Limerick Project

Gortdrum Block

REVIEW REPORT FOR

PROSPECTING LICENCE AREA 4498

Period ending 11th February 2023

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Introduction

This report summarises exploration work carried out by Group Eleven Mining & Exploration Ltd (Group Eleven) on Prospecting Licence Area (PLA) 4498 in County Tipperary during the 2-year period ending 11th February 2023.

PLA 4498 is being explored as part of a small group of licences which comprise of PLAs 4498 and 350, informally termed the Gortdrum Block by Group Eleven. The ground is contiguous with Group Eleven's 'Emly Block' which lies to the southwest. The licence is located 3 km northeast of Tipperary town, and 30 km southeast of Limerick City. PLA 4498 covers an area of 23 sq. km. (Figure 1).

Figure 1: Map showing location of the Gortdrum Block

The licence is characterised by gently undulating lowland terrain with slightly higher elevations in the north and south of the area. The land is primarily in agricultural use, mostly grazing, with a few areas of poorer scrubland, where bedrock is closer to the surface. The town of Tipperary lies to the south of the area and farms and ribbon development occur along roads throughout the area. Access to the area is via the N24 national primary route and a network of secondary roads and farm tracks. The main Dublin to Cork railway and a spur line to Limerick City, also pass through the area.

The Gortdrum project area is considered to be prospective for Lower Carboniferous hosted Cu-Ag deposits, similar to that mined at Gortdrum and discovered at Aherlow in Co. Tipperary and at Tullacondra, Co Cork.

Exploration History

PLA 4498 is a new licence with no previous exploration work. However, the area was extensively explored by Gortdrum Mines Ltd and Irish Base Metals from 1962 to 1976 when the area was held under PLA 69 and various mining leases, the last of which was SML89. During this time the Gortdrum Cu-Ag/Hg deposit was discovered and mined. The key milestones were as follows:

- Discovered in 1962 by soil and stream geochemistry and geophysics (IP)
- By 1966, 16,000m drilled.
- Pre-mining resource of 4.2mt @ 1.2% Cu, 23 g/t Ag
- Mining commenced in 1967 – open pit.
- Produced copper/silver concentrates and mercury until closure in 1975.
- Total production was 38,000t Cu, 2.9Moz Ag and 271t Mercury.
- Mining Lease lapsed in 1986.

The exploration history of PLA 4498 is summarised in the table below:

Table 1: Summary of exploration history of PLA 4498

Year	Company	Activity
1962	Gortdrum Mines Ltd	Discovery of Gortdrum deposit as a result of reconnaissance geological and geochemical exploration followed by drill target delineation from IP surveys
1963-66	Gortdrum Mines Ltd	Delineation drilling (G series holes), definition of Gortdrum orebody
1965-66	Gortdrum Mines Ltd	Exploration drilling immediately adjacent to deposit (B series holes)
1966	Gortdrum Mines Ltd	Extension of soil geochemistry to northeast of mine area
1969	Gortdrum Mines Ltd	Exploration drilling to northeast of mine along Gortdrum Fault (E series holes)
1972	Gortdrum Mines Ltd – Irish Base Metals	Conclusion of exploration drilling in Gortdrum area (focus shift of exploration north to Coonagh Castle and other Zn/Pb prospects)

Exploration in the Gortdrum area, since discovery of the Gortdrum deposit, was effectively in 4 phases:

- Phase 1: Discovery and delineation of the Gortdrum orebody (1962-66)
- Phase 2: Exploration immediately adjacent to the deposit (1965-66)

- Phase 3: Exploration north-east of the mine along strike of the Gortdrum Fault (1969-72)
- Phase 4: Exploration to the north of Gortdrum for Waulsortian hosted Zn-Pb mineralisation (1972 onwards)

No significant exploration has taken place in the area now covered by PLA 4498 since the early 1970's.

Geology

Regional Geology

The regional geology of the Limerick Basin area is well known following the work of Shepard-Thorn (1963), Philcox (1984), Strogen & Sommerville (1992), and more recent authors such a Blaney & Redmond (2014). This work has most recently been summarised for Group Eleven by Kelly (2018).

The Gortdrum Block lies at the south-eastern margin of the Limerick Basin and just to the southeast of the Limerick Volcanic centre and overlies a variable bedrock geology, which ranges from Devonian to Tournaisian (Figure 2).

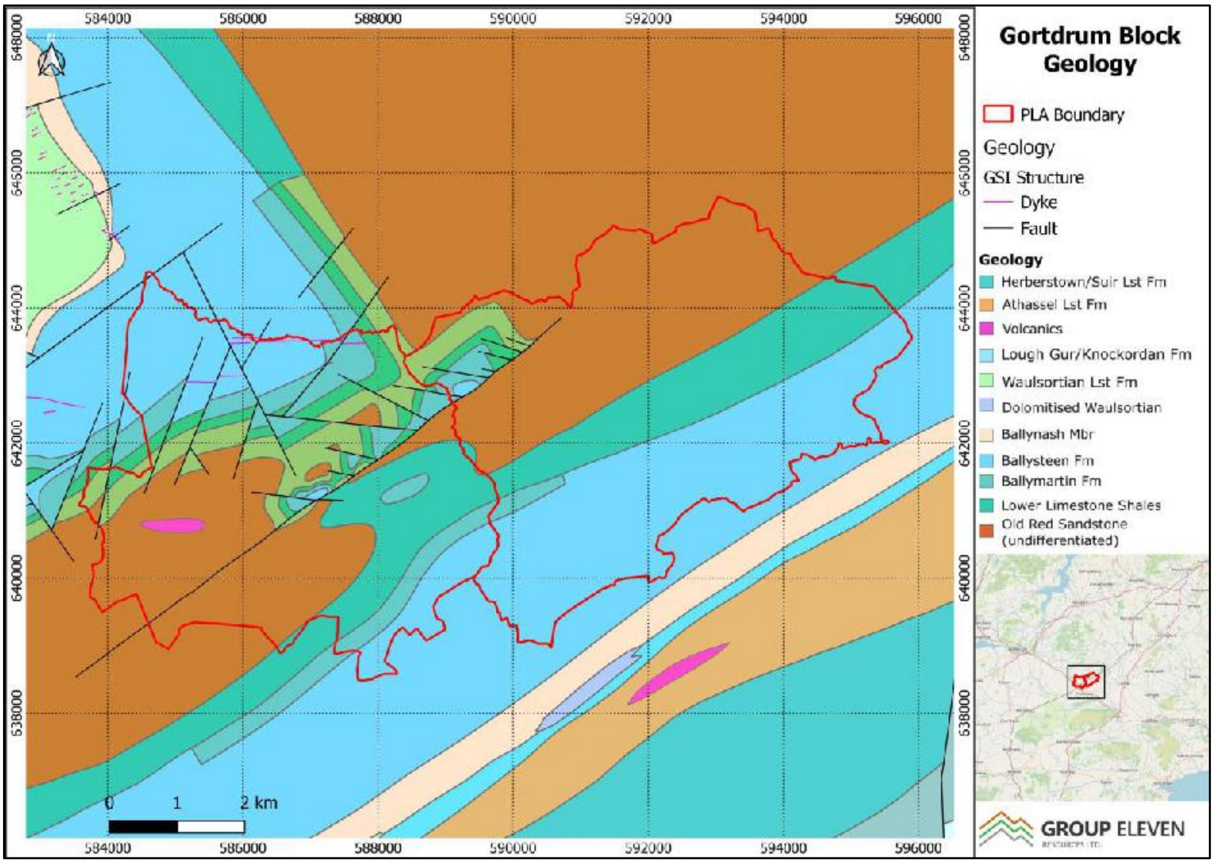

Figure 2: Gortdrum Block – GSI Bedrock Geology

The stratigraphic sequence is described below:

Devonian Clastic Sequence

The oldest part of the stratigraphy exposed in the Limerick District is the uppermost Old Red Sandstone beds. These are Devonian to early Carboniferous in age and the lithologies are described as consisting of massive structureless sandstones and red to green siltstones, which are overlain conformably by the Lower Limestone Shales.

Lower Limestone Shale Group

The Lower Limestone Shale Group represents the initial marine flooding at the start of the Carboniferous transgression over the Old Red Sandstone continent. The Lower Limestone Shale sequence in the Limerick area (Philcox, 1984) is largely understood from coastal sections and the Pallaskenry borehole (Somerville and Jones, 1985) and from Gortdrum mine on the eastern side of the Emly inlier. The Lower Limestone Shale Group is sub-divided into the Mellon House Formation, the Ringmoylan Formation and the Ballyvergin Formation.

Mellon House Formation

The Mellon House Formation succeeds the pale-cream and white terrestrial sandstones of the uppermost Old Red Sandstone facies and is composed of dark-grey laminated siltstones, grey fine-grained sandstones and calcareous shales. Flaser-bedding and cross-stratification area common as are desiccation cracks. The formation is 34.4m thick in the Pallaskenry borehole (LI-68-10), and is known to thicken to the north, but it thins to the northeast and east, being 12.5m in thickness at Ballyvergin. At Gortdrum, the formation contains five distinct units comprising a total thickness of up to 42m (Duane, 1981).

Ringmoylan Formation

The Ringmoylan Formation is largely composed of dark-grey to black calcareous shales, with subordinate thin beds or bands of bioclastic limestone which are estimated to form only 20 – 30% of the formation. The formation is 31m thick at Pallaskenry but thickens northwards where 47m is recorded at Shannon and then thins north-eastwards, with 23.5m at Ballyvergin. A thickness of 24.3-27.4m is recorded at Gortdrum where the formation is termed the "Dark Limestone" under the mine nomenclature (Steed, 1979).

Ballyvergin Formation

The Ballyvergin Formation (or Ballyvergin Shale) overlies the Ringmoylan Formation and is composed of a distinctive green-grey non-calcareous mudstone with siltstone laminae. The formation is 3m thick at Gortdrum and to 5.4m in the Pallaskenry borehole. It marks a distinctive transition from argillaceous dominated sequence below to a carbonate dominated sequence above.

Argillaceous Bioclastic Limestone Group

The Argillaceous Bioclastic Limestone Group is composed of two formations: the Ballymartin Formation and the overlying Ballysteen Formation.

Ballymartin Formation

The Ballymartin Formation is composed of thinly bedded, pale-grey, muddy limestones and dark-grey calcareous shales. The proportion of shale to limestone is approximately 1:1. The formation varies between 11.45m and 45.6m in thickness in the Limerick area. It is equivalent to the Lower Pale Limestone at Gortdrum and the Lower Ballysteen Limestone at Silvermines. It is distinguishable in core, but rarely outcrops and in mapping is generally shown as included within the Ballysteen Limestone Formation.

