

Resource Centre
Policy Branch
Dept. of Minerals & Energy



ROYALTIES AND STATISTICS BRANCH

**STATISTICAL DIGEST OF
MINERAL PRODUCTION**

1984/85



**DEPARTMENT OF MINES
WESTERN AUSTRALIA**



STATISTICAL DIGEST OF
MINERAL PRODUCTION
1984/85

COMPILED BY:

ROYALTIES AND STATISTICS BRANCH

DEPARTMENT OF MINES
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OCTOBER 1985

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ABBREVIATIONS

cons.	concentrates	f.o.t.	free on truck
f.o.b.	free on board	n.a.	not available
f.o.r.	free on rail		

REFERENCES

- (a) Value based on the average Australian value of alumina as published by the Bureau of Mineral Resources in the Australian Mineral Industry Review.
- (b) Value at works.
- (c) Estimated f.o.b. value.
- (d) Estimated f.o.r. value.
- (e) Estimated f.o.b. value based on the current price of nickel containing products.
- (f) Nett well head value.
- (g) Value based on the price per barrel as assessed by the Commonwealth for Barrow Island crude oil at Kwinana.
- (h) Value at pithead.
- (i) Nominal Price at Wellhead

UNITS AND CONVERSION FACTORS

	Metric unit	Symbol	Imperial unit	Conversion factors	
				Multiply imperial unit by	Multiply metric unit by
Mass	gram	g	troy (fine) ounce (oz)	31.1035	0.0321507
	kilogram	kg	pound (lb)	0.453592	2.20462
	tonne	t	long tonne (2240 lbs)	1.01605	0.984207
	tonne	t	short tonne (2000 lbs)	0.907185	1.10231
Volume	cubic metre	m ³	barrel (bbl)	0.158987	6.28981
	litre	L	gallon	4.54609	0.2199692
	kilolitre	kL			

SUMMARY

The total value of mineral production in Western Australia for the year 1984/85 is estimated at \$4 663.7 million, an increase of \$841.1 million over the previous financial year.

Iron Ore continued as the major mineral commodity in the state with production increasing by 4.6% to 89.27 million tonnes valued at \$1 830.09 million. Iron Ore made up 39% of the total value of mineral production.

Other minerals to record significant increases in production during the year were Alumina up 22.3% to 5.33 million tonnes, Gold up 43% to 37 424 kilograms and salt up 10.4% to 4.82 million tonnes.

Deliveries of gas and condensate from the North West Shelf project commenced in August 1984 and by years end gas and condensate with a combined estimated value of \$144.8 million had been produced.

Nickel concentrate production dropped by 3.8% to 486 491 tonnes although the value increased by 17% to \$363.3 million which reflects an improvement in prices assisted by the flow on effects of the devaluation of the Australian dollar.

Royalty revenue for the year amounted to \$130.994 million a rise of \$12.885 million over the previous year.

TABLE 1 QUANTITY AND VALUE OF MINERALS 1984/85

Mineral	Unit of	1983/84		1984/85	
		Quantity	Value(\$)	Quantity	Value(\$)
Alumina	t	4 355 167	796 706 797	5 326 982	1 056 839 641
Building stone					
quartz	t	3 386	152 534	2 644	118 980
quartzite	t	431	7 758	-	-
Clay					
cement clay	t	22 469	56 173	28 155	70 389
fire clay	t	190 225	228 919	242 489	292 136
kaolin	t	-	-	1 710	31 505
white clay	t	97 900	292 230	-	-
Coal	t	3 941 642	106 324 957	3 672 619	109 120 090
Cobalt	t	527	5 097 520	449	5 937 452
Construction materials					
aggregate	t	123 343	54 275	15 250	56 035
gravel	t	-	-	58 944	67 107
rock	t	68 442	136 880	46 524	92 686
sand	t	270 083	1 003 964	739 311	1 958 695
Copper	t	3 809	4 381 965	3 424	3 141 119
Copper concentrates	t	35 745	7 284 445	48 533	12 803 570
Cupreous ore	t	-	-	42	6 748
Diamond	carats	6 951 123	61 220 214	5 569 285	45 056 768
Diatomite	t	-	-	257	1 029
Dolomite	t	-	-	300	2 100
Feldspar	t	4 740	41 257	4 779	32 017
Garnet sand	t	3 150	110 257	4 269	149 459
Gold	kg	26 183	365 452 686	37 425	508 891 876
Gypsum	t	660 554	7 567 503	545 151	6 169 189
Iron ore	t	85 316 423	1 609 662 388	89 296 548	1 830 519 885
Limestone	t	241 867	1 246 635	209 618	1 187 327
Magnesite	t	-	-	16 729	215 936
Mica	t	84	22 018	-	-
Mineral beach sands					
ilmenite	t	1 168 020)		1 187 577)	
reduced ilmenite	t	-)	41 867 518	140)	55 385 867
upgraded ilmenite	t	48 905)		69 516)	
kyanite	t	-	-	39	3 618
leucoxene	t	22 990	4 426 599	19 571	4 583 699
monazite	t	13 501	5 786 264	16 590	7 512 887
rutile	t	63 283	16 499 083	73 484	25 457 848
xenotime	t	48	246 233	42	397 547
zircon	t	309 289	34 467 023	362 339	41 279 076
Nickel concentrates	t	505 947	309 647 238	486 491	363 306 720
Palladium	kg	513	2 532 070	461	2 491 786
Petroleum					
condensate	t	2 982	n.a.	94 861	n.a.
crude oil	kL	1 257 841	283 527 375	1 216 456	284 790 518
natural gas	'000m3	982 574	53 163 419	1 759 631	165 844 011
Platinum	kg	71	1 151 313	81	1 225 011
Salt	t	4 370 195	67 032 670	4 822 931	88 560 999
Semi-precious stones					
amethyst	kg	14 311	64 958	59 586	90 368
moss opal	kg	843	544	-	-
Silica sand	t	255 741	352 691	404 636	1 274 898
Silver	kg	29 189	12 187 136	44 670	12 761 245
Spodumene	t	4 593	884 751	8 505	1 852 772
Talc	t	167 069	n.a.	182 613	n.a.
Tantalite	t	123	3 148 205	69	4 219 279
Tin concentrates	t	655	6 348 508	569	9 442 807
Vermiculite	t	298	5 400	471	7 740
Zinc concentrates	t	54 448	12 240 785	42 438	10 451 891
Total value			3 822 631 168		4 663 702 326

