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Market Announcements Platform
ASX Limited
Exchange Centre
20 Bridge Street
Sydney NSW 2000

# Sulphide Mineralisation intersected in Alcoutim Cu-Zn Project

### Highlights

- Increasing electrical conductivity at the base of Hole ALFP003 ("Hole 3") indicated by preliminary interpretation of the Down Hole Electro Magnetic ("DHEM") survey
- Disseminated and vein mineralisation has been logged in volcanic sediments interpreted to be similar rocks to the host sequence at the Super Giant Neves Corvo Cu-Zn Deposit
- Hole 3 will now be deepened to follow up on bottom of hole Electro Magnetic ('EM') conductivity anomaly

Auroch Minerals ("Auroch" or "the Company"), the renewable energy focused exploration company is pleased to advise that based on chalcopyrite mineralisation encountered within a fault zone at the end of Hole 3 and the interpretation of an EM conductor below the end of hole from the down-hole geophysics that Hole 3 will be deepened.

CEO Dr Andrew Tunks said,

"A DHEM survey was conducted onsite and preliminary interpretation has identified several EM conductors throughout the hole directly related to the logged sulphides. Importantly, the DHEM data indicated a possible conductor below the original end of hole and a decision has been made to deepen the hole."

It should be noted that Hole 3 at Alcoutim had already intersected several narrow zones of pyrite mineralisation in the upper portions of the hole<sup>1</sup>. Towards the planned end of hole, drilling has identified further intervals of vein related and disseminated chalcopyrite mineralisation, which when combined with a possible EM conductor and the observed rocktypes indicates we are in a highly prospective zone."

<sup>&</sup>lt;sup>1</sup> Alcoutim Cu-Zn Project-Portugal – Sulphide Rich Sediments (ASX – 04/09/2017)



#### Hole ALFP003

Hole 3 is collared close to the historic Billiton (1986) AC-1 hole, which was abandoned at 1,063m in sulphide rich black shales, due to rig limitations. The intersected geology was interpreted to be the strike extension of the host rock to mineralisation at Neves Corvo, which Auroch is targeting.

Hole 3 has intersected several intervals of blebby and disseminated chalcopyrite and pyrite that are associated with intense shearing and deformation. These zones are interpreted to be examples of widespread but small secondary sulphide mineralisation in the Iberian Pyrite Belt, similar to the historical Covos do Mouros Mine located in the south of the license.



Photos of core with orogenic copper mineralisation in the upper part of borehole ALFP 003

A) Blebs of chalcopyrite associated with quartz veining in black shale 745.0m

B) Blebby and disseminated chalcopyrite associated with narrow quartz chlorite deformation zone – 727.6m

C) Blebby and disseminated chalcopyrite in brecciated fault zone -745.9m

Hole 3 was initially halted in an intense fault zone at 1206.55m to