

# ZINC EXPLORATION IN IRELAND

LEADING THE WAY IN EXPLORATION FOR ZINC, LEAD AND COPPER IN IRELAND



**UNICORN'S** STRATEGIC FOCUS IS THE EXPLORATION FOR ECONOMIC DEPOSITS OF 'IRISH TYPE' CARBONATE HOSTED ZINC, LEAD, COPPER AND SILVER MINERAL DEPOSITS IN THE IRISH MIDLANDS OREFIELD.

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# Welcome to Unicorn Mineral Resources Ltd

**Unicorn Mineral Resources Ltd** (UMR) is an Irish mineral exploration company. UMR's strategic focus is the exploration for economic deposits of 'Irish Type' carbonate hosted Zinc/Lead/Copper and Silver in the highly prospective Irish Midlands Orefield. We have acquired a high-class land package using the latest geological, structural and mineralogical models to drive the target generation programme. UMR has the in-house experience and expertise to run exploration programmes and aggressively explore sole-venture licences. UMR is dedicated to creating shareholder value and will consider exploration and/or development opportunities, including potential joint venture agreements.

UMR was formed in 2010 and guided by our Geologist and Chief Operations Director, Dave Blaney, we now have 32 highly prospective licences in 5 project areas in the the Irish Midlands. Our Directors have experience in the exploration sector having previously served on the Boards as Chairman, CEO and CFO and we are delighted with the progress UMR has made in such a short space of time especially with challenges that the low prices of commodities over that timeframe.

UMR use the Irish-based geological consultancy company BRG Ltd (www.brg.ie) to design and manage their technical programmes. BRG has considerable experience of Irish exploration and has worked on many major exploration projects, including taking the Pallasgreen deposit (Glencore/Xstrata) from discovery through to the current published Inferred Resource of 44 million tonnes grading 7% Zn/1% Pb.

The Directors consider that UMR has acquired a portfolio of high-quality licence areas in Ireland during a period that other exploration companies reduced exploration activities thus freeing up high-quality ground. The exploration sentiment has now changed, manifested by the number of deals recently announced by exploration companies in Ireland and scarcity of quality, prospective exploration ground. This is partially related to the recent turnaround on commodity prices, in particular zinc, which is a primary focus for UMR and has now reached ten high price levels.

UMR has continued to aggressively explore during that period and are now at a stage where a number of quality drill targets have been identified across the various projects. UMR have also been fortunate in that we were able to work in partnership with the GSI in Ireland and have fast tracked the 'Tellus' regional airborne survey to cover the Waterford Block.



# Unicorn Zinc, lead and copper projects in Ireland

UMR's increasing and varied portfolio of licences, located in a range of geological terrains, gives it an array of target types. UMR was initially created to take advantage of the availability of ground in the highly prospective, world class Irish Midlands Zn/Pb Orefield. The Lower Carboniferous aged rocks of the Irish Midlands host a range of highly significant economic Zn/Pb deposits that have been mined since the early 1960's. It is recognised that there is more zinc per square kilometre in the Irish Midlands than anywhere else in the world (ref. EMD 2002).

UMR's exploration strategy has been focused on the prospective 'Irish Midlands Orefield' where UMR has four licence blocks: Clonmel, Gort, Kilcormick, Kilmallock and a block of sixteen licences over the volcano-sedimentary terrain with potential for VMS deposits in Waterford.

UMR has been actively exploring on its blocks of exploration ground in the highly prospective Irish Midlands Orefield. The exploration strategy has been designed to delineate and define quality targets for subsequent drill testing. Fieldwork has included geophysical surveying (airborne and ground surveys), supported by geological mapping/prospecting, soil and deep overburden geochemistry, lithogeochemistry and diamond drilling.

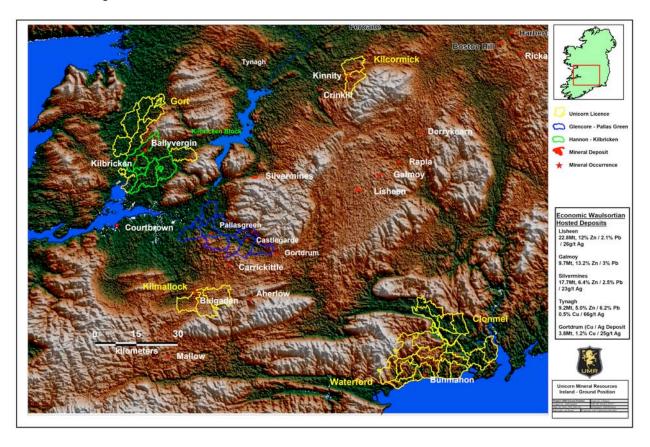


Figure 1: Map showing the relative location of UMR's licence areas

UMR identified the potential to acquire high-quality exploration ground in the Irish Midlands during a period of low metal prices when there was a general withdrawal from exploration. UMR's strategy was to acquire licences in areas where new ideas/models could be applied to ground that was relatively poorly explored.

The targeting strategy was designed to identify blocks of available high-quality ground. The first phase was to use the morphology of the basement underlying the Irish Midlands carbonate rocks to focus upon mineralising trends. The basement is dominated by Lower Palaeozoic rocks controlled by a structural mosaic related to the closure of the Lapetus Ocean and the Caledonian Orogenic event. This has resulted in a series of northeast-southwest trending structural corridors that exert a fundamental control on the position and scale of mineralising systems within the Irish Midlands.