TABLE 2 QUANTITY AND VALUE OF MINERALS: SHOWING GOLD-FIELD/MINERAL-FIELD AND METALLIC CONTENT.

Mineral	Gold-field Mineral-field	Unit of Quantity	Quantity	Metallc Content	Value (\$)	Ref.
Alumina	South West	t	5 326 982		1 056 839 641	(a)
Building stone quartz	South West	t	2 644		118 980	(b)
Clay						
cement clay	South West	t	28 155		70 389	
fire clay	South West	t	242 489		292 136	
kaolin	Greenbushes	t	1 710		31 505	
			272 354		394 030	(b)
Coal	Collie	t	3 672 619		109 120 090	(h)
Cobalt (metallic by-product nickel mining)	Coolgardie East Murchison	t t		Cobalt t	4 544 248 1 393 204	
					448.951	5 937 452 (c)

TABLE 2 QUANTITY AND VALUE OF MINERALS: SHOWING GOLD-FIELD/MINERAL-FIELD AND METALLIC CONTENT - continued.

Mineral	Gold-field		Unit of	Quantity	Quantity	Metallic		Value (\$)	Ref.
	Mineral-field	Mineral-field				Content	Content		
Construction materials aggregate	Kimberley		t	2 466				9 864	
	Pilbara		t	4 752				18 055	
	West Pilbara		t	8 032				28 116	
				15 250				56 035	(b)
gravel	Pilbara		t	52 310				52 310	
	West Kimberley		t	1 722				8 266	
	West Pilbara		t	4 912				6 531	
				58 944				67 107	(b)
rock	West Pilbara		t	46 524				92 686	(b)
sand	Coolgardie		t	12 384				58 909	
	East Coolgardie		t	145 294				815 034	
	Pilbara		t	12 646				58 359	
	South West		t	556 671				988 547	
	West Pilbara		t	12 316				37 846	
				739 311				1 958 695	(b)
Copper (metallic by-product nickel mining)	Coolgardie		Copper t					2 737 139	
	East Murchison			2 931.912				403 980	
				492.445					
				3 424.357				3 141 119	(c)

TABLE 2 QUANTITY AND VALUE OF MINERALS: SHOWING GOLD-FIELD/MINERAL-FIELD AND METALLIC CONTENT - continued.

Mineral	Gold-field		Unit of	Metallic	Value (\$)	Ref.
	Mineral-field	Quantity				
Copper concentrates	Mt Margaret	48 532.5	t	10 381.054	12 803 570	(c)
				Copper t		
Cupeous Ore	Phillips River	42.27	t	221.07	6 748	(d)
				Copper units		
Diamond	Kimberley	5 569 285	carats		45 056 768	(c)
Diatomite	South West	257	t		1 029	(d)
Dolomite	South West	300	t		2 100	(d)
Feldspar	South West	4 779	t		32 017	(d)
Garnet sand	South West	4 269	t		149 459	(c)
				Ore treated t		
Gold	State generally	37 424.545	kg	8 352 003	508 891 876	
	Includes alluvial, dollied and specimens, gold obtained from tailings retreatment and gold contained in exported gold bearing material.					
Gypsum	Dundas	109 399	t		1 074 996	
	Gascoyne	277 768	t		4 233 598	
	South West	87 584	t		651 538	
	Yilgarn	70 400	t		209 057	
		545 151			6 169 189	(b)
						(c)

42 366 t of plaster of paris were manufactured from 62 025 t of gypsum.

TABLE 2 QUANTITY AND VALUE OF MINERALS: SHOWING GOLD-FIELD/MINERAL-FIELD AND METALLIC CONTENT - continued

Mineral	Gold-field		Unit of	Quantity	Metallic	Value (\$)	Ref.
	Mineral-field	Mineral-field					
Iron ore					Assay Fe%		
ore shipped interstate	Peak Hill		t	4 657 593	64.00	80 631 944	
	West Kimberley		t	1 093 461	67.76	12 036 981	
<hr/>							
ore exported overseas	Peak Hill		t	5 751 054		92 668 925	
	Pilbara		t	24 549 501	63.00	554 476 603	
	West Kimberley		t	4 572 191	62.27	103 194 810	
	West Pilbara		t	2 158 916	66.70	46 195 068	
<hr/>							
				52 243 453	61.56	1 033 562 370	
<hr/>							
				83 524 061		1 737 428 851	
<hr/>							
pellets (exported overseas)			t	89 275 115		1 830 097 776 (c)	
			t	21 433	60.71	422 109 (c)	
<hr/>							
Limestone	South West		t	199 915		117 586	
	North East Coolgardie		t	6 349		6 349	
	West Pilbara		t	3 354		9 392	
<hr/>							
				209 618		1 187 327 (b)	
<hr/>							
Magnesite	Phillips River		t	16 729		215 936 (c)	

TABLE 2 QUANTITY AND VALUE OF MINERALS: SHOWING GOLD-FIELD/MINERAL-FIELD AND METALLIC CONTENT - continued.

