Myra Falls
885873

Land Holdings
in Acres (as of December 31, 1983)

	Leases and Mineral Title		Licences, Permits Reservations, Concessions and Exploration Agreements		Total	
	Gross	Net	Gross	Net	Gross(1)	Net
Alberta	1,933,971	792,513	152,938	50,926	2,086,909	843,439
British Columbia	518,145	44,998	—	—	518,145	44,998
Saskatchewan	132,836	68,974	—	—	132,836	68,974
Yukon Territory	—	—	1,303,603	1,032,637	1,303,603	1,032,637
Arctic Islands & Offshore (2)	—	—	306,279	—	306,279	—
Beaufort Sea	—	—	1,906,515	164,665	1,906,515	164,665
Labrador Offshore	—	—	753,403	61,125	753,403	61,125
United States	238,813	70,415	—	—	238,813	70,415
Abu Dhabi	—	—	1,457,205	189,437	1,457,205	189,437
TOTAL — December 31, 1983	**2,823,765**	**976,900**	**5,879,943**	**1,498,790**	**8,703,708**	**2,475,690**
December 32, 1982	3,177,256	1,194,868	5,137,280	566,584	8,314,536	1,761,452

(1) Gross figures include working interest, mineral title, carried interest and overriding royalty lands.

(2) In addition Westmin has a 12.28% equity interest in Magnorth Petroleum Ltd. which in turn holds 2,346,411 gross acres or 1,738,535 net acres.

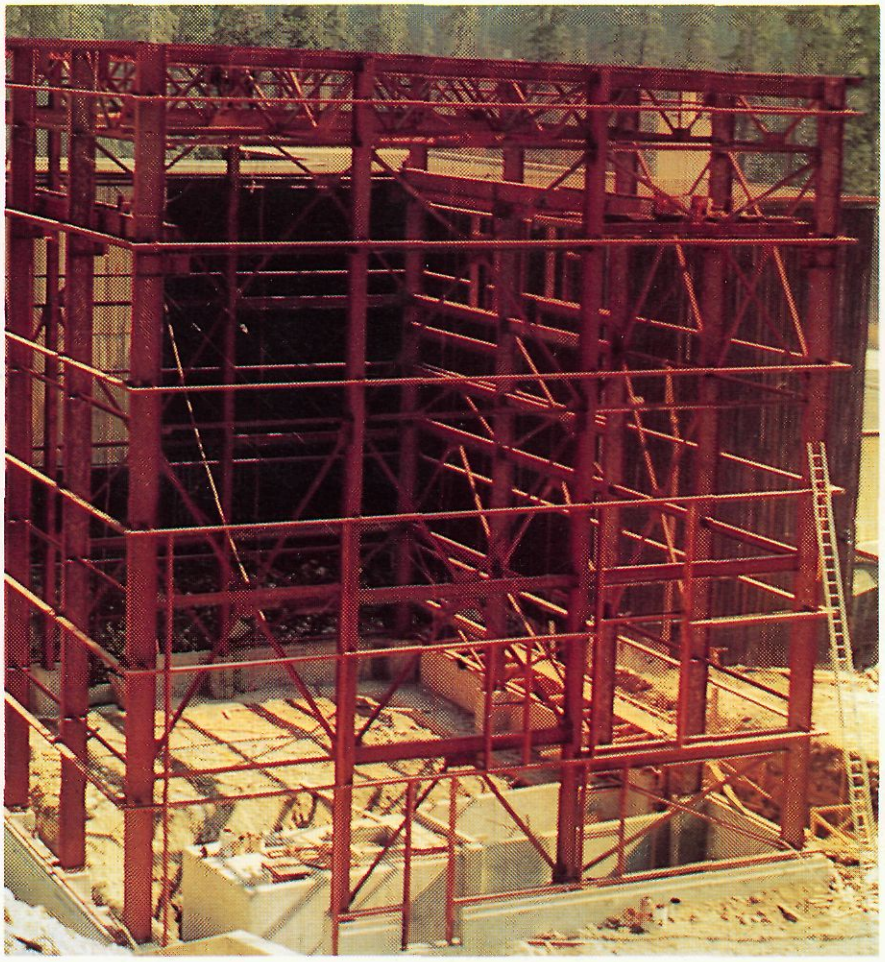
Portable steaming plant at work on tertiary recovery well in the general Lindbergh area.

