

## INDUSTRY NEWS

On the exploration front the historically low price of zinc until the last few months resulted in the curtailment of the majority of the base metal exploration programmes during 2003, with little change to date in 2004. The exceptions have been in areas in the immediate vicinity of the three zinc-lead mines viz. Navan, Galmoy and Lisheen. Concessions granted by the Minister for Communications, Marine and Natural Resources in 2002 for two years, and extended for a further one year period in 2004, have meant that Prospecting Licence holders will not be penalised for not meeting expenditure requirements during 2002-2004. Accordingly, licensees have been able to retain their properties during this severe downturn. However, in view of the recent upsurge in exploration globally it is expected these companies will resume exploration without delay should this improvement in the exploration climate be maintained. Ground application interest has already increased. There is a continuing interest in gold exploration, attributable to the rise in price of that metal, with both **Conroy Diamonds and Gold** and **Minco** active in this regard.

Zinc and lead mine production reached a new high for the country during 2003. Ireland's three base metal mines at Navan, Lisheen and Galmoy between them produced a total of 419,000 tonnes of zinc in concentrates. This represents 41% of European mine production, and 4.6% of world mine production. In addition, the three mines produced some 50,000 tonnes of lead in concentrate, accounting for 26% of European mine production, and 7.7% of world mine production.

The ownership of the Navan mine, the largest zinc mine in Europe, and employing some 700 people, was transferred at the end of 2003 from **Outokumpu** to **New Boliden**.

### Development

- **Navan (New Boliden)**

Production at the **New Boliden-Tara Mines** underground zinc-lead mine at Navan Co. Meath for 2003 amounted to 2.5Mt of ore grading 7.94%Zn and 1.68%Pb. The mine produced 335,000t of zinc concentrate (56.2 %Zn) and 47,000t of lead concentrate (62.3%Pb). Total production to date (1977-2003) is 57.7Mt grading 8.33%Zn and 2.05%Pb. At the end of 2003, Ore Reserves (Proven and Probable) were 16.9Mt grading 9.3%Zn and 2.0%Pb. In addition, Mineral Resources (Measured, Indicated and Inferred) totalled 20.7Mt grading 7.3%Zn and 2.1%Pb.

The Navan mine is the largest zinc mine in Europe, employing some 700 people. It has been owned since the end of 2003 by **New Boliden** and is operated by its wholly owned subsidiary, **Tara Mines**.

At the end of 2003, Tara submitted planning and mining facility applications for the development of the Nevinstown ore (the Bula mineralization), which comprises the northeastern, near-surface part of the Navan orebody. Additional drilling of this mineralization in 2003 increased the tonnage by over 1Mt, as Mineral Resources and Reserves were estimated in 2002 by Tara to be 8Mt grading 10% Zn and 2% Pb. In parallel with this work, a planning application was lodged and granted by Meath County Council in December 2003.

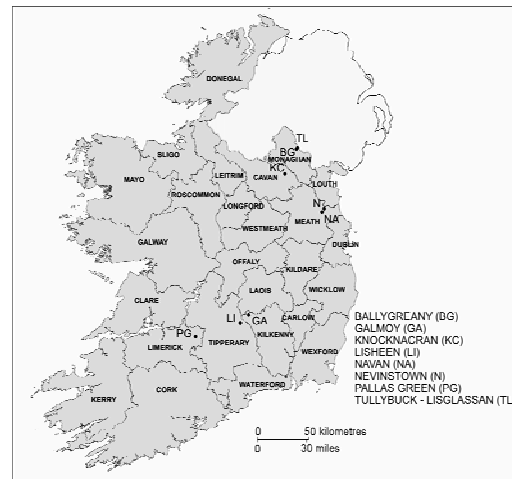
A major expansion continued on the southwest extension (SWEX) of the Navan orebody, discovered in the early 1990s. In late 2003, a lateral development programme of over 17km was completed. Civil engineering works and installation of a new crusher/conveyer system for the SWEX was completed in July 2003, and by November had processed over 0.5Mt of ore. On its completion, following the raise boring of two 650m vent raises in 2004/5, the SWEX Capital Project will have cost €58 million.

