

THE MINERAL INDUSTRY OF

IRELAND

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Ireland remained a major European Union (EU) producer of zinc and an important producer of alumina, lead, and peat in 2002 (table 1). The country's mineral processing industry was small, as was the demand for and consumption of mineral products (table 2).

There was a reduction in Irish mineral exploration activity that was a reflection of the general reduction in exploration activities globally and was exacerbated by the restrictions in activities caused by the hoof and mouth disease crisis in livestock in 2001. Because of this reduction, there was an initiative by the Government to boost mineral exploration. The one-off initiative waives the minimum requirements for maintaining prospecting licenses and the capping of expenditure requirements for the next 2 years. The Government was hopeful that these measures would encourage companies to review their exploration programs and initiate new activities (Mining Journal, 2002b).

Ireland's geology includes several lithological units and tectonic features that are favorable for the occurrence of several types of mineral resources from base metals to industrial minerals. The Department of Communications, Marine and Natural Resources, provides technical assistance to exploration and mining companies engaged in the identification of these occurrences.

The Geological Survey of Ireland (GSI) is the national earth science agency and is responsible for providing geologic advice and information, and acquiring data for this purpose. The GSI produces a range of products that include maps, reports, and databases. It functions as a line division of the Department of Communications, Marine and Natural Resources.

In 2002, the Irish economy grew at a slower rate than previous years. Ireland had 10 years of economic growth with gross domestic product growth that averaged more than 8%. The unemployment rate in 2001 was reduced to less than 4% from about 14%. The EU euro (€) became the official unit of exchange on January 1, 2002, and the Irish pound (£) ceased to circulate as Ireland's national currency. In the process of creating a single European currency, the European Monetary Union irrevocably set the exchange rates of individual member states on January 1, 1999. Ireland's exchange rate was irrevocably fixed at £1.2697 to €1.0000 (U.S. Bureau of Economic and Business Affairs, 2002).

The slowdown in the United States economy and slower-than-expected growth in the EU was expected to take its toll on Irish exports. The value of imports was expected to increase owing to the relative strength of domestic demand. The trade balance between Ireland and the United States increased from net imports of \$11.4 billion in 2001 to \$15.6 billion in 2002 (table 3).

Conroy Diamonds and Gold plc's drilling at its Tullybuck-Lisglassen gold property in County Monaghan was reported to have intersected several zones of gold mineralization. The zones, which are within an interval of 67.3 meters (m), comprised 1.5 m at 6.23 grams per metric ton (g/t) gold from 22 m downhole, 4.75 m at 2.5 g/t gold from 45.3 m downhole, and 6.75 m at 3.15 g/t gold from 78.1 m downhole. Conroy considered the possibility that the zones are part of a larger mineralized system and not confined to high-grade veins previously intersected (Mining Journal, 2002a).

The main focus for exploration and development of Ireland's lead-zinc deposits was the Carboniferous of the Midlands region. The mineralization that is similar to that of the Mississippi Valley type in the United States is hosted in strata-bound carbonate units. Ireland was a major EU zinc producer with production centered on Anglo American plc's and Ivernia West plc's joint-venture Lisheen lead-zinc mine, Arcon International Resources plc's Galmoy lead-zinc mine, and Outokumpu Oyj's Tara lead-zinc mine (table 2). These were three of Europe's most modern mines and produced 3% of the world's zinc and 2% of the world's lead in 2002. Additional projects were expected to be developed in the near future, but the declining prices of zinc and lead have forced several of these to be mothballed (MBendi Information Services (Pty) Ltd., 2002§¹).

Arcon considered its first round of new exploration drilling on the Galmoy block to be quite successful. The actual discovery hole intersected 19.5% zinc, 3.7% lead, and 28 g/t silver across 10.7 m that began at a depth of 126.1 m. Another hole 100 m southwest of the first intersected 32.3% zinc, 12.8% lead, and 93 g/t silver over 14.4 m at a depth of 136.6 m. The weighted average grade of 23.5% zinc and the average thickness of 12.4 m were about double that of the adjacent CW ore body. The average levels of silver were also significantly higher (Minesite, 2002§).

