R36/19

### **Ballinasloe Surrender Report**

PL 3459

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# <u>R36/19</u> Ballinasloe Surrender Report – PL 3459 Dave Blaney, June 2019

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#### 1. Introduction

PL 3459 forms part of the Ballinasloe Block, located in eastern Co. Galway between the towns of Athlone and Ballinasloe. The Ballinasloe consists of three contiguous licences (PL's 2105, 3163, and 3459), covering a surface area of 126.75 km<sup>2</sup>, consisting of generally undulating, glaciated terrain some forestry and raised bog. Wetlands, the Shannon Callows, occur along the eastern side of PL's 2105 & 3163. Settlement patterns are generally rural and dispersed, the major towns of the region are Ballinasloe located on PL3459 and Athlone are located just off the edge of the licence block to the north. There are a number of environmental protection areas (SAC's, SPA's and NHA's) on this licence block.

PL 3459 was applied for by Beal Na Blath Ltd. in early 2015 and awarded in July 2015, this report is a review of the second period of exploration work carried out on the licence. BRG Ltd. was retained by Beal Na Blath Ltd. to act as consultants and to assist with the management of the preliminary exploration activity in this region.

This report describes work carried out on PL3459 between July 2017 and June 2019. Based upon a strategic assessment of its targeting philosophy and short to medium term objectives, Beal Na Blath Ltd has decided to surrender this licence forthwith.

The work carried out during this review period has consisted of:

• Strategic target assessment

Beal Na Blath consider that this region is undoubtedly prospective for; "Irish Type" carbonate hosted base metal mineralisation hosted by the Waulsortian Reef Formation and / or the Navan Beds. Geological mapping, prospecting, interpretation of regional geophysics and digital terrain models confirms that the geological / structural setting is highly prospective.



Figure 1: Location Map

#### 2. Environmental Considerations

The Ballinasloe licence block is located in a region with a number of environmentally sensitive areas that have been classified as either Special Protection Areas (SPA), Special Conservation Areas (SCA) or National Heritage Areas (NHA), with some overlap been the specified conservation areas. There are two SAC's located on the Ballinasloe licence block, namely the River Shannon Callows (000216) and the Glenloughaun Esker (002213).



Figure 2: Location of Special Areas of Conservation (SAC)

In addition there are a number of Special Protection Areas (SPA), which include part of the River Shannon Callows (004096) and River Suck Callows (004097).



Figure 3: Location of Special Protection Areas (SAC)

There are also two National Heritage Areas, the River Suck Callows (000222) and Carricknaghtan Bog (001623).



Figure 4: Location of National Heritage Areas (NHA)

### 2.1 Environmental Policies / Practices

Beal Na Blath is committed to conducting all exploration activities on the Ballinasloe Block to the highest possible environmental standards. Beal Na Blath is working closely with the relevant statutory / regulatory authorities to ensure that all exploration activities have been carried out to the highest possible environmental standards.

A dedicated Environmental Officer has been assigned to the project and is responsible for ensuring that the exploration activities in general and diamond drilling in particular meet the highest possible standard. Beal Na Blath has developed an environmental protocol and Standard Operating Procedure (SOP) for all exploration activities. Detailed environmental records will be maintained on exploration activities.

### 3. Regional Geological Setting / Mineral Occurrences

The Ballinasloe Licence block is located in eastern County Galway in an area underlain by Devonian to Carboniferous aged sandstones, shales and limestones (Figures 5 & 6). The Ballinasloe Block is located on the northern margin of the Tynagh Basin that was actively subsiding during the early Lower Carboniferous (Courceyan – Arundian). Outcrop in this region is poorly developed and the geology has been interpreted from float mapping, drillhole data, geochemistry, ground and airborne geophysical surveying.

The block is located along a west-southwest plunging anticline cored by the Navan Beds Formation, the oldest rocks outcropping on the block, which subcrop to the west of Athlone. During the late Devonian / early Carboniferous a northward migrating marine transgression moved across the peneplained Irish Midlands resulting in a change from a continental to a marine depositional environment. The earliest marine facies are the Navan Beds, comprising a series of interbedded shales, siliciclastics and carbonates (micrites, oolites and grainstones), which were deposited in a shallow marine, intra to peri-tidal environment. The Navan beds are conformably overlain by the Argillaceous Bioclastic Limestone (ABL), which outcrops along the core of the anticline and dips gently to the northwest and south. The Waulsortian Reef conformably overlies the ABL and subcrops along the eastern side of the block, on PL's 2105 and 3163. The Reef of this region demonstrates a pronounced thinning to the south, with thicknesses of >400m recorded in the Ballinasloe region to zero to the south of PL2105 into the Tynagh Basin, where the Reefal micrites grade laterally into an argillaceous, nodular bedded, Reef Equivalent facies known locally as the Grey Calp. The well developed Waulsortian Reef to the north of this licence block 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. This 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. A discrete Lower Transition facies is mapped immediately overlying the ABL contact.

