	103,735·37		73,943·49	73,943·49		3,074·74	3,074·74
1915		4,218·34	4,218·34	68·20	107,934·53	108,002·73	668·99	56,372·00	57,010·99		14,447·56	14,447·56
1916		4,336·27	4,336·27	642·48	111,277·58	111,920·06		39,714·46	39,714·46		6,815·74	6,815·74
1917		1,108·11	1,108·11		111,357·98	111,357·98		28,306·34	28,306·34		9,185·65	9,185·65
Total	**11,346·58**	**59,324·74**	**70,671·32**	**606,288·72**	**2,176,430·53**	**2,782,719·25**	**260,484·70**	**1,605,569·38**	**1,866,054·08**	**121,540·42**	**191,746·26**	**313,286·68**

Year.	*h* DUNDAS.			*i* PHILLIPS RIVER.			¶ DONNYBROOK.			STATE GENERALLY.		
	Export.	Mint.	Total.	Export.	Mint.	Total.	Export.	Mint.	Total.	Export.	Mint.	Total.
	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.
1886												
1887												
1888												
1889												
1890												
1891												
1892												
1893	132·37		132·37									
1894	204·31		204·31									
1895	216·40		216·40									
1896	3,891·77		3,891·77									
1897	17,275·36		17,275·36									
1898	28,655·52		28,655·52									
1899	39,980·65	423·71	40,404·36				277·27	175·49	452·76		809·07	809·07
1900	8,144·72	28,254·19	36,398·91					237·56	237·56	5,644·83	1,450·08	7,094·91
1901	5,411·46	29,752·16	35,163·62					4·20	4·20	215·91	1,511·63	1,727·54
1902	4,401·31	26,714·16	31,115·47	2,946·53	4,422·56	7,369·09	4·94	57·64	62·58	7·77	2,115·52	2,123·29
1903	1,311·53	33,905·88	35,217·41	2,136·09	5,441·68	7,577·77		82·64	82·64	53·44	2,839·44	2,892·88
1904	1,834·03	31,347·06	33,181·09	936·76	2,047·59	2,984·35				·86	1,344·25	1,345·11
1905	1,324·48	27,411·31	28,735·79	2,060·46	1,458·44	3,518·90				70·41	1,515·58	1,585·99
1906	1,111·18	20,198·62	21,309·80	945·65	1,439·03	2,384·68				284·38	763·15	1,047·53
1907		22,830·71	22,830·71	4,043·86	1,514·90	5,558·76				799·48	285·47	1,084·95
1908		41,203·39	41,203·39	969·00	3,631·02	4,600·02				15·91	1,953·56	1,969·47
1909		35,894·72	35,894·72	4,025·81	3,605·75	7,631·56				46·78	455·34	502·12
1910		43,260·55	43,260·55	3,271·89	5,031·60	8,303·49				48·67	222·89	271 56
1911		48,361·14	48,361·14	1,374·96	4,241·05	5,616·01				209·03	129·01	338·04
1912		38,373·40	38,373·40		3,292·05	3,292·05				687·32	142·72	830·04
1913		27,090·46	27,090·46		3,515·02	3,515·02				385·58	230·17	615·75
1914		27,803·51	27,803 51		395 67	395·67				280·34	287·86	568·20
1915		24,148·61	24,148·61	2,011·73	263·06	2,274·79				188·32	318·59	506·91
1916		21,956·42	21,956·42	4,119·93	181·13	4,301·06				8,188·93	357·85	8,546·78
1917		19,346·27	19,346·27	2,995·76	196·24	3,192·00				356·72	216·30	573·02
Total	**113,895·09**	**548,276·27**	**662,171·36**	**31,838·43**	**40,676·79**	**72,515·22**	**282·21**	**557·53**	**839·74**	**17,484·68**	**16,948·48**	**34,433·16**

a Prior to 1st May, 1898, included with Pilbara. *d* Prior to 1st April, 1897, included with Murchison. *c* From 1st August, 1897.
e Prior to 1st May, 1896, included with Coolgardie. *f* From 1st September, 1897. *h* Prior to 1893 included with Yilgarn.
i Prior to 1902, included in State generally. ¶ Abolished 4th March, 1908.

ROYAL MINT, FROM 1ST JANUARY, 1886, TO 31ST DECEMBER 1917, SHOWING, IN FINE OUNCES, THE GOLDFIELDS, AND THE TOTAL ANNUAL VALUE.

Year.	*b* GASCOYNE.			*c* PEAK HILL.			*c* EAST MURCHISON.			MURCHISON.		
	Export.	Mint.	Total.	Export.	Mint.	Total.	Export.	Mint.	Total.	Export.	Mint.	Total.
	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.
1886	...	...	...	...	...	...	...	...	...	...	...	...
1887	...	...	...	...	...	...	...	...	...	...	...	...
1888	...	...	...	...	...	...	...	...	...	...	...	...
1889	...	...	...	...	...	...	...	...	...	...	...	...
1890	...	...	...	...	...	...	...	...	...	...	...	...
1891	...	...	...	...	...	...	...	...	...	1,846·83	...	1,846·83
1892	...	...	...	...	...	...	...	...	...	21,789·19	...	21,789·19
1893	...	...	...	...	...	...	...	...	...	18,974·77	...	18,974·77
1894	...	...	...	...	...	...	...	...	...	47,365·54	...	47,365·54
1895	...	...	...	...	...	...	...	...	...	58,575·66	...	58,575·66
1896	...	...	...	...	...	...	...	...	...	63,769·17	...	63,769·17
1897	...	...	...	4,571·38	...	4,571·38	8,457·34	...	8,457·34	74,154·67	...	74,154·67
1898	...	...	...	12,288·93	...	12,288·93	35,393·19	...	35,393·19	83,794·22	...	83,794·22
1899	297·96	76·63	374·59	14,064·24	14,558·64	28,622·88	33,826·08	3,361·95	37,188·03	61,586·09	22,074·71	83,660·80
1900	...	77·02	77·02	9,528·14	16,119·79	25,647·93	23,545·54	28,671·55	52,217·09	53,815·70	43,423·77	97,239·47
1901	6·59	16·82	23·41	231·85	19,352·44	19,584·29	29,780·63	40,557·07	70,337·70	92,149·56	38,996·10	131,145·66
1902	...	107·29	107·29	85·93	28,044·55	28,130·48	25,450·63	53,583·10	79,033·73	141,731·91	40,926·08	182,657·99
1903	...	30·76	30·76	203·60	29,395·32	29,598·92	21,878·06	65,334·05	87,212·11	154,012·88	54,348·53	208,361·41
1904	...	10·95	10·95	...	17,475·33	17,475·33	21,296·85	64,550·36	85,847·21	165,232·67	52,683·16	217,915·83
1905	...	21·34	21·34	125·01	13,371·75	13,496·76	1,361·68	89,249·93	90,611·61	131,656·36	92,742·05	224,398·41
1906	...	78·73	78·73	...	2,038·62	2,038·62	140·68	95,168·89	95,309·57	79,172·69	109,936·80	189,109·49
1907	...	8·44	8·44	...	5,918·75	5,918·75	2,891·66	117,735·69	120,627·35	54,811·74	115,497·50	170,309·24
1908	...	31·82	31·82	...	9,864·36	9,864·36	10,701·24	137,028·14	147,729·38	45,483·05	111,540·54	157,023·59
1909	...	7·37	7·37	...	7,322·29	7,322·29	11,599·83	136,637·67	148,237·50	24,682·47	107,167·27	131,849·74
1910	...	26·31	26·31	...	3,057·25	3,057·25	1,557·78	137,190·44	138,748·22	19,568·85	111,414·23	130,983·08
1911	...	7·87	7·87	...	134·23	134·23	11·77	96,442·87	96,454·64	13,919·70	109,444·91	123,364·61
1912	...	6·55	6·55	...	196·11	196·11	...	90,397·82	90,397·82	6,377·17	105,245·32	111,622·49
1913	...	...	...	...	258·10	258·10	195·78	80,122·11	80,317·89	5,749·47	115,694·96	121,444·43
1914	...	4·11	4·11	...	85·66	85·66	354·75	65,609·61	65,964·36	6,443·82	111,822·67	118,266·49
1915	...	65·55	65·55	·56	446·00	446·56	268·57	52,926·34	53,194·91	8,669·79	96,610·36	106,280·15
1916	...	60·53	60·53	...	155·01	155·01	902·67	30,284·85	31,187·52	6,694·02	77,369·19	84,063·21
1917	...	...	...	...	...	...	...	7,942·96	7,942·96	1,082·93	94,142·67	95,225·60
Total	**304·55**	**638·09**	**942·64**	**41,099·64**	**167,794·20**	**208,893·84**	**229,614·73**	**1,392,795·40**	**1,622,410·13**	**1,443,110·92**	**1,611,080·82**	**3,054,191·74**

Year.	*e* NORTH-EAST COOLGARDIE.			*e* EAST COOLGARDIE.			*g* COOLGARDIE.			YILGARN.		
	Export.	Mint.	Total.	Export.	Mint.	Total.	Export.	Mint.	Total.	Export.	Mint.	Total.
	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.	fine ozs.
1886	...	...	...	...	...	...	...	...	...	...	...	...
1887	...	...	...	...	...	...	...	...	...	...	...	...
1888	...	...	...	...	...	...	...	...	...	...	...	...
1889	...	...	...	...	...	...	...	...	...	1,662·61	...	1,662·61
1890	...	...	...	...	...	...	...	...	...	2,036·99	...	2,036·99
1891	...	...	...	...	...	...	...	...	...	11,480·61	...	11,480·61
1892	...	...	...	...	...	...	...	...	...	18,973·91	...	18,973·91
1893	...	...	...	...	...	...	...	...	...	67,760·73	...	67,760·73
1894	...	...	...	...	...	...	94,227·58	...	94,227·58	28,178·31	...	28,178·31
1895	...	...	...	...	...	...	111,919·21	...	111,919·21	17,666·25	...	17,666·25
1896	3,679·63	...	3,679·63	76,297·42	...	76,297·42	61,848·03	...	61,848·03	14,819·20	...	14,819·20
1897	29,437·40	...	29,437·40	268,411·95	...	268,411·95	93,312·00	...	93,312·00	16,097·78	...	16,097·78
1898	112 039·58	...	112,039·58	402,847·31	...	402,847·31	113,816·75	...	113,816·75	10,463 35	...	10,463·35
1899	57,674·82	14,940·55	72,615·37	796,696·63	29,567·58	826,264·21	101,589·22	24,700·89	126,290·11	6,919·11	8,114·60	15,033·71
1900	10,400·57	36,233·90	46,634·47	600,328·29	125,105·24	725,433·53	60,988·33	46,167·62	107,155·95	688·47	25,628·83	26,317·30
1901	6,798·56	39,024·18	45,822·74	698,042·56	238,840·93	936,883·49	9,584·35	70,720·21	80,304·56	49·15	26,677·85	26,727·00
1902	549·07	46,316 67	46,865·74	460,462·26	546,964·68	1,007,426·94	2,872·61	80,887·85	83,760·46	3·31	22,232·80	22,236·11
1903	4,308·99	36,145·75	40,454·74	570,447·27	580,790·97	1,151,238·24	7,318·63	69,681·38	77,000·01	...	22,761·00	22,761·00
1904	55·09	33,262·10	33,317·19	555,016·48	584,579·88	1,139,596·36	1,100·07	61,073·11	62,173·18	28·87	29,965·37	29,994·24
1905	2,187·11	40,220·19	42,407·30	479,254·37	613,103·20	1,092,357·57	177·80	62,066·34	62,244·14	...	25,291·11	25,291·11
1906	1,590·31	30,943·82	32,534·13	454,645·84	612,546·81	1,067,192·65	103·78	60,474·81	60,578·59	...	25,570·77	25,570·77
1907	3,132·83	25,399·75	28,532·58	323,550·05	643,139·11	966,689·16	1,050·88	61,670·65	62,721·53	...	23,311·41	23,311·41
1908	925·44	23,902·44	24,827·88	267,748·62	657,936 89	925,685·51	871·76	40,982·65	41,854·41	...	20,866·10	20,866·10
1909	1,774·45	24,566·87	26,341·32	306,462·21	620,612·07	927,074·28	350·91	36,311·70	36,662·61	204·41	20,958·23	21,162·64
1910	...	19,082·01	19,082·01	179,062·94	653,211·05	832,273·99	...	38,264·02	38,264·02	...	24,049·13	24,049·13
1911	...	18,528·97	18,528·97	123,160·54	686,386·80	809,547·34	...	33,840·93	33,840·93	...	14,688·17	14,688·17
1912	194·22	14,475·38	14,669·60	71,429·00	717,356·45	788,785·45	...	42,327·65	42,327·65	...	27,439·38	27,439·38
1913	...	11,210·69	11,210·69	70,078·57	722,593·22	792,671·79	...	35,593·00	35,593·00	9,688·59	63,679·58	73,368·17
1914	...	5,210·22	5,210·22	40,393·05	677,609·26	718,002·31	...	21,957·78	21,957·78	3,798·03	81,713·56	85,511·59
1915	...	8,773·97	8,773·97	5,493·67	709,061·79	714,555·46	...	17,590·21	17,590·21	...	90,705·75	90,705·75
1916	...	1,996·06	1,996·06	6,194·14	635,425·68	641,619·82	...	12,381·82	12,381·82	...	84,800·82	84,800·82
1917	...	769·16	769·16	4,523·28	602,459·51	606,982·79	...	6,500·66	6,500·66	...	74,399·36	74,399·36
Total	**234,748·07**	**431,002·68**	**665,750·75**	**6,760,546·45**	**10,657,291·12**	**17,417,837·57**	**661,131·91**	**823,193·28**	**1,484,325·19**	**210,519·68**	**712,853·82**	**923,373·50**

Year.	GRAND TOTAL.			
	Export.	Mint.	Total.	Value.
	fine ozs.	fine ozs.	fine ozs.	£ s. d.
1886	270·17	...	270·17	1,147 12 2½
1887	4,359·37	...	4,359·37	18,517 8 6¼
1888	3,124·82	...	3,124·82	13,273 7 10½
1889	13,859·52	...	13,859·52	58,871 9 11¼
1890	20,402·42	...	20,402·42	86,663 19 5
1891	27,116·14	...	27,116·14	115,182 0 10½
1892	53,271·65	...	53,271·65	226,238 11 8
1893	99,202·50	...	99,202·50	421,385 8 8½
1894	185,298·73	...	185,298·73	787,098 19 6
1895	207,110·20	...	207,110·20	879,748 4 2¼
1896	251,618·69	...	251,618·69	1,068,808 5 2
1897	603,846·44	...	603,846·44	2,564,976 12 9½
1898	939,489·49	...	939,489·49	3,990,697 13 10
1899	1,283,360·25	187,244·41	1,470,604·66	6,246,731 10 7¾
1900	894,387·27	519,923·59	1,414,310·86	6,007,810 13 4½
1901	923,686·96	779,729·56	1,703,416·52	7,235,653 9 1
1902	707,039·75	1,163,997·60	1,871,037·35	7,947,661 9 7¾
1903	833,685·78	1,231,115·62	2,064,801·40	8,770,718 17 0½
1904	810,616·04	1,172,614·03	1,983,230·07	8,424,225 17 3¾
1905	655,089·88	1,300,226·00	1,955,315·88	8,305,653 18 5½
1906	562,250·59	1,232,296·01	1,794,546·60	7,622,749 8 7
1907	431,803·14	1,265,750·45	1,697,553·59	7,210,749 6 2¾
1908	356,353·96	1,291,557·17	1,647,911·13	6,999,881 10 10½
1909	386,370·58	1,208,898·83	1,595,269·41	6,776,273 14 7¼
1910	233,970·34	1,236,661·68	1,470,632·02	6,246,847 15 0
1911	160,422·28	1,210,445·24	1,370,867·52	5,823,075 1 9¾
1912	83,577·12	1,199,080·87	1,282,657·99	5,448,384 16 5¾
1913	86,255·13	1,227,788·15	1,314,043·28	5,581,701 1 2¾
1914	51,454·65	1,181,522·17	1,232,976·82	5,237,352 12 6½
1915	17,340·47	1,192,771·23	1,210,111·70	5,140,227 15 5½
1916	26,742·17	1,034,655·87	1,061,398·04	4,508,532 5 11
1917	9,022·49	961,294·67	970,317·16	4,121,645 6 2¼
TOTAL	10,922,398·99	20,597,573.15	31,519,972·14	133,888,331 5 1¼

b Prior to March, 1899, included with Ashburton. *c* From 1st August, 1897. *e* Prior to 1st May, 1896, included with Coolgardie. *g* Declared 5th April, 1894, to which dated included with Yilgarn.

TABLE VII.

MONTHLY RETURN OF GOLD, CONTAINED IN BULLION, FURNACE PRODUCTS, AND ORE, ENTERED FOR EXPORT DURING 1917.

MONTH.	UNITED KINGDOM.			VICTORIA.			NEW SOUTH WALES.			SOUTH AUSTRALIA.			TOTALS.		
	Bullion.	Furnace Products.	Ore.	Bullion.	Furnace Products.	Ore.	Bullion.	Furnace Products.	Ore.	Bullion.	Furnace Products.	Ore.	Bullion.	Furnace Products.	Ore.
1917.	Fine ozs.	Estimated fine ozs.	Estimated fine ozs.	Fine ozs.	Estimated fine ozs.	Estimated fine ozs.	Fine ozs.	Estimated fine ozs.	Estimated fine ozs.	Fine ozs.	Estimated fine ozs.	Estimated fine ozs.	Fine ozs.	Estimated fine ozs.	Estimated fine ozs.
January	...	...	...	1,082·93	...	...	...	63·80	...	...	609·27	...	1,082·93	673·07	...
February	...	...	...	...	...	...	...	607·14	...	...	1,286·83	...	...	1,893·97	...
March	...	...	...	...	...	...	...	...	...	...	428·07	...	...	428·07	...
April	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
May	...	...	...	...	...	...	...	1,181·33	...	...	88·05	...	...	1,269·38	...
June	...	...	...	...	...	...	...	...	...	...	268·67	...	...	268·67	...
July	...	...	...	...	...	...	...	...	...	...	384·62	...	...	384·62	...
August	...	...	...	...	...	...	...	581·02	...	...	308·64	...	...	889·66	...
September	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
October	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
November	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
December	...	...	...	...	...	...	...	804·70	...	...	1,327·42	...	...	2,132·12	...
TOTALS	...	...	...	1,082·93	...	...	...	3,237·99	...	...	4,701·57	...	1,082·93	7,939·56	...

TABLE VIII.

RETURN OF GOLD BULLION RECEIVED AT THE PERTH BRANCH OF THE ROYAL MINT FROM MAY, 1899, TO THE 31ST DECEMBER, 1917, SHOWING IN GROSS OUNCES THE QUANTITY OBTAINED FROM THE RESPECTIVE GOLDFIELDS AND OTHER COUNTRIES, AND THE ACTUAL VALUE THEREOF.

