

## **Alba Mineral Resources plc**

("Alba" or the "Company")

### **Clogau-St David's Gold Mine Update Progress of Development Plans**

Alba Mineral Resources plc (AIM: ALBA) is pleased to provide an update in relation to the progress of the Company's development plans at the Clogau-St David's Gold Mine.

#### **Key Points**

- Mine plan under development for the extension of underground workings to key production targets - Llechfraith Payshoot and Jack Williams, New Branch, 7-10 and Grandfathers Lodes.
- Modelling of the Phase 2 Surface and Underground drilling results has resulted in a reassessment of the extension of the Main Lode system, including the identification of a historically overlooked Lode termed the New Branch Lode.
- Further digitisation of historical mine plans has identified workings above the Tyn y Cornel Level that can give direct access onto the New Branch Lode and the 7-10 Lode high within the critical Clogau Shales package.
- In respect of the Company's dewatering application for the Llechfraith Shaft, Natural Resources Wales ("NRW") are in the process of undertaking a Habitat Regulations Assessment ("HRA"). The completion of an HRA will facilitate Alba's mine development plans going forward.

#### **Alba's COO and Senior Geologist, Mark Austin, commented:**

*"We are pushing forward with our development plans at Clogau. An up-to-date mine plan is coming together, pulling together the key development zones we have identified in our drilling and other work activities. For instance, the Phase 2 surface drilling completed in July has enabled us to determine that a new branch of the quartz vein system exists between the Jack Williams and 7-10 Lodes, forming a key part of the Main Lode System Extension.*

*The fact that this New Branch Lode structure is only 22 m horizontally to the north from the 7-10 Lode on the Llechfraith level, with the Jack Williams Lode only a further 23 m away, means that with less than 50 m of development – which is tiny when compared to the already several kilometres of existing underground development - we will be able to access never previously mined zones with these two Lode structures, which have contributed a significant amount of the past gold production at Clogau.*

*One of the keys for old mines like Clogau is to establish efficient ways to access the new development zones we discover through our drilling and other exploratory work. The New Branch Lode gives us exactly that opportunity, not least as it has also helped to open up a further new development zone on the Cornel-2 level. Subject to completing some relatively straightforward safety works, our team will be able to access the Cornel-2 level and gain in situ exposure to the New Branch Lode (involving about 35 m of workings) and the Jack Williams Lode. It also means we can access the 7-10 Lode high within the critical Clogau Shales package."*

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

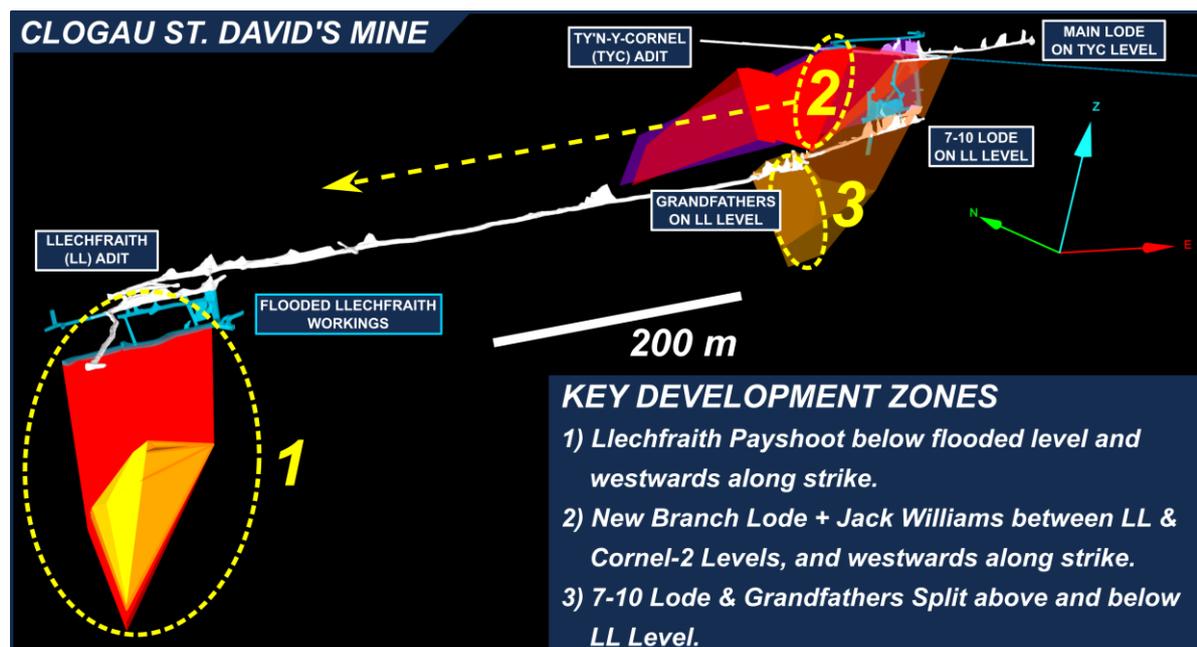
"We wanted to provide a fuller update than usual in this release, as we know that shareholders are keen to learn in detail of the progress of works at Clogau. As Mark has highlighted above, we believe we are now in a strong position to move this project into the development phase, with no less than three significant new target zones identified within the existing envelope of the mine and, no less importantly, being target zones which should be accessible by putting in a relatively modest amount of new development.