Prospective 'corridors' were then assessed to identify the regions with prospective stratigraphy, in particular the Waulsortian Reef and Navan beds. Once identified these regions were examined in detail using the historic exploration records held in the open files of the Geological Survey of Ireland (GSI). Of particular importance was the existence of base metal sulphide mineralisation, the presence of alteration (i.e. dolomitisation, silicification, iron formation etc...) and development of breccia systems.

The outcome of this process is that UMR identified four blocks of ground, consisting of fifteen prospecting licences, within the Irish Midlands Orefield. In addition the entire Waterford, Ordovician aged, volcano sedimentary belt, analogous to the Gander Zone in Newfoundland and prospective for VMS style deposits has been acquired by UMR.

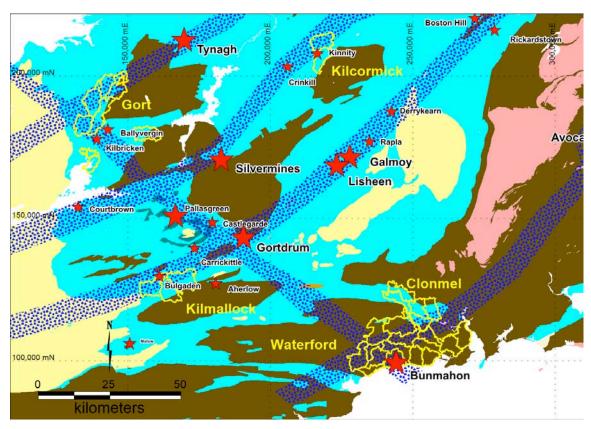


Figure 2: UMR licences highlighted in yellow, showing their position relative to known mineralising trends and significant mineral deposits.

#### **TARGET MODELS**

The main target for UMR on its Irish Midlands licence blocks is a Waulsortian Reef hosted, massive sulphide Zn/Pb deposit, analogous to Lisheen or Silvermines (Figure 2).

Lisheen/Silvermines style Waulsortian Reef hosted deposits occur at or close to the base of the Waulsortian Reef. Mineralisation is directly related to normal faulting, with the thickest parts of the orebody with the highest grades and concentrations of metals often located immediately adjacent to main feeder fault zones. Brecciation of the Waulsortian Reef, in and around the deposit is seen as a pre-syn mineralisation ground preparation event.

A secondary style of carbonate hosted zinc/lead mineralisation found in the Irish Midlands is more analogous to the classic Mississippi Valley Type (MVT) deposits. The MVT mineralisation has the simple mineralogy of carbonate hosted sulphides and is dominated by sphalerite, galena, pyrite and marcasite. The mineralisation is controlled by Waulsortian Reef hosted breccia bodies and it tends to be stratabound but not stratiform.

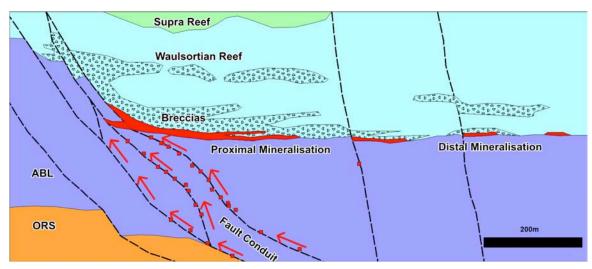


Figure 3: Schematic section through an 'Irish Type' Waulsortian Reef hosted Zn/Pb deposit (model)

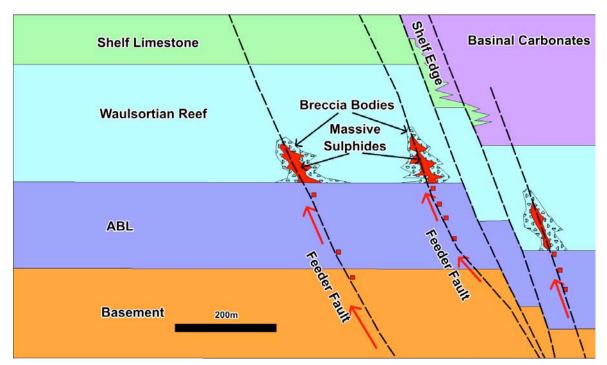


Figure 4: Schematic section through an MVT Zn/Pb deposit (model)

#### **GORT LICENCE AREA**

The Gort Block consists of five contiguous and two stand alone prospecting licences covering a surface area of 241.95km². The licence block is located along the intersection between the Tynagh – Ballinalack/Limerick mineralising trends in a region with well developed Waulsortian Reef. Mapping by UMR has defined a pronounced shelf/basin hinge line striking east-northeast and controlled by east-northeast faulting. The Gort Block is focusing on the Clare Syncline region and licences are located proximal to the significant Zn/Pb mineral deposit discovered by Lundin at Kilbricken, where intersections of 21.2m grading 11.0% Zn/4.8% Pb and 20.5m grading 7.5% Zn/9.9% Pb have been reported.

Recent exploration activity by UMR has focused on one particular target area at Knocktoby identified by a geological/geochemical review, geophysical surveying and diamond drilling.