Mineral	Gold-field		Unit of	Quantity	Metallic	Value (\$)	Ref.
	Mineral-field	Quantity					
Mineral beach sands ilmenite reduced ilmenite upgraded ilmenite	South West	1 187 577	t	58.78)	55 385 867 (c)		
	South West	140	t	65.00)			
	South West	69 516	t	92.00)			
kyanite	South West	39	t		3 618 (c)		
leucoxene	South West	19 571	t	TiO2 t	4 583 699 (c)		
				ThO2 units	7 512 887 (c)		
rutile	South West	73 484	t	TiO2 t	25 457 848 (c)		
				Y2O3 kg	397 547 (c)		
zircon	South West	362 339	t	ZrO2 t	41 279 076 (c)		

TABLE 2 QUANTITY AND VALUE OF MINERALS: SHOWING GOLD-FIELD/MINERAL-FIELD AND METALLIC CONTENT - continued.

Mineral	Gold-field		Unit of	Quantity	Quantity	Metallic Content	Value (\$)	Ref.
	Mineral-field	Mineral-field						
Platinum (metallic by-product nickel mining)	Coolgardie		kg	80.938			1 225 011	(c)
Salt	State generally		t	4 822 931			88 560 999	(c)
Semi-precious stones amethyst	Gascoyne		kg	59 586			90 368	
Silica sand	East Coolgardie		t	64 955			159 139	
	South West		t	305 474			1 031 952	
	Coolgardie		t	34 207			83 807	
				404 636			1 274 898	(b)(c)
Silver	By-product gold mining		kg	7 905.740			1 812 135	
	By-product nickel mining		kg	345.574			89 110	
	Mt Margaret		kg	36 418.738			10 860 000	
				44 670.052			12 761 245	
Spodumene	Greenbushes		t	8 504.66		Li102 t	1 852 772	(c)

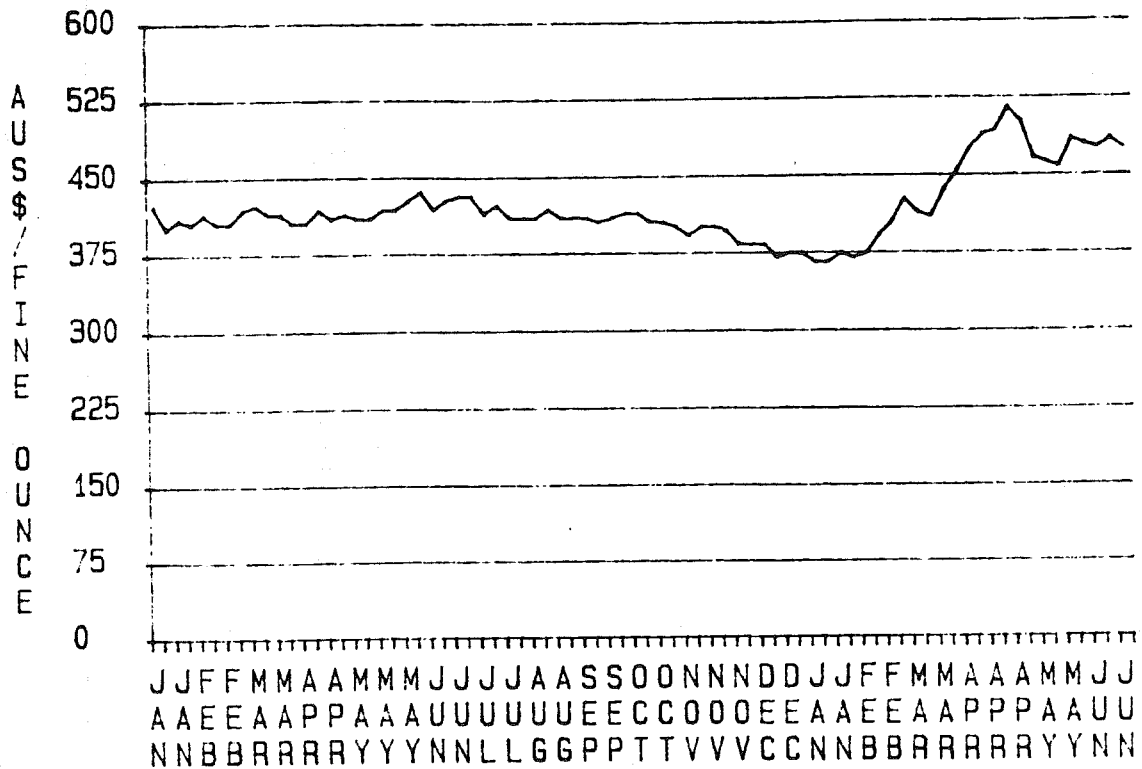
TABLE 2 QUANTITY AND VALUE OF MINERALS: SHOWING GOLD-FIELD/MINERAL-FIELD AND METALLIC CONTENT - continued.