Outokumpu resumed production in September 2002 at its Tara Mine, which was the largest zinc mine in Europe. Tara's production was suspended in November 2001 owing to poor market conditions, the low price of zinc, and the high costs of the operation. Outokumpu began a program to improve the mine's technical condition and productivity. The planned development of the company's Bula and Swex properties was expected to improve Tara's future. Outokumpu had announced its intention to exit the mining business, so it was assumed the restart was to attract potential buyers (Mining Engineering, 2002).

Industrial mineral production remained relatively constant. Several industrial minerals projects were waiting to be granted planning permissions and mining leases before moving into development and production.

Natural gas production continued from the Ballycotton gasfield off the southern coast of Ireland near Cork. Reserves were not disclosed, and the production from the fields was being carefully managed to extend the life of the fields. Natural gas has been increasingly the fuel of choice in Ireland. The source of indigenous gas from the Kinsale Head field was in decline, and imports were

¹References that include a section mark (§) are found in the Internet References Cited section.

growing in importance. Historically, Ireland has not proven to be a very successful location for exploration. Activity has been hindered by the lack of success and by high cost. During the past 4 years, there have been only five exploration wells that have been drilled offshore (Enterprise Oil plc, 2002§).

Marathon International Petroleum Ireland (a subsidiary of Marathon Oil Corp.) announced that it would be drilling and developing an additional subsea gas well in the Kinsale Head area. The company will complete the Greensand gas well by using a subsea tieback to Marathon's existing Kinsale Head Bravo platform. The well will target the southwestern part of the reservoir that is not being adequately drained by existing platform wells. The estimated base production capacity of the Kinsale area reservoirs would increase in volume to 2.6 billion cubic meters when the Greensand well comes onstream (Alexander's Gas and Oil Connections, 2002d§).

The Government paved the way for the first production of natural gas from a new Irish field since 1991 by granting a lease to Ramco Energy plc to produce gas from the Seven Heads field off the coast of Cork. Ramco estimated the field had reserves of 8.5 billion cubic meters and the potential to supply more than 10% of Ireland's current (2002) demand. Ramco said that it planned to drill five new wells in 2003 (Alexander's Gas and Oil Connections, 2002a§).

The Government announced the approval of Enterprise Oil plc's development plan for the Corrib gasfield offshore western Ireland. Construction of a pipeline to export the gas was also approved. Production, which was planned for 2004, was expected to supply about 24 billion cubic meters to the Irish grid during its 15- to 20-year lifespan (Alexander's Gas and Oil Connections, 2002c§).

The Government gave approval for what would be the largest offshore wind farm in the world. The \$720 million development will supply 520 megawatts of electricity and will produce 10% of the country's electricity needs when completed. The 200-turbine wind farm will be located on a sandbank about 7 kilometers offshore of Arklow, County Wicklow (Alexander's Gas and Oil Connections, 2002b§).

