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Westmin Resources -  
H-W Ore Body  
N.M. / Sept. 25<sup>30</sup> / 85

# Westmin's H-W Orebody

Reserves:  $15 \times 10^6$  tons  $\rightarrow$  5.3% Zn.  
0.33% Pb  
2.2% Cu.  
1.1 oz Ag  
0.07 oz Au.

Stated production rate: 3000 tons/day  $\rightarrow$  1,050,000 tpy

Stated annual metal prod'n

Au	40,000 ozs
Ag	1,000,000 ozs.
Cu	17,500 tons
Pb	2,500 tons
Zn	70,200 tons.

Annual Value of Prod'n (at current metal prices): "NSR"

Zn:	$70,200 \text{ t} \times 2000 \times \overset{\text{L.T. avg.}}{\downarrow} (.43 \times .55 \times 1.35)$	=	\$ 44,826,000
Au:	$40,000 \times (325 \times 1.35)$	=	17,550,000
Ag:	$1,000,000 \times (6.25 \times 1.35)$	=	8,438,000.
Cu:	$17,500 \times 2000 \times (.64 \times 1.35 \times .62)$	=	18,749,000
Pb:	$2,500 \times 2000 \times (.18 \times .50 \times 1.35)$	=	607,000
			<u>\$ 90,170,000</u>

~NSR/ton  $\rightarrow$  \$ 86/ton.

N.M. states Westmin "expects to get operating (mine) costs down to \$50/ton" (paraphrase)

Assuming costs of \$55/ton, ∴ net op. profit. is approx. \$31/ton

$$\text{Payback} \sim \frac{\$250,000,000}{1,050,000 \times 31} = 7.7 \text{ yrs.}, \text{ say 8 yrs} \\ (\text{excludes interest}).$$

Note: Zn prod'n. does not reconcile with Zn grade of reserve; Cu + Pb prod'ns. do.

$$\text{Cu: } (1,050,000 \times 2.2 \times 20 \times .78) / 2000 = 18,018 \text{ tons Cu} \\ \uparrow \text{rec. @ Myra Falls} \quad (\text{vs } 17,500 \text{ reported})$$

$$\text{Pb: } (1,050,000 \times .33 \times 20 \times .73) / 2000 = 2529 \text{ tons Pb (vs } 2500 \text{ reported)}$$

$$\left( \begin{array}{l} \text{Rec. @ Myra} = 77\% \\ \text{Hd. grade @ Myra} = 1.2\% \text{ Pb} \end{array} \right)$$

$$\text{Zn: } (1,050,000 \times 5.3 \times 20 \times .82) / 2000 = 45,633 \text{ tons Zn} \\ \uparrow \left( \begin{array}{l} \text{Rec. @ Myra } 84\% \\ \text{Grade " " } 7.5\% \end{array} \right) \quad (\text{vs } 70,200 \text{ reported})$$

∴, it would appear that initial prod'n. will be in higher grade Zn areas ~ 8.2% Zn +

which means, later on, avg. Zn grade will be < 5.3% Zn in order to achieve the avg. Zn grade ~~for~~ of the reserve.

# The Northern Miner

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CANADA'S MINERAL RESOURCES NEWSPAPER

## Cornerstone of mining group

### Westmin opens \$250m. mine

by David Duval

CAMPBELL RIVER, B.C. — Like many other great mines, Westmin Resources' Myra Falls operation started small but grew.

Described by a company executive as "the cornerstone of our mining group," Westmin has just completed a \$250-million capital program to develop its new H-W orebody and triple the mill rate to 3,000 tons per day.

Truly a showpiece in British Columbia's mining industry — and probably nationally as well — this mine-mill complex was officially opened approximately five years after the remarkable H-W orebody was discovered. The polymetallic mineral deposit has been compared (albeit with some reverence) to the Kidd Creek deposit at Timmins which has just about everything else but gold.

