# Alba Mineral Resources plc

("Alba" or the "Company")

# Award of Exploration Licence over Gwynfynydd Gold Mine, North Wales

# Progress Report on Clogau-St David's Gold Mine, North Wales

Alba Mineral Resources plc (AIM: ALBA) is pleased to report that the Company has been awarded the exclusive exploration rights to the Gwynfynydd Gold Mine in north Wales. The Gwynfynydd Gold Mine is the second largest producer of gold in the UK's history, after the Clogau-St David's Gold Mine. With this award, Alba now has the exclusive exploration rights over the entire length of the Dolgellau Gold Belt. In this release, the Company also reports on the progress of work activities at the Clogau St-David's Gold Mine in north Wales.

#### Key Points

#### Gwynfynydd Gold Mine

- Six-year mineral exploration licence granted to Alba
- Gwynfynydd Gold Mine has historically produced around 45,000 ounces of gold at a mining grade of 15 grams/tonne. Commercial operations at Gwynfynydd ceased in 1999 when the gold price was only around US\$300 per ounce
- Gwynfynydd shares many of the same geological and mineralogical characteristics of Clogau, enabling Alba to roll out the same modern exploration and development methods as have been successfully deployed at Clogau-St David's

# Clogau-St David's Gold Mine

- Surface drilling at Clogau-St David's progressing well, with drill hole LL001 completed for 183.5 metres and LL002 currently in progress
- Pilot processing plant due for delivery and installation by December 2020
- Alba now has the benefit of a stand-alone bulk sampling lease entitling the Company to sell all gold recovered, subject to the payment of a royalty

# Alba's Executive Chairman, George Frangeskides, commented:

"We are delighted to have secured the exclusive mineral exploration rights to the Gwynfynydd Gold Mine and its surrounding exploration ground. Alba now has the exclusive exploration rights across the entire length of the Dolgellau Gold Belt."

"Gwynfynydd shares many of the same characteristics and the same geological setting as Clogau-St David's, and as such we intend to approach the exploration and development activities at Gwynfynydd in much the same way as we have done at Clogau, using all the tools in the extensive modern-day exploration tool-box, from underground 3D mine scanning to geochemical soil sampling, surface trenching, diamond drilling and bulk sampling."

"Alba has now reunited the two key mines in the Dolgellau Gold Field, Clogau and Gwynfynydd, meaning that we can now roll out our regional exploration programme, which identified no fewer than 10 new gold targets over our Clogau licence area, to the Gwynfynydd licence area too. We are really excited to begin work."

# Gwynfynydd Gold Mine: Overview

The Gwynfynydd Gold Mine ("**Gwynfynydd**" or the "**Mine**") is located close to the town of Ganllwyd in the county of Gwynedd, north Wales (see Figure 1). Gwynfynydd lies within the Dolgellau Gold Belt (or Gold Field), a known geological formation which forms an arc approximately 26 km long by 6 km wide around the south-eastern and eastern margins of the Harlech Dome (see Figure 2).

The quartz vein (or lode) at Gwynfynydd was discovered in 1860 and started commercial development in 1887. The Gwynfynydd Mine has produced around 45,000 ounces (around 1.3 tonnes) of gold since inception with a historical mining grade of 15 grams of gold per tonne



Figure 1: Gwynfynydd Gold Mine Location Map

("g/t Au"). Gwynfynydd became one of the most important mines in the Dolgellau Gold Field and, together with the Clogau-St David's Gold Mine, contributed some 95% of the total gold output from the area. Clogau and Gwynfynydd are the only two mines which have operated as recently as the late 20<sup>th</sup> Century.

At Gwynfynydd, production last took place between 1991 and 1999, when 10,000 tonnes of ore was extracted annually from a total estimated resource base of 180,000 tonnes. All the 20<sup>th</sup> Century production came from the Chidlaw Link Zone, which varies in thickness from one to eight metres. When commercial operations ceased in 1999, the gold price was only around US\$300 per ounce.

A potentially significant target is located below and to the east of the Chidlaw Link Zone. This deep zone, more than 250 metres below surface, was tested by only a single diamond drill hole from surface (drilled in 1992) and is constrained by faults which are known from surface and underground mapping.

The Collett Lode was separately estimated at the time to contain 20,000 tonnes at a grade of between 5 g/t Au to 8 g/t Au between the No 2 and 6 Levels, west of the Link Zone. Tonnage was based on projected volumes of reef between the two levels and grade based on historical gold yields, not based on drilling or sampling as such.