Mining Division

Following considerable preliminary planning and development, Westmin made the final decision to go ahead with the threefold expansion at the Myra Falls, Vancouver Island mine site at the end of March, 1983.

The H-W orebody, believed to be one of the more significant massive sulphide developments in Canada in recent decades, will cost in the neighborhood of $225,000,000 in current dollars and including interest capitalized during construction.

The expansion, which is already well under way, includes the construction of a new 3,000 ton per day concentrator, new administration and maintenance buildings, expanded hydro-electric generating capacity, enlarged concentrate storage and dock complex and additional environmental control facilities. The project is scheduled for completion by late 1984 or early in the new year.



Steelwork in place for the new crushing building as part of the three-fold expansion at the Myra Falls operation.

Production

While production continued from the Lynx and Myra mines, an aggressive exploration program outlined the new G Zone West in the Lynx, over a strike length of 1,400 feet. The zone is open at both ends and is being prepared for initial production during the second half of 1984.

A program of modular training for miners and training courses for all levels of management was commenced during 1983 and is planned as a long term project. Accident rates declined by 30% during the year.

Negotiations for a new collective agreement with the Canadian Association of Industrial, Mechanical and Allied Workers (CAIMAW) were carried out over a period of four months. In spite of the efforts of negotiating committees and a provincial government mediator, negotiations were unsuccessful and a strike which began on November 16 continued well into the first quarter of 1984.

Due largely to this work stoppage, 1983 production declined by 13.6% from 1982 levels to 273,787 tons.

The Lynx mine produced 77% of the ore milled, with the remaining ore coming from the Myra.

		1983	1982
Ore Milled — tons		**273,787**	317,002
Daily Average — tons		**928**	930
Source of Ore (%)	Lynx	**77**	72
	Myra	**23**	27
	H-W	**—**	1
Head Grade	Gold — oz/ton	**0.08**	0.08
	Silver — oz/ton	**3.53**	3.73
	Copper — %	**1.10**	1.06
	Lead — %	**1.08**	1.11
	Zinc — %	**7.45**	7.28
Mill Recovery	Copper — %	**79.2**	78.9
	Lead — %	**77.7**	75.1
	Zinc — %	**83.5**	83.1
Concentrate Production	Copper — tons	**8,755**	10,006
	Lead — tons	**5,704**	6,129
	Zinc — tons	**32,244**	36,314

Development

Diamond drilling and development at the Lynx mine resulted in the discovery of an additional 135,000 tons of proven and 360,000 tons of indicated reserves. After allowing for tonnages milled during the year, there was a net decrease in proven reserves of the Lynx, Myra and Price mines of 138,400 tons.

Total proven and indicated reserves as of January 1, 1984 were as follows:

		GRADE				
	Proven Reserves Tons	**Gold oz/ton**	**Silver oz/ton**	**Copper % Cu**	**Lead %Pb**	**Zinc %Zn**
Lynx Mine	580,000	.06	1.9	1.0	0.8	7.8
Myra Mine	72,000	.08	5.2	0.6	1.0	5.0
Price Mine	231,000	.04	1.6	1.1	1.1	8.3
TOTAL	883,000	.06	2.1	1.0	0.9	7.7
	Indicated Reserves					
Lynx Mine	360,000	0.08	2.7	0.9	0.9	7.7

