

INDUSTRY NEWS FROM IRELAND

MARCH 2009

Overview

In spite of a prolonged period of declining base metal prices, the exploration and mining sector in Ireland has remained relatively buoyant. As of 28 February 2009, thirty-one exploration companies held 493 Prospecting Licences, the highest licence figure recorded since 2000. Approximately 25% of Ireland's land area is currently under licence. Five of the western world's top ten zinc miners are currently exploring in Ireland (Xstrata, Teck, Anglo American, Boliden and Lundin).

Ireland's base metal mines also continue to make up a significant proportion of European zinc and lead mine output. In 2007, the zinc and lead content of concentrates produced in Ireland amounted to 401,000t and 56,800t respectively. The three working operations accounted for 39% of European zinc and 20% of European lead mine production. These figures equate to 6% of western world mine production of zinc and 3% for lead. In global terms, Ireland is the 9th largest producer of both zinc and lead in concentrates.

Mining

The Boliden Tara Mines' underground operation at Navan, Co Meath, is the largest zinc mine in Europe. In 2008, the mine milled 2.41Mt of ore grading 7.76% Zn and 1.54% Pb. This yielded 175,000t of zinc and 22,600t of lead metal in concentrates. Over some thirty years of operation (1977 to end 2008), total mine production has amounted to 70.6Mt grading 8.29% Zn and 1.96% Pb. In January 2008, the mine's JORC Classified Ore Reserves (Proven and Probable) stood at 17.8Mt grading 7.7% Zn and 1.7% Pb, whilst Mineral Resources (Measured, Indicated and Inferred) were calculated at 13.5Mt grading 7.2% Zn and 2.1% Pb (2009 figures not available).

In the first six months of 2008, Galmoy Mines Ltd., a subsidiary of Lundin Mining Corporation, produced 248,000t of ore grading 12.8% Zn and 3.5% Pb from its underground mine at Galmoy in Co. Kilkenny. This tonnage was some 19% higher than that recorded for the corresponding period in 2007. Between 1997 and the end of 2007, Galmoy produced a milled tonnage of 6.12Mt at 11.5% Zn and 2.4% lead. Reserves (Proven and Probable) at end December 2007 were calculated at 2.02Mt grading 15.8% Zn, 4.4% Pb and 42g/t Ag. In addition, Resources (Measured and Indicated only) totalled 1.95Mt at 14.9% Zn, 3.2% Pb and 31g/t Ag.

In late January 2009, the Board of Lundin announced that Galmoy Mines would permanently cease production on 29 May 2009. Mining operations are currently being wound down in an orderly fashion ahead of the implementation of the mine's closure plan, during which all remaining rehabilitation works will be completed.

In 2007 (the most recent year for which figures are available), Anglo American produced 1.51Mt of ore grading 12.01% Zn and 1.91% Pb from its underground mine at Lisheen, Co. Tipperary. This ore yielded concentrates containing 174,435t of zinc and 20,190t of lead. Between 1999 and end December 2007, the mine produced 11.08Mt grading 11.82% Zn and 2.16% Pb. At the start of 2008, Lisheen Mine Reserves amounted to 9.68Mt at 11.94% Zn and 1.88% Pb, with additional Resources of 2.03Mt grading 13.73% Zn and 2.35% Pb.

Irish Gypsum, part of the Saint-Gobain group of companies, produced an estimated 700,000t of gypsum in 2007, from its opencast operation at Knocknacran and adjacent underground mine at Drummond, Co. Monaghan. Crushed and blended gypsum is transported to a production plant in nearby Kingscourt, where an extensive range of plasterboards and plaster are manufactured for use in the construction industry.

For more information please visit our website:

www.mineralsireland.ie

Exploration

Since the 2008 PDAC Convention, a total of 92 Prospecting Licence applications have been received and 102 licences have been issued, primarily for base metals. Thirty of the licences issued have been granted to Exploration and Discovery Ltd (a subsidiary of Canadian explorer Rathdowney Resources Ltd). Fifteen licences have been granted to Connemara Mining Company Plc., thirteen to Lundin Mining Exploration Ltd. and eleven each to Midas Mineral Resources Ltd. and Metallum Exploration Ltd. In the same period, 36 licences have been relinquished.