In 1985, an underground drilling programme was undertaken at Gwynfynydd. The exploration programme included twelve drill holes totalling 810 metres, which were drilled from the Mine's Number 6 Level to investigate the Chidlaw Link Zone at depth. On average the quartz bodies intercepted were 3.5 metres thick and were considered to be related to lode zones seen during past mining operations on the Chidlaw Link Zone. The objective of the drilling was to identify the lode structure, and as such it was successful. As at Clogau-St David's, gold grades in drill intersections are not expected to be representative of the actual in-situ grade due to the extreme nuggety nature of the mineralisation. It is for this reason that Alba has been

undertaking bulk sampling in combination with drilling at Clogau-St David's and a similar approach will be warranted at Gwynfynydd.

<u>Important Note</u>: The figures above for tonnages, grades, production and drilling results have been taken from historical reports and other papers written by third parties and have not been the subject of independent verification by Alba. Any reference to tonnages or grades are conceptual in nature as there has been insufficient exploration to define a Mineral Resource in accordance with the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, the JORC Code" (JORC 2012) or other similar internationally recognised mineral resource codes. Further, it is uncertain if further exploration will result in the determination of a Mineral Resource.

# Gwynfynydd: Geology

The licence area of Gwynfynydd straddles the same stratigraphy that is found at the Clogau-St David's Gold Mine. The quartz veins, which like Clogau strike north-east to south-west, and are most auriferous (gold-bearing) where they intersect the Clogau Formation, a pyritic and graphitic black mudstone, forming extremely rich pockets of mineralization. The Gwynfynydd Mine and option area lies within the continuation of this Clogau Shale Formation (**Error! Reference source not found.**2).



*Figure 2: Dolgellau Gold Belt comprising Clogau Shales (blue) arcing south-east to east of the Harlech Dome* 

The gold mineralisation is the result of a complex interplay between the host stratigraphy, different mineralisation periods, local intrusives and different vein morphologies. The veins can occur as single discrete veins up to a few metres thick, but often split into zones where the veins split and can rejoin. These vein systems can be traceable over several hundred metres.



*Figure 3: Vein system at Gwynfynydd, No.6 Level (after Ashton, 1981)* 

Within the high-grade areas, free gold is common and can become very coarse with over 65 per cent reporting to the +300 microns ( $\mu$ m) fraction. This characteristic provides the opportunity for the recovery of gold using relatively simple gravity methods in the pilot processing plant which Alba has designed and is in the process of installing at Clogau-St David's.

# Gwynfynydd: Exploration Licence

Alba's wholly owned subsidiary, GMOW (Gwynfynydd) Limited, has been awarded an exclusive mineral exploration licence (known as an "Option to Lease Mines Royal") by The Crown Estate over a 20 km<sup>2</sup> area (the "Gwynfynydd Licence") between the northern and southern segments of the Dolgellau Gold Belt which are already held by Alba.

In common with all options granted by The Crown Estate, the Gwynfynydd Licence will run for a total of six years and is renewable by up to a further four years thereafter. The licence holder is required to submit formal progress reports every two years. As with Clogau, as and when the Company is ready to proceed to commercial production, Alba will apply to convert the Option to Lease Mines Royal into a formal, long-term Lease.

# Gwynfynydd: Strategy and Work Plans

In the past couple of years, Alba has demonstrated a sustained commitment to the work which is required to re-open the Clogau-St David's Mine for commercial production. The Company has also undertaken an extensive regional exploration programme over several miles of the Dolgellau Gold Field, as a result of which several substantial new gold targets have been identified which have the potential greatly to extend the Clogau-St David's Mine workings out into hitherto completely untapped gold deposits within the Gold Field.

All of this work that has been undertaken at Clogau, and the expertise that Alba has amassed in this type of gold setting, will be directly applicable to Gwynfynydd. The geological setting at Gwynfynydd is essentially the same as that at Clogau-St David's. Further, the nature of the controls on mineralisation at Gwynfynydd are expected to be the same as those with which Alba is familiar at Clogau, and as such the Company is confident that extensions to known lodes and previously undiscovered lodes will be identified at the Gwynfynydd Mine. In terms of regional exploration, there are over 300 known former workings for minerals in the Dolgellau Gold Field (see Figure 4). A large number of these former workings are situated within the Gwynfynydd option area.