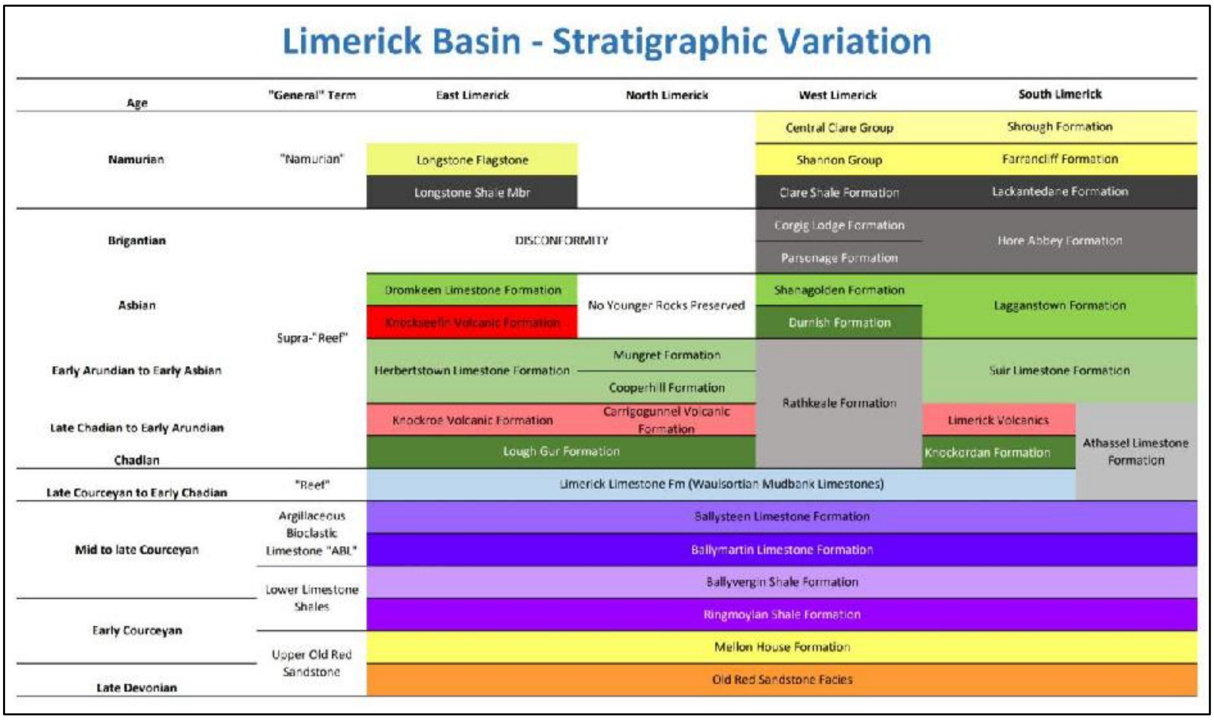

Figure 3: Stratigraphic Variation in Limerick

Ballysteen Formation

The Ballysteen Formation is distinguished from the underlying Ballymartin Formation by the development of thick, rather than thin, bedded, bioclastic, slightly argillaceous limestones with the initial unit forming a distinctive carbonate rich (>90% limestone) marker (Pallaskenry Member of Somerville and Jones, 1985). Above this, the formation can be sub-divided into three separate units, a lower unit of dark, well-bedded argillaceous wackestones, an upper unit of more markedly argillaceous limestones and a formally named uppermost unit, the Ballynash Member (also termed the Wavy Nodular Limestone or Nodular Micrite Unit), composed of nodular micrites (frequently cherty) and shales that immediately precedes the onset of Waulsortian limestone deposition.

Waulsortian (Limerick Limestone Formation)

The Waulsortian limestones (Limerick Limestone Formation) form the primary host rock for hydrothermal alteration and base-metal mineralization in the southern Irish Midlands (Stonepark, Pallas Green, Silvermines, Lisheen, Galmoy, Tynagh etc.). The Waulsortian forms a complex composed of stacked mounds, sheets or tabular bodies of massive to poorly bedded biomicrite wackestone with large cavity spaces (stromatactis) infilled with reworked calcite muds and fibrous or later blocky calcite spar cements (Lees and Miller, 1995). These clean limestone units may be separated by slightly argillaceous to argillaceous (frequently cherty) "intermound or offbank" beds referred to as Waulsortian equivalent facies by some workers.

Drilling in the Stonepark and Pallas Green areas and interpretations from work in other areas of the Limerick Basin, indicates a highly variable thickness pattern in the Waulsortian on the northern limb of the Limerick syncline, from 140m to 440m, almost certainly related to both consistent westwards deepening and thickening of the formation, but also due to more local differential subsidence across syn-depositionally active structures.

The stratigraphic sequence above the Waulsortian shows considerable variation across the Limerick Region (Figure 3).

Supra-Waulsortian Sequence – South Limerick

Lough Gur/Knockordan Formation

The Waulsortian limestones are overlain by dark-grey to black, cherty, argillaceous wackestones of the Lough Gur Formation, known locally as the Knockordan formation. The Lough Gur Formation is equivalent to the Crosspatrick Formation in the Rathdowney Trend (Lisheen/Galmoy) and the Oldcourt Cherty Limestone Formation (Silvermines District). Formation thickness is variable, probably initially infilling relict topography on the upper surface of the Waulsortian mound complex, but thickness variations recorded suggest that a significant amount of lateral thickness variation in the Lough Gur and the underlying Waulsortian limestone is controlled by structurally influence facies variations.

Three facies within the Lough Gur have been identified previously by Strogen(1988); 1) the principal Lough Gur facies – described above , 2) the Grange facies – a poorly sorted coarse crinoidal biosparite with rare chert and 3) the Coolnapisha facies – non argillaceous, well washed grainstones rich in brachiopod debris but lacking in bryozoa. The Grange facies is present in the drilling at Ballywire, overlying the core facies Lough Gur limestone.

The Lough Gur thickness is estimated at 100-150m in the south Limerick/Tipperary area. The upper part of the formation may contain tuffs and lavas associated with the onset of volcanism and the lavas and volcanogenic sediments of the Knockroe Volcanic Formation.

Athassel Limestone Formation

The Athassel Limestone Formation of Carruthers (1985) overlies the Lough Gur/Knockordan Formation and comprises dark grey, fine grained, argillaceous, cherty wackestones with interbedded lavas, ashes and laminated oolitic sections. The interbedded lavas and tuffs are most likely related to volcanism near the Limerick Syncline.

The unit is interpreted as basinal in nature and a thickness of approximately 250m is suggested by Archer et al. (1996) and Somerville et al. (1996). Biostratigraphic dating of the formation from drill holes across Tipperary indicated ages of a late Tournaisian to Arundian age. The ages and thickening of the formation to the east likely indicates that a basin was located in the area to the southeast of the Emly Inlier, now known as the "Golden Gulf". The formation is believed to pinch out to the west of Ballywire where it is approximately 35m thick.

Herbertstown/Suir Limestone Formation

The Suir Limestone Formation (local Equivalent to the Herbertstown Formation in the Limerick Syncline) is a ~250m thick sequence of coarse, bioclastic grainstones, composed of oolitic, peloidal and coralline limestones. The Suir Limestone was likely deposited in a shallow water environment and is Arundian in age.

Knockroe Volcanic Formation/Limerick Volcanics

A volcanic sequence is frequently seen in drillholes south of the Emly Inlier and is believed to be stratigraphically equivalent to the Knockroe Volcanics of the Limerick Syncline. The Knockroe Volcanics consists of a complex package of volcaniclastic sediments, lavas and igneous intrusives of alkali basalt to trachytic composition. The initial phase of alkali basalt activity is marked by the emplacement of a significant number of large diatremes ranging from 100-500m in diameter and related to surface Maar cone development on the Carboniferous land surface at that time. The Knockroe volcanics vary in thickness from 250 to 500m and dating of interbedded limestones indicates a largely Chadian age for the volcanism, younging from west to east. Intrusives consist of a swarm of alkali basalt sills and dykes hosted within the Waulsortian and Lough Gur Formations and a late-stage suite of porphyritic trachyte-syenite dykes and plugs. Blaney and Redmond (2015) clearly indicate that timing relationships determined from drilling in the Pallas Green and Stonepark areas show evidence for pre, syn and post mineralization volcanism.

Local Geology, Structure and Mineralisation

Prospecting licence area 4498 is underlain primarily by Devonian clastic rocks and the overlying Tournaisian carbonates, consisting primarily of the Ballysteen Limestone (Figure 4). Clastic rocks of Devonian age occur in the northern part of the licence area.

The major Gortdrum Fault, which is a regionally significant structures traverses the north-western part of the licence and downthrows to the northwest, bringing in the younger carbonates.

The historical literature (Steed 1986, Thompson 1966) describes the carbonates in terms of the Dark and Pale Limestone. These units are considered to be the Ringmoylan Shale and Ballysteen Limestone (Table 2).

