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Developments and Outlook for Lead and Zinc in Australia:

Speaking Notes and Figures

by

M J Roarty

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Developments and Outlook for Lead and Zinc in Australia:

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by

M J Roarty

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Thank you Mr Chairman, I am very pleased to be here today.

Ladies and Gentlemen, the topic of my talk is:

DEVELOPMENTS AND OUTLOOK FOR LEAD AND ZINC IN AUSTRALIA

I feel almost certain of the fact that I wont be telling anybody is this audience anything new when I say that the Australian non-ferrous metal producers have been faced with depressed market circumstances over the last few years and profitability has declined substantially since around 1980. In response to this the Australian producers have had to become more cost effective to stay in business.

My aim today is to present some of the more positive aspects of the outlook for the lead zinc industry, especially from the Australian viewpoint rather than be caught up in the commonly expressed sentiment that base metals are now in decline and are suffering the effects of substitution to a substantial degree. To keep the overview balanced, I will refer to some of the factors that have tended to keep downward pressure on the price level.

The structure of my talk will include a discussion on price, profitability and productivity. Australian production and forecasts incorporating new developments, world developments, demand and supply and conclude with a brief summary in an attempt to tie the above elements together.

SLIDES 1 and 2

Firstly on price, zinc on the left, lead to the right. Following an encouraging upward trend, world and Australian zinc prices began to tumble in June 85 which continued in to the first quarter of 1986. This decline was attributed in part to excess

metal supply in the middle two quarters of 1985 despite the fact there was a close balance of metal output and demand over the year as a whole. Prices began to lift in the second quarter of 1986 because of a better demand outlook and some disruption to metal supply, particularly in Canada at the Valleyfield complex. Prices were pegged back at year end and have remained around these levels possibly because of a slight forecast metal surplus for 1987 even though there is an expected statistical deficit of around 170 000 t of metal for 1986. The lead graph despicts a sorry tale with an almost unabatted fall through to early 1985 although it must be remembered that the price level in 1979 and 1980 was quite high in historical terms. There has been some upward movement in the price level since June 1986 although as with zinc, prices have fallen to somewhat lower levels early this year. The upward trend was attributed to the disruption of metal supply in a number of countries including the USA, Australia and to a lesser extent Europe and to the fact of an expected statistical deficit of around 116 000 t of metal for 1986. This deficit is expected to ease to a slight statistical surplus of metal for 1987.

SLIDE 3

Despite the fact that zinc prices have fared better than other base metals, Australia's non-ferrous metal producers have suffered declining levels of profitability to unacceptably low levels. I have illustrated this aspect by the trends exhibited by the AMIC bar graphics which show net profit return an average shareholders funds and which has been dealt with in more detail by Mr Davies earlier in this conference.

SLIDE 4

In response to these low levels of profitability the Australian producers have had to become more cost effective to stay in business. They have done this by becoming more productive. I have illustrated this aspect by looking at a series of productivity indices over time. The indices is tonnes mined/manshift and represents ore mined, not metal content. In all cases the indicee, tonnes mined/ manshift has increased over the last few years at all mines. The 1985/86 and 1986 indicee for the ZC/NBHC mines and the North mine at Broken Hill however did not increase but this is explained by the loss of production in mid 1986. One very interesting comparison is an examination of the indicees for the NBHH Ltd group of mines where Elura is by far larger than any of the other mines. Elura, of course is a relatively new mine, is ideally geologically orientated for mine extraction and has the added advantage of being exploited by the latest technology.

I would now like to look at Australian mine and metal production together with some tentative forecasts incorporating possible new developments. I have only looked at zinc but a similar analysis of lead would follow along similiar trends. Australian mine production for 1985/86 is illustrated on the left and a forecast production schedule is presented on the right.

SLIDES 5 and 6

Lets firstly look at mine production for 1985/86. Company on the left and tonnes of contained metal mined on the right. Generally speaking the lead zinc silver ore grades of these deposits is higher than the world average. Even the Broken Hill mines which have been producing for more than 100 years have combined zinc

lead grades of 15-18%. In addition the mines have a substantial resource base and most of these mines will be able to produce at current rates of production for the medium term, and for some well into the 21st century.