Boliden Tara Mines are the largest Prospecting Licence holder in Ireland, with 114 licences. During 2008, the company drilled at a number of locations, including close to the mine at Navan, Co. Meath, and also in Co. Limerick and in Co. Wexford. In the second half of 2008, Boliden, together with Rathdowney Resources Ltd. (see below), contracted Bell Geospace to fly a 3-D Full Tensor Airborne (Fixed-Wing) Gravity Gradient Survey over large parts of the north-central Irish Midlands. This survey was the first of its kind to be flown in Ireland.

Rathdowney Resources Ltd has received, compiled and interpreted over 10,000 soil geochemical results taken across priority areas within its portfolio of 67 prospecting licences. Rathdowney's multi-element geochemical surveys have focused on areas of known mineralization and/or elevated metal in soils, and where there were clearly obvious shortcomings in the work of previous explorers, or there was a somewhat ad hoc approach to target testing. Late last year, the company received airborne gravity data for its Westmeath South property (see above) together with the results of a Heliborne SkyTEM survey flown over four project areas (again the first-time such technology has been applied to mineral exploration in Ireland). Rathdowney's exploration team is currently integrating its airborne geophysics, soil geochemistry and geological data to define high priority drill targets. Several airborne geophysical survey anomalies not obviously related to elevated metal concentrations in the soil are being further investigated by deep-overburden drilling.

In 2008, Xstrata Zinc (76.4%) and joint venture partner Minco Plc (23.6%) intensified their exploration programme at Pallas Green in northeast Co. Limerick. Throughout the year, 99 holes were completed for a total of 42,482 metres. Much of the drilling focused on the Tobermalug prospect. Here, a north-south oriented zone of pyrite-zinc-lead mineralization has been traced over a total distance of 3.2km. Mineralization remains open to both the south and northwest. Significant intersections include drill-hole MN-2529-059 which at a depth of 370m, returned 8.55 metres averaging 18.29% zinc and lead. Drilling has also continued west of Tobermalug at Caherconlish South, Srahane West and Kilculleen in order to evaluate the continuity of high grade sulphides at these separately

mineralized zones. A budget of €1.5 million has been agreed by Xstrata and Minco for the first six months of 2009 to carry out a preliminary Scoping Study and undertake a further 8,000 metres of drilling.

Connemara Mining Company Plc holds 38 licences in ten different areas of Ireland. In its Lough Sheelin licence block (Cos. Cavan and Meath), Connemara has completed an eleven hole drilling programme. Five of the 11 holes intersected zinc-lead mineralization including one intercept of 4.7m at 3.38% Zn and 0.59% Pb. The company's principal asset, however, is a block of 16 licences in Co. Limerick, which are spread over two areas, Monaster and Newcastle West. All of these Limerick licences have been joint ventured with Teck Cominco Ireland Ltd., who operate the exploration programme and who will earn a 75% interest in the block by spending C\$3M. On the Monaster block, Teck Cominco Ireland Ltd have carried out a follow-up drilling programme on the Stonepark prospect. Stonepark was discovered in late 2007 by drill hole TC-2638-4 which intersected a 4.0 m sulphide zone grading 11.62% Zn and 3.46% Pb, including a high-grade zone of 1.15 m at 28.61% Zn and 4.17% Pb. Highlights of the 2008 step-out drilling programme included; TC-2638-7 which intersected 2.85 m at 12.18% Zn and 0.75% Pb within an overall interval of 15.35 m at 3.25% Zn and 0.33% Pb, TC-2638-8 which intersected 7.35 m at 5.02% Zn and 1.17% Pb, including 1.25 m at 16.19% Zn and 3.07% Pb, and TC-2638-17 which intersected 1.0 m at 27.69% Zn and 12% Pb. Drilling to-date has demonstrated the presence of a large ore-forming hydrothermal system at Stonepark and the ore zone remains open.

