



# 2013 Minerals Yearbook

---

## IRELAND

---

# THE MINERAL INDUSTRY OF IRELAND

By Alberto Alexander Perez

Ireland is part of the European Union (EU) and a member of the European Monetary Union. The euro (EUR) is its official currency. In 2013, Ireland's gross domestic product (GDP) was \$217.8 billion, which was an increase of about 3.4% compared with that of 2012. Ireland had suffered a long recession since its major banks collapsed in 2010, which prompted an emergency bailout from the International Monetary Fund (IMF) and the EU. On December 13, Ireland exited the bailout; the country has funded itself up to 2015 by issuing its own bonds. The Irish unemployment rate decreased to 12.1% in January 2014 from 13.9% in January 2013, decreasing by 1.8% in a year (Yukhananov, 2013; Central Statistics Office, 2014b; World Bank, The, 2014).

In the latest measured trade period dated from May 2013 to May 2014, the value of Irish exports increased by 9% to \$10.06 billion.<sup>1</sup> The exports that showed the highest increases in terms of value were organic chemicals (14%) and medical and pharmaceutical products (12%). By May 2014, intra-EU trade accounted for 52% of Ireland's total exports, and the United States was the principal non-EU destination for Irish products, accounting for 23%. The value of Irish imports during the same period also increased by 9% to \$5.48 billion. The largest increase in Irish imports by value was in machinery and transport equipment, with an increase of 24%. By May 2014, the EU accounted for 62% of all Irish imports by value; of these, 29% originated from the United Kingdom. The United States accounted for 11% of Irish imports, and China, for 5%, by value (Central Statistics Office, 2014a).

Ireland was the principal zinc producer in the EU and was a leading producer of lead in the world. Ireland was ranked 10th in the world (by tonnage of output) in mine production of zinc and 13th in mine production of lead (table 1; Department of Communications, Energy, and Natural Resources, 2014, p. 1; Guberman, 2015; Tolcin, 2015).

## Minerals in the National Economy

In the assessment of economic contribution of mineral exploration and mining in Ireland report, commissioned by Ireland's Department of Communications, Energy and Natural Resources in July 2013, it was stated that the gross value-added contribution of the mining industry to Ireland's GDP in 2012 was \$350 million, with economy-wide expenditures by the industry of \$1.03 billion. During the same period, Ireland employed 1,373 people directly in the mining industry and the economy-wide employment supported by the industry was calculated to be 3,306 people (Department of Communications, Energy and Natural Resources, 2013a, p. 8–10).

## Production

In 2013, Ireland's alumina production remained at about the same level as 2012, gypsum production decreased by about 30%, and mine production of lead decreased by about 9%. Silver production decreased by an estimated 3.3% from its production level in 2012, and zinc production decreased by 3%.

## Structure of the Mineral Industry

Although Ireland was a major producer of lead and zinc in the EU, mining and the mineral-processing industry contributed only a small percentage to the country's GDP. Companies in the mining sector were privately owned, although the Irish Government owned about 60% of all mineral deposits and reserved itself the right of 100% ownership of any existing gold and silver deposits. The Exploration and Mining Division of the Department of Communications, Energy and Natural Resources is responsible both for the technical management of the state mineral licensing and leasing system and for promoting the mineral industry (Department of Communications, Energy and Natural Resources, 2013b).

In 2013 three mining projects were operating in Ireland: the Tara lead and zinc mine in Navan, Co. Meath; the Lisheen Mine in Co. Tipperary, which also produced lead and zinc; and the gypsum operation with adjacent mines in Knocknacran and Drummond, Co. Monaghan.

The Tara lead and zinc mine was owned by Boliden Tara Mines Ltd. (a subsidiary of Boliden AB of Sweden) and was the leading zinc mine, by tonnage of output, in the EU. The Lisheen lead and zinc mine was owned by Vedanta Resources plc of the United Kingdom, and the Drummond and Knocknacran gypsum mines in Co. Monaghan, were owned by Irish Gypsum Ltd. (a subsidiary of Saint Gobain Group of France). The Galmoy lead and zinc mine in Co. Kilkenny, which was owned by a subsidiary of Lundin Mining Corp. of Canada, closed operations in October 2012 (table 2; Department of Communications, Energy and Natural Resources, 2014).

CRH plc. was an international building materials conglomerate based in Dublin, and it owned subsidiaries in Ireland that produced construction aggregates, cement, lime, and limestone, all for domestic consumption and export. Premier Periclase Ltd. (owned by RHI AG of Austria) produced seawater magnesia products in the plant in Drogheda, Co. Louth. Sandvik Hyperion AB of Sweden and Element Six Ltd. (100% owned by De Beers Group of Luxembourg) produced industrial diamond and industrial abrasives in Ireland. The major mineral industry facilities and their capacities are listed in table 2.

