

## REPUBLIC OF IRELAND

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The Irish economy has slowed significantly in common with most other developed countries, and preliminary estimates for GNP suggest that it grew by only 0.6% in real terms to €105 billion. GDP, however, grew by an estimated 6.4%. Most commentators are optimistic for the Irish economy and expect increased growth in 2003. Inflation (4.6%) has remained stubbornly high and is a continuing concern, especially as there are still real domestic wage pressures in spite of modest rises in unemployment. Corporation Tax for mining remained at 25%, but with additional allowances compared with most other industry. This position remains under review.

The total value of production for mining and quarrying in 2001 (the latest year for which figures are available) was €704.1 million, of which €217.8 million was contributed by metal mining. About 1,100 people are employed in mining and 3,000 in the non-energy extractive industry as a whole.

There are 11 State Mining Leases and 5 Mining Licenses, and €1.05 million was collected in royalties and licence fees. Costed proposals to remediate the effects of historic mining in the Silvermines area in County Tipperary were published in May, 2002. They are available from the EMD web-site ([www.emd.ie](http://www.emd.ie)).

### **Exploration**

Grass-roots exploration in Ireland was significantly reduced because of low zinc prices, and there was a further decline in the number of Prospecting Licences to 352, covering 13,000 km<sup>2</sup> at the end of the year. Direct expenditure in 2001 fell by 18% to €7.0 million, partially as a result of the restrictions caused by the outbreak of Foot and Mouth Disease in the UK. It is unlikely that 2002 will show a significant increase. The Department of Communications, Marine and Natural Resources has undertaken a number of initiatives to encourage exploration. These include progressively making available high-resolution aeromagnetic data flown by the exploration companies over 35% of Ireland, and a major programme to make data available on-line. A relaxation in the expenditure requirements for Prospecting Licences was announced. Further details are available on the EMD web-site.

There is substantial involvement by major international companies, including, Anglo American (as Amcorp Ireland Ltd), Grupo Mexico SA de C.V., Noranda and Outokumpu Zinc-Tara Mines. Other significant companies, in terms of licences held, include Arcon, Conroy Diamonds and Gold, Ivernia West, Minco and Ovoca Resources. New entrants include Aurum Exploration Ltd., which was formed by the Irish staff of Navan Resources, and junior exploration companies Cranderry Ltd (Irish), Fractore Pty (Australian) and Tournigan Gold Corp. (Canadian).

The main focus for base metals exploration remains the Lower Carboniferous of the Midlands. The most encouraging results continue to be achieved in the Pallas Green, County Limerick prospect, which is held in a Noranda/Minco joint venture. Diamond drilling has established the existence of an extensive mineralised zone over a strike length of 5 km.

Higher prices boosted interest in gold exploration and Conroy Diamonds and Gold announced further mineralised intersections in its prospect at Tullybuck-Lisglassan in Co. Monaghan.

Irish companies continued to hold significant overseas interests. In particular, Kenmare has made substantial progress in bringing its heavy mineral sands project at Moma in Mozambique into production. Ennex announced the sale of the Shaimerden zinc prospect in Kazakhstan to ZincOx Resources for a combination of shares and a production royalty. Glencar sold the Wassa gold mine in Ghana to Golden Star Resources. Ivernia West continues work in Australia. MinMet has a number of exploration projects in Peru, Dominican Republic and Brazil and acquired a 50% interest in a producing gold mine at Björkdal in Sweden.

### **Metals**

Low zinc prices throughout 2002 continued to have serious effects on the financial position of the Irish metal mines.

Outokumpu Zinc-Tara Mines restarted production at its mine at Navan, Co. Meath in September, 2002 after being placed on care-and-maintenance in November, 2001. It milled 755,000 t of diluted ore at an average grade of 7.02% Zn and 1.57% Pb. This produced 89,000 t of zinc concentrate (55.1% Zn) and 13,000 t of lead concentrate (63.3% Pb). Total proven and probable reserves (December 31, 2002) were 11.9 Mt averaging 9.18% Zn and 2.07% Pb. There are additional resources totalling 17.4 Mt at 7.1% Zn and 2.3% Pb within the Main mine and South West Extension (SWEX) only.

Following the contract signed in May 2001, and having received the necessary court approvals, Tara executed the final purchase documents with the Receiver of Bula Ltd to acquire the Bula assets for €35 million. These include the Nevinstown part of the Navan orebody, which abuts the north-eastern boundary of the Tara property. It is estimated by Tara to contain reserves and resources in excess of 8 Mt averaging 10% Zn and 2% Pb.

