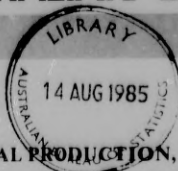




AUSTRALIAN BUREAU OF STATISTICS

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EMBARGOED UNTIL 11.30 A.M. 16 AUGUST 1985

MINERAL PRODUCTION, AUSTRALIA 1983-84

- PHONE INQUIRIES** *for more information about these statistics*—contact Mr John van Dartel on Canberra (062) 52 5650 or any of our State offices.
- other inquiries including copies of publications*—contact Information Services on Canberra (062) 52 6627 or in any of our State offices.
- MAIL INQUIRIES** write to Information Services, ABS, P.O. Box 10, Belconnen, A.C.T. 2616 or any of our State offices.

EXPLANATORY NOTES

Introduction

This publication presents details of the quantity and value of minerals produced during the year ended June 1984 for each State, the Northern Territory and Australia with some comparative statistics relating to preceding years. (Note: No details are available for publication for the Australian Capital Territory in respect of 1983-84). The commodities are identified by the commodity codes used in Australian mining statistics.

2. The statistics are derived from information supplied to the various State Mines Departments and the Australian Bureau of Statistics (ABS), supplemented in some cases by information made available by the Department of Resources and Energy, and from data compiled by the ABS from other sources. The period covered by the annual census of mining establishments and the annual mineral production collection is in general the twelve months ended 30 June. Where businesses find it impossible to supply information on this basis a substitute accounting period is used.

3. Minerals are classified into five major groups: metallic minerals, coal, oil and gas, construction materials and other non-metallic minerals. In this publication the minerals are arranged in these five groups.

Scope

4. Mineral production data are collected from establishments in the mining industry as defined in the Australian Standard Industrial Classification (ASIC), from establishments classified to other ASIC industries which, as subsidiary activities, carry out mining or quarrying (e.g. brick and cement manufacturing establishments extracting clays, limestone), and from itinerant and part-time miners.

Coverage

5. Coverage is deficient in the case of some minerals, principally because of the difficulties in obtaining complete lists of producers and collecting satisfactory returns. The standard of coverage of the major groups of minerals is discussed below and the major deficiencies of coverage are outlined.

6. Coverage of metallic minerals, coal and oil and gas is complete, except that adequate records of production of metallic minerals by fossickers and small parties are

not always available. There are problems in the coverage of non-metallic minerals in some States due to the fact that the extraction of some of these minerals is outside the administrative control of Mines Departments. Products chiefly affected are clays, limestone, salt, silica and loam and in these cases the ABS, wherever possible, collects statistics direct from the producers. It is recognised that coverage of gemstone production is deficient to a considerable extent.

7. Coverage of construction materials is incomplete in most States. This is due primarily to the difficulties of obtaining complete lists of quarries (including those operated by governmental authorities) many of which operate intermittently or for relatively short periods at any one location. There is difficulty also in obtaining satisfactory returns from quarries operated in conjunction with some other activity, e.g. dam construction, brick-making etc. Important deficiencies in the coverage of construction materials are sand and gravel in Western Australia.

8. As mentioned in paragraph 4, the mineral production statistics in this publication cover production (subject to the qualifications set out in paragraphs 5-7) by all producers whether classified as mining establishments or not.

Principles for measuring quantity and value of minerals

9. The quantities of individual minerals produced are recorded, in general, in the form in which the minerals are dispatched from the mine or from associated treatment works in the locality of the mine. Thus for metallic minerals, the output is recorded as ore if no treatment is undertaken at or near the mine, and as concentrate if ore dressing operations are carried out in associated works in the locality of the mine. In addition to the basic quantity data, the content of metallic minerals (based on assay) are recorded; no allowance has been made for losses in smelting and refining and the quantities shown are therefore in general, greater than the contents actually recovered.

10. In general, *quantity* statistics in this publication are quantities produced during the year. The figures cover, in addition to quantities produced for sale, quantities for transfer to other establishments of the enterprise and quantities for consumption by the mine itself. In the case of some minerals (e.g. those which do not have a marketable value until they are sold or dispatched from a

mine) the quantities reported are dispatches or sales from the mine, rather than production, and the corresponding value of production refers to value of minerals dispatched or sold.

11. The production of individual minerals is *valued* at the mine or at associated treatment works in the locality of the mine. The valuation is derived, in general, by valuing the quantity produced during the year at the unit selling value less any transport costs from the mine or associated treatment works to the point of sale.

World production of selected minerals

12. Table 4 shows for 1983 estimated world production of selected minerals, the proportion accounted for by Australian production, and the world's leading producing country. The data for this table are obtained from the Bureau of Mineral Resources Geology and Geophysics (BMR).

Related publications

13. The following is a list of publications containing other mining and related statistics for Australia, published by the ABS or the BMR. Users are also referred to the annual reports of the State Mines Departments, which contain mineral statistics.

COMMODITY STATISTICS

Monthly—

Exports, Australia (5404.0)—issued monthly (\$1.10, \$1.90 incl. postage)

Imports, Australia (5406.0)—issued monthly (\$1.10, \$1.90 incl. postage)

Monthly Bulletin of Copper, Lead and Zinc Statistics (BMR)

Monthly Bulletin of Tin Statistics (BMR)

Monthly Bulletin of Metal and Mineral Prices (BMR)

Quarterly—

Australian Mineral Industry Quarterly (8403.0) (BMR)

Quarterly Bulletin of Mineral Sands Statistics (BMR)

Quarterly Bulletin of Copper, Lead and Zinc Statistics (BMR)

Quarterly Bulletin of Tin Statistics (BMR)

Annual—

Manufacturing Commodities: Selected Principal Articles Produced, Australia, 1982-83 (Preliminary) (8365.0)

Manufacturing Commodities: Principal Articles Produced, Australia 1981-82 and 1982-83 (8303.0)

Overseas Trade, Australia, Part 1: Exports and Imports, 1982-83 (5409.0)