Year.	Kimberley.	Pilbara.	West Pilbara.	Ashburton.	Gascoyne.	Peak Hill.	East Murchison.	Murchison.	Yalgoo.	Mt. Margaret.	North Coolgardie.	Broad Arrow.	North-East Coolgardie.
	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
1899	308·45	529·80	...	281·80	85·65	16,274·00	3,758·07	24,675·64	5,190·05	16,911·54	44,779·38	8,503·50	16,700·90
1900	644·02	7,493·88	137·33	474·26	86·10	18,019·08	32,049·74	48,540·12	8,851·52	67,748·45	88,688·14	14,376·10	40,503·12
1901	663·37	11,279·93	394·38	55·42	18·56	21,351·67	44,746·88	43,024·65	9,191·01	126,703·91	135,493·31	18,829·13	43,055·63
1902	439·93	10,706·03	3,284·37	...	124·86	32,637·17	62,357·98	47,628·18	5,116·94	144,663·12	182,543·06	15,903·42	53,901·58
1903	511·75	14,217·53	6,481·58	135·30	36·29	34,684·27	77,089·29	64,127·18	1,687·99	148,006·49	197,229·08	21,528·20	42,649·25
1904	37·69	8,293·58	5,170·06	150·73	13·10	20,909·99	77,237·31	63,037·71	3,345·82	143,453·51	166,939·82	24,721·53	39,799·55
1905	656·34	16,053·42	1,400·46	50·54	25·65	16,075·36	107,295·17	111,493·34	5,469·06	184,178·87	175,057·14	18,394·17	48,352·22
1906	785·23	6,007·79	915·63	168·30	95·43	2,471·21	115,363·22	133,264·79	5,919·37	166,097·63	130,784·60	20,415·43	37,509·91
1907	431·72	4,924·97	396·22	49·89	10·06	7,057·22	140,382·15	137,713·43	3,815·06	183,693·29	86,685·09	16,228·85	30,285·39
1908	400·19	9,676·11	1,292·97	54·32	37·68	11,679·58	162,243·76	132,066·00	2,625·14	175,092·47	90,815·08	9,408·64	28,300·91
1909	203·59	6,662·82	1,682·49	274·93	8·89	8,823·58	164,652·43	129,139·74	755·31	163,781·55	80,293·29	5,860·66	29,603·84
1910	586·44	7,094·46	1,670·20	208·31	31·67	3,679·72	165,123·37	134,098·94	873·58	158,847·24	73,283·66	386·84	22,967·23
1911	183·78	6,033·33	1,014·60	334·38	9·78	165·36	119,267·86	135,342·96	363·85	162,319·77	74,536·34	346·78	22,917·38
1912	361·11	7,674·55	912·60	47·77	8·09	237·96	110,585·25	128,679·43	1,410·49	124,123·10	61,018·13	5·32	17,705·86
1913	319·55	5,048·77	1,491·66	47·37	...	564·67	96,270·04	139,021·56	3,410·52	107,391·67	73,160·41	10,814·52	13,452·90
1914	238·83	6,750·56	1,538·31	56·09	5·00	104·45	79,785·02	135,990·48	1,705·85	125,937·60	89,904·49	3,727·56	6,318·12
1915	270·76	9,084·52	1,540·93	20·50	81·05	550·77	65,111·82	118,861·14	5,208·56	132,819·64	69,318·34	17,810·14	10,808·78
1916	306·92	8,265·75	692·68	38·34	74·07	190·21	37,169·30	95,071·24	5,320·33	136,731·10	48,799·86	8,415·40	2,441·68
1917	133·03	5,770·70	683·84	25·85	...	...	9,660·88	115,360·36	1,366·18	136,343·74	34,650·24	11,300·38	936·97
Total ...	7,482·70	151,568·50	30,700·31	2,474·10	751·93	195,476·27	1,670,149·54	1,937,136·89	71,626·63	2,604,844·69	1,903,979·46	226,976·57	508,211·22

Year.	East Coolgardie.	Coolgardie.	Yilgarn.	Dundas.	*Phillips River.	†Donny-brook.	State generally.	TOTAL. Western Australia. Quantity.	Western Australia. Actual Value.	TOTAL. Other Countries. Quantity.	Other Countries. Actual Value.	GRAND TOTAL. Quantity.	Grand Total. Actual Value.
	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	£ s. d.	ozs.	£ s. d.	ozs.	£ s. d.
1899 ...	33,051·33	27,611·24	9,070·70	473·63	...	196·17	904·39	209,306·24	762,546 11 6	103·46	336 18 3	209,409·70	762,883 9 9
1900 ...	139,845·60	51,607·26	28,648·51	31,583·20	...	265·55	1,620·93	581,182·91	2,096,212 14 2	17·49	44 15 7	581,200·40	2,096,257 9 9
1901 ...	263,514·75	78,026·07	29,433·84	32,825·75	...	4·64	1,667·79	860,280·69	3,033,311 0 4	92·25	297 5 8	860,372·94	3,033,608 6 0
1902 ...	636,536·52	94,134·17	25,873·68	31,088·91	5,146·80	67·08	2,461·98	1,354,615·78	4,791,303 18 1	16·27	38 10 2	1,354,632·05	4,791,342 8 3
1903 ...	685,289·82	82,218·79	26,856·28	40,006·39	6,420·79	97·52	3,350·32	1,452,624·11	5,139,852 11 9	294·78	703 14 10	1,452,918·89	5,140,556 6 7
1904 ...	699,475·35	73,076·66	35,854·87	37,508·11	2,450·03	...	1,608·47	1,403,083·89	4,955,870 9 0	263·05	614 11 9	1,403,346·94	4,956,485 0 9
1905 ...	737,065·14	74,615·36	30,404·65	32,953·56	1,753·32	...	1,821·99	1,563,115·76	5,475,841 2 10	525·80	1,491 0 7	1,563,641·56	5,477,332 3 5
1906 ...	742,525·99	73,307·24	30,996·76	24,484·65	1,744·38	...	925·10	1,493,782·66	5,330,245 12 1	413·86	974 16 0	1,494,196·52	5,331,220 8 1
1907 ...	766,846·83	73,532·99	27,795·35	27,222·21	1,806·30	...	340·39	1,509,217·41	5,416,812 0 7	640·51	1,663 4 3	1,509,857·92	5,418,475 4 10
1908 ...	779,009·10	48,524·18	22,835·58	48,785·54	4,299·19	...	2,080·42	1,529,226·86	5,386,858 15 8	1,313·84	3,885 2 3	1,530,540·70	5,390,743 17 11
1909 ...	747,856·04	43,756·68	25,255·30	43,254·22	4,345·04	...	548·71	1,456,759·11	5,143,035 17 1	882·56	1,109 6 7	1,457,641·67	5,144,145 3 8
1910 ...	786,209·41	46,054·82	28,945·68	52,068·70	6,056·08	...	268·26	1,488,454·61	5,163,100 17 11	2,251·71	1,670 11 7	1,490,706·32	5,164,771 9 6
1911 ...	848,725·06	41,861·54	18,190·20	59,831·49	5,242·16	...	159·90	1,496,846·52	5,143,795 10 5	452·22	915 19 4	1,497,298·74	5,144,711 9 9
1912 ...	876,900·05	51,732·78	33,429·29	52,220·76	4,026·32	...	174·26	1,471,253·12	5,106,466 9 1	641·47	1,527 8 0	1,471,894·59	5,107,993 17 1
1913 ...	867,887·30	42,738·63	76,581·73	47,535·02	4,221·40	...	277·70	1,490,235·42	5,204,738 18 3	697·50	1,247 12 7	1,490,932·92	5,205,986 10 10
1914 ...	824,280·77	26,696·51	99,410·57	47,487·27	480·65	...	350·48	1,450,768·61	5,016,905 19 0	915·24	1,726 5 1	1,451,683·85	5,018,632 4 1
1915 ...	872,406·66	21,593·44	111,539·75	42,283·16	324·48	...	392·28	1,480,026·72	5,060,196 7 6	1,260·07	2,610 8 11	1,481,286·79	5,062,806 16 5
1916 ...	780,354·90	15,238·33	104,136·12	36,653·26	221·89	...	437·33	1,280,558·71	4,405,278 13 10	1,059·26	2,060 6 9	1,281,617·97	4,407,339 0 7
1917 ...	737,833·22	7,968·62	91,168·91	34,685·39	238·50	...	264·27	1,188,391·08	4,074,112 6 7	1,016·70	1,905 17 7	1,189,407·78	4,076,018 4 2
Total ...	12,825,613·84	974,295·31	856,427·77	722,951·22	48,777·33	630·96	19,654·97	24,759,730·21	86,706,485 15 8	12,858·04	24,823 15 9	24,772,588·25	86,731,309 11 5

* Prior to 1902 included in State generally.

† Abolished 4th March, 1908.

PART II.—MINERALS OTHER THAN GOLD.

TABLE IX.

GENERAL RETURN OF ORE AND MINERALS, OTHER THAN GOLD, SHOWING THE QUANTITY PRODUCED AND THE VALUE THEREOF AS REPORTED TO THE MINES DEPARTMENT FROM THE RESPECTIVE GOLDFIELDS AND MINERAL FIELDS, DURING 1917, AND PREVIOUS YEARS.

BLACK TIN.

Period.	Pilbara Goldfield—Marble Bar District.				Greenbushes Mineral Field.				Total.			
	Quantity.			Value.	Quantity.			Value.	Quantity.			Value.
	Lode.	Stream.	Total.		Lode.	Stream.	Total.		Lode.	Stream.	Total.	
	tons.	tons.	tons.	£	tons.	tons.	tons.	£	tons.	tons.	tons.	£
Previous to 1899 ...	...	75·45	75·45	4,419	...	1,590·33	1,590·33	66,108	...	1,665·78	1,665·78	70,527
1899	...	57·50	57·50	3,612	...	277·32	277·32	21,658	...	334·82	334·82	25,270
1900	...	387·87	387·87	27,174	...	435·62	435·62	29,528	...	823·49	823·49	56,702
1901	...	412·98	412·98	21,148	...	321·34	321·34	18,852	...	734·32	734·32	40,000
1902	...	216·35	216·35	15,103	...	403·21	403·21	24,680	...	619·56	619·56	39,783
1903	...	292·11	292·11	21,528	...	524·94	524·94	34,362	...	817·05	817·05	55,890
1904	...	320·86	320·86	24,355	...	533·64	533·64	34,462	...	854·50	854·50	58,817
1905	...	435·74	435·74	33,880	...	643·52	643·52	52,960	...	1,079·26	1,079·26	86,840
1906	36·59	675·06	711·65	78,449	26·18	757·10	783·28	79,195	62·77	1,432·16	1,494·93	157,644
1907	104·13	749·56	853·69	85,603	40·40	729·60	770·00	73,045	144·53	1,479·16	1,623·69	158,648
1908	31·00	372·03	403·03	30,636	13·90	562·43	576·33	41,046	44·90	934·46	979·36	71,682
1909	81·75	212·21	293·96	22,431	44·40	414·35	458·75	34,786	126·15	*628·08	*754·23	†57,335
1910	33·75	119·75	153·50	12,899	25·06	292·65	317·71	27,974	58·81	412·40	471·21	40,873
1911	27·35	121·30	148·65	16,064	27·82	383·30	411·12	44,638	55·17	504·60	559·77	60,702
1912	10·25	113·13	123·38	14,993	14·90	415·55	430·45	50,166	25·15	528·68	553·83	65,159
1913	14·15	124·95	139·10	16,506	29·06	429·42	458·48	50,954	43·21	‡557·72	‡600·93	§67,717
1914	12·35	75·05	87·40	8,168	5·32	239·22	244·54	21,145	17·67	314·27	331·94	29,313
1915	5·05	73·60	78·65	7,633	7·55	239·78	247·33	21,431	12·60	313·38	325·98	29,064
1916	6·50	146·67	153·17	15,939	9·94	271·80	281·74	27,319	16·44	418·47	434·91	43,258
1917	4·05	65·00	69·05	9,264	11·18	226·74	237·92	29,928	15·23	291·74	306·97	39,192
Total	**366·92**	**5,047·17**	**5,414·09**	**469,804**	**255·71**	**9,691·86**	**9,947·57**	**784,237**	**622·63**	**14,743·90**	**15,366·53**	**1,254,416**

* Includes tons 1·52, the produce of Cue District. † Includes £118, value of tons 1·52, the produce of Cue District, ‡ Includes tons 3·20, the produce of Cue District and tons ·15 of Coolgardie District. § Includes £242, value of tons 3·20 the produce of Cue District, and £15, value of ·15 tons of Coolgardie District.

TANTALITE.

Period.	Pilbara Goldfield—Marble Bar District.				Greenbushes Mineral Field.				Total.			
	Quantity.			Value.	Quantity.			Value.	Quantity.			Value.
	Lode.	Stream.	Total.		Lode.	Stream.	Total.		Lode.	Stream.	Total.	
	tons.	tons.	tons.	£	tons.	tons.	tons.	£	tons.	tons.	tons.	£
Previous to 1899 ...	...	...	...	...	...	...	...	...	...	...	...	...
1899	...	...	...	...	...	...	...	...	...	...	...	...
1900	...	...	...	...	...	...	...	...	...	...	...	...
1901	...	...	...	...	...	...	...	...	...	...	...	...
1902	...	...	...	...	...	...	...	...	...	...	...	...
1903	...	...	...	...	...	...	...	...	...	...	...	...
1904	...	...	...	...	...	...	...	...	...	...	...	...
1905	...	70·95	70·95	8,925	...	2·34	2·34	1,590	...	73·29	73·29	10,515
1906	1·80	12·85	14·65	2,644	...	...	...	...	1·80	12·85	14·65	2,644
1907	...	...	...	...	...	...	...	...	...	...	...	...
1908	...	...	...	...	...	...	...	...	...	...	...	...
1909	·45	...	·45	113	...	·85	·85	214	·45	·85	1·30	327
1910	...	...	...	...	...	...	...	...	...	...	...	...
1911	...	...	...	...	...	...	...	...	...	...	...	...
1912	...	...	...	...	...	...	...	...	...	...	...	...
1913	...	...	...	...	...	...	...	...	...	...	...	...
1914	...	...	...	...	...	...	...	...	...	...	...	...
1915	...	...	...	...	...	...	...	...	...	...	...	...
1916	...	...	...	...	...	...	...	...	...	...	...	...
1917	...	12·50	12·50	1,782	...	...	...	...	...	12·50	12·50	1,782
Total	**2·25**	**96·30**	**98·55**	**13,464**	**...**	**3·19**	**3·19**	**1,804**	**2·25**	**99·49**	**101·74**	**15,268**

Period.	Pyritic Ore.		Copper Ore.											
	Mt. Morgans D.		Pilbara Goldfield.				West Pilbara Gf.		Ashburton Gf.		Peak Hill Gf.		E. Murchison Gf.	
			Marble Bar D.		Nullagine D.								Lawlers D.	
	Quantity.	‖Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£
Previous to 1899 ...	...	...	...	...	...	...	7,018·00	55,270	...	...	...	...	...	...
1899	...	...	...	...	...	...	2,555·00	29,478	...	...	...	...	...	...
1900	...	...	...	...	...	...	1,605·00	12,139	...	...	...	...	...	...
1901	...	...	...	...	...	...	1,162·00	15,891	...	...	...	...	...	...
1902	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1903	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1904	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1905	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1906	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1907	...	...	7·77	190	...	...	3,365·50	63,548	...	...	...	...	...	...
1908	...	...	...	...	...	...	1,486·00	17,691	188·00	2,311	...	...	6·77	69
1909	...	...	...	...	...	...	7,135·50	62,447	10·75	259	...	...	...	...
1910	...	...	...	...	...	...	8,479·80	64,861	...	...	...	...	...	...
1911	9,938·92	3,529	25·10	196	5·00	120	9,082·02	69,140	...	...	...	...	...	...
1912	7,625·80	2,543	...	...	...	...	12,284·02	104,289	...	...	...	...	...	...
1913	10,216·18	3,658	...	...	...	...	12,621·73	76,878	...	...	...	...	...	...
1914	9,758·83	3,485	...	...	...	...	7,764·18	40,607	...	...	112·70	2,409	...	...
1915	6,557·62	2,368	...	...	...	...	314·75	3,546	146·00	3,744	237·58	7,618	10·93	147
1916	4,409·22	2,263	...	...	...	...	48·87	16,116	2·61	27	250·93	8,268	63·42	1,311
1917	3,575·46	1,752	...	...	...	...	783·61	13,406	3·71	67	287·84	9,683	75·00	1,523
Total ...	**52,082·03**	**19,598**	**32·87**	**386**	**5·00**	**120**	**76,605·98**	**645,307**	**351·07**	**6,408**	**889·05**	**27,978**	**156·12**	**3,050**

‖ Represents the value of the sulphur only the copper contents not having been treated yet.

TABLE IX.—*Minerals other than Gold, etc.*—continued.