Table 2: Stratigraphic Nomenclature Gortdrum

Current Stratigraphic nomenclature (Philcox)	Gortdrum Stratigraphic nomenclature (Steed, Thompson etc.)	Lithology	Unit thickness (m)
Waulsortian Limestone	Not seen in mine area	Clean micritic limestone	~ 400 +
Ballysteen Limestone Formation	Middle and Upper Pale Limestone	Argillaceous Bioclastic Limestones	290
Ballymartin Formation	Lower Pale Limestone?	Thin bedded, slightly argillaceous limestone	40
Ballyvergin Shale	Mudstone	Grey-green non- calcareous mudstone	3
Ringmoylan Shale	Dark Limestone	Bioclastic limestone with interbedded black shale	25
Mellon House Beds	Transition Beds	Calcareous shale and sandy limestones	32
Upper Old Red Sandstone	Upper Old Red Sandstone	Pale dolomitic sandstone with red and green siltstone & shale	270

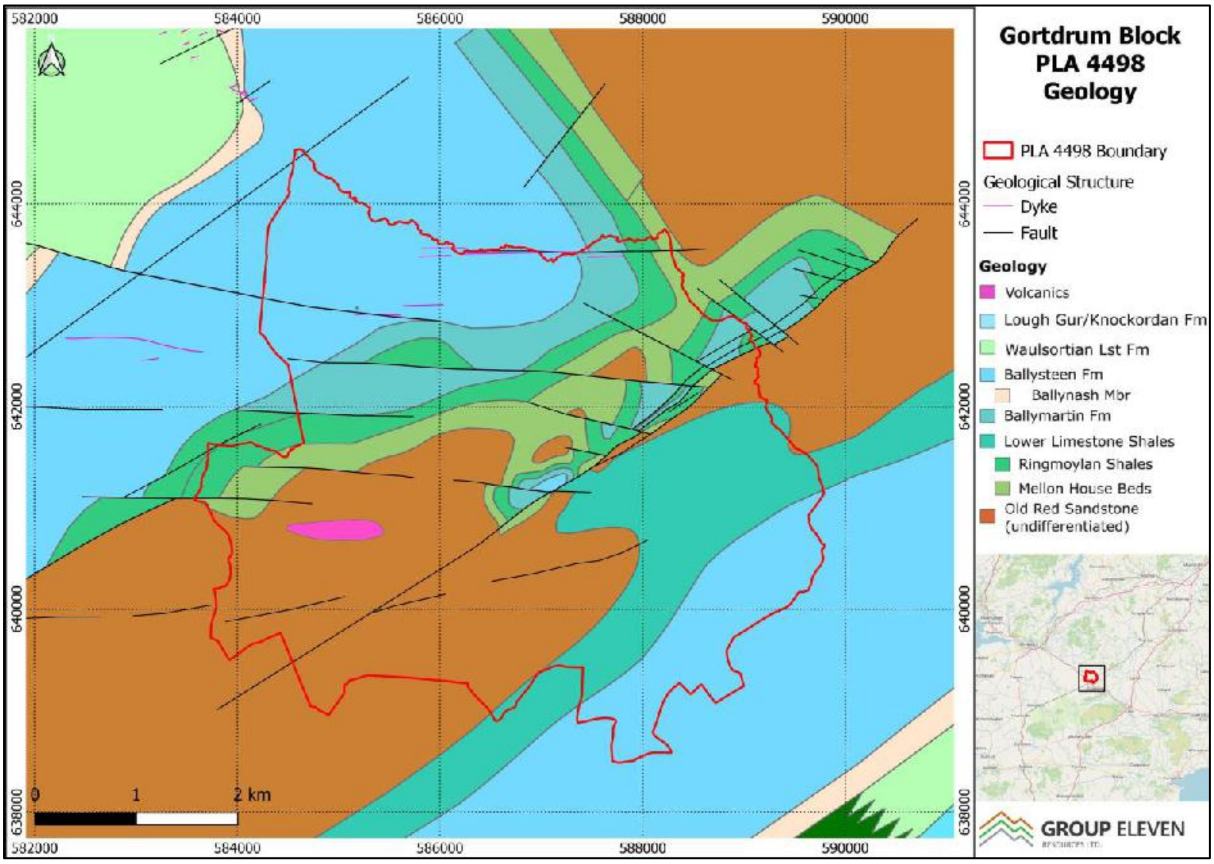

Figure 4: Map showing the Interpreted Bedrock Geology of PLA 4498

Gortdrum Deposit

The following section on the geology of the deposit is compiled from Steed, Thompson and a number of other authors, such as Tyler, who have provided informal descriptions of the deposit. The Gortdrum Fault (Figure 5) is by far the most important factor controlling the distribution of mineralisation at Gortdrum.

It is genetically related to the regional folding and appears to have developed primarily to accommodate the intersection of three opposing folds in the hanging wall of the fault. These are the east-west Pallas syncline to the north, the north-south Slieve Phelim anticline to the north-east and the ENE Emly perianticline to the south-west. The Pallas syncline is eliminated against the fault approximately 8000 feet ENE of the mine. The north-south axis of the Slieve Phelim anticline is rotated to join with the ENE axis of the Emly anticline. This is achieved in the hanging wall of the Gortdrum Fault by a series of small dextral offsets of the N-S fold axis, along east-west and WNW striking faults, which are subsidiary or secondary to the main Gortdrum Fault. Both the Slieve Phelim and Emly anticlines have well-developed crestal synclines. Gortdrum is located in a small structural basin formed where the crestal syncline of the Emly anticline is intersected by the much offset crestal syncline of the Slieve Phelim anticline. A second, although only weakly mineralised structural basin occurs 8000 feet east of Gortdrum, where another section of the offset Slieve Phelim crestal syncline intersects the east-west Pallas Syncline. Figure 6 below shows the position of the Emly and Slieve Phelim anticlines.

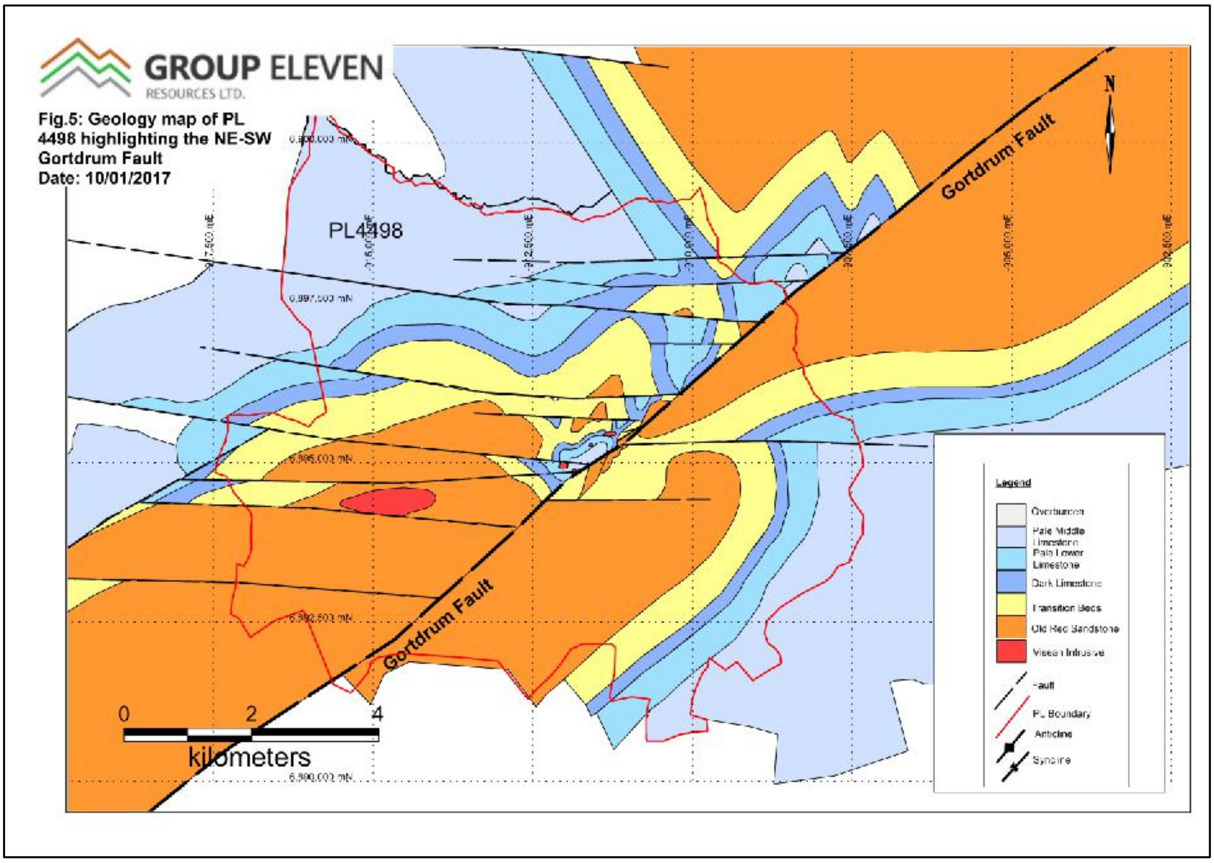

Figure 5: Geological map of PL4498 highlighting the NE-SW Gortdrum Fault

There is no evidence at Gortdrum to suggest that the Gortdrum Fault was active during sedimentation. In the case of the Pallas syncline the Visean succession contains 2000 to 2500 feet of basic lavas, tuffs and agglomerates. Associated with these extrusive rocks are a swarm of close spaced east-west striking dykes and small plugs of basalt. Gortdrum is close to the southern edge of this dyke swarm and at least 3 small plugs and ten dykes were exposed in the open pit. All of these small plugs and dykes have been subjected to hydrothermal alteration. In many cases this has progressed to the point where the basalt has been reduced to a rock composed essentially of clay minerals and carbonate. Within the deposit these dykes were referred to as Buff Alteration Zones. In places this alteration was accompanied by extensive dolomitisation and silicification of the wall rock limestones. Post-dating basalt dyke intrusion and hydrothermal alteration was a period of tuffisite or igneous breccia formation. These breccias are nearly always closely associated with the earlier dykes and plugs; they occur as thin dykes often no more than a few millimetres thick, and small irregular plug-like bodies. All of this intrusive material is, without exception, pre-faulting and folding.