EXPLORATION STATISTICS

Quarterly—

Mineral Exploration, Australia (8412.0)

Annual—

Mineral Exploration, Australia, 1983-84 (8407.0)

INDUSTRY AND RELATED STATISTICS

Annual—

Census of Mining Establishments: Summary of Operations (Preliminary) by Industry Class, Australia, 1983-84 (8401.0)

Census of Mining Establishments: Details of Operations by Industry Class, Australia, 1983-84 (8402.0)

Census of Manufacturing Establishments: Details of Operations by Industry Class, Australia, 1982-83 (8203.0) (\$1.20, \$3.70 incl. postage)

Census of Manufacturing Establishments: Summary of Operations by Industry Class, Australia, 1982-83 (8202.0)

Australian Mineral Industry Annual Review (BMR)

Irregular—

Census of Mining Establishments: Selected Items of Data Classified by Employment Size and Industry Class, Australia, 1982-83 (8410.0)

Census of Mining Establishments: Industry Concentration Statistics, Australia, 1982-83 (8411.0).

14. In addition to the publications above, more detailed information at State level is available from each State office of the ABS.

15. Current publications produced by the ABS are listed in the *Catalogue of Publications, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

Symbols and other usages

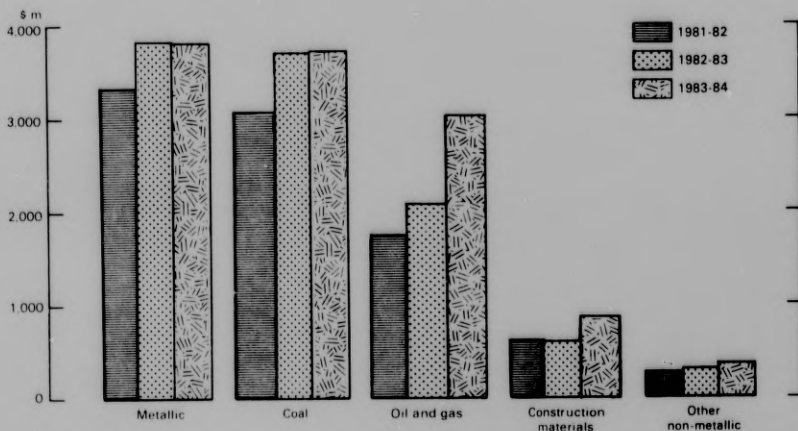
- nil or rounded to zero
- .. not applicable
- n.a. not available
- n.p. not available for separate publication (but included in totals where applicable)
- n.e.i. not elsewhere included

16. Where figures have been rounded, discrepancies may occur between sums of the component items and totals.

17. The figures for previous years have been revised where necessary and as a consequence may not agree with similar data shown in previous publications.

