

Resource Centre
Policy Branch
Dept. of Minerals & Energy



ROYALTIES AND STATISTICS BRANCH

**STATISTICAL DIGEST OF
MINERAL PRODUCTION
1987**



DEPARTMENT OF MINES
WESTERN AUSTRALIA



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MINERAL PRODUCTION
1987

COMPILED BY:

ROYALTIES AND STATISTICS BRANCH

DEPARTMENT OF MINES
MINERAL HOUSE
100 PLAIN STREET
PERTH WA 6000

TELEPHONE: (09) 222 3333

TELEGRAMS: "WAMINES" PERTH

TELEX : AA 95791 MINEWA

FACSIMILE: (09) 222 3430

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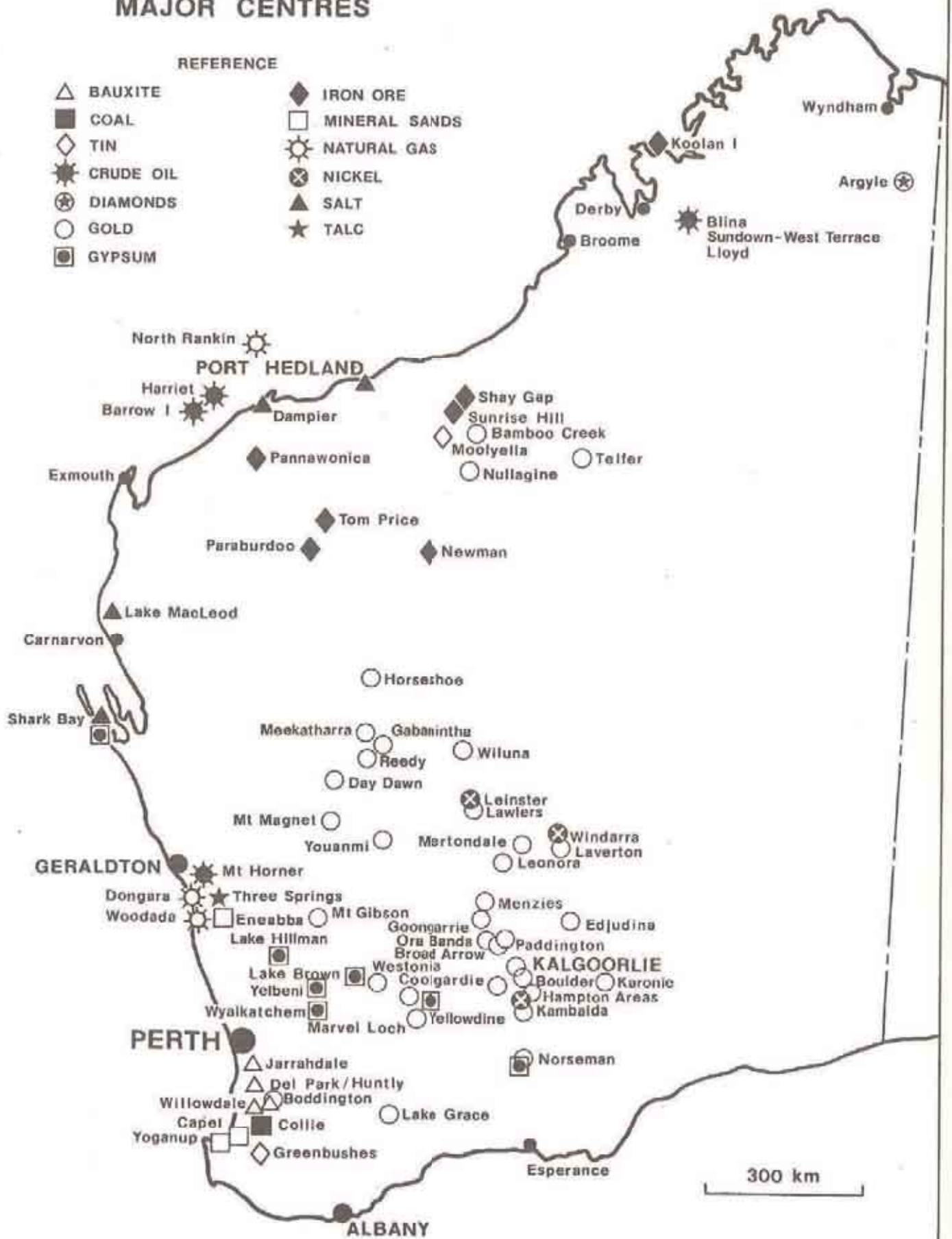
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Principal Mineral Producers 25

MINERAL PRODUCTION MAJOR CENTRES

REFERENCE

- | | |
|-------------|-----------------|
| △ BAUXITE | ◆ IRON ORE |
| ■ COAL | □ MINERAL SANDS |
| ◇ TIN | ☀ NATURAL GAS |
| ☀ CRUDE OIL | ⊗ NICKEL |
| ⊛ DIAMONDS | ▲ SALT |
| ○ GOLD | ★ TALC |
| ⊙ GYPSUM | |



WESTERN AUSTRALIA MINERAL PRODUCTION TRENDS: AN OVERVIEW

The total value of minerals (including petroleum) produced in Western Australia for 1987 was \$6331 million, a rise of 15.4% over the total for 1986. This rise principally reflects a 66.6% increase in the value of gold production. The value of all other minerals, excluding gold rose by only 4.4% to \$4709 million, somewhat below the rate of inflation. This weak performance was particularly effected by a 9.2% fall in the value of production of iron ore.

IRON ORE

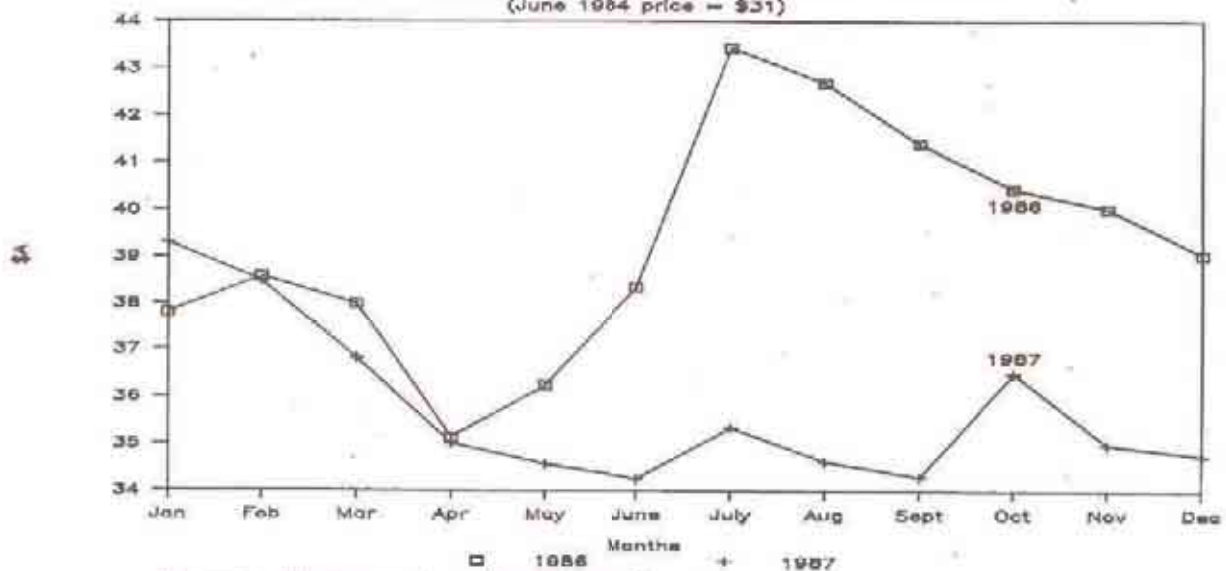
Iron ore remained the leading contributor to the total in 1987 despite the fall in it's value of production. The gross value of \$1737 million represented 27.4% of the total value of mineral production. However this was a drop from \$1915 million which represented 35.4% of total mineral production in 1986.

The fall in the value of production occurred despite a 3.5% increase in tonnages and reflects lower \$US ore prices as well as a higher average \$A/\$US exchange rate which compounded the effects of the lower prices. The overall effect of this is illustrated below.

A better than expected year for the world steel industry, particularly in Japan, translated into the higher quantities shipped in 1987 but failed to stimulate iron ore prices during the negotiations for the 1988 iron ore year. As a result, despite the improved outlook for the profitability of the steel industry, Japanese fine ore prices for 1988 have fallen in \$US terms, albeit with a provision for increases in tonnages to help offset the lower prices. However, exchange rate effects, if maintained, will result in an effective price drop for all ore to those overseas buyers and Australian producers with contracts in US dollars. The outlook for 1988 is thus increased sales but at lower average prices with the net effect likely to be a lower value of production.

IRON ORE - Prices : \$A/tonne

(June 1984 price = \$31)



SOURCE: HAMERSLEY HIGH GRADE LUMP PRICES.

GOLD

The value of gold produced in the State in 1987 rose by 66.6% to reach \$1622 million, overtaking alumina as the second most valuable mineral produced. The gold value represented over a quarter of the State's total value of mineral production.

Gold production has been the major success story of the mining industry in the last ten years. A combination of improved technology and high prices have stimulated exploration and development to such an extent that the quantity of gold produced in 1987 was over three times that produced in 1983 while the value was four and a half times. These increases represent average annual growth rates of 34.6% and 45.7% respectively over the period, well above the average growth rate in the value of other minerals of 9.3%.

The continued surge of gold production represents a major shift in the composition of the State's mining industry with an impact only exceeded by the commencement of large scale iron ore mining in the 1960s. If the present trend continues gold production will overtake iron ore to again become the leading mineral produced, a position it occupied until the mid-1960s.

All mineral prices are a function of supply and demand with the demand for most minerals being dependent on the production of final goods. The demand for gold, however, includes a significant speculative component which can cause large and rapid changes in the price. With this caveat in mind, it does appear that the favourable conditions which the gold industry presently enjoys are likely to continue.



SOURCE: LONDON GOLD PRICE, MONTHLY AVERAGE OF WEDNESDAY PRICES.