It is because of the success of the unprecedented drilling campaigns we have designed and executed at Clogau over the past two years, which have unearthed several genuine development targets within the mine, together with the dedication and skill of our technical team in making sense of what is a highly complex structural setting, that we can now seriously begin to plan the work which is needed to access these new target development zones.

At the same time, none of us should shy away from the fact that there will always be challenges along the way as one seeks to build the technical and economic case for reopening a historic mine. It will not always be plain sailing! It is true, for instance, that the processing of our application for the permits to dewater the Llechfraith Shaft, one of the three development zones highlighted in this release, has taken considerably longer than we ever envisaged. It is understandable that the regulator should exercise all due care and caution when considering any application for the discharge of water into the watercourse.

However, in respect of the specifics of our dewatering proposal, as shareholders can read for themselves in this release, the thoroughness of the technical work completed by our highly experienced consultants, the robustness of the dewatering scheme they have devised and the extensive supporting data we have compiled over the past 18 months give us a great deal of confidence in the merits of our application. We therefore look forward to it proceeding to a determination soon."

**Development of Mine Plan**

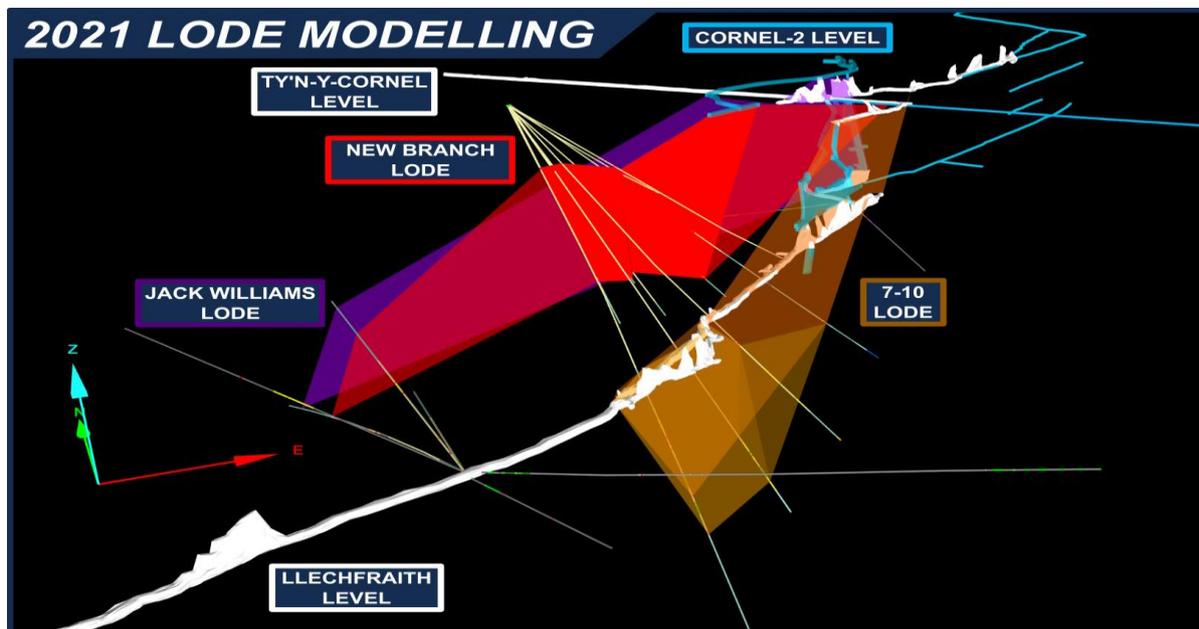


**Figure 1: Key development zones identified through Alba's underground and surface drilling campaigns.**

Alba's technical team, under the direction of Alba's COO & Senior Geologist Mark Austin and the Company's consulting mining engineers, have been progressing the detailed design and costing of a series of potential development options at Clogau-St David's in order to gain access to the lodes identified during the drilling programmes which have been completed to date. This involves both the Llechfraith Payshoot and the Main Lode System Extension, incorporating the Jack Williams Extension and the New Branch (see below), 7-10 and Grandfathers Lodes, and will enable the Company to directly access the resource potential of these zones. Figure 1 shows the key development zones identified through Alba's extensive drilling campaigns.

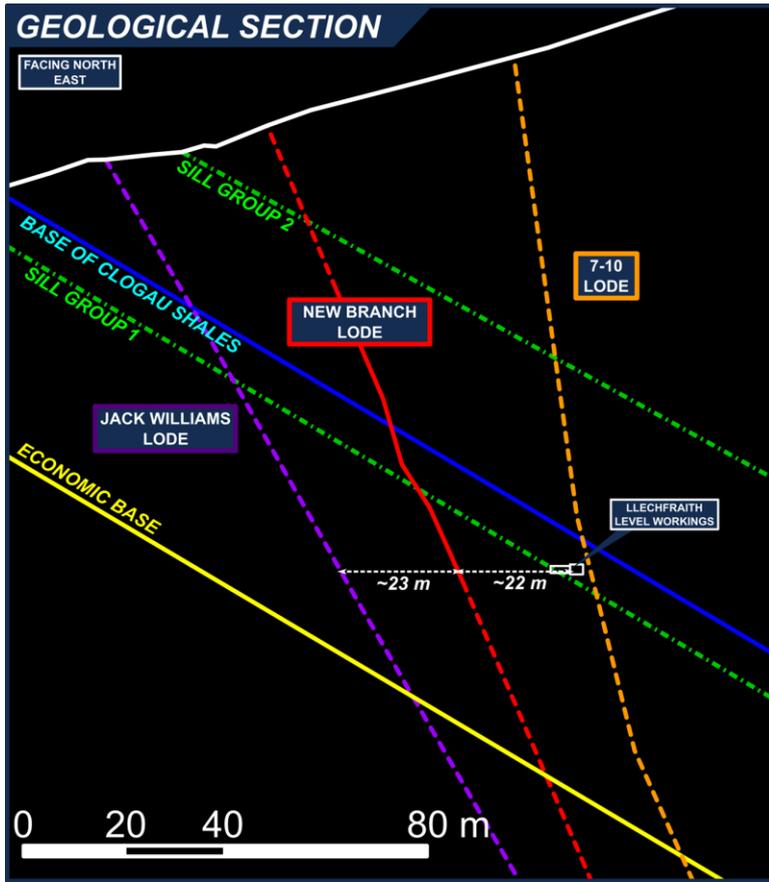
### **New Branch Lode Discovery**

Since the completion of Phase 2 Surface Drilling, the geological model of the Clogau-St David's Mine has evolved to highlight additional structural features that had historically been overlooked. Once Phase 2 collars had been accurately surveyed, this data was inputted into the model and it became apparent that the Lode structure intercepted in the Phase 2 surface holes was not in fact the same vein as was mined in the Jack Williams Stope.