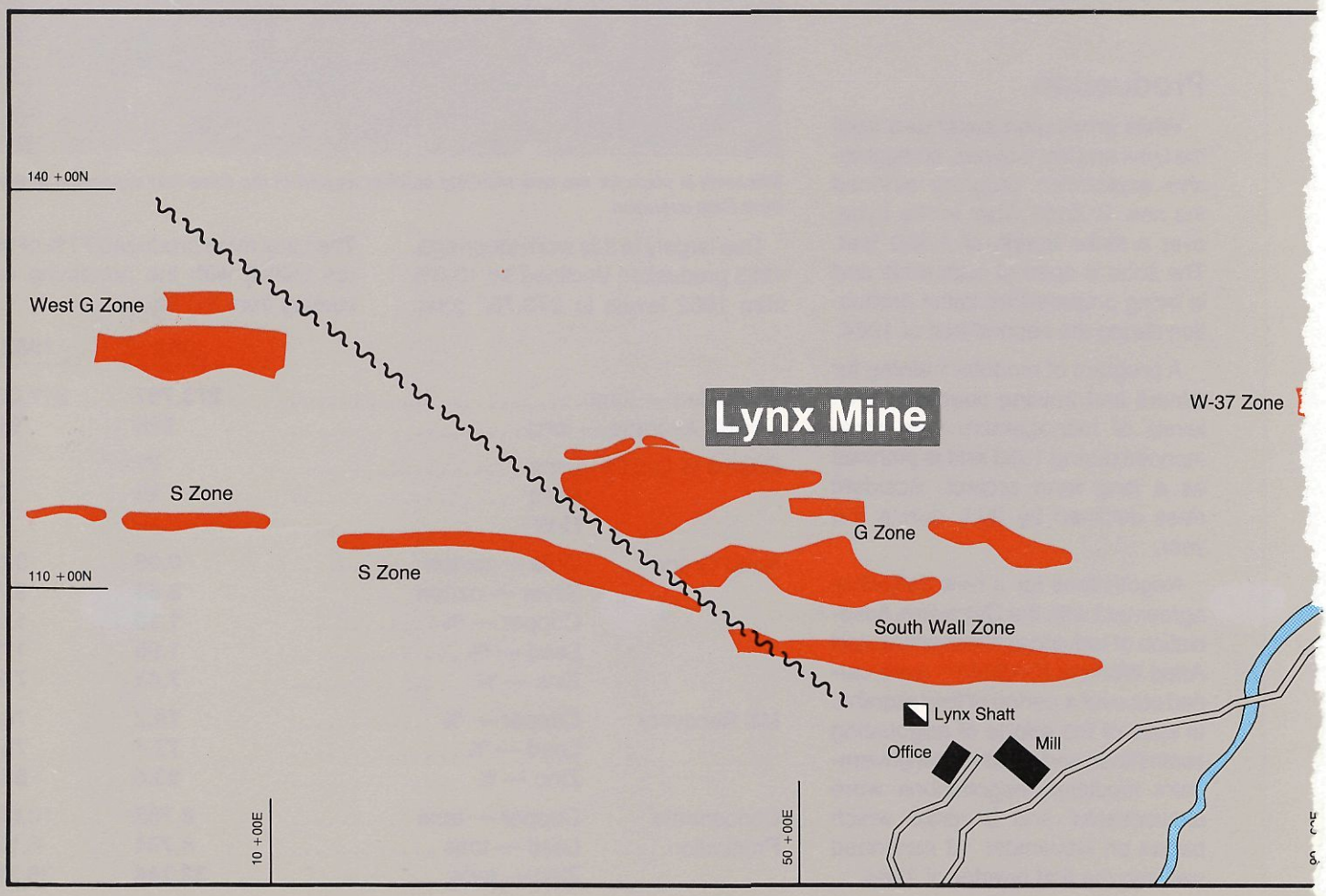
For comparison, total proven reserves as of January 1, 1983 were:

	1,021,400	0.06	2.6	1.0	0.9	7.4

H-W Project

Preparation of engineering reports and information for both the Stage II submission and project evaluation continued into the first quarter of 1983. This culminated in achieving "Approval-in-Principle" from the British Columbia Government on March 11, 1983 and project approval by the Board of Directors on March 29, 1983. Construction activities commenced almost immediately. By late spring, a number of contracts had been awarded and the construction management team assembled.

Mine development and ancillary building construction progressed well during 1983. The H-W shaft was completed to a depth of 2,343 feet in April and by year end, 515 feet of internal development and 1,329 feet of ventilation shaft had been completed. Construction of the new office/shop/warehouse complex commenced in August and is well underway although some delays were experienced as a result of the labour



dispute by mine production personnel. Development of the 3,000 tpd mill is underway, with commissioning planned for early 1985.