Drilling on the Gort Block at Knocktoby intersected extensive brecciation, faulting, and dolomitisation with minor disseminated pyrite. It has also confirmed the presence of a north-south striking fault zone with rapid facies changes developed across the structure indicating that the fault zone was active during deposition in the Lower Carboniferous. The fault zone is dominated by brecciation with intense dolomitisation and localised disseminated pyrite. The drilling has also confirmed that the base of the Waulsortian Reef lies at a depth of 100–200m in an area of thin overburden. Geophysical modelling established that a massive sulphide body in this setting would generate a detectable gravity anomaly and a gravity survey was subsequently carried out across the Knocktoby area.

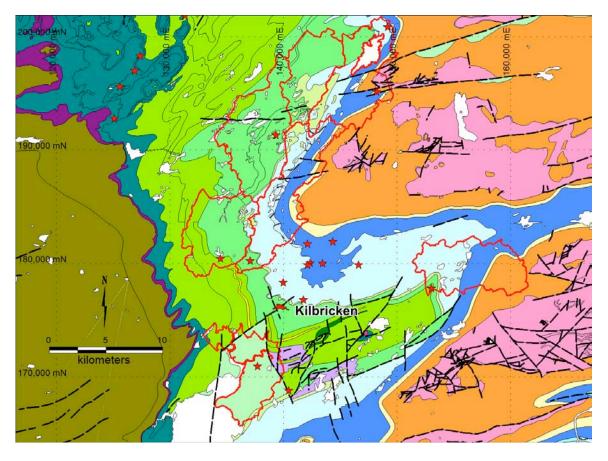


Figure 5: Gort geology map, with mineral occurrences

Digitization of historic soil samples on PL2895 along strike from the Kilbricken deposit has confirmed elevated zinc and lead values in soil sample taken in an area underlain by the prospective lower part of the Waulsortian Reef. Only two holes have been drilled on this licence and one intersected massive / semi-massive pyrite controlled by a fault zone that off sets the base of Waulsortian Reef contact. The Reef on the hangingwall side of this mineralized fault zone remains untested.

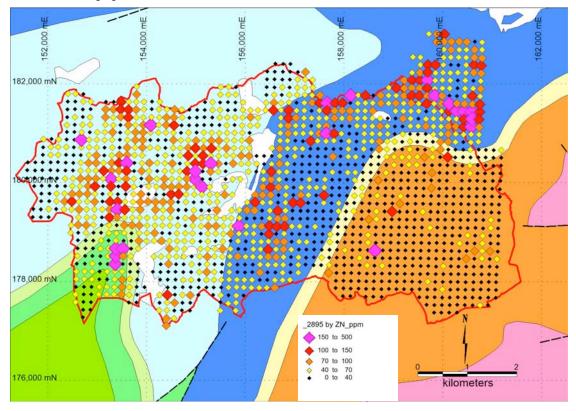


Figure 6: Zn Soil Geochemistry Poster-plot on Geology Background

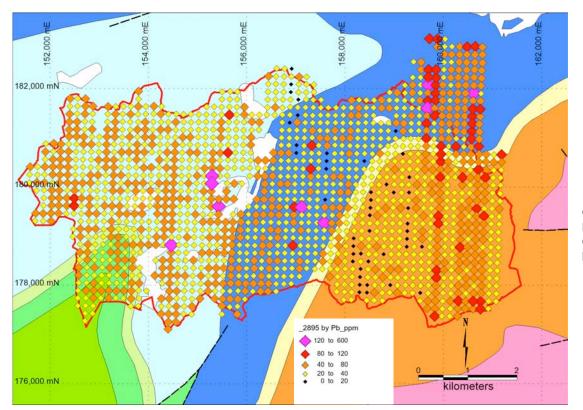


Figure 7: Pb Soil Geochemistry Poster-plot on Geology Background

#### WATERFORD LICENCE AREA

The Waterford Block consists of sixteen contiguous prospecting licences covering a surface area of c.608.86km<sup>2</sup> in eastern/southeastern County Waterford (Figure 9).

In the Waterford region the geological terrain is dominated by much older volcanosedimentary rocks (Silurian and Ordovician) consisting of sediments and bimodal volcanics that were deposited in the Island Arc depositional environment. Accordingly, the target is different from the other licence blocks. The focus is still for base metals, particularly zinc and lead, however, in Waterford there is substantial potential for economic quantities of copper, possibly with credits of silver and gold. The main target type in this region is Volcanogenic Massive Sulphide deposits (VMS), similar to the Avoca deposit in County Wicklow or the Buchans or Bathurst camps in Newfoundland and New Brunswick respectively (Figure 8).

The deposit model for VMS style deposits dictates that the metals and sulphur are sourced from the volcanic pile by hydrothermal circulation driven by heat from underlying intrusions. Metals and sulphur are then transported by hydrothermal fluids and vent in a submarine fumarole field (Black Smokers) onto (or proximal to) the ocean floor where they rapidly cool and precipitate sulphide minerals. The mineralisation tends to occur during a hiatus or change in volcanic activity.

The geological setting of the Waterford volcano-sedimentary belt is dominated by Lower Palaeozoic (Cambro – Silurian) aged strata that extend to the northeast through Wexford/ Wicklow and across the Irish Sea to Anglesey. Prior to the opening of the Atlantic Ocean (c.65Ma years ago), the Lower Palaeozoic belt of the SE of Ireland was contiguous with the Canadian Lower Palaeozoic terrain of Newfoundland, New Brunswick and Nova Scotia, where there are a number of highly significant, economic massive sulphide deposits. The Lower Palaeozoic geology in southeast Ireland is highly analogous to eastern Canada and is dominated by a succession of sediments and volcanics that were deposited in an Island/ Back Arc environment along the southern margin of the Lapetus Ocean.