Tara Mines continues to explore for further extensions to the Navan orebody, where almost 20Mt of new resources have been discovered over the past 10 years. The principal targets include the extension of the SWEX, as well as around the Nevinstown and Liscarton areas (the latter acquired from Glencar in 2002), all of which adjoin the main orebody. Over 70% of Tara's exploration budget is spent on mine site exploration, with over 16km of surface exploration and delineation drilling completed in 2003.

- **Lisheen (Anglo American)**

During 2003 **Anglo American** mined 1.52 Mt of ore grading 12.30%Zn and 2.08 %Pb from its underground zinc-lead mine at Lisheen, Co. Tipperary. They produced 314,000t of zinc concentrate (53.9 %Zn), and 35,000t of lead concentrate (60.0%Pb). Total production to date (1999-2003) is 5.09Mt grading 11.63%Zn and 2.41%Pb. Reserves at end 2003 were 9.86Mt grading 12.41%Zn and 2.14%Pb, with additional Resources of 0.89Mt grading 12.25%Zn and 1.12%Pb. In 2003, Anglo shipped its one millionth tonne of concentrate from Lisheen.

An €8M civil works programme to raise the impoundment height of the tailings management facility at Lisheen was successfully completed in 2003. The key project currently underway at Lisheen is the construction of a state-of-the-art paste backfill plant which, it is projected, will be commissioned by October 2004 and will cost some €11M to complete. The company has also commenced an aggressive exploration programme to discover satellite ore bodies that could be accessed from the current underground workings. **Anglo American** now wholly owns Lisheen mine, following its purchase of the 50% owned by **Ivernia West PLC**.



**County Map of Ireland showing locations mentioned in the text.**

- **Galmoy (Arcon Mines)**

During 2003, **Arcon Mines Ltd.** milled 660,000t of ore grading 11.27 %Zn and 2.66%Pb at their underground zinc-lead mine at Galmoy, Co. Kilkenny, and produced 119,000t of zinc concentrate (51.68%Zn). No lead concentrate was produced. Total production from 1997 to end 2003 was 3.8Mt grading 10.72%Zn and 1.41%Pb. Reserves at the end of December 2003 were 4.5Mt at 14.4%Zn and 4.4%Pb; this includes reserves of 2.1 Mt at 19.2 %Zn, 7.3%Pb and 62g/t Ag in the recently discovered R Zone. In December 2003, Kilkenny County Council announced their intention to grant planning permission for development of the R Zone, but the company has appealed the terms of the permission.

- **Knocknacran (Irish Gypsum Ltd.)**

Gypsum has been continually mined near Kingscourt, Co. Cavan since 1936, with a 2003 production figure of some 400,000t from the open cast mine at Knocknacran. In July 2003, **Irish Gypsum** submitted a Planning Application for a new underground gypsum mine at Drummond. The new mine

will be adjacent to the Knocknacran mine, and is within the area of the company's current State Mining Lease.

## Exploration

### • **Reduced Exploration Expenditure Concessions.**

In January 2004, in response to the continuing downturn in exploration, the Minister for Communications, Marine and Natural Resources announced his intention to extend concessions in relation to certain expenditure requirements for Prospecting Licence holders for a further one-year period.

The key concessions are:

- A moratorium on expenditure requirements for licences that fall due for renewal during 2004. The licensee will only be required to pay the relevant fees to retain their licences.
- A 'cap' on the required expenditure for the following two-year period of €20,000 per licence, for licences more than six years old.

A Prospecting Licence holder seeking these concessions will be required to submit a comprehensive report on all exploration carried out to date on each licence or block of licences, and will be required to advise as to whether they are seeking a joint venture partner for the ground. If a joint venture partner is being sought, the report will be made publicly available in the Exploration and Mining Division's exploration website, [www.minex.ie](http://www.minex.ie).

### • **Company Activities**

During the past six months, **Arcon International Resources** have continued to carry out exploration in the immediate vicinity of the company's underground zinc-lead mine at Galmoy. Exploration efforts are focused on previously identified gravity anomalies northeast of the R Zone, anomalies that are similar to that which led to the recent discovery of the R Zone.

**Conroy Diamonds and Gold Plc** has announced further results from their gold exploration in Co. Monaghan. Drilling at Ballygreany has outlined two zones of low-grade gold mineralisation. These zones are similar to, and correletable with, those encountered previously at Ballygreany during channel sampling of two trenches. The trenches are approximately 80m apart along strike, and returned a best value of 8m averaging 0.78g/t Au, with individual grab samples of up to 2.25g/t Au.

