

PROGRESS OF EXPLORATION SUPPORT INITIATIVES UNDERTAKEN BY THE EXPLORATION AND MINING DIVISION IN 2004

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A primary strategic objective of the Exploration and Mining Division (EMD), a line Division of the Department of Communications, Marine and Natural Resources, is to "Maximise the level of exploration for minerals". In pursuit of this, since 2000 the EMD policy approach has been to take full advantage of the promotional avenues opened up by the expansion of the global information society. This has led to several constant themes during the various ongoing EMD exploration support programmes, namely the rapid release of all non-confidential data free in digital format, full website access with GIS facilities and online e-business services. Delivery on these themes has been vital in the EMD promotional strategy to keep Ireland at the forefront of industry awareness in selecting exploration territory.

The purpose of the current support initiatives are to provide industry through the web with all the available information concerning ground for preliminary evaluation or regional assessment, the mineral potential of the country, ground availability, and all e-business facilities for exploration permitting. This promotional effort also includes data on specific target areas, keeping industry fully up to date with current exploration and mining activities and the regulatory situation. EMD is committed to maintaining these on an ongoing basis. Within this framework a flexible regulatory policy has also meant that needed changes to ensure that Ireland remains an attractive location are also part of the promotional strategy.

The past year has seen significant progress:

- The backlog of exploration data due for release is almost cleared, and made available in digital format.
- Exploration company data is now available online for a third of all the licence areas (including some 70% of the Lower Carboniferous zinc target area of central Ireland). Data on 345 areas was uploaded during 2004.

- The first of the added value products on selected target areas have come on stream.
- The www.minex.ie website (Mineral Exploration Ireland) has been substantially revised and expanded. The online GIS mapping tool has been upgraded to incorporate additional functionality and spatial data-sets; it is planned that the new GIS will be available before the end of the year.
- Regulatory concessions have been extended.

Details of the current status of the various support initiatives are provided below.

REGULATORY SUPPORT – EXPENDITURE MORATORIUM

In recognition of the financial constraints for exploration due to the global recession, in 2002 the Minister of State allowed current ground holders to continue to hold their licences without meeting required expenditure commitments due in 2002 and 2003. This permitted significant exploration programmes to be merely suspended instead of terminated, with the result that a number of companies were able to maintain a presence instead of withdrawing from Ireland.

In view of the lack of significant funding improvement, the Minister of State extended this moratorium in January to the end of the year. Companies were required however to provide major reviews of the work done to date, which would be made available on the minex.ie website, where joint ventures were sought. This has provided publicity facilities for a number of companies, and over the three years resulted in the substantial additional availability of up to date data on currently held licence areas that would not otherwise have been the case.

DATA RELEASE PROGRAMMES

Company Exploration Data Release

A substantial amount of company exploration data relating to Licence areas was released during 2004 under three ongoing separate programmes.

- Firstly, data over 6 years old from currently held ground (**historic data release**), where the backlog encompassed 141 areas in 2001, is now available for up to 1998 for all but 14 areas. Three more blocks incorporating 51 areas were released in 2004 on CD (see product listing below).
- Secondly, data from 36 licence areas surrendered in 2004 (**surrendered data release**). Such data is only released four times a year when the relevant quarterly Prospecting Licence Competition takes place, since surrendered ground is always initially made available through competition.
- Thirdly, from the 30 areas for which companies availed of the 2002-2004 exploration moratorium (see above) and are seeking joint venture partners (**joint venture data release**). The locations are shown in Fig. 1.