Mineral	Gold-field		Unit of	Quantity	Metallic	Value (\$)	Ref.
	Mineral-field	Quantity					
Talc	Peak Hill	3 863	t			n.a.	
	South West	178 750	t			n.a.	
							n.a.
							Ta ₂ O ₅ kg
Tantalite	Greenbushes	58.45	t	27 700	3 389	286	
	Pilbara	16.46	t	10 324	829	993	
							74.91
							4 219 279 (c)
							Tin t
Tin concentrates	Greenbushes	462.490	t	323.560	8 417	060	
	Pilbara	106.576	t	75.168	1 025	747	
							569.066
							398.728
							9 442 807 (c)
Vermiculite	Phillips River	471	t		7 740		(d)
							Zinc t
Zinc concentrates	Mt Margaret	42 438	t	21 677	10 451	891	(c)
							\$4 663 702 326

TABLE 3
 QUANTITY OF GOLD (KG) AND ORE TREATED 1984/85
 SHOWING GOLDFIELD AND DISTRICT

	ALLUVIAL KILOGRAMS	DOLLIED AND SPECIMENS KILOGRAMS	MILLED OR SMELTERED		TOTAL GOLD KILOGRAMS	SILVER KILOGRAMS
			ORE TREATED (TONNES)	GOLD THEREFROM KILOGRAMS		
KIMBERLEY	8,199	.963	-	-	9,162	.095
WEST KIMBERLEY	-	-	-	-	-	-
MARBLE BAR	53,557	4,397	1 496 939.00	4 263,523	4 321,497	239,619
NULLAGINE	200,890	7,388	155.00	3,582	211,860	.395
PILBARA	254,467	11,785	1 497 094.00	4 267,105	4 533,357	240,014
WEST PILBARA	12,280	.236	-	-	12,516	.291
ASHBURTON	26,771	.214	601.00	3,903	30,888	.036
GASCOYNE	.332	1,997	-	-	2,329	.038
PEAK HILL	10,730	1,912	263 719.00	842,404	855,046	43,944
LAWLERS	9,852	.340	36 945.00	644,568	654,760	22,662
WILUNA	1,268	1,258	-	832,482	835,008	330,953
BLACK RANGE	59,189	6,358	234.00	46,326	81,873	2,221
EAST MURCHISON	40,309	7,956	37 179.00	1 523,376	1 571,641	335,836
CUE	42,211	4,021	182 171.00	631,313	677,545	.794
MEEKATHARRA	103,102	4,712	581 109.00	1 137,106	1 244,920	6,915
DAY DAWN	17,688	.708	95.00	19,874	38,270	6,161
MT MAGNET	8,918	2,947	313 451.00	1 493,312	1 505,177	158,708
MURCHISON	171,919	12,388	1 076 826.00	3 281,605	3 465,912	172,578
YALGOO	11,429	1,406	5 595.00	52,578	65,413	9,190
MT MORGANS	9,000	1,154	777.00	9,693	19,847	.399
MT MALCOLM	58,779	5,842	619 962.00	2 105,627	2 170,248	44,076
MT MARGARET	22,011	4,232	276 937.00	1 767,899	1 794,142	484,248
MT MARGARET	89,790	11,228	897 676.00	3 883,219	3 984,237	528,723
MENZIES	2,863	.223	3 047.00	173,055	176,141	5,183
ULARRING	-	-	59 909.00	59,842	59,842	-
NIAGARA	.492	.257	135.00	16,045	16,794	.203
YERILLA	.008	.368	278 337.00	991,844	992,220	7,391
NORTH COOLGARDIE	3,363	.848	341 428.00	1 240,786	1 244,997	12,777
BROAD ARROW	2,659	.036	151 763.00	623,555	626,250	11,979
KANOWNA	7,405	.094	245.00	13,553	21,052	1,806
KURNALPI	3,760	.078	334.00	.296	4,134	.114
NE COOLGARDIE	11,165	.172	579.00	13,849	25,186	1,920
EAST COOLGARDIE	7,108	3,977	2 437 605.00	11 986,412	11 997,497	2 468,918
BULONG	8,207	.410	99.00	21,799	30,216	.489
EAST COOLGARDIE	15,115	4,387	2 437 704.00	12 008,211	12 027,713	2 469,407
COOLGARDIE	12,817	4,874	801 863.00	3 731,753	3 749,444	445,183
KUNANALLING	1,504	.103	828.00	21,884	23,491	.952
COOLGARDIE	14,321	4,977	802 691.00	3 753,637	3 772,935	446,135
YILGARN	1,876	.883	435 946.00	1 650,444	1 653,203	297,612
DUNDAS	.327	.768	317 180.00	3 234,054	3 235,149	1 350,973
PHILLIPS RIVER	-	.066	158.00	72,367	72,433	19,210
SOUTH WEST	-	-	85 864.00	233,055	233,055	-
STATE GENERALLY	1,671	1,452	-	-	3,123	.225
TOTAL	676,723	63,674	8 352 003.00	36 684,148	37 424,545	5 960,983