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Major Source of Information

Department of Communications, Marine and Natural Resources

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TABLE 1
IRELAND: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity	1998	1999	2000	2001	2002 ^c
METALS					
Alumina ^c	1,200	1,300	1,300	1,400	1,200
Iron and steel, steel, crude	358	335	342	110	--
Lead:					
Mine output, Pb content tons	36,528	43,831	57,825	44,500	32,500
Metal, refined, secondary ^c do.	12,000	12,996 ²	9,000	9,800	12,000
Silver, mine output, Ag content kilograms	10,800	15,300	25,100	19,300	5,000
Zinc, mine output, Zn content tons	180,951	226,100	262,877	225,135	252,700 ²
INDUSTRIAL MINERALS³					
Cement, hydraulic	2,256	2,466	2,620	2,500	2,500
Gypsum ^c	450	450	450	500	500
Lime ^c tons	100,000	100,000	100,000	100,000	100,000
Nitrogen, N content of ammonia	458	401	410	443	400
Sand and gravel ^{e,4}	12,000	12,000	12,000	12,000	12,000
Stone and other quarry products: ^c					
Limestone million tons	1	1	1	1	1
Other ⁵ tons	36,000	35,000	35,000	36,000	36,000
MINERAL FUELS AND RELATED MATERIALS					
Gas, natural, marketed million cubic meters	2,400	2,500 ^e	2,500 ^e	2,500	2,500
Peat:					
For horticultural use ^c	400	350	400	400	250
For fuel use: ^c					
Sod peat ⁶	1,000	1,600	1,600	1,600	1,600
Milled peat ⁷	3,000	4,000	3,500	3,500	2,500
Total	4,000	5,600	5,100	5,100	4,100
Peat briquets ^c	300	300	300	300	300
Petroleum refinery products: ⁸					
Liquefied petroleum gas thousand 42-gallon barrels	498	464	545	500	500
Naphtha do.	799	1,046	884	900	900
Gasoline, motor do.	3,868	3,893	4,556	4,500	4,500
Distillate fuel oil do.	7,443	7,333	8,415	8,000	8,000
Residual fuel oil do.	6,693	7,000	7,639	7,000	7,000
Refinery fuel and losses do.	147	70	77	75	75
Total do.	19,448	19,806	22,116	21,000	21,000

^cEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ¹Revised.

¹Table includes data available through April 2003.

²Reported figure.

³Ireland also produces significant quantities of synthetic diamond and is the major supplier to the United States. Output, however, is not quantitatively reported, and general information is inadequate to make reliable estimates of output levels.

⁴Excludes output by local authorities and road contractors.

⁵Includes clays for cement production, fire clay, granite, marble, rock sand, silica rock, and slate.

⁶Includes production by farmers and by Bord Na Mona (Government Peat Board).

⁷Includes milled peat used for briquet production.

⁸From imported crude oil.

TABLE 2
IRELAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2002

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facility	Annual capacity
Alumina	Glencore International AG	Aughinish Island, County Limerick	1,000
Cement	Irish Cement Ltd.	Plants in Limerick and Platin	2,000
Lead-zinc, concentrate	Anglo American plc, 50%; Ivernia West plc, 50%	Lisheen Mine, County Kilkenny	160
Do.	Arcon International Resources plc	Galmoy Mine, County Kilkenny	135
Do.	Outokumpu Oyj	Tara Mine, Navan, County Meath	215
Natural gas million cubic feet	Marathon Oil Corp.	Kinsale Head Field, Celtic Sea	75,000
Nitrogen, N content of ammonia	Irish Fertilizer Industries	Plant at Marino Point	450
Peat	Bord Na Mona (Government Peat Board)	Production mainly in midlands	4,200
Petroleum, refined barrels per day	Irish National Petroleum Corp. Ltd. (Tosco Corp., 100%)	Whitegate, near Cork	75,000
Steel	Irish Ispat (Ispat International NV)	Haulbowline, near Cork (closed)	500

TABLE 3
 IRELAND: EXPORT AND IMPORT TRADE
 WITH THE UNITED STATES

(Million dollars)

Month	2001		2002	
	Exports	Imports	Exports	Imports
January	756	1,497	598	1,523
February	630	1,375	594	1,832
March	692	1,382	556	1,863
April	537	1,544	479	1,438
May	570	1,409	621	1,911
June	514	1,473	577	2,040
July	454	1,696	526	1,854
August	532	1,360	506	1,739
September	503	1,693	439	2,058
October	781	2,040	519	2,175
November	532	1,802	673	2,038
December	643	1,230	662	1,917
Total	7,144	18,501	6,750	22,388

Source: U.S. Census Bureau, Foreign Trade Division, April 2003.