The scene might have been different today had not Westmin's formidable exploration department fought hard for the funds needed to make the discovery. Mine life was only three years at the time and the mine's very existence was in jeopardy, a classic bind where

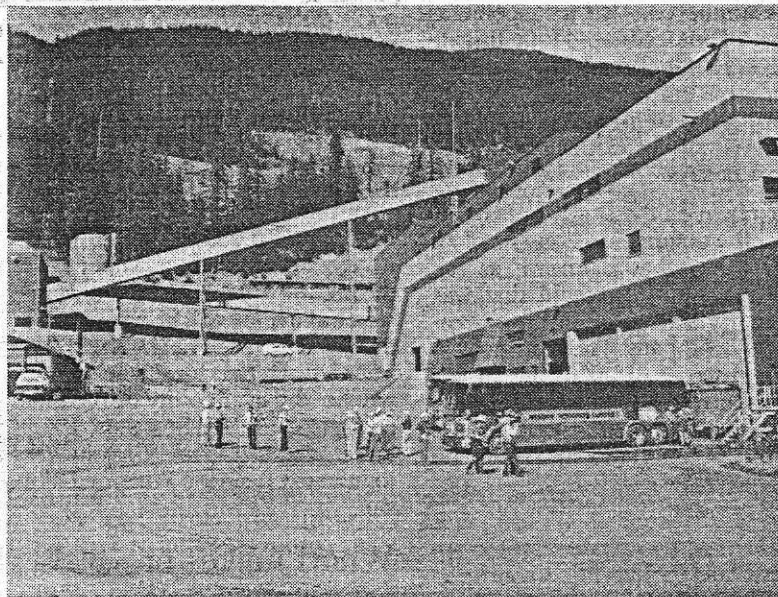


Photo by The Northern Miner

*The mill complex with the concentrate loadout at the extreme right.*

operating profits are sustained at the expense of exploration.

But 300,000 ft. of drilling (nearly two-thirds of it delineation) changed all that. Mine life now is at least 15 years and will probably carry over well into the year 2000.

an unspecified downstream business by acquisition or investment. Kidd Creek, however, has considerable long-term debt now and it seems unlikely it could afford to buy an interest before a public offering provides it with more cash.

Kidd Creek is a wholly-owned subsidiary of the Canada Development Corporation which is currently 47% owned by the federal government. A recent CDC share offering will reduce that to 11.5%, but shares sold in the offering are payable by installments so dilution will not take effect until September, 1986.

"Becoming a public company... means going to market and that's a question of timing," Mr. Lowe

Higher grade sections of the massive orebody will also allow the company to capitalize on improved metal prices and reduce the payback period accordingly.

According to Paul M. Marshall, president and chief executive officer, the grade of the ore and mining method will offset the extremely low metal prices that exist today, and while conceding the company incurred a very high debt to develop the new mine, he predicted: "When prices improve we will do extremely well." Noting the location of the operation, Mr. Marshall quipped: "It was the first non-recourse financing of a mining project in the middle of a provincial park."

Congratulating Gordon H. Montgomery, executive vice-president and general manager mining division, for steering the

See Page 13

## Green light at rich Wi

by Allan Jones

To no one's great surprise, it goes for the Winston Lake zinc-copper-silver mine of Corporation Falconbridge Copper.

The zinc-rich northwestern Ontario deposit, described as "small but beautiful" by Falconbridge Copper President Com. Carbonneau, will go into production by about October or November of next year, and hit its full production stride by early 1987.

Total costs will be in the order of \$52.5 million, Mr. Carbonneau told The Northern Miner in an interview.

The Falconbridge Copper head is cautious when it comes to describing the Winston Lake deposit as among the richest in Canada, or even the world. "It's no elephant as is, for instance, the Red Dog deposit of Cominco Ltd.," he says, "and it's only middle-size in terms of reserve, but it does have excellent grade."

And, he adds, it has significant

## Quebec pro award to Ve

by James Borland

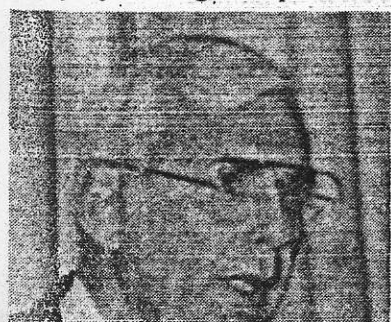
VAL d'OR, Que. — Two of Quebec's best-known and most successful prospectors were honored here by their peers when the Quebec Prospectors Association presented its prospector of the year award to Gaston and Yvan Vezina at the association's eleventh annual meeting.