As part of the expansion program, an additional source of hydro electric power is being developed at Thelwood Lake, six miles from the mine site. The access road and the site of the intake works is 50% complete with the 8.5 megawatt hydro plant expected on stream late in 1984.

Since sufficient ore has been proven up to justify Westmin's decision to proceed with the H-W expansion, diamond drilling in 1983 was limited to definition drilling of the zones planned for early production. The orebody remains open in three directions. Drill indicated geological reserves for the H-W orebody remain unchanged from 1982 and are as follows:

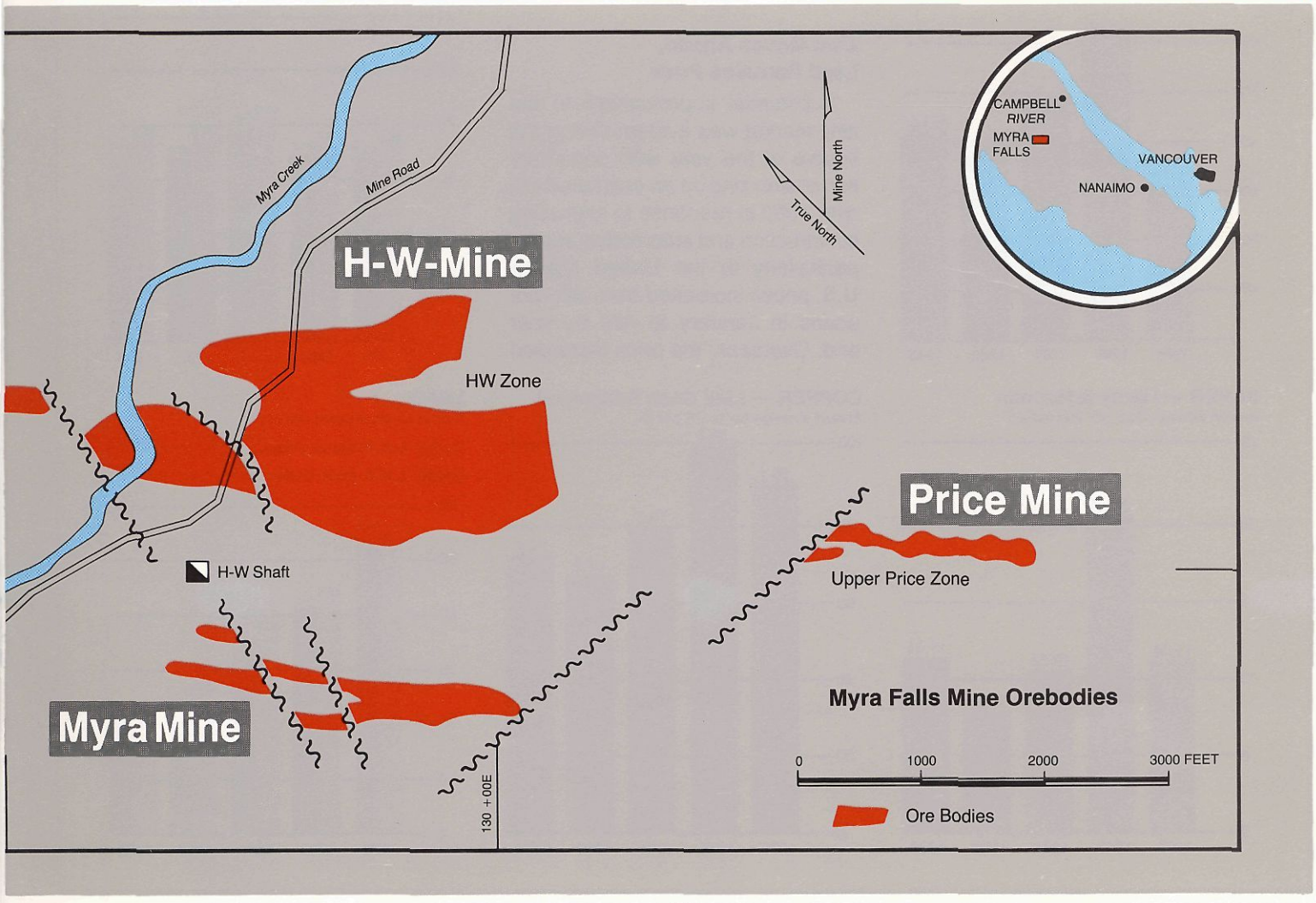
	GRADE				
Tons	Gold oz/ton	Silver oz/ton	Copper % Cu	Lead % Pb	Zinc %Zn
15,232,000 . . .	0.07	1.1	2.2	0.3	5.3