The acquisition of the Bula orebody will extend the mine life of Tara and improve cost efficiency. Together with the improvement programme carried out at a cost of €15 to €20 million during the period of care-and-maintenance, and development of the SWEX, the development of the Nevinstown ore should significantly enhance the value of the operation. Glencar Mining plc announced that it has finalised an agreement to sell its wholly-owned subsidiary Rennicks and Bennett Ltd to Tara Mines for €65,000, who will also assume the €535,000 owed by R&B to Glencar. According to Glencar, an extension of the Navan ore into Liscarton, held by R&B under a Prospecting Licence, contains resources of 1.2 Mt averaging 8.4% Zn and 2.0% Pb. Tara

is preparing the necessary documentation for it to apply for planning permission to develop both Nevinstown and Liscarton. Tara will also require State mining facilities for the Liscarton area and part of Nevinstown, but the bulk of the Nevinstown ore is exempt from this requirement.

As part of its strategy to withdraw from metal mining, Outokumpu Oyj hopes to divest itself of the Tara mine by the end of 2003.

Arcon Mines Ltd processed 660,000 t of ore averaging 10.1% Zn and 2.8% Pb at its mine at Galmoy, County Kilkenny. This yielded 102,000 t of zinc concentrates (53.1% Zn) and 2,500 t of lead concentrates (48.3% Pb). Total production to end of 2002 amounts to 3.1 Mt of ore at 10.6% Zn and 1.1% Pb. Ore reserves amounted to 3.1 Mt grading 10% Zn and 2.1% Pb as at December 31, 2003. Results for the parent company, Arcon International Resources plc, showed a reduced net loss of €14.7 million on a turnover of €20.1 million, an increase of 7% as a result of increased production.

Arcon completed its financial restructuring during the year. This included purchase of bank debts of US\$85 million by Fairfield Holdings, a company owned and controlled by Sir Anthony O'Reilly. The debt has been written down to US\$20 million. The Banks received €3.6 million in shares as a part of this arrangement and a rights issue raised €28.8 million. This was underwritten by Sir Anthony, who owns 71.7% of Arcon International.

Exploration drilling, which commenced in August, was very successful, resulting in the discovery of a new high-grade zone (the R-zone) 125 m south east of the CW-zone, where most mining has taken place to date. A resource of 2.0 Mt of ore averaging 19% Zn, 7.2% Pb and 66 g/t Ag has been delineated from 60 drill holes on a close-spaced grid of from 25 to 50 m. This includes an intersection of 31 m at 31.8% Zn and 9.4% Pb. Arcon is expected to seek the necessary permissions at the earliest possible date to permit exploitation of the R-zone.

The Lisheen mine operated at full capacity during the year. Some 1.558 Mt of ore averaging 11.15% Zn and 2.07% Pb were milled producing 281,000 t of zinc concentrates (54.05% Zn) and 36,000 t of lead concentrates (62% Pb). Proven and probable reserves as at December 31, 2002 amounted to 12.8 Mt averaging 12.8% Zn and 1.96% Pb, with additional resources of 2.32 Mt at 9.86% Zn and 1.23% Pb. Work is under way to raise the tailings dam as originally planned and this should be completed early in 2003. The mine met its completion targets with its banking syndicate in October, which resulted in the release of parent company guarantees.

It was announced in February 2003 that Anglo American plc, which manages the project, had purchased the mine's bank debt at an undisclosed discount. Anglo holds an effective 59% interest in the mine, with the remainder held by Ivernia West plc. Ivernia announced in May 2003 that it has accepted in principle the concept that Anglo will purchase Ivernia's interest in Lisheen for US\$1.8 million and the assumption of all Ivernia's debt related obligations in the project.

### **Industrial minerals**

Aughinish Alumina, a wholly-owned subsidiary of Glencore, produced over 1.4 Mt of alumina, based on bauxite imported from Boke, Guinea. Irish Gypsum is understood to have mined approximately 500,000t of gypsum at its open-pit mine at Knocknacran, Co. Monaghan. The gypsum is destined for its nearby plaster and plaster-board factory and for the Irish cement industry. A new State Mining Lease was issued to Irish Gypsum, and the company has indicated that it is in the process of preparing plans for a new underground mine with a projected life of 25 years to replace the Knocknacran quarry once it is worked out.