In February 2004, Conroy announced that SRK Consulting (UK) is to prepare a preliminary mineral resources estimate for the company's gold properties in Ireland. The study will place particular emphasis on Tullybuck-Lisglassan, Conroy's original focus in this region. SRK will also provide a 3-D model as an aid to further exploration. The consultants' report will incorporate a regional geological review of the company's wider exploration effort in the Longford-Down massif. The review will focus on identifying the structural features that control mineralization in the region.

In 2004, **Minco**, together with their joint venture partner **Noranda**, propose to undertake a drilling programme on the extensive block of joint venture licences at Pallas Green, Co. Limerick.

Minco also holds six prospecting licences in Cos Wicklow, Wexford and Kildare, where their focus is on vein, shear-hosted and stratabound gold mineralization. An initial exploration programme commenced on the Wicklow/Kildare licences in October 2003, comprising geological mapping and prospecting, geochemistry and geophysics. Drilling is planned to test emerging targets as well as existing targets on the South Wicklow/Wexford licences during 2004.

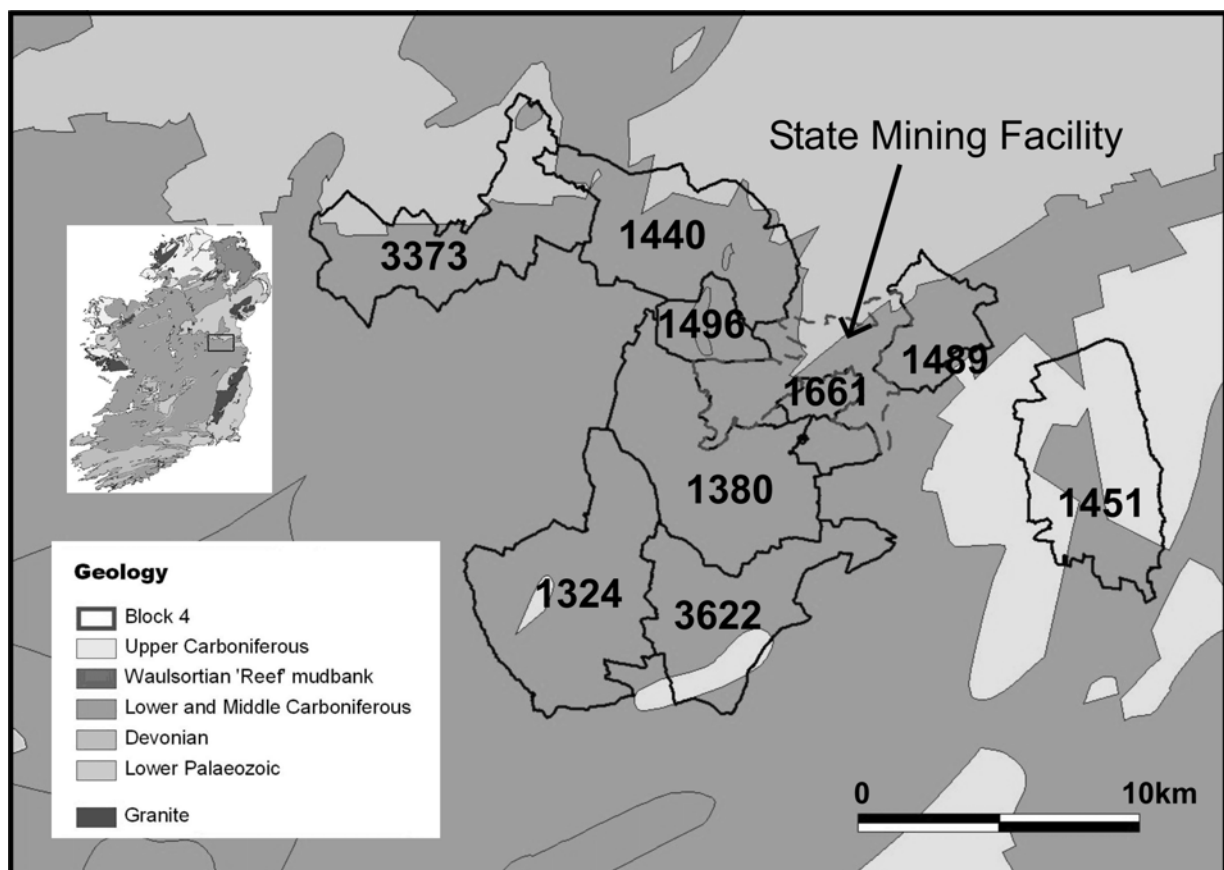
**Tara Mines Ltd** continues to explore for further extensions of the Navan orebody. The principle targets are adjoining the SWEX, as well as around the recently acquired Nevinstown and Liscarton areas, which represent extensions to the main Navan orebody. Tara is also exploring outside the mine area, principally for carbonate-hosted zinc deposits, but also for copper and gold in varied geological settings. Outside the Navan area, the principal focus is in Co. Limerick, where several new areas with mineralization have been identified by recent drilling