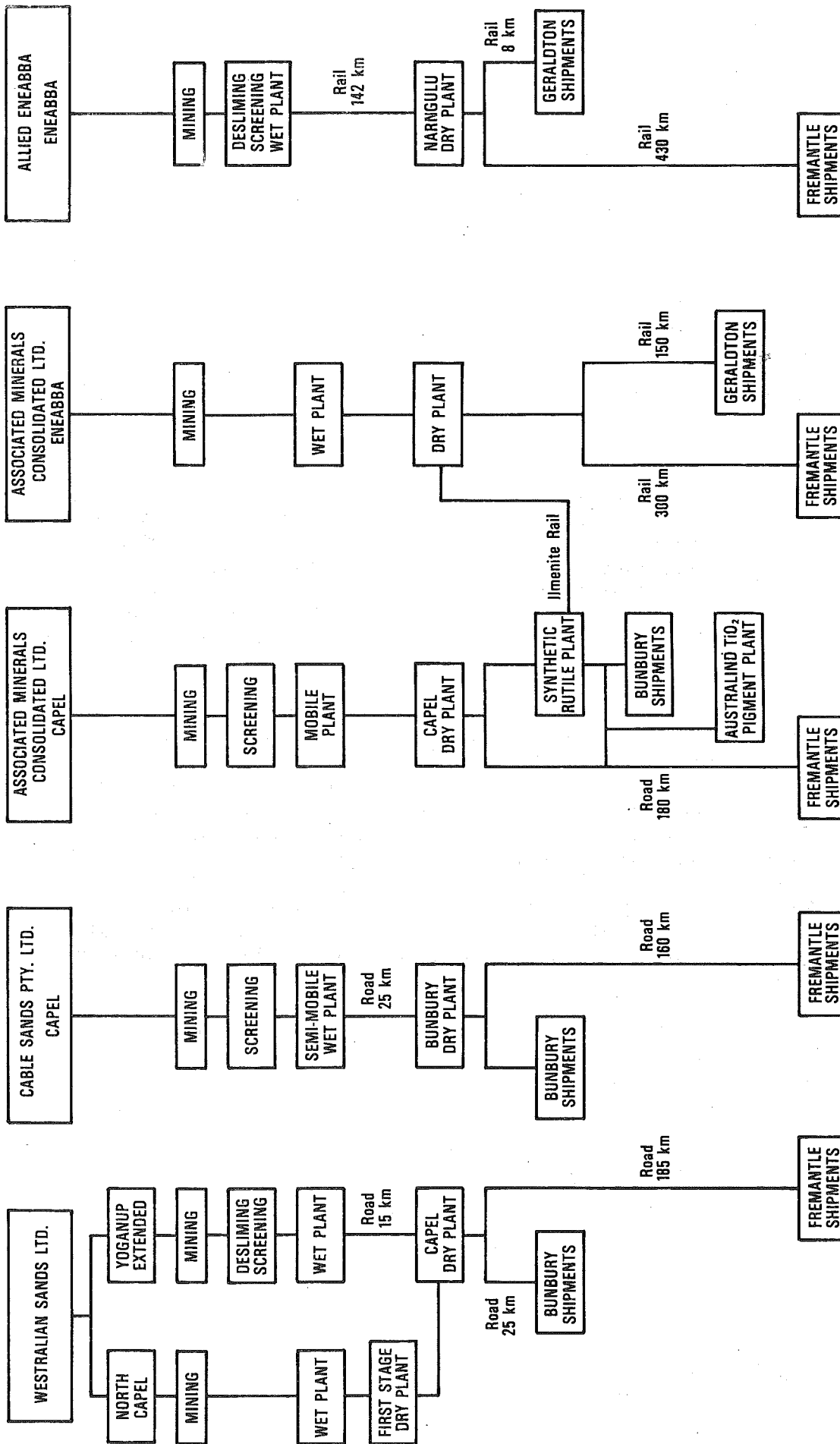
WEEKLY GOLD PRICES 1984/85



**GOLD PRICE 1984/85
(MONTHLY AVERAGES)**

	PERTH \$/TROY OUNCE (DAILY FIXING)	HONG KONG \$/TROY OUNCE (DAILY FIXING)
JULY	417.10	347.80
AUGUST	411.05	347.85
SEPTEMBER	411.25	341.70
OCTOBER	406.75	339.95
NOVEMBER	396.00	341.30
DECEMBER	380.20	319.80
JANUARY	370.35	302.20
FEBRUARY	394.10	298.50
MARCH	438.15	304.30
APRIL	490.90	325.55
MAY	469.90	316.20
JUNE	478.00	317.55
1984/85 AVERAGE	422.00	325.20

FLOW CHART - WESTERN AUSTRALIAN HEAVY MINERAL SANDS INDUSTRY



MINERAL BEACH SANDS

Heavy minerals found in the deposits of Capel and Eneabba include Ilmenite, Zircon, Monazite, Leucoxene, Rutile and Xenotime.

Titanium white pigment is manufactured from Ilmenite and is used extensively in paints. Zircon is used as foundry sand, refractory bricks and derivatives of it are used in white leather tanning, paints ceramics and cosmetics. Derivatives of Monazite are used as catalysts in the oil refining industry and in the manufacture of mantles, refractories and medicines. Yttrium, used in the color television industry also comes from monazite.

The principal use for Rutile is in the manufacture of welding rod coatings and titanium white pigment but is also used in the making of titanium for the building of aircraft frames and in rockets for space programs. Leucoxene is used as a substitute for rutile in the moulding industry. Xenotime is a rare earth mineral which is also a source of Yttrium for the coloured television industry.

West Australian mineral sands are shipped from Bunbury, Geraldton and Fremantle to markets in Europe, Japan and United States while titanium dioxide pigments are produced at Bunbury and Burnie (Tasmania).

The total realised value of 1984/85 production was \$134.62 million and the average number of persons employed in the mineral sands industry during the year was 801.