COPPER ORE—*continued.*

Period.	Murchison Gf.				Yalgoo Gf.		Northampton Mf.		Yandanooka Mf.		Mt. Margaret Goldfield.			
	Meekatharra D.		Day Dawn D.								Mt. Morgans District.		Mt. Margaret District.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£
Previous to 1899	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1899	...	...	...	...	...	...	98·00	1,715	38·00	407	273·00	4,338	...	...
1900	...	...	5·15	91	...	...	...	...	...	...	4,539·00	30,718	...	...
1901	...	...	10·50	76	...	...	38·50	277	...	...	7,660·00	40,738	...	...
1902	...	...	...	...	...	...	...	...	...	...	1,954·00	6,852	...	...
1903	...	...	...	...	...	...	...	...	...	...	18,965·00	45,557	...	...
1904	...	...	...	...	...	...	...	...	...	...	500·00	900	...	...
1905	...	...	...	...	...	...	...	...	...	...	60·00	674	...	...
1906	133·50	2,816	...	...	13·91	91	...	...	...	...	4,361·05	21,934	...	...
1907	...	...	31·71	274	10·00	130	...	...	...	...	5,141·52	58,888	2·85	26
1908	...	...	...	...	9·50	97	...	...	133·55	1,482	4,404·10	20,221	...	...
1909	608·00	2,823	...	...	...	...	...	...	...	...	...	...	...	...
1910	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1911	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1912	...	...	4·80	54	...	...	...	...	...	...	...	...	...	...
1913	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1914	15·19	248	3·40	27	...	...	...	...	...	...	...	...	...	...
1915	33·70	492	...	...	4·99	95	...	...	...	...	...	...	...	...
1916	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1917	82·92	2,164	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	**873·31**	**8,543**	**55·56**	**522**	**38·40**	**413**	**136·50**	**1,992**	**171·55**	**1,889**	**47,857·67**	**230,820**	**2·85**	**26**

COPPER ORE—*continued.*

Period.	North Coolgardie Goldfield.		East Coolgardie Goldfield.		Phillips River Goldfield.		State generally.		Total.	
	Menzies District.		E. Coolgardie D.							
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£
Previous to 1899	...	...	...	...	...	...	...	...	7,018·00	55,270
1899	...	...	...	...	...	...	...	...	2,964·00	35,938
1900	...	...	...	...	34·00	725	...	...	6,183·15	43,673
1901	...	...	...	...	1,089·14	12,918	...	...	9,960·14	69,900
1902	...	...	...	...	308·25	1,238	...	...	2,262·25	8,090
1903	...	...	...	...	1,561·33	10,984	...	...	20,526·33	56,541
1904	...	...	...	...	3,468·89	24,280	...	...	3,968·89	25,180
1905	...	...	...	...	2,329·04	15,592	...	...	2,389·04	16,266
1906	4·70	33	...	...	2,885·00	25,270	13·50	193	7,411·66	50,337
1907	1·42	18	...	...	10,414·57	57,273	3·08	40	18,978·42	180,387
1908	...	...	50·67	330	2,015·71	9,233	...	...	8,294·30	51,434
1909	...	...	...	...	7,330·70	29,815	...	...	15,084·95	95,344
1910	...	...	...	...	25,871·65	96,745	...	...	34,351·45	161,606
1911	...	...	...	...	13,563·68	46,862	...	...	22,675·80	116,318
1912	...	...	...	...	1,318·38	15,815	...	...	13,607·20	120,158
1913	...	...	...	...	806·95	9,737	...	...	13,428·68	86,615
1914	...	...	...	...	4,841·15	37,524	38·50	426	12,775·12	81,241
1915	...	...	...	...	3,681·03	24,093	69·58	1,263	4,498·56	40,998
1916	...	...	...	...	5,428·08	48,618	3·47	36	6,697·38	74,376
1917	...	...	...	...	5,255·57	66,868	...	...	6,488·65	93,711
Total	**6·12**	**51**	**50·67**	**330**	**92,203·12**	**533,590**	**128·13**	**1,958**	**219,563·97**	**1,463,383**

Period.	IRONSTONE.								LEAD ORE.					
	W. Pilbara Gf.		E. Coolgardie Gf. E. Coolgardie D.		State generally.		Total.		Northampton Mf.		West Pilbara Gf.		Total.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£
Previous to 1899	100·00	300	...	...	...	...	100·00	300	...	...	...	...	...	...
1899 ...	...	...	...	...	12,852·00	8,939	12,852·00	8,939	82·75	912	...	...	82·75	912
1900 ...	...	...	...	...	12,251·00	9,258	12,251·00	9,258	268·00	533	...	...	268·00	533
1901 ...	...	...	450·00	247	20,119·00	12,999	20,569·00	13,246	...	...	...	...	...	...
1902 ...	...	...	...	...	4,800·00	2,040	4,800·00	2,040	...	...	...	...	...	...
1903 ...	...	...	...	...	220·00	88	220·00	88	...	...	...	...	...	...
1904 ...	...	...	...	...	1,441·50	577	1,441·50	577	...	...	...	...	...	...
1905 ...	...	...	...	...	3,212·60	1,285	3,212·60	1,285	...	...	...	...	...	...
1906 ...	...	...	...	...	1,279·87	512	1,279·87	512	...	...	...	...	...	...
1907 ...	...	...	...	...	1,093·53	438	1,093·53	438	10·00	128	...	...	10·00	128
1908 ...	...	...	...	...	...	...	...	...	57·00	461	...	...	57·90	461
1909 ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1910 ...	...	...	...	...	† 10·50	† 12	10·50	12	185·10	1,777	...	...	185·10	1,777
1911 ...	...	...	...	...	...	...	...	...	8,194·76	17,663	...	...	8,194·76	17,663
1912 ...	...	...	...	...	...	...	...	...	11,098·50	24,412	...	...	11,098·50	24,412
1913 ...	...	...	...	...	...	...	...	...	26,589·53	50,474	...	...	26,589·53	50,474
1914 ...	...	...	...	...	...	...	...	...	15,334·62	38,351	...	...	15,344·62	38,351
1915 ...	...	...	...	...	...	...	...	...	15,678·30	29,396	...	...	15,678·30	29,396
1916 ...	...	...	...	...	...	...	...	...	34,578·34	110,872	44·00	770	34,622·34	111,642
1917 ...	...	...	...	...	...	...	...	...	46,801·97	143,925	62·57	759	46,864·54	144,684
Total ...	**100·00**	**300**	**450·00**	**247**	**57,280·00**	**36,148**	**57,830·00**	**36,695**	**158,878·87**	**418,904**	**106·57**	**1,529**	**158,985·44**	**420,433**

† Iron ore from Koolan Island, Yampi Sound,

TABLE IX.—*Minerals other than Gold, etc.*—continued.

Period.	Silver Lead Ore. Ashburton Gf.		Coal. Collie River Coal Mf.		Wolfram Ore. State generally.		Gadolinite. Pilbara Gf. Marble Bar D.		Asbestos. Pilbara Gf. Marble Bar D.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£
Previous to 1899	...	...	3,508·00	1,761	...	...	...	...	...	...
1899	...	...	54,336·00	25,951	...	...	...	...	...	...
1900	...	...	118,410·10	54,835	...	...	...	...	...	...
1901	21·05	152	117,835·80	68,561	...	...	...	...	...	...
1902	35·85	277	140,883·90	86,188	...	...	...	...	...	...
1903	...	...	133,426·62	69,128	...	...	...	...	...	...
1904	...	...	138,550·04	67,174	...	...	...	...	...	...
1905	...	...	127,364·06	55,312	...	...	...	...	...	...
1906	...	...	149,755·27	57,998	...	...	...	...	...	...
1907	...	...	142,372·54	55,158	...	...	...	...	...	...
1908	727·25	6,914	175,247·92	75,694	...	...	...	...	40·00	1,600
1909	440·00	3,520	214,301·98	90,965	*5·00	90	...	...	2·83	154
1910	...	...	262,166·06	113,699	† 42·00	115	...	...	...	...
1911	...	...	249,899·15	111,154	‡ 194·00	877	...	...	...	...
1912	...	...	295,078·91	135,857	...	...	...	...	...	...
1913	125·50	1,757	313,817·96	153,614	‡ 4·64	69	1·00	112	...	...
1914	715·10	9,807	319,210·32	148,684	...	...	...	...	...	...
1915	298·96	4,429	286,666·35	137,859	** ·25	27	...	...	...	...
1916	67·83	554	301,525·97	147,823	20·00	117	...	...	...	...
1917	...	...	326,550·07	191,822	...	...	...	...	...	...
Total	**2,431·54**	**27,410**	**3,870,907·02**	**1,849,237**	**265·89**	**1,295**	**1·00**	**112**	**42·83**	**1,754**

Period.	Limestone. Murchison Gf. Cue District.		Limestone. Yilgarn Goldfield.		Limestone. State generally.		Limestone. Total.		Diamonds. Pilbara Gf. Nullagine District.		Magnesite. East Coolgardie Goldfield. Bulong District.		Antimony. West Pilbara Goldfield.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	tons.	£	tons.	£	tons.	£	tons.	£	carats.	£	tons.	£	tons.	£
Previous to 1899	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1899	...	...	...	...	17,593·00	2,838	17,593·00	2,838	§	24	...	...	...	...
1900	...	...	269·85	273	15,657·00	3,321	15,926·85	3,594	...	...	...	...	...	...
1901	...	...	1,642·00	919	16,568·00	3,429	18,210·00	4,348	...	...	...	...	...	...
1902	...	...	535·00	340	4,545·35	1,000	5,080·35	1,340	...	...	...	...	...	...
1903	...	...	102·00	75	1,177·50	103	1,279·50	178	...	...	...	...	...	...
1904	...	...	...	...	13,397·20	1,699	13,397·20	1,699	...	...	...	...	...	...
1905	...	...	...	...	9,144·60	1,220	9,144·60	1,220	...	...	...	...	...	...
1906	...	...	...	...	9,472·28	1,691	9,472·28	1,691	...	...	...	...	...	...
1907	298·00	772	...	...	3,303·95	610	3,601·95	1,382	...	...	...	...	...	...
1908	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1909	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1910	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1911	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1912	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1913	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1914	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1915	...	...	...	...	...	...	...	...	...	...	601·50	601	...	...
1916	...	...	...	...	...	...	...	...	...	...	97·50	97	20·78	491
1917	...	...	...	...	...	...	...	...	...	...	20·50	21	...	...
Total	**298·00**	**772**	**2,548·85**	**1,607**	**90,858·88**	**15,911**	**93,705·73**	**18,290**	...	**24**	**719·50**	**719**	**20·78**	**491**

* Produced within the West Kimberley Magisterial District. † Tons 22·00, value £30, the produce of West Kimberley, and tons 20·00, value £85, the produce of Cue. ‡ The produce of Cue District. § Weight unknown. ** The produce of Yalgoo Goldfield.

NOTE.—As the collection of Statistics of Minerals other than Gold commenced during 1899, the total production from the different localities can only be approximately estimated by the Customs Records, the latest available returns of which are to be found in Table XXV., pages 76–79.

TABLE X.

QUANTITY AND VALUE OF BLACK TIN REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917. Quantity. Load.	1917. Quantity. Stream.	1917. Quantity. Total.	1917. Value.	TOTALS TO DATE. Quantity. Lode.	TOTALS TO DATE. Quantity. Stream.	TOTALS TO DATE. Quantity. Total.	TOTALS TO DATE. Value.
			tons.	tons.	tons.	£	tons.	tons.	tons.	£
PILBARA GOLDFIELD.										
MARBLE BAR DISTRICT.										
Coogiegong ...	...	Sundry Claims	...	19·00	19·00	2,836	...	1,627·27	1,627·27	137,671
Mill's Find ...	...	Sundry claims	...	...	...	...	...	·85	·85	69
Moolyella ...	...	Voided leases	...	...	...	...	...	330 53	330·53	21,340
Do. ...	...	Sundry claims	...	31 00	31 00	4,483	...	2,699 51	2,699·51	246,630
Old Shaw ...	...	Voided leases	...	...	...	...	...	6·75	6·75	424
Do. ...	...	Sundry claims	...	...	...	...	...	214·04	214·04	14,525
Tabba Tabba ...	...	Sundry claims	...	10·00	10·00	1,000	...	94·77	94·77	9,441
Wodgina ...	86, 87, 95 ...	H.M. and Anchorite leases ...	...	5·00	5·00	500	...	5·00	5·00	500
Do. ...	84	(Mount Cassiterite)	...	...	...	...	133·52	13·85	147·37	14,184
Do. ...	84 (93), (148)	Mount Cassiterite leases ...	4·05	...	4·05	445	189·80	1·60	191·40	15,825
Do. ...	...	Voided leases	...	...	...	...	37·82	6·10	43·92	4,414
Do. ...	...	Sundry claims	...	...	...	...	5·78	46·90	52·68	4,781
		Totals	**4·05**	**65·00**	**69·05**	**9,264**	**366·92**	**5,047·17**	**5,414·09**	**469,804**
MURCHISON GOLDFIELD.										
CUE DISTRICT.										
Poona	...	Sundry claims	...	...	...	...	...	1·52	1·52	118
Cuddingwarra ...	...	Sundry claims	...	...	...	...	...	3·20	3·20	242
		Totals	...	...	...	...	...	**4·72**	**4·72**	**360**
COOLGARDIE GOLDFIELD.										
COOLGARDIE DISTRICT.										
Bulla Bulling ...	...	Sundry claims	...	...	...	...	...	·15	·15	15
		Totals	...	...	...	...	...	**·15**	**·15**	**15**
GREENBUSHES MINERAL FIELD.										
Greenbushes ...	472	(Aqua)	...	...	...	...	...	1·50	1·50	128
Do. ...	587	Birds' Nests	2·00	...	2·00	338	2·00	...	2·00	338
Do. ...	296	(Central)	...	...	...	...	...	100·16	100·16	9,728
Do. ...	511	Champion	1·60	33·75	35·35	3,805	1·60	138·10	139·70	13,321
Do. ...	583	Cornwall	1·18	...	1·18	197	1·18	...	1·18	197
Do. ...	369	Enterprise	...	...	...	...	·20	7·04	7·24	623
Do. ...	577	Ethel May	...	9·77	9·77	1,260	...	17·00	17·00	1,993
Do. ...	472, 497, 510...	Excelsior leases	...	9·05	9·05	1,186	...	29·65	29·65	3,624
Do. ...	510	(Excelsior Extended)	...	...	...	...	...	·05	·05	5
Do. ...	497	(Excelsior Tin Mining Co., Ltd.) ...	...	...	...	...	...	4·05	4·05	281
Do. ...	(35), (169), (218), (272), (287), (295), 296, (331), (375), (395), (421), (425), (428), (432), (448), (453)	Greenbushes Development Co., Ltd.	...	24·85	24·85	3,306	·35	960·89	961·24	84,830
Do. ...	(35)	(Horan's)	...	...	...	...	...	188·35	188·35	11,605
Do. ...	515	Kapanga	2·32	...	2·32	305	18·54	·76	19·30	2,086
Do. ...	73, 233, 271 ...	King Tin leases	·30	·25	·55	59	5·61	51·13	56·74	5,607
Do. ...	271	(King Tin North)	...	...	...	...	...	1·84	1·84	117
Do. ...	(578)	Morning Star	...	...	...	...	...	1·55	1·55	147
Do. ...	73	(Nelson)	...	...	...	...	...	22·40	22·40	1,675
Do. ...	73, 233 ...	(Nelson leases)	...	...	...	...	...	61·01	61·01	4,164
Do. ...	504	Old Bunbury	...	...	...	...	...	35·05	35·05	3,129
Do. ...	529, 555, 571	Phoenix Sluicing Co., Ltd. ...	...	10·41	10·41	1,041	...	58·95	58·95	5,553
Do. ...	498	Rat	...	...	...	...	...	·74	·74	84
Do. ...	588	Satin Bird	...	1·05	1·05	159	...	1·05	1·05	159
Do. ...	505, 519 ...	Scotia leases	...	1·69	1·69	224	...	41·84	41·84	3,714
Do. ...	450, 458, 485, 486, 487, 488, 489	Stanhope United leases ...	...	29·45	29·45	3,948	...	464·68	464·68	50,382
Do. ...	529	(Three C's)	...	...	...	...	...	53·33	53·33	4,314
Do. ...	565	Turn of the Tide	...	3·09	3·09	419	...	6·18	6·18	682
Do. ...	(215)	(W.A. Mount Bischoff) ...	...	...	...	...	...	5·38	5·38	342
Do. ...	(381), (435), (436), 472, (478)	(Westralian Gully Tin Co., Ltd.)	...	...	...	...	6·38	34·38	40·76	3,235
Do. ...	(35), (169), (195), 218, (221), (228), (272), 287, (293), (295), (299), (310), (375)	(Westralian Stanneries, Ltd.) ...	...	...	...	...	...	109·33	109·33	8,171
Do. ...	Loc. 289, 290	Freehold Ground (Clarth and others)	...	...	...	...	...	318·04	318·04	28,959
Do. ...	... ...	Voided leases	...	...	...	...	181·93	733·65	915·58	82,737
Do. ...	... ...	Sundry claims	3·78	103·38	107·16	13,681	37·92	6,243·78	6,281·70	452,307
		Totals	**11·18**	**226·74**	**237·92**	**29,928**	**255·71**	**9,691·86**	**9,947·57**	**784,287**

TABLE XI.

QUANTITY AND VALUE OF TANTALITE REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917. Quantity. Lode.	1917. Quantity. Stream.	1917. Quantity. Total.	1917. Value.	TOTAL TO DATE. Quantity. Lode.	TOTAL TO DATE. Quantity. Stream.	TOTAL TO DATE. Quantity. Total.	TOTAL TO DATE. Value.
			tons.	tons.	tons.	£	tons.	tons.	tons.	£
PILBARA GOLDFIELD.										
MARBLE BAR DISTRICT.										
Wodgina ...	86, 87, 95 ...	H.M. and Anchorite leases ...	...	12·50	12·50	1,782	2·25	44·80	47·05	7,340
Do. ...	...	Sundry claims	...	...	...	...	...	51·50	51·50	6,124
		Totals	...	**12·50**	**12·50**	**1,782**	**2·25**	**96·30**	**98·55**	**13,464**
GREENBUSHES MINERAL FIELD.										
Greenbushes ...	369	Enterprise	...	...	...	...	...	3·19	3·19	1,804
		Totals	...	...	...	...	...	**3·19**	**3·19**	**1,804**

TABLE XII.

QUANTITY AND VALUE OF PYRITIC ORE REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917. Quantity.	1917. †Value.	TOTAL TO DATE. Quantity.	TOTAL TO DATE. †Value.
			tons.	£	tons.	£
MT. MARGARET GOLDFIELD.						
MT. MORGANS DISTRICT.						
Eulaminna ...	4F, 5F, (11F), (12F)	West Australian Copper Co., Ltd.	2,086·17	998	42,142·28	15,275
Murrin Murrin ...	18F	Nangeroo: Nangaroo Mines, Ltd.	1,489·29	754	9,939·75	4,323
		Totals	**3,375·46**	**1,752**	**52,082·03**	**19,598**

† Represents the value of the sulphur only, the copper contents not having been treated yet.

TABLE XIII.