The joint award, made posthumously to Yvan who died earlier this year, was a departure from tradition said Association President Denis Francoeur. While the

## Kidd Creek considers 'vertical integration'

Further vertical integration may be in the works for Kidd Creek Mines as it considers getting into some business that would produce value-added products from its zinc and copper or byproducts.

President Donald Lowe said the company could gain exposure to



## BP's Newfoundland stake increased via land deal

by Nicholas Tintor

Spurred by recent exploration successes in Newfoundland, Selco,

In 1984 Selco announced its Chetwynd gold discovery, located east of Port Aux Basques along



## Westmin opens a B.C. mining showpiece

From Page 1  
 project through a number of environmental minefields, Stephen Rogers, B.C.'s minister of energy, mines and petroleum resources, emphasized his government was doing everything it could to see operations like this open elsewhere. He described the development as a new mine, rather than an expansion project, pointing to a new mill which is state-of-the-art and highly automated. With already a 15-year mine life, Westmin was reminded that the H-W body is still open in three directions and also that grades encountered underground have been better than those indicated in drilling. Indeed, one senior executive of The Northern Miner some 15 years ago as in the orebody average 0.25 oz. gold and 20 oz. silver. But these grades tend to be localized and not necessarily representative of large tonnages.

High gold values are often associated with an increase in copper content which, in some instances, is 12% or better. Mine management confirms these high grade zones will be tapped to increase revenues and reduce the payback period in the early years of operation. Net smelter return from some of these sections at today's prices is about \$200 per ton, The Northern Miner was told.

Present reserves stand at approximately 15 million tons grading 0.07 oz. gold, 1.1 oz. silver, 2.2% copper, 0.33% lead and 5.3% zinc. The high metal content is extremely important and in terms of metal value is on a par with the best of our mine at Timmins, a major producer.

About the only bright spot in the base metals sector, zinc has performed fairly well during the recession owing to its usage as a

substitute in the automotive industry. The mine has an abundance of zinc and will be a highly leveraged supplier of the metal.

### Supplies own power

The largest components in the \$250-million H-W project included underground development (\$59 million) and mill and surface facilities (\$57 million). The mine has the ability to supply its own power from two hydro generating stations with a total capacity of 11 megawatts. Power supply and distribution was \$24 million with the next highest item, shaft and underground facilities, coming in at \$23 million.

The mine is located right in the middle of a park so addressing environmental concerns was a key element in the decision to expand. Almost \$20 million was spent on environmental and engineering studies implementing waste management systems to protect and enhance the area. Public participation was an integral part of the program.

These studies addressed environmental concerns over heavy metal content in Buttle Lake, utilizing a disposal system which would have discharged effluent into that body of water.

In the end, Westmin decided on a sub-aerial technique for

tailings disposal, a land-based system which will be sealed and revegetated when mining is completed. All water flows associated with the milling and mining complex (including waste stockpiles) pass through two treatment plants and Westmin confirms it has met performance expectations, more than satisfying all government regulations.

Westmin is aiming for an operating cost of \$50 per ton because the H-W deposit is much more massive than the company's Lynx mine where cut and fill is the primary mining method. The former is amenable to trackless mining techniques and now is producing

about 30,000 tons per month, rising to 80,000 when the Lynx mine is phased out. The H-W should be producing about 60,000 tons in the next few months, the company explains.

Zinc production will be approximately 70,200 tons per year with 40,000 oz. gold and one million ounces silver. The mine will also produce about 17,500 tons of copper and 2,500 tons of lead. There are now some 453 people on the payroll, but this could rise to 575 by early 1986. Monthly payroll is about \$2 million and the project was a major contributor to the economy of Campbell River during the recession.