TABLE 5

ROYALTY RECEIPTS 1984/85

Mineral	1983/84	1984/85	Value (\$A) variance	% up (% down)
Alumina	7 697 140	9 638 703	1 941 563	25
Building stone	355	896	541	153
Clay	84 656	128 566	43 910	52
Coal	836 842	1 090 174	253 332	30
Cobalt	64 841	93 540	28 699	44
Construction materials				
aggregate	36 567	2 169	(34 398)	(94)
gravel	24	14 684	14 660	61 083
rock	11 778	14 262	2 484	21
sand	60 536	108 941	48 405	80
Copper	424 426	586 568	162 142	38
Diamond	3 802 167	3 062 632	(739 535)	(19)
Diatomite	-	120	120	Inf.
Dilomite	-	60	60	Inf.
Feldspar	29	1 655	1 626	5 607
Garnet sand	5 651	7 177	1 526	27
Gold	87 825	100 622	12 797	15
Gypsum	281 438	159 134	(122 304)	(43)
Iron ore	78 165 503	88 531 269	10 365 766	13
Limestone	104 959	88 437	(16 522)	(16)
Magnesite	-	10 797	10 797	Inf.
Magnetite	51	-	(51)	(100)
Mica	1 943	-	(1 943)	(100)
Mineral beach sands				
ilmenite	673 061	909 724	236 663	35
leucoxene	100 285	98 546	(1 739)	(2)
monazite	150 027	182 708	32 681	22
rutile	430 223	492 691	62 468	15
xenotime	2 059	985	(1 074)	(52)
zircon	982 764	987 802	5 038	1
Nickel	4 556 895	5 572 626	1 015 731	22
Palladium	16 046	23 018	6 972	43
Petroleum Products				
condensate	40 840	179 770	138 930	340
crude oil	14 774 296	13 621 418	(1 152 878)	(8)
natural gas	3 326 836	3 754 615	427 779	13
Platinum	16 046	23 011	6 965	43
Salt	373 437	505 586	132 149	35
Semi-precious stones				
amethyst	3 165	5 697	2 532	80
moss opal	41	80	39	95
Silica sand	103 334	160 217	56 883	55
Silver	5 225	76 573	71 348	1 366
Spodumene	33 468	82 179	48 711	146
Talc	74 001	74 073	72	1
Tantalite	125 425	67 425	(58 000)	(46)
Tin concentrate	170 560	144 785	(25 775)	(15)
Vermiculite	84	596	512	610
Zinc concentrate	484 592	389 744	(94 848)	(20)
Total value	118 109 441	130 994 275	12 884 834	11

PRINCIPAL MINERAL PRODUCERS 1984/85 - Head office postal address, telephone ber: minesite.

ALUMINA

Alcoa of Australia (WA) Ltd, P O Box 161, Kwinana 6167, (09) 419 1566: Del Park, Huntly, Jarrahdale
Worsley Alumina Pty Ltd, P O Box 344, Collie 6225, (097) 34 3022: Boddington.

BUILDING STONE - quartz

Snowstone Pty Ltd, P O Box 209, Cannington 6107, (09) 453 6777: Mukinbudin.

CLAY - cement clay

Bell Basic Industries Ltd, P O Box 75, Guildford 6055, (09) 279 0000: Armadale: Karragullen.

- fire clay

Clackline Refractories Ltd, P O Box 893, West Perth 6005, (09) 386 7833: Clackline.
Midland Brick Company Ltd, Bassett Road, Middle Swan 6056, (09) 274 5522: Bullsbrook.

- kaolin

Greenbushes Tin Ltd, GPO Box J646, Perth 6001, (09) 325 8900: Greenbushes.

COAL

Griffin Coal Mining Company Ltd, GPO Box G474, Perth 6001, (09) 325 8155: Collie.
Western Collieries Ltd, GPO Box X2231, Perth 6001, (09) 325 2711: Collie.

COBALT

Agnew Mining Company Pty Ltd, P O Box 22, Leinster 6437, (090) 37 6005: Agnew.
Western Mining Corporation Ltd, P O Box 80, Belmont 6104, (09) 478 0711: Kambalda.

CONSTRUCTION MATERIALS - aggregate

Calsil Ltd, 5 Mill Street, Perth 6000, (09) 321 8552: Port Hedland.

~~State of Western Australia, Department of Mines, 6054, (09) 279 2707
Woodhead JL, 407 Packsaddle Road, Kununurra 6743, (091) 68 1472 : Kununurra.~~

PRINCIPAL MINERAL PRODUCERS 1984/85 - continued.

CONSTRUCTION MATERIALS - gravel

Brenel Pty Ltd, 178 St George's Terrace, Perth 6000, (09) 321 2698: Broome.
Kane DJ, 8 Oleander Place, Wickham 6720, (091) 87 1616 : Mt Welcome.
Leslie Salt Company, P O Box 420, Port Hedland 6721, (09) 72 3777: Port Hedland.
Pioneer Concrete (WA) Pty Ltd, P O Box 187, Victoria Park 6100, (09) 362 1100: Port Hedland.

- rock

Specified Services Pty Ltd, P O Box 89, West Perth 6005, (09) 321 3086: Mt Regal.

- sand

Calsil Ltd, P O Box 7214, Cloisters Square, Perth 6000, (09) 321 8552: Port Hedland.
Clackline Refractories Ltd, P O Box 893, West Perth 6005, (09) 386 7833: Clackline.
Cottiers Pty Ltd, P O Box 311, Port Hedland 6721, (09) 72 1553: Port Hedland.
Monier Ltd, P O Box 5, Willetton 6155, (09) 455 1488: Gosnells.
Pioneer Concrete (WA) Pty Ltd, P O Box 187, Victoria Park 6100, (09) 362 1100 :
Port Hedland.
Specified Services Pty Ltd, P O Box 89, West Perth 6005, (09) 321 3086: Maitland.
The Readymix Group (WA), P O Box 20, Bentley 6102, (09) 451 5566: Boulder, Jones River, Rocklea,
Turner River, Widgiemooltha.