QUANTITY AND VALUE OF COPPER ORE REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917. Quantity. Ore.	1917. Quantity. Metallic Copper.	1917. Value.	TOTAL TO DATE. Quantity. Ore.	TOTAL TO DATE. Quantity. Metallic Copper.	TOTAL TO DATE. Value.
			tons.	tons.	£	tons.	tons.	£
PILBARA GOLDFIELD.								
MARBLE BAR DISTRICT.								
Marble Bar ...	... ...	Voided Leases	...	...	...	11·00	1·64	90
Do. ...	... ...	Sundry claims	...	...	...	4·75	·48	25
North Pole ...	... ...	Voided leases	...	...	...	9·35	1·39	81
North Shore ...	... ...	Voided leases	...	...	...	7·77	1·90	190
		Totals	...	...	...	**32·87**	**5·41**	**386**
NULLAGINE DISTRICT.								
McPhee's Creek	... ...	Voided leases	...	...	...	5·00	2·22	120
		Totals	...	...	...	**5·00**	**2·22**	**120**
WEST PILBARA GOLDFIELD.								
Croydon ...	... ...	Voided leases	...	...	...	604·00	108·65	7,333
Egina	... ...	Voided leases	...	...	...	542·00	104·15	6,643
Roebourne ...	M.L. 183 ...	(Carlow Castle: Roebourne Copper Mines, Ltd.)	...	...	...	69·00	7·80	780
Do. ...	M.Ls. 174, (175)	Good Fortune leases	17·05	2·20	293	63·40	9·58	1,011
Do. ...	M.L. 184 ...	Good Luck	2·44	·64	73	2·44	·64	73
Do. ...	M.L. 178 ...	Lily Blanche	...	...	...	16·98	2·97	272
Do. ...	M.L. 167 ...	(Quod Est)	...	...	...	22·43	3·49	256
Do. ...	M.Ls. 167, 183	Roebourne Copper Mines, Ltd.	53·50	7·25	730	53·50	7·25	730
Do. ...	M.Ls. 179, 180	Whundo leases	104·50	19·74	2,059	372·50	78·91	7,692
Do. ...	M.L. 144 ...	Yannery Hill	57·32	14·06	1,458	274·97	72·80	5,912
Do. ...	... ...	Voided leases	...	...	...	2,000·10	371·93	29,621
Do. ...	... ...	Sundry claims	...	...	...	77·41	13·61	800
Whim Creek ...	M.L. 34 ...	(Balla Balla Copper Mines, Ltd.)	...	...	...	2,009·00	166·33	12,036
Do. ...	M.L. 34 ...	Mons Cupri: Whim Well Copper Mines, Ltd.	137·50	14·85	1,525	282·50	33·75	2,979
Do. ...	Loc. 71 ...	Whim Well Copper Mines, Ltd.	411·30	69·60	7,268	70,185·75	8,963·31	568,919
Do. ...	... ...	Voided leases	...	...	...	30·00	5·50	250
		Totals	**783·61**	**128·34**	**13,406**	**76,605·98**	**9,950·67**	**645,307**

TABLE XIII.—*Quantity and Value of COPPER ORE, etc.*—continued.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.			TOTALS TO DATE.		
			Quantity.		Value.	Quantity.		Value.
			Ore.	Metallic Copper.		Ore.	Metallic Copper.	
			tons.	tons.	£	tons.	tons.	£
ASHBURTON GOLDFIELD.								
Ashburton ...	... ...	Sundry Claims	3·71	·52	67	6·32	·79	94
Red Hill ...	... ...	Voided leases	...	...	...	175·50	33·85	2,126
Uaroo	M.L. 88 ...	Victoria	...	...	...	146·00	55·24	3,744
Do. ...	... ...	Voided leases	...	...	...	23·25	7·25	440
		Totals	**3·71**	**·52**	**67**	**351·07**	**97·13**	**6,408**
PEAK HILL GOLDFIELD.								
Peak Hill ...	M.L. 35P ...	Burra Copper Mines, Ltd.	13·78	4·41	513	13·78	4·41	513
Do. ...	M.L. 41P ...	Butcher Bird	19·26	3·49	396	27·22	6·07	726
Do. ...	M.L. (32P) ...	Resurgam	...	...	...	25·88	8·94	587
Do. ...	M.L. 46P ...	Hard to Find	2·00	·81	81	2·00	·81	81
Do. ...	M.Ls. 37P, 38P	Sonia and Diana leases	98·05	35·22	3,691	98·05	35·22	3,691
Do. ...	M.L. 9P ...	Sons of Gwalia	67·83	24·94	3,011	391·06	144·21	13,215
Do. ...	M.Ls. (10P), (11P)	Sons of Gwalia South leases	...	...	...	2·87	1·04	68
Do. ...	M.Ls. (29P), (30P), 31P	(Two Sisters leases)	...	...	...	64·04	30·93	1,466
Do. ...	M.L. 31P ...	Two Sisters, North	85·62	16·53	1,938	115·76	31·40	3,594
Do. ...	... ...	Voided leases	...	...	...	86·36	23·90	2,200
Do. ...	... ...	Sundry claims	1·30	·53	53	62·03	21·96	1,837
		Totals	**287·84**	**85·93**	**9,683**	**889·05**	**308·89**	**27,978**
EAST MURCHISON GOLDFIELD.								
LAWLERS DISTRICT.								
Kathleen Valley ...	... ...	Voided leases	...	...	...	6·77	1·32	69
Lawlers ...	M.L. 29 ...	Bungarra	75·00	11·70	1,523	75·00	11·70	1,523
Do. ...	... ...	Sundry claims	...	...	...	74·35	13·25	1,458
		Totals	**75·00**	**11·70**	**1,523**	**156·12**	**26·27**	**3,050**
MURCHISON GOLDFIELD.								
MEEKATHARRA DISTRICT.								
Gabanintha ...	G.M.L. 1360N...	Leviathan	41·69	8·98	965	41·69	8·98	965
Do. ...	G.M.L. (1175N)	Unexpected	...	...	...	42·22	8·32	606
Do. ...	... ...	Voided leases	...	...	...	741·50	83·60	5,639
Do. ...	... ...	Sundry claims	27·75	7·17	938	34·42	9·23	1,072
Holden's Find...	... ...	Sundry claims	6·72	1·11	111	6·72	1·11	111
Yaloginda ...	... ...	Sundry claims	6·76	1·41	150	6·76	1·41	150
		Totals	**82·92**	**18·67**	**2,164**	**873·31**	**112·65**	**8,543**
DAY DAWN DISTRICT								
Day Dawn ...	... ...	Voided leases	...	...	...	26·95	5·17	305
Do. ...	... ...	Sundry claims	...	...	...	28·61	2·93	217
		Totals	...	...	...	**55·56**	**8·10**	**522**
YALGOO GOLDFIELD.								
Mount Gibson ...	... ...	Sundry claims	...	...	...	4·99	1·10	95
Twin Peaks ...	... ...	Sundry claims	...	...	...	19·50	3·49	227
Wadgingarra ...	... ...	Voided leases	...	...	...	13·91	·98	91
		Totals	...	...	...	**38·40**	**5·57**	**413**
NORTHAMPTON MINERAL FIELD.								
Geraldine ...	... ...	Voided leases	...	...	...	136·50	36·05	1,992
		Totals	...	...	...	**136·50**	**36·05**	**1,992**
YANDANOOKA MINERAL FIELD.								
Arrino	... ...	Sundry claims	...	...	...	126·05	18·48	1,386
Yandanooka ...	Freehold Gd. ...	Muggawa Copper Mines	...	...	...	7·50	1·20	96
Do. ...	... ...	Voided leases	...	...	...	38·00	7·95	407
		Totals	...	...	...	**171·55**	**27·63**	**1,889**
MOUNT MARGARET GOLDFIELD.								
MOUNT MORGANS DISTRICT.								
Eulaminna ...	[10C, 11C], (12C, 37C)	(Mt. Malcolm Copper Mine)	...	...	...	13,516·00	1,001·98	70,754
Do. ...	[10C, 11C], 4F, 5F	(Mt. Malcolm Copper Mine)	...	...	...	3,839·00	418·00	17,065
Do. ...	[10C, 11C], (12C, 37C)	(Murrin Copper Mines, Ltd.)	...	...	...	19,165·00	798·50	45,817
Do. ...	4F, 5F, 11F, 12F	West Australian Copper Co., Ltd.	...	...	...	9,794·05	1,976·08	80,199
Mt. Margaret ...	... ...	Voided leases	...	...	...	11·53	2·40	163
Murrin Murrin...	18F	Nangeroo : Nangaroo Mines, Ltd.	...	...	...	6·80	3·00	160
Do. ...	... ...	Voided leases	...	...	...	1,525·29	248·04	16,662
		Totals	...	...	...	**47,857·67**	**4,448·00**	**230,820**

TABLE XIII.—*Quantity and Value of COPPER ORE, etc.*—continued.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.			TOTALS TO DATE.		
			Quantity.		Value.	Quantity.		Value.
			Ore.	Metallic Copper.		Ore.	Metallic Copper.	
			tons.	tons.	£	tons.	tons.	£
MOUNT MARGARET DISTRICT.								
Burtville		Voided leases	...	...	...	2·85	·29	26
		Totals	...	...	...	**2·85**	**·29**	**26**
NORTH COOLGARDIE GOLDFIELD.								
MENZIES DISTRICT.								
Goongarrie		Voided leases	...	...	...	4·70	·42	33
Do.		Sundry claims	...	...	...	1·42	·40	18
		Totals	...	...	...	**6·12**	**·82**	**51**
EAST COOLGARDIE GOLDFIELD.								
EAST COOLGARDIE DISTRICT.								
Boorara		Voided leases	...	...	...	50·67	6·22	330
		Totals	...	...	...	**50·67**	**6·22**	**330**
PHILLIPS RIVER GOLDFIELD.								
Kundip ...	G.M.Ls. 147, 179	Fair Play leases	...	8·91	1,176	130·09	89·64	7,591
Do. ...	G.M.Ls. 136, 137, 138, (139)	(Flag Gold and Copper Mining Co., Ltd.) ...	...	...	...	2,107·84	144·75	8,494
Do. ...	G.M.Ls. 136, 137, 138	Flag leases	235·66	13·20	1,506	268·84	32·37	2,904
Do. ...	G.M.L. 184 ...	Gem	...	3·19	369	...	6·79	729
Do. ...	G.M.Ls. 151, 156	Gem Consolidated leases	...	26·54	3,312	48·00	48·26	5,266
Do. ...	M.Ls. 52, 94 ...	Harbour View Gold and Copper Co., Ltd. ...	272·07	16·71	2,081	1,152·02	87·11	7,909
Do. ...	M.Ls. 52, 94 ...	(Harbour View leases)	...	...	...	604·36	76·80	4,524
Do. ...	M.Ls. 52, 94 ...	(Harbour View leases)	...	...	...	508·27	64·66	3,642
Do. ...	G.M.L. 98 ...	Hillsborough	...	4·65	513	692·84	40·49	3,105
Do. ...	M.L. 370 ...	North Harbour View	13·80	·76	94	13·80	·76	94
Do. ...	M.Ls. 52, 94 ...	(Ravensthorpe G.M. Syndicate, N.L.) ...	...	...	...	132·56	24·36	1,382
Do. ...	G.M.L. 74 ...	Two Boys	...	12·80	1,554	...	16·48	1,922
Do. ...	... ...	Voided leases	...	...	...	964·05	106·62	6,893
Do. ...	... ...	Sundry claims	15·17	2·46	322	87·56	13·15	1,080
Mt. Desmond ...	M.L. 203 ...	British Flag: Phillips River Gold and Copper Co., Ltd.	...	...	...	19·90	3·64	250
Do. ...	M.L. 208 ...	Desmond	363·32	45·12	5,670	973·50	114·10	11,345
Do. ...	M.L. 208 ...	(Desmond: Phillips River Gold and Copper Co., Ltd.)	...	...	...	1,234·05	215·74	14,956
Do. ...	M.L. 95 ...	Elverdton	1,485·53	182·73	22,488	6,484·91	559·34	54,101
Do. ...	M.L. 95 ...	(Elverdton)	...	...	...	130·00	5·70	570
Do. ...	M.L. 95 ...	(Elverdton: Phillips River Gold and Copper Co., Ltd.)	...	...	...	30,574·23	2,186·64	124,252
Do. ...	M.L. 95 ...	(Elverdton: Phillips River Option Syndicate, N.L.)	...	...	...	2,946·02	401·43	22,657
Do. ...	M.L. 168 ...	Elverton South: Phillips River Gold and Copper Co., Ltd.	...	...	...	15·73	1·46	92
Do. ...	M.L. 168 ...	(Elverton South)	...	...	...	18·48	2·39	119
Do. ...	M.L. 109 ...	Mt. Desmond: Phillips River Gold and Copper Co., Ltd.	...	...	...	1,762·22	216·76	18,128
Do. ...	M.L. 109 ...	(Mt. Desmond)	...	...	...	198·87	30·77	1,640
Do. ...	M.L. 199 ...	P.L.P.: Phillips River Gold and Copper Co., Ltd.	...	...	...	17·56	1·88	121
Do. ...	M.L. 199 ...	(P.L.P.)	...	...	...	208·66	33·69	2,277
Do. ...	... ...	Voided leases	...	...	...	1,015·17	166·71	9,770
Do. ...	... ...	Sundry claims	...	...	...	98·44	18·48	1,231
Ravensthorpe ...	M.L. 368 ...	Lady Nina	...	·58	74	...	·58	74
Do. ...	M.L. 361 ...	Last Chance	23·79	1·56	183	74·85	8·41	868
Do. ...	M.L. 16 ...	Marion Martin	663·53	77·88	9,609	1,437·94	167·34	16,259
Do. ...	M.L. 16 ...	(Marion Martin)	...	...	...	865·69	130·61	6,650
Do. ...	M.L. 16 ...	(Marion Martin: Phillips River Gold and Copper Co., Ltd.)	...	...	...	2,855·36	375·44	23,506
Do. ...	M.L. 363 ...	Mount Benson	79·45	5·27	696	301·64	15·53	1,722
Do. ...	M.L. 15 ...	Mount Cattlin	1,203·16	70·17	8,698	1,712·90	107·64	11,287
Do. ...	M.L. 15 ...	(Mount Cattlin)	...	...	...	281·56	31·35	1,716
Do. ...	M.L. 15 ...	(Mount Cattlin: Mount Cattlin Copper Mining Co., Ltd.)	...	...	...	6,608·76	333·59	28,841
Do. ...	M.L. 15 ...	(Mount Cattlin: Phillips River Gold and Copper Co., Ltd.)	...	...	...	1,263·76	80·26	7,646
Do. ...	M.L. 15 ...	(Mount Cattlin: Phillips River Gold and Copper Co., Ltd.)	...	...	...	14,432·25	714·90	40,313
Do. ...	M.L. 342 ...	Surprise	117·01	17·49	2,085	817·98	149·44	10,996
Do. ...	... ...	Voided leases	...	...	...	6,520·64	796·45	48,022
Do. ...	... ...	Sundry claims	253·77	25·41	3,027	794·49	77·75	6,533
West River ...	... ...	Voided leases	...	...	...	44·04	7·41	414
Do. ...	... ...	Sundry claims	...	...	...	145·41	24·81	1,939
Do. ...	... ...	From Goldfield generally	529·31	25·36	3,411	1,637·88	128·64	9,760
		Totals	**5,255·57**	**540·79**	**66,868**	**92,203·12**	**7,861·12**	**533,590**
STATE GENERALLY.								
...	M.L. 227H ...	Holbrook	...	...	...	4·22	·94	64
...	M.L. 228H ...	Obagama	...	...	...	8·97	1·82	136
...	M.L. 221H ...	Yampi Sound Copper Mines	...	...	...	92·86	22·80	1,473
...	A97H	M. McCulloch	...	...	...	2·03	·28	16
		Voided leases	...	...	...	3·08	1·26	40
		Sundry claims	...	...	...	16·97	2·63	229
		Totals	...	...	...	**128·13**	**29·73**	**1,958**

TABLE XIV.

QUANTITY AND VALUE OF IRONSTONE REPORTED TO THE MINES DEPARTMENT DURING 1917 AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.		TOTALS TO DATE.	
			Quantity.	Value.	Quantity.	Value.
			tons.	£	tons.	£
		WEST PILBARA GOLDFIELD.				
Whim Creek ...	... ...	Voided leases	...	...	100·00	300
		Totals	...	...	**100·00**	**300**
		EAST COOLGARDIE GOLDFIELD.				
		EAST COOLGARDIE DISTRICT.				
Boulder ...	... ...	Voided leases	...	...	450·00	247
		Totals	...	...	**450·00**	**247**
		STATE GENERALLY.				
		Avon	...	...	22,223·00	16,241
		Clackline	...	...	18,253·50	8,789
		Coate's Paddock	...	...	4,712·00	3,277
		Greenbushes	...	...	7,418·00	4,629
		Koolan Island—Yampi Sound	...	...	10·50	12
		Werribee	...	...	4,600·00	3,200
		Totals	...	...	**57,280·00**	**36,148**

TABLE XV.

QUANTITY AND VALUE OF LEAD ORE REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.			TOTALS TO DATE.		
			Lead Ore.	Metal therefrom.	Value.	Lead Ore.	Metal therefrom.	Value.
			tons.	tons.	£	tons.	tons.	£
		NORTHAMPTON MINERAL FIELD.						
Geraldine ...	Loc. 1 ...	Geraldine Mine	169·67	54·26	1,080	169·67	54·26	1,080
Do. ...	... ...	Voided leases	...	...	...	57·00	41·61	461
Do. ...	... ...	Sundry claims	111·39	41·55	814	111·39	41·55	814
Narra Tarra ...	Loc. 833 ...	Narra Tarra: Fremantle Trading Co., Ltd.	26,292·00	2,646·69	79,401	44,853·65	5,086·95	148,990
Do. ...	... ...	Sundry claims	...	...	...	225·00	27·00	185
Northampton ...	Loc. 1472 ...	Baddera: Fremantle Trading Co., Ltd.	18,712·80	1,906·19	57,186	110,914·96	11,840·16	254,212
Do. ...	M.Ls. 127, 128, 129	Kirtons leases	1,055·00	139·13	2,692	1,722·58	294·77	5,677
Do. ...	M.L. 142 ...	Nooka Lead Mining Co., N.L. ...	292·57	58·12	1,109	292·57	58·12	1,109
Do. ...	M.L. (140) ...	Surprise	...	...	...	·71	44	9
Do. ...	M.L. (126) ...	Uga	...	...	...	121·03	83·80	1,996
Do. ...	Loc. 1146 ...	Wheal Ellen: Fremantle Trading Co., Ltd.	45·70	4·91	147	45·70	4·91	147
Do. ...	Loc. 436 ...	Wheal of Fortune Extended Syndicate	14·97	8·61	149	14·97	8·61	149
Do. ...	... ...	Voided leases	...	...	...	132·14	82·60	1,403
Do. ...	... ...	Sundry claims	107·87	70·04	1,347	198·50	119·81	2,460
Victoria ...	... ...	Voided leases	...	...	...	19·00	12·54	212
		Total	**46,801·97**	**4,929·50**	**143,925**	**158,878·87**	**17,757·13**	**418,904**
		WEST PILBARA GOLDFIELD.						
Roebourne ...	... ...	Sundry claims	2·57	1·36	39	2·57	1·36	39
Whim Creek ...	M.L. 172 ...	Cumstock	60·00	24·00	720	104·00	46·00	1,490
		Total	**62·57**	**25·36**	**759**	**106·57**	**47·36**	**1.529**

TABLE XVI.

QUANTITY AND VALUE OF SILVER-LEAD ORE REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.		TOTALS TO DATE.	
			Quantity.	Value.	Quantity.	Value.
			tons.	£	tons.	£
		ASHBURTON GOLDFIELD.				
Ashburton ...	... ...	Voided leases	...	...	56·90	429
Do. ...	... ...	Sundry claims	...	...	2·83	40
Uaroo	M.Ls. 43, 49, 84	Uaroo Silver Lead Mines, Ltd.	...	...	2,371·81	26,941
		Totals	...	...	**2,431·54**	**27,410**

TABLE XVII.

QUANTITY AND VALUE OF COAL REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.		TOTALS TO DATE.	
			Quantity.	Value.	Quantity.	Value.
			tons.	£	tons.	£
COLLIE RIVER MINERAL FIELD.						
Collie	197, etc. ...	Cardiff Coal Mining Co., Ltd.	69,545·00	37,845	723,193·33	316,241
Do. ...	151, etc. ...	(Collie Boulder Coal Co., Ltd.)	...	...	71,512·70	26,139
Do. ...	244, etc. ...	Collie Co-Operative Collieries, Ltd.	101,325·00	63,243	819,974·10	410,719
Do. ...	88 (part of) ...	(Collie Proprietary Coalfields of W.A., Ltd.)	...	...	477,781·55	242,918
Do. ...	85–100 ...	(Collie Proprietary Coalfields of W.A., Ltd.)	...	...	580,392·15	289,246
Do. ...	260–6	Premier Coal Mining Co., Ltd.	12,859·64	7,170	102,824·13	48,645
Do. ...	151, etc. ...	Scottish Co-Operative Collieries Co., Ltd.	...	...	430,796·95	171,303
Do. ...	88 (part of) ...	The Proprietary Coal Mines of W.A., Ltd.	...	...	109·00	54
Do. ...	85–100 ...	The Proprietary Coal Mines of W.A., Ltd.	85,328·02	50,381	362,784·84	190,457
Do. ...	250–4, 256 ...	Westralian Coal Mining Co., Ltd.	57,492·41	33,183	275,968·42	140,585
Do. ...	... ...	Voided leases	...	...	25,569·85	12,930
		Totals	**326,550·07**	**191,822**	**3,870,907·02**	**1,849,237**

TABLE XVIII.