I now draw your attention to the forecast production schedule on right. You will note that all of these figures represent contained metal content for comparability. The 690 000 t figure has been transposed from the left slide to the top lefthand corner of the right slide. Apart from the forecast production decline to 650 000 t in 1986/87 which will result because of losses of production from Broken Hill brought about by industrial disputation in mid 1986 in relation to work practices, and I may add, that this issue now appears to be largely resolved, production from existing mines is expected to be maintained until 1994/95. Production from Woodcutters will probably cease around 1991/92 and it is also possible that the underground Woodlawn operation may cease during this time period. Additional production is expected to come from new potential mines as shown. Announcements have been made to the effect that Hellyer, Cadjebut and Benambra will be developed although the levels of production past 89/90 are somewhat speculative on my part. No announcements have been made on whether developments will proceed at Blendevale, 12 Mile, Lady Loretta, Golden Grove and Thalanga. I have not referred singularly to the bringing on stream of Hilton where trial stoping is scheduled to begin shortly and production on an expanded scale is scheduled to begin in the early 1990's because production from this source will offset declining production from Mount Isa itself with overall production levels staying around current levels. Once again zinc lead grades at these deposits as

with the existing mines are higher than world averages and the resource base at most of these deposits is substantial. Mount Isa Mines Ltd have stated they believe the Mount Isa region to be one of the greatest zinc lead provinces in the world.

Although mine production is forecast to increase as indicated, metal production is expected to remain much the same assuming that capacity at the existing plants is not expanded or that new plant does not come on stream. There has been no announcements to date that either of these options are being considered. An extensive modernisation program is being carried out at the major Risdon plant. The two other plants in Australia are at Port Pirie, SA, and Cockle Creek near Newcastle. The production levels indicated represent near capacity production. Of the order of 80 000-90 000 t of this metal is consumed domestically and the remainder exported. The balance of mine production is expected to be exported as concentrate as shown on the bottom line.

In 1986, export earnings for all zinc and lead primary products were $850 million, which was 6% of our total mineral export earnings. The bottom line which results from projected mine expansion suggests that this value could increase.

The above outline has shown that despite the low levels of profitibility of the Australian non-ferrous metal producers, no mines or smelters have been permanently closed, with the exception of Teutonic Bore, WA, where ore reserves have been exhausted. In contrast, a number of lead and zinc mines and lead and zinc smelting and refining complexes in North America, Morocco, Mexico and Japan closed down either temporarily or

permanently in 1986. However, this was offset by expansion and new openings elsewhere including the reopening of the large Faro mine in Canada and a mine in Brazil. Other projects a little down the track include the Red Dog deposit in Alaska, and other mines in the US, Canada and India.

A very pleasing aspect for the lead zinc producers has been increases in the demand side of the equation. Although the growth rates of western world lead and zinc consumption have declined and in fact were negative from 1979 to 1982 (not 84 as in abstract) two important facts are:

1. The western world still consumes substantial amounts of lead and zinc;
2 Estimated western world consumption of zinc increased to 4.9 Mt in 1986, which is an all time high, and estimated consumption of lead increased to 4.1 Mt, second only to 1979. Further increases for both metals are forecast for 1987.

The later point is considered important because of the worldwide trend towards the manufacture of lighter, thinner and stronger products. I have illustrated demand by end use sectors in both the slides.

SLIDES 7 and 8

The traditional uses of lead in batteries and zinc for galvanising remain firm. The gradual phasing out of lead additives in petrol (shown by the green pigments and chemicals sector) has reduced the demand for lead to some extent but a number of new applications appear to be emerging. Research is currently being conducted on the use of large lead batteries for

7.

the load management for essential services and in lead compounds to increase the life of bitumen used on road surfaces. Zinc die casting (included in the fawnish alloys sector) has returned to favour in recent years because of the extensive use of thin-walled zinc diecasts.

In spite of these better demand forecasts the supply side of the equation has kept a dampener on the price level. Studies by Rio Tinto Zinc Corporation suggest that both lead and zinc mine capacities exceed actual production by up to 200 000-300 000 t. This excess of capacity has enabled consumers to reduce stockpiles with the view that supply is readily available if required. Also continuation of mine and metal production has been assisted in a number of countries including Australia by the devaluation of their currencies. The slide adequately demonstrates this fact.