A. R. BAGNALL
Acting Australian Statistician

VALUE OF MINERALS PRODUCED, AUSTRALIA
1981-82 - 1983-84



VALUE OF MINERALS PRODUCED BY STATE
1981-82 - 1983-84

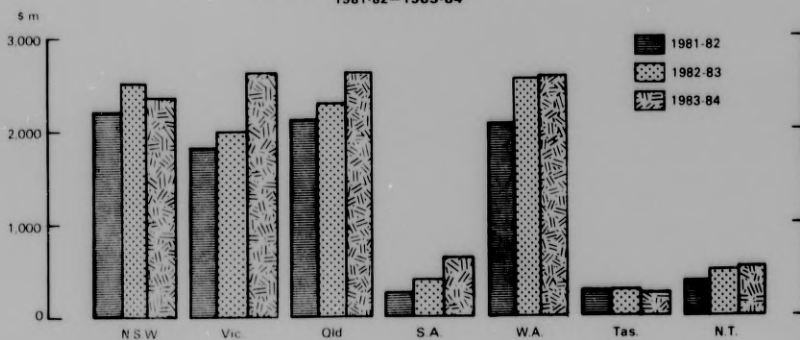


TABLE 1. QUANTITY OF MINERALS PRODUCED

Commodity code	Mineral		TABLE 1. QUANTITY OF MINERALS PRODUCED								Australia(a)		
			N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	1983-84	1982-83	1981-82	
			1983-84										
METALLIC MINERALS													
556	Antimony concentrate	tonnes	471	—	2	—	—	—	—	473	496	1,023	
500	Bauxite	' 000 tonnes	—	n.p.	7,961	—	n.p.	—	n.p.	n.p.	n.p.	24,690	
502	Copper concentrate	' 000 tonnes	122	—	634	n.p.	42	91	n.p.	n.p.	n.p.	905	
503	Copper ore	tonnes	—	—	40,371	—	—	—	—	40,371	15,864	23,067	
505	Copper oxide	tonnes	—	—	—	—	—	—	—	—	682	2,543	
506	Copper precipitate	tonnes	—	—	—	—	—	—	—	—	—	—	
509	Gold bullion(b)	kg	191	187	2,351	—	31,061	—	n.p.	n.p.	n.p.	21,008	
511	Gold concentrate	tonnes	1,091	—	700	—	—	—	—	1,791	1,022	554	
510	Gold ore	tonnes	3	—	—	439	—	—	—	442	n.p.	3,081	
512	Other gold	kg	—	n.p.	—	—	—	—	—	n.p.	n.p.	10	
(c)	Iron ore(d)	' 000 tonnes	—	n.p.	—	1,776	72,604	n.p.	—	76,478	78,971	86,786	
Iron oxide for—													
516	Cement manufacture	tonnes	14,384	—	10,759	—	—	n.p.	—	n.p.	n.p.	50,397	
517	Coal washing	tonnes	—	—	25,336	—	—	—	—	25,336	18,609	30,465	
535	Lead concentrate	' 000 tonnes	290	—	385	—	—	34	n.p.	n.p.	n.p.	704	
536	Lead-copper concentrate	tonnes	—	—	—	—	—	20,835	—	20,835	24,968	31,999	
537	Lead ore	tonnes	—	—	46,552	n.p.	—	—	—	n.p.	n.p.	123	
546	Lead-zinc concentrate	tonnes	37,932	—	—	—	—	—	—	37,932	40,205	41,179	
Manganese ore—													
563	Metallurgical grade	' 000 tonnes	—	—	—	—	—	—	n.p.	n.p.	n.p.	1,198	
565	Other grades	' 000 tonnes	—	—	—	—	—	—	n.p.	n.p.	n.p.	38	
Mineral sands—													
522	Ilmenite concentrate(e)	' 000 tonnes	17	—	42	—	958	—	—	1,017	932	1,238	
523	Leucoxene concentrate	' 000 tonnes	—	—	—	—	15	—	—	15	14	20	
524	Monazite concentrate	' 000 tonnes	1	—	—	—	16	—	—	17	11	11	
525	Rutile concentrate	' 000 tonnes	35	—	76	—	52	—	—	163	195	220	
528	Xenotime concentrate	' 000 tonnes	—	—	—	—	—	—	—	—	n.p.	—	
529	Zircon concentrate	' 000 tonnes	60	—	65	—	287	—	—	412	404	459	
567	Molybdenum concentrate	tonnes	—	—	—	—	—	24	—	24	n.p.	45	
532	Nickel concentrate	' 000 tonnes	—	—	—	—	506	—	—	506	483	423	
533	Nickel ore	' 000 tonnes	—	—	1,118	—	—	—	—	1,118	1,711	2,231	
542	Silver ore	tonnes	—	—	—	n.a.	—	—	—	n.a.	n.a.	n.a.	
570	Tantalite-columbite concentrate	tonnes	—	—	—	—	92	—	—	92	149	263	
549	Tin concentrate	tonnes	2,832	—	(f) 3,510	654	9,452	—	—	16,448	20,424	24,604	
550	Tin-copper concentrate	tonnes	—	—	—	—	1,618	—	—	1,618	1,955	3,189	
551	Tin-tantalite concentrate	tonnes	—	—	—	—	—	—	n.p.	n.p.	n.a.	25	
Tungsten concentrates—													
571	Scheelite concentrate	tonnes	—	—	155	—	—	1,646	—	1,801	2,307	3,364	
573	Wolfram concentrate	tonnes	1	—	1,498	—	—	—	—	1,499	1,502	2,017	
575	Uranium concentrate	tonnes	—	—	—	—	—	—	n.p.	n.p.	n.p.	5,086	
543	Zinc concentrate	' 000 tonnes	588	—	369	—	59	131	—	1,147	1,206	1,097	
544	Zinc ore	tonnes	—	—	—	27,379	—	—	—	27,379	11,987	—	
579	Other metallic minerals	tonnes	1,755	—	—	—	—	—	—	1,755	n.a.	n.a.	
COAL													
Black coal—													
581	Semi-anthracite	' 000 tonnes	—	—	220	—	—	—	—	220	201	142	
580	Bituminous	' 000 tonnes	66,823	—	39,565	—	—	276	—	106,664	98,687	92,246	
582	Sub-bituminous	' 000 tonnes	—	—	4,252	1,269	3,942	—	—	9,463	8,880	7,172	
Total													
		' 000 tonnes	66,823	—	44,036	1,269	3,942	276	—	116,346	107,768	99,560	
		' 000 tonnes	42,822	—	3,617	—	826	276	—	47,541	50,361	49,476	
		' 000 tonnes	24,001	—	40,419	1,269	3,115	—	—	68,804	57,407	49,958	

For footnotes see end of table.