Environmental Control

Construction has proceeded on a number of new environmental installations in conjunction with the expansion program at Myra Falls. The first of a two stage on-land tailings disposal area was started in June with the clearing of a 22 acre site north of Myra Creek. By year end, the necessary confining embankments, piping and pump stations were 90% complete with commissioning scheduled for the second quarter of 1984.

A number of modifications were made to the new surface and ground water collection system during the early part of 1983 to optimize treatment efficiency. Both government and Westmin monitored data confirm that the new system is consistently removing an average of 80% of all metals that previously entered Myra Creek. The new system has also been equipped with de-sludging facilities to ensure that accumulated metal precipitates can be removed on a continuous basis. This sludge, in slurry form, is now being injected into waste rock areas as a means of controlling the original source of metals which formerly entered Myra Creek.

Government monitoring has confirmed that improvements at the mine site have resulted in a significant reduction in the metal content of Buttle Lake. Zinc concentrations at Gold River Bridge have been reduced by 70% over levels observed in 1981 and are now equivalent to those measured in the early 1970's. This trend is expected to continue.

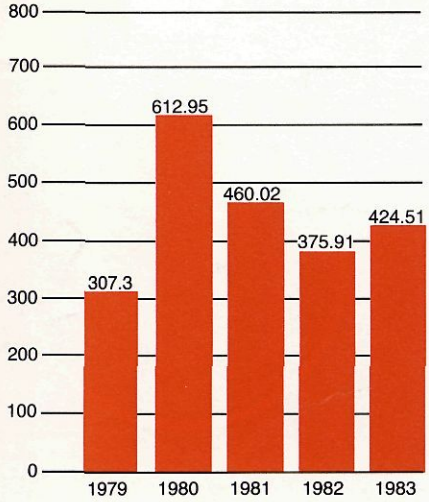


Metal Review

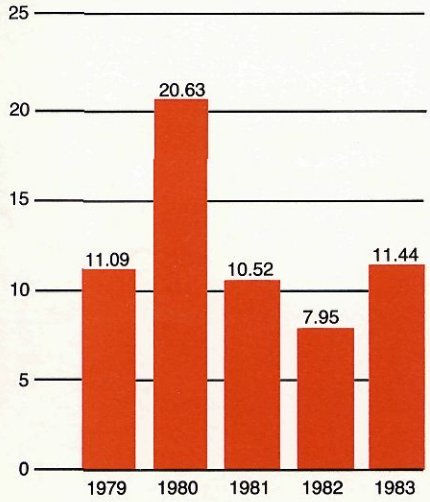
Opportunistic Outlook for Precious Metals

Concerns over the security of international debt, and the expectation of a weaker U.S. dollar prompted significant price increases in the latter part of 1982. The momentum carried over into the early part of 1983, with gold reaching US $511.50 per ounce and silver US $14.745 per ounce in late January-early February. These levels failed to hold over the course of the year as both speculative and physical demand were adversely affected by the contribution of high 'real' interest rates and a strong U.S. dollar. Despite the deterioration towards year end, prices averaged significantly better in 1983 at US $424.51 and US $11.44 respectively. A gradual improvement in precious metal prices is expected over the next several years and will have a favourable impact on Westmin's operations.