SLIDE 9

Of course it is reasonable to suggest that low levels of profitability would discourage construction of new capacity although for the present there are a number of large projects under consideration for development both in Australia and overseas as I have outlined. It is difficult to forecast whether these developments will be counterbalanced or outweighed by closures as it is unusual to announce such details well in advance of their happening.

To conclude Ladies and Gentlemen, let me summarise these aspects. The demand side of the equation looks reasonable for the next two years, and even beyond according to some industry experts.

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Australia's mines have relatively high metal grades and the mines and smelters are efficiently run and most importantly the majority of the existing mines and new projects have a substantial resource base. Production has been assisted by the devaluation of the Australian dollar and the companies have made stenuous efforts to reduce costs and improve productivity. Australian production is forecast to increase with the bringing on stream of new projects.

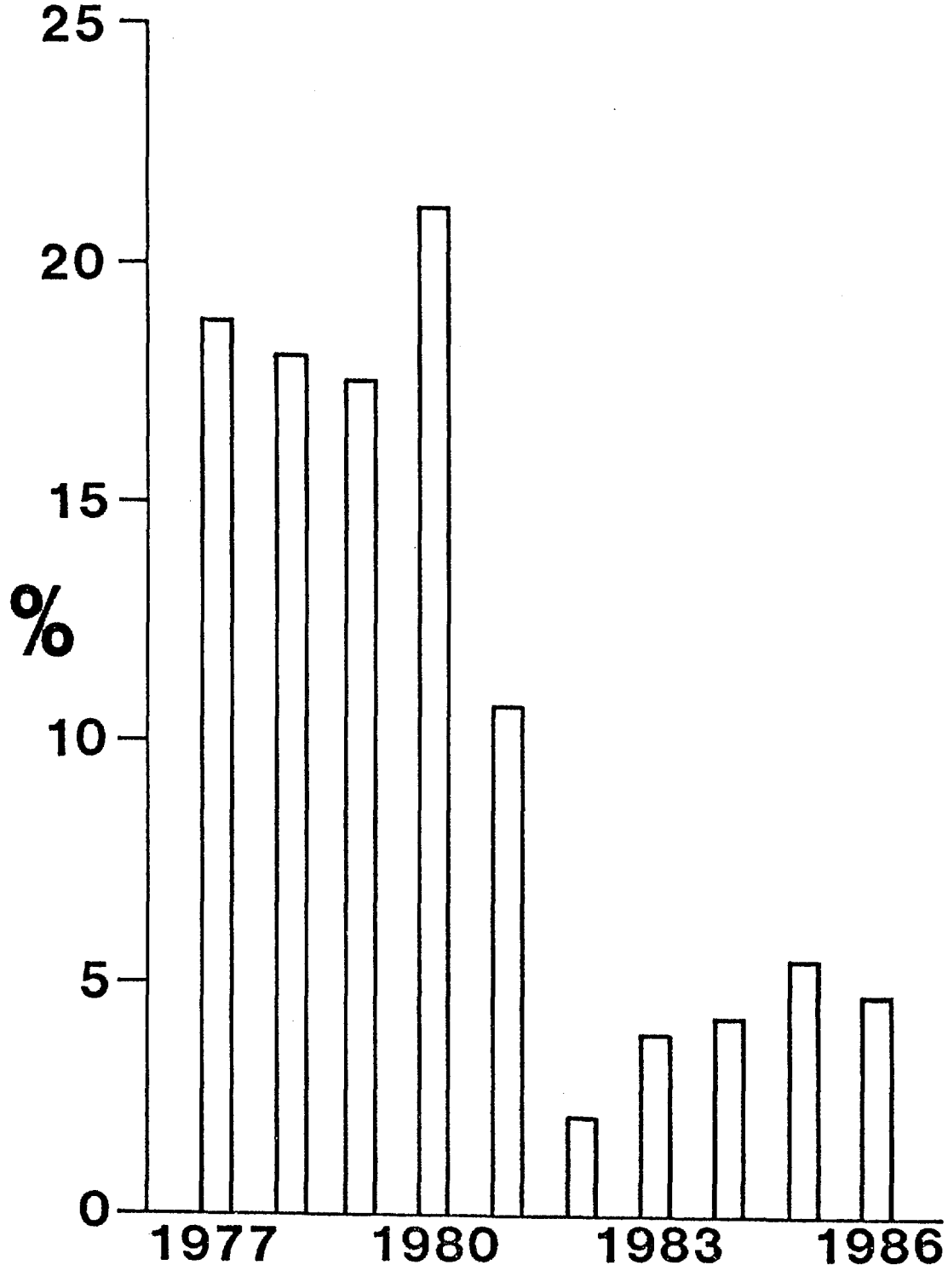
The problem that remains for the world lead zinc industry is that a substantial surplus capacity remains and there is a strong probability that further projects will be developed. It is difficult to predict if and when this surplus capacity will be reduced either by mine closures or the discouragement of further investment in new projects. The expansion of Australia's production in such an environment is possible because of the comparative advantage principle, i.e. high grades, large resource base and efficiently run together with some additional factors I have mentioned.