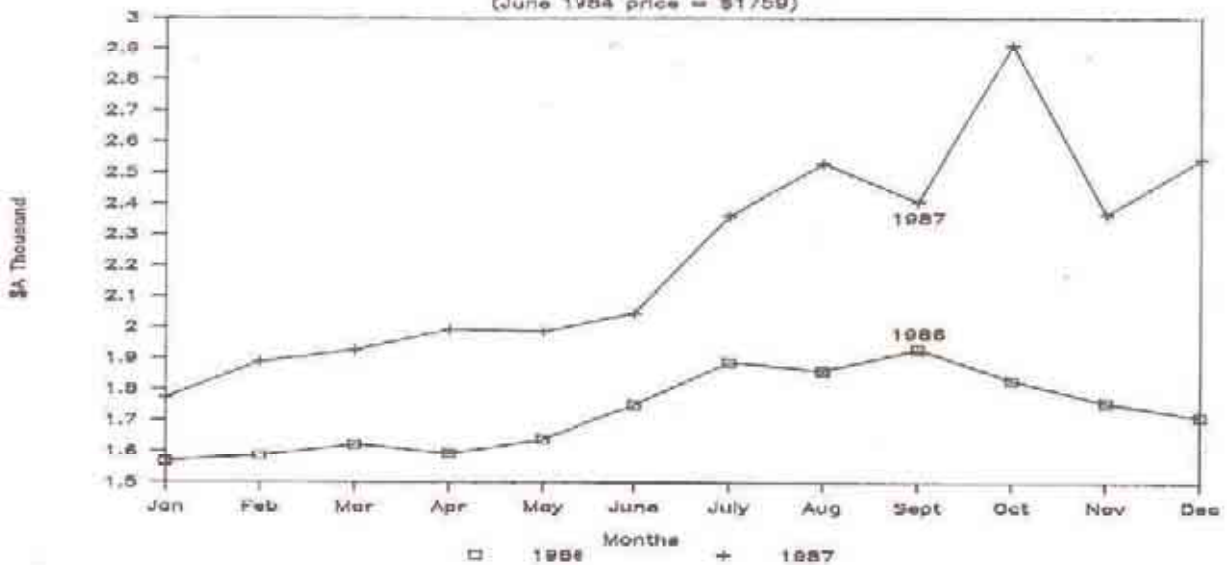
ALUMINA

The value of alumina production in 1987 was \$1104 million which represented an increase of 8.8% over the 1986 value of production. This reflects the 8.9% rise in the quantity of alumina produced, there being virtually no change in price levels.

Alumina demand is derived from its use as the primary raw material for aluminum production. The demand for aluminum and its price have improved over the last six months of 1987, leading to a brighter outlook for the alumina sector than has been the case for a number of years.

ALUMINIUM - Prices : \$A/tonne

(June 1984 price = \$1750)



SOURCE: L.M.E. HIGH GRADE CASH, MONTHLY AVERAGE OF WEDNESDAY PRICES.

PETROLEUM

Crude oil production increased by 9.8% in 1987 which, coupled with a recovery in average crude oil prices over those experienced in 1986 (during the Saudi price war), led to a 20.8% increase in value to \$315 million.

Natural gas production rose by 16.1% in 1987 and increased in value by 23.3% to \$326 million. Over 90% of production is sourced from the North West Shelf. Prices for natural gas are influenced by those for oil but are usually specified in longer term contracts and hence suffer less fluctuations. As a consequence while oil prices rebounded from being severely depressed in 1986 gas prices neither fell nor rose significantly following the re-establishment of some stability in oil markets in 1987.

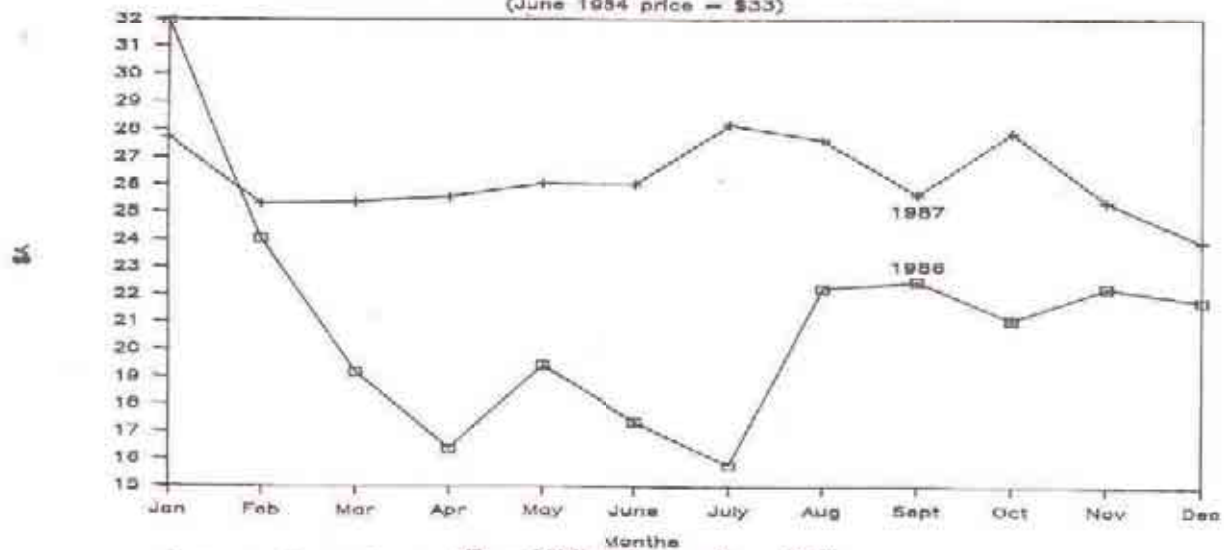
Condensate production nearly trebled in 1987 to be worth \$135 million following the commencement of a condensate stripping process on the North Rankin Platform.

The outlook for petroleum is generally dependent on the actions of the Middle East oil producers. In the last twelve months, oil prices fluctuated around US\$17 per barrel. This has been despite the falling value of the \$US in the same period. Some recent Saudi statements have indicated a desire to recapture their market share, but this has not been interpreted as leading to a return to 1986 policies and oil prices have remained relatively stable.

A more recent feature of the petroleum industry has been the reaction of oil markets to OPEC plans to admit some non-OPEC countries to full membership of the cartel. Fulfilment of this plan would see much more of the world supply of oil managed under production targets with the possibility of higher prices. However, producer cartels are difficult to control as shown by the difficulty which OPEC has experienced with it's present membership in its attempts to control price and production. It is probable that the planned increase in membership, if it eventuates, will lead to minimal change in world markets as the co-ordination and enforcement of official OPEC policies would become increasingly complex and difficult.

PETROLEUM - Prices : \$A/bbl.

(June 1984 price = \$33)



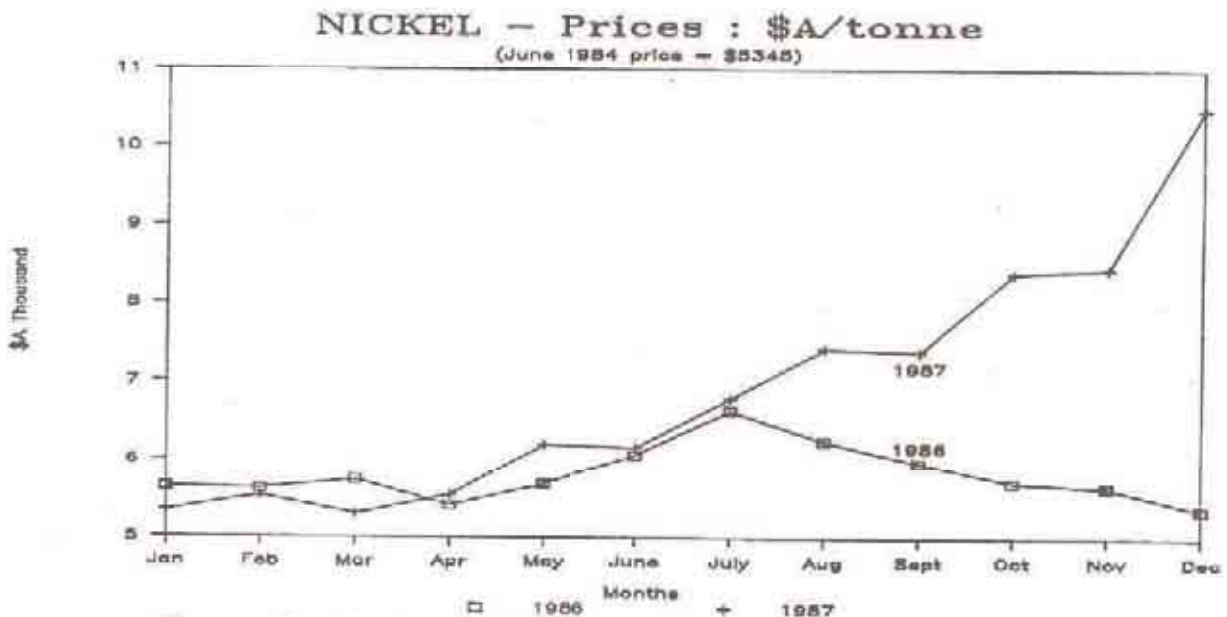
SOURCE: BRENT SPOT, MONTHLY AVERAGE OF WEDNESDAY PRICES.

NICKEL

Nickel production rose by 3.4% in 1987 while the value of production rose by 10.7% to \$294 million reflecting the rise in world nickel prices.

The outlook for nickel is bouyant with prices recently reaching unprecedented levels. Prices would still have to drop to less than a quarter of early 1988 levels for the industry to return to the poor conditions of a year ago. This scenario is unlikely but probably no more unlikely than the possibility a year ago that the price today would be four to five times the then prevailing market price.

However the fundamentals of the nickel market appear to have improved and the recent high prices seem to be a reaction to short term supply problems so that a steady medium term outlook has been forecast.



SOURCE: L.M.E. CASH, MONTHLY AVERAGE OF WEDNESDAY PRICES.