**Figure 2: 3D View of the three Lode structures identified to date that make up the Main Lode System extension, including the New Branch Lode.**

It has therefore been determined that a new branch of the vein system exists between the Jack Williams and 7-10 Lodes and forms a key part of the Main Lode System Extension (see the red plane in Figure 2). This new branch has been called the New Branch Lode. This is an exciting development as it adds further new development potential to the zones already identified in the Company's drilling campaigns.

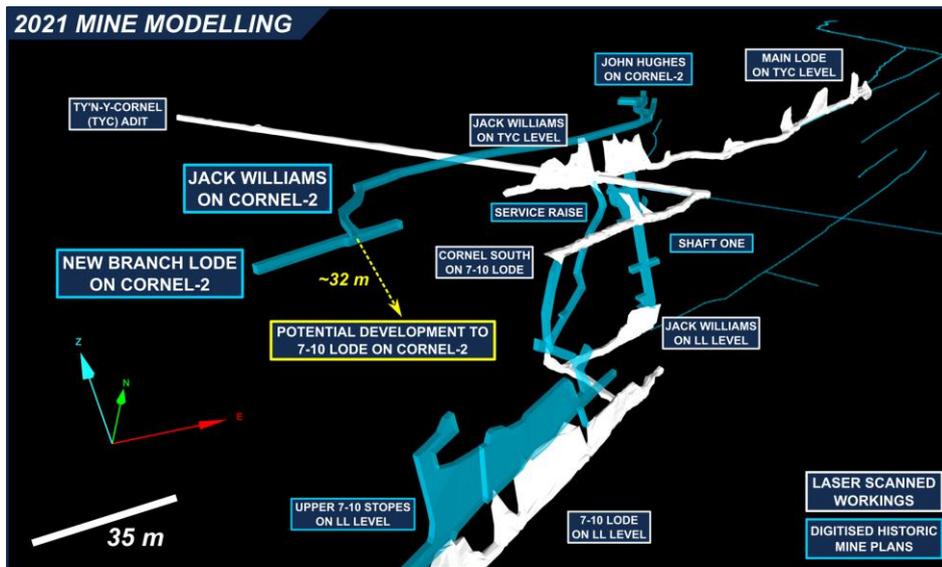


Further, the New Branch Lode structure is only ~22 m horizontally to the north from the 7-10 Lode on the Llechfraith level. The Jack Williams Lode is projected to be a further ~23 m away to the north, meaning that with less than 50 m of development Alba will be able to access virgin ground on these two Lode structures (see Figure 3). Developing from the Llechfraith Level would also enable a thicker portion of the New Branch Lode identified by the surface holes GMOW\_JW002, JW008 and JW009 to be targeted.

**Figure 3: Section through the Clogau 3D Model, showing the modest distances involved in reaching the target structures from the existing Llechfraith Level using underground development.**

**New Development Zone on Cornel-2 Level**

Further work has been completed to digitise historical mine plans, including a plan of the Cornel-2 Level, which sits ~12 m above the Tyn y Cornel (“TYC”) Level and the Jack Williams Stope. Historical plans show that previous operators of the mine believed they had encountered the 7-10 Lode on this level, around ~32 m to the south of the Jack Williams Lode. However, Alba’s 3D model shows that the 7-10 Lode was never reached, and that this development was actually on the New Branch Lode (see Figure 4).



**Figure 4: 3D diagram showing the additional development and stoping (in blue) which has been added to the model.**

This has two implications:

- (1) Establishing safe access into this level will give the Alba team insitu exposure of the New Branch Lode (~35 m of workings) as well as additional insight into the Jack Williams Lode.
- (2) Historical mining never reached the target of the 7-10 Lode, stopping ~30 m short. This gives Alba the opportunity to access the 7-10 Lode high within the critical Clogau Shales package with a relatively short amount of development.