Teck Cominco Ireland Ltd. also holds 60 licences across the Irish Midlands including the licences on the Ballinalack deposit in Co. Westmeath. Ballinalack was discovered in 1970 and is the largest of Ireland's undeveloped zinc-lead deposits. It contains an historic resource of ~7 Mt including a thick high grade core zone. The best historic drill hole (B59) intersected 45.6 m at 13.61 % Zn and 2.4% Pb from 223 m depth. Teck Cominco has carried out extensive geophysical and geochemical orientation on the deposit and in 2008 began drill testing new targets outboard of the historic resource. Teck Cominco Ireland also holds a number of licences to the east of the historic Tynagh deposit and began drill testing targets on this block in 2008.

Conroy Diamonds and Gold P.l.c (Conroy) have continued to progress their gold exploration programme in the Lower Palaeozoic rocks of the Longford – Down Massif. In July 2008, Conroy announced a JORC-compliant gold resource of over one million ounces at its Clontibret target area in County Monaghan. Using a 0.75g/t cut-off, Indicated and Inferred Resources are estimated at 25.0Mt grading 1.28 g/t Au (1,030,000 oz contained gold). The company asserts that this gold resource estimate is the largest yet reported in either Ireland or the UK. Elsewhere, at Clay Lake (Co. Armagh, Northern Ireland), 7 km north-east of Clontibret,

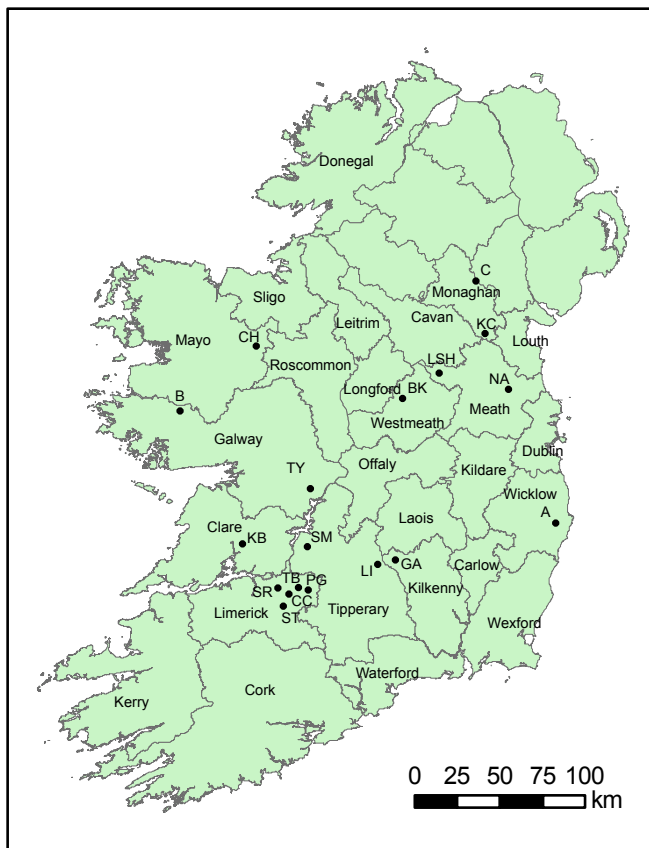
Conroy have also recently identified a 2 x 1 km gold-in-soil anomaly, returning gold values up to 1.53g/t.

Alba Mineral Resources, through its subsidiary Aurum Mineral Resources, hold a total of 11 licences in two different parts of the country. In Counties Galway and Mayo, the company is exploring for gold in a block of nine contiguous licences. The block includes the gold showing at Bohaun, a 1200m long and up to 80m wide zone of silicified breccia that contains visible gold mineralization. In Limerick, Aurum have reduced their ground holding down to two licences. Following encouraging results from geochemical and geophysical investigations, the company's exploration focus in the region has switched from gold to base metals. Aurum Mineral Resources also jointly hold five licences with Ormonde Mining Plc in southern Co. Wicklow, over an area hosting known tungsten mineralization.