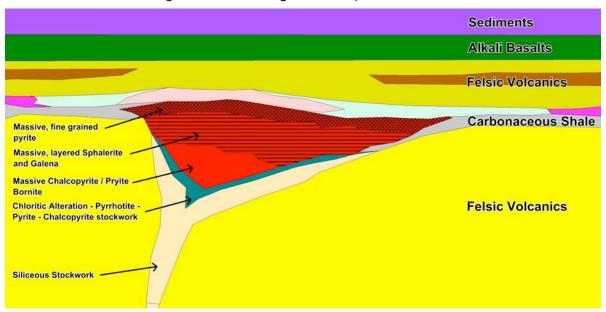


Figure 8: Schematic section through a VMS Zn/Pb/Cu deposit (model)

UMR rate this region very highly and consider it to be highly prospective for a range of different deposit types, including:

- 1. Volcanogenic Massive Sulphide (VMS) deposits of the Felsic-siliciclastic and Bimodal felsic/mafic sub-classes. These styles of deposit have the potential to form very large, economic, polymetalic (Copper, Zinc, Lead +/- Gold & Silver) orebodies.
- 2. Sedimentary Exhalative (SEDEX) style mineralisation associated with more quiescent basin development located along the margins and distal to the main volcanic centres. Indications of SEDEX style mineralisation have been intersected by the limited amount of drilling carried out to date.
- **3.** There is also significant potential for gold mineralisation and the limited amount of historic exploration for gold has discovered a number of significant indications.

There are a number of significant target zones on the Waterford Block that show strong indications of VMS style mineralisation. Evidence of mineralisation has been discovered in historic drilling campaigns that tended to be very shallow (<100m) and of limited scope. At the Carroll's Crossroads target drilling discovered zones of up to 4% Zn + Pb and 0.2% Cu. At Fennor significant alteration and geological pathfinders were related to a wide stringer zone with up to 1.9% Cu and 0.35% Zn.

Drilling at Cullen Castle intersected 1.3m grading 3.5% Zn/0.25% Cu in a stringer system with a similar system at Lisnakill returning 3.6m grading 1.7% Zn/1.2% Pb. These results are all good indications of mineralising systems active in the Waterford region.

Waterford also has a history of copper mining and the old Bunmahon copper mine produced significant quantities of copper ore from an extensive vein system between 1825–1880. Secondary mineralisation can still be seen at Bunmahon in the old underground workings.

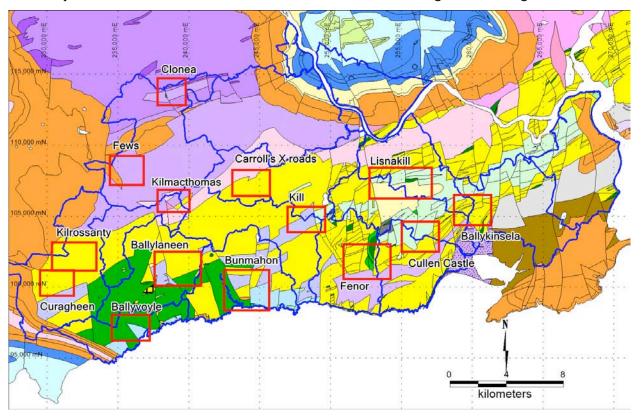


Figure 9: Waterford licences, geology and target zones

The recent exploration programme on the Waterford Block was designed to swiftly evaluate the target areas by using, airborne geophysics with refinement the geological/structural models, supported by mapping and prospecting, followed by ground geophysics, soil/deep overburden geochemistry and lithogeochemistry. This work has identified a range of significant targets and will ultimately lead to a comprehensive diamond drilling programme. Historic data, including geology, geochemistry, lithogeochemistry and geophysics for the Waterford ground has been collated and incorporated into a comprehensive database.

UMR, in conjunction with the Geological Survey of Ireland flew an airborne magnetic, electromagnetic and radiometric survey, as part of the regional TELUS programme, over the Waterford licence block in May 2016. This survey was designed to enhance and refine the geological/structural model for the region and allow for more accurate target generation and definition. Processing and modelling of the data is ongoing, however, to date it has been used to control and direct fieldwork, including deep overburden sampling and gravity surveying.

The complexity of the region is apparent from the airborne magnetics data (Figure 10). The geological interpretation is reliant upon relatively limited outcrop inland and from the excellent coastal exposures. The airborne magnetics used in conjunction with outcrop data allows for more accurate mapping of the local geology with subsequent benefits for follow up ground surveys and targeting of diamond drilling. An example of this the Lisnakill target area, where UMR have recently being following up on the airborne data with mapping/prospecting, deep overburden sampling and gravity surveying (Figures 11–14).