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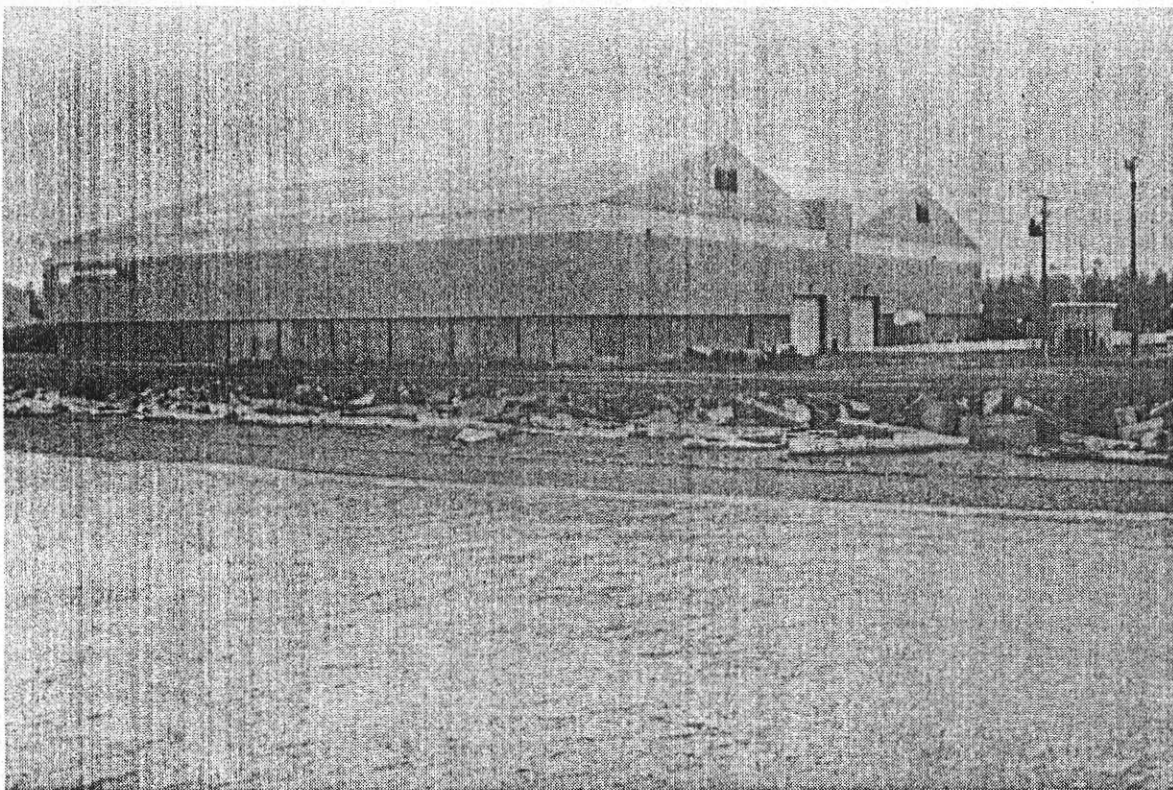
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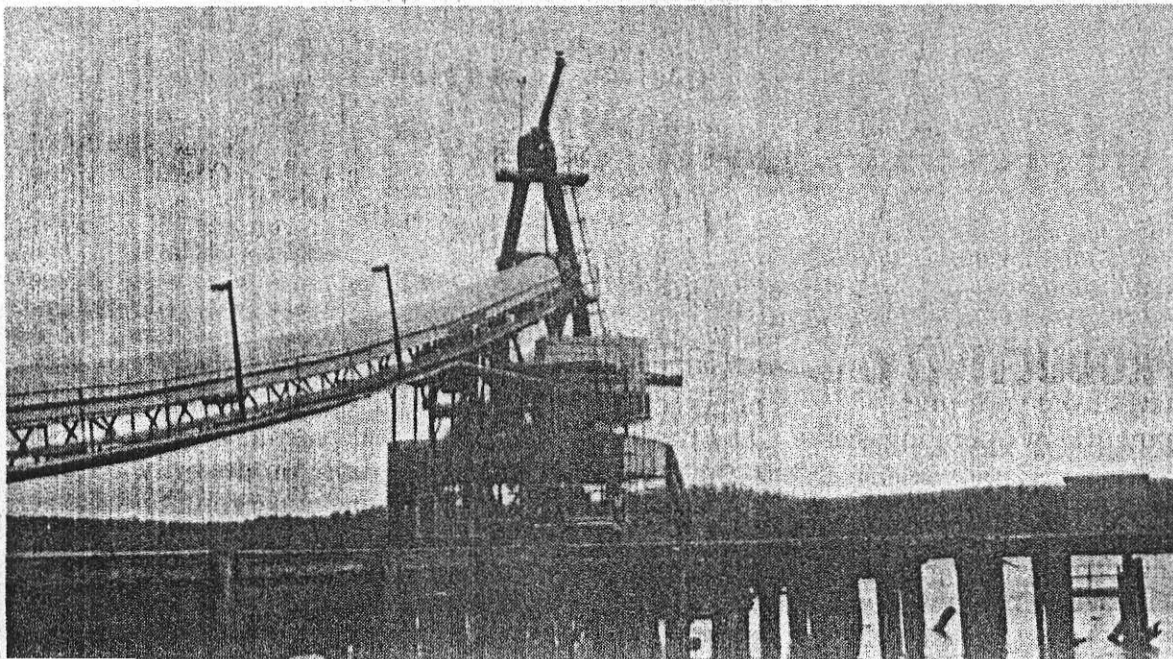
The redesigned operator compartment offers convenient entry at the rear wheel well. The functional and roomy compartment reduces operator fatigue for more productivity.