COPPER

Agnew Mining Company Pty Ltd, P O Box 22, Leinster 6437, (090) 37 6005: Agnew.
Teutonic Bore Mine Project, GPO Box R1274, Perth 6000, (09) 325 4511: Teutonic Bore.
Western Mining Corporation Ltd, P O Box 80, Belmont 6104, (09) 478 0711: Kambalda.

CUPREOUS ORE

Walker H&L, P O Box 169, Ravensthorpe 6346: Ravensthorpe.

DIAMOND

Argyle Diamond Mines Pty Ltd, Private Bag No 11 Post Office, West Perth 6005, (09) 325 1166: Argyle.

DIATOMITE

Hines, Horton and Rule, C/- 141 Robinson Street, Gingin 6503, (095) 75 2261: Sabys Peak.

PRINCIPAL MINERAL PRODUCERS 1984/85 - continued.

DOLOMITE

Green K&P, Newdegate 6355, (098) 71 1547 : Lake Magenta.

FELDSPAR

Snowstone Pty Ltd, P O Box 209, Cannington 6107, (09) 453 6777: Mukinbudin.

GARNET SAND

Target Minerals N L, P O Box 188, Geraldton 6530, (099) 23 3644: Port Gregory.

GOLD

Central Norseman Gold Corporation N L, P O Box 56, Norseman 6443, (090) 39 1101: Norseman.
Edjudina Gold Mines, P O Box 1014, Kalgoorlie 6430, (090) 24 2056: Edjudina.
Gold Resources Pty Ltd, Private Mail Bag 90, Kalgoorlie 6430, (090) 21 5544: Fimiston.
Hill 50 Gold Mine N L, 140 St George's Terrace, Perth 6000, (09) 322 6915: Mt Magnet.
Kalgoorlie Mining Associates, P O Box 105, Fimiston 6433, (090) 21 3411: Fimiston, Mt Charlotte.
Newmont Holdings Pty Ltd, P O Box 211, Cloverdale 6105, (09) 277 7011: Telfer.
North Kalgurli Mines Ltd, P O Box 88, Fimiston 6433, (090) 21 0600: Fimiston.
Sons of Gwalia Ltd, P O Box 669, West Perth 6005, (09) 322 1773: Leonora.
Western Mining Corporation Ltd, P O Box 80, Belmont 6104, (09) 478 0711: Agnew, Boulder, Kambalda, Lancefield, Ora Banda.
Whim Creek Consolidated N L, P O Box 144, West Perth 6005, (09) 325 5855: Meekatharra.

GYP SUM

Agnew Clough Ltd, P O Box 7005, Cloisters Square, Perth 6000, (09) 322 4811: Shark Bay.
Amalgamated Industries Pty Ltd, Private Bag 16 Post Office, West Perth 6005, (09) 322 6444: Wyalkatchem.
Blake and Sita, P O Box 144, Merredin 6415: Lake Brown.
Brady H B and Company Pty Ltd, P O Box 42 Bayswater 6053, (09) 279 4422: Lake Brown.
CSR Building Materials, P O Box 91, Bentley 6102, (09) 451 4444: Yellowdine.
D & C Nominees Pty Ltd, P O Box 155, Yerecoin 6571: Wongan Hills.
Fitzgerald E M and E J, P O Box 404, Merredin 6415, (090) 41 1146, Hines Hill.
Green K L and P M, Newdegate 6355: Newdegate.
McAndrew Mining, Yelbeni 6487: Yelbeni.
Nixon P F and R S, P O Box 69, Moora 6510: Lake Hillman.
Southern Asiatic Enterprises Pty Ltd, 41 St George's Terrace, Perth 6000, (09) 325 7417: Norseman.
Swan Portland Cement Ltd, P O Box 78, Rivervale 6103, (09) 361 8822: Lake Hillman.

PRINCIPAL MINERAL PRODUCERS 1984/85 - continued.

IRON ORE

BHP Minerals Pty Ltd, P O Box 160, Kwinana 6167, (09) 410 1111: Cockatoo Island, Koolan Island.
Cliffs Robe River Iron Associates, GPO Box P1224, Perth 6001, (09) 325 9288: Pannawonica.
Goldsworthy Mining Ltd, GPO Box B80, Perth 6001, (09) 322 1788: Shay Gap, Sunrise Hill.
Hammersley Iron Pty Ltd, P O Box A42, Perth 6000, (09) 327 2327: Mt Tom Price, Paraburdoo.
Mt Newman Mining Company Pty Ltd, P O Box 7122, Cloisters Square, Perth 6000, (09) 322 0691: Mt Whal
Mt Whaleback.

LIMESTONE

Bell Basic Industries Ltd, P O Box 75, Guildford 6055, (09) 279 0000: Wanneroo.
Bellombra V, 6 Park Street, Tuart Hill 6060, (09) 349 3312: Wanneroo.
Cypress Nominees Pty Ltd, 4 Phillips Place, Karrinyup 6018, (09) 446 3930: Moore River.
Specified Services Pty Ltd, P O Box 89, West Perth 6005, (09) 321 3086: Cleaverlyville.
Swan Portland Cement Ltd, P O Box 78, Rivervale 6103, (09) 361 8822: Wanneroo.

MAGNESITE

Norseman Gold Mines N L, GPO Box E221, Perth 6001, (09) 325 2333: Bandalup.