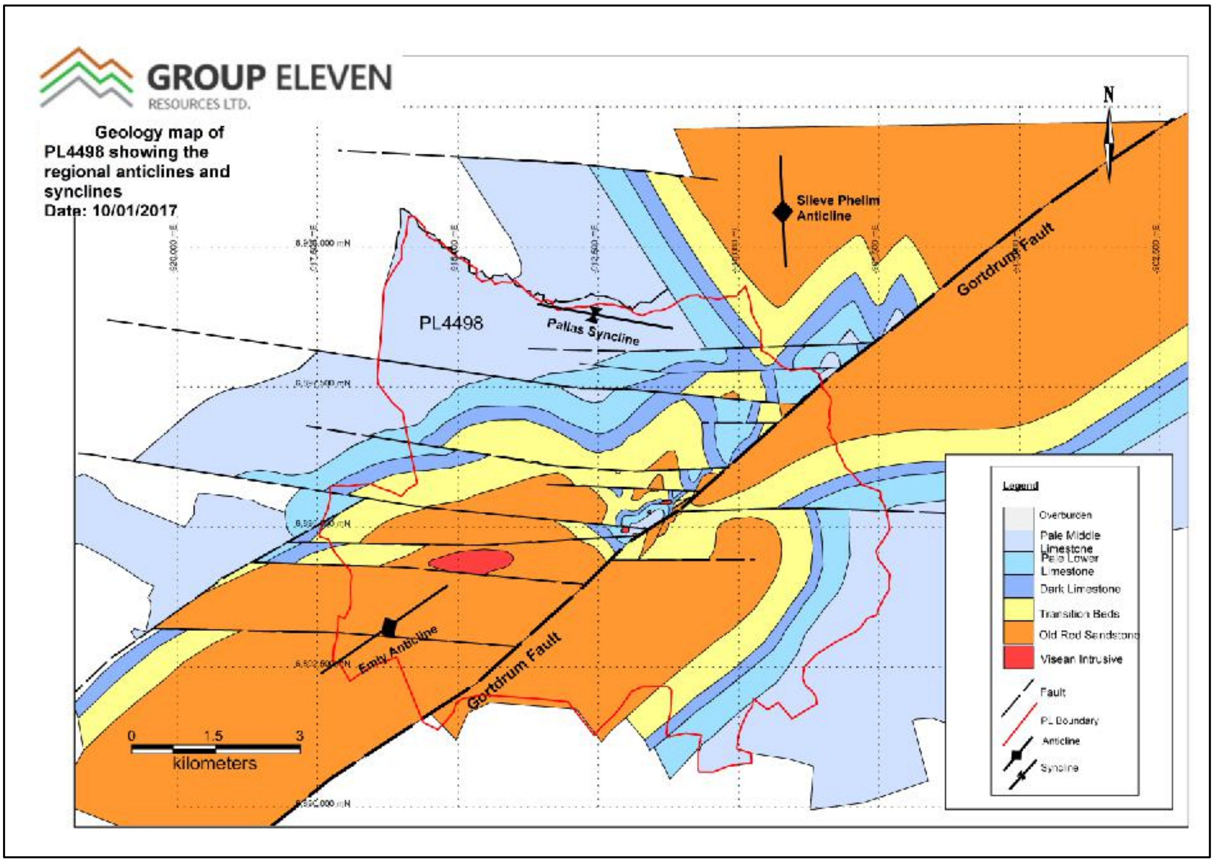

Figure 6: Geology map of PL4498 showing regional anticlines and synclines.

Orebody Geology

The orebody is clearly divisible into two halves (Figure 7). The western ore zone cross-cuts severely deformed limestone and shales in the hanging wall of the Gortdrum Fault. The southern boundary of the ore is the Gortdrum Fault: the northern boundary is an assay wall. The western ore zone can be further divided into two sub-zones. The main sub-zone is adjacent to the fault. The smaller sub-zone is centred on a wide altered dyke, the main Buff Alteration Zone. This dyke zone is severely faulted and sheared. Such deformation along dykes in the hanging wall of the Gortdrum Fault is typical, the dykes having provided obvious planes of weakness, along which stress release could be channelled during movement along the main fault. Mineralisation along the dyke dies out rapidly westwards as the dyke and Gortdrum Fault diverge.

The eastern ore zone is in the footwall of the Gortdrum Fault and is contained within a narrow wedge of severely deformed limestones bounded by the Gortdrum Fault to the north and a subsidiary structure, the South Wedge fault to the south. East, beyond the limits of the open pit, this structure re-joins the Gortdrum Fault. The limestones within this fault wedge dip very steeply to the north-west.

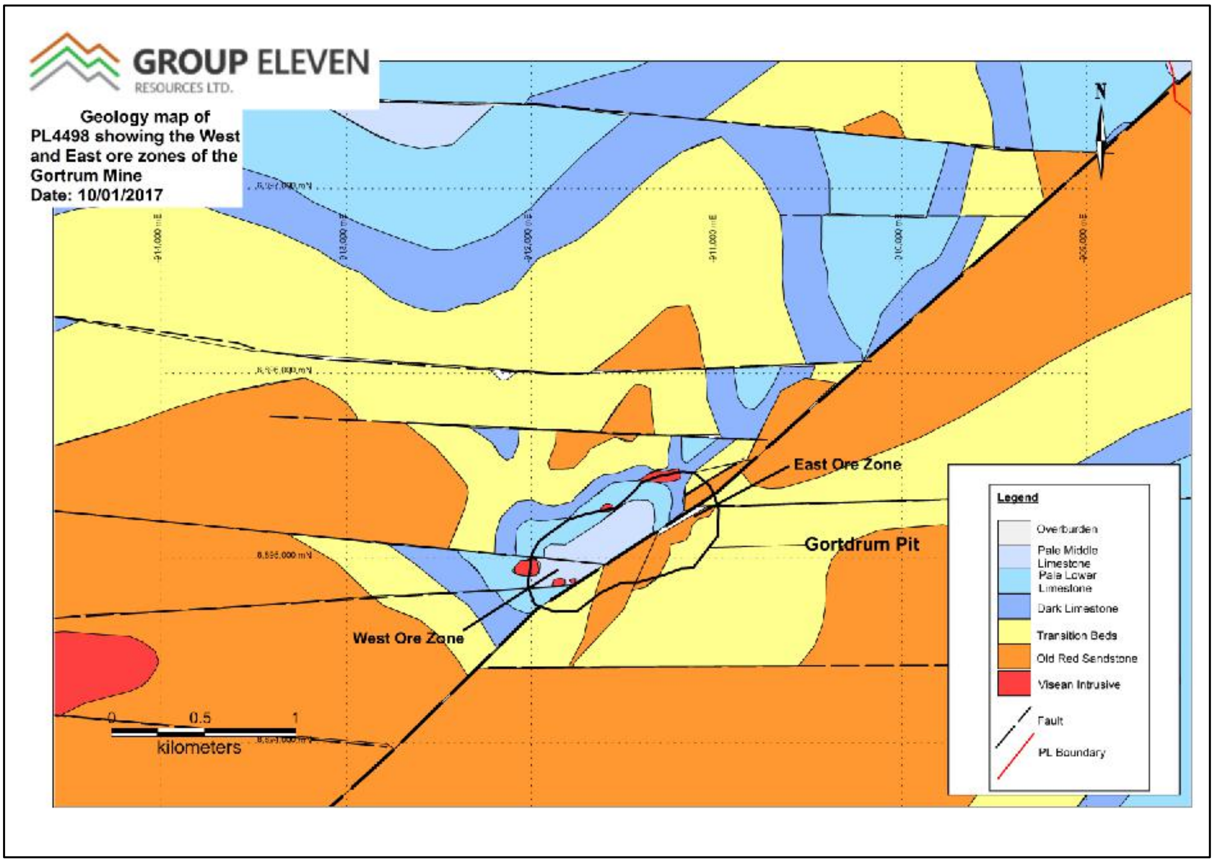

Figure 7: Geology Map of PL4498 showing the position of east and west ore zones.

The South Wedge fault and wedge structure are cut off above, at the eastern end of the deposit, by an over thrust block of Old Red Sandstone and Transition Beds. The thrust plane in turn, is dislocated by the Gortdrum Fault, which is the only fault structure known to offset the thrust, and a small saucer of over thrust material is isolated north of the Gortdrum Fault. To the south-east the thrust most likely passes into bedding slip within the Old Red Sandstone. The South Wedge fault is almost certainly an over-steepened bedding slip, initiated originally within the very shaly units of the Transition Beds. Both wedge development and thrusting are interpretable in terms of secondary stress release structures during strike slip movement along the main Gortdrum Fault; they do not imply more than one period of major tectonism. The absence of major mineralisation in the hanging wall of the Gortdrum Fault, immediately north of the wedge, can be most easily explained by late, post-mineralisation, sinistral movements along the Gortdrum Fault, of the order of 1000 feet. This would mean that at the time of mineralisation the west end ore zone was located immediately north of the east end ore zone. Figures 8 and 9 show cross sections through the West and East orebodies, respectively