TABLE 1. QUANTITY OF MINERALS PRODUCED — continued

Commodity code	Mineral								Australia(a)		
		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	1983-84	1982-83	1981-82
1983-84											
COAL—continued											
	Brown coal—										
588	For briquettes	' 000 tonnes	—	1,900	—	—	—	—	1,900	1,956	2,658
589	Other	' 000 tonnes	—	31,345	—	—	—	—	31,345	33,042	34,904
586	Briquettes	' 000 tonnes	—	760	—	—	—	—	760	760	993
OIL AND GAS(g)											
590&592	Crude oil—stabilised (incl. condensate)	mega litres	—	24,051	284	1,233	1,258	—	26,826	22,069	22,378
591	Natural gas(h)	giga litres	—	5,797	434	4,853	1,011	3	12,098	11,654	11,550
593	Ethane	giga litres	—	175	—	—	—	—	175	169	152
	Liquefied petroleum gases(i)—										
594	Propane	mega litres	—	1,629	—	—	1	—	1,630	1,513	1,536
595	Butane	mega litres	—	1,500	—	—	1	—	1,501	1,393	1,496
CONSTRUCTION MATERIALS(j)											
601	Sand	' 000 tonnes	8,402	n.p.	5,830	2,797	n.a.	450	n.p.	(k)24,760	(k)24,312
600	Gravel	' 000 tonnes	4,486	n.p.	3,714	78	n.a.	1,165	n.p.	(k)14,612	(k)13,240
605	Crushed and broken stone	' 000 tonnes	10,452	n.p.	19,874	3,280	4,948	2,023	n.p.	55,407	50,619
625	Dimension stone	' 000 tonnes	22	18	34	51	—	—	—	29,239	30,066
640	Other (decomposed rock, etc.)	' 000 tonnes	17,706	2,474	2,917	5,969	—	48	—	—	34,105
OTHER NON-METALLIC MINERALS											
680	Asbestos (chrysotile)	tonnes	—	—	—	—	—	—	—	11,872	34,293
684	Barite	tonnes	1,180	—	—	16,578	—	—	17,758	18,039	18,964
685	Carbon dioxide	—	—	—	—	—	—	—	—	—	—
	Clays—										
(l)	Bentonite and bentonitic clay	' 000 tonnes	4	—	28	—	—	—	32	n.p.	33
667	Brick clay and shale	' 000 tonnes	2,487	999	979	707	1,093	n.p.	n.p.	6,476	6,198
668	Cement clay and shale	' 000 tonnes	152	—	113	33	n.p.	—	393	431	477
670	Fireclay n.e.i.	' 000 tonnes	26	n.p.	—	2	n.p.	—	39	n.p.	81
672	Kaolin (incl. ball clay)(m)	' 000 tonnes	67	60	3	5	n.p.	n.p.	—	160	121
674	Pipe and tile clay	' 000 tonnes	(n)58	n.p.	7	—	n.p.	—	106	150	241
676	Stoneware clay	' 000 tonnes	28	n.p.	—	—	—	—	n.p.	n.p.	134
(o)	Other clays	' 000 tonnes	—	n.p.	—	1	n.p.	—	—	45	37
686	Diatomite	tonnes	6,219	—	—	—	—	—	6,219	n.p.	2,274
688	Dolomite	' 000 tonnes	2	—	24	570	—	22	—	618	530
689	Felspar (incl. cornish stone)	tonnes	164	—	600	—	n.p.	—	—	n.p.	5,116
691	Garnet concentrate	tonnes	—	—	—	—	n.p.	—	—	n.p.	n.p.
	Gems	—	—	—	—	—	—	—	—	—	—
704	Gypsum	' 000 tonnes	29	222	—	1,002	616	—	1,869	1,492	2,091
655	Limestone (incl. shell and coral)	' 000 tonnes	3,024	n.p.	n.p.	1,583	n.p.	607	10,333	n.p.	12,790
705	Lithium ores	tonnes	—	—	—	—	4,593	—	4,593	1,747	—
708	Magnesite, crude	tonnes	28,279	—	1,753	1,497	n.p.	—	—	n.p.	26,980
709	Mica	tonnes	—	—	—	—	n.p.	—	—	n.p.	n.a.
710	Mineral pigments, ochres etc.	tonnes	—	—	—	—	—	—	—	—	386
711	Peat	tonnes	2,886	—	1,849	—	n.p.	620	n.p.	n.p.	n.p.
713	Pebbles-for grinding	tonnes	—	—	—	3	—	n.p.	—	n.p.	1,220
714	Perlite	tonnes	—	—	3,785	—	—	—	3,785	1,701	1,300
715	Phosphate rock	tonnes	—	—	4,400	7,737	—	—	12,137	126,901	149,730
717	Pyrophyllite	tonnes	7,189	—	—	—	—	—	7,189	9,835	8,829
724	Salt	' 000 tonnes	—	111	n.p.	670	4,473	—	—	n.p.	4,985
(p)	Silica	' 000 tonnes	450	407	767	125	270	42	2,060	n.p.	1,895
736	Sillimanite	tonnes	—	—	—	287	—	—	287	411	577
737	Talc (incl. steatite)	' 000 tonnes	—	—	—	17	159	—	176	126	106
738	Vermiculite	tonnes	—	—	—	—	298	—	298	56	429
745	Other	tonnes	—	—	—	2	—	—	2	—	—

(a) Australian Capital Territory excluded for 1983-84, included for 1982-83 and 1981-82. (b) Includes alluvial gold. (c) Commodity codes 513,514,515. (d) Includes iron ore for pellet production. (e) Includes Ilmenite from which titanium dioxide is not commercially extractable. Beneficiated ilmenite (commodity code 521) is also included. (f) Includes some wolfram - tin concentrate. (g) Source: Department of Resources and Energy. (h) Includes field and plant usage. (i) Excludes refinery production. (j) Incomplete owing to difficulties of coverage in some States. See Explanatory notes, paragraph 7. (k) Excludes Western Australian production. (l) Commodity codes 665,666. (m) Includes refined kaolin. (n) Pipe clay is included with stoneware clay. (o) Commodity codes 669,671,675,679. (p) Commodity codes 725,726,727,728.

TABLE 2. VALUE OF MINERALS PRODUCED
('000)