### **Dewatering Permits**

In January 2021 Alba submitted an application to Natural Resources Wales ("NRW") for a permit to dewater the flooded Llechfraith Shaft and discharge the treated water into the neighbouring stream. Alba's ecological and environmental team has been led by Alba's ecological consultants ENVSYS and Alba's consulting geochemical engineer Dr Matthew Dey CEng MIMMM of Geochemical Engineering Solutions Ltd, UK, with support from Mr Alistair Black, Principal Hydrogeologist & Director, Groundwater Science Ltd.

Originally, Alba was informed that only a Discharge Permit was required. Then, in late May 2021 NRW informed Alba that a Transfer (or Abstraction) Licence would also be required. In June 2021 NRW indicated to Alba that a decision would be made within a few weeks. However, on 1 July 2021 NRW issued a formal notification (known as a Schedule 5 notification) seeking further information in relation to the proposed scheme. Alba provided the requested information on 8 July.

More recently, however, NRW has informed Alba for the first time that it intended to undertake a Habitat Regulations Assessment ("HRA") and requested that Alba submit a detailed report to assist it in that assessment. This was discussed in a meeting in August between NRW and Alba.

Since then, Alba's environmental and ecological team has been compiling a detailed report to inform the NRW's HRA, the overall objective of which is to assist NRW in its assessment of any potential impacts of the dewatering exercise on the integrity of the Special Areas of Conservation ("SACs") situated closest to the mine. Those SACs are the Lleyn Peninsula and the Sarnau SAC, which commences 1.14km to the south of the Llechfraith adit, and the Meirionnydd Oakwood and Bat Sites SAC, which commences 1.4km to the east of the mine. As part of this exercise, Alba's report reviews the locations of these sites and their qualifying features in relation to the mine, identifies any apparent effect pathways and then gives consideration to the likely significance of any potential effects identified on both SACs.

While Alba's report has been largely completed, its final sign-off has been delayed by NRW's request that further sediment samples are taken at a location in the estuary approximately 1 km downstream of the mine, which has necessitated obtaining the relevant landowner's (and indeed NRW's) formal consent. NRW issued its consent yesterday, 21 September, and Alba's geologists were therefore able to collect the sediment samples from the estuary yesterday. As a result, it is expected that Alba's report will be submitted to NRW in the next week or so, with a supplemental appendix being submitted once the estuary samples have been assayed at the ALS Laboratories (which normally involves a turn-around time of a few weeks). Given the time this process has taken to date, NRW has indicated to Alba that it will carry out its HRA as quickly as possible in order to proceed swiftly to a determination of Alba's application.

Although Alba understands NRW's concern as regards the potential impact of the discharge of water from any former mine into a watercourse, Alba has taken great care, and taken

the best available advice, to devise a robust dewatering scheme and to ensure that any water discharged into the watercourse post-treatment in the manner proposed will not have a detrimental effect on the environment. Indeed, Alba's and NRW's concerns are completely aligned in that regard. It should also be noted that:

- (1) The flooded lower workings are estimated to hold 800m<sup>3</sup> of water, or about 1/3 of the volume of an Olympic-size swimming pool. With the water to be pumped at a flow rate of up to 4.2m<sup>3</sup>/hr (100m<sup>3</sup>/day), it is estimated that the lower workings would be dewatered within just eight days.
- (2) Discharge from the drainage adit is not currently treated and has never been treated since mine abandonment in 1998. By contrast, Alba's dewatering scheme involves:
  - Water pumped out of the lower workings being first passed through two Siltbuster HB10 settlement tanks, operating in parallel and each with a capacity of 10m<sup>3</sup>/hr, with no settling reagents to be used.
  - The electrical conductivity (EC) of the water being manually monitored on a daily basis (in Phase 1) and on a monthly basis (in Phase 2).
  - Collected settled solids being assayed to determine if any gold or deleterious elements are present.
- (3) A substantial amount of data has been compiled by Alba to date to support its application, including the following:
  - 12 rounds of water sampling have been undertaken over the course of the best part of a year. Samples were taken from five sampling points, upstream of the mine, downstream of the mine and from the current discharge itself.
  - The flooded Llechfraith Shaft has also been sampled and profiled. The water column in the shaft was profiled by lowering a Van Essen CTD diver, that was set to record water depth, temperature, and electro-conductivity every second. In addition, a profile was made of water temperature, electrical conductivity (EC), pH, dissolved oxygen (DO), and redox potential (ORP – which measures whether the water is reducing or aerobic), using an in-situ Aqua Troll 600.
  - A v-notched weir was installed 10m into the drainage adit. The CTD diver was then deployed at this site to record the water quality and changes in depth of the water passing over the weir. From this, the discharge flow from the Llechfraith drainage adit was determined.
  - The Afon Cwm Llechen responds quickly to rainfall and exhibits significant changes in level. A second Van Essen diver was therefore used at one of the sampling points to record variation in river depth.
  - All samples were assayed at the ALS specialist laboratories in Coventry, for water quality, namely elemental composition and electrical conductivity.
- (4) In total, since its original application in January 2021 Alba has submitted a further 10 rounds of responses to enquiries received from NRW, with the current report being compiled to inform the NRW's HRA being the 11<sup>th</sup> such submission.