Construction activity in Ireland finished the year 4% down on 2001, mainly because of weakness in the commercial and industrial sectors. Cement Roadstone Holdings (CRH), Ireland's largest supplier to the construction industry, increased its turnover in Ireland by 1.4% to €713.9 million, but trading profits fell to €138.8 million, a drop of 7.6%. This Irish-based multinational now operates in 22 countries worldwide and its turnover reached €10,794 million (+3%) of which 59% was generated in the Americas and 28% on mainland Europe. It achieved net profits of €623 million. The group spent €1,000 million on acquisitions.

Lagan Cement, a part of Belfast-based Lagan Group, commenced production at its €50 million cement plant at Killaskillen, County Meath. The plant has the capacity to produce 600,000 t/y of ordinary Portland cement, and high-quality white cement mainly for export. This brings the number of cement plants to four in Ireland; the others being at Platin, County Meath; Castle Mungret, County Limerick, both operated by Irish Cement, a subsidiary of CRH; and Derrylin, County Fermanagh, operated by the Sean Quinn Group. This gives a total installed capacity of 3.3 Mt/y.

Premier Periclase (a part of CRH) has the capacity to produce about 90,000 t/y of sinter magnesia from sea water. It reported another extremely difficult year as Chinese exports drove prices down, whilst energy costs rose.

### **Coal and Hydrocarbons**

There was no recorded coal production during 2002.

One exploration well was drilled offshore Ireland in 2002, with encouraging results. Enterprise Energy Ireland Ltd. (a Shell-owned company) drilled well 12/2-1 on its 'Dooish' prospect in the Rockall Basin, approximately 125 km northwest of the Donegal coast in 1,478 m of water, the second deepest-water well drilled offshore Ireland. The well encountered a substantial column of hydrocarbons but work was suspended until 2003 for operational reasons.

Evergreen Resources hydraulically fractured and tested its two onshore wells (Dowra #2y and Thur Mountain #1) that were drilled in 2001. Both wells have been suspended and analysis of the test data is ongoing.

One 3D seismic survey was shot in the Slyne Basin, in which a total of 408 km<sup>2</sup> of data were acquired.

No new Exploration Licences or Licensing Options were issued. However, one Frontier Exploration Licence in the Rockall Basin was relinquished, as was 50% of a Frontier Exploration Licence in the Slyne Basin. A Petroleum Lease over the Seven Heads structure was awarded to Ramco Energy plc. At the end of 2002, the total number of Exploration Licences offshore Ireland stood at seven and there were three Licensing Options.

A Plan of Development was approved for the Corrib Gas Field on April 15, 2002. Development work is presently on hold pending planning permission for the onshore gas terminal.

A Licensing Initiative was announced in the Porcupine Basin, which constitutes a two-year 'rolling round' (2003 – 2004). The round is aimed at rejuvenating hydrocarbon exploration in that area, and details can be accessed on the Petroleum Affairs Division (PAD) web-site [www.pad.ie](http://www.pad.ie). The closing date for receipt of bids for Tranche 1 of the round was March 15, 2003 and the closing date for bids for Tranche 2 is October 15, 2003.

The total indigenous gas production for 2002 was 34.47 billion ft<sup>3</sup> (980 million m<sup>3</sup>) from the Kinsale Head, Southwest Kinsale and Ballycotton Gas Fields.

Regional exploration work continued under the Petroleum Infrastructure Programme (a joint PAD / Industry programme) and projects included the acquisition of a deep seismic profile across the Porcupine Basin.

2003 will be a busy year for drilling, with development wells on the Seven Heads and Southwest Kinsale gas accumulations. One exploration well is planned for the Erris Basin and it is also anticipated that the Dooish well will be re-entered and operations completed there.

**Production Table ('000 t unless stated)**

<b>Commodity</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
Lead (metal in concentrate)	57.5	44.5	41.7
Zinc (metal in concentrate)	263.0	298.1	276.7
Silver ('000 kg in lead conc.)	16.7	8.7	7.5
Gypsum	500 <sup>(e)</sup>	500 <sup>(e)</sup>	500 <sup>(e)</sup>
Coal	0	0	0
Lead metal production	8.5	9.8	6.6
Alumina	1,300.0	1,400.0	1,400.0
Natural gas (billion m <sup>3</sup> )	1.23	1.02	0.98

(e): estimate