Commodity code	Mineral	N. S. W.	Vic.	Qld	S. A.	W. A.	Tas.	N. T.	Australia(a)		
				1983-84					1983-84	1982-83	1981-82
	METALLIC MINERALS										
556	Antimony concentrate	378	—	3	—	—	—	—	381	425	1,235
500	Bauxite	—	n.p.	144,968	—	n.p.	—	n.p.	n.p.	n.p.	n.p.
502	Copper concentrate	21,240	—	184,310	n.p.	n.p.	n.p.	n.p.	275,385	264,144	231,952
503	Copper ore	—	—	2,242	—	—	—	—	2,242	1,174	8,110
505	Copper oxide	—	—	—	—	—	—	—	—	585	6,848
506	Copper precipitate	—	—	—	—	—	—	—	—	2,085	—
509	Gold bullion(b)	1,575	n.p.	23,465	—	362,930	—	n.p.	n.p.	n.p.	200,408
511	Gold concentrate	1,521	—	1,405	—	—	—	—	2,926	2,783	1,412
510	Gold ore	—	—	—	33	—	—	—	33	n.p.	792
512	Other gold	—	n.p.	—	—	—	—	—	n.p.	n.p.	92
(c)	Iron ore(d)	—	n.p.	—	15,936	1,166,341	n.p.	—	n.p.	n.p.	1,131,186
	Iron oxide for—										
516	Cement manufacture	186	—	125	—	—	n.p.	—	n.p.	n.p.	615
517	Coal washing	—	—	1,790	—	—	—	—	1,790	1,315	1,630
535	Lead concentrate	100,362	—	181,120	—	—	n.p.	n.p.	n.p.	n.p.	252,136
536	Lead-copper concentrate	—	—	—	—	—	n.p.	—	n.p.	n.p.	21,474
537	Lead ore	—	—	924	n.p.	—	—	—	n.p.	n.p.	23
546	Lead-zinc concentrate	9,786	—	—	—	—	—	—	9,786	9,723	8,445
	Manganese ore—										
563	Metallurgical grade	—	—	—	—	—	—	n.p.	n.p.	n.p.	46,136
565	Other grades	—	—	—	—	—	—	n.p.	n.p.	n.p.	209
	Mineral sands—										
522	Ilmenite concentrate(e)	268	—	724	—	36,030	—	—	37,022	26,737	36,610
523	Leucosene concentrate	—	—	—	—	2,958	—	—	2,958	2,889	4,200
524	Monazite concentrate	182	—	21	—	6,483	—	—	6,686	4,901	4,607
525	Rutile concentrate	8,731	—	20,679	—	13,469	—	—	42,879	47,817	61,758
528	Xenotime concentrate	—	—	—	—	246	—	—	246	n.p.	218
529	Zircon concentrate	7,271	—	7,358	—	28,802	—	n.p.	43,431	40,892	37,526
567	Molybdenum concentrate	—	—	—	—	—	—	n.p.	n.p.	n.p.	193
532	Nickel concentrate	—	—	—	—	n.p.	—	—	n.p.	n.p.	n.p.
533	Nickel ore	—	—	7,892	—	—	—	—	7,892	12,476	n.p.
542	Silver ore	—	—	—	n.p.	—	—	—	n.p.	n.a.	n.a.
570	Tantalite-columbite concentrate	—	—	—	—	2,411	—	—	2,411	3,971	11,091
549	Tin concentrate	17,766	—	(f)24,212	—	6,349	n.p.	n.p.	n.p.	133,405	141,716
550	Tin-copper concentrate	—	—	—	—	—	n.p.	—	n.p.	n.p.	724
551	Tin-tantalite concentrate	—	—	—	—	—	—	n.p.	n.p.	n.a.	278
	Tungsten concentrates—										
571	Scheelite concentrate	—	—	860	—	—	n.p.	—	n.p.	n.p.	27,612
573	Wolfram concentrate	3	—	8,888	—	—	—	—	8,891	n.p.	15,607
575	Uranium concentrate	—	—	—	—	—	—	n.p.	n.p.	n.p.	356,219
543	Zinc concentrate	150,804	—	73,517	—	n.p.	n.p.	—	278,040	220,346	n.p.
544	Zinc ore	—	—	—	3,161	—	—	—	3,161	1,005	—
579	Other metallic minerals	310	—	—	—	—	—	—	310	n.a.	n.a.
	Total metallic minerals	320,383	1,946	684,502	36,274	2,046,956	206,431	528,039	3,816,531	3,810,345	3,330,453
	COAL										
	Black coal—										
581	Semi-anthracite	—	—	6,443	—	—	—	—	6,443	10,139	5,768
580	Bituminous	1,733,358	—	1,576,952	—	—	10,459	—	3,320,769	3,303,340	2,777,212
582	Sub-bituminous	—	—	85,201	(g)43,160	106,325	—	—	234,686	205,531	143,903
	Total	1,733,358	—	1,668,596	(g)43,160	106,325	10,459	—	3,561,898	3,519,010	2,926,883
	Brown coal—										
588	For briquettes	—	—	—	—	—	—	—	—	—	—
589	Other	—	135,736	—	—	—	—	—	135,736	150,788	137,138
586	Briquettes	—	18,136	—	—	—	—	—	18,136	19,808	22,754
	Total coal	1,733,358	153,872	1,668,596	(g)43,160	106,325	10,459	—	3,715,770	3,689,606	3,086,774

For footnotes see end of table.

TABLE 2. VALUE OF MINERALS PRODUCED—continued
(S' 000)