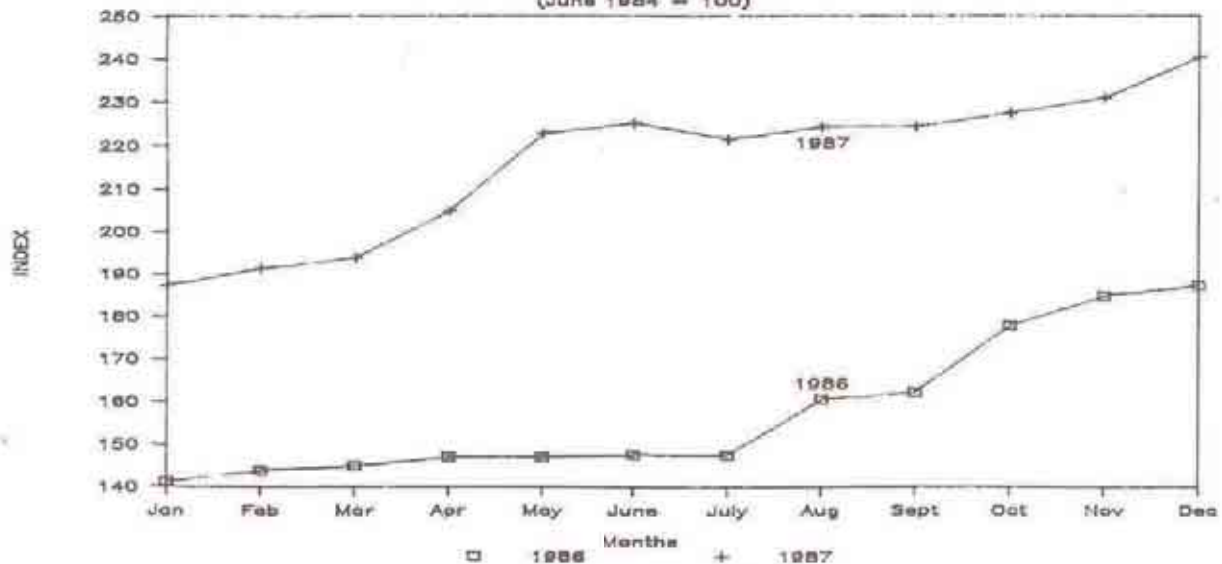
MINERAL SANDS

Another commodity group to enjoy improved market conditions in 1987 was minerals sands with ilmenite, rutile and zircon predominant. The value of production of all mineral sands has shown 47% increase from 1986 to 1987 reaching \$246 million. This reflects increased production with the commissioning of two new synthetic rutile plants and higher prices for most products. Prices for 1988 have been forecast to rise slightly in real terms with the outlook good for continued strong demand.

The graph below represents an index of the prices for the three major mineral sands products produced in W.A., ilmenite, rutile and zircon. It has been constructed using weighting for the respective prices based on an average contribution to the total value of mineral sands production over the last 5 years.

MINERAL SANDS - Price Index.

(June 1984 = 100)



SOURCE: LONDON PRICES, AS DETAILED IN TEXT ABOVE.

DIAMONDS

Diamond production rose by 3.8% in 1987 to reach 30.3 million carats but the stronger SA and price falls for lower quality diamonds combined to reduce the value of production to \$246.5 million, a fall of 4% from 1986.

It was feared that the market for diamonds would be severely effected by the fallout from the stockmarket crash in October, however these fears were proven incorrect and in fact demand has been strong enough for the C.S.O. to recently announce price rises in the order of 13.5%. The effects of this on the Argyle mine will be muted by the continued strength of the SA.

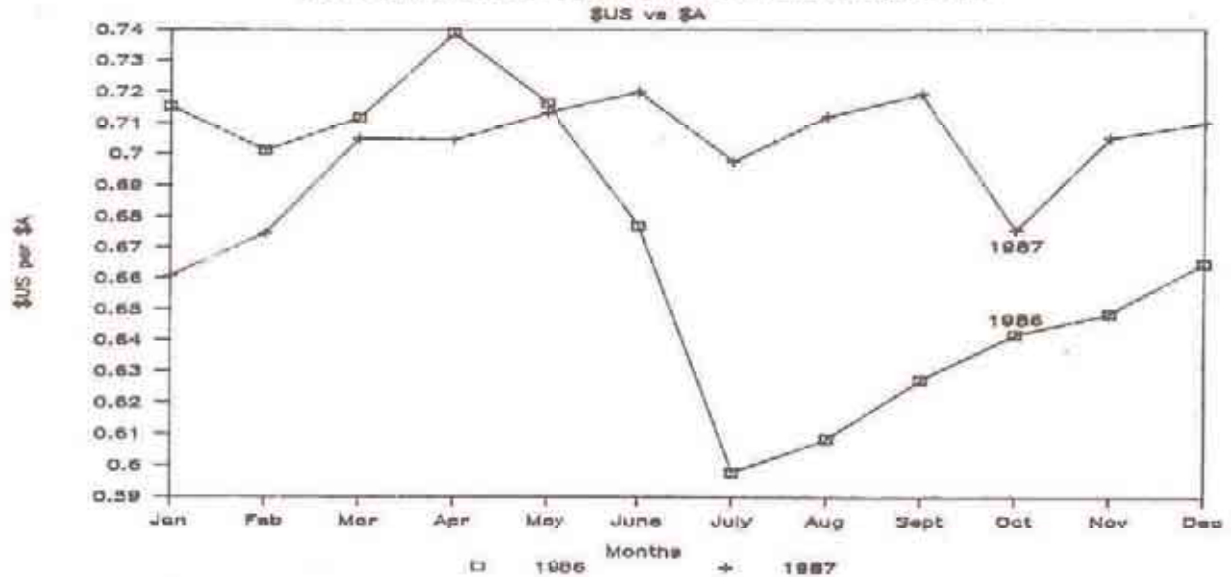
SUMMARY AND OUTLOOK

1987 saw a general improvement in the prices for many of WA mineral products when compared with 1986. The result has been a more healthy economic climate for the commencement of 1988 than for the same period a year earlier. The extent to which this improvement in conditions is maintained depends on a number of factors.

The share market falls in October highlighted world trading imbalances but the expected dire reactions in the world economy with predicted consequent falls in commodity prices have not eventuated. In fact most prices have remained firm after some initial uncertainty and appear to be maintaining modest improvement (excepting nickel which has risen dramatically).

Exchange rate effects will play an important part in the health of the mining industry during 1988. In 1987 the average \$A/\$US exchange rate was 70cUS an appreciation of 3cUS over the 1986 average, however, 1986 (as can be seen below) included a three month period where the \$A plunged from 74c to below 60c. Since that time the rate has risen steadily to reach highs of over 77c in early May 1988. Such levels have been eroding the commodity price gains made since 1986 and should this trend be sustained the returns to mineral producers will suffer.

EXCHANGE RATE COMPARISON



SOURCE: AUSTRALIAN FINANCIAL REVIEW, MONTHLY AVERAGE OF DAILY PRICES.

World economic growth has not appreciably changed in direction since the October stock market crash and demand for mineral based products has not slackened.

Some products such as steel have enjoyed higher demand growth than general GDP growth in industrialized countries over the last year and warnings have been made concerning the possibilities that this state of affairs will not last. Similarly, nickel has enjoyed high demand which combined with supply problems has resulted in high prices but if these persist at exceptional levels for too long the demand for nickel could be adversely affected. Other commodities such as aluminum are faced with uncertainties regarding the level of prices but the outlook is for a strong 1988.

TABLE 1
QUANTITY AND VALUE OF MINERALS 1986, 1987

Mineral	Unit	1986		1987	
		Quantity	Value (\$A)	Quantity	Value (\$A)
Alumina	†	5 442 790	1 015 172 246	5 928 763	1 104 313 745
Building Stone					
black granite	†	585	50 000	-	-
quartz	†	1 117	50 261	1 334	60 035
Clay					
attapulgite	†	47 376	n.a.	10 960	n.a.
cement clay	†	23 495	58 729	23 217	58 043
fire clay	†	203 597	244 317	208 631	252 009
kaolin	†	3 540	131 580	7 460	241 564
white clay	†	126 053	363 382	72 176	209 528
Coal	†	3 825 535	137 136 740	3 709 806	144 944 239
Cobalt	†	484	5 564 158	368	1 858 290
Construction Material					
aggregate	†	122 114	677 247	175 345	890 820
gravel	†	5 370	19 875	20 205	36 255
rock	†	89 478	178 958	112 599	1 092 626
sand	†	1 147 184	3 300 083	933 608	2 435 871
sandstone	†	20	40	-	-
Copper	†	3 592	4 054 126	2 910	4 218 249
Copper Concentrate	†	20 806	4 387 234	-	-
Diamond	ct	29 232 453	256 963 424	30 331 701	246 517 116
Diatomite	†	1 060	5 301	525	2 688
Dolomite	†	330	2 310	243	3 162
Emerald	g	425	3 469	-	-
Felspar	†	9 497	76 224	4 933	149 430
Garnet Sand	†	9 724	340 340	16 837	593 043
Gold	kg	53 639	974 017 155(r)	78 438	1 622 471 286
Gypsum	†	314 481	3 771 201	136 045	1 333 818
Iron Ore	†	81 290 940	1 914 745 851	84 122 743	1 737 650 556
Kyanite	†	768	113 637	1 079	162 108
Limestone	†	217 092	1 006 511	131 866	1 311 783
Mineral Beach Sand					
ilmenite	†	946 315)		996 074)	
reduced ilmenite	†	53)	65 581 056	-)	112 173 783
upgraded ilmenite	†	58 874)		134 194)	-
leucoxene	†	14 143	5 315 181	11 290	4 653 700
monazite	†	14 747	9 470 735	11 766	8 501 662
rutile	†	69 887	35 289 099	85 630	51 056 433
xenotime	†	41	335 662	5	38 444
zircon	†	319 192	51 163 829	320 163	69 347 543
Nickel Concentrate	†	402 398	262 931 472	416 152	291 185 395
Nickel Ore	†	66 715	12 207 125	20 602	2 965 739
Palladium	kg	428	2 557 435	450	2 980 875
Peat	†	1 474	44 315	1 236	53 041
Petroleum Products					
condensate	kl	329 396	58 584 914(r)	921 912	135 427 471
crude oil	kl	1 607 251	260 582 180	1 764 084	314 913 379
natural gas	'000m ³	2 974 410	264 200 592	3 453 947	325 888 999
Platinum	kg	115	2 459 690	84	2 150 013
Salt	†	4 947 666	103 554 621	5 276 501	105 717 998
Semi-precious Stone					
amethyst	kl	8 988	50 716	51 000	195 500
moss opal	kl	21	14	-	-
Silica Sand	†	390 381	2 308 525	386 048	2 653 305
Silver	kg	24 883	5 863 597	11 353	2 282 605
Spodumene	†	8 530	2 682 232	16 621	3 320 514
Talc	†	151 368	n.a.	189 274	n.a.
Tantalite	†	126	4 398 606	111	4 204 828
Tin Concentrate	†	742	4 989 398	648	4 485 426
Vermiculite	†	657	13 142	1 409	28 226
Zinc Concentrate	†	23 969	5 228 455	-	-
Total Value			5 485 691 012		6 330 991 319