- **Joint Venture Opportunities**

In March 2004, Exploration and Mining Division produced a leaflet entitled *Mineral Exploration in Ireland: Joint Venture Opportunities*. The leaflet contains information on ten different properties where the licensees are looking for joint venture partners. Seven different companies are offering properties, and the minerals under offer include base metals, gold and diamonds. Copies of the leaflet are available free of charge from the Exploration and Mining Division, and from our exploration website [www.minex.ie](http://www.minex.ie),

- **Prospecting Licence Information**

At 14<sup>th</sup> April 2004, a total of 26 active companies held 270 Prospecting Licences, primarily for base metals. During the past six months, 23 licences were surrendered. Although no licences were issued during that period, applications for 25 licences have been received, the vast majority for gold.



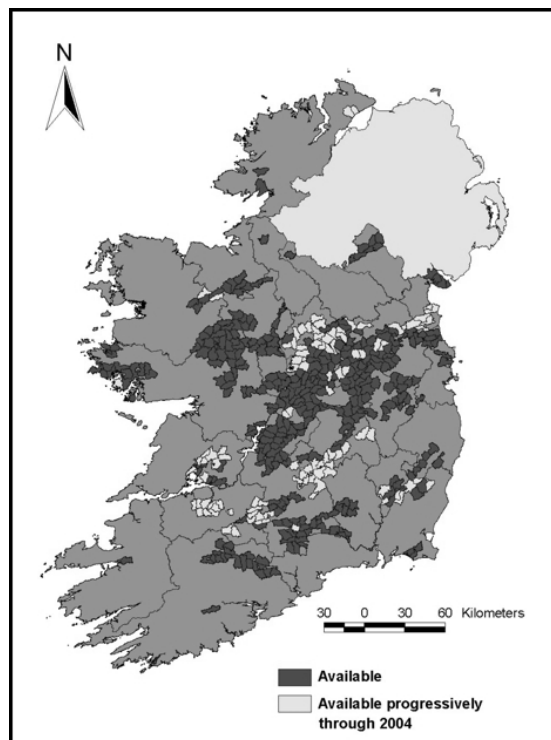
**Latest Prospecting Licence areas for which data over 6 years old has been released**  
**Exploration Support**

During the past six months work has continued by the Exploration and Mining Division on their four complementary programmes to encourage exploration.

The **MAPS** (Minerals Administration Programme Support) **Programme** designed to provide online clients with all the available background data to assess ground and undertake permitting and eBusiness is slightly behind schedule. New content is added continually to the current site at **minex.ie**, such as GIS data and exploration company reports. However, the second phase, which will provide much increased content, improved GIS facilities and the full range of online permitting facilities, is still in development.

Under the **Airborne Data Release Programme**, geophysical surveys over the Moate, Tynagh and Limerick areas have been released (see product listings inside front cover).

Various themes under the **Data Release Programme** have advanced considerably. Data more than six years old from currently held prospecting licences (*Historical Data Release*) has been released for 21 more areas, including several adjoining or partially subsumed by the State Mining Facilities over the Navan zinc deposit (see figure above). Company data from 45 surrendered areas has also been made publicly available (*Surrendered Data Release* themes). The third theme of this programme is the *online availability* of company data. All data relating to Licences surrendered since 1<sup>st</sup> January 2000, and all historic company data (see above) are being made progressively available through **minex.ie**. Data relating to some 370 areas are now online, including data on areas available in the 1<sup>st</sup> May Competition as an aid to rapid evaluation of this ground. This compares to 111 areas in October 2003. The remaining backlog (see figure) will be cleared during the year. The fourth theme (*digital licence maps*) is the provision of digital versions of the Prospecting Licence map and ground status, on CD-ROM in shapefile format, for use with the ESRI suite of GIS products. A free map viewer is provided, and updates can be downloaded from the **minex.ie** website.