Perth, Australia based Mincor Resources NL has, in partnership with Fractore Pty Ltd, been systematically drilling zinc targets at its Tipperary project, similar in style to Lisheen, Galmoy and/or Pallas Green along a postulated extension of the Rathdowney Trend. The prospective area lies within the hanging wall zone of an interpreted north dipping fault (the Kilross Fault) with five deep diamond holes having been drilled to date. The fifth drill hole, FM-1654-1, intersected 8.55m at 0.77% zinc, including 1.55m at 3.2% and 0.3m at 11.2%, the best results seen in the area to date. The company considers the results to be highly encouraging, given that the project is still at a very early greenfield stage. Mincor currently holds a 51% interest in the project which comprises 12 Prospecting Licences covering approximately 300 square kilometres centred around Tipperary Town.

In September 2008, Belmore Resources announced that it had secured a 100% interest in six licences in Co. Clare, formerly held by Central Mining Finance. Belmore now holds a total of 11 licences in Co. Clare (covering a land area of 400km²) and an additional two licences in Co. Donegal. In early 2008, a hole drilled by Belmore at the old Kilbreckan Silver Mine to test the base of the Waulsortian Reef, intersected 18 metres of massive sulphide at 440m depth. This intersection included an interval of 10m grading 13.84% Zn and 5.52% Pb.

El Nino Ventures Inc are exploring for carbonate-hosted



- Avoca (A)
- Ballinalack (BK)
- Bohaun (B)
- Caherconlish (CC)
- Charlestown (CH)
- Clontibret (C)
- Galmoy (GA)
- Kilbreckan (KB)
- Knocknacran (KC)
- Lisheen (LI)
- Lough Sheelin (LSH)
- Navan (NA)
- Pallas Green (PG)
- Srahane West (SR)
- Stonepark (ST)
- Tobermalug (TB)
- Tynagh (TY)

Zn-Pb deposits in 13 licence areas across the Irish Midlands. The company have commenced a preliminary drilling programme that is testing coincident stratigraphic/structural targets on several of their licences.

Midas Mineral Resources have secured over 53 licences since the end of 2007. Midas are exploring for a number of different deposit types including carbonate-hosted Zn-Pb in their Headford and Portlaoise project areas, volcanogenic massive sulphides in southeast Leinster, mesothermal gold/base metal skarns around Oughterard, sandstone-hosted base metal mineralization near Skibbereen and shear-hosted gold in Cos. Wexford and Wicklow.

Other companies actively exploring in Ireland include Lundin Mining Exploration Ltd., who hold a total of 29 licences in six areas. In the last year, Lundin's exploration efforts have switched focus away from near the mine at Galmoy and onto its regional licences. Oriel Selection Trust continues to advance its exploration programme in Co. Mayo, over an area that includes the sub-economic copper deposit at Charlestown. Hidefield Gold Plc is prospecting for base metals, barytes and silver in Co. Sligo, whilst Jadebay Ltd continue to evaluate the base metal and gold potential of the Avoca region.

Exploration and Mining Expenditures

In the 2007 calendar year, exploration expenditure in Ireland amounted to €14.47 million. This figure was over 30% greater than the corresponding expenditure total for 2006 (€10.87 million). Exploration expenditure in Prospecting Licence areas ('greenfield' exploration) totalled €10.6 million, whereas that in areas covered by State Mining Facilities ('brownfield' exploration) totalled €3.87 million.

The majority of expenditure in PL areas related to base metal exploration (€10.16M), with a small amount spent on gold exploration (€0.37M). The expenditure on exploration in State Mining Facilities was largely directed at base metals (zinc, lead), with a minority accounted for by exploration for gypsum. For 2007, Ireland accounted for approximately 3% of global zinc exploration expenditure.

Exploration Support

In recent years, the Exploration and Mining Division (EMD) has undertaken a number of data release initiatives to promote exploration in Ireland. The types of exploration data made available by the Division includes:

- **Exploration Company Reports.**

All non-confidential reports for current licences that are more than six years old and all reports relating to licences surrendered since 1st January 2000 are accessible from the following URL: <http://www.mineralsireland.ie/Available+Exploration+Data/Exploration+Company+Reports.htm>. To date, over 2000 company reports pertaining to more than 800 PL Areas have been published online.