Note: (r) Revised from Previous Edition

FIGURE 1
1982 VALUE OF PRODUCTION

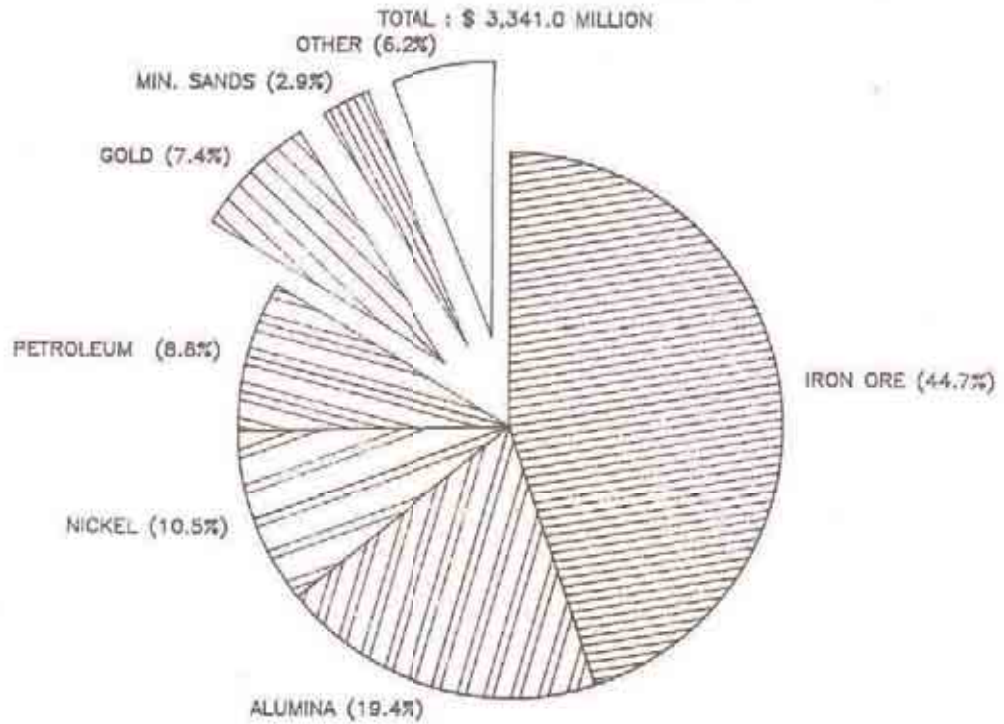


FIGURE 2
1987 VALUE OF PRODUCTION

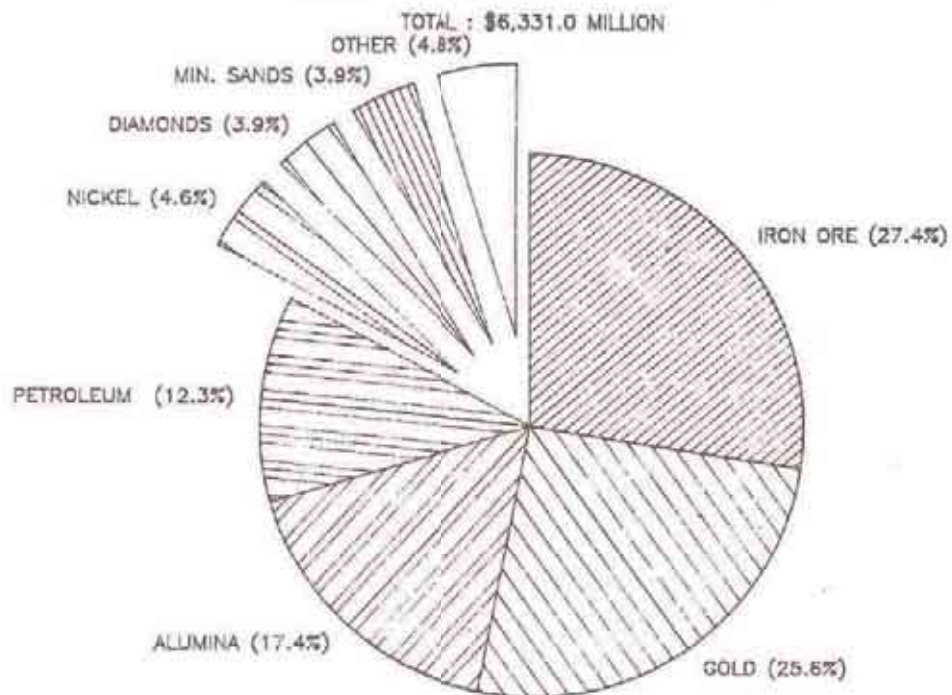


Table 2
Quantity and Value of Minerals
Showing Mineral-Field and Metallic Content

Mineral	Mineral-field	Quantity tonnes	Metallic Content	Value (\$)	Ref.
Alumina	South West	5 928 763		1 104 313 745	(a)
Building stone					
- quartz rock	South West	1 334		60 035	(b)
Clay					
- attapulgite	South West	10 960		N.A.	
- cement clay	South West	23 217		58 043)	
- fire clay	South West	208 631		252 009)	(b)
- kaolin	Greenbushes	7 460		241 564)	
- white clay	South West	72 176		209 528)	
			32 444 31 454		761 144
Coal	Collie	3 709 806		N.A.	
Cobalt	Coolgardie		† 367,809	1 858 290 (c), (d)	
Construction Materials					
- aggregate	East Coolgardie	146 002		614 181	
	Kimberley	6 732		26 928	
	Pilbara	14 746		177 589	
	West Kimberley	7 865		72 122	
		175 345		890 820	
- gravel	Pilbara	17 685		17 685	
	West Pilbara	2 520		18 570	
		20 205		36 255	
- rock	West Pilbara	112 599		1 092 626	

Mineral	Mineral-field	Quantity tonnes	Metallic Content	Value (\$)	Ref.
- sand	Coolgardie	6 197		29 241	
	North East				
	Coolgardie	850		1 700	
	Pilbara	14 449		89 477	
	South West	707 247		1 256 606	
	West Pilbara	204 865		1 058 847	
		933 608		2 435 871	
Total Construction Materials				4 455 572	
			†		
Copper	Coolgardie		2 910.131	4 218 249 (c), (d)	
			ct		
Diamonds	Kimberley		30 331 701	246 517 116	(c)
Diatomite	South West	525		2 688	(e)
Dolomite	South West	243		3 162	(e)
Felspar	South West	4 933		149 430	(e)
Garnet Sand	South West	15 837		593 043	(e)
			kg		
Gold	State-wide	78 438.347		1 622 471 286	
Gypsum	Gascoyne	15 450		253 737	(c)
	South West	77 949		813 252	(e)
	Yilgarn	42 546		266 829	(e)
Total Gypsum		136 045		1 333 818	

Mineral	Mineral-field	Quantity tonnes	Metallic Content	Value (\$)	Ref.
Av. Assay Fe %					
Iron Ore					
Interstate					
- ore	Peak Hill	4 134 285	64.21	86 912 461	
	West Kimberley	1 515 694	66.50	16 672 634	
		5 649 979		103 585 095	
Exported					
- ore	Peak Hill	26 467 681	63.00	595 774 076	
	Pilbara	4 318 295	61.73	92 047 388	
	West Pilbara	44 735 659	61.10	883 080 637	
	West Kimberley	2 370 696	66.56	50 868 913	
		77 892 331		1 621 771 014	
- pellets	West Pilbara	580 433	63.21	12 294 447	
		78 472 764		1 634 065 461	
Total Iron Ore		84 122 743		1 737 650 556	(c)
Kyanite	South West	1 079		162 108	(c)
Limestone	South West	117 174		1 111 458	
	West Pilbara	14 692		200 325	
Total Limestone		131 866		1 311 783	(b)

Mineral	Mineral-field	Quantity tonnes	Metallic Content	Value (\$)	Ref.	
Av. Assay $TiO_2\%$						
Mineral Beach Sands						
- ilmenite	South West	996 074	56.07)	112 173 783		
- upgraded ilmenite	South West	134 194	92.00)			
$TiO_2 \uparrow$						
- leucoxene	South West	11 290	10 212	4 663 700		
Th O_2 10kg units						
- monazite	South West	11 766	76 131	8 501 662		
$TiO_2 \uparrow$						
- rutile	South West	85 630	81 444	51 056 433		
Y_2O_3 kg						
- xenotime	South West	5	1 585	38 444		
$ZrO_2 \uparrow$						
- zircon	South West	320 163	210 394	69 347 543		
Total Mineral Beach Sands				245 781 565	(c)	
Av. Assay Ni%						
Nickel						
- concentrates	Coolgardie	314 226	11.39	221 789 263		
	East Coolgardie	31 011	11.59	21 853 187		
	Mt Margaret	70 915	10.64	47 542 945		
				416 152	291 185 395	(f)
- ore	Coolgardie	20 602	3.20	2 965 739	(b)	
Total Nickel				294 151 134		