Given the robustness of its dewatering proposals, the support of its highly experienced technical consultants and the confidence derived from the extensive supporting data compiled over the past 18 months or so, which has confirmed the relatively benign nature of the mine water, Alba is confident in the merits of its application and proposed scheme and remains hopeful of a positive outcome soon.

Looking beyond the dewatering exercise, the NRW's completion of an HRA is regarded as a positive for the Project as it will help to streamline the permitting process as the work at Clogau moves into the development phase.

***This announcement contains inside information for the purposes of the UK Market Abuse Regulation and the Directors of the Company are responsible for the release of this announcement.***

## **Glossary**

**7-10 Lode:** The 7-10 Lode is a parallel vein structure to the Main Lode, lying some 30-40m to the south of the Main Lode. The whole of the Llechfraith Level is developed on the 7-10 Lode.

**Borehole or**

**drillhole:** A hole drilled into bedrock using a diamond-coated bit to return core samples.

**Grandfathers:** Grandfathers or Grandfathers Lode is a pay-shoot within the 7-10 Lode.

**Jack Williams:** The Jack Williams Stope is the most westerly mined portion of the Main Lode on the Ty'n-y-Cornel Level.

**Intercept:** A section of core in which a target lithology, structure or significant assay result has been identified.

**Main Lode:** The main quartz vein structure along which the majority of historic mining took place at Clogau-St David's. The Main Lode was mined from the Jack Williams Stope for approximately 300m eastwards to the Bryntirion Fault, on the other side of which it was mined over a strike of at least 150m at the St David's Mine.

**Mineralisation:** Any single mineral or combination of minerals occurring in a mass, or deposit, of economic interest. The term is intended to cover all forms in which mineralisation might occur, whether by class of deposit, mode of occurrence, genesis or composition.

**Quartz vein:** A sheet-like body consisting predominantly of the mineral quartz, which is known to host gold mineralisation in the Dolgellau Gold Belt.

**Stope:** A mined-out area along a lode structure from which ore has been extracted.

## **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.

All activities and timelines in this announcement are subject to the timely receipt of regulatory and other third-party consents and to the timely availability of contractors, plant and equipment.

### **Competent Person Declaration**

The information in this release that relates to Exploration Results 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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Thomas Smith

### **Alba's Project and Investment Portfolio**

<b>Project (commodity)</b>	<b>Location</b>	<b>Ownership</b>
<b><i>Mining Projects</i></b>		
Amitsoq (graphite)	Greenland	100%
Clogau (gold)	Wales	90%

Dolgellau Gold Exploration (gold)	Wales	90-100%
Gwynfynydd (gold)	Wales	100%
Inglefield (copper, cobalt, gold)	Greenland	100%
Limerick (zinc-lead)	Ireland	100%
Melville Bay (iron ore)	Greenland	100%
TBS (ilmenite)	Greenland	100%
<b><i>Oil &amp; Gas Investments</i></b>		
Horse Hill (oil)	England	11.765%