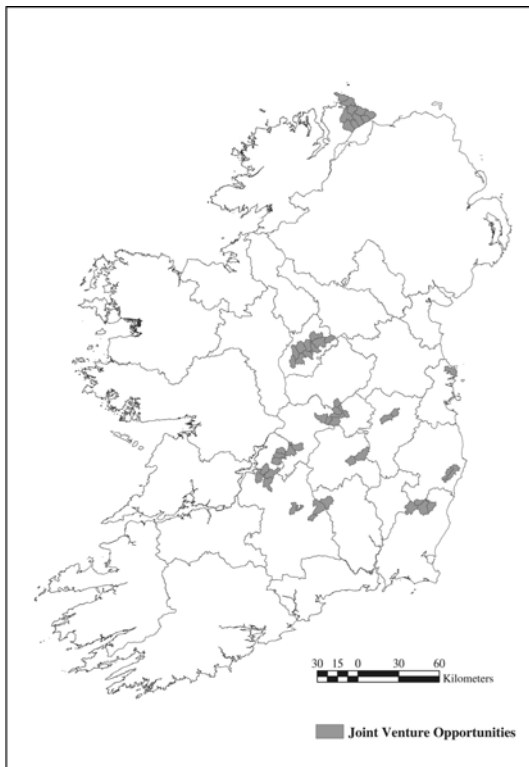


Fig. 1: Location of Licence areas available for joint ventures, and for which current exploration data are available online at minex.ie.

All such data is freely available in digital format from EMD, and is also supplied as it is released to the Geological Survey of Ireland.

Airborne Geophysics Data Release

By end 2003 some 70% of all the company geophysical data obtained by low-level, high resolution airborne surveys over Ireland since 1995 had been released by EMD (Cox and Gardiner 2003). Since then, data from two further survey areas has been made available (Dardis 2003, 2004), covering parts of Co. Limerick and North Co. Cork. The present coverage is shown in Fig. 2. All release data is available free on CD, and additional details on forthcoming releases can be found on the www.emd.ie website.

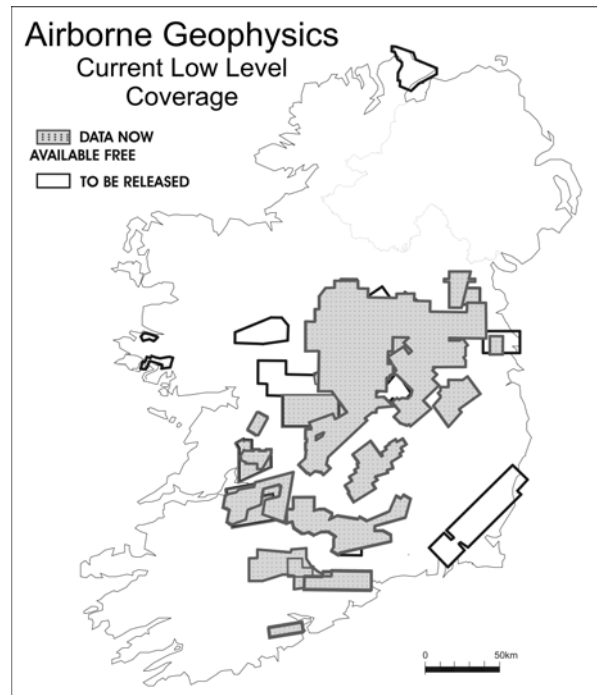


Fig. 2: Current coverage and availability of low-level airborne geophysical surveys

Online Availability of Company Data

There has been a major increase in internet data availability under this initiative in 2004, with data for a further 345 areas being added. The resulting area coverage is shown in Fig. 3, encompassing a third of all Prospecting Licence areas. All data released since 1st January 2000 from current licences, surrendered licences, ground in the 1st November 2004 competition and joint venture areas has now been published online, as will all

future releases other than the airborne geophysical data.

Digital Prospecting Licence Map

Digital versions of the Prospecting Licence map are now produced twice a year. These are free on request (email EMDTechnical.info@dcmnr.gov.ie), and enable clients without specialist GIS software to display the licence areas and determine ground availability. The prospecting licence boundaries can also be downloaded off the minex.ie web site.

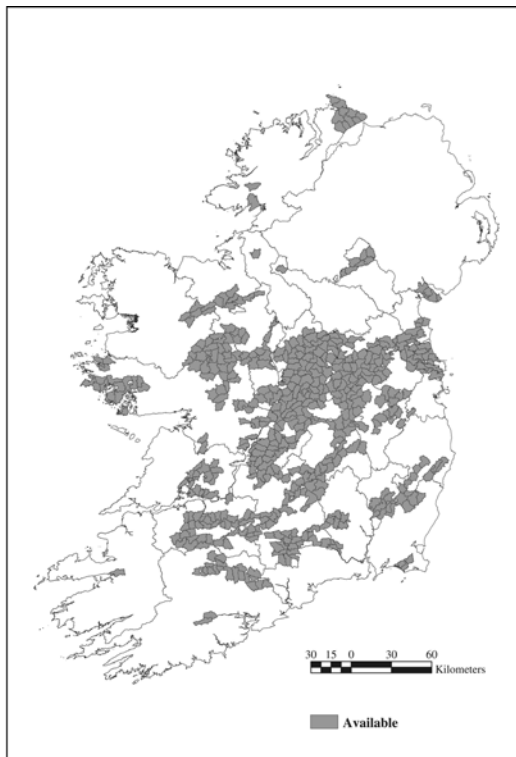


Fig. 3: Extent of ground coverage for which online company exploration data are available at minex.ie.