Mineral	Mineral-field	Quantity tonnes	Metallic Content	Value (\$)	Ref.
			kg		
Palladium	Coolgardie		450.540	2 980 875	(c),(d)
Peat	South West	1 236		53 041	(b)
			kl		
Petroleum	Basin				
- condensate	Carnarvon	920 190		135 124 200	
	Perth	1 722		303 271	
		921 912		135 427 471	
- crude oil	Canning	31 738		5 490 520	
	Carnarvon	1 724 355		308 077 246	
	Perth	7 931		1 345 613	
		1 764 034		314 913 379	(g)
			m ³ 10 ³		
- natural gas	Carnarvon	3 112 723		292 250 000	
	Perth	341 224		33 638 999	
		3 453 947		325 888 999	(h)
Total Petroleum				776 229 849	
			kg		
Platinum	Coolgardie		84.459	2 150 013	(c),(d)
Salt	Gascoyne	1 980 031		41 248 832	
	Pilbara	1 992 624		38 298 189	
	South West	600		11 850	
	West Pilbara	1 303 226		26 159 127	
Total Salt		5 276 501		105 717 998	(c)

Mineral	Mineral-field	Quantity tonnes	Metallic Content	Value (\$)	Ref.
Semi-precious stones			kg		
amethyst	Gascoyne		51 000	195 500	(e)
Silica	Coolgardie	62 121		N.A.	
	South West	323 927		N.A.	
Total Silica		386 048		N.A.	(c)
Silver			kg		
	By-product of gold mining		10 539.951	2 025 977	
	By-product of nickel mining		813.326	256 628	(c)
Total Silver			11 353.277	2 282 605	
Spodumene			LiO ₂ †		
	Greenbushes	16 621	978	3 320 514	(c)
Talc	South West	189 274		N.A.	
Tantalite			Ta ₂ O ₅ kg		
	Greenbushes	111.43	73 825	4 204 828	(c)
Tin			Sn †		
	Greenbushes	613.5	429.5	4 077 285	
	Pilbara	33.9	24.4	408 141	
Total Tin		647.4	453.9	4 485 426	(c)
Vermiculite	Phillips River	1 409		28 226	(e)
Value of Gold				1 622 471 286	
Value of other Minerals				<u>4 708 520 033</u>	
TOTAL VALUE OF ALL MINERALS				<u>6 330 991 319</u>	

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	n.ap.	not applicable

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) Metallic by-product of nickel mining.
- (e) Estimated f.o.r. value.
- (f) Estimated f.o.b. value based on the current price of nickel containing products.
- (g) Value based on the price per barrel as assessed by the Commonwealth for crude oil at Kwinana.
- (h) Nominal Price at Wellhead

UNITS AND CONVERSION FACTORS

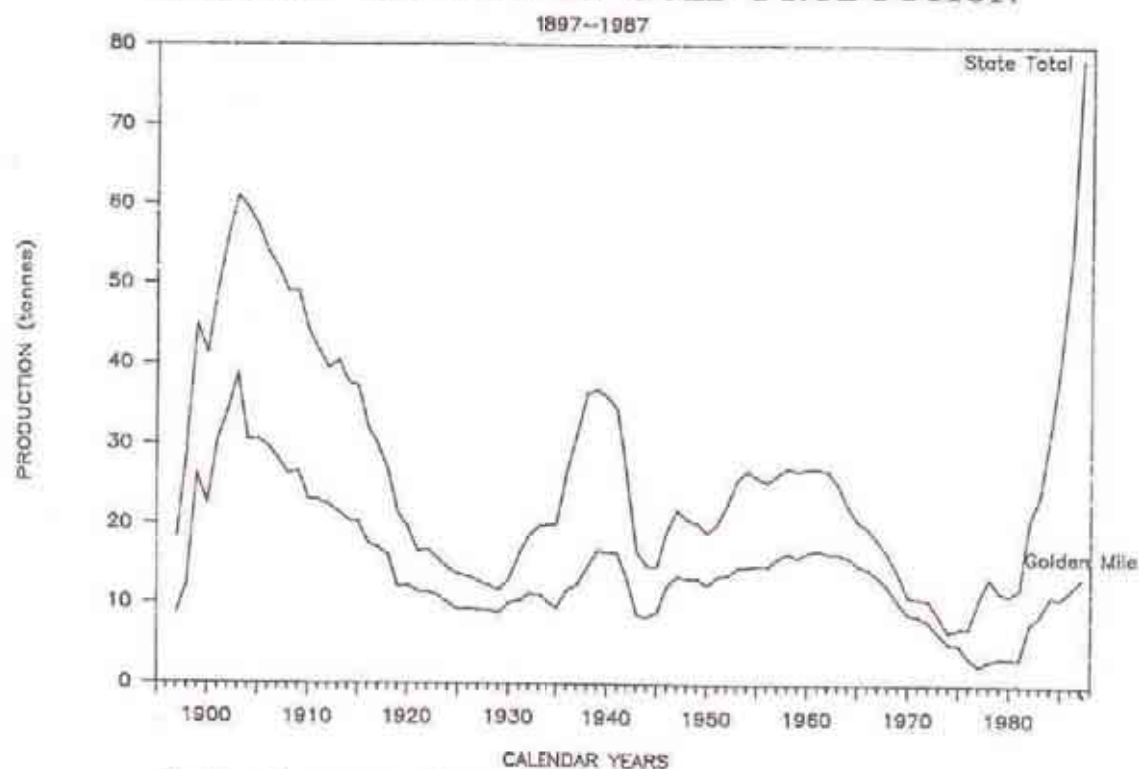
	Metric unit	Symbol	Imperial unit	Conversion factors	
				Multiply Imperial unit by	Multiply metric unit by
Mass	gram	g	troy (fine) ounce (oz)	31.1035	0.0321507
	kilogram	kg	pound (lb)	0.453592	2.20462
	tonne	t	long ton (2240 lbs)	1.01605	0.984207
	tonne	t	short ton (2000 lbs)	0.907185	1.10231
Volume	kilolitre	kl	barrel (bbl)	6.29	0.159

TABLE 3
 QUANTITY OF GOLD (KG) AND ORE TREATED 1987
 SHOWING MINERAL-FIELD AND DISTRICT

	ALLUVIAL KILOGRAMS	DOLLIED AND SPECIMENS KILOGRAMS	MILLED OR SMELTERED		TAILING RETREATMENT KILOGRAMS	TOTAL GOLD KILOGRAMS
			ORE TREATED (TONNES)	GOLD THEREFROM KILOGRAMS		
KIMBERLEY	17,446	0,485	455	4,167	-	22,098
WEST KIMBERLEY	-	-	-	-	-	-
MARBLE BAR	29,517	3,022	2 266 706	6 922,404	34,120	6 989,063
NULLAGINE	56,465	1,774	31 824	319,985	-	378,224
PILBARA	85,982	4,796	2 298 530	7 242,389	34,120	7 367,287
WEST PILBARA	16,271	2,914	-	-	-	19,165
ASHBURTON	5,733	-	-	-	-	5,733
GASCOYNE	3,185	0,677	52	0,466	-	4,328
PEAK HILL	39,278	-	348 927	1 392,639	0,205	1 432,122
LAWLERS	10,102	0,800	1 252 145	3 469,989	336,421	3 817,321
WILUNA	0,033	-	749 436	2 490,174	409,031	2 899,238
BLACK RANGE	3,334	1,657	701 338	2 290,708	18,213	2 313,912
EAST MURCHISON	13,469	2,466	2 702 919	8 250,871	763,665	9 030,471
CUE	31,955	1,573	249 003	1 280,352	30,997	1 344,877
MEEKATHARRA	18,502	0,436	1 319 652	2 997,757	3,270	3 019,695
DAY DAWN	19,482	0,058	68 645	1 252,621	91,838	1 363,999
MT MAGNET	15,068	0,354	810 267	3 003,572	1,372	3 020,366
MURCHISON	85,007	2,421	2 447 567	8 534,032	127,477	8 748,937
YALGOO	1,183	0,114	705 970	2 240,586	30,681	2 241,883
MT MORGANS	10,344	-	4 807	28,191	-	38,535
MT MALCOLM	27,354	1,573	1 482 979	4 809,525	713,182	5 535,405
MT MARGARET	26,866	2,012	627 193	2 042,078	171,159	2 242,115
MT MARGARET	48,335	3,585	2 114 979	6 879,794	884,341	7 816,055
MENZIES	0,107	0,160	158 571	274,807	51,481	326,555
ULARRING	-	-	59 355	172,752	13,901	186,653
NIAGARA	3,303	-	175	0,423	21,609	25,335
YERILLA	0,321	-	234 253	712,775	-	713,096
NORTH COOLGARDIE	3,731	0,160	432 354	1 160,757	86,991	1 251,639
BROAD ARROW	4,586	-	2 570 228	7 053,982	58,953	7 117,521

	ALLUVIAL KILOGRAMS	DOLLIED AND SPECIMENS KILOGRAMS	MILLED OR SMELTERED		TAILING RETREATMENT KILOGRAMS	GOLD KILOGRAMS
			ORE TREATED (TONNES)	GOLD THEREFROM KILOGRAMS		
KANOWNA	3,236	0.556	86 871	166,058	2,237	172,087
KURNALPI	0.624	-	38 581	69,160	-	69,784
NE COOLGARDIE	3,860	0.556	125 452	235,218	2,237	241,871
EAST COOLGARDIE	2,728	0.034	4 805 484	15 868,717	359,165	16 230,644
BULONG	2,039	-	-	-	-	2,039
EAST COOLGARDIE	4,767	0.034	4 805 484	15 868,717	359,165	16 232,683
COOLGARDIE	4,117	0.421	1 709 525	5 294,200	15,024	5 313,383
KUNANALLING	0.652	-	18 535	66,819	14,699	82,170
COOLGARDIE	4,769	0.042	1 728 060	5 361,019	29,723	5 395,553
YILGARN	5,761	0.128	2 204 878	5 930,154	74,416	6 010,459
DUNDAS	1,173	-	454 466	2 599,738	2,080	2 602,991
PHILLIPS RIVER	0,095	-	708	13,200	0,972	14,267
SOUTH WEST	-	-	999 284	2 883,284	-	2 883,284
STATE GENERALLY	-	-	-	-	-	-
TOTAL	344,611	18,378	23 940 308	75 620,332	2 455,026	78 438,347