Figure 4: Historic Mine Workings (blue dots)



Figure 5 (left): Very high-grade visible gold ore from the footwall leader vein (FLV) within the Chidlaw Link Zone, 40 Level, Gwynfynydd mine. Scale bar 5 mm; (right) FLV from which this material was extracted during a past period of production. [Source: Snowden Mining Industry Consultants Pty Limited Technical Report, 2012]

Alba has already rolled out an extensive regional exploration programme over the Clogau section of the Dolgellau Gold Field, involving a combination of geochemical soil sampling and ground geophysics. This regional programme will now be extended to the exploration ground at Gwynfynydd, i.e. those parts of the Gwynfynydd licence which are away from the historical Mine workings.

This will enable Alba to join the dots between the Clogau and the Gwynfynydd deposits and to compile a comprehensive and unprecedented regional exploration data base of the entire length of the Dolgellau Gold Field.

Through this work, Alba is confident that new mineralized zones will be discovered at Gwynfynydd to add to the 10 gold target zones which the Company has already identified over the Clogau section of the Dolgellau Gold Field, covering about nine kilometres in total.

# **Gwynfynydd: Next Steps**

In the first phase of work, Alba's technical team will seek to capture and integrate all historical data sets for Gwynfynydd within the Company's overall geological model for the Dolgellau Gold Field. In terms of field work, this will initially comprise reconnaissance site visits and inspections. More comprehensive field activities will be planned during Q1 2021, with a view to commencing a field programme in earnest in Q2 2021.

The Company's intention is to roll out at Gwynfynydd the same overall exploration and development work plan that has been developed successfully at Clogau, including:

- Extensive 3D underground scanning survey of accessible workings.
- A geochemical soil sampling programme over the existing mine workings, in order to identify potential extensions to the existing footprint of the Mine.
- An in-mine safety and rehabilitation programme for the key Mine areas.
- Drilling from underground and from surface in order to identify promising structures and extensions to known gold ore shoots. As at Clogau, given the narrow-vein, nuggety effect of the mineralisation, drilling will be primarily for structure rather than grade, as the focus

will be on identifying the known gold-bearing geological structures and stratigraphy for follow-up bulk sampling and development.

• Bulk sampling of underground vein exposure, which would then be processed through the Company's pilot plant at Clogau to provide accurate data relating to the gold content over a more representative sample of ore than can be afforded by drilling alone.

Progress of the above activities will be dependent upon the timely receipt of regulatory consents and approvals, contractor availability and access arrangements being agreed with all relevant landowners.

# Clogau-St David's Gold Mine: Update on Surface Drilling Programme

Further to the Company's announcement on 5 October 2020, good progress is being made in the current surface drill programme at Clogau which has been designed to target mineralisation below the existing mine workings at the Llechfraith mine area. Drill hole LL001 has been completed to a length of 183.5 metres and the Company is now drilling LL002 (currently at 44 metres, as at 18 November 2020).

Final drill results will not be known and reported until all the drilling has been completed and the drill core analysed, assayed and the results reviewed and interpreted.

As previously reported, due to the high variability in gold distribution at Clogau caused by its narrow-veined, nuggety characteristics, it is not possible to achieve representative samples by diamond drilling alone. Underground drilling has therefore been undertaken for structural purposes, to identify the zones underground which display the geological characteristics which



correlate to the known gold-bearing setting for previously mined zones at Clogau. Once those zones have been identified, this will then allow for follow-up bulk sampling and block mining of those zones, involving the extraction large of volumes of material for processing, where representative results, terms of both in quantities and grades, are much more likely to be achievable.

Figure 6 (left): Phase 1 Surface Drilling Programme (initial drill holes LL001-003 shown in yellow, with drill traces for Nov 2020 drill holes BH1-3 also shown).

# <u>Clogau-St David's Gold Mine: Update on Pilot Processing Plant and Bulk Sampling</u> <u>Exercise</u>

Subject to there being no unexpected delays in shipment of the plant that has been ordered from South Africa, the Company expects its pilot gold processing plant to be fully operational by December 2020.

The Company has signed a stand-alone Bulk Sampling Lease with The Crown Estate which means that the Company will own any gold recovered from the processing of the 36-tonne bulk sample extracted during the underground bulk sampling programme which was completed last month. As such, Alba will be entitled to retain all sale proceeds from the sale of that gold, subject to paying The Crown Estate a Net Realisable Value (NRV) royalty of 4% of the proceeds of sale (and if the proceeds are derived from post smelting values then the NRV will be determined after deducting the costs of smelting, refining and transporting the concentrate or unprocessed ore to the smelter).