TARGET AREAS INITIATIVE

This initiative is intended to stimulate interest in specific areas of the country by providing focussed information and added value to the ongoing data release programmes where appropriate.

Airborne Magnetic Interpretation Initiative

A Public-Private Participation Programme (PPP) was initiated in late 2002 with PGW Europe Ltd., to process and interpret the newly released airborne magnetic data covering the highly prospective Lower Carboniferous Central Basin

area of Ireland. Three blocks are involved, but owing to significant delays the first block results are only now available on CD (Fig. 4). This covers the eastern part of the region. It includes a report, and a number of maps at 1:100,000 scale, (geophysical interpretation, processed magnetic, prospecting licence areas and mineral deposits). Additional digital products are also available from PGW Europe Ltd. These include the original processed products, linked / levelled total magnetic field, individual / composite grids and enhanced images for interpretation (e.g. 1VD, RTP, AS, Euler). The other two Blocks will follow in 2005.

Data on Gold in Ireland

To increase the awareness of the gold potential of the country, in late 2003 EMD proposed a digital release of all known gold localities in a GIS format. With the agreement of GSI, the localities were sourced from the GSI minerals databank, and together with additional data held by EMD, fully described and spatially located on a simplified geological map (Fig. 5). The CD also includes a review of the potential for gold mineralisation by GSI (Stanley et al., 2004). The CD was released free as a joint EMD-GSI publication early in 2004. It has proved extremely popular, with over 150 copies being provided by EMD alone, and several Prospecting Licences have been recently granted on foot of applications triggered by this release. The gold spatial data and supporting gold occurrence descriptions will also be accessible through the updated minex.ie website.

Cregganbaun Gold Target Area

EMD has initiated work on a digital compilation and evaluation of all currently confidential exploration work in this area, within which a deposit estimated at over 500,000t at 6 g/t Au has been discovered at Cregganbaun East. It is intended that this work will be available on CD in 2005, when consideration will be given to making the currently unavailable ground open for application under competition.

THE 'MAPS' INITIATIVE (www.minex.ie)

Designed to be a world leader in delivering e- and g-Enabled systems to inform, facilitate and encourage the exploration and mining industry, the MAPS (Minerals Administration Programme

Support) initiative is a major promotional project that has yet to deliver the full range of customer benefits as outlined in Cox and Gardiner (2003).

Due to contractor problems, neither the e-enabled back office systems designed to deliver increased efficiency to customers, nor the full range of the online e-business permitting services, have been implemented. Work is still in progress.

There have however, been a number of improvements with regard to the website. The content has been substantially expanded and the "GEMS" GIS mapping tool has been made more intuitive and faster to use. Additional GIS layers have been added, including gold occurrences, historic mines, State Mining Facilities and PL Areas available for joint venture. Company exploration reports covering a third of the licence areas and some 2000 borehole logs are accessible via the new GIS viewer. The new GIS is scheduled for "go-live" in December 2004.

ACKNOWLEDGEMENTS

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REFERENCES

Cox, W.R. & Gardiner P.R.R. 2003. Current status of exploration support initiatives undertaken by the Exploration and Mining Division. In: Irish Association for Economic Geology Annual Review 2003, 52-54.

Stanley, G., Carroll, B., Connolly, J. & Doyle, E. 2004. A review of Ireland's potential for bedrock gold mineralization. In: Cox, W. & Loughlin, B. 2004. Gold in Ireland.