QUANTITY AND VALUE OF LIMESTONE REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.		TOTALS TO DATE.	
			Quantity.	Value.	Quantity.	Value
			tons.	£	tons.	£
MURCHISON GOLDFIELD.						
CUE DISTRICT.						
Cuddingwarra ...	... ...	Voided leases	...	...	298·00	772
		Totals	...	...	**298·00**	**772**
YILGARN GOLDFIELD.						
Southern Cross	... ...	Voided leases	...	...	2,548·85	1,607
		Totals	...	...	**2,548·85**	**1,607**
STATE GENERALLY.						
Fremantle ...	... ...	... ...	...	...	90,858·88	15,911
		Totals	...	...	**90,858·88**	**15,911**

TABLE XIX.

QUANTITY AND VALUE OF ASBESTOS REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.		TOTALS TO DATE.	
			Quantity.	Value.	Quantity.	Value.
			tons.	£	tons.	£
PILBARA GOLDFIELD.						
MARBLE BAR DISTRICT.						
Soansville ...	... ...	Voided leases	...	...	42·83	1,754
		Totals	...	...	**42·83**	**1,754**

TABLE XX.

QUANTITY AND VALUE OF GADOLINITE REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.		TOTALS TO DATE.	
			Quantity.	Value.	Quantity.	Value.
			tons.	£	tons.	£
PILBARA GOLDFIELD.						
MARBLE BAR DISTRICT.						
Cooglegong ...	(M.L. 254) ...	Iverna	...	...	1·00	112
		Totals	...	...	**1·00**	**112**

TABLE XXI.

QUANTITY AND VALUE OF WOLFRAM REPORTED TO THE MINES DEPARTMENT DURING 1917 AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.			TOTALS TO DATE.		
			Ore.	Metallic contents.	Value.	Ore.	Metallic contents.	Value.
			tons.	tons.	£	tons.	tons.	£
MURCHISON GOLDFIELD.								
CUE DISTRICT.								
Callie Spring ...	... ...	Sundry claims	...	...	...	24·64	1·45	186
Cuddingwarra ...	... ...	Voided leases	...	...	...	194·00	6·11	877
Do. ...	... ...	Sundry claims	...	...	...	20·00	·85	85
		Totals	...	...	...	**238·64**	**8·41**	**1,148**
YALGOO GOLDFIELD.								
Yalgoo	M.L. (36) ...	Yandanoo King, North	...	...	...	·25	·12	27
		Totals	...	...	...	**·25**	**·12**	**27**
STATE GENERALLY.								
Derby	(146H) ...	Taylor's Wolfram Reward ...	...	...	...	27·00	2·00	120
		Totals	...	...	...	**27·00**	**2·00**	**120**

TABLE XXII.

QUANTITY AND VALUE OF MAGNESITE REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.		TOTALS TO DATE.	
			Quantity.	Value.	Quantity.	Value.
			tons.	£	tons.	£
EAST COOLGARDIE GOLDFIELD.						
BULONG DISTRICT.						
Bulong	M59H	(Sheppard, W.)	20·50	21	719·50	719
		Totals	**20·50**	**21**	**719·50**	**719**

TABLE XXIII.

QUANTITY AND VALUE OF DIAMONDS REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.		TOTALS TO DATE.	
			Quantity.	Value.	Quantity.	Value.
			carats.	£	carats.	£
PILBARA GOLDFIELD.						
NULLAGINE DISTRICT.						
Nullagine ...	M.R.C. 6L ...	(Morgans, A. E.)	...	...	...	24
		Totals	...	...	...	**24**

TABLE XXIV.

QUANTITY AND VALUE OF ANTIMONY REPORTED TO THE MINES DEPARTMENT DURING 1917, AND TOTALS TO DATE.

LOCALITY.	NUMBER OF LEASE, CLAIM, OR AREA.	REGISTERED NAME OF COMPANY OR LEASE.	1917.			TOTALS TO DATE.		
			Ore.	Metallic contents.	Value.	Ore.	Metallic contents.	Value.
			tons.	tons.	£	tons.	tons.	£
WEST PILBARA GOLDFIELD.								
Balla Balla ...	M.I. (185) ...	Star	...	...	...	20·78	11·58	491
		Totals	...	...	...	**20·78**	**11·58**	**491**

TABLE

RETURN OF ORE AND MATERIALS OTHER THAN GOLD

YEAR.	COPPER.												
	COPPER ORE.										COPPER INGOT, MATTE, ETC.		Total Value of Copper Exported.
	West Pilbara Gf.		Northampton Mf.		Phillips River Gf.		State generally.		Total.		State generally.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£	tons.	£	£
1850 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
1 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
3 ...	...	...	[2]†	7	...	...	...	...	...	7	...	...	7
4 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ...	...	...	2	26	...	...	...	...	2	26	...	...	26
6 ...	...	...	57	1,018	...	...	...	...	57	1,018	...	...	1,018
7 ...	...	...	80	1,920	...	...	...	...	80	1,920	...	...	1,920
8 ...	...	...	433	9,531	...	...	...	...	433	9,531	...	...	9,531
9 ...	...	...	941	14,122	...	...	...	...	941	14,122	...	...	14,122
1860 ...	...	...	517	8,021	...	...	...	...	517	8,021	...	...	8,021
1 ...	...	...	409	6,339	...	...	...	...	409	6,339	...	...	6,339
2 ...	...	...	783	12,536	...	...	...	...	783	12,536	...	...	12,536
3 ...	...	...	763	12,208	...	...	...	...	763	12,208	...	...	12,208
4 ...	...	...	1,076	17,216	...	...	...	...	1,076	17,216	...	...	17,216
5 ...	...	...	886	13,290	...	...	...	...	886	13,290	...	...	13,290
6 ...	...	...	557	8,362	...	...	...	...	557	8,362	...	...	8,362
7 ...	...	...	337	5,055	...	...	...	...	337	5,055	...	...	5,055
8 ...	...	...	83	1,245	...	...	...	...	83	1,245	...	...	1,245
9 ...	...	...	155	2,325	...	...	...	...	155	2,325	...	...	2,325
1870 ...	...	...	6	90	...	...	...	...	6	90	...	...	90
1 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
3 ...	...	...	56	848	...	...	...	...	56	848	...	...	848
4 ...	...	...	67	998	...	...	...	...	67	998	...	...	998
5 ...	...	...	205	3,071	...	...	...	...	205	3,071	...	...	3,071
6 ...	...	...	279	4,185	...	...	...	...	279	4,185	...	...	4,185
7 ...	...	...	54	803	...	...	...	...	54	803	...	...	803
8 ...	...	...	9	135	...	...	...	...	9	135	...	...	135
9 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
1880 ...	...	...	8	120	...	...	...	...	8	120	...	...	120
1 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
2 ...	...	...	2	23	...	...	...	...	2	23	...	...	23
3 ...	...	...	5	75	...	...	...	...	5	75	...	...	75
4 ...	...	...	118	1,770	...	...	...	...	118	1,770	...	...	1,770
5 ...	...	...	120	1,793	...	...	...	...	120	1,793	...	...	1,793
6 ...	...	...	249	3,735	...	...	...	...	249	3,735	...	...	3,735
7 ...	...	...	23	345	...	...	...	...	23	345	...	...	345
8 ...	...	...	88	1,488	...	...	...	...	88	1,488	...	...	1,488
9 ...	...	...	112	1,904	...	...	...	...	112	1,904	...	...	1,904
1890 ...	...	...	8	136	...	...	...	...	8	136	...	...	136
1 ...	263	4,462	...	...	...	...	...	...	263	4,462	...	...	4,462
2 ...	[1]† 412	6,319	155	2,377	...	...	...	...	567	8,696	...	...	8,696
3 ...	50	606	...	...	...	...	...	...	50	606	...	...	606
4 ...	...	...	...	...	...	...	...	...	...	...	...	...	...
5 ...	802	12,832	24	120	...	...	...	...	826	12,952	...	...	12,952
6 ...	6	100	...	...	...	...	...	...	6	100	...	...	100
7 ...	65	731	21	302	...	...	...	...	86	1,033	...	...	1,033
8 ...	281	3,334	75	932	...	...	...	...	356	4,266	...	...	4,266
9 ...	1,404	31,979	587	9,473	...	...	...	...	1,991	41,452	...	...	41,452
1900 ...	544	10,696	...	...	105	2,411	197	3,355	846	16,462	249	17,475	33,937
1 ...	1,058	26,464	1	10	1,205	22,107	397	6,322	2,661	54,903	880	55,866	110,769
2 ...	68	1,698	20	330	162	2,469	33	489	283	4,986	175	7,918	12,904
3 ...	4	180	25	460	302	3,538	15	349	346	4,527	1,075	33,288	37,815
4 ...	50	500	...	...	11	154	310	3,378	371	4,032	102	3,827	7,859
5 ...	...	...	...	...	80	2,808	713	8,576	793	11,384	794	53,867	65,251
6 ...	112	323	...	...	...	...	224	2,930	336	6,162	343	30,367	36,529
7 ...	...	...	...	...	...	...	3,727	61,493	3,727	61,493	1,602	141,883	203,376
8 ...	...	...	...	...	...	...	2,503	29,272	2,503	29,272	479	27,819	57,091
9 ...	...	...	...	...	...	...	6,959	59,541	6,959	59,541	833	45,100	104,641
1910 ...	...	...	...	...	...	...	6,309	27,271	6,309	27,271	1,281	68,657	95,928
1911 ...	...	...	...	...	...	...	9,825	33,709	9,825	33,709	828	44,409	78,118
1912 ...	...	...	...	...	...	...	9,536	58,688	9,536	58,688	28	1,136	59,824
1913 ...	...	...	...	...	...	...	4,339	136,472	4,339	136,472	82	5,891	142,363
1914 ...	...	...	...	...	...	...	3,913	33,654	3,913	33,654	183	4,520	38,174
1915 ...	...	...	...	...	...	...	737	13,768	737	13,768	946	77,401	91,169
1916 ...	...	...	...	...	...	...	650	14,971	650	14,971	457	49,862	64,833
1917 ...	...	...	...	...	...	...	966	20,878	966	20,878	535	64,860	85,738
Total	...	...	...	...	...	...	...	...	67,733	800,480	10,872	734,146	1,534,626

[1]†*See* Woodward's Mining Handbook, Perth : By Authority, 1895 ; page 123.

XXV.

ENTERED FOR EXPORT FROM 1850 TO 1917, INCLUSIVE.

TIN.											
BLACK TIN (Dressed Tin).								TIN INGOT (White tin).		Total Value of Tin Exported.	YEAR.
Pilbara Gf.		Greenbushes Mf.		[3]†State generally.		Total.		Greenbushes Mf.			
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.		
tons.	£	tons.	£	tons.	£	tons.	£	tons.	£	£	
...	...	...	...	...	...	...	...	...	...	...	1850
...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	5
...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	...	...	...	...	...	...	...	7
...	...	...	...	...	...	...	...	...	...	...	8
...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	...	...	...	...	...	...	1860
...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	5
...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	...	...	...	...	...	...	...	7
...	...	...	...	...	...	...	...	...	...	...	8
...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	...	...	...	...	...	...	1870
...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	5
...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	...	...	...	...	...	...	...	7
...	...	...	...	...	...	...	...	...	...	...	8
...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	...	...	...	...	...	...	1880
...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	5
...	...	...	...	...	...	...	...	...	...	...	6
...	...	...	...	...	...	...	...	...	...	...	7
...	...	...	...	...	...	...	...	...	...	...	8
...	...	5	300	...	...	5	300	...	...	300	9
...	...	68	5,400	...	...	68	5,400	...	...	5,400	1890
...	...	204	10,200	...	...	204	10,200	...	...	10,200	1
...	...	265	13,843	...	...	265	13,843	...	...	13,843	2
57	3,470	171	7,664	...	...	228	11,134	...	...	11,134	3
19	949	371	14,325	...	...	390	15,274	...	...	15,274	4
...	...	277	9,703	...	...	277	9,703	...	...	9,703	5
...	...	137	4,338	...	...	137	4,338	...	...	4,338	6
...	...	96	3,275	...	...	96	3,275	...	...	3,275	7
...	...	68	2,760	...	...	68	2,760	...	...	2,760	8
30	2,025	278	21,138	...	...	308	23,163	...	...	23,163	9
368	30,146	102	8,032	...	...	470	38,178	142	18,872	57,050	1900
439	34,600	68	4,895	...	...	507	39,495	97	12,607	52,102	1
248	19,698	31	2,870	...	...	279	22,568	141	16,830	39,398	2
267	20,988	25	1,868	...	...	292	22,856	235	29,277	52,133	3
64	4,932	24	1,389	379	20,797	467	27,118	129	16,155	43,273	4
188	16,853	119	8,177	666	51,748	973	76,778	[2]†	1	76,779	5
329	28,375	444	46,254	624	64,005	1,397	138,634	45	8,746	147,380	6
...	...	...	...	1,424	151,414	1,424	151,414	78	14,725	166,139	7
...	...	...	...	1,093	83,294	1,093	83,594	[2]†	1	83,595	8
...	...	...	...	698	62,989	698	62,989	...	...	62,989	9
...	...	...	...	500	45,129	500	45,129	...	...	45,129	1910
...	...	...	...	495	55,220	495	55,220	...	...	55,220	1911
...	...	...	...	651	79,738	651	79,738	...	...	79,738	1912
...	...	...	...	484	72,142	484	72,142	...	...	72,142	1913
...	...	...	...	363	35,649	363	35,649	...	...	35,649	1914
...	...	...	...	429	41,391	429	41,391	...	...	41,391	1915
...	...	...	...	463	49,101	463	49,101	...	...	49,101	1916
...	...	...	...	383	45,288	383	45,288	...	...	45,288	1917
...	...	...	...	...	...	13,414	1,186,672	867	117,214	1,303,886	Total

[2]†Weight not stated. [3]†Probably the produce of Pilbara Goldfield and Greenbushes Mineral Field.

TABLE XXV.—*Return of Ore and Minerals other than Gold*

Year.	Silver.		‡ Lead.		‡ Lead and Silver-Lead.		Pig Lead.		Zinc Ingots and Concentrates.	
	State generally.		Northampton Mf.		State generally.		State generally.		State generally.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	ozs.	£	tons.	£	tons.	£	tons.	£	tons.	£
1850	...	...	5	55	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...	...	...	...
3	...	...	[2]†	4	...	...	55	1,200	...	...
4	...	...	...	...	...	...	122	2,440	...	...
5	...	...	25	250	...	...	134	2,675	...	...
6	...	...	...	...	...	...	60	1,200	...	...
7	...	...	...	...	...	...	120	2,410	...	...
8	...	...	...	...	...	...	61	1,220	...	...
9	...	...	13	135	...	...	25	495	...	...
1860	...	...	98	985	...	...	...	...	...	...
1	...	...	79	790	...	...	...	...	...	...
2	...	...	9	90	...	...	...	...	...	...
3	...	...	230	2,300	...	...	...	...	...	...
4	...	...	80	800	...	...	...	...	...	...
5	...	...	703	8,436	...	...	...	...	...	...
6	...	...	273	3,282	...	...	...	...	...	...
7	...	...	902	10,824	...	...	[4]†3	50	...	...
8	...	...	1,100	13,206	...	...	...	...	...	...
9	...	...	699	8,394	...	...	...	...	...	...
1870	...	...	1,209	14,514	...	...	...	...	...	...
1	...	...	420	5,040	...	...	...	...	...	...
2	...	...	364	4,368	...	...	...	...	...	...
3	...	...	965	11,586	...	...	...	...	...	...
4	...	...	2,144	25,725	...	...	...	...	...	...
5	...	...	2,289	27,468	...	...	4	89	...	...
6	...	...	2,192	26,298	...	...	[4]†7	155	...	...
7	...	...	3,956	47,466	...	...	[4]†1	15	...	...
8	...	...	3,618	43,410	...	...	...	...	...	...
9	...	...	2,775	33,300	...	...	...	...	...	...
1880	...	...	1,921	15,368	...	...	[4]†5	89	...	...
1	...	...	1,401	11,204	...	...	[4]†1	20	...	...
2	...	...	1,794	14,348	...	...	...	...	...	...
3	...	...	1,038	7,266	...	...	...	...	...	...
4	...	...	696	4,872	...	...	...	...	...	...
5	...	...	465	3,255	...	...	...	...	...	...
6	...	...	611	4,277	...	...	...	...	...	...
7	...	...	471	4,710	...	...	[4]†6	120	...	...
8	...	...	532	5,320	...	...	[4]†2	40	...	...
9	...	...	250	2,500	...	...	...	...	...	...
1890	...	...	214	2,135	...	...	...	...	...	...
1	...	...	25	250	...	...	...	...	...	...
2	...	...	30	150	...	...	...	...	...	...
3	...	...	...	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...	...	...	...
7	...	...	[2]†	4	...	...	[4]†1	11	...	...
8	...	...	5	33	...	...	...	...	...	...
9	...	...	16	96	...	...	77	1,077	...	...
1900	28,749	3,594	27	242	...	...	...	...	...	...
1	60,869	7,609	...	...	...	...	...	...	...	...
2	83,293	9,190	...	...	...	...	...	...	...	...
3	168,113	19,153	...	...	...	...	...	...	...	...
4	399,190	45,912	...	...	...	...	...	...	...	...
5	359,744	44,278	...	...	...	...	...	...	...	...
6	282,145	37,612	...	...	...	...	...	...	...	...
7	189,265	25,382	...	...	211	1,866	...	...	73	3,390
8	168,455	18,877	...	...	518	5,006	...	...	11	98
9	176,843	18,778	...	...	211	1,199	...	...	19	244
1910	176,139	18,777	248	1,433	...	...	...	...	12	147
1911	169,043	18,333	679 870	6,682 8,320	...	...	...	...	12	189
1912	165,371	19,725	1,868	22,270	...	...	...	...	14	217
1913	188,020	23,420	3,169	59,002	...	...	...	...	...	...
1914	193,057	23,227	3,554	46,285	...	...	...	...	22	379
1915	222,159	24,295	...	...	2,883	39,032	13	302	7	143
1916	173,012	22,258	...	...	428	12,033	3,523	74,930	14	630
1917	222,075	38,339	...	...	22	593	4,661	139,940	...	...
Total	**3,425,542**	**418,759**	**44,632**	**5.8,748**	**4,273**	**53,729**	**8,881**	**228,478**	**184**	**5,437**

[2]† Weight not stated. [4]† Estimated. [5]† 4 cwts. [6]† Includes Cobalt ore, 2 tons, valued at £41 : Plumbago ore, 1 ton, valued at £6. ‡ Ore and Concentrates.

[9]† Includes—
Antimony ore, 25 tons = £630
Scheelite, 4 tons ... = 140
N.E.I., 71 tons ... = 817
Total £1,587

[10]† Includes—
Tantalite ... ... = £400
N.E.I., 42 tons ... = £2,750
Total £3,150

[11]† Includes—
Other Concentrates, 29 tons = £108
N.E.I., 234 tons = £627
Total £735

[12]† Includes N.E.I., ½ ton = £100

[14]† Includes—
Iron ore, 9 tons ... = £7
Ores, N.E.I., 5 tons = 400
Total £407

entered for EXPORT from 1850 to 1917, inclusive—continued.