Commodity code	Mineral	1983-84							Australia(a)		
		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	1983-84	1982-83	1981-82
OIL AND GAS											
590&592	Crude oil stabilised (incl. condensate)	—	n.p.	79,579	462,860	n.p.	—	n.p.	3,024,008	2,089,401	1,779,989
591	Natural gas										
593	Ethane										
594	Liquefied petroleum gases(h)—										
595	Propane										
	Butane										
	Total oil and gas	—	n.p.	79,579	462,860	n.p.	—	n.p.	3,024,008	2,089,401	1,779,989
CONSTRUCTION MATERIALS(i)											
601	Sand	45,007	n.p.	29,259	13,985	n.a.	2,634	n.p.	(j)123,520	(j)112,502	(j)110,239
600	Gravel	47,406	n.p.	25,200	147	n.a.	4,905	n.p.	(j)98,606	(j)75,627	(j)80,566
605	Crushed and broken stone	88,137	n.p.	97,630	11,152	34,954	14,155	n.p.	374,348	320,563	325,406
625	Dimension stone	1,949	n.p.	—	1,569	n.p.	48	—	91,996	95,997	94,148
640	Other (decomposed rock, etc.)	45,681	9,352	7,083	24,950	—	132	—	—	—	—
	Total construction materials	228,180	n.p.	159,173	51,802	n.p.	21,873	n.p.	688,470	604,689	610,357
OTHER NON-METALLIC MINERALS											
680	Asbestos (chrysotile)	—	—	—	—	—	—	—	—	4,766	14,464
684	Barite	12	—	—	450	—	—	—	462	434	414
685	Carbon dioxide	—	—	—	154	—	—	—	154	287	287
	Clays—										
(k)	Bentonite and bentonitic clay	112	—	1,128	—	—	—	—	1,240	n.p.	937
667	Brick clay and shale	10,831	2,644	843	1,721	4,388	n.p.	n.p.	21,007	18,996	27,029
668	Cement clay and shale	690	—	215	n.p.	n.p.	n.p.	n.p.	1,547	1,612	1,756
670	Fireclay n.e.c.	438	n.p.	—	18	n.p.	n.p.	n.p.	525	n.p.	706
672	Kaolin (incl. ball clay)(l)	2,492	5,436	168	302	n.p.	n.p.	n.p.	9,805	n.p.	7,637
674	Pipe and tile clay	(m)398	n.p.	22	—	n.p.	n.p.	n.p.	645	657	771
676	Stoneware clay	146	n.p.	—	—	—	—	—	n.p.	n.p.	458
(n)	Other clays	1,022	—	—	90	n.p.	—	—	1,270	1,573	n.p.
686	Diatomite	122	—	232	2,001	—	n.p.	—	1,022	n.p.	336
688	Dolomite	6	—	11	—	n.p.	—	—	n.p.	n.p.	2,291
689	Felspar (incl. cornish stone)	—	—	—	—	n.p.	—	—	n.p.	n.p.	122
691	Garnet concentrate	—	—	—	—	n.p.	—	—	n.p.	n.p.	n.p.
	Gems—										
694	Chrysoprase	—	—	159	—	—	—	—	159	164	131
695	Opal	14,929	—	955	(o)30,103	—	—	—	45,987	42,131	45,374
696	Sapphire	4,627	—	9,000	—	—	—	—	13,627	21,566	22,675
702	Other	11	—	27	65	n.p.	—	—	n.p.	n.p.	103
704	Gypsum	496	1,606	n.p.	3,102	4,901	—	—	10,105	9,284	11,074
655	Limestone (incl. shell and coral)	17,199	n.p.	n.p.	5,230	n.p.	3,770	—	54,767	n.p.	58,785
705	Lithium ores	—	—	—	—	885	—	—	885	19	—
708	Magnesium, crude	3,558	—	100	n.p.	n.p.	—	—	4,161	n.p.	2,824
709	Mica	—	—	—	—	n.p.	—	—	n.p.	n.a.	n.p.
710	Mineral pigments, ochres etc.	—	—	—	—	—	—	—	—	—	n.p.
711	Peat	198	—	14	—	n.p.	n.p.	—	n.p.	n.p.	n.p.
713	Pebbles-for grinding	—	—	—	—	—	n.p.	—	n.p.	n.p.	61
714	Perlite	—	—	82	—	—	—	—	62	37	14
715	Phosphate rock	—	—	149	51	—	—	—	200	4,799	5,342
717	Pyrophyllite	344	—	—	—	—	—	—	344	389	325
724	Salt	—	3,884	n.p.	2,445	65,101	—	—	n.p.	n.p.	52,177
(p)	Silica	5,237	n.p.	6,797	1,132	1,325	n.p.	—	23,466	18,357	18,494
736	Sillimanite	—	—	—	28	—	—	—	28	35	47
737	Talc (incl. steatite)	2	—	796	n.p.	n.p.	—	—	n.p.	n.p.	n.p.
738	Vermiculite	—	—	—	5	—	—	—	5	1	—
745	Other	—	—	3	—	—	—	—	3	—	2
	Total other non-metallic minerals	62,870	n.p.	40,446	47,813	176,043	6,596	n.p.	362,182	305,658	281,558
	Total all minerals and construction materials	2,344,792	2,618,888	2,632,296	641,909	2,584,321	245,359	539,397	11,666,962	10,519,699	9,009,128

(a) Australian Capital Territory, excluded for 1983-84, included for 1982-83 and 1981-82. (b) Includes alluvial gold. (c) Commodity codes 513,514,515. (d) See footnote (d) of Table 1. (e) See footnote (e) of Table 1. (f) See footnote (f) of Table 1. (g) Source S.A. Department of Mines and Energy. (h) See footnote (i) of Table 1. (i) See footnote (j) of Table 1. (j) See footnote (k) of Table 1. (k) Commodity codes 665,666. (l) Includes refined kaolin. (m) See footnote (n) of Table 1. (n) Commodity codes 669,671,675,679. (o) Estimated (p) Commodity codes 725,726,727,728.

TABLE 3. CONTENTS OF METALLIC MINERALS PRODUCED

In this table the contents of the various minerals have been tabulated to show the aggregate quantity of each metal, metallic oxide or element contained in the various metallic minerals produced. The totals compiled in this way are known as 'Mine Production' and, as no allowance has been made for losses in smelting and refining, they are, in general, greater than the quantities actually recovered.

Commodity code	Mineral in which contained	N. S. W.	Vic.	Qld	S. A.	W. A.	Tas.	N. T.	Australia		
		1983-84							1983-84	1982-83	1981-82
ANTIMONY (tonnes)											
556	Antimony concentrate	297	—	1	—	—	—	—	298	331	681
535	Lead concentrate	374	—	—	—	—	—	—	374	404	496
546	Lead-zinc concentrate	30	—	—	—	—	—	—	30	33	41
579	Other metallic minerals	17	—	—	—	—	—	—	17	—	—
	Total	718	—	1	—	—	—	—	719	768	1,218
CADMIUM (tonnes)											
535	Lead concentrate	111	—	102	—	—	—	—	213	174	178
546	Lead-zinc concentrate	56	—	—	—	—	—	—	56	66	53
543	Zinc concentrate	1,172	—	589	—	—	184	—	1,945	n.p.	1,852
	Total	1,339	—	691	—	—	184	—	2,214	n.p.	2,083
COBALT (tonnes)											
532	Nickel concentrate	—	—	—	—	562	—	—	562	550	408
533	Nickel ore	—	—	1,330	—	—	—	—	1,330	2,191	2,610
543	Zinc concentrate	60	—	—	—	—	—	—	60	92	57
	Total	60	—	1,330	—	562	—	—	1,952	2,833	3,075
COPPER (tonnes)											
502	Copper concentrate	19,742	—	156,570	n.p.	9,417	23,471	n.p.	233,320	207,893	230,952
503	Copper ore	—	—	2,130	—	—	—	—	2,130	2,763	5,169
505	Copper oxide	—	—	—	—	—	—	—	—	n.p.	3,415
506	Copper precipitate	—	—	—	—	—	—	—	—	580	2,175
511	Gold concentrate	—	—	9	—	—	—	—	9	19	3
535	Lead concentrate	3,561	—	939	—	—	152	—	4,652	n.p.	5,854
536	Lead-copper concentrate	—	—	—	—	—	2,358	—	2,358	3,026	3,901
546	Lead-zinc concentrate	172	—	—	—	—	—	—	172	170	295
532	Nickel concentrate	—	—	—	—	3,808	—	—	3,808	3,532	2,848
550	Tin-copper concentrate	—	—	—	—	—	n.p.	—	n.p.	n.p.	681
543	Zinc concentrate	2,066	—	—	—	—	n.p.	—	n.p.	n.p.	2,733
	Total	25,541	—	159,648	n.p.	13,225	26,748	n.p.	249,282	235,302	259,707
GOLD (kg)											
502	Copper concentrate	15	—	—	—	—	n.p.	n.p.	n.p.	935	2,004
503	Copper ore	—	—	—	—	—	—	—	—	1	1
509	Gold bullion(a)	114	126	1,682	—	25,906	—	n.p.	n.p.	n.p.	17,612
511	Gold concentrate	—	—	119	—	—	—	—	119	229	161
510	Gold ore	—	—	—	—	3	—	—	3	n.p.	83
512	Other gold	—	n.p.	—	—	—	—	—	n.p.	8	9
535	Lead concentrate	443	—	—	—	—	78	—	521	n.p.	391
536	Lead-copper concentrate	—	—	—	—	—	1,039	—	1,039	n.p.	1,305
537	Lead ore	—	—	—	2	—	—	—	2	n.p.	2
546	Lead-zinc concentrate	18	—	—	—	—	—	—	18	23	4
532	Nickel concentrate	—	—	—	—	278	—	—	278	n.p.	197
543	Zinc concentrate	240	—	—	—	—	165	—	405	n.p.	308
579	Other metallic minerals	6	—	—	—	—	—	—	6	—	—
	Total	856	n.p.	1,801	5	26,184	n.p.	n.p.	33,881	25,825	22,328