Easy-to-reach service points make routine maintenance fast and simple. Plus, the chassis mainframe design allows the engine, converter and transmission to be easily removed. The im-





Concentrate storage building at Campbell River.



## Westmin's H-W

From Page 12  
power station with an elevation difference of 450 ft.

Major changes were made to Westmin's concentrate storage and port facility at Campbell River. A new ship loader was installed and the dock now can accommodate 20,000-30,000-ton ships. The loader was designed by Wright Engineers, says Westmin. The cost of the over-all project was \$5.5 million and the storage facility alone cost \$3.5 million.

Ship loading is highly automated

and employees are only on the site when ships are loading. The loader can handle about 500-600 tons per hour. Copper and zinc concentrates are shipped from the facility but lead concentrates are trucked to Courtenay, about 25 miles to the southeast, where they are loaded into rail cars and shipped across to the mainland by ferry, and then to Cominco's Trail smelter. There are not enough lead concentrates produced to warrant sending them across by barge from Campbell River, Westmin says.

## Ekaton Energy seeks partner to mine Sask. kaolin deposit

Cat litter and kaolin — a fine white clay used to whiten paper and make fine china — may seem to have no connection, but for Verne Hogg, president of Ekaton Energy of Calgary, production of one has led to the discovery of what looks like the world's second largest deposit of the other.

While looking for absorbent clay materials for his subsidiary DEM Resource Processors to make cat litter in 1964, Mr. Hogg became aware of outcroppings of kaolin in Wood Mountain — Eastend area of southern Saskatchewan. But only in the past two years did he become interested in mining the deposit to supply kaolin to paper, paint, brick and porcelain manufacturers in western Canada and the western U.S.

This 500,000-ton market currently gets its kaolin from producers in Georgia, England and Germany. World kaolin production amounted to seven million tons in 1984, according to the Clay Minerals Society of Bloomington, Ind.

To date, Ekaton holds 160 sq. mi. of ground in the area and

begin production in 1987 if the company is successful in negotiating a joint-venture deal with a Canadian based resource company. Those negotiations are currently under way, Mr. Hogg says.

Samples of crude kaolin from the deposit are being shipped to existing producers for evaluation.

In the 3-month period ended June 30, Ekaton reports a net loss of \$27,466 on oil, gas and cat litter revenues of \$28,568. The company has a working capital deficiency of \$68,541.

In trading on the Alberta Stock Exchange last week, the company's shares closed at \$4.70 a share. The company has 4,209,673 shares outstanding.

## Marge seeking major

Marge Enterprises is attempting to interest major mining companies in a joint venture deal concerning its Casa Berardi area gold property in northwestern Quebec, the company says in a report to shareholders.

The 97-claim property in the southeast corner of Casa Berardi