Wolfram.		Non-Metallic Minerals.						Minerals not Elsewhere Included.		Total Value of Minerals other than Gold, exported to Date.	Year.
		Asbestos.		Coal.		Mica.					
State generally.		State generally.		Collie River Coal Mf.		State generally.					
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.		
tons.	£	tons.	£	tons.	£	tons.	£	tons.	£	£	
...	...	...	...	...	...	...	...	...	...	55	1850
...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	1,211	3
...	...	...	...	...	...	...	...	...	...	2,440	4
...	...	...	...	...	...	...	...	...	...	2,951	5
...	...	...	...	...	...	...	...	...	...	2,218	6
...	...	...	...	...	...	...	...	...	...	4,330	7
...	...	...	...	...	...	...	...	...	...	10,751	8
...	...	...	...	...	...	...	...	...	...	14,752	9
...	...	...	...	...	...	...	...	...	...	9,006	1860
...	...	...	...	...	...	...	...	...	...	7,129	1
...	...	...	...	...	...	...	...	...	...	12,626	2
...	...	...	...	...	...	...	...	...	...	14,538	3
...	...	...	...	...	...	...	...	...	...	18,016	4
...	...	...	...	...	...	...	...	...	...	21,726	5
...	...	...	...	...	...	...	...	...	...	11,644	6
...	...	...	...	...	...	...	...	...	...	15,929	7
...	...	...	...	...	...	...	...	...	...	14,451	8
...	...	...	...	...	...	...	...	...	...	10,719	9
...	...	...	...	...	...	...	...	...	...	14,604	1870
...	...	...	...	...	...	...	...	...	...	5,040	1
...	...	...	...	...	...	...	...	...	...	4,368	2
...	...	...	...	...	...	...	...	...	...	12,434	3
...	...	...	...	...	...	...	...	...	...	26,723	4
...	...	...	...	...	...	...	...	...	...	30,628	5
...	...	...	...	...	...	...	...	...	...	30,638	6
...	...	...	...	...	...	...	...	...	...	48,284	7
...	...	...	...	...	...	...	...	...	...	43,545	8
...	...	...	...	...	...	...	...	...	...	33,300	9
...	...	...	...	...	...	...	...	...	...	15,577	1880
...	...	...	...	...	...	...	...	...	...	11,224	1
...	...	...	...	...	...	...	...	...	...	14,371	2
...	...	...	...	...	...	...	...	...	...	7,341	3
...	...	...	...	...	...	...	...	...	...	6,642	4
...	...	...	...	...	...	...	...	...	...	5,048	5
...	...	...	...	...	...	...	...	...	...	8,012	6
...	...	...	...	...	...	...	...	...	...	5,175	7
...	...	...	...	...	...	...	...	...	...	6,848	8
...	...	...	...	...	...	...	...	...	...	4,704	9
...	...	...	...	...	...	...	...	...	...	7,671	1890
...	...	...	...	...	...	...	...	...	...	14,912	1
...	...	...	...	...	...	[2]†	25	...	...	22,714	2
...	...	...	...	...	...	[2]†	4	...	...	11,744	3
...	...	...	...	...	...	...	...	...	...	15,274	4
...	...	...	...	...	...	[2]†	3	...	...	22,658	5
...	...	...	...	...	...	...	...	...	...	4,438	6
...	...	...	...	...	...	[2]†	209	...	...	4,532	7
...	...	...	...	1	1	...	...	...	...	7,060	8
...	...	[2]†	1	798	772	[2]†	50	...	...	66,611	9
...	...	...	...	355	350	[2]†	3	5	85	95,261	1900
...	...	...	...	971	969	...	...	...	4	171,453	1
...	...	...	...	12	12	...	...	[6]† 3	47	61,551	2
...	...	[5]†	10	110	127	...	...	[7]† 22	230	109,468	3
...	...	...	...	11	7	...	...	7	81	97,132	4
...	...	...	...	108	87	...	...	[8]† 80	5,856	192,251	5
...	...	...	...	86	65	...	...	10	1,035	222,621	6
...	...	...	...	26 *1,447	28 1,138	...	...	[9]† 100	1,587	402,906	7
...	...	[2]†	1,242	13 *9,612	11 7,747	[2]†	10	[10]†	3,150	176,827	8
1	100	...	...	353 *85,647	183 93,781	...	...	[11]† 263	735	282,650	9
2	190	...	...	3 *48,876	2 38,400	...	...	[12]†	100	200,106	1910
9	826	...	...	* 40,063	29,344	...	...	[13]† 14	407	197,439	1911
...	...	...	...	6 *42,602	6 30,721	...	...	[14]†	8	212,539	1912
1	86	...	...	*54,228	39,125	...	...	5	17	336,155	1913
½	40	...	...	*54,416	38,244	4	323	[15]† 16	675	182,996	1914
¼	25	...	...	1,667 *26,167	1,513 19,288	[2]†	26	[16]† 701	1,311	218,495	1915
1	128	...	...	2,447 *37,590	1,857 28,387	[2]†	10	[17]† 131	10,876	265,043	1916
...	...	...	...	*31,951	29,359	...	...	[18]† 161	3,910	343,167	1917
15	**1,395**	...	**1,253**	**439,566**	**361,524**	...	**663**	...	**30,114**	4,454,612	**Total**

* Bunker Coal. [7]† Antimony ore. [8]†Includes Tantalite, 18 tons, valued at £5,729.

[14]† Includes—

Manganese, 2 tons	=	£4
N.E.I.	=	4
Total		£8

[15]† Includes—

Bismuth, 9 tons ...	=	£635
Graphite, 7 tons ...	=	40
Total		£675

[16]† Includes—

Bismuth, 1 ton ...	=	£37
Fireclay, 12 tons	=	75
Magnesite, 688 tons	=	1,196
Manganese, 3 cwt.	=	3
Total		£1,311

[17]† Includes—

Antimony, 27 tons	=	£580
Arsenical Ore, 11 tons	=	19
Bismuth, 4 cwt. ...	=	133
Graphite, 21 tons	=	284
Magnesite, 12 tons	=	47
Scheelite, 3 tons ...	=	438
Tantalite, 47 tons	=	9,375
Total ...		£10,876

[18]† Includes—

Antimony, 12 tons	=	£258
Arsenical Ore, 57 tons	=	707
Bismuth, 9cwt. ...	=	24
Graphite, 18 tons	=	158
Magnesite, 42 tons	=	50
Molybdenite, 14 tons	=	158
Scheelite, 12 cwt.	=	42
Tantalite, 17 tons	=	2,513
Total		£3,910

PART III.—ALL MINES.

TABLE XXVI.

MILLING AND CYANIDING PLANTS ERECTED IN THE RESPECTIVE GOLDFIELDS, DISTRICTS, AND MINERAL FIELDS ON THE 31ST DECEMBER, 1917, AND THE TOTAL VALUE OF MINING MACHINERY.

Mining Centre and Lease or Area.	Name of Mine, Company, or Works.	Milling.									Cyaniding.			Value of all Mining Machinery
		Batteries.	Other Mills.											
		Number of Heads of Stampers.	Prospecting Mills.	Ball Mills.	Griffin Mills.	Huntington Mills.	Puddlers.	Other Crushers.	Flint Mills.	Grinding Pans.	Leaching Vats.	Agitating Vats.	Vacuum Filters and Presses.	
	PILBARA GOLDFIELD.													
	MARBLE BAR DISTRICT.													
Bamboo Creek. 795	Bulletin	10	...	...	...	...	...	...	...	...	4	...	...	...
⩚ *Elsie.* 792	State Battery, Bamboo Creek	5	...	...	...	...	...	...	...	...	5	...	...	...
Lalla Rookh. R.C. 112	Trio	3	...	...	...	...	...	...	...	...	...	...	...	...
Marble Bar. 694	Lalla Rookh G.M.	10	...	...	...	...	...	...	...	...	3	...	...	...
⩚ *Warrawoona.* (604)	Jo Jo G.M.	5	...	...	...	...	...	...	...	...	...	...	...	...
Yandicoogina. M.A. (26)	State Battery, Marble Bar	5	...	...	...	...	...	...	...	...	...	...	...	...
	Klondyke Boulder G.M. Co., Ltd.	15	...	...	...	...	...	...	...	...	...	...	...	...
	Lady Adelaide Battery	10	...	...	...	...	...	...	...	...	4	...	...	...
	Total	**63**	...	...	...	...	...	...	...	...	**16**	...	...	**£9,651**
	NULLAGINE DISTRICT.													
Eastern Creek. M.A. 11L	Doherty's Works	10	...	...	...	...	...	...	...	...	3	...	...	...
Middle Creek. 106L	Barton	10	...	...	...	...	...	...	...	1	6	...	...	...
McPhee's Creek. M.A. 12L	Judge	3	...	...	...	...	...	...	...	...	...	...	...	...
20-Mile Sandy. ⩚	State Battery, 20-Mile Sandy	5	...	...	...	...	...	...	...	...	4	...	...	...
	Total	**28**	...	...	...	...	...	...	...	1	**13**	...	...	**£31,729**
	WEST PILBARA GOLDFIELD.													
Station Peak. 165	Belladonna	20	...	...	...	...	...	...	...	1	...	...	...	...
Towranna. 155	Tauri Tom Tit	10	...	...	...	...	...	...	...	1	2	...	...	...
Weerianna. M.A. 12	Porteminna Battery	10	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**40**	...	...	...	...	...	...	...	2	**2**	...	...	**£3,000**
	GASCOYNE GOLDFIELD.													
Bangemall. 32	Gem	1	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**1**	...	...	...	...	...	...	...	...	...	...	...	**£1,100**
	PEAK HILL GOLDFIELD.													
(1P, etc.)	(Peak Hill Goldfields, Ltd.)	30	...	...	...	...	...	2	...	...	8	3	...	...
⩚	State Battery, Mt. Egerton	5	...	...	...	...	...	...	...	...	...	...	...	...
⩚	State Battery, Ravelstone	5	...	...	...	...	...	...	...	...	...	...	...	...
⩚	Purcell's Works	...	...	...	...	...	...	...	...	...	5	...	...	...
	Total	**40**	...	...	...	...	...	**2**	...	...	**13**	**3**	...	**£7,963**
	EAST MURCHISON GOLDFIELD.													
	LAWLERS DISTRICT.													
Bronzewing. (1017)	Bronzewing	3	...	...	...	...	...	...	...	...	2	...	...	...
Kathleen Valley. (113)	Nil Desperandum	10	...	...	...	...	...	...	...	...	...	...	...	...
382	Yellow Aster	10	...	...	...	...	...	...	...	...	4	...	...	...
Lake Darlot. 138H	Murie & Dowson's Cyanide Works	...	...	...	...	...	...	...	...	...	5	...	...	...
633, etc.	Zangbar	10	...	...	...	...	...	...	...	...	...	...	...	...
Lawlers. 1171	Great Eastern	5	...	...	...	...	...	...	...	...	6	...	...	...
M.A. 11	Lawlers Public Battery	...	...	...	...	...	...	...	...	...	4	...	...	...
M.H.L. 9	Leinster Homestead leases	...	...	...	...	...	...	...	...	...	4	...	...	...
1172	Queen Battery	5	...	...	...	...	...	...	...	...	5	...	...	...
910	Sunrise	5	...	...	...	...	...	...	...	...	2	...	...	...
1188	Try It	5	...	...	...	...	...	...	...	...	...	...	...	...
58, etc.	Waroonga G.M. Co., Ltd.	10	...	...	...	...	...	...	...	...	...	...	...	...
Sir Samuel. M.A. 28	Bellevue	40	...	...	...	...	...	1	...	1	...	...	...	...
⩚	State Battery, Sir Samuel	5	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**108**	...	...	...	...	...	**1**	...	**1**	**32**	...	...	**£18,266**

TABLE XXVI.—*Milling and Cyaniding Plants erected in the respective Goldfields, Districts, etc.*—continued.

Mining Centre and Lease or Area.	Name of Mine, Company, or Works.	Milling.									Cyaniding.			Value of all Mining Machinery.
		Batteries.	Other Mills.											
		Number of Heads of Stampers.	Prospecting Mills.	Ball Mills.	Griffin Mills.	Huntington Mills.	Puddlers.	Other Crushers.	Flint Mills.	Grinding Pans.	Leaching Vats.	Agitating Vats.	Vacuum Filters and Presses.	
	EAST MURCHISON GOLDFIELD—*contd.*													
	WILUNA DISTRICT.													
Collavilla. (71J) *Mt. Keith.* ⋀ *Wiluna.* M.A. 5 7J 10J 6J, etc. 12J, etc. ⋀	May Queen Reward	5	...	...	...	...	...	...	...	...	...	...	...	...
	State Battery, Mt. Keith	5	...	...	...	...	...	...	...	...	4	...	...	...
	Christensen's Battery	...	1	...	...	...	...	...	...	...	...	...	...	...
	Moonlight	10	...	...	...	...	...	...	...	2	...	6	1	...
	Western Machinery Co., Ltd.	30	...	1	...	...	...	1	...	4	13	13	6	...
	Wiluna G.Ms., Ltd.	25	...	...	...	...	...	1	...	3	9	3	1	...
	State Battery, Wiluna	10	...	...	...	...	...	1	5	...	...	4	...	...
	Total	**85**	**1**	**1**	...	...	...	**3**	**5**	**9**	**26**	**26**	**7**	**£58,507**
	BLACK RANGE DISTRICT.													
Barrambie. 773B *Birrigrin.* M.A. 10B M.A. 8B *Curran's Find.* 641B *Errolls.* M.A. 9B *Maninga Marley.* 203B *Sandstone.* 4B, etc. M.A. 13B. ⋀ *Youanme.* 518, etc. ⋀	Barrambie Ranges G.M. Co., N.L.	10	...	...	...	...	...	...	...	...	6	...	...	...
	Pelerin	5	...	...	...	...	...	...	...	...	...	...	...	...
	Reply Works	5	...	...	...	...	...	...	...	...	4	...	...	...
	Red, White, and Blue	5	...	...	...	...	...	...	...	...	...	...	...	...
	Great Saddle	10	...	...	...	...	...	...	...	1	8	...	...	...
	Havilah	10	...	...	...	...	...	...	...	1	4	...	...	...
	Black Range M. Co., N.L.	20	...	...	...	...	...	...	...	...	12	...	...	...
	Yuanmi G.Ms., Ltd.	20	...	...	...	...	...	...	1	1	...	...	2	...
	State Battery, Black Range	10	...	...	...	...	...	1	...	...	5	...	...	...
	Yuanmi G.Ms., Ltd.	20	...	1	...	...	...	...	1	2	6	3	...	...
	State Battery, Youanme	5	...	...	...	...	...	...	...	...	2	...	...	...
	Total	**120**	...	**1**	...	...	...	**1**	**2**	**5**	**47**	**3**	**2**	**£110,657**
	MURCHISON GOLDFIELD.													
	CUE DISTRICT.													
Cuddingwarra. 1860 (595) T.L. 2/16 T.A. 26 Cue. (1833) 203, etc. (1020) 1148, etc. *Mindoolah.* (1609) *Tuckabiano.* 1914 *Tuckanarra.* ⋀	Big Bell	10	...	...	...	...	...	...	...	...	6	1	...	...
	Victory United	10	...	...	...	...	...	...	...	...	...	...	...	...
	McIntyre's Cyanide Works	...	...	...	...	...	...	...	...	...	2	...	...	...
	Wright's Works	...	...	...	...	...	...	...	...	...	3	...	...	...
	Agamemnon	5	...	...	...	...	...	...	...	...	...	...	...	...
	Cue No. 1	20	...	...	...	...	...	1	...	...	6	...	...	...
	Gem of Cue Extended	15	...	...	...	...	...	...	...	...	...	...	...	...
	Light of Asia	...	...	...	...	...	...	1	...	...	...	...	...	...
	Mindoolah Battery	10	...	...	...	...	...	...	...	...	...	...	...	...
	Triplicate	5	...	...	...	...	...	1	...	...	3	...	...	...
	State Battery, Tuckanarra	10	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**85**	...	...	...	...	...	**3**	...	...	**20**	**1**	...	**£32,368**
	MEEKATHARRA DISTRICT.													
Gabanintha. 1324N *Garden Gully.* M.A., 16N *Gum Creek.* M.A., 11N *Meekatharra.* 597N, etc. 477N, etc. 555N 475N 395N, etc. 507N, etc. ⋀ *Nannine.* 16N, etc. *Quinn's.* ⋀ *Ruby Well.* 1261N 1291N	Hamburg Belle	5	...	...	...	...	...	...	...	...	2	...	...	...
	Kyarra G.M. Co., N.L.	10	...	...	...	...	...	...	...	1	8	...	1	...
	Connecticut	5	...	...	...	...	...	...	...	...	...	...	...	...
	Commodore G.M. Co., N.L.	10	...	...	...	...	...	...	...	...	4	3	1	...
	Fenian leases	15	...	...	...	...	...	2	...	8	...	8	1	...
	Ingliston	10	...	...	...	...	...	...	...	...	...	...	...	...
	Ingliston Consols Extended	15	...	...	...	...	...	...	...	1	6	...	...	...
	Ingliston Extended G.Ms., Ltd.	10	...	...	...	...	...	...	...	3	2	2	1	...
	Queenhills G.Ms., Ltd.	2	...	...	...	...	...	...	2	2	...	3	1	...
	State Battery, Meekatharra	5	...	...	...	...	...	...	...	...	6	...	...	...
	Nannine leases	10	...	...	...	...	...	...	...	2	...	...	...	...
	State Battery, Quinn's	5	...	...	...	...	...	...	...	...	...	...	...	...
	Harder to Find	5	...	...	...	...	...	...	...	...	4	...	...	...
	Waterloo	5	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**112**	...	...	...	...	...	**2**	**2**	**17**	**32**	**16**	**5**	**£144,542**
	DAY DAWN DISTRICT.													
Day Dawn. 389D 1D, etc. (138D) *Webb's Patch.* 513D	Creme d'Or	5	...	...	...	...	...	...	...	...	5	...	...	...
	Great Fingall Consolidated, Ltd.	40	...	...	...	...	...	4	...	8	17	11	2	...
	Murchison Associated	10	...	...	...	...	...	...	...	...	...	...	...	...
	Black Range Pinnacles Co., N.L.	10	...	...	...	...	...	...	...	4	...	6	24	...
	Total	**65**	...	...	...	...	...	**4**	...	**12**	**22**	**17**	**26**	**£161,450**

TABLE XXVI.—*Milling and Cyaniding Plants erected in the respective Goldfields, Districts, etc.*—continued.