<sup>1</sup>Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an average rate of EUR0.783=US\$1.00.

## Commodity Review

### Metals

**Bauxite and Alumina.**—In 2013, United Company RUSAL Plc (RUSAL) of Russia reported that construction of new gas-fired boilers at the Aughinish alumina refinery was continuing as planned; the new installations were expected to be commissioned in mid-2014. The company also stated that it had initiated a number of programs to optimize its bauxite mix to be used in the refinery. In 2013, the plant reached its historical maximum production and was producing at full capacity. The refinery was located on Aughinish Island on the southern side of the Shannon estuary near Limerick City and was operated by Aughinish Alumina plc (United Company RUSAL Plc, 2014, p. 15).

**Lead and Zinc.**—In 2013, Boliden's Tara Mine milled 2.5 million metric tons (Mt) of ore grading 7.05% zinc and 1.46% lead. The mine's Joint Ore Reserves Committee (JORC)-classified ore reserves (proven and probable) were 13.1 Mt grading 7% zinc and 1.6% lead. The mine employed 667 people in 2013 (Boliden AB, 2014, p. 41; Department of Communications, Energy and Natural Resources, 2014, p. 1).

Galmoy Mines Ltd. (a subsidiary of Lundin Mining) ceased underground mining operations at the mine in Galmoy in October 2012. The total mine production for 2012 amounted to 142,000 metric tons (t) with grades of 14% zinc and 2.4% lead. The ore was processed at the Lisheen Mine operations located in Co. Tipperary (Department of Communications, Energy and Natural Resources, 2013b, p. 1; Lundin Mining Corp., 2013).

In 2013, Vedanta Resources plc., stated that it had successfully enacted a plan to close the Lisheen Mine by 2014 or 2015; however, no further details were announced. Vedanta produced 1.32 Mt of ore grading 11.52% zinc and 1.6% lead. This produced 259,000 t of zinc concentrates with 53.6% zinc content and 23,000 t of lead concentrates with a 61.1% lead content. The last resource and reserve statement issued by Vedanta dated March 2014 stated that the remaining reserves amounted to 1.67 Mt at 10.46% zinc and 1.72% lead, with additional resources of 2.07 Mt grading 14.26% of zinc and 2.40% of lead (Department of Communications, Energy and Natural Resources, 2014, p. 1; Vedanta Resources plc., 2014, p. 53).

### Industrial Minerals

**Cement.**—Irish Cement Ltd. (wholly owned by CRH plc.), had cement operations in Limerick and Platin, Co. Meath. The plant in Limerick had a kiln that had a capacity of 800,000 metric tons per year, and the plant in Platin had a capacity of 2.8 million metric tons per year (Irish Cement Ltd., 2014a, b).

**Gypsum.**—Irish Gypsum Ltd. extracted gypsum from two sites in southern Co. Monaghan. The company stated that it had extracted more than 200,000 t of gypsum in 2013. The continuing inactivity of the construction sector in Ireland was the most probable cause for the decrease in gypsum production (Department of Communications, Energy and Natural Resources, 2014, p. 1).

**Magnesium Compounds.**—Premier Periclase Ltd. (owned by RHI Group of Austria) produced a range of crystal sinter magnesia products and of magnesium oxide and magnesium hydroxide products and suspensions in the plant in Drogheda (Premier Periclase Ltd., 2014).

### Outlook

The Irish economy recovered in 2013 growing by 3.4% in comparison with 2012; however, the construction sector continued to be depressed in 2013 and was expected to recover slowly in 2014. The probable slow recovery in this sector would likely affect the construction materials sector, such as cement and gypsum.

The pending closure of the Lisheen Mine was expected to cause the production of lead and zinc in the country to decrease substantially. It remains to be seen what plans Vedanta Resources will enact for the mine, as the company had not issued any further statements other than those in the outlook section of its 2013 annual report (Vedanta Resources plc, 2014).

It is likely that oil and gas exploration, in particular of shale oil, and further development of the energy sector and of renewable energy will be a priority in the near future.