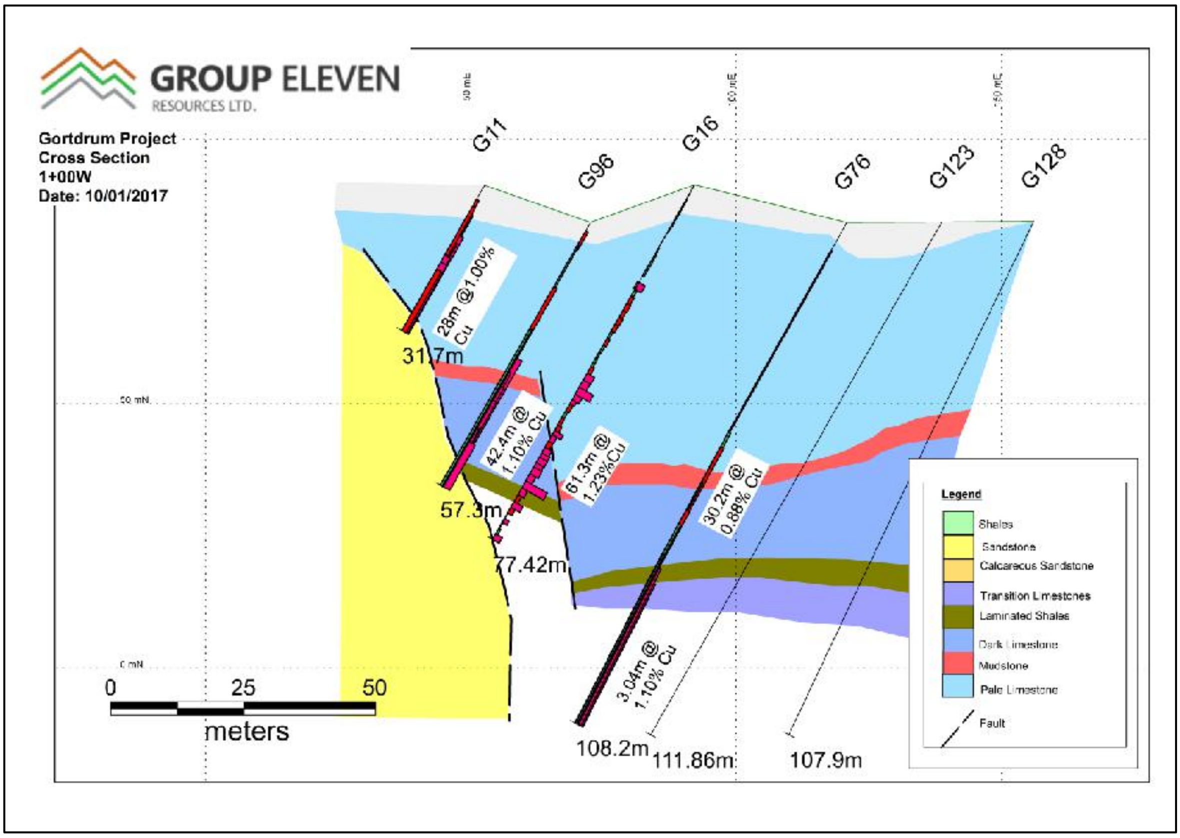

Figure 8: Cross Section 1+00W, West orebody

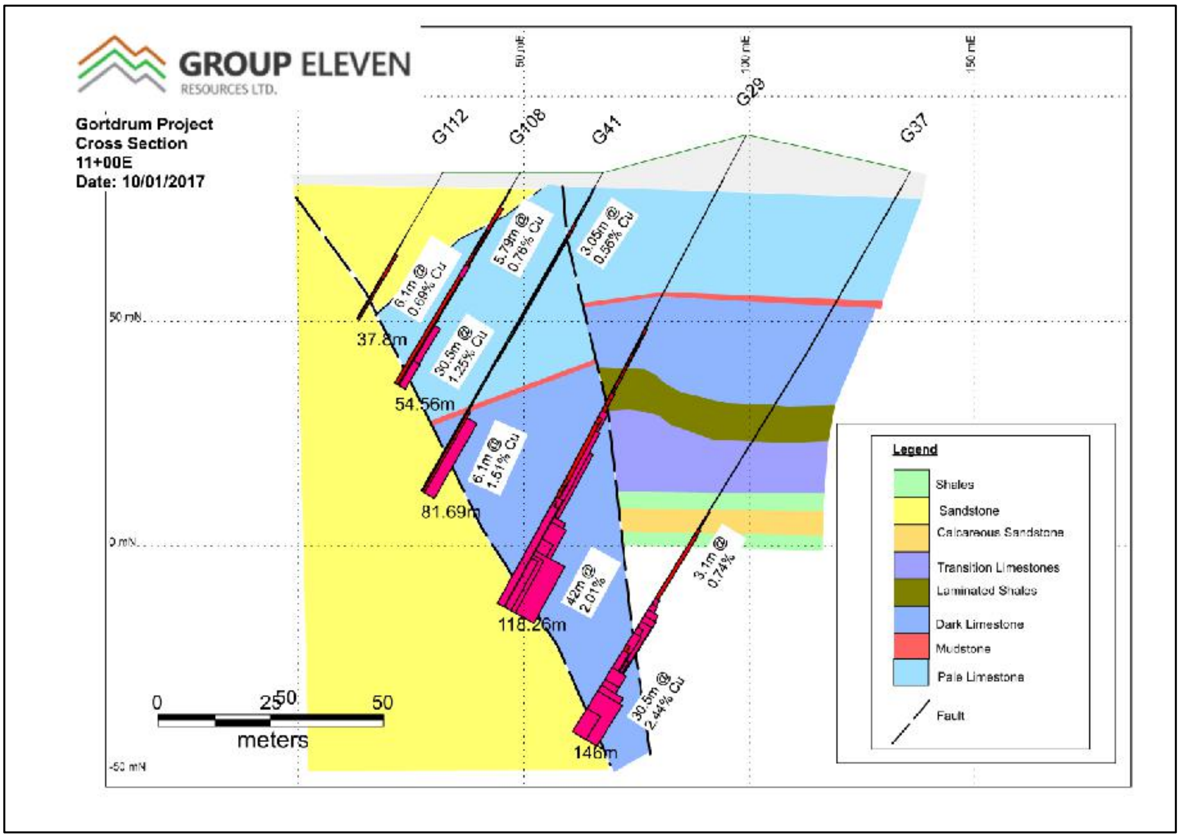

Figure 9:Cross Section 11+00E, East orebody

Mineralisation

The copper mineralisation occurred in four sulphide phases. These in order of decreasing abundance were bornite and chalcocite in eutectic intergrowths, chalcopyrite and tennantite. In general, bornite and chalcocite increased with depth at the expense of chalcopyrite and tennantite. Tennantite is the only significant host of arsenic and antimony in the deposit. This makes it possible to use assay data for these two elements to quantify the amount of tennantite in the deposit at any one point. At any one level the tennantite content of the ore decreased with increasing copper grade, which in turn increased with increasing severity of deformation of the host rocks. Hence the ore with the lowest tennantite content at any given elevation within the western ore zone, was adjacent to the Gortdrum Fault.

The tennantite became more arsenious with depth. The mean arsenic: antimony ratio increased from 3:1 to 7:1 between 100 and 200 feet below surface. Most of the mercury was contained within the tennantite. This is demonstrated by the constant antimony to mercury ratio throughout the orebody. Mercury therefore decreased in depth in step with the tennantite.

Previous work by the Current Licensee

The table below summarises the work completed by Group Eleven on PLA 4498 between 2015 and 2021.

Years	*Company*	*Activity*
2015-2017	Group Eleven Resources	• Cataloguing of data and preliminary data capture • Drill hole compilation
2017-2019	Group Eleven Resources	• Capture of Historical Soil geochemistry • Rock & Tailings Sampling • Review of Structural Setting • Regional Stratigraphic Review • Regional Structural Interpretation • Regional Airborne Magnetic survey.
2019-2021	Group Eleven Resources	• Drilling – G11-4498-01

Work by current licensee during reporting period

Drilling – G11-4498-02

Aims of the Drilling

The aim of the short drilling programme was to try and better establish the location of the Gortdrum Fault to the east of the mine. Although the structure has been positioned with some degree of certainty by the 'E hole' drilling programme (completed in the 1970's) few of the holes intersected the fault plane. The drilling by Group Eleven in 2020 was planned to drill through the Fault, but neither hole intersected what was considered to be the main fault plane. This cast some doubt on the accuracy of the locations of the historic hole collars and Fault trace.

The recent drilling consisted of two short drill holes, sited to collar in the argillaceous limestone unit and intersect the Fault at 70-80m depth, thereby testing the lower units for copper mineralisation and providing an accurate fix on the Fault, from which the historical holes could be reassessed.

A secondary idea was that the style of veining intersected in the hangingwall and footwall of the Fault may give some indication of what kind of veins sets might also be observed at Ballywire in proximity to a major structure.

Details of Drilling

Hole G11-4498-02: Drilling commenced on 13th January 2023 and was completed on 19th January 2023.

Set-up: Azimuth 150°, Dip -80°. Target depth 100m. Final depth: 97m. Location: ITM E588,951.22, N642,528.51, Elevation 94.62 (VRS RTK)

The original set-up of the hole was planned at -70° but the hole collar had to be moved further south, so to avoid the possibility of drilling into the fault near surface, the angle of the hole was changed to -80°. The overburden in the historical holes was recorded as up to 40m thick.

Location Map

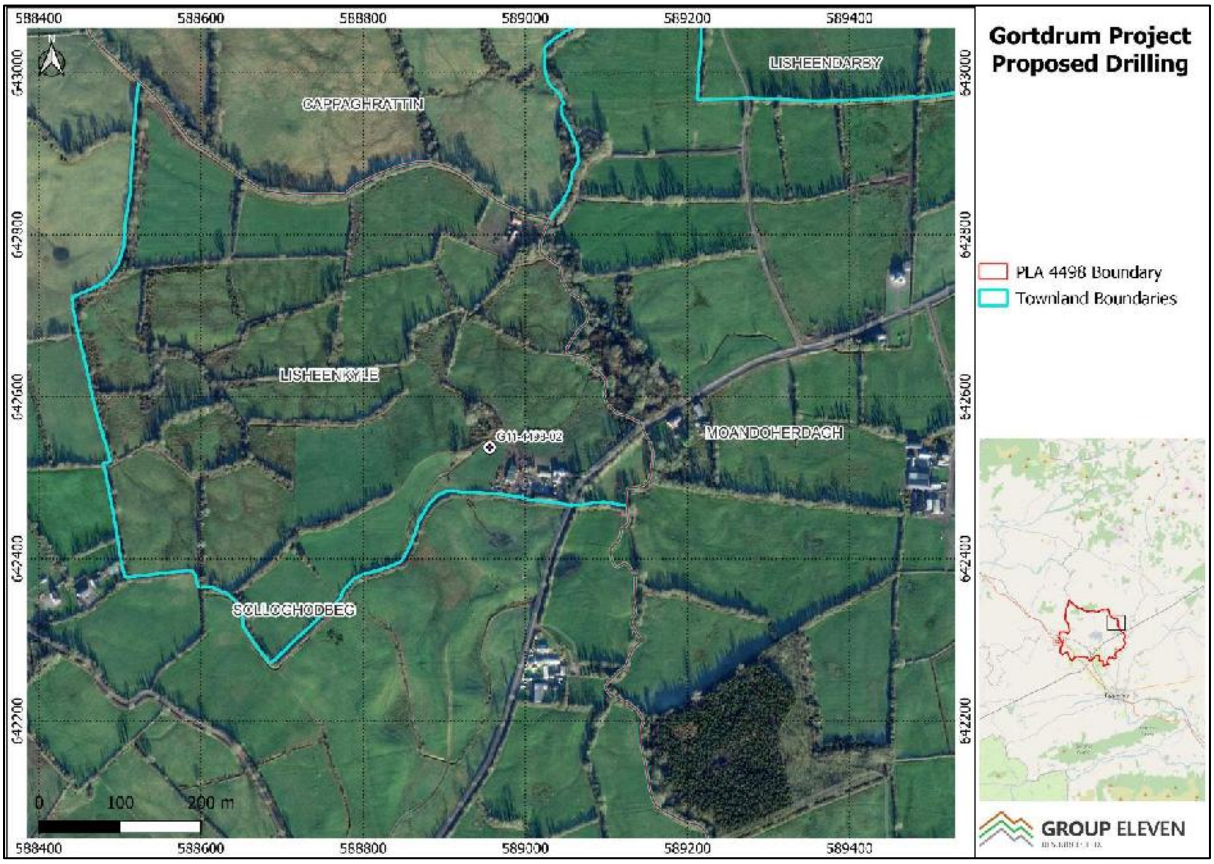

Figure 10: Location of hole G11-4498-02

Geology

The hole encountered 32m of boulder clay above the bedrock with fragments of red sandstone and dark bioclastic limestone being recovered. The rock was cored from 32.2m, first encountering a large vesicular dyke intruded into the shaley bioclastic limestones. Several cavities occurred over the first six meters with the loss of approximately 1m of core. The core throughout the hole was quite broken with an overall RQD of 65% and recoveries of 97%.