MINERAL BEACH SANDS

Allied Eneabba Ltd, P O Box 6115, Hay Street East, Perth 6000, (09) 325 2599: Eneabba.
Associated Minerals Consolidated Ltd, 45 Stirling Highway, Nedlands 6009, (09) 386 8611: Capel,
Eneabba.
Cable Sands Pty Ltd, P O Box 133, Bunbury 6230, (097) 21 4111: Capel.
Westralian Sands Pty Ltd, P O Box 96, Capel 6271, (097) 27 2002: Boyanup, North Capel, Yoganup.

NICKEL

Agnew Mining Corporation Pty Ltd, P O Box 22, Leinster 6437, (090) 37 6005: Agnew.
BHP Minerals Ltd, GPO Box 86A, Melbourne 3001, (03) 60 0701: Carnilya Hill.
Western Mining Corporation Ltd, P O Box 80, Belmont 6104, (09) 478 0711: Carnilya Hill, Kambalda,
Windarra.

PALLADIUM

Western Mining Corporation Ltd, P O Box 80, Belmont 6104 (09) 478 0711: Kambalda.

PRINCIPAL MINERAL PRODUCERS 1984/85 - continued.

PETROLEUM - condensate

Strata Oil N L, GPO Box G474, Perth 6001, (09) 325 8155: Woodada.
West Australian Petroleum Pty Ltd, GPO Box C1580, Perth 6001, (09) 325 0181: Barrow Island, Dongara.
Woodside Offshore Petroleum Pty Ltd, GPO Box D188, Perth 6001, (09) 425 1211: North Rankin.

PETROLEUM - crude oil

Home Energy Company Ltd, P O Box 6176, Hay Street East, Perth 6000, (09) 325 1555: Blina.
Pacific Basin Exploration Pty Ltd, 100 Mill Point Road, South Perth 6151, (09) 368 2800: Mt Horner.
West Australian Petroleum Pty Ltd, GPO Box C1580, Perth 6001, (09) 325 0181: Barrow Island, Dongara.

- natural gas

Strata Oil N L, GPO Box G474, Perth 6001, (09) 325 8155: Woodada.
West Australian Petroleum Pty Ltd, GPO Box C1580, Perth 6001, (09) 325 0181: North Perth Basin.
Woodside Offshore Petroleum Pty Ltd, GPO Box D188, Perth 6001, (09) 425 1211: North Rankin.

PLATINUM

Western Mining Corporation Ltd, P O Box 80, Belmont 6104, (09) 478 0711: Kambalda.

SALT

Dampier Salt Ltd, P O Box 7073, Cloisters Square, Perth 6000, (09) 327 2327: Dampier, Lake MacLeod.
Leslie Salt Company, P O Box 420, Port Hedland 6721, (091) 72 3777: Port Hedland.
Shark Bay Salt Joint Venture, P O Box 7005, Cloisters Square, Perth 6000, (09) 322 4811: Shark Bay.

SEMI-PRECIOUS STONES - amethyst and moss opal

Soklich Trading Company, Dale Place, Orange Grove 6109 (09) 459 1449: Gascoyne.

SILICA SAND

Australian Glass Manufacturers Co, 35 Baille Road, Canning Vale 6155 (09) 455 1111: Lake Gnangara.
Bell Basic Industries Ltd, P O Box 75, Guildford 6055, (09) 279 0000: Jandakot.
Monier Sands, P O Box 5, Willetton 6155, (09) 455 1488: Jandakot.
The Readymix Group (WA), P O Box 20, Bentley 6102, (09) 451 5566: Jandakot.
Western Mining Corporation Ltd, P O Box 80, Belmont 6104, (09) 478 0711: Douglas Lake.
Westralian Sands Ltd, P O Box 96, Capel 6271, (097) 27 2002: Boyanup.

PRINCIPAL MINERAL PRODUCERS 1984/85 - continued.

SILVER

Teutonic Bore Mine Project, GPO Box R1274, Perth 6000, (09) 325 4511: Teutonic Bore.
Western Mining Corporation Ltd, P O Box 80, Belmont 6104, (09) 478 0711: Kambalda.

SPODUMENE

Greenbushes Tin Ltd, GPO Box J646, Perth 6001, (09) 325 8900: Greenbushes.

TALC

Western Mining Corporation Ltd, P O Box 80, Belmont 6104, (09) 478 0711: Three Springs.
Westside Mines Pty Ltd, P O Box 572, Cloverdale 6105, (09) 277 4422: Mt Seabrook.

TANTALITE

Goldrim Mining Australia Ltd, 317 Hunter Street, Newcastle, NSW 2300, (049) 22 433: Wodgina.
Greenbushes Tin Ltd, GPO Box J646, Perth 6001, (09) 325 8900: Greenbushes.
Kincora Pty Ltd, P O Box 6009, Hay Street East, Perth 6000, (09) 325 6442: Old Shaw.

TIN

Endeavour Resources Ltd, Private Bag 16 Post Office, West Perth 6005, (09) 322 6444: Moolyella.
Goldrim Mining Australia Ltd, 317 Hunter Street, Newcastle, NSW 2300, (049) 22 433: Wodgina.
Greenbushes Tin Ltd, GPO Box J646, Perth 6001, (09) 325 8900: Greenbushes.
Kincora Pty Ltd, P O Box 6009, Hay Street East, Perth 6000, (09) 325 6442: Old Shaw.

VERMICULITE

Vermiculite Industries Pty Ltd, 101 Ewing Street, Welshpool 6106: Young River.

ZINC

Teutonic Bore Mine Project, GPO Box R1274, Perth 6000, (09) 325 4511: Teutonic Bore.

MINERAL PRODUCTION MAJOR CENTRES