**Map showing Prospecting Licences for which exploration data is available. The coverage relates to all data publicly available since 1<sup>st</sup> January 2000.**

The **Airborne Magnetic Interpretation Programme**, in partnership with PGW Europe Ltd., is also behind schedule. Focussed on three blocks covering part the Central Basin area, the digital products for the first of the blocks to be available (Block 2, see figure) have been completed and are being prepared for release.

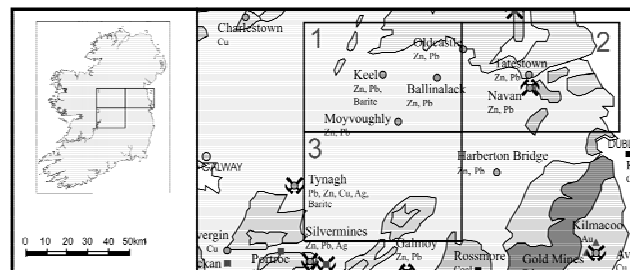
## • Gold Occurrences in Ireland

In view of the recent interest in gold exploration, the Exploration and Mining Division (EMD) and the [Geological Survey of Ireland](http://www.gsi.ie) (GSI) have collaborated to produce the first-ever digital release of data on gold occurrences in Ireland. Intended to stimulate exploration, the free CD contains information on over 300 gold occurrences within Ireland, a comprehensive bibliography, and copies of the most relevant articles and GIS data sets that include:

- Bedrock, float and alluvial gold occurrences
- 1:600,000 simplified geology map of Ireland
- Status of exploration permit areas at February 2004
- General prospectivity maps for a range of gold exploration plays

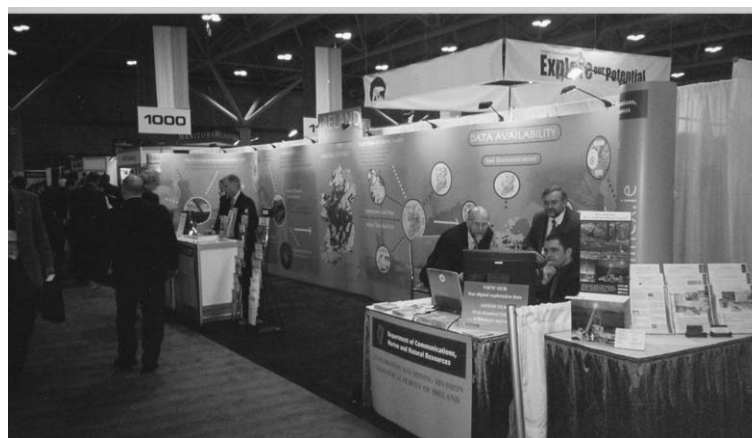
The CD-ROM is available from either EMD ( [www.minex.ie](http://www.minex.ie) ) or GSI ( [www.gsi.ie](http://www.gsi.ie) ).

**Map showing areas covered under the Airborne Magnetic Interpretation Programme**



## PDAC Convention 2004, Toronto

The 72<sup>nd</sup> Annual Convention and Trade show of the Prospectors and Developers Association of Canada (PDAC) was held in Toronto from 7<sup>th</sup> to 10<sup>th</sup> March 2004. The Exploration and Mining Division was again represented at the Trade Show, where we were joined by our colleagues from the Northern Ireland Department of Enterprise, Trade and Investment, and the Geological Survey of Northern Ireland, in a combined **Ireland** exhibit. There was abundant evidence of the upsurge in exploration funding, with a steady stream of visitors to the stand and serious interest in both gold and zinc exploration. Attendance was apparently in excess of 10,000 visitors, with the Trade Show being extended onto another floor due to the demand for stand space.



**The combined Ireland stand at the PDAC Trade Show, Toronto, March, 2004**