The Company regards it as a very positive development that Alba will own all gold produced during this pilot processing phase, as this is not normally the case in the exploration phase of a mining project.

# This announcement contains inside information for the purposes of Article 7 of EU Regulation 596/2014.

#### <u>Glossary</u>

Clogau Shales	Black pyritous and carbonaceous mudstones and silty mudstones with rare silt laminae and sparse fine-grained sandstone beds. The gold deposits of the Dolgellau Gold Belt have been shown to be related to the presence of the Clogau Formation, interactions with igneous sills, and/or reef splitting to form discrete ore shoots.	
Graphitic	Of, relating to, resembling, or having the structure of graphite.	
Harlech Dome	The Harlech Dome is a geological dome in southern Snowdonia in north Wales, extending approximately from Blaenau Ffestiniog in the north to Tywyn in the south, and includes Harlech, The Rhinogydd, Barmouth and Cadair Idris.	
Intrusives	Intrusive rock, also called plutonic rock, igneous rock formed from magma forced into older rocks at depths within the Earth's crust, which then slowly solidifies below the Earth's surface, though it may later be exposed by erosion. Igneous intrusions form a variety of rock types.	
Mines Royal	The historic name for naturally occurring gold and silver, virtually all of which deposited in England, Wales and Northern Ireland is owned by The Crown Estate.	
Morphology	A particular form, shape or structure.	
Pyritic	Of, relating to, resembling, or having the structure of pyrite, a yellow mineral, found in igneous and metamorphic rocks and in veins with the composition of iron sulphide.	
Reef	A term used to describe an orebody, and synonymous with <i>lode</i> .	
Stratigraphy	A branch of geology concerned with the study of rock layers (strata) and layering (stratification). It is primarily used in the study of sedimentary and layered volcanic rocks.	

#### Forward Looking Statements

This announcement contains forward-looking statements relating to expected or anticipated future events and anticipated results that are forward-looking in nature and, as a result, are subject to certain risks and uncertainties, such as general economic, market and business conditions, competition for qualified staff, the regulatory process and actions, technical issues, new legislation, uncertainties resulting from potential delays or changes in plans, uncertainties resulting from working in a new political jurisdiction, uncertainties regarding the results of exploration, uncertainties regarding the timing and granting of prospecting rights, uncertainties regarding the timing and granting of regulatory and other third party consents and approvals, uncertainties regarding the Company's or any third party's ability to execute and implement future plans, and the occurrence of unexpected events.

Without prejudice to the generality of the foregoing, uncertainties also exist in connection with the ongoing Coronavirus (COVID-19) pandemic which may result in further lockdown measures and restrictions being imposed by Governments and other competent regulatory bodies and agencies from time to time in response to the pandemic, which measures and restrictions may prevent or inhibit the Company from executing its work activities according to the timelines set out in this announcement or indeed from executing its work activities at all. The Coronavirus (COVID-19) pandemic may also affect the Company's ability to execute its work activities due to personnel and contractors testing positive for COVID-19 or otherwise being required to self-isolate from time to time.

Actual results achieved may vary from the information provided herein as a result of numerous known and unknown risks and uncertainties and other factors.

#### **Competent Person Declaration**

The technical information in this release has been reviewed by Mr Mark Austin. Mr Austin is a member of SACNASP (Reg. No. 400235/06), Fellow of The Geological Society and Fellow of the Geological Society of South Africa. He has a B.Sc. Honours in Geology with 38 years' experience.

Mark Austin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration targets, Exploration Results, Mineral Resources and Ore Reserves', also known as the JORC Code. The JORC code is a national reporting organisation that is aligned with CRIRSCO. Mr Austin consents to the inclusion in the announcement of the matters based on his information in the form and context in which they appear.

#### For further information, please contact:

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# Alba's Project and Investment Portfolio

Project (commodity)	Location	Ownership		
Mining Projects				
Amitsoq (graphite)	Greenland	90%		
Clogau (gold)	Wales	90%		
Inglefield (copper, cobalt, gold)	Greenland	100%		
Limerick (zinc-lead)	Ireland	100%		
Melville Bay (iron ore)	Greenland	51%		
TBS (ilmenite)	Greenland	100%		
Oil & Gas Investments				
Brockham (oil)	England	5%		
Horse Hill (oil)	England	11.765%		