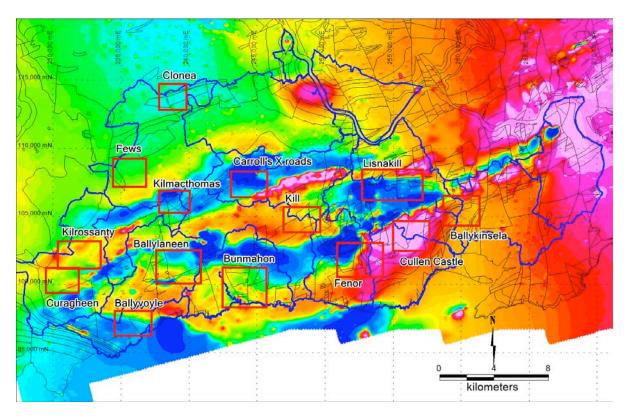


Figure 10: Waterford - airborne magnetic survey, target areas

The geological interpretation of the Lisnakill target area (Figure 11) models it as a succession of east-northeast striking Rhyolites/Felsic tuffs overlain by andesites, basalts and sediments that are dipping gently to the south and are located on the northern limb of an open syncline. The main target horizon is the facies change from felsic volcanics to intermediate/basic volcanics and the accompanying break in sedimentation and volcanic activity.

When this area is examined on the airborne magnetics there is a clear contact striking almost east-west, from high magnetic susceptibility to the north to low magnetic susceptibility in the south (Figure 12). As can be seen from this image the felsic rocks are relatively magnetic and the contact is in fact slightly further to the south (c.300m) of the target area. The ongoing refinement of the detailed geological model is critical for interpretation and targeting.

Figure 13 shows the results of a Deep Overburden (DOB), base of till sampling programme, with very high zinc values, of up to 6,700ppm (supported by lead), and were discovered to the south of the magnetic contact. Preliminary follow up of the geochemistry with a series of gravity traverses has defined a significant, discrete residual anomaly in an area coincident with the high DOB geochemistry (figure 14).

It is possible that the residual gravity anomaly is related to buried mineralisation deposited at the top of the rhyolites/felsites and buried at depth 100–150m. Further work is required to fully assess this area and this will undoubtedly require a diamond drilling programme.

Elsewhere on the Waterford Block, UMR are continuing to develop and evolve numerous targets, using a similar methodology (geology, lithogeochemistry, airborne geophysical modelling, DOB geochemistry and ground geophysics). UMR are in the process of bringing a number of targets to drill-ready status and would anticipate that a comprehensive drilling programme will commence during the next two year licence review period.

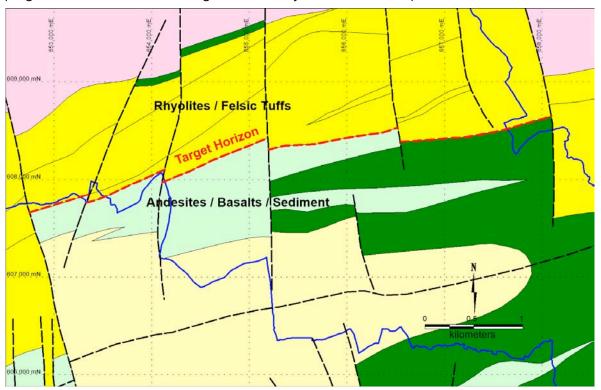


Figure 11: Lisnakill geology - Facies change from Felsic Volcanics to intermediate/basic volcanics

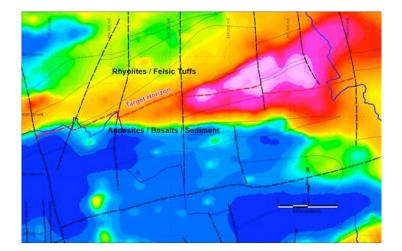


Figure 12: Lisnakill airborne magnetics -Note: displacement of contact to the south

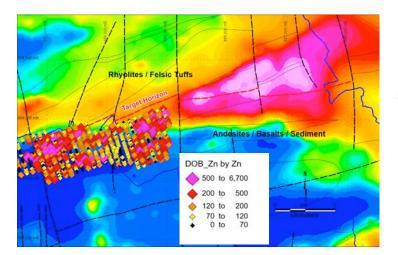


Figure 13: Lisnakill deep overburden sampling - zinc, on magnetics and geology

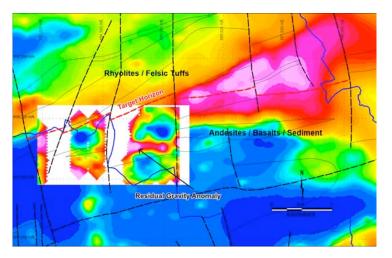


Figure 14: Lisnakill residual gravity, on magnetics and geology

#### **KILMALLOCK**

The Kilmallock Block consists of three licences located in the prospective Limerick Region and covering a surface area of 136.60km<sup>2</sup>. This block was identified through UMR's ongoing target generation process as being highly prospective for Irish type, Waulsortian Reef hosted, massive sulphide deposits.

The basis of UMR's interest in this ground can be summarised as follows:

