

## EXPLORATION

### Increase In Lisheen Reserves

Drilling has continued at the Lisheen zinc-lead discovery in Co. Tipperary, Ireland, since Ivernia West plc last announced results in October (*MJ*, November 1, 1991, p.329). The drilling has concentrated on delineating the size of the orebody and infill drilling to determine the continuity of the ore.

By the end of April, more than 170 drill holes had been completed and assayed. Three new zones of mineralisation have been discovered recently contiguous to the Main and Derryville zones. Total *in situ* reserves of 18.4 Mt grading 13.4% zinc, 2.4% lead and 38.7 g/t silver have been calculated in the proven and probable categories. (Earlier estimates came to 13.5 Mt grading 12.4% Zn, 2.1% Pb and 41 g/t silver.) All five zones remain open and the drilling programme is continuing using seven drill rigs.

Ivernia and its partner, Chevron Mineral Corp., have decided to begin immediately a full feasibility study of the orebody. The study is expected to take about 12 months to complete. The study, together with the environmental impact statement, will form the basis of the planning application for the Lisheen mine development. The partners hope to be ready to submit their application by the third quarter of 1993.

### Draft EIS For McArthur River Project

MIM has delivered to the Conservation Commission of Australia's Northern Territory a draft environmental impact statement for the current feasibility study into development of the zinc-lead-silver deposit at McArthur River. The 260-page EIS plus appendices is open to public review for four weeks. An amended EIS taking into account all comments will be presented to the Minister for Conservation to determine the environmental protection measures and requirements that the project must satisfy for it to proceed.

The feasibility study will be completed this year and will incorporate the results of the EIS (*MJ*, May 8, p.332). The study is based on an underground mine accessing a resource of 47.4 Mt of ore grading 15.7% zinc, 6.5% lead and 66 g/t silver within the overall site mineralisation of 227 Mt of lower average grade. The plant is designed to treat 1.2 Mt/y of ore, which will require fine grinding, to produce 350,000 t of mixed concentrate containing 150,000 t of

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zinc and 40,000 t of lead as well as silver. The study also proposes that the concentrate be trucked from the mine site on existing roads to a purpose-built loading point on MIM property. A single special-purpose barge will transfer concentrate to medium-sized (20,000 to 30,000 dwt) ships 30 km offshore in Gulf waters.

Assuming the EIS and the feasibility study are favourable, MIM hopes to complete construction of surface works and the decline for underground development by May 1994. The concentrator should start working in April 1994 and mining operation should increase to 1.2 Mt/y by 1996.

### J&L Update

Cheni Gold Mines and France's BRGM implemented a \$C4 million exploration programme at the J&L property near Revelstoke, British Columbia, during 1991. The mineral inventory base for the J&L is divided between the Main and Yellowjacket zones. The latter is a clean lead-zinc-silver zone while the Main zone is a continuous arsenical sulphide zone which contains gold, silver, lead and zinc. Mineralisation has been followed underground by drifting and drilling along a 1,200 m strike and has been traced on surface in excess of 3 km.

The Yellowjacket zone is thought to contain 1 Mt grading 52 g/t silver, 2.4% lead and 0.1% zinc in the probable and possible categories. A probable inventory of 1.7 Mt grading 7.4 g/t gold, 76 g/t silver, 2.6% lead and 4.4% zinc is assigned to the Main zone, along with a possible inventory of 1.9 Mt of similar grade.

Metallurgical work has been carried out to separate the pyrite and gold bearing arsenopyrite. A customised mining method ensuring a production rate of 1,500 t/d, and allowing for reinjection of the tailings underground, is being studied. Further work is necessary to prove the 5 Mt necessary to sustain such an operation for 10 years.

Cheni and BRGM have the right to earn a 60% undivided interest (split 55:45 respectively) in the J&L property from Pan American Minerals Corp. and Equinox Resources.

### Drilling Asia Pacific Project

Starmin Mining has recently completed a placement of \$C225,000 and is planning to begin diamond drilling shortly with its equal partner, Adonos Resources, on the Asia Pacific project on Negros Island, Philippines (*MJ*, January 3, p.4).

Exploration staff have completed a programme of stream sediment and soil

sampling, mapping/prospecting and pitting. Partial results of stream sediment sampling have identified a new copper-gold-silver anomaly measuring 950 m by 250 m located about 1.5 km southwest of the main deposit.

The drilling programme will test the strike expansion of the Asia Pacific deposit, as well as provide material from the oxide cap for testing the recovery of copper by heap leach SX/EW methods. The gold and silver content will also be analysed.

### Panorama Programme

Burmin Exploration and Development reports that a \$A1.8 million programme is underway on the Panorama polymetallic property in Western Australia (*MJ*, February 28, p.148). The funds will be used for a diamond drilling programme to establish drill-indicated resources on the Sulphur Springs and Kangaroo Caves targets and for a regional mapping and sampling programme, particularly on the gossans discovered last year. Some percussion drilling will also be carried out on these new targets.

The joint venture is operated by Sipa Resources International which holds a 51% interest, with Burmin's wholly owned subsidiary, Ashling Resources, holding 39% and Guardian Resources the remaining 10%.

## DEVELOPMENT

### MacArthur Interest For Arimetco

Arimetco International has acquired a 50% interest in the MacArthur property located near its Yerington mine in Nevada, at a cost of \$US900,000. The property contains an estimated 40,000 t of copper contained in oxide ore. Arimetco plans to start developing the property immediately. Ores will be mined, stacked and leached at the rate of 1.8 Mt/y to produce 4,450 t/y of copper. Arimetco's Yerington operations include a solvent extraction/electrowinning plant.

### Annealing Line For Eregli

An international consortium has received an order from Eregli Demi ve Celik Fabrikari, a Turkish integrated steel-maker, to supply Turkey's first continuous annealing line (CAL). This forms part of Eregli's steelworks modernisation programme. The CAL will produce cold rolled sheets primarily for automobile and electric appliance uses. The 900,000 t/y facility is due to come on stream in 1995.

The consortium includes Marubeni Corp. as main contractor, NKK, the technical leader, responsible for metallurgy and operation technology and process computerisation, Mitsubishi Electric