FIGURE 3
WESTERN AUSTRALIAN GOLD PRODUCTION

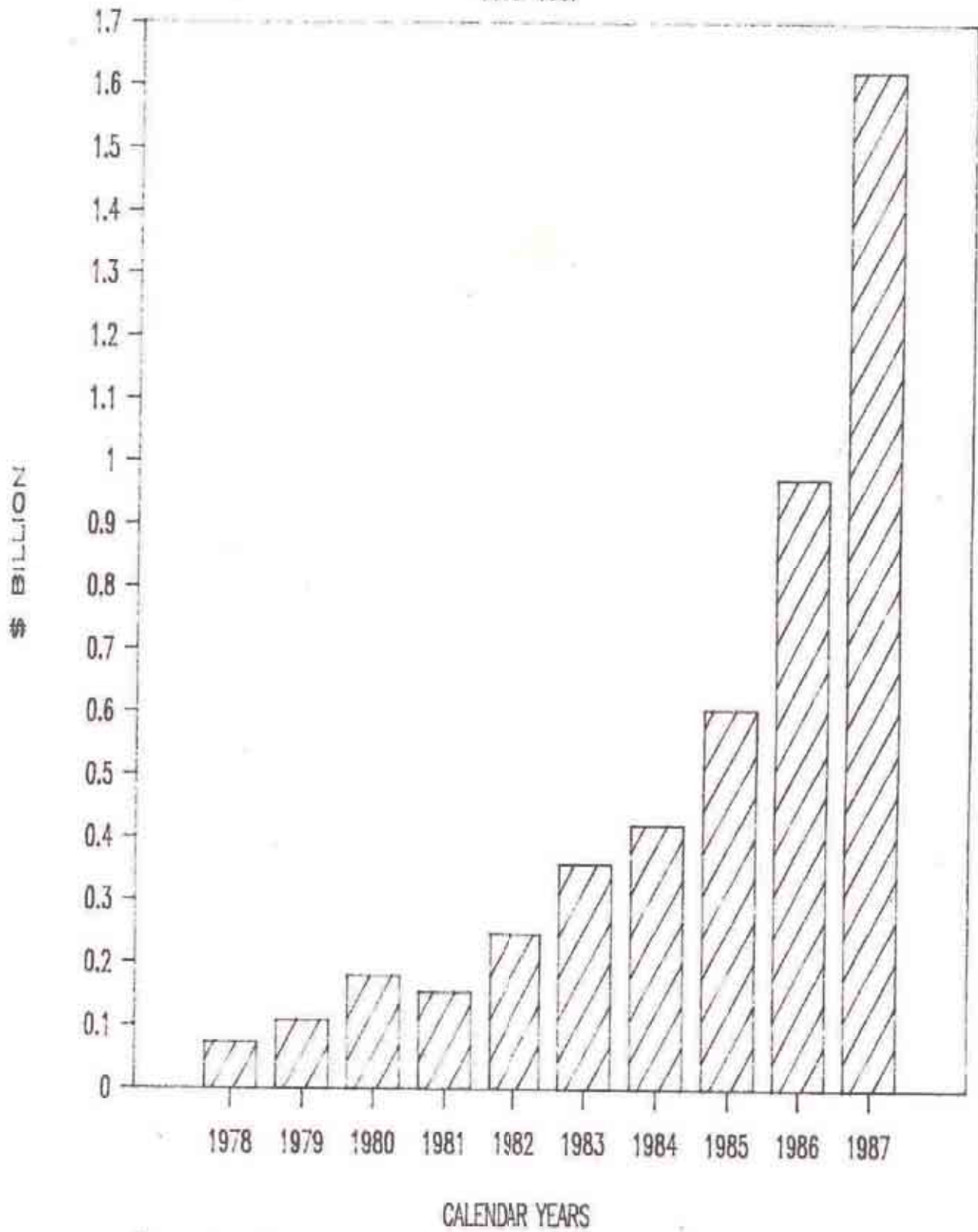


SOURCE: DEPARTMENTAL STATISTICS.

FIGURE 4

VALUE OF W.A. GOLD PRODUCTION

1978-1987



SOURCE: DEPARTMENTAL STATISTICS.

TABLE 4

ROYALTY RECEIPTS 1987

Mineral			Value (\$A)	\$ up
	1986	1987	variance	(\$ down)
	(\$A)	(\$A)		
Alumina	10 368 378	10 484 702	116 324	1
Building stone	352	693	341	97
Clay	135 463	322 620	187 157	138
Coal	1 358 292	1 494 885	136 593	10
Cobalt	103 518	31 770	(71 748)	(69)
Construction materials				
aggregate	15 287	59 482	44 195	74
gravel	7 196	8 576	1 380	19
rock	30 397	35 031	4 634	15
sand	187 152	191 870	4 718	3
Copper	196 729	104 020	(92 709)	(47)
Diamond	7 474 564	14 522 383	7 047 819	94
Diatomite	354	134	(220)	(62)
Dolomite	99	18	(81)	(82)
Emerald	260	-	(260)	(100)
Feldspar	3 289	13 777	10 488	319
Garnet sand	15 463	30 515	15 052	97
Gold	100 142	138 522	38 380	38
Gypsum	102 605	59 401	(43 204)	(42)
Iron ore	102 414 688	89 274 397	(13 140 291)	(13)
Kyanite	3 696	5 455	1 759	48
Limestone	77 193	77 561	368	1
Mineral beach sands				
ilmenite	1 183 206	1 625 722	442 516	37
leucosane	111 534	175 076	63 542	57
monazite	304 240	212 062	(92 178)	(30)
rutile	1 136 023	1 218 234	82 211	7
xenotime	2 742	8 457	5 715	208
zircon	1 372 266	1 456 471	(115 795)	(7)
Nickel	5 819 275	3 364 708	(2 454 567)	(42)
Ochre	1 460	2 255	795	54
Palladium	20 257	22 754	2 497	12
Peat	12 721	2 596	(10 125)	(80)
Petroleum Products				
condensate	525 997 (r)	1 024 716	498 719	95
crude oil	27 136 487	23 321 032	(3 815 455)	(14)
natural gas	3 585 794 (r)	5 585 215	1 999 421	56
Platinum	20 257	22 754	2 497	12
Salt	638 885	777 513	138 628	21
Semi-precious stones				
amethyst	3 804	14 663	10 859	285
moss opal	1	-	(1)	(100)
Silica sand	174 084	188 732	14 648	8
Silver	108 788	59 920	(48 868)	(45)
Spodumene	31 023	137 928	106 905	345
Talc	104 534	85 160	(19 474)	(19)
Tantalite	34 234	153 083	118 849	347
Tin	65 377	200 858	135 481	207
Vermiculite	489	1 180	691	141
Zinc Concentrate	130 713	-	(130 713)	(100)
Total value	165 319 408	156 516 901	(8 802 507)	(5)