I can foresee no major impediments to Australia's projected expanded production, but despite the promising demand forecasts, the world surplus supply capacity together with the strong probability of the bringing on stream of new projects will probably tend to keep a dampener on the price at least in the short to medium term barring of course any unforeseen circumstances such as major closures.

Thank you

Mike Roarty

NET PROFIT RETURN ON AVERAGE SHAREHOLDERS' FUNDS



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AUSTRALIAN ZINC MINE PRODUCTION
1985/86
(CONTAINED METAL 000't)

COMPANY	t
ZC/NBHC	140
MT ISA	200
EZ (WEST COAST AND ELURA)	190
NBH	40
WOODLAWN MINES	60
COBAR	18
SELTRUST	11
WOODCUTTERS	13
MMM	18
TOTAL	690

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PROJECTED AUSTRALIAN ZINC MINE PRODUCTION

(CONTAINED METAL 000't)

	85/86	86/87	87/88	88/89	89/90	90/91	91/92	92/93	93/94	94/95
EXISTING MINES	690	650	730	710	710	710	700	660	650	640
POTENTIAL MINES:										
• HELLYER		6	19	30	50	80	80	80	80	80
• CADJEBUT (BLENDEVALE & 12 MILE)			12	48	48	70	131	131	131	131
• LADY LORETTA				35	51	51	51	51	51	51
• BENAMBRA				12	23	23	23	23	23	23
• GOLDEN GROVE					41	82	82	82	82	82
• THALANGA							17	23	23	23
TOTAL	690	656	761	835	923	1016	1084	1050	1040	1030
METAL PRODUCTION	295	310	315	315	315	320	320	320	320	320
ZINC IN CONCENTRATE AVAILABLE FOR EXPORT	395	346	446	520	608	696	764	730	720	710