(a) Includes alluvial gold.

TABLE 3. CONTENTS OF METALLIC MINERALS PRODUCED—continued

Commodity code	Mineral in which contained	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Australia		
		1983-84							1983-84	1982-83	1981-82
IRON ('000 tonnes)											
(b)	Iron ore	—	n.p.	—	n.p.	46,067	n.p.	—	n.p.	n.p.	54,886
LEAD (tonnes)											
502	Copper concentrate	3,984	—	—	—	—	—	—	3,984	3,304	2,932
535	Lead concentrate	183,224	—	183,598	—	—	21,213	n.p.	n.p.	n.p.	405,917
536	Lead-copper concentrate	—	—	—	—	—	5,293	—	5,293	6,389	8,288
537	Lead ore	—	—	2,782	n.p.	—	—	—	n.p.	1,350	11
546	Lead-zinc concentrate	10,026	—	—	—	—	—	—	10,026	10,887	10,058
543	Zinc concentrate	15,697	—	9,988	—	—	4,401	—	30,086	n.p.	27,570
579	Other metallic minerals	223	—	—	—	—	—	—	223	n.a.	n.a.
	Total	213,154	—	196,586	n.p.	—	30,907	n.p.	n.p.	n.p.	454,776
MANGANESE (tonnes)											
563	Manganese ore—Metallurgical grade	—	—	—	—	—	—	n.p.	n.p.	n.a.	582,468
565	Other grades	—	—	—	—	—	—	n.p.	n.p.	—	—
543	Zinc concentrate	4,025	—	—	—	—	259	—	4,284	n.p.	5,451
	Total	4,025	—	—	—	—	259	n.p.	n.p.	n.p.	587,919
MOLYBDENUM (kg)											
567	Molybdenum concentrate	—	—	—	—	—	19,910	—	19,910	10,215	16,873
MONAZITE (tonnes)											
524	Monazite concentrate	445	—	251	—	14,511	—	—	15,207	10,536	10,636
NICKEL (tonnes)											
532	Nickel concentrate	—	—	—	—	59,842	—	—	59,842	58,643	50,321
533	Nickel ore	—	—	15,928	—	—	—	—	15,928	24,302	31,103
	Total	—	—	15,928	—	59,842	—	—	75,770	82,945	81,424
PALLADIUM (kg)											
532	Nickel concentrate	—	—	—	—	506	—	—	506	461	360
PLATINUM (kg)											
532	Nickel concentrate	—	—	—	—	71	—	—	71	55	65
SILVER (kg)											
502	Copper concentrate	14,817	—	21,259	—	25,005	4,814	n.p.	n.p.	n.p.	64,255
503	Copper ore	—	—	194	—	—	—	—	194	13	254
509	Gold bullion	24	5	648	—	4,611	—	n.p.	n.p.	n.p.	2,518
511	Gold concentrate	—	—	41	—	—	—	—	41	92	24
512	Other gold	—	—	—	—	—	—	—	—	1	—
535	Lead concentrate	222,075	—	457,430	—	—	25,213	n.p.	n.p.	n.p.	650,537
536	Lead-copper concentrate	—	—	—	—	—	30,746	—	50,746	47,446	56,095
537	Lead ore	—	—	—	10	—	—	—	10	n.p.	9
546	Lead-zinc concentrate	19,525	—	—	—	—	—	—	19,525	24,935	17,606
532	Nickel concentrate	—	—	—	—	370	—	—	370	369	255
542	Silver ore	—	—	—	n.a.	—	—	—	n.a.	—	—
543	Zinc concentrate	47,013	—	43,094	—	5,868	10,306	—	106,281	n.p.	95,767
579	Other metallic minerals	857	—	—	—	—	—	—	857	n.a.	n.a.
	Total	304,311	5	522,666	10	35,854	91,079	n.p.	n.p.	n.p.	887,569

(b) Commodity codes 513,514,515.