GOLD — Initial London fixing
Annual average $US per troy ounce



SILVER — Hardy & Harman
Annual average $US per troy ounce



Stronger Dollar and Oversupply Constrain Copper

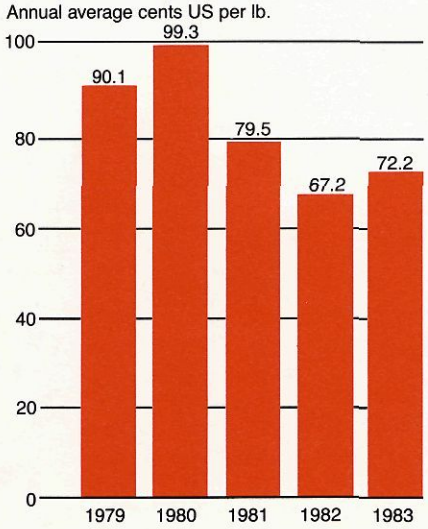
The copper industry endured another very difficult year in 1983 despite an increase in the U.S. Industrial Production Index of over 14%. The absence of a synchronized business recovery amongst major OECD countries inhibited improvement in copper consumption whilst foreign exchange requirements prompted some countries to produce at near maximum levels. Despite a continuation of price-related mine closures and cutbacks in North America and the Philippines, refined stocks rose an estimated 200,000 tonnes, effectively limiting price rises. The LME quotation averaged US 72.2¢ per pound in 1983, which is below the average cash breakeven cost of many dollar producers.

Zinc Moves Ahead, Lead Remains Poor

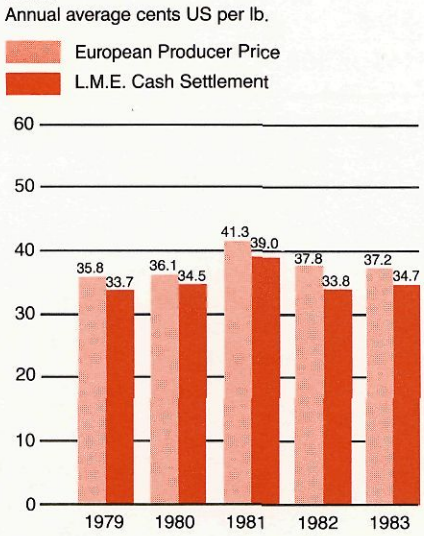
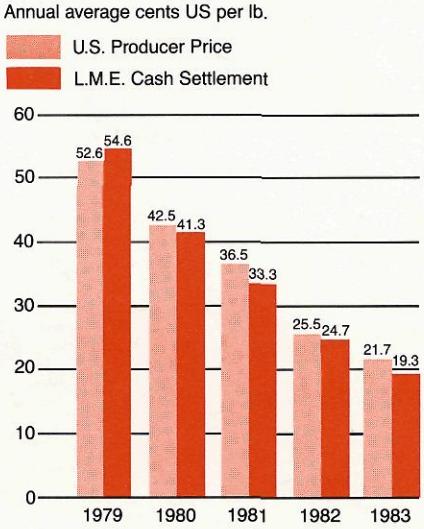
Substantial improvement in the zinc market was evident during the course of the year with consumption of slab zinc up an estimated 6% over 1982 in response to improving construction and automotive trends, particularly in the United States. U.S. prices increased from 38¢ per pound in January to 49¢ by year end. Overseas, the price increased from US $850 per tonne (38.5¢/lb) to $980 per tonne (44.4¢/lb). The outlook for 1984 is encouraging with inventories at reasonable levels and consumption continuing to show signs of further improvement.

For the fourth consecutive year, both supply and demand for lead declined while stocks rose. Prices continued to deteriorate, with the U.S. Producer Price averaging US 21.7¢ per pound and the LME price averaging US 19.3¢ per pound. Some lead mine and smelter closures have taken place and most remaining operations are being sustained by silver or other by-products. Over the long run, it seems inevitable that production will be limited to the most cost-effective producers, in the absence of new markets to offset reductions arising from smaller batteries and lead-free gasoline.

COPPER — LME Cash Settlement
Annual average cents US per lb.



ZINC
Annual average cents US per lb.



LEAD
Annual average cents US per lb.