The Ballinasloe Block is located along a marked facies change that occurs during the Supra Reef, Chadian / Arundian periods, coincident with the development of extensional tectonics and the break-up of the Irish Midlands region into a series of horsts and grabens. The Supra Waulsortian Reef facies in this region can be subdivided into undifferentiated Visean Shelf Limestones to the north / northwest and basinal, turbiditic Calp limestone to the south. The contact with the underlying Waulsortian Reef is conformable. The shelf edge that controls the northern extent of the Tynagh Basin is interpreted as running almost east – west bisecting PL's 2105 and 3459. The presence of outcropping oolitic limestones within the Calp centred on 192000E / 229000N on PL2105 suggests, either a period of shallowing water depth related to localised uplift or slumping of shelf facies into the basin at a tectonically active and unstable basin margin.



Figure 5: Ballinasloe Block - Geological Map



Figure 6: Ballinasloe Region, Simplified Stratigraphic Column

The Waulsortian Reef and Navan Beds are considered to be the main target lithologies in this part of the Irish Midlands. The Waulsortian Reef exploration model would indicate that massive sulphide lenses, hosted by laterally extensive breccia systems should be developed close to the contact between the Waulsortian Reef and the underlying ABL. The Navan Beds model proposes a stacked lens system controlled by facies changes within the Navan Beds sequence with mineralisation hosted by carbonates / arkosic sandstones and controlled by shale horizons acting as aquacludes. Active normal faulting controls the emplacement of metal bearing hydrothermal fluids and sulphate bearing cooler fluids into the sites of deposition.

One significant mineral occurrence has been discovered on the Ballinasloe Block. This is located at Glentaun, to the northeast of PL3459, and consists of 0.6m intersection of massive sphalerite and galena grading 35% Zn + Pb in a hole drilled by Canadian Superior.



Figure 7: Ballinasloe Block - Mineral Occurrences

#### 4. Work Programme

The work programme carried out by Beal Na Blath during the second two year phase of the licence block has involved a strategic assessment of priorities across the Irish Midlands Orefield.

#### 4.1 Target reassessment

On the Ballinasloe Block Beal Na Blath has carried out an assessment of the merits of the various targets present and evaluated them by comparison with other ground and the strategic objectives of the Company's Irish exploration programme.

When evaluating the potential of the Ballinasloe the merits of the individual targets and the overall fit of the region into Beal Na Blath's exploration strategy was considered. It was found that individual targets on the Ballinasloe Block had some significant negative issues that relegated them to second tier status. The historic mineralisation and alteration in the western part of the Block is hosted by the Waulsortian Reef and associated with a structurally controlled shelf margin. To the west the target depth for base of Reef hosted mineralisation becomes prohibitive, with depths in excess of 700m. The mineralisation intersected by historic drilling at Glentuan is now though to be related to a thin massive sulphide vein, possibly associated with a fault, with little possibility of building significant tonnage. This mineralisation is also located on the licence boundary with no possibility to follow it out to the north and northeast. On PL3163 there is a potential Navan Beds target to the north of the licence low grade mineralisation is noted in this area, however, Beal Na Blath consider the faulted, northern side of the inlier to be more prospective and unfortunately this target area falls on the adjoining licence to the north.

Beal Na Blath has developed an exploration strategy that is designed to test poorly explored areas with new ideas and techniques. The intent is to secure larger tracts of ground and thoroughly evaluate the untested exploration potential. The focus of this work will be along the major mineralising trends, with particular focus on the Navan-Silvermines and the Rathdowney Trends.

# 5. Conclusions and Interpretation

The results of the 2017 – 2019 exploration programme carried out on the PL3459 have not been encouraging. The work carried was re-evaluation of the Ballinasloe Block from the perspective of the newly evolved exploration strategy being employed by the company. Unfortunately, this has resulted in the Ballinasloe Block being downgraded in terms of its strategic importance and PL3459 is being surrendered forthwith.