- **Airborne Geophysics Data.**

Since 1995, in excess of 60 low-level, high resolution airborne geophysical surveys have been flown over Ireland. Much of this data and associated maps are available on request from EMD. They include structural interpretations of the north and north-eastern parts of the Irish Midlands that were produced by PGW Europe Ltd, as part of a Public-Private Partnership project with EMD.

- **Geospatial (GIS) Information**

Since 2001, EMD has progressively released much of its non-confidential spatial data into the public domain. This data can either be visualised online using an intuitive, user-friendly map viewer or downloaded by clients for incorporation into their own systems. Included amongst the spatial data available for download/viewing is an up-to-date PL Area status map. Other accessible datasets include retired PL Area boundary outlines, geology, boreholes, current and historic mines, mineral deposits, gold occurrences, environmental constraint areas and location maps at various scales (1:600,000 down to 1:10,560). To learn more about the variety of spatial data available from EMD and other Government Divisions (e.g. Geological Survey of Ireland, GSI; Petroleum Affairs Division, PAD), please visit <http://www.dcenr.gov.ie/Spatial+Data/DCENR+Spatial+Data.htm>.

- **Target Areas Data**

This initiative provides focused compilations of digital data on particular commodities or specific areas of the country. Four 'Target Area' CD/DVDs have been released (1) Gold in Ireland, (2) The Ballinalack Zn-Pb Deposit, (3) Cregganbaun and Adjacent Gold Target Areas, (4) The

Silvermines Zn-Pb District. Each product contains relevant GIS data, a free viewer for visualising the data, plus collections of exploration company reports and technical papers. Copies of all the products can be ordered from emd.info@dcenr.gov.ie.

- **Bibliography of Irish Mineral Resources**

This bibliography, listing almost 1500 publications and selected reports relating to Irish Mineral Resources between 1750 and 2008, has recently been added to EMD's website (<http://www.minex.ie/Exploration/Bibliography.htm>). The references themselves are not available from EMD, though many can be accessed by visiting the Geological Survey of Ireland Library.

The common theme in all of EMD's Data Release Initiatives has been the provision of digital data, free of charge. Continuing on this practice, a collaborative project between EMD, GSI and the Information Services Division (ISD) of DCENR, has resulted in thousands of older exploration company documents stored in the Survey's 'Open File,' being made available through the internet. Under this new initiative, exploration clients can access company reports dating back 40 years or more, via either a map-based interface or a simple text entry screen. Using the latter, clients can enter a current (or retired) PL Area number to establish which organization holds data on the PL Area of interest. If GSI holds data on the area, users are readily able to hyperlink into the Survey's online 'Document Management System,' that permits them to select and download documents of interest (primarily reports submitted prior to 2000). Alternatively, should data be available from EMD, clients are directed towards "internet MAPS;" a back-office facility that provides clients with a view into the Division's corporate database. Users are automatically presented with a screen that lists all relevant exploration company reports, together with summary information on the PL Area of interest (e.g. Status of PL Area [Held/Open, etc], PLA Start/Retirement Date, Townland Information, County, Simplified Geological Setting, and Size of PL Area in square km). From this initial screen, users can easily tab into a number of other screens that display:

- Information on current and former Prospecting Licence holders,
- Retired licence area numbers that have been superseded by later areas.
- Environmental constraint information relevant to the PL Area in question (e.g. Special Protection Areas, Special Areas of Conservation, National Heritage Areas, National Parks, Historic Monuments, Forestry Areas, etc.).

This latest data initiative is already 'live.' To check it out for yourself, please visit: <http://www.dcenr.gov.ie/Spatial+Data/DCENR+Spatial+Data.htm>. Any feedback on this site or suggestions for improvement will be warmly received. Comments may be forwarded to emd.info@dcenr.gov.ie.