TABLE 3. CONTENTS OF METALLIC MINERALS PRODUCED—continued

TABLE 3. CONTENTS OF METALLIC MINERALS PRODUCED — continued											
Commodity code	Mineral in which contained	N. S. W.	Vic.	Qld	S. A.	W. A.	Tas.	N. T.	Australia		
		1983-84							1983-84	1982-83	1981-82
SULPHUR (tonnes)											
535	Lead concentrate	47,096	—	—	—	—	6,422	—	53,518	n.p.	65,594
536	Lead-copper concentrate	—	—	—	—	—	5,650	—	5,650	n.p.	8,955
546	Lead-zinc concentrate	8,830	—	—	—	—	—	—	8,830	9,072	9,946
543	Zinc concentrate	164,187	—	112,777	—	—	42	—	277,006	n.p.	330,056
579	Other metallic minerals	90	—	—	—	—	—	—	90	—	—
	Total	220,203	—	112,777	—	—	12,114	—	345,094	n.p.	414,551
TANTALITE (kg) n.p.											
TANTALITE-COLUMBITES (Ta ₂ O ₅ + Nb ₂ O ₅) (kg)(c)											
570	Tantalite-columbite concentrate	—	—	—	—	50,013	—	—	50,013	78,975	129,635
TIN (tonnes)											
549	Tin concentrate	1,388	—	(d)1,975	—	460	4,835	—	8,658	10,608	12,693
550	Tin-copper concentrate	—	—	—	—	—	n.p.	—	n.p.	n.p.	40
551	Tin-tantalite concentrate	—	—	—	—	—	—	n.p.	n.p.	n.a.	17
	Total	1,388	—	1,975	—	460	n.p.	n.p.	8,658	n.p.	12,750
TITANIUM DIOXIDE (TiO ₂) (tonnes)											
522	Ilmenite concentrate	7,552	—	—	—	580,514	—	—	588,066	529,031	712,147
523	Leucocene concentrate	—	—	—	—	13,954	—	—	13,954	12,945	18,330
525	Rutile concentrate	33,840	—	72,999	—	49,374	—	—	156,213	n.p.	210,469
	Total	41,392	—	72,999	—	643,842	—	—	758,233	n.p.	940,946
TUNGSTIC OXIDE (WO ₃) (units of 10 kg)											
571	Scheelite concentrate	—	—	10,635	—	—	119,473	—	130,108	169,609	243,114
549	Tin concentrate	—	—	5,779	—	—	—	—	5,779	—	—
573	Wolfram concentrate	35	—	103,314	—	—	—	—	103,349	n.p.	141,180
	Total	35	—	119,728	—	—	119,473	—	239,236	n.p.	384,294
URANIUM OXIDE (U ₃ O ₈) (tonnes)											
575	Uranium concentrate	—	—	—	—	—	—	n.p.	n.p.	n.p.	4,975
YTRIUM OXIDE (Y ₂ O ₃) (kg)											
528	Xenotime concentrate	—	—	—	—	15,060	—	—	15,060	n.p.	17,152
ZINC (tonnes)											
502	Copper concentrate	5,910	—	—	—	—	—	—	5,910	5,241	4,812
535	Lead concentrate	17,476	—	27,298	—	—	4,295	—	49,069	n.p.	46,061
536	Lead-copper concentrate	—	—	—	—	—	2,960	—	2,960	3,154	3,835
546	Lead-zinc concentrate	11,086	—	—	—	—	—	—	11,086	11,590	12,841
543	Zinc concentrate	296,430	—	184,636	—	30,817	68,221	—	580,104	n.p.	556,355
544	Zinc ore	—	—	—	n.p.	—	—	—	n.p.	—	—
579	Other metallic minerals	38	—	—	—	—	—	—	38	—	—
	Total	330,940	—	211,934	n.p.	30,817	75,476	—	n.p.	n.p.	623,904
ZIRCONIUM DIOXIDE (ZrO ₂) (tonnes)											
529	Zircon concentrate	39,770	—	43,088	—	192,295	—	—	275,153	266,565	299,201

(c) Includes a small amount of Tantalite-Columbite contained in tin concentrate. (d) Includes some wolfram — tin concentrate.

TABLE 4. QUANTITY OF SELECTED MINERALS, AUSTRALIAN AND ESTIMATED WORLD PRODUCTION, 1983

(Source: Bureau of Mineral Resources, Geology and Geophysics)

Mineral		Estimated world production	Australian production	Australian production as a percentage of estimated world production	World's leading producer	
					Country	Production
Bauxite	mega tonnes	77	(a)24	31.2	Australia	(a)24
Black coal-saleable	mega tonnes	2,889	99	3.4	USA	670
Brown coal	mega tonnes	(b)1,057	34	3.2	Germany D.R.	280
Copper in ores and concentrates	'000 tonnes	8,189	261	3.2	Chile	1,257
Iron ore	mega tonnes	750	71	9.5	USSR	245
Lead in ores and concentrates(c)	'000 tonnes	3,450	481	13.9	USSR	580
Manganese ore	'000 tonnes	21,460	1,370	6.4	USSR	10,400
Mineral sands:						
Ilmenite concentrate	'000 tonnes	(d)3,510	(e)906	25.8	Australia	(e)906
Rutile concentrate	'000 tonnes	335	163	48.7	Australia	163
Zircon concentrate	'000 tonnes	(f)680	382	56.2	Australia	382
Nickel in ores and concentrates	'000 tonnes	637	77	12.1	USSR	170
Salt	mega tonnes	166	5	3.0	USA	29
Silver in ores and concentrates	tonnes	12,247	(a)1,033	8.4	Mexico	1,773
Tin in ores and concentrates	'000 tonnes	173	9	5.2	Malaysia	41
Tungsten in concentrates	'000 tonnes	(g)28	2	11.1	China	(h)10
Zinc in ores and concentrates(i)	'000 tonnes	6,498	699	10.8	Canada	1,069

(a) Excludes Victoria. (b) Excludes mainland China. (c) Lead content of lead and other metallic ores and concentrates. (d) Includes titania slag produced in Canada and South Africa. Excludes centrally planned economies. (e) Includes Leucocene. (f) Western world production. (g) Excludes U.S.S.R. and Democratic People's Republic of Korea. (h) Estimated. (i) Zinc content of zinc and other metallic ores and concentrates.