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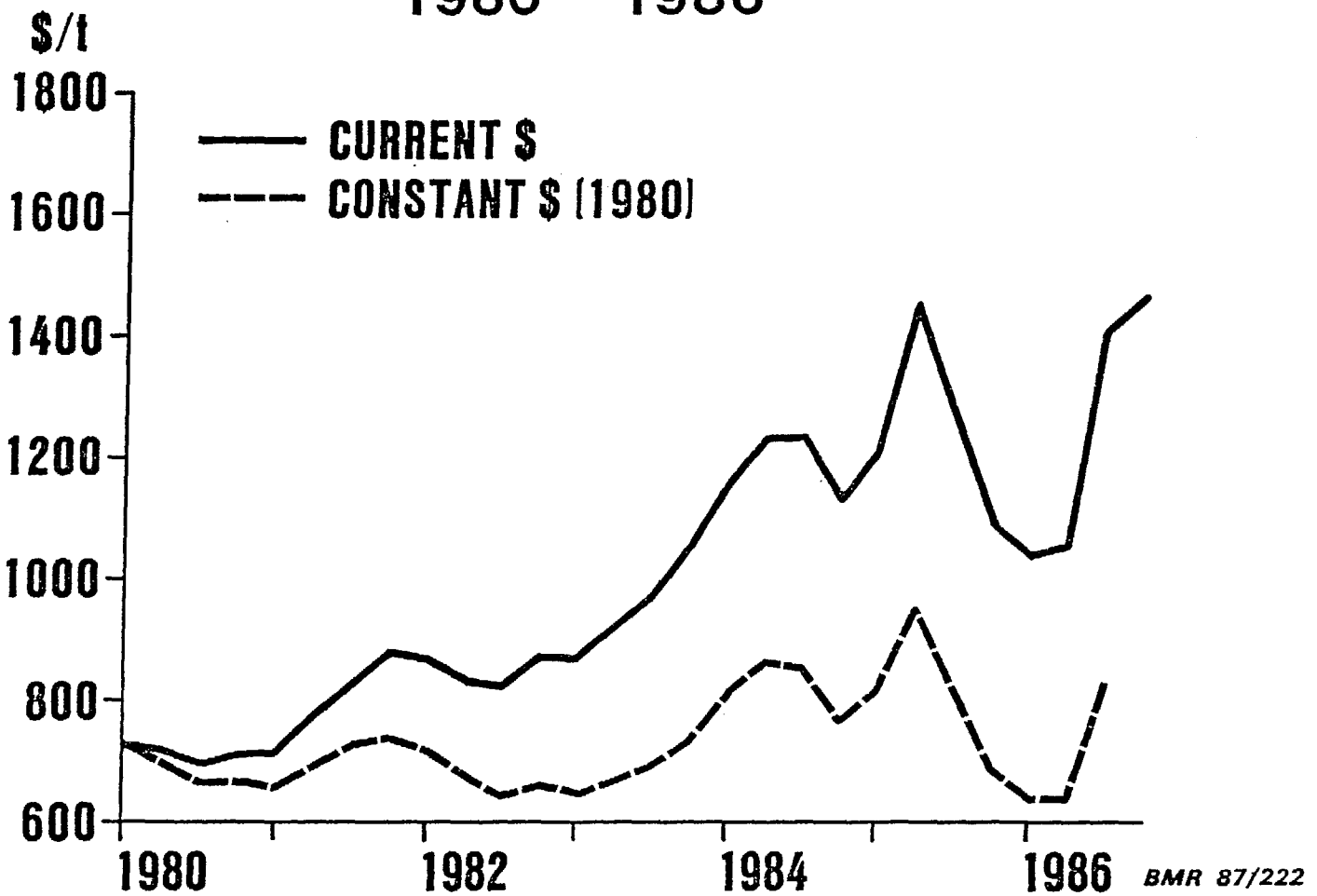
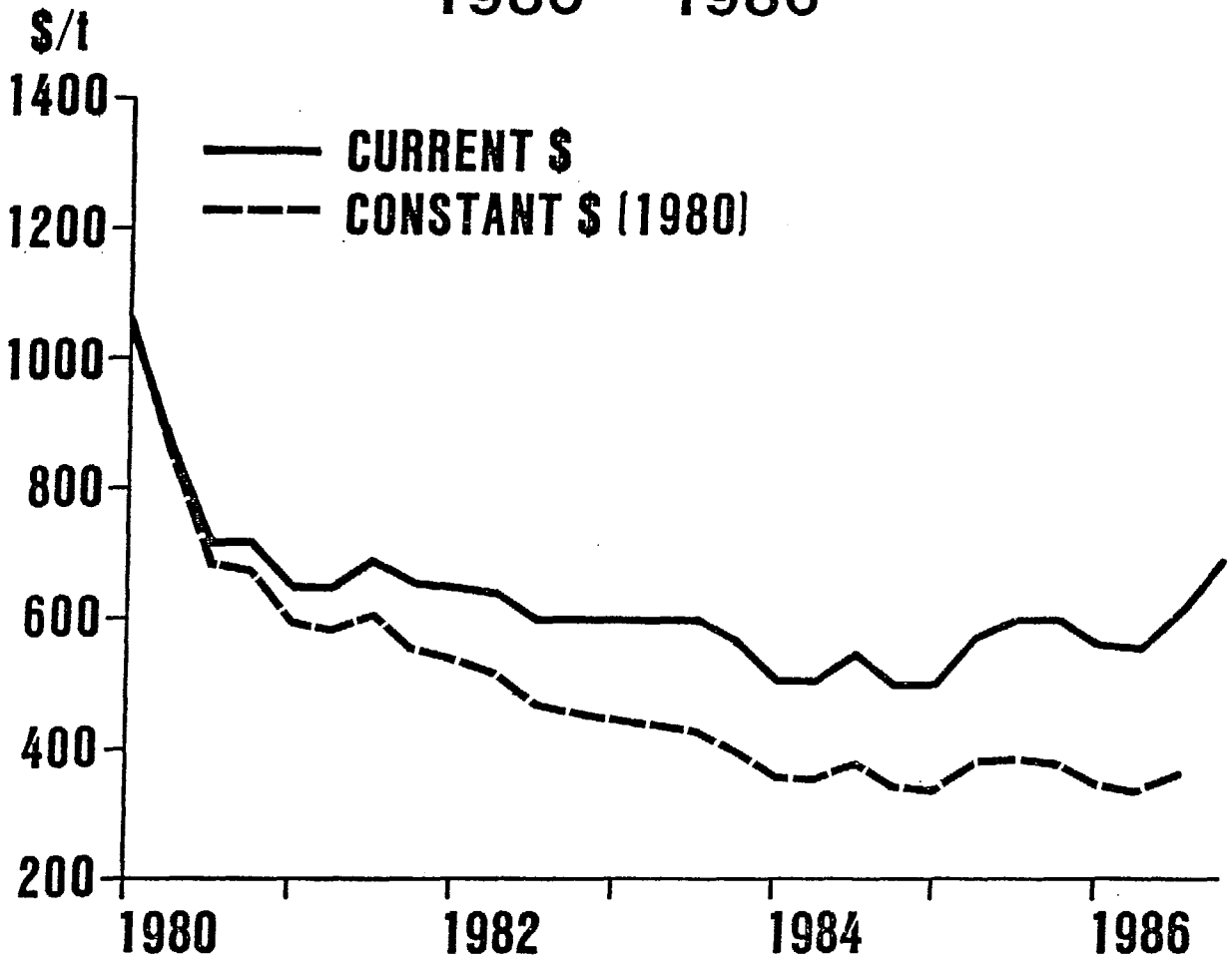
12.