- 1. The region is located along an extension of one of the most significant and productive regional, mineralising trends the Rathdowney Trend. (Figure 2). The Rathdowney Trend is the fundamental basement control that is coincident with the economic Lisheen, Galmoy and Gortdrum deposits and is coincident with the sub-economic occurrences at Carrickittle, Rapla, Derrykearn.
- 2. The geology is highly prospective with extensive, well-developed, prospective Waulsortian Reef limestone outcropping along the northern edge of the block and dipping south beneath the licences. Structural complexity means that the Waulsortian reef sub-crops extensively along the northern flank of the Kilmallock syncline.
- 3. Significant alteration has been detected by mapping and drilling with thick zones of hydrothermal alteration intersected. This includes intense dolomitisation and haematitic basal Waulsortian Reef, possible analogous to iron formations at Tynagh and Crinkill.
- 4. Historic soil and deep overburden sampling has detected some very strong geochemical anomalies, particularly at Ballycullane where deep overburden sampling, pitting and shallow drilling intersected zinc grades of up to 21% Zn/13% Pb. Regional scale soil sampling has detected strongly anomalous Zn/Pb enriched soil samples that are orientated along NW-SE trends. The significance of this orientation has been recognised since the discovery of the Pallas Green deposit.
- 5. At Ballycullane, where subcropping secondary Zn/Pb has been discovered close to the base of the Waulsortian Reef and is thought to be related to oxidation of a significant body of base metal massive sulphides, intersections of up to **5m grading 20% Zn** have been reported
- 6. At Bulgaden historic drilling has intersected significant high grade massive sulphide mineralisation hosted by the Waulsortian Reef, with intersections of up to 6.0m grading 10.4% Zn/1.8% Pb, 3.8m grading 14.7% Zn/4.8% Pb, 1.1m grading 48.9% Zn/7.2% Pb and 4.5m grading 16.53% Zn / 1.25% Pb to name but a few (Figure 16).

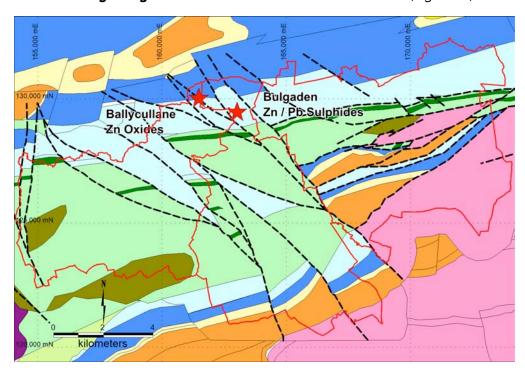


Figure 15: Kilmallock Block geology and mineral occurrences

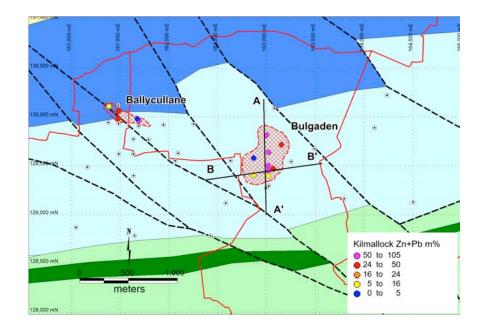


Figure 16: Detail - geology, drillhole collars and cross section locations

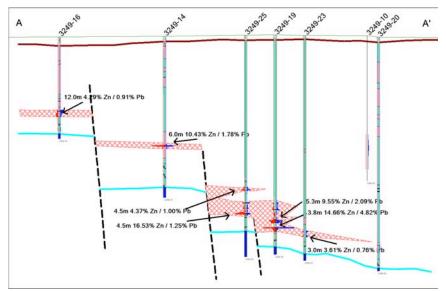


Figure 17: Cross section A - A'

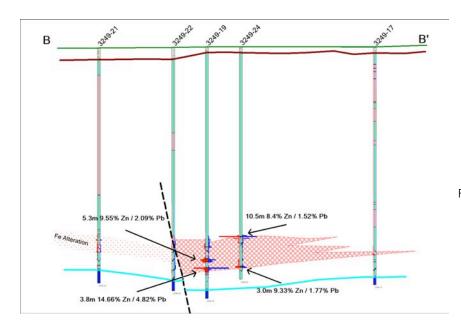


Figure 18: Cross section B - B'

The sulphide mineralisation intersected to date at the Bulgaden prospect is without doubt highly significant. From the drill sections it can be clearly seen that mineralisation consisting of breccia hosted massive, semi-massive, disseminated and fracture fill sulphides located c. 50–70m above the base of Waulsortian Reef contact has been intersected over a considerable strike length (>450m). This zone is open to the north/northeast and the southwest, it is apparently closed to south by a single drillhole (3249-20). Closer examination of 3249-20 confirms that the target zone c.40m above the base of reef contact consists of breccia hosted low grade stringer mineralisation, It is possible that this hole does not effectively close off the mineralisation.

The best intersections from Bulgaden mineralising system (Table 1) demonstrate that it is a considerable and relatively untested mineralising system. It is controlled by northwest-southeast striking faulting and is strongly analogous to the Pallas Green deposit (in terms of structural control, host lithology, relative position within the reef succession and style of mineralisation), some 15km to the north. High-quality targets lie proximal to the known mineralisation at Bulgaden and down dip from the Ballycullane secondary (oxide) mineralisation. Potential of the extensive, untested Waulsortian Reef of this block remains to be tested.

Hole ID	Thickness (m)	Zn (%)	Pb (%)	Ag g/t
3249-14	6.0	10.43	1.78	N/A
3249-16	12.0	4.29	0.91	23.55
3249-18	2.4	12.76	2.00	34.40
3249-19	5.3	9.55	2.09	27.26
3249-19	3.8	14.66	4.82	133.79
3249-23	3.0	3.61	0.76	3.95
3249-24	10.5	8.34	1.52	61.98
3249-24	3.0	9.33	1.77	22.00
3249-25	4.5	16.53	1.25	57.12

Table 1: Mineralised composites from the Bulgaden Zone

#### KILCORMICK LICENCE AREA

The Kilcormick Block (Figure 19) consists of two contiguous prospecting licences covering a surface area of 67.05km². The exploration target on this block is 'Irish Type' and MVT style, Waulsortian Reef hosted, massive sulphide mineralisation. The licence block is located along the Navan - Silvermines mineralising trend (Figure 2) in a region with extensive and well developed Waulsortian Reef. Mapping by UMR has defined a pronounced shelf/basin contact located along the line of regional scale Knockshigownagh Fault Zone, which strikes northeast-southwest and controls a facies change from shelf limestones in the northwest to basinal limestones in the southeast. The Kilcormick Block is located c.5km along strike from the significant, base of Waulsortian Reef hosted, Crinkill Iron Formation discovered in the 1980's by Billiton near Birr.