Mining Centre and Lease or Area,	Name of Mine, Company, or Works,	MILLING,									CYANIDING,			Value of all Mining Machinery.
		Batteries.	Other Mills.											
		Number of Heads of Stampers.	Prospecting Mills.	Ball Mills.	Griffin Mills.	Huntington Mills.	Puddlers.	Other Crushers.	Flint Mills.	Grinding Pans.	Leaching Vats.	Agitating Vats.	Vacuum Filters and Presses.	
	MURCHISON GOLDFIELD—*continued.*													
	MT. MAGNET DISTRICT.													
Boogardie.	Sirdar	...	...	...	...	...	...	...	...	...	3	...	...	...
696M	State Battery, Boogardie	5	...	...	...	...	...	...	...	...	5	...	...	...
Lennonville.	Empress leases	5	...	...	...	...	...	1	...	...	3	...	...	...
964M, etc.	State Battery, Lennonville	10	...	...	...	...	...	...	...	...	...	...	...	...
Mt. Magnet.	Early Bird	5	...	...	...	...	...	...	...	...	5	1	1	...
1169M	Great Boulder No. 1, Ltd.	10	...	...	...	...	...	...	...	...	...	...	...	...
M.A., 6M	Mars	...	1	...	...	...	...	...	...	...	7	...	...	...
1013M	Morning Star	10	...	...	...	...	...	...	...	...	6	...	...	...
1151M	New Havelock	5	...	...	...	...	...	...	...	...	4	...	...	...
1075M	Pearl	...	1	...	...	...	...	...	...	...	...	...	...	...
1095M														
Paynesville.	Paynesville Cyanide Plant	...	...	...	...	...	...	...	...	...	3	6	...	...
T.A., 9														
	Total	**50**	**2**	...	...	...	...	**1**	...	...	**36**	**7**	**1**	**£25,897**
	YALGOO GOLDFIELD.													
Field's Find.	Field's Find Extended	10	...	...	...	...	...	...	...	...	4	...	...	...
680														
Gullewa.	Mugga King	5	...	...	...	...	...	...	...	...	...	...	...	...
877														
Noongal.	Melville Battery	5	...	...	...	...	...	...	...	...	...	...	...	...
M.A., 18														
Payne's Find.	Payne's Find Development Co., N.L.	5	...	...	...	...	...	...	...	...	...	...	...	...
606	State Battery, Payne's Find	5	...	...	...	...	...	...	...	...	3	...	...	...
Warriedar.	Mug's Luck	10	...	...	...	...	...	...	...	...	4	4	...	...
708	State Battery, Warriedar	5	...	...	...	...	...	...	...	...	...	...	...	...
Yalgoo.	Ivanhoe Works	5	...	...	...	...	...	...	...	...	...	...	...	...
M.A., 17.														
Yuin.	Bullrush Gold Estates, N.L.	20	...	...	...	...	...	...	...	5	...	...	...	...
712, etc.														
	Total	**70**	...	...	...	...	...	...	...	**5**	**11**	**4**	...	**£32,090**
	MT. MARGARET GOLDFIELD.													
	MT. MORGANS DISTRICT.													
Korong.	Royal Flush	10	...	...	...	...	...	...	...	...	...	...	...	...
(313F)														
Linden	Devon	5	...	...	...	...	...	...	...	...	...	...	...	...
341F [904R]	State Battery, Linden	10	...	...	...	...	...	1	...	...	6	...	...	...
Mt. Margaret.	Mt. Morven	5	...	...	...	...	...	...	...	...	3	...	...	...
314F														
Mt. Morgans.	Westralia Mt. Morgans Mines, N.L.	10	...	...	...	...	...	...	...	3	...	2	1	...
5F, etc.	Millionaire Works	5	...	...	...	...	...	...	...	...	4	...	...	...
325F														
Murrin Murrin.	Alix Junior	5	...	...	...	...	...	...	...	...	...	...	...	...
208F	Hill's Proprietary	20	...	...	...	...	...	...	...	...	9	...	...	...
194F														
Yundamindera.	Battlesville Battery	5	...	...	...	...	...	...	...	...	5	...	...	...
M.A., 9F														
	Total	**75**	...	...	...	...	...	**1**	...	**3**	**27**	**2**	**1**	**£14,824**
	MT. MALCOLM DISTRICT.													
Diorite King.	King of the Hills	5	...	...	...	...	...	...	...	...	3	...	...	...
1459C														
Leonora.	Leonora Gold Blocks, N.L.	10	...	...	...	...	...	2	...	3	1	4	...	...
1482C	Lloyd George G.Ms., Ltd.	5	...	...	...	...	...	...	...	...	...	...	...	...
1479C	Sons of Gwalia, Ltd.	50	...	...	...	...	...	...	4	10	...	8	2	...
190C, etc.	Sons of Gwalia South G.Ms., Ltd.	10	...	...	...	...	...	1	...	...	...	...	...	...
198C, etc.	State Battery, Leonora	10	...	...	...	...	...	...	...	...	5	...	...	...
Mt. Clifford.	Victory No. 1	5	...	...	...	...	...	...	...	...	...	...	...	...
1329C														
Mt. Malcolm.	North Star: Malcolm Prospecting Co., N.L.	10	...	...	...	...	...	...	...	...	...	...	...	...
1175C	Never Tire	2	...	...	...	...	...	...	...	...	...	...	...	...
1470C														
Pigs' Well.	Starlight G.M. Syndicate, N.L.	10	...	...	...	...	...	...	...	...	...	...	...	...
1295C, etc.														
	Total	**117**	...	...	...	...	...	**3**	**4**	**13**	**9**	**12**	**2**	**£240,334**
	MT. MARGARET DISTRICT.													
Burtville.	Amalgamated Westralia G.M. Co., N.L.	5	...	...	...	...	...	...	...	...	...	...	...	...
1935T	Nil Desperandum	...	...	1	...	...	...	...	...	1	...	...	...	...
1044T	State Battery, Burtville	10	...	...	...	...	...	...	...	...	...	...	...	...
Erlistoun.	Little Doris	5	...	...	...	...	...	...	...	...	...	...	...	...
M.A., 18T	Mulga Queen Consols	10	...	...	...	...	...	...	...	1	4	...	...	...
1990T	Westralia Tasmania	5	...	...	...	...	...	...	...	...	4	...	...	...
M.A., 20T														
Euro.	Lone Star	10	...	...	...	...	...	...	...	...	...	...	...	...
1984T														
Laverton.	Ida H. G.M. Co., Ltd.	10	...	...	...	...	...	1	...	2	...	...	...	...
829T, etc.	Lancefield Gold Mines, Ltd.	...	...	5	...	...	...	1	...	...	...	6	3	...
715T, etc.	Mary Mac G.M. Co., N.L.	10	...	...	...	...	...	...	...	4	4	...	...	...
1897T	State Battery, Laverton	10	...	...	...	...	...	...	...	...	3	...	...	...
	Total	**75**	...	**6**	...	...	...	**2**	...	**8**	**15**	**6**	**3**	**£46,287**

TABLE XXVI.—*Milling and Cyaniding Plants erected in the respective Goldfields, Districts, etc.*—continued.

Mining Centre and Lease or Area.	Name of Mine, Company, or Works.	MILLING. Batteries. Number of Heads of Stampers.	Other Mills. Prospecting Mills.	Ball Mills.	Griffin Mills.	Huntington Mills.	Puddlers.	Other Crushers.	Flint Mills.	Grinding Pans.	CYANIDING. Leaching Vats.	Agitating Vats.	Vacuum Filters and Presses.	Value of all Mining Machinery.
	NORTH COOLGARDIE GOLDFIELD.													
	MENZIES DISTRICT.													
Comet Vale.														
5217Z	Gladsome	10	...	...	...	...	...	...	...	2	12	...	...	...
5300Z	Happy Jack	...	...	...	...	1	...	...	...	...	...	...	...	...
5211Z, etc.	Sand Queen G. Ms., Ltd.	20	...	...	...	...	...	2	...	5	12	...	...	...
Goongarrie.														
5414Z	New Boddington	10	...	...	...	...	...	...	...	...	...	...	...	...
Menzies.														
5354Z	Balkis	5	...	...	...	...	...	...	...	...	4	...	...	...
5420Z	Goodenough	5	...	...	...	...	...	...	...	...	...	...	...	...
5302Z	Lady Harriet	5	...	...	...	...	...	...	...	1	4	...	...	...
(4895Z)	Mararoa	10	...	...	...	...	...	...	...	...	7	...	...	...
4931Z, etc.	Menzies Consolidated Gold Mines, Ltd. ...	20	...	...	...	...	...	...	...	9	15	4	1	...
3100Z, etc.	Menzies Mining and Exploration Corptn., Ltd.	10	...	...	...	...	...	...	...	...	8	...	1	...
T.A., 46Z	Gidneys Works	...	...	...	...	...	...	...	...	...	8	...	...	...
T.A., 47Z	Gidney's Works	...	...	...	...	...	...	...	...	...	3	...	...	...
Mt. Ida.														
M.A., 134Z	Mt. Ida Meteor	5	...	...	...	...	...	...	...	1	2	...	...	...
⋀	State Battery, Mt. Ida	5	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**105**	...	...	...	**1**	...	**2**	...	**18**	**75**	**4**	**2**	**£58,577**
	ULARRING DISTRICT.													
Davyhurst.														
(959U)	Expansion	...	...	...	...	1	...	...	...	...	3	...	...	...
(438U)	Waihi	10	...	...	...	...	...	...	...	...	...	...	...	...
Mulline.														
123U	Riverina	10	...	...	...	...	...	...	...	...	3	...	...	...
324U, etc.	Riverina South	10	...	...	...	...	...	1	1	2	...	4	...	...
⋀	State Battery, Mulline	10	...	...	...	...	...	...	...	...	4	...	...	...
Mulwarrie.														
⋀	State Battery, Mulwarrie	10	...	...	...	...	...	...	...	...	6	...	...	...
	Total	**50**	...	...	...	**1**	...	**1**	**1**	**2**	**16**	**4**	...	**£34,245**
	NIAGARA DISTRICT.													
Kookynie.														
T.A., 128H	Champion Cyanide Works	...	...	...	...	...	...	...	...	...	6	...	...	...
769G	Two D's	...	...	1	...	...	...	...	...	...	2	...	...	...
757G	Western Machinery Co., Ltd.	...	...	...	...	...	...	...	...	...	6	...	...	...
Niagara.														
M.A., 35G	Eagle Hawk Heather	10	...	...	...	...	...	...	...	...	...	...	...	...
(734G)	Lubra Queen	5	...	...	...	...	...	...	...	...	...	...	...	...
(419G)	Orion Mines, Ltd.	10	...	...	...	...	...	...	...	1	6	...	...	...
T.L., 108H	Bright's Cyanide Works	...	...	...	...	...	...	...	...	...	3	...	...	...
⋀	State Battery, Niagara	10	...	...	...	...	...	...	...	...	6	...	...	...
Tampa.														
(753G)	Golden Butterfly G.M. Co., N.L.	10	...	...	...	...	...	...	...	2	...	...	2	...
M.A., 59G	Grafter	5	...	...	...	...	...	...	...	1	2	...	...	...
	Total	**50**	...	**1**	...	...	...	...	...	**4**	**31**	...	**2**	**£6,220**
	YERILLA DISTRICT.													
Edjudina.														
1011R	Neta Battery	10	...	...	...	...	...	...	...	1	3	...	...	...
Pinjin.														
⋀	State Battery, Pinjin	5	...	...	...	...	...	...	...	...	...	...	...	...
Yarri.														
⋀	State Battery, Yarri	10	...	...	...	...	...	1	1	...	...	4	...	...
Yerilla.														
⋀	State Battery, Yerilla	5	...	...	...	...	...	...	...	...	3	...	...	...
	Total	**30**	...	...	...	...	...	1	1	1	6	4	...	**£5,244**
	BROAD ARROW GOLDFIELD.													
Bardoc.														
1743W	Zoroastrian	5	...	...	...	...	...	1	...	...	...	...	...	...
Carnage.														
M.A., 22W	Regan's Carnage Battery	10	...	...	...	...	...	...	...	...	...	...	...	...
Paddington.														
1733W	Mount Eddy	...	...	...	...	1	...	...	...	...	...	...	...	...
W.R., 86W	Russell Bond Treatment Plant	...	...	...	...	...	...	...	...	...	...	4	...	...
Siberia.														
1399W	Associated Northern Blocks (W.A.), Ltd. ...	...	...	1	...	2	...	...	...	10	7	...	2	...
1371W	Gimblet South...	10	...	...	...	...	...	...	...	...	...	...	...	...
1289W	Lady Evelyn	5	...	...	...	...	...	...	...	...	...	...	...	...
1736W	Pole Battery	5	...	...	...	...	...	...	...	...	3	1	...	...
⋀	State Battery, Ora Banda	5	...	...	...	...	...	...	...	...	4	...	...	...
⋀	State Battery, Siberia	5	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**45**	...	**1**	...	**3**	...	**1**	...	**10**	**14**	**5**	**2**	**£71,075**
	NORTH-EAST COOLGARDIE GOLDFIELD.													
	KANOWNA DISTRICT.													
Gindalbie.														
(1047X)	Eclipse	5	...	...	...	...	...	...	...	...	6	...	...	...
(1123X)	Gindalbie	10	...	...	...	...	...	3	...	...	...	...	...	...
(894X)	Kalgoorlie Foundry, Ltd.	10	...	...	...	...	...	...	...	3	12	...	...	...
(1174X)	United	5	...	...	...	...	...	...	...	...	...	...	...	...
Gordon.														
891X	Sirdar	10	...	...	...	...	...	...	...	...	8	...	...	...
Kanowna.														
(918X)	Government Well	3	...	...	...	...	...	...	...	...	...	...	...	...
M.A., 19X	Martin's Works	15	...	...	...	...	...	...	...	...	8	...	...	...
M.A., 39X	Mudlark	...	...	...	...	...	1	...	...	...	...	...	...	...
M.A., 56X	North White Feather G.Ms., Ltd.	60	...	...	...	...	...	...	...	1	16	...	...	...
Q.C. 57X	Riedel & Norton's Works	10	...	...	...	...	...	...	...	1	...	...	...	...
M.A., 58X	Lady Pratt	10	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**138**	...	...	...	...	**1**	**3**	...	**5**	**50**	...	...	**£16,778**

TABLE XXVI.—*Milling and Cyaniding Plants erected in the respective Goldfields, Districts, etc.*—continued.

Mining Centre and Lease or Area.	Name of Mine, Company, or Works.	Milling.									Cyaniding.			Value of all Mining Machinery.
		Batteries.	Other Mills.											
		Number of Heads of Stampers.	Prospecting Mills.	Ball Mills.	Griffin Mills.	Huntington Mills.	Puddlers.	Other Crushers.	Flint Mills.	Grinding Pans.	Leaching Vats.	Agitating Vats.	Vacuum Filters and Presses.	
	NORTH-EAST COOLGARDIE GOLDFIELD—*continued.*													
	KURNALPI DISTRICT.													
Kurnalpi.														
M.A. 2K	Success	5	...	...	...	...	...	...	...	...	...	...	...	...
Mulgabbie														
M.A. 1K	Simmon's Battery	...	1	...	...	...	...	...	...	...	...	...	...	...
	Total	**5**	**1**	...	...	...	...	...	...	...	...	...	...	**£150**
	EAST COOLGARDIE GOLDFIELD.													
	EAST COOLGARDIE DISTRICT.													
Boorara.														
3908E, etc.	Golden Ridge G.M. Co., Ltd.	20	...	...	...	...	...	...	...	...	6	4	1	...
Boulder.														
38E, etc.	Associated G.Ms. of W.A., Ltd.	...	...	9	...	...	...	1	...	20	...	6	9	...
49E, etc.	Associated Northern Blocks (W.A.), Ltd. ...	...	...	...	...	1	...	...	...	...	4	...	...	...
351E, etc.	Golden Horseshoe Estates, Ltd.	140	...	1	...	...	3	6	15	24	20	22	20	...
50E	Great Boulder No. 1, Ltd.	10	...	...	...	...	...	...	...	1	...	...	...	...
66E	Great Boulder Perseverance G.M. Co., Ltd. ...	...	...	8	...	...	...	4	2	17	...	24	13	...
M.A. 59E	Great Boulder Proprietary G.Ms., Ltd. ...	...	1	4	13	...	...	9	...	20	...	25	14	...
3643E	Hainault Sulphide Plant	...	...	2	...	...	...	...	...	...	...	...	...	...
M.A. 5E	Hannans Central Battery	20	...	...	...	...	...	1	1	...	14	3	2	...
4317E, etc.	Idaho	10	...	...	...	...	...	...	...	1	6	...	...	...
946E	Ironsides North	10	...	...	...	...	...	1	...	...	6	...	...	...
31E, etc.	Ivanhoe Gold Corporation, Ltd.	100	...	...	...	...	...	3	2	25	32	11	9	...
22E, etc.	Kalgurli G.Ms., Ltd.	...	...	9	...	...	...	5	...	17	...	16	9	...
15E, etc.	Lake View and Star, Ltd.	75	...	...	...	...	...	7	8	21	...	27	16	...
281E, etc.	North Kalgurli (1912), Ltd.	20	...	...	...	...	...	...	...	...	7	3	1	...
6E, etc.	Oroya Links, Ltd.	50	...	2	...	...	...	...	5	3	...	3	5	...
1208E, etc.	South Kalgurli Consolidated, Ltd.	40	...	4	...	...	...	2	...	15	34	11	10	...
Kalgoorlie.														
4509E	Adelaide Enterprise Prospecting Synd., N.L.	...	...	...	...	1	...	...	...	...	...	...	...	...
796E	Bonnie Lass (Raven Battery)	10	...	...	...	...	...	...	...	...	6	...	...	...
M.A. 5E	Brown Hill Consols, Ltd.	20	...	...	...	...	...	...	...	...	...	...	...	...
4E	Cassidy Hill	...	...	...	...	1	...	...	...	...	3	...	...	...
4545E	Creswick Battery	...	...	...	...	1	...	...	...	...	...	...	...	...
M.A. 64E	Dunstan & Cummings Plant	...	...	...	...	...	...	...	...	...	...	...	...	...
4546E, etc.	Hannans Reward, Ltd.	10	...	...	...	2	...	1	...	...	12	...	1	...
L.C. 353E	Lone Hand Works	...	...	...	...	1	...	...	...	1	3	...	...	...
	Total	**535**	**1**	**39**	**13**	**7**	**3**	**40**	**33**	**165**	7	...	...	...
											160	**155**	**110**	**£1,376,294**
	BULONG DISTRICT.													
Randalls.														
M.A. 68Y	Hardcastle	20	1	...	...	...	...	...	...	...	...	...	...	...
	Total	**20**	**1**	...	...	...	...	...	...	...	...	...	...	**£8,000**
	COOLGARDIE GOLDFIELD.													
	COOLGARDIE DISTRICT.													
Bonnievale.														
(595)	Gem	15	...	...	...	...	...	...	...	...	2	...	...	...
(144)	Westralia and East Extension Mines, Ltd. ...	40	...	...	...	...	...	1	...	1	...	...	...	...
Burbanks.														
134, etc.	Burbanks Birthday G.Ms., Ltd.	60	...	...	...	...	...	...	...	...	9	...	...	...
M.A. 77	Burbanks Main Lode (1904), Ltd.	20	...	...	...	...	...	...	...	...	12	...	...	...
2160	Lady Robinson G.M. Co., N.L.	10	...	...	...	...	...	...	...	...	8	...	...	...
4469	Lord Bobs	...	...	...	...	1	...	...	...	...	...	...	...	...
Coolgardie.														
(3918)	Coolgardie Redemption	10	...	...	...	...	...	...	...	...	...	...	...	...
(4434)	Daisy	3	...	...	...	...	...	...	...	...	...	...	...	...
(4392)	Garden Gully	5	...	...	...	...	...	...	...	...	...	...	...	...
(4448)	Griffiths Gold Mine	10	...	...	...	...	...	...	...	...	...	...	...	...
4443	King Solomon	...	...	...	...	1	...	...	...	...	...	...	...	...
M.A. 11	New Bailey's Mines, Ltd.	10	...	...	...	...	...	...	...	...	6	...	...	...
	State Battery, Coolgardie	10	...	...	...	...	...	1	...	...	6	...	...	...
Eundynie.														
4253	Hidden Secret North	10	...	...	...	...	...	...	...	...	6	...	...	...
Gibraltar.														
(4418)	Reform	5	...	...	...	...	...	...	...	...	3	...	...	...
Gnarlbine.														
(4401)	Baroota Wonder	10	...	...	...	...	...	...	...	...	...	...	...	...
Higginsville.														
4184	Sons of Erin	10	...	...	...	...	...	...	...	...	...	...	...	...
Red Hill.														
(4331)	Edquist	...	...	...	...	...	...	...	...	6	...	...	...	...
Widgiemooltha.														
M.A. 63	Highgate Battery	3	...	...	...	...	...	...	...	1	...	...	...	...
7497	Imperial Battery	5	...	...	...	...	...	...	...	...	...	...	...	...
(3906)	Yorkshire Lass	3	...	...	...	...	...	...	...	...	2	...	...	...
	Total	**239**	...	...	...	**2**	...	**2**	...	**8**	**54**	...	...	**£51,317**
	KUNANALLING DISTRICT.													
Balgarrie.														
M.A. 138	Stanley Battery	5	...	...	...	...	...	...	...	...	3	...	...	...
Carbine.														
338	Carbine	10	...	...	...	...	...	1	...	2	...	...	...	...
Dunnsville														
(178)	North Coolgardie	20	...	...	...	...	...	...	...	...	4	...	...	...
Kintore.														
878S	Albury	...	...	...	...	1	...	...	...	...	...	...	...	...
M.A. 14S	Hands Across the Sea	5	...	...	...	...	...	...	...	...	...	...	...	...
25-Mile.														
696S	Blue Bell	5	...	...	...	...	...	...	...	...	7	...	...	...
(602S)	Shamrock	5	...	...	...	...	...	...	...	...	4	...	...	...
645S	Star of Fremantle	10	...	...	...	...	...	...	...	...	4	...	...	...
(846S)	Swallow	5	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**65**	...	...	...	**1**	...	**1**	...	**2**	**22**	...	...	**£8,250**

TABLE XXVI.—*Milling and Cyaniding Plants erected in the respective Goldfields, Districts, etc.*—continued.