ZINC - QUARTERLY PRICES
1980 - 1986



LEAD - QUARTERLY PRICES
1980 - 1986



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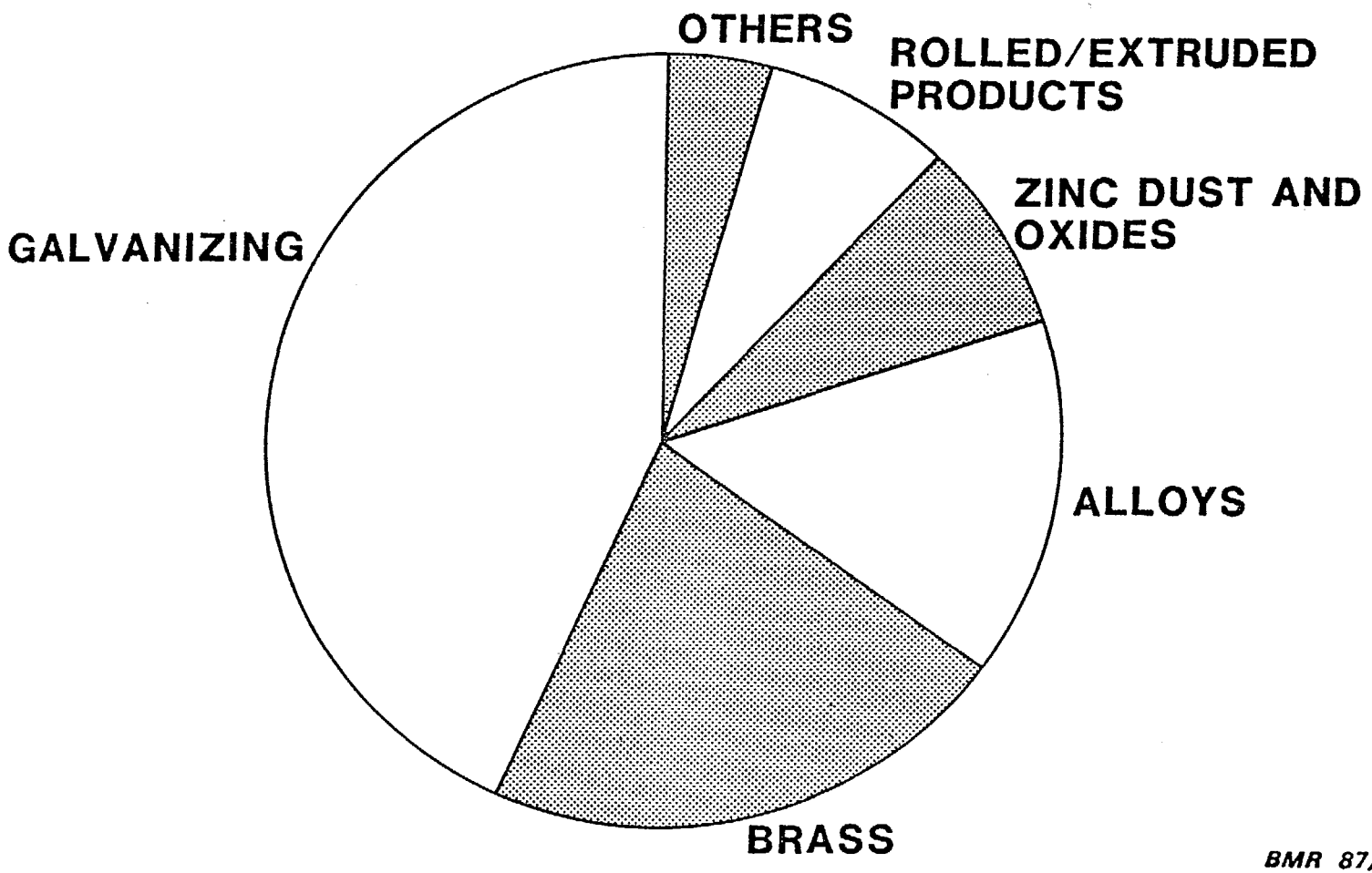
PRODUCTIVITY INDICES