Historic work on this ground particularly by Arcon and Noranda in the 1990's defined a significant massive sulphide occurrence to the northwest of PL 4057. This deposit, known as Kinnity, consists of a series of 'Mississippi Valley Type' (MVT) lenses of massive pyrite/marcasite with associated sphalerite and galena mineralisation. The mineralisation dips to the southeast at 45–60° and is thought to be orientated parallel to the Knockshigownagh Fault (Figures 21 & 22).

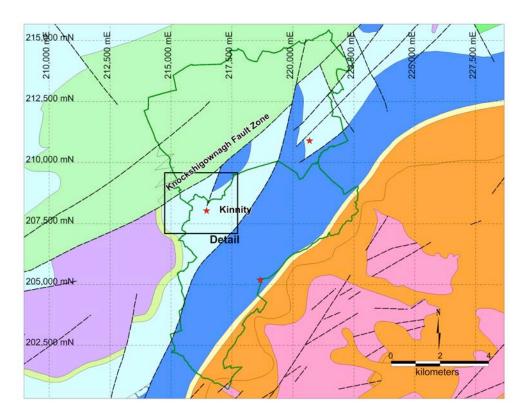


Figure 19: Kilcormick PL's, mineral occurrences and geology

The style of mineralisation at the Kinnity deposit is steeply dipping lenses of massive sulphides associated with a coarsely crystalline, creamy coloured calcite gangue. The historic drilling was orientated vertically, which is ideal for flat lying Irish Type deposits, however, the morphology of the Kinnity deposit would actually be better suited to an angled drilling programme. Lenses dipping at 45–60o can easily slip between even a relatively tight vertical drilling pattern leading to the conclusion that this mineralisation remains open, both along strike and down dip.

The work carried out by UMR was designed to follow up the MVT style mineralisation discovered at Kinnity (Figure 4). Reinterpretation of the historic and recent drilling indicates that the mineralisation is steeply dipping and structurally controlled. It is felt that the mineralisation discovered to date is in an area where the structures are horsetailling and breaking up into complex, discontinuous features. From a regional perspective the most significant structure in this region is the Knockshigownagh Fault zone located to the northwest. This is a major, basin margin controlling, reversed fault that controls the Crinkill Iron Formation near Birr. Historic mapping has interpreted a north-northeast striking, splay from the Knockshigownagh Fault to the immediate northeast of the Kinnity mineralisation. It is possible that this splay is a feeder structure for the Kinnity mineralisation. Historic drilling by Noranda (drillhole PN-2860-13) immediately west of this structure intersected structurally controlled basic intrusives suggestive of dilatant, extensional tectonics.

UMR completed a Pole-Dipole Induced Polarisation (IP) traverse across this region in 2013 (Figure 20). This survey has been reprocessed and reinterpreted based upon new data and a marked break can be seen in the resistivity inversion, possibly related to a controlling fault zone, also of interest is the pronounced chargeability anomaly detected on the southeastern side of the inferred fault zone. This is considered to be the prime target area for future follow up work.

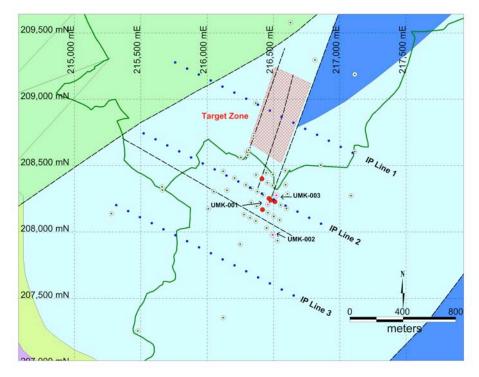


Figure 20: Drillhole collars at the Kinnity deposit, (including UMR drillholes UMK-001. 002 & 003)

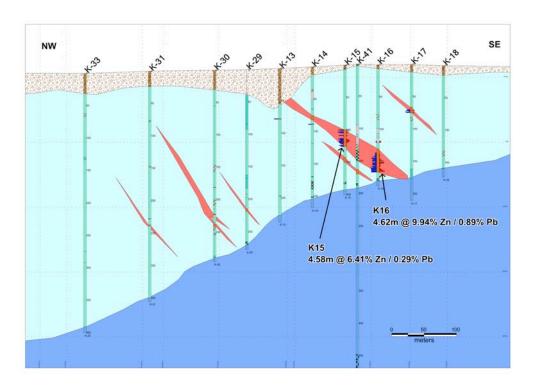


Figure 21: Drill section across the Kinnity deposit

Drillhole ID	Company	From	То	Thickness (m)	Zn (%)	Pb (%)
K-10	Arcon/Noranda	227.3	229.05	1.75	5.54	0.34
K-15	Arcon/Noranda	114.56	119.14	4.58	6.41	0.29
K-16	Arcon/Noranda	145.25	147.82	2.57	4.25	0.84
K-16	Arcon/Noranda	149.92	152.79	2.87	8.14	0.27
K-16	Arcon/Noranda	160.38	165	4.62	9.94	0.81
K-21	Arcon/Noranda	198.88	209	10.12	9.45	1.12
UMK-001	Unicorn	103.95	110.75	6.80	4.23	0.25
UMK-001	Unicorn	127.55	131.85	4.30	4.63	1.00