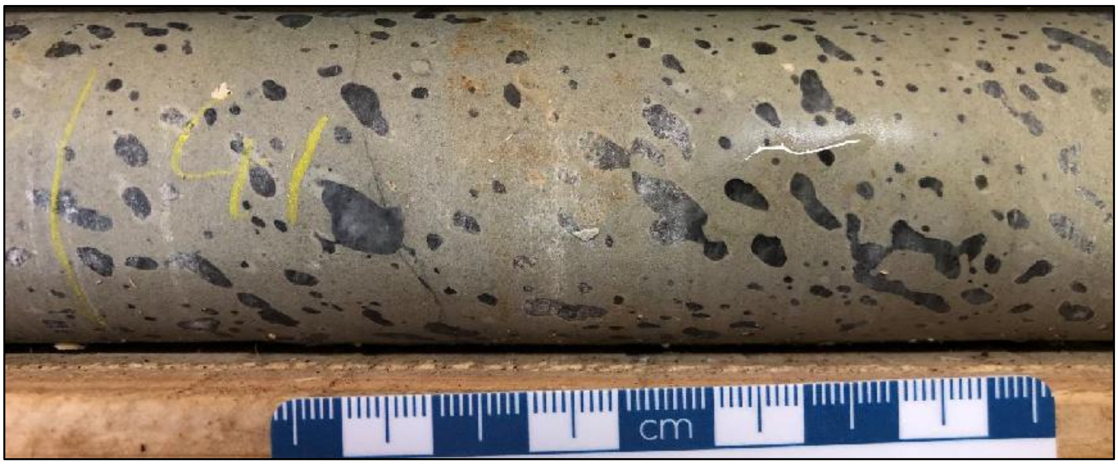

Figure 11: Altered vesicular basalt dyke at 41m.

The dyke is fine-grained, altered basalt, generally pale greenish grey to tan in colour. The vesicles are filled with calcite and are quite pronounced, up to 1 cm in diameter, showing a crude elongation in flow direction in parts. Pyrite is sporadically developed within the dyke. The dyke includes short intervals of Ballymartin Limestone and truncates the top of the underlying Ballyvergin Shale at 43.85m. Thinner branches of the main dyke continue to cut through the underlying Ringmoylan shale to 51m. The top of a dyke forms a polymictic breccia from 47.3-47.84m, with angular to sub-rounded fragment of carbonates and volcanics.

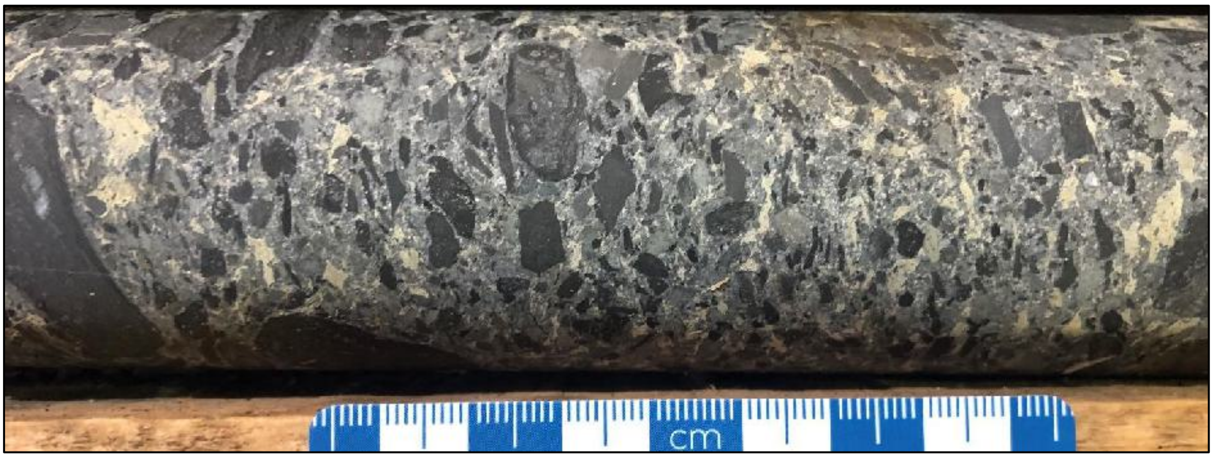

Figure 12: Polymictic breccia at 47.5m

The lower dykes are thin seams cutting and disrupting the shaley limestones.

Figure 13: Thin, altered, dykes traversing the Ringmoylan Shale at 50.8m

The Ringmoylan Shale is a unit approximately 20m thick of typically argillaceous, thin-bedded carbonates with abundant biodebris. The base of the unit is taken at a minor fault, where some gouge and crackle breccia is developed (63.55-63.75m).The beds appear to be locally steepened, with less than a couple of metres of stratigraphic section missing across this minor fault.

The underlying Mellon House Beds consist of a mixed sequence of siltstones, shales and calcareous sandstones, which can be roughly matched to the units described from the

Gortdrum mine. The upper most beds are a distinctive laminated shale and siltstone unit, followed by various calcareous sandstones. These are interbedded with dark grey to black mudstones up to several metres thick, forming the Upper and Lower Shale units. Some thin carbonate beds occur around 80m and although the unit has been termed the Transition Limestone, it is primarily a sandstone with a carbonate cement.

Figure 14: Steepened bedding and crackle breccia associated with minor fault at 64.7m

From 77.7m the beds are dominantly sandstone with various degrees of cross-lamination, burrowing and bioturbation, with interbedded silts and shales. The top of the Old Red Sandstone is taken at 92m, with grey to greenish grey, non-calcareous sandstones, with minor corn stone horizons. The first red sandstone bed is seen at 97m.

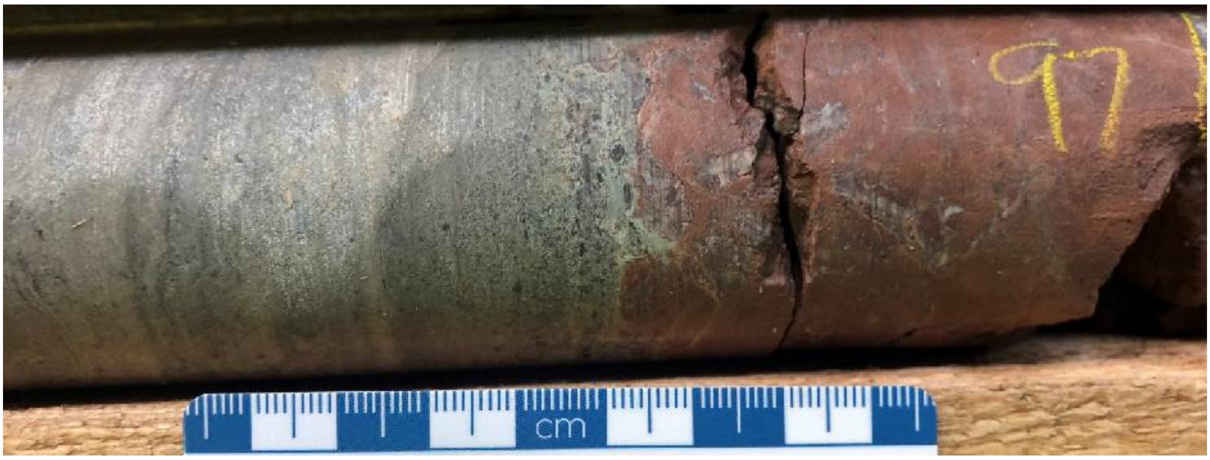

Figure 15: First 'Red Bed' at c.97m

Structure

Core orientation was difficult due to breaks in the core, with readings based of one orientation mark is each instance. As such, the degree of confidence in the structural measurements is generally low. However, the readings from different marks do give similar results, indicating some degree of consistency in the orientation line.

The small fault at 64.7m appears to separate beds which dip mostly to the north in the hangingwall, from those dipping west in the footwall. There appears to be relatively little loss of stratigraphy across the structure, with beds dipping at low angles (c.10°) except in the immediate hangingwall of the fault where they locally dip at 40°. The fault appears to dip 60° to the NW.

A minor structure at 76.4m, within the Mellon House Beds dips at c.60° to the west but, again, appears to have minimal displacement.

Figure 16: Minor Fault at 76.4m

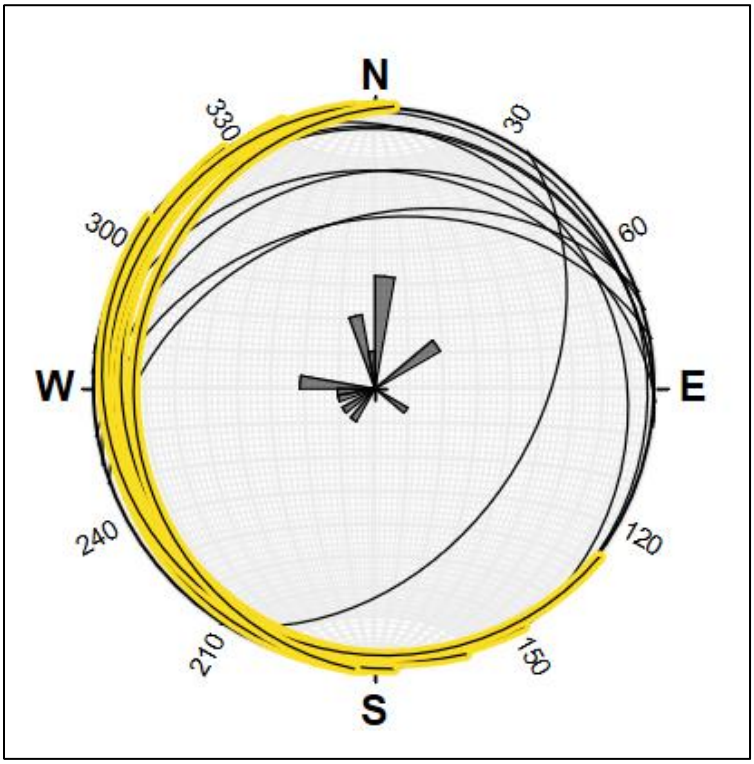

Figure 17: Bedding orientation (beds in footwall of small fault highlighted)

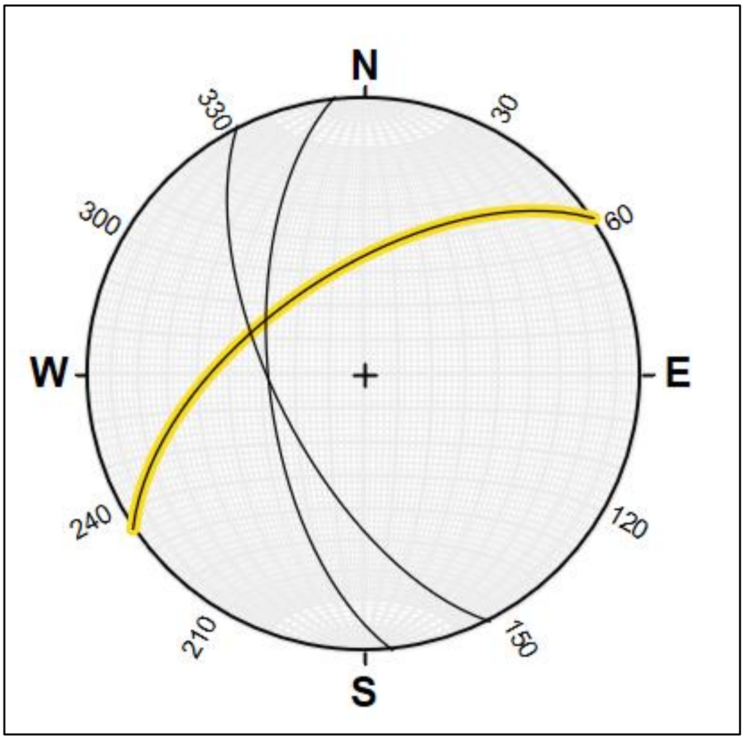

Figure 18: Fault orientations (highlighted structure @ 64.7m)

Section

A cross section indicates that the Gortdrum fault must be a steeply dipping structure at this location. As indicated by the structural data, the beds appear to dip away from the main fault.