DIGITAL PRODUCTS PRODUCED ON CD-ROM BY EMD IN 2004 UNDER THE EXPLORATION SUPPORT INITIATIVES

Cox, W., Tinnelly, S., Breen, R., Bergin, J & Loughlin, B. Exploration data release (1972 to 2001) over parts of Cos. Meath, Westmeath and Offaly. Minerals Publication MP 19/03

Dardis, O. Tara Mines Ltd. airborne magnetic, VLF and radiometric survey (1999) over the Limerick area. Minerals Publication MP 23/03

Cox, W., Tinnelly, S., Breen, R., & Loughlin, B. Exploration data release (1970-2002) over parts of west-central Co. Meath. Minerals Publication MP 24/03

Cox, W., Tinnelly, S., Breen, R., & Loughlin, B. Exploration data release update (to 2002) over parts of Co. Tipperary & Co, Offaly. Minerals Publication MP 03/04.

Loughlin B. and Cox, W. Exploration permit areas and status (Feb. 2004). Minerals Publication MP 04/04.

Cox, W. & Loughlin, B. Gold in Ireland. Minerals Publication MP 10/04.

Dardis O. The Amcorp Ireland Ltd. airborne magnetic survey (1999) over the North Cork area. Minerals Publication MP 18/04.

Tinnelly, S., Breen, R., Loughlin, B., Rooney. C. & Cox, W. Exploration data release (1981 to 2003) over parts of Cos. Longford and Westmeath. Minerals Publication MP 19/04.

Breen, R., Tinnelly, S., Loughlin, B., Rooney. C. & Cox, W. Exploration data release (1987-2002) over parts of Cos. Clare, Limerick and Tipperary. Minerals Publication MP 20/04.

Breen, R., Tinnelly, S., Loughlin, B., Rooney. C. & Cox, W. Exploration data release (1983 to 2003) over parts of Cos. Kildare, Kilkenny and Laois. Minerals Publication MP 21/04.