N B H H LTD

WEST COAST MINES	TONNES MINED/MANSHIFT
1980/81	2.3
⬇	
1984/85	2.8
1985/86	3.5
NORTH MINE	
1981/82	1.9
⬇	
1984/85	2.4
1985/86	2.4
ELURA	
1985/86	17.0
CRA LTD	
NBHC/ZC	
1982	3.5
1983	3.6
1984	3.2
1985	4.1
1986	3.9
MOUNT ISA MINES	
MOUNT ISA	
1983/84	6.5
1984/85	7.5
1985/86	8.6

WESTERN WORLD ZINC CONSUMPTION BY MAJOR END USE
1985



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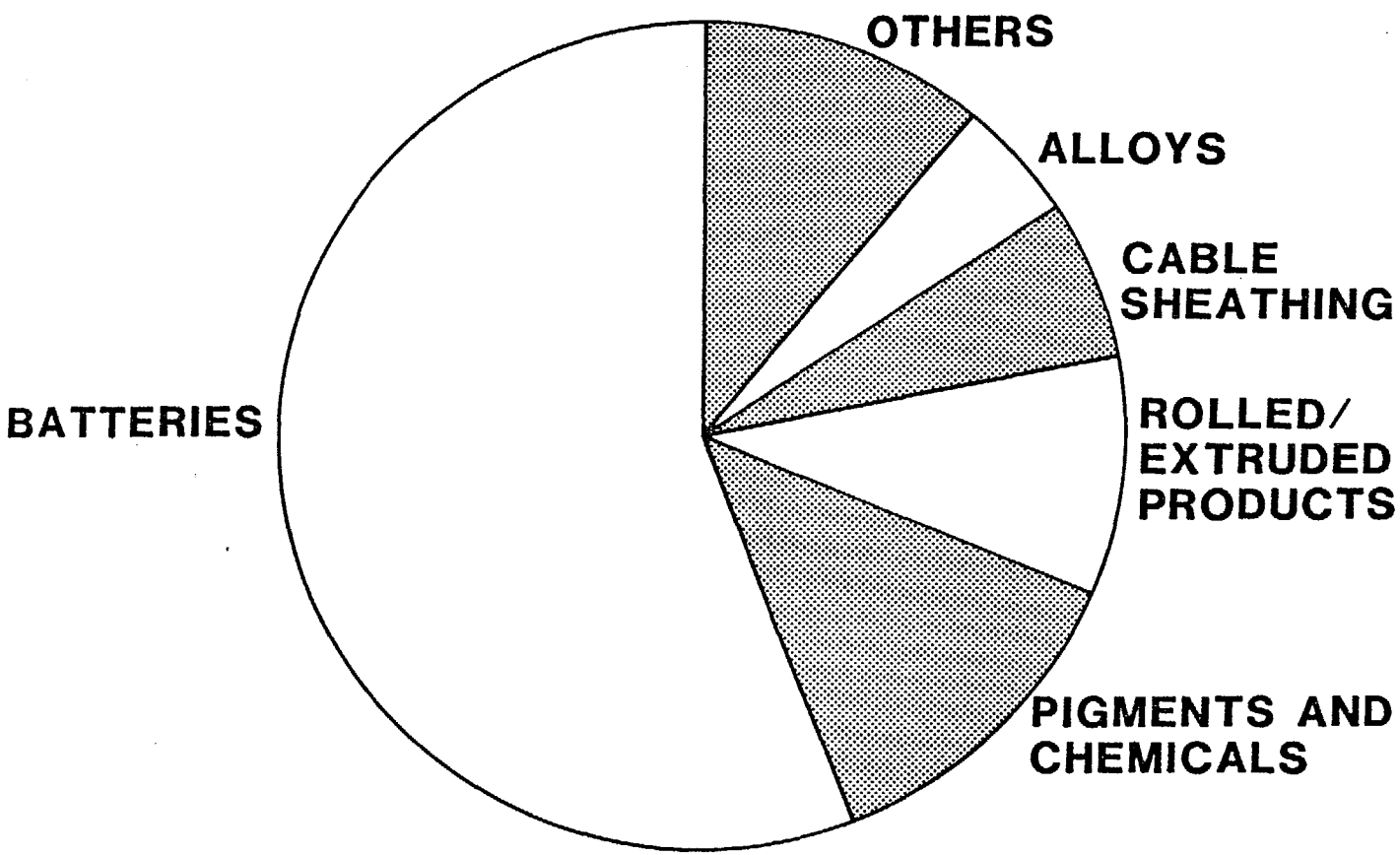
WESTERN WORLD LEAD CONSUMPTION BY MAJOR END USE
1985