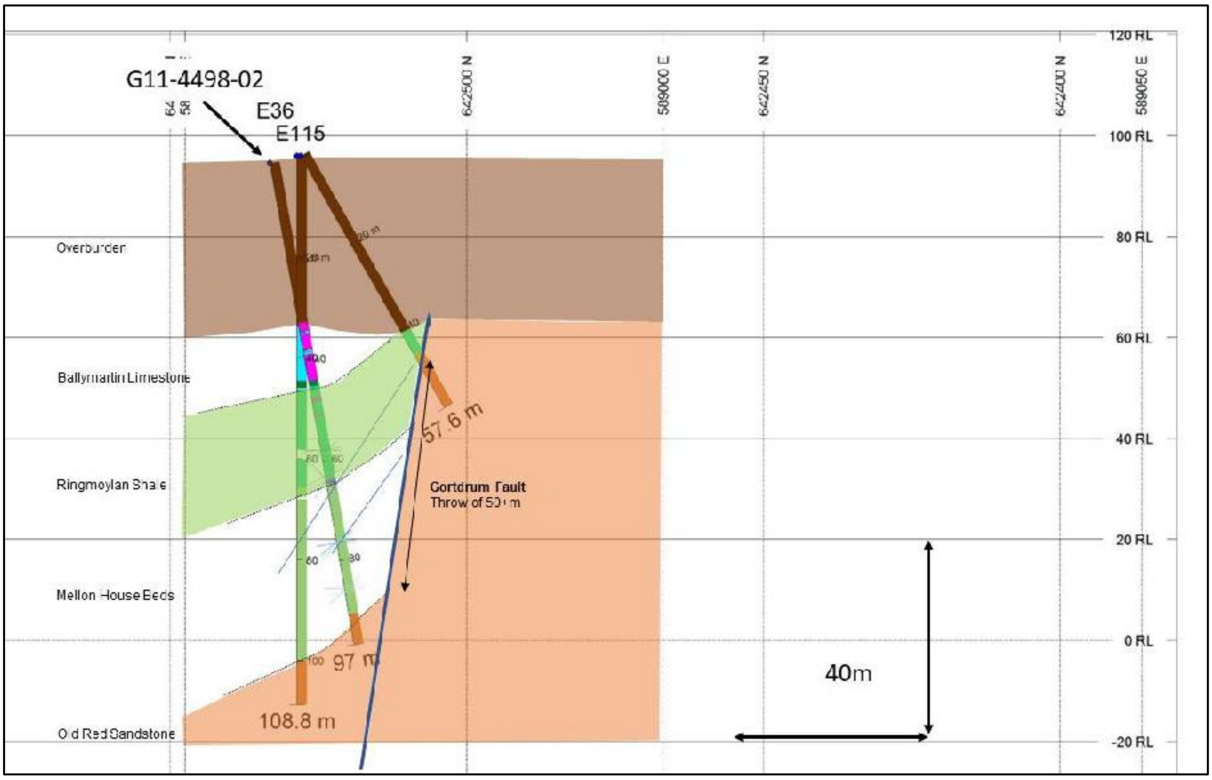

Figure 19: NW-SE Cross Section through hole G11-4498-02

Mineralisation

Only minor pyrite was observed in some of the more argillaceous beds in the Ringmoylan Shales, along with some disseminated pyrite with the dykes.
No samples were taken for assay analysis.

Analysis of samples in Hole G11-4498-01

Details of the drilling of hole G11-4498-01 were provided in the previous period but assay result were not available at the time of reporting and are therefore reported in this period.

Mineralisation

The first signs of mineralisation occurred as trace pyrite disseminated in the limestone beds of the Ringmoylan Shales from 35.3-36.2m. Below this, from 41-41.9m and 43.8-44m, are two horizons with abundant arsenopyrite needles. Trace amounts are seen to about 45m.

Figure 20: Arsenopyrite @ 41m

Chalcopyrite first appears from 46.6m in blebs within thin calcite veins and occasionally finely disseminated within the shales/limestone beds. Brachiopod fossils often appear partially replaced by chalcopyrite. It also occurs in smears along shear surfaces. The chalcopyrite appears to drop out around 61m although trace amounts could continue to about 67m. A 2-3mm calcite vein with a grey copper mineral, possibly tennantite, is seen at 64.55m.

Figure 21: Example of Chalcopyrite in calcite veins @ 59.75m

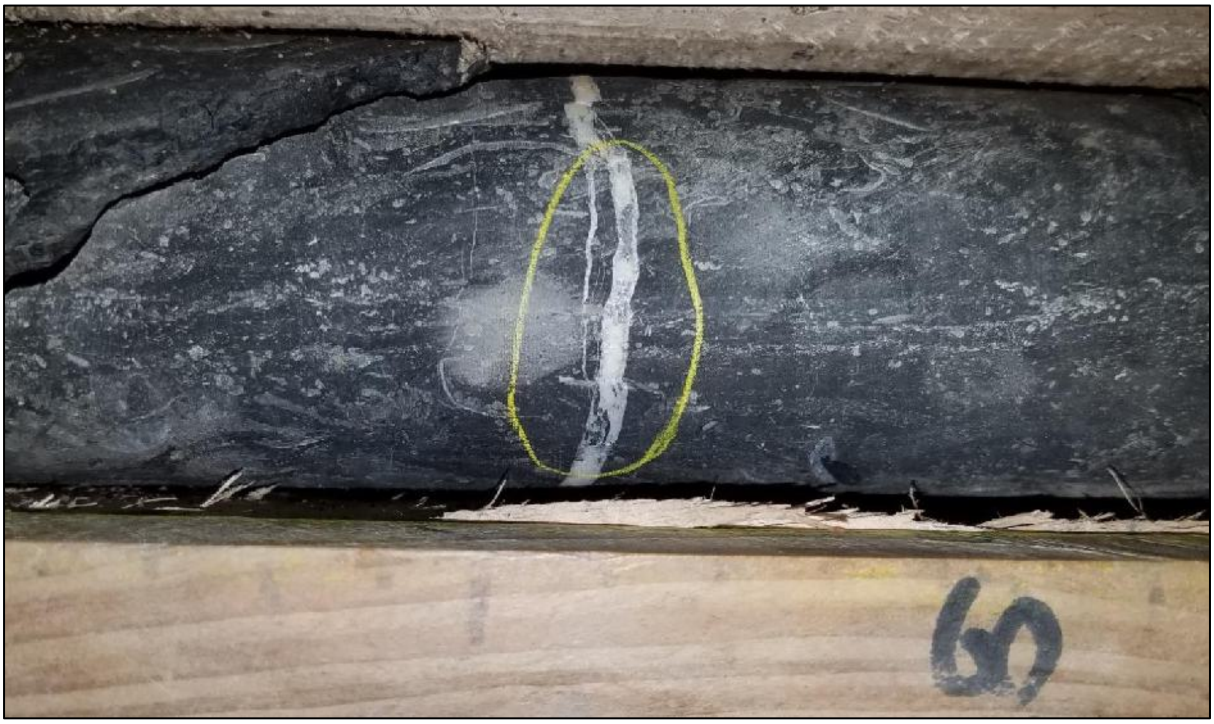

Figure 22: Grey coppers @ 64.55m

At 92.6m what appears to be sphalerite is seen finely disseminated in a calcarenite bed. No significant mineralisation is seen until the fault breccia, which contains trace disseminated chalcopyrite in the matrix and in thin veinlets from around 155m. The sandstone below also contains trace chalcopyrite in veins, last seen at 169.3m.

Assays

The core was sampled from 34.75m to 67.75m to provide an overview of the distribution of copper within the carbonate sequence. The samples were mostly taken over 1m intervals, sometimes split into smaller intervals where mineralisation was concentrated.

A further batch of samples was taken from 161.4m to 176.25m in the polymictic breccia, which might be related to Gortdrum Fault. A total of 73 samples were analysed including 6 QAQC samples, and these are fully reported in the accompanying data, with a subset provided in Table 3.

The results highlight a zone of copper mineralisation between 46.2-60.6m averaging 0.22% Cu. The highest grade for copper was 0.62% over 0.8m (50-50.8m). Silver and antimony are also slightly elevated in the zone of copper mineralisation.

The fault breccia (152.1-164m) showed an average of around 500ppm Cu, with a high of 0.11% Cu from 158.7-159.5m. The arsenic and silver all but drop out although barium appears elevated, particularly within the fault breccia and in the lower sandstone.