### References Cited

- Boliden AB, 2014, Annual report 2013: Stockholm, Sweden, Boliden AB, 124 p.
- Central Statistics Office [Ireland], 2014a, Goods exports and imports: Central Statistics Office. (Accessed August 4, 2014, at <http://www.cso.ie/en/releasesandpublications/er/gei/goodsexportsandimportsmay2014/#.U9-P5Zzb7pc>.)
- Central Statistics Office [Ireland], 2014b, Unemployment rate: Central Statistics Office. (Accessed August 4, 2014, at <http://www.cso.ie/indicators/default.aspx?id=2LRM03>.)
- Department of Communications, Energy and Natural Resources, 2013a, Assessment of economic contribution of mineral exploration and mining in Ireland, July 2013: Dublin, Ireland, Department of Communications, Energy and Natural Resources, 61 p. (Accessed August 4, 2014, at <http://www.mineralsireland.ie/NR/rdonlyres/34CE4AD3-3D84-4700-8F74-F8D9B4E08323/0AssessmentofEconomicContributionofMineralExplorationandMininginIreland.pdf>.)
- Department of Communications, Energy and Natural Resources, 2013b, Mining in Ireland: Dublin, Ireland, Department of Communications, Energy and Natural Resources, 2 p. (Accessed August 4, 2014, at [http://www.mineralsireland.ie/NR/rdonlyres/C91C09D7-6FDF-45C6-83D7-EA8FB7F854A6/0/Mining\\_inIreland.pdf](http://www.mineralsireland.ie/NR/rdonlyres/C91C09D7-6FDF-45C6-83D7-EA8FB7F854A6/0/Mining_inIreland.pdf).)
- Department of Communications, Energy and Natural Resources, 2014, Ireland—Exploration and mining news, 1st May 2014: Dublin, Ireland, Department of Communications, Energy and Natural Resources, 4 p. (Accessed August 4, 2014, at <http://www.mineralsireland.ie/NR/rdonlyres/4F451964-DF10-4216-B728-FD5E6F76283A/0/IndustryNewsMay2014.pdf>.)
- Guberman, D.E., 2015, Lead: U.S. Geological Survey Mineral Commodity Summaries 2015, p. 90–91.
- Irish Cement Ltd., 2014a, Limerick: Irish Cement Ltd. (Accessed August 4, 2014, at <http://www.irishcement.ie/operations/limerick/>.)
- Irish Cement Ltd., 2014b, Platin: Irish Cement Ltd. (Accessed August 4, 2014, at <http://www.irishcement.ie/operations/platin/>.)
- Lundin Mining Corp., 2013, Production statistics: Lundin Mining Corp. (Accessed August 15, 2013, at <http://www.lundinmining.com/s/ProductionStats.asp>.)
- Premier Periclase Ltd., 2014, About: Premier Periclase Ltd. (Accessed August 4, 2014, at <http://www.premierpericlase.ie/about.html>.)
- Tolcin, A.C., 2015, Zinc: U.S. Geological Survey Mineral Commodity Summaries 2015, p. 186–187.
- United Company RUSAL Plc., 2014, Annual report 2013—Balanced approach: Moscow, Russia, United Company RUSAL Plc., 250 p.
- Vedanta Resources plc., 2014, Annual report 2013: London, United Kingdom, Vedanta Resources plc., 214 p.

TABLE 1  
IRELAND: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

| Commodity <sup>2</sup>                                 | 2009                       | 2010                 | 2011                 | 2012                 | 2013 <sup>e</sup>     |                      |
|--|----------------------------|----------------------|----------------------|----------------------|-----------------------|----------------------|
| METALS   |                            |                      |                      |                      |                       |                      |
| Alumina  | 1,240                      | 1,864                | 1,926                | 1,927                | 1,935 <sup>3</sup>    |                      |
| Lead:  |                            |                      |                      |                      |                       |                      |
| Mine output, Pb content                                | metric tons                | 43,000               | 39,100               | 50,700               | 47,000                | 43,000 <sup>3</sup>  |
| Metal, refined, secondary <sup>c</sup>                 | do.                        | 19,000               | 19,000               | 18,000               | 18,000                | 18,000               |
| Silver, mine output, Ag content                        | kilograms                  | 8,000                | 3,818                | 6,109                | 6,000                 | 5,800                |
| Zinc, mine output, Zn content                          | metric tons                | 357,000              | 342,500              | 344,000              | 337,500               | 327,000 <sup>3</sup> |
| INDUSTRIAL MINERALS                                    |                            |                      |                      |                      |                       |                      |
| Cement, hydraulic <sup>e</sup>                         |                            | 2,797 <sup>r,3</sup> | 2,379 <sup>r,3</sup> | 2,103 <sup>r,3</sup> | 2,200                 | 2,000                |
| Gypsum <sup>c</sup>                                    |                            | 400                  | 300                  | 300                  | 300                   | 210 <sup>3</sup>     |
| Sand and gravel: <sup>e,4</sup>                        |                            | 20,000               | 10,000               | 7,000                | 7,000                 | 7,000                |
| Stone and other quarry products, other: <sup>e,5</sup> | metric tons                | 45,000               | 40,000               | 25,000               | 25,000                | 25,000               |
| MINERAL FUELS AND RELATED MATERIALS                    |                            |                      |                      |                      |                       |                      |
| Gas, natural, marketed                                 | million cubic meters       | 413                  | 402                  | 356                  | 350                   | 459 <sup>3</sup>     |
| Peat: <sup>e,6</sup>                                   |                            |                      |                      |                      |                       |                      |
| For horticultural use                                  |                            | 500                  | 500                  | 500                  | 500                   | 400                  |
| For fuel use, milled peat <sup>7</sup>                 |                            | 3,800                | 4,991 <sup>3</sup>   | 3,707 <sup>3</sup>   | 3,700                 | 3,700                |
| Total  |                            | 4,300                | 5,500                | 4,200                | 4,200                 | 4,100                |
| Briquets   |                            | 300                  | 238                  | 192 <sup>3</sup>     | 190                   | 190                  |
| Petroleum refinery products: <sup>8</sup>              |                            |                      |                      |                      |                       |                      |
| Liquefied petroleum gas                                | thousand 42-gallon barrels | 380                  | 482                  | 566                  | 840 <sup>r</sup>      | 840                  |
| Naphtha <sup>c</sup>                                   | do.                        | 900                  | 237 <sup>3</sup>     | 144 <sup>3</sup>     | 140                   | 140                  |
| Gasoline, motor  | do.                        | 3,687                | 3,996                | 4,360                | 4,636 <sup>r</sup>    | 4,600                |
| Distillate fuel oil                                    | do.                        | 7,702                | 9,616                | 9,481                | 8,906 <sup>r</sup>    | 8,900                |
| Residual fuel oil                                      | do.                        | 6,023                | 8,154                | 8,991                | 6,205 <sup>r</sup>    | 6,200                |
| Refinery fuel and losses                               | do.                        | 694                  | 980                  | 752                  | 750                   | 750                  |
| Total  | do.                        | 19,400 <sup>e</sup>  | 23,465               | 24,294               | 21,500 <sup>e,r</sup> | 21,400               |

<sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. <sup>r</sup>Revised. do. Ditto.

<sup>1</sup>Table includes data available through August 1, 2014.

<sup>2</sup>In addition to the commodities listed, Ireland also produces lime, limestone, seawater magnesia, and significant quantities of synthetic diamond, but output is not quantitatively reported on a regular basis, and available information is inadequate to make reliable estimates of output.

<sup>3</sup>Reported figure.

<sup>4</sup>Excludes output by local authorities and road contractors.

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

<sup>6</sup>Includes production by farmers and by the Bord Na Mona (Government Peat Board).

<sup>7</sup>Includes milled peat used for briquet production.

<sup>8</sup>From imported crude oil.

TABLE 2  
IRELAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Thousand metric tons unless otherwise specified)

| Commodity              | Major operating companies and major equity owners                      | Location of main facility                       | Annual capacity |
|------------------------|--|---|-----------------|
| Aggregates             | Roadstone Wood Ltd. (CRH plc., 100%)                                   | Tallaght, South Dublin                          | 10,600          |
| Alumina                | Aughinish Alumina plc (United Company RUSAL Plc, 100%)                 | Aughinish Island, Co. Limerick                  | 1,990           |
| Cement                 | Irish Cement Ltd. (CRH plc., 100%)                                     | Plants in Limerick and Co. Meath                | 3,600           |
| Diamond, industrial    | Element Six Ltd. (De Beers Group, 100%)                                | Shannon, Co. Clare                              | NA              |
| Do.                    | Sandvik Hyperion AB (Sandvik AB, 100%)                                 | Dublin  | NA              |
| Gypsum                 | Irish Gypsum Ltd. (Saint Gobain Group, 100%)                           | Mines in Knocknacran and Drummond, Co. Monaghan | NA              |
| Lead-zinc, concentrate | Vedanta Lisheen Mining Ltd. (Vedanta Resources plc., 100%)             | Lisheen Mine, Co. Tipperary                     | 187             |
| Do.                    | Boliden Tara Mines Ltd. (Boliden AB, 100%)                             | Tara Mine, Navan, Co. Meath                     | 215             |
| Do.                    | Galmoy Mines Ltd. <sup>1</sup> (Lundin Mining Corp., 100%)             | Galmoy Mine, Co. Kilkenny                       | 135             |
| Lime                   | Clogrennane Lime Ltd. (CRH plc., 100%)                                 | Plants in Co. Carlow and Co. Clare              | 500             |
| Limestone              | Roadstone Wood Ltd. (CRH plc., 100%)                                   | Tallaght, South Dublin                          | NA              |
| Magnesia               | Premier Periclase Ltd. (RHI Group, 100%)                               | Drogheda, Co. Louth                             | 73              |
| Natural gas            | million cubic meters<br>Igas Energy plc.                               | Kinsale Head field, Celtic Sea                  | 2,100           |
| Peat                   | Bord Na Mona [Government Peat Board]                                   | Production mainly in the Midlands               | 4,200           |
| Petroleum, refined     | 42-gallon barrels<br>per day<br>ConocoPhillips Whitegate Refinery Ltd. | Whitegate, near Cork                            | 71,000          |

Do. Ditto. NA Not available.

<sup>1</sup>Mine closed at end of 2012.