Note: (r) Revised from previous edition

FIGURE 5
1982 ROYALTY RECEIPTS

TOTAL : \$ 84.8 MILLION

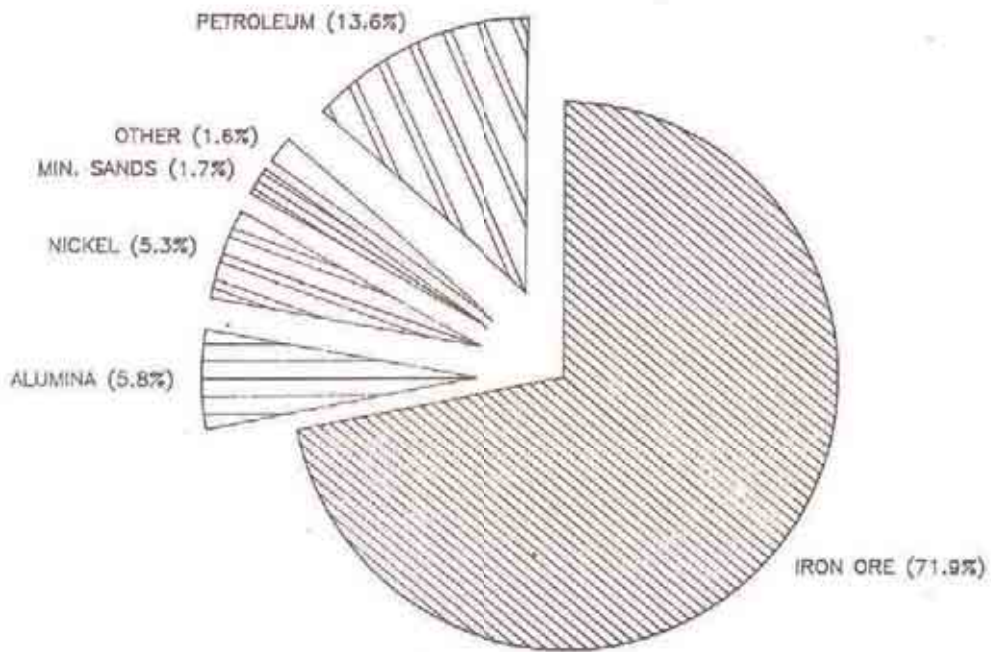


FIGURE 6
1987 ROYALTY RECEIPTS

TOTAL : \$ 156.5 MILLION

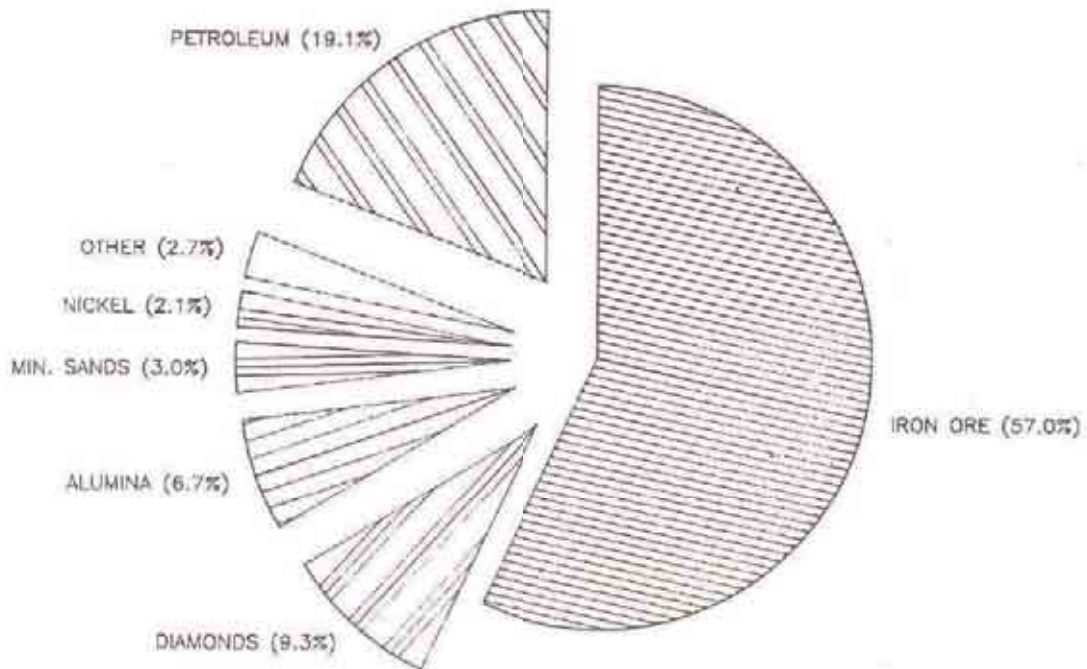


TABLE 5
NUMBER OF PERSONS EMPLOYED IN THE WESTERN AUSTRALIAN MINING INDUSTRY
AS AT DECEMBER 1987

(SOURCE: AXSTAT REPORTING SYSTEM, MINING ENGINEERING DIVISION)

MINERAL COMPANY	LOCATION	1982	1987
ALUMINA			
Alcoa of Australia Ltd.	Jarrahdale/Kwinana	1676	1526
	Del Park/Huntley/Pinjarra	1643	1671
	Wagerup	103	539
Worsley Alumina Pty. Ltd.	Administration	210	285
	Worsley	-	854
		3632	4875
COAL			
Griffin Coal Mining Co. Ltd.	Collie	421	482
Western Collieries Ltd.	Collie	648	671
		1069	1153
COPPER-SILVER ZINC			
Salttrust Mining Corporation Pty. Ltd.	Teutonic Bore	148	-
DIAMOND			
Argyle Diamond Mines J.V.	Lake Argyle	-	697
Freeport Bow River Properties Ltd.	Bow River	-	23
		-	720
GOLD			
AUR NL	Mt. Martin	-	54
Australian Consolidated Minerals Ltd.	Golden Crown	-	90
	Westonia	-	126
Australis Mining NL	Norseman	-	52
Austwhim Resources NL	Cork Tree Well/Mt Morgans	-	136
BHP Minerals Ltd.	Gimlet South/Orban J.V.	-	103
Bamboo Creek J.V.	Bamboo Creek	-	63
Bardoc Gold Pty. Ltd.	Bardoc	-	110
Barrack Mine Management	Peak Hill	-	48
	Horseshoe	-	105
	Wiluna	-	92
Boddington Gold Project	Boddington	-	115
Broken Hill Metals	Hopes Hill	-	85
Brunswick NL	Galtee More	-	76
Central Norseman Gold Corp. NL	Norseman	373	497
Chevron Exploration Corp.	Mt. Wilkinson	-	56
Cypress Minerals Aust. Co.	Gidgee	-	64
Eastmet Ltd.	Youanmi	-	86
Edjudina Gold Mines Pty. Ltd.	Neda/Gawler	-	81
Endeavour Resources Ltd.	Bluebird	-	125
Forrest Gold Pty. Ltd.	Hannans South	-	40
	Tower Hill	-	46
Forsayth NL	Lawlers	-	62
Freeport Australia	Karonie	-	54
Gabarritha Gold Mines	Gabarritha	-	49
Golden Spec J.V.	Golden Spec	-	55
Goongarrlie Gold Mines	Goongarrlie	-	77
Great Victoria Gold Ltd.	Gt Victoria	-	94
Hampton Australia Ltd.	Jubilee	-	93
Harbour Lights Mining Pty. Ltd.	Leonora	-	109
Hill 50 Gold Mine NL	Mt. Magnet	167	257
Hunter Resources	Mertondale	-	45
KLV-Kalgoorlie	Mt Charlotte	184	384
KLV-Fleiston	Perseverance	531	635
Kia Ora Gold Corp. Ltd.	Marvel Lock	50	173
Kuanulling Joint Venture	Gibraltar	-	41
Kurara J.V.	Kurara	-	51
Metana Minerals	Black Cat	-	79
	Ready	-	72
	Mt Magnet	-	106

MINERAL COMPANY	LOCATION	1982	1987
Mimco NL	Edwards Find	-	79
Mt Percy Project	Mt Percy	-	67
Nevoria J.V.	Nevoria	-	89
Newmont Holdings Pty. Ltd.	New Celebration	-	109
North Kalgurlil Mines Ltd.	Norkal/Fimlston	263	440
Pancontinental Gold Mining Areas Pty. Ltd.	Paddington	-	173
Queen Margaret Gold Mines	Bellevue	-	136
Sons of Gwalia NL	Gwalia	-	77
Sundowner Minerals NL	Mt Fisher	-	74
Telfer Project	Telfer	111	382
WMC-GT, Boulder Holdings	Boulder	12	-
	Davyhurst	-	39
	EMU	-	82
	Kambalda	37	123
	Lancefield	75	102
	Sand King	10	45
WMC Ltd. & Consolidated Exploration Ltd.	Lady Bountiful	-	58
Whim Creek Consolidated NL	Meekatharra	32	119
All Other Operators		1182	1514
TOTAL GOLD		3027	8336
IRON ORE			
BHP Minerals Pty. Ltd.	Koolyanobbling	77	-
	Kwinana	418	-
	YampI	558	432
Goldsworthy Mining Ltd.	Pilbara/Port Hedland	1178	949
Hammersley Iron Pty. Ltd.	Tom Price-Paraburdoo/Dampier	4041	3003
Mt Newman Mining Co. Ltd.	Newman/Port Hedland	3794	3824
Robe River Mining Co. Pty. Ltd.	Pannawonica/Cape Lambert	1384	1147
		11450	9355
MINERAL BEACH SAND			
Allied Eneabba Pty. Ltd.	Eneabba	204	131
Associated Minerals Cons. Ltd.	Capel	122	173
	Eneabba/Naragulu	136	592
Cable Sands Pty. Ltd.	Capel	82	135
Westralian Sands Ltd.	Capel	139	337
		683	1368
NICKEL			
Agnew Mining Co. Pty. Ltd.	Leinster	288	36
Metals Exploration Ltd.	Nepoan	175	-
Western Mining Corporation	Kalgoorlie	364	310
	Kambalda	1476	1210
	Kwinana Refinery	405	286
	Mt Windarra	348	441
		3056	2383
PETROLEUM PRODUCTS			
Bond Corporation Pty. Ltd.	Harriet	-	68
Home Energy Pty. Ltd.	Bilna/Sundown	-	4
Barrack Energy Ltd.	Mt Horner	-	3
Strata Oil NL	Woodada	45	4
West Australian Petroleum Pty. Ltd.	Barrow Island	133	175
	Dongara	9	12
Woodside Offshore Petroleum Pty. Ltd.	North Rankin A/Burrup Peninsula	-	1337
		187	1603

MINERAL COMPANY	LOCATION	1982	1987
SALT			
Dampier Salt Ltd.	Dampier	173	182
	Lake McLeod	117	95
Leslie Salt Co.	Port Hedland	49	110
Shark Bay Salt J.V.	Shark Bay	98	102
		437	489
ALL OTHER MATERIALS (Including Rock Quarries)		683	773
TOTAL		24 372	31 055

PRINCIPAL MINERAL PRODUCERS 1987 - Head office postal address, telephone number: minesite.

ALUMINA

Alcoa of Australia (WA) Ltd, P O Box 161, Kwinana 5167, (09) 419 1566: Del Park, Huntly, Jarrahdale
Worsley Alumina Pty Ltd, P O Box 344, Collie 6225, (097) 34 3022: Boddington.

BUILDING STONE - quartz

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

- black granite

Parry Corporation Ltd, PO Box 457, West Perth WA 6005, (09) 322 1621: Napier Downs.

CLAY - attapulgitic

Mallina Holdings Ltd, 249 Stirling Highway, Claremont 6010, (09) 384 7077: Lake Narramyne.

- cement clay

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

- fire clay

Clackline Refractories Ltd, PO Box 893, West Perth WA 6005 (09) 322 7788: Plawanning.
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

Adelaide Quarry Industries, P O Box 125, Wanneroo 6065, (09) 342 7333: Karratha
Calsil Ltd, 5 Mill Street, Perth 6000, (09) 321 8552: Port Hedland.
Woodhead JL, 407 Packsaddle Road, Kununurra 6743, (091) 68 1472 : Kununurra.
The Readymix Group WA, PO Box 20, Bentley WA 6102, (09) 451 5566: Boulder, Boodardie, Oscar Range,
Karratha.

- gravel

Kane DJ, 8 Oleander Place, Wickham 6720, (091) 87 1616 : Mt Welcome.
Leslie Salt Company, PO Box 7073, Cloisters Square, Perth 6000, (09) 327 2327: Port Hedland.
Pioneer Concrete (WA) Pty Ltd, P O Box 187, Victoria Park 6100, (09) 362 1100: Port Hedland, Paraburdoo.

PRINCIPAL MINERAL PRODUCERS 1987 - continued.

CONSTRUCTION MATERIALS (ctd) - 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.

Cottlers Pty Ltd, P O Box 311, Port Hedland 6721, (09) 72 1553: Port Hedland.