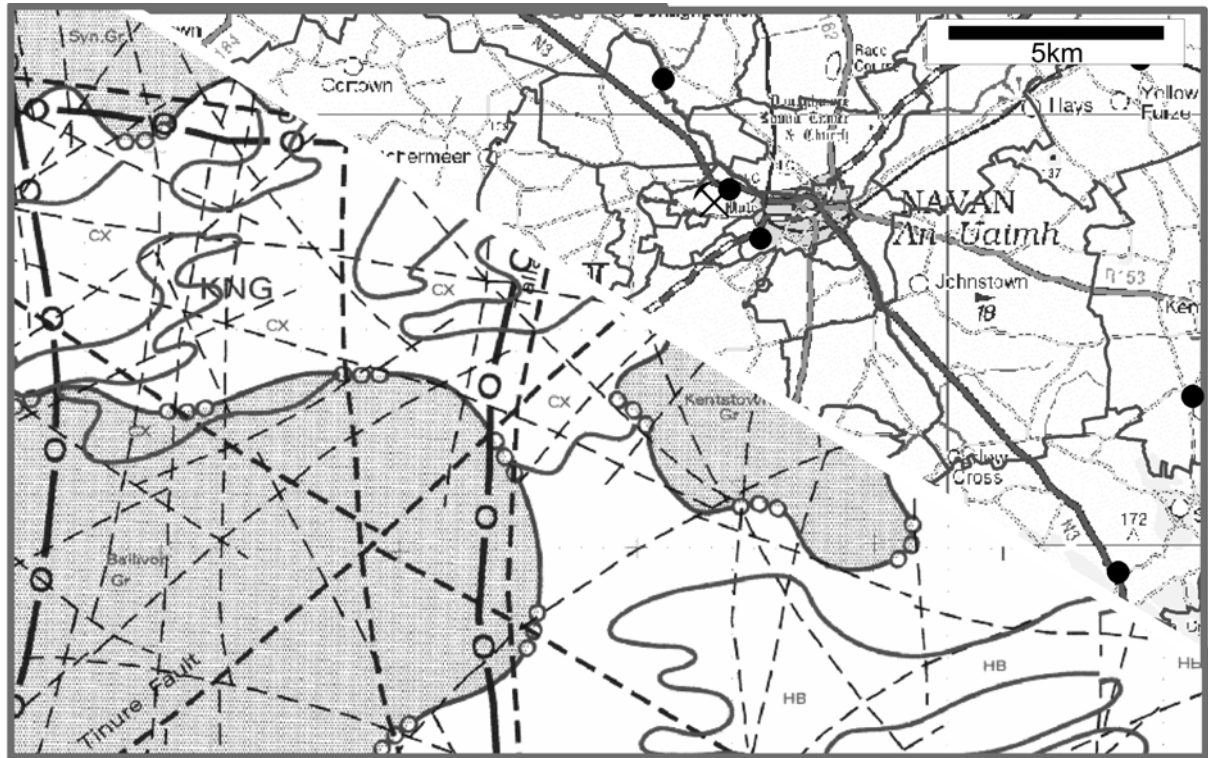


Fig. 4: Sample maps reproduced from the airborne magnetic interpretation project of part of the Lower Carboniferous Central Basin, showing interpreted intrusives, structural features and lithological contacts, Prospecting Licence boundaries, and mineral deposit locations.

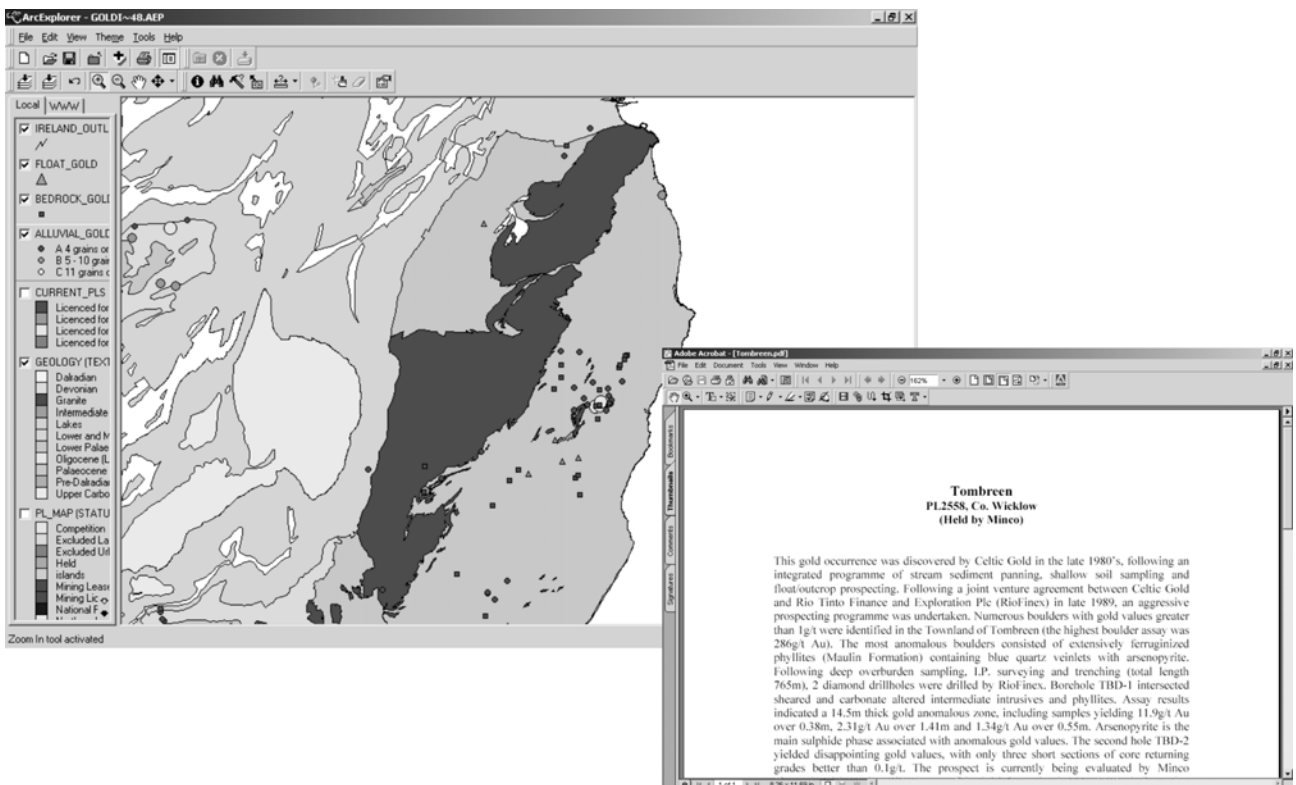


Fig. 5: GIS showing gold locations on a simplified geological map, with an example of a locality description. Taken from the CD prepared by Cox and Loughlin (2004).