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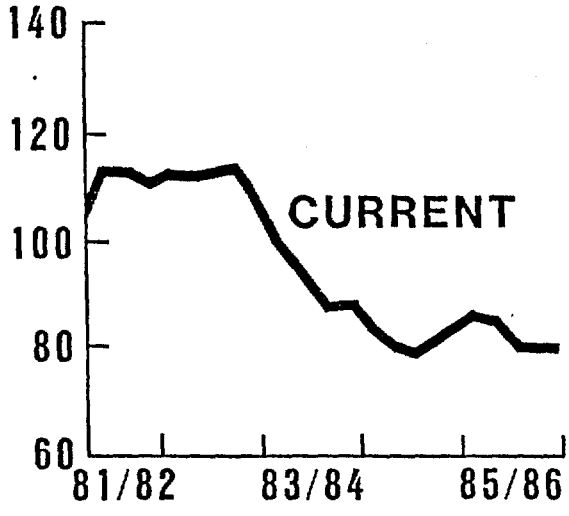
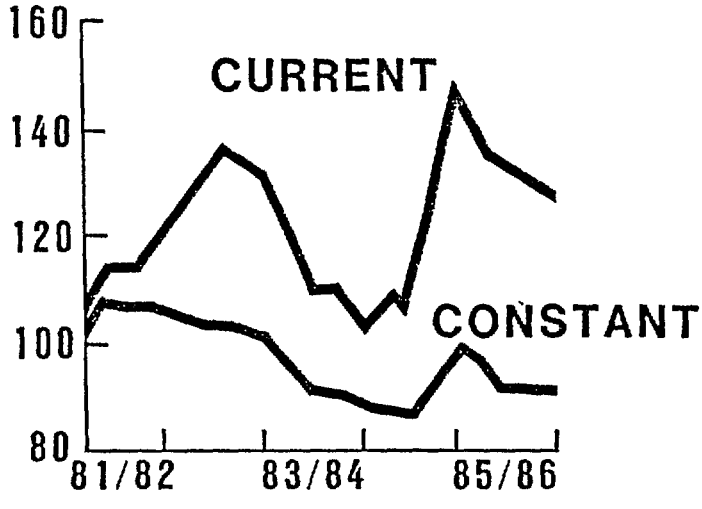
THE EFFECT OF DEVALUATION ON AUSTRALIAN PRODUCERS REVENUE

AMIC Mineral Price
Index $US
1979/80=100



$US:$A Exchange Rate
Quarterly average

AMIC Mineral Price
Index $A
1979/80=100



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