Draw, M, P O Box 55, Cervantes, 6511, (095) 45 7018: Cervantes.

Marathon Roofing Pty Ltd, P O Box 5, Willetton 6155, (09) 455 1488: Jandakot.

May, S, C/- 660 Londond Rd, Chandler, Queensland 4155, (07) 245 4399: Sherlock.

Monier Ltd, P O Box 5, Willetton 6155, (09) 455 1488: Gosnells, Gnangarra.

Pioneer Concrete (WA) Pty Ltd, P O Box 187, Victoria Park 6100, (09) 362 1100: Port Hedland, Paraburdoo.

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

Stillman WJ, PO Box 71, Boulder WA 6432: Lake Lefroy.

The Readymix Group (WA), P O Box 20, Bentley 6102, (09) 451 5566: Karratha, Lake Raeside, Rocklea, Turner River, Warramble Station, Widgiamooltha.

Tomlinson JJ, Via Flynn Road, East Mundaring WA 6073, (095) 72 6088: Childow

Wreford, WB, C/- PO Box 517, Karratha, WA 6714, (091) 83 8100: West Pilbara

COPPER

Agnew Mining Company Pty Ltd, P O Box 22, Leinster 6457, (090) 37 6005: Agnew.

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

DIAMOND

Argyle Diamond Mines Pty Ltd, Private Bag No 11 Post Office, West Perth 6005, (09) 325 1166: Argyle.
Freeport of Aust. Inc., P O Box 280, Collins St Post Office, Melbourne Victoria 3000, (03) 602 4811
Lissadell

Gem Exploration & Minerals Ltd, P O Box 7009, Cloisters Square, Perth 6000, (09) 322 1979: Lissadell

DIATOMITE

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

DOLOMITE

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

EMERALD

Mackay, NJ, 91 Thomas St, Nedlands WA 6009, (09) 386 6206: Wonder Well

FELDSPAR

Matlock Mining NL, 1 Mill Street, Perth WA 6000 : Mukinbudin

GARNET SAND

Cable Sands P O Box 133, Bunbury 6230 (097) 21 4111 Capel

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

PRINCIPAL MINERAL PROCEDURES 1987 - continued

GOLD

Australian Consolidated Minerals Ltd, C/- GPO Box X2201, Perth WA 6001, (09) 325 7755: Golden Crown, Westonia.

Austwhim Resources, P O Box 869, West Perth, (09) 325 5855: Cork Treewell.

Bardoc Gold Pty Ltd, PMB, 14 Kalgoorlie 6430 (090) 242068 : Bardoc.

Boddington, P O Box 48, Boddington 6390, (098) 838 260.

Brunswick Oil NL, 229 Stirling Highway, Claremont WA 6010, (09) 384 5155 : Galteemore.

Central Norseman Gold Corporation N L, P O Box 56, Norseman 6443, (090) 39 1101: Central Norseman.

Chevron Exploration, P O Box 454, Victoria Park 6100, (09) 470 2777 : Mt Wilkinson.

East Murchison Mining Pty Ltd, GPO Box C130, Perth, (09) 4265500 : Gidgee.

Edjudina Gold Mining P O Box 1014, Kalgoorlie 6430, (090) 24 2056 : Porphyry.

Endeavour Resources Ltd, 31 Ventnor Ave, West Perth 6005, (09) 322 6444: Bluebird, Ingleton.

Forrest Gold, P O Box 869, West Perth 6005 (09) 327 2327: (09) 327 2327: Tower Hill/Hannans South.

Forsyth NL & Reynolds Aust. Mines Pty Ltd, 1st Floor, 28 The Esplanade, Perth 6000, (09) 3227221: Mt. Gibson.

Great Victoria Gold Ltd, C/- Post Office, Southern Cross WA 6426, (090) 401 099: Great Victoria.

Harbour Lights Mining Ltd, P O Box 240, Leonora 6438, (090) 37 6211: Harbour Lights.

Hill 50 Gold Mine N L, 140 St George's Terrace, Perth 6000, (09) 322 6915: Hill 50.

Horseshoe Lights Gold Pty Ltd, 614 Newcastle St, Leederville 6107, (09) 328 8200: Horseshoe.

Hunter Resources Ltd, P O Box 200, Leonora 6438, (090) 376 397 : Mertondale.

Kalgoorlie Mining Associates, P O Box 105, Fimiston 6433, (090) 21 3411: Fimiston, Mt Charlotte.

Kia Ora Gold Corporation NL, PO Box 78, Southern Cross WA 6426, (090) 401 030: Marvel Loch.

Metana Minerals NL, P O Box 792, Cloverdale 6105 277 9944 : Creedy, Parkinson, St George, Paris, Ardpatrick.

Mt Percy Gold Project, PO Box 489, Kalgoorlie 6430, (090) 218 276: Mt Percy.

Newmont Holdings Pty Ltd, P O Box 211, Cloverdale 6105, (09) 277 7011: Telfer.

Nord Australax Nominees Pty Ltd & Indian Ocean Venture Ltd, P O Box 6322, Hay Street East, Perth 6000: Kurl.

North Kalgoorlie Mines Ltd, P O Box 88, Fimiston 6433, (090) 21 0600: Fimiston, Paringa.

Pancontinental Goldmining Areas Pty Ltd, P O Box 1161, Kalgoorlie 6430, (090) 24 2000: Paddington.

Queen Margaret Gold Mines NL & Spargos Exploration NL, 234 Great Eastern Highway, Belmont, (09) 277 9344 :Bellevue Sands, Bellevue Opencut.

Sons of Gwalla Ltd, P O Box 669, West Perth 6005, (09) 322 1773: Sons of Gwalla.

Southern Goldfields Ltd, 263 Adelaide Terrace, P O Box 8361 Stirling : Nevada.

Western Mining Corporation Ltd, P O Box 80, Belmont 6104, (09) 478 0711: Emu, St Boulder, Kambalda, Lancefield, Sand King.

Western Alluvials Pty Ltd, C/-Bardack Mine Management, 614 Newcastle St., Leederville 6107 (09) 328 8200: Wiluna.

Whim Creek Consolidated N L, P O Box 144, West Perth 6005, (09) 325 5855: Havelock/Phar Lap.

GYPSUM

Agnew Clough Ltd, P O Box 7005, Cloisters Square, Perth 6000, (09) 322 4811: Shark Bay.

Endeavour Resources 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.

Cusak, B, PO Box 103, Narembeen, 6369 (090) 64 7311: Kondinin.

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.

Eaton MB & AE, PO Box 146, Narembeen 6369, (090) 64 7316, Mt. Walker.

Fitzgerald, EM & EJ, PO Box 404 Merredin 6495 (090) 41 1146: Hines Hill.

Green K L and P M, Newdegate 6355: Newdegate.

Hathaway, G, R & S, PO Box 33, Kalannie 6468, (096) 66 2011: Lake Hillman.

Kidman, G, PO Box 69, Newdegate 6355, (098) 71 6444: Varley.

McAndrew Mining, Yelbent 6487: Yelbent.

Nixon P F and R S, P O Box 69, Moora 6510: Lake Hillman.

Pustkuchen, JV & Enright, AM & BA, C/- 3 Mitchell St, Koolberrin, 6410, (090) 45 4052: Hines Hill.

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.

IRON ORE

BHP Minerals Pty Ltd, P O Box 160, Kwinana 6167, (09) 410 1111: Cockatoo Island, Koolan Island.
Goldsworthy Mining Ltd, GPO Box 880, Perth 6001, (09) 322 1788: Shay Gap, Sunrise Hill.
Hamersley 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: Newman.
Robe River Iron Associates, GPO Box P1224, Perth 6001, (09) 325 9288: Pannawonica.

PRINCIPAL MINERAL PRODUCERS 1986/87 - continued.

LIMESTONE

Endeavour Resources Ltd, C/- PMB 16, West Perth, 6005, (09) 322 6444: Lancelin.
Bell Basic Industries Ltd, P O Box 75, Guildford 6055, (09) 279 0000: Wanneroo.
Chelstford Pty Ltd, 89 Erindale Road, Balcatta WA 6021, (09) 349 6009: 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: Cleaverville.
Swan Portland Cement Ltd, P O Box 78, Rivervale 6103, (09) 361 8822: Wanneroo.
Unimil Pty Ltd, PO Box 15, Bentley, 6102, (09) 362 1411: Lancelin.
Sunrise Investments Pty Ltd., 41 Spearwood Ave., Bibra Lake 6163 (09) 4181030: Wanneroo.

MINERAL BEACH SANDS

Allied Eneabba Ltd, 45 Stirling Highway, Nedlands 6009, (09) 386 8611: 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: Carnliya Hill.
Metals Exploration Ltd, 80 Collins Street, Melbourne 3000, (03) 653 7100: Nepean.
Western Mining Corporation Ltd, P O Box 80, Belmont 6104, (09) 478 0711: Carnliya Hill, Kambalda, Windarra.

PALLADIUM

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

PETROLEUM - condensate

Stata Oil N L, GPO Box 6474, Perth 6000, (09) 325 8155: Woodada
West Australian Petroleum Pty Ltd, GPO Box C1580, Perth 6001, (09) 322 7355: Barrow Island, Dongara.
Woodside Offshore Petroleum Pty Ltd, GPO Box D188, Perth 6001 (09) 425 1211: North Rankin.

- crude oil

Barrack Energy Ltd, PO Box 7191, Cloisters Square, Perth 6000, (09) 381 7122: Mt Horner
Bond Corporation Pty Ltd, GPO Box X2275, Perth 6001, (09) 322 7355: Harriet.
Home Energy Company Ltd, P O Box 6176, Hay Street East, Perth 6000, (09) 325 1555: Biina.
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.

PRINCIPAL MINERAL PRODUCERS 1986 - continued.

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 Ballie 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.

SILVER

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

SPODUMENE

Lithium Australia 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.

TANTALITE

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

TIN

Endeavour Resources Ltd, Private Bag 16 Post Office, West Perth 6005, (09) 322 6444: Moolyalla.
Greenbushes Tin Ltd, GPO Box J646, Perth 6001, (09) 325 8900: Greenbushes.

VERMICULITE

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



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