Mining Centre and Lease or Area.	Name of Mine, Company, or Works.	MILLING.									CYANIDING.			Value of all Mining Machinery.
		Batteries.	Other Mills.											
		Number of Heads of Stampers.	Prospecting Mills.	Ball Mills.	Griffin Mills.	Huntington Mills.	Puddlers.	Other Crushers.	Flint Mills.	Grinding Pans.	Leaching Vats.	Agitating Vats.	Vacuum Filters and Presses.	
	YILGARN GOLDFIELD.													
Bullfinch.														
914, etc.	Bullfinch Proprietary (W.A.), Ltd.	20	...	...	...	...	...	...	2	2	...	5	3	...
Corinthian.														
896, etc.	Corinthian North G.Ms., Ltd.	20	...	2	...	...	...	...	2	2	...	...	...	...
Golden Valley.														
M.A. 11	Violet Battery	5	...	...	...	...	...	...	...	1	4	...	...	...
Greenmount.														
550	Sunbeam	5	...	...	...	...	...	...	...	1	7	...	...	...
536	Transvaal	20	...	...	...	...	...	...	...	...	...	...	...	...
Hope's Hill.														
M.A. 21	Lakeside Battery	10	...	...	...	...	...	...	...	1	6	...	...	...
Kennyville.														
507	Great Leviathan	5	...	...	...	...	...	...	...	...	...	...	...	...
Marvel Loch.														
768	Donovan's Find Battery	5	...	...	...	...	...	...	...	...	13	...	...	...
719, etc.	Great Victoria	10	...	...	...	...	...	...	...	2	10	...	...	...
M.A. 19	Marvel Loch Cyanide Works	...	...	...	...	...	...	...	...	...	10	...	...	...
M.A. 16	Mountain Queen, Ltd	2	...	...	...	...	...	...	...	3	...	...	1	...
M.A. 18	Never Never Works	10	...	...	...	...	...	...	...	...	3	...	...	...
Mt. Jackson.														
1933	Butcher Bird No. 1	5	...	...	...	...	...	...	...	...	...	...	...	...
Parker's Range.														
(508)	Australia	5	...	...	...	...	...	...	...	...	5	...	...	...
2801	Scots Greys	5	...	...	...	...	...	...	...	...	...	...	...	...
724	Spring Hill G.M. Co., N.L.	10	...	...	...	...	...	...	...	1	3	...	...	...
Southern Cross.														
2787	Mt. Rankin Gold Mines, N.L.	10	...	...	...	...	...	...	...	2	...	...	...	...
Weston's.														
2769	Edna May Battler G.M. Co., N.L.	5	...	...	...	...	...	...	...	...	4	...	1	...
2291	Edna May Central G.Ms., N.L.	10	...	...	...	...	...	...	...	2	8	...	...	...
2570	Edna May Consolidated G.M. Co., N.L. ...	10	...	...	...	...	...	...	...	1	...	...	...	...
2180	Edna May G.M. Co., N.L.	10	...	...	...	...	...	...	...	2	7	3	...	...
2087	Greenfinch Proprietary G.M., N.L.	5	...	...	...	...	...	...	...	...	8	...	...	...
2168	Myrtle Consols	10	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**197**	...	**2**	...	...	...	...	**4**	**20**	**88**	**8**	**5**	**£227,343**
	DUNDAS GOLDFIELD.													
Norseman.														
938, etc.	Hampton Uruguay, Ltd.	10	...	...	...	...	...	...	...	4	12	4	1	...
M.A. 31	Mararoa G.M. Co., N.L.	20	...	...	...	...	...	...	...	5	17	4	1	...
106, etc.	Princess Royal G.M. Co., N.L.	20	...	...	...	...	...	2	...	5	3	...	...	...
1021	Princess Royal North	10	...	...	...	...	...	...	...	2	2	2	...	...
M.A. 18	Rawlings, Bullen, & Rumble	10	...	...	...	...	...	...	...	...	4	...	...	...
990	Viking No. 1 Syndicate	10	...	...	...	...	...	...	...	3	8	...	...	...
A	State Battery, Norseman	5	...	...	...	...	...	...	...	1	6	...	...	...
	Total	**85**	...	...	...	...	...	**2**	...	**20**	**52**	**10**	**2**	**£30,493**
	PHILLIPS RIVER GOLDFIELD.													
Kundip.														
136, etc.	Flag leases	5	...	...	...	...	...	...	...	...	...	...	...	...
M.A. 6	Gem	5	...	...	...	...	...	...	...	...	4	...	...	...
151, etc.	Gem Consolidated	5	...	...	...	...	...	...	...	...	...	...	...	...
M.L. 52	Harbour View Gold and Copper Co., Ltd. ...	10	...	...	...	...	...	...	...	1	...	...	...	...
74	Two Boys	10	...	...	...	...	...	...	...	...	...	...	...	...
Mt. Purchas.														
M.A 18	Mount Purchas Prospecting Plant	...	1	...	...	...	...	...	...	...	...	...	...	...
Ravensthorpe.														
(153)	Maori Queen	...	1	...	...	...	...	1	...	...	...	...	...	...
M.A. 4	Ravensthorpe Battery Co., Ltd.	10	...	...	...	...	...	...	...	...	...	...	...	...
	Total	**45**	**2**	...	...	...	...	**1**	...	**1**	**4**	...	...	**£12,600**
	State generally	...	...	1	...	...	...	1	...	...	...	...	...	...
	Total	...	...	1	...	...	...	1	...	...	...	...	...	**£30,000**

TABLE XXVI.—*Milling and Cyaniding Plants erected in the respective Goldfields, Districts, etc.*—continued.

GOLDFIELD.	DISTRICT.	MILLING.									CYANIDING.			Total Value of all Mining Machinery.
		Batteries.	Other Mills.											
		Number of Heads of Stampers.	Prospecting Mills.	Ball Mills.	Griffin Mills.	Huntington Mills.	Puddlers.	Other Crushers.	Flint Mills.	Grinding Pans.	Leaching Vats.	Agitating Vats.	Vacuum Filters and Presses.	
	GOLD MINING.													£
KIMBERLEY	...	...												...
PILBARA	Marble Bar	63	...	...	...	...	...	...	...	...	16	...	...	9,651
	Nullagine	28	...	...	...	...	...	...	...	1	13	...	...	31,729
WEST PILBARA	...	40	...	...	...	...	...	...	...	2	2	...	...	3,000
ASHBURTON	...	...	...	...	...	...	...	...	...	...	...	...	...	...
GASCOYNE	...	1	...	...	...	...	...	...	...	...	...	...	...	1,100
PEAK HILL	...	40	...	...	...	...	...	2	...	...	13	3	...	7,963
EAST MURCHISON	Lawlers	108	...	...	...	...	...	1	...	1	32	...	...	18,266
	Wiluna	85	1	1	...	...	...	3	5	9	26	26	7	58,507
	Black Range	120	...	1	...	...	...	1	2	5	47	3	2	110,657
	Cue ...	85	...	...	...	...	...	3	...	...	20	1	...	32,368
MURCHISON	Meekatharra	112	...	...	...	...	...	2	2	17	32	16	5	144,542
	Day Dawn	65	...	...	...	...	...	4	...	12	22	17	26	161,450
	Mt. Magnet	50	2	...	...	...	...	1	...	...	36	7	1	25,897
YALGOO	...	70	...	...	...	...	...	...	...	5	11	4	...	32,090
MT. MARGARET	Mt. Morgans	75	...	...	...	...	...	1	...	3	27	2	1	14,824
	Mt. Malcolm	117	...	...	...	...	...	3	4	13	9	12	2	240,334
	Mt. Margaret	75	...	6	...	...	...	2	...	8	15	6	3	46,287
	Menzies	105	...	...	...	1	...	2	...	18	75	4	2	58,577
NORTH COOLGARDIE	Ularring	50	...	...	...	1	...	1	1	2	16	4	...	34,245
	Niagara	50	...	1	...	...	...	...	...	4	31	...	2	6,220
	Yerilla	30	...	...	...	...	...	1	1	1	6	4	...	5,244
BROAD ARROW	...	45	...	1	...	3	...	1	...	10	14	5	2	71,075
N.E. COOLGARDIE	Kanowna	138	...	...	...	...	1	3	...	5	50	...	...	16,778
	Kurnalpi ...	5	1	...	...	...	...	...	...	...	...	...	...	150
EAST COOLGARDIE	East Coolgardie	535	1	39	13	7	3	40	33	165	160	155	110	1,376,294
	Bulong ...	20	1	...	...	...	...	...	...	...	...	...	...	8,000
COOLGARDIE	Coolgardie ...	239	...	...	...	2	...	2	...	8	54	...	...	51,317
	Kunanalling ...	65	...	...	...	1	...	1	...	2	22	...	...	8,250
YILGARN	...	197	...	2	...	...	...	...	4	20	88	8	5	227,343
DUNDAS	...	85	...	...	...	...	...	2	...	20	52	10	2	30,493
PHILLIPS RIVER	...	45	2	...	...	...	...	1	...	1	4	...	...	12,600
STATE GENERALLY	...	...	...	1	...	...	...	1	...	...	...	...	...	30,000
	Total Gold Mining Machinery ...	**2,743**	**8**	**52**	**13**	**15**	**4**	**78**	**52**	**332**	**893**	**287**	**170**	**2,875,251**
	LEAD MINING.													
NORTHAMPTON, M.F.	...	...	...	...	...	...	...	5	...	...	...	...	...	28,150
	Total, Lead Mining Machinery ...	...	...	...	...	...	...	**5**	...	...	...	...	...	**28,150**
	TIN MINING.													
PILBARA	Marble Bar ...	...	...	...	...	1	...	2	...	...	...	...	...	25,300
GREENBUSHES TINFIELD	...	10	...	...	...	1	1	4	...	...	...	...	...	21,474
	Total, Tin Mining Machinery	**10**	...	...	...	**2**	**1**	**6**	...	...	...	...	...	**46,774**
	COPPER MINING.													
PHILLIPS RIVER	...	...	...	...	...	...	...	12	...	...	...	...	...	77,750
WEST PILBARA	...	...	...	...	...	...	...	...	...	...	...	...	...	101,067
MT. MARGARET	Mt. Morgans ...	...	...	...	...	...	...	...	...	...	...	...	...	2,500
	Total, Copper Mining Machinery	...	...	...	...	...	...	**12**	...	...	...	...	...	**181,317**
	COAL MINING.													
COLLIE RIVER COALFIELD	...	...	...	...	...	...	...	...	...	...	...	...	...	64,390
	Total, Coal Mining Machinery ...	...	...	...	...	...	...	...	...	...	...	...	...	**64,390**
Total, Machinery other than Gold Mining		**10**	...	...	...	**2**	**1**	**23**	...	...	...	...	...	**320,631**
Total all Mining Machinery		**2,753**	**8**	**52**	**13**	**17**	**5**	**101**	**52**	**332**	**893**	**287**	**170**	**3,195,882**

APPENDIX.

ROYAL MINT, PERTH BRANCH.

Subject to the Regulations, any person may deposit gold at the Mint in his own name. Those who cannot attend personally for the purpose may send the gold by an agent, under Police escort, or by Post.

A circular can be obtained from the Deputy Master of the Mint giving all necessary information for intending depositors, conditions of the Escort Service, Coining Regulations, etc., etc.

An Escort Service is provided by the Police Department for parcels of all sizes. The consignor pays for the carriage by coach or train, but the escort charges may be collected by the Mint.

Forms for use in connection with gold sent to the Mint by post or under Police escort can be obtained at the Mint.

Charges for Assaying, Refining, and Coinage.

Gross Weight of Deposit in ounces.	Mint Charge.	Gross Weight of Deposit in ounces.	Mint Charge.	Gross Weight of Deposit in ounces.	Mint Charge.
Up to and including—	£ s. d.	Up to and including—	£ s. d.	Up to and including—	£ s. d.
24	0 5 0	400	4 3 4	1,300	10 4 2
30	0 6 3	410	4 5 5	1,400	10 16 8
40	0 8 4	420	4 7 6	1,500	11 9 2
50	0 10 5	430	4 9 7	1,600	12 1 8
60	0 12 6	440	4 11 8	1,700	12 14 2
70	0 14 7	450	4 13 9	1,800	13 6 8
80	0 16 8	460	4 15 10	1,900	13 19 2
90	0 18 9	470	4 17 11	2,000	14 11 8
100	1 0 10	480	5 0 0	2,100	15 4 2
110	1 2 11	490	5 2 1	2,200	15 16 8
120	1 5 0	500	5 4 2	2,300	16 9 2
130	1 7 1	520	5 6 8	2,400	17 1 8
140	1 9 2	540	5 9 2	2,500	17 14 2
150	1 11 3	560	5 11 8	2,600	18 6 8
160	1 13 4	580	5 14 2	2,700	18 19 2
170	1 15 5	600	5 16 8	2,800	19 11 8
180	1 17 6	620	5 19 2	2,900	20 4 2
190	1 19 7	640	6 1 8	3,000	20 16 8
200	2 1 8	660	6 4 2	3,100	21 9 2
210	2 3 9	680	6 6 8	3,200	22 1 8
220	2 5 10	700	6 9 2	3,300	22 14 2
230	2 7 11	720	6 11 8	3,400	23 6 8
240	2 10 0	740	6 14 2	3,500	23 19 2
250	2 12 1	760	6 16 8	3,600	24 11 8
260	2 14 2	780	6 19 2	3,700	25 4 2
270	2 16 3	800	7 1 8	3,800	25 16 8
280	2 18 4	820	7 4 2	3,900	26 9 2
290	3 0 5	840	7 6 8	4,000	27 1 8
300	3 2 6	860	7 9 2	4,100	27 14 2
310	3 4 7	880	7 11 8	4,200	28 6 8
320	3 6 8	900	7 14 2	4,300	28 19 2
330	3 8 9	920	7 16 8	4,400	29 11 8
340	3 10 10	940	7 19 2	4,500	30 4 2
350	3 12 11	960	8 1 8	4,600	30 16 8
360	3 15 0	980	8 4 2	4,700	31 9 2
370	3 17 1	1,000	8 6 8	4,800	32 1 8
380	3 19 2	1,100	8 19 2	4,900	32 14 2
390	4 1 3	1,200	9 11 8	5,000	33 6 8

For every additional 100ozs. the charge is increased by 12s. 6d.

NOTE.—Additional charges (*see* Regulation No. 6) are collected when base metals in a deposit exceed 2 per cent. of its weight.

The following table illustrates the operation of these charges in case of gold of the value of £3 17s. 10½d. an ounce:—

Weight of Deposit.	Rate of Charge per ounce.	Amount of Charge.	Net Value of Deposit.
ozs.	d.	£ s. d.	£ s. d.
50	2.5	0 10 5	194 3 4
100	2.5	1 0 10	388 6 8
600	2.3	5 16 8	2,330 8 4
1,000	2.0	8 6 8	3,885 8 4
5,000	1.6	33 6 8	19,435 8 4
10,000	1.55	64 11 8	38,872 18 4

NOTE.—A proportion of silver in deposits of gold is paid for by the Mint as follows:—

In deposits under 1,000ozs. gross: all silver in excess of 8 per cent. of the weight of the deposit after melting.
" from 1,000 " to 5,000 " " 6 " " " " "
" " 5,000 " " 10,000 " " 5 " " " " "
" " 10,000 " upwards " " 4 " " " " "

The rate at which payment for silver is made is liable to fluctuation.

GOLD ESCORT SERVICE.

RATES.

Actual Cost, plus 20 per cent.

RATES FOR CARRIAGE OF GOLD ON GOVERNMENT RAILWAYS.

	Distance not over—							
	25 miles.	50 miles.	100 miles.	150 miles.	200 miles.	250 miles.	300 miles.	350 miles.
Gold dust and bullion per 100ozs.	s. d. 1 0	s. d. 2 0	s. d. 3 0	s. d. 3 9	s. d. 4 6	s. d. 5 0	s. d. 5 6	s. d. 6 0

6d. per 100ozs. for every additional 50 miles, or part thereof.

NOTE.—A special reduction of 25 per cent. is made for all gold dust or bullion consigned to the Perth Mint.

To find the value per ounce of gold sent from a mine to the Mint.—Divide the standard gold by the weight before melting, and multiply the result by £3 17s. 10½d. For instance, supposing the Mint return to show:—

	Ozs.
Weight before melting	47.41
Standard gold	38.19

The calculation would be as follows:—

```
4741)3819.0(.805
   3792.8
   ------
     26200
     23705
     -----
      2495
      ----
```

.805 × £3 17s. 10½d. =
.805 × £3.894

```
      .805
      ----
     19470
    311520
    ------
£3.134(670)
      20
    ----
s. 2.680
      12
    ----
d. 8.160 = £3 2s. 8d., value per ounce of gold as produced from the mine.
```

By Authority: FRED. WM. SIMPSON, Government Printer, Perth.