Table 2: Kinnity assay results - Split core sampling

#### **CLONMEL LICENCE AREA**

The Clonmel Block consists of four contiguous prospecting licences covering a surface area of 157.92km². The exploration target on this block is 'Irish Type' Waulsortian Reef hosted massive sulphide mineralisation.

The geological setting at Clonmel is dominated by east-west striking folding with pronounced dextral offsets. The Waulsortian Reef can be seen to outcrop along the centre of an east-west trending synclinal fold. The Waulsortian Reef of this region has a typical core/flank mud-mound morphology with well developed stromatactic biomicrites and bioclastic rich zones that can be intensely altered by local scale dolomitisation. The dolomitisation is usually a buff grey coloured, medium crystalline dolomite, with preservation of primary Waulsortian Reef textures as relic features and later cross cutting, white saddle dolomite. The Waulsortian Reef is considered to be the main target lithology in this part of the Irish Midlands. The exploration model would indicate that fault controlled, massive sulphide lenses, hosted by laterally extensive breccia systems should be developed close to the contact between the reef and the underlying ABL.

Following a Lithogeochemistry survey, two areas at Piltown and Mooncoin have been identified for further follow-up exploration. At Mooncoin a clear lineation can be seen controlled by a NW trending fault zone. The target zone consists of Zn/Pb anomalies controlled by NW faulting. At Piltown Lead distribution is closely associated with Zinc indicating minimal fractionation which suggests the metals are proximal to source.

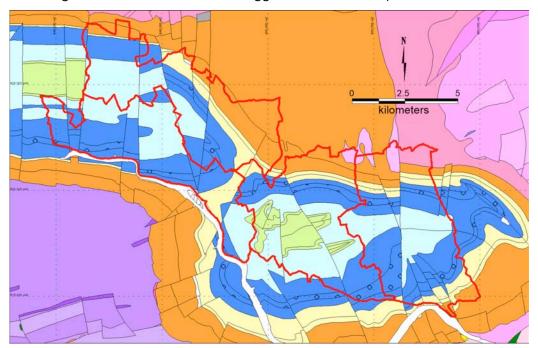


Figure 22: Clonmel geology map

# **Unicorn Mineral Reources - Executive Directors**

# Paddy Doherty – Chairman

Mr Doherty is a founding partner, Chairman and Managing Director of the Electro Automation Group, operating across Europe since 1984 in Design, Commissioning and Maintenance of Car Parking Equipment, Automatic Gates and Doors, Security Equipment, Tolling and one off Design Projects.

## Richard O'Shea - CEO

Over 25 years experience in Exploration Companies including CEO of AIM listed Ovoca Gold plc. Mr O'Shea is a director of BTU Metals Corp (TSX.V BTU) and his background is in engineering and management.

## John O'Connor FCA- CFO

An E-Y Chartered Accountant with over 30 years experience in Exploration Companies including CFO of AIM listed Ovoca Gold plc. Mr O'Connor's background is in practice, industry and planning.

## Dave Blaney P.Geo - COO

30 Years experience in the exploration industry with a particular focus on the Irish Midlands Orefield. Mr Blaney is founder and partner in BRG Ltd., who have worked on a number of significant Irish discoveries in the last 20 years.

THE DIRECTORS CONSIDER THAT UMR HAS ACQUIRED A PORTFOLIO OF HIGH-QUALITY LICENCE AREAS IN **IRELAND** DURING A PERIOD THAT OTHER EXPLORATION COMPANIES REDUCED EXPLORATION ACTIVITIES FREEING UP HIGH-QUALITY GROUND.

THE EXPLORATION SENTIMENT HAS NOW CHANGED, MANIFESTED BY THE NUMBER OF DEALS RECENTLY ANNOUNCED BY EXPLORATION COMPANIES IN IRELAND AND SCARCITY OF QUALITY, PROSPECTIVE EXPLORATION GROUND. THIS IS PARTIALLY RELATED TO THE RECENT TURNAROUND ON COMMODITY PRICES. IN PARTICULAR **ZINC**, WHICH IS A PRIMARY FOCUS FOR UMR AND HAS RISEN BY ALMOST 100% IN LAST 12 MONTHS.

# Directors and other information

Chairman Paddy Doherty

Directors Richard O'Shea

John O'Connor Paul Smithwick Dave Blaney

Company Secretary John O'Connor

Company Number 482509

Registered Office 36 Dame Street

Dublin 2 Ireland

Auditors MFOR Audit Services Limited t/a

Brophy Gillespie St. Gall's House St. Gall Gardens South

Milltown Dublin 14 Ireland

Bankers Bank of Ireland

Parliament Street Kilkenny

Co. Kilkenny Ireland

Solicitors Mary Molloy Solicitors

2 Rose Inn Street

Kilkenny Ireland

Shares in issue plus options (Feb 2018) 50 million (44m shares 6m options).

#### **Contact Details**

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