From (m)	To (m)	Interval (m)	Sample Number	Ag_ppm	As_ppm	Ba_ppm	Cu_ppm	Fe_Pct	Pb_ppm	S_Pct	Sb_ppm	Zn_ppm
34.75	35.65	0.90	107449	0.75	44.6	180	132	2.47	95.3	0.97	4.16	15
35.65	36.55	0.90	107450	0.51	26	150	116	2.95	139	0.41	3.38	20
36.55	37.50	0.95	107451	0.54	32.7	180	121	3.53	148	0.58	4.08	21
37.50	38.35	0.85	107452	0.28	18.9	90	40.8	2.4	292	0.3	3.03	86
38.35	39.20	0.85	107453	0.28	24.5	110	36.6	1.76	378	0.3	2.42	158
39.20	40.10	0.90	107454	0.3	26.5	120	17.6	2.05	256	0.35	2.96	68
40.10	41.00	0.90	107455	0.58	66.5	260	30	1.92	516	0.61	7.4	20
41.00	41.25	0.25	107456	0.5	63.9	340	19	1.85	258	0.54	6.94	18
41.25	41.90	0.65	107457	1.06	5060	290	16.2	2.83	204	1.47	8.96	18
41.90	42.75	0.85	107458	0.39	138.5	220	9.4	2.35	191.5	0.67	7.15	19
42.75	43.80	1.05	107459	0.45	206	270	17	2.44	181.5	0.6	7.25	23
43.80	44.15	0.35	107460	0.64	3250	290	15.1	2.6	277	0.81	9.42	18
44.15	45.25	1.10	107461	0.7	190.5	220	34.1	2.69	925	0.55	6.99	20
45.25	46.20	0.95	107462	0.56	123	190	400	2.61	51.2	0.54	6.89	17
46.20	47.20	1.00	107463	2.64	90	260	1290	2.46	14.8	0.54	12.85	20
47.20	48.10	0.90	107464	4.54	168.5	220	1690	2.45	20.8	0.58	20.8	29
48.10	49.00	0.90	107465	2.12	48.3	200	1730	2.31	13.1	0.54	8.4	17
49.00	50.00	1.00	107466	2.12	60.8	210	2050	2.46	29.3	0.63	7.74	51
50.00	50.80	0.80	107467	4.42	32	230	6200	2.5	67.5	0.87	7.38	57
50.80	51.70	0.90	107468	1.09	37.6	170	1460	2.33	41.6	0.5	4.5	52
51.70	52.60	0.90	107469	1.68	54.8	230	2090	2.46	65.1	0.83	7.42	25
52.60	53.50	0.90	107470	1.78	36.3	190	2270	2.68	23.8	0.62	6.62	30
53.50	54.45	0.95	107471	2.1	35.4	240	2850	2.68	21.9	0.88	7.67	23
54.45	55.3	0.85	107474	0.56	42.3	200	472	2.83	26.7	0.98	6.54	16
55.30	56.30	1.00	107475	1.27	40.6	220	1740	2.45	17.8	0.93	7.11	14
56.30	57.20	0.90	107476	3.13	34.9	210	3870	2.57	12.2	0.77	10.25	26
57.20	58.10	0.90	107477	1.82	28.6	210	1860	2.61	14.7	0.83	8.03	33
58.10	58.95	0.85	107478	1.53	14.8	160	1990	3.09	6.4	0.32	4.72	33
58.95	59.80	0.85	107479	1.65	14.4	120	2090	3.66	9.5	0.34	6.35	28
59.80	60.60	0.80	107480	2	18.7	230	2150	2.43	11.7	0.52	6.9	19
60.60	61.50	0.90	107481	0.99	24.4	200	981	2.67	14.4	0.43	4.66	16
61.50	62.30	0.80	107482	1.5	42	270	874	2.67	38.7	0.79	7.32	18
62.30	63.20	0.90	107483	0.67	41.9	180	269	2.87	46	0.68	5.26	69
63.20	63.90	0.70	107484	0.56	47.7	240	35.6	2.94	60.6	0.74	6.22	36
63.90	64.85	0.95	107485	0.64	51.5	260	126	2.67	144	0.71	6.77	18
64.85	65.80	0.95	107486	4.46	93.2	230	392	2.69	115	0.7	14.85	23
65.80	66.75	0.95	107487	0.72	49.1	250	142	2.57	127.5	0.68	7.12	24
66.75	67.75	1.00	107488	0.84	57.6	240	346	2.98	119	0.78	7.14	30
92.65	92.80	0.15	107489	0.45	59.4	110	10.7	1.24	60.5	0.52	1.8	1380
148.50	149.46	0.96	107492	0.03	4	320	179.5	1.49	4.1	0.03	1.58	9
149.46	150.40	0.94	107493	0.01	3.9	330	147	1.7	2.3	0.03	1.96	8
150.40	150.90	0.50	107494	0.05	5.3	320	370	2.37	3.2	0.05	2.17	9
150.90	152.10	1.20	107495	0.05	4.1	740	68.8	2.62	1.4	0.03	1.25	11
152.10	153.00	0.90	107496	0.45	17.1	440	501	4.43	7.4	0.3	3.08	17
153.00	154.00	1.00	107497	0.39	20.9	370	192	3.27	8.4	0.33	3.19	16
154.00	155.30	1.30	107498	0.31	21.8	410	167	3.52	8.4	0.3	4.53	17
155.30	156.10	0.80	107499	0.34	27.9	400	222	4.04	10.4	0.26	5.91	20
156.10	157.00	0.90	107500	0.32	25.7	320	592	5.33	47.6	0.22	5.03	20
157.00	157.85	0.85	107501	0.22	20.2	430	753	4.03	6.4	0.23	4.95	20
157.85	158.70	0.85	107502	0.15	16.8	450	496	4.09	4.8	0.18	4.49	16
158.70	159.50	0.80	107503	0.2	19.1	520	1110	4.04	4.6	0.25	4.2	15
159.50	160.40	0.90	107504	0.09	12	330	322	4.83	2.8	0.08	2.53	17
160.40	161.30	0.90	107507	0.18	17.1	420	518	4.52	5	0.16	4.13	17
161.30	162.18	0.88	107508	0.13	15.5	540	531	3.71	3.8	0.1	3.53	13
162.18	163.00	0.82	107509	0.18	15.5	540	471	2.75	4	0.1	3.56	10
163.00	164.00	1.00	107510	0.18	10.1	550	537	2.83	6	0.1	3.76	11
164.00	165.00	1.00	107511	0.13	3.2	210	211	2.36	3.5	0.03	1.73	7
165.00	165.75	0.75	107512	0.2	2.8	180	135.5	3.45	1.5	0.02	1.72	12
165.75	166.70	0.95	107513	0.3	2.9	150	116.5	3.89	3	0.01	1.43	13
166.70	167.65	0.95	107514	0.57	2.6	170	195	2.23	18.2	0.03	1.63	7
173.20	174.10	0.90	107515	0.15	3.2	310	523	2.58	1.6	0.06	2.41	9
174.10	174.70	0.60	107516	0.11	7.6	1310	1170	2.37	22.8	0.05	6.84	11
174.70	176.25	1.55	107517	0.01	3.6	1180	26.6	3.13	2.1	0.03	1.49	14

Table 3: Assay results

Environmental

Group Eleven is committed to conducting all exploration activities within environmental guidelines. A review of specifically protected sites in the Gortdrum Block was undertaken with information compiled from the National Parks and Wildlife Service. This includes a review of SPAs, SACs and NHAs;

- An NHA is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection.
- A SAC is an area of conservation value for habitats and/or species of importance in the European Union designated internationally under the Habitats Directive.
- A SPA is an area of conservation value for birds of importance in the European Union designated internationally under the Birds Directive.

There are currently a number of protected areas within or immediately adjacent to PLA 350 (Figure 23). These include the Lower River Suir SAC and a number of proposed NHAs (pNHA) covering Ballydonagh and Doonoor Marshes and the Annacarty Wetlands.

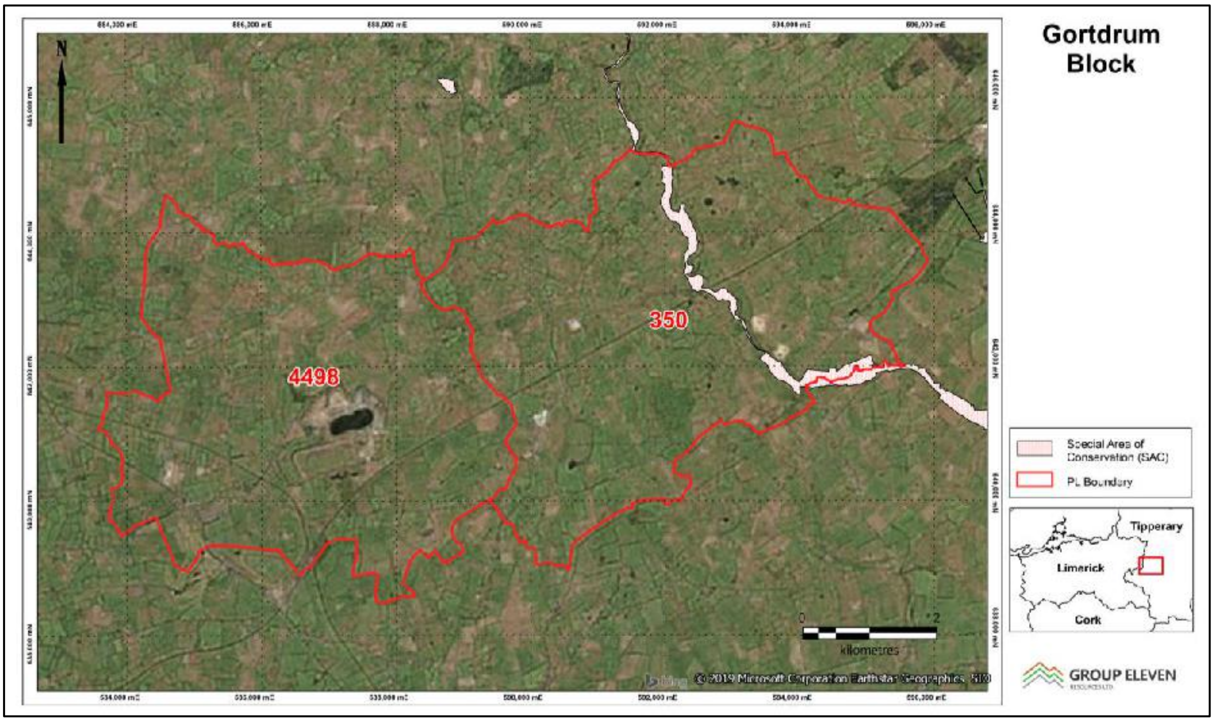

Figure 23: Protected sites -Gortdrum Block

To date, exploration activity on PLA 4498 has had no environmental impact. Group Eleven has also proven their commitment to undertaking work which complies with all environmental regulations by submitting an appropriate assessment screening report prior to sampling in the vicinity of Protected Sites. Furthermore, the proposed work programme for the upcoming reporting period will be undertaken in a manner to minimise any potential impact on the protected areas outlined above.

Conclusions and Recommendations

The recent drilling has indicated that the location of the eastward extension of the Gortdrum Fault is not precisely constrained. However, the carbonate units, even in quite close proximity to the fault are not necessarily mineralised.

Recommended further work includes:

- Analysis of drill core from hole G11-4498-02,
- Further review of historical hole locations
- Further analysis of historical data for PL4498, including geophysics
- Ground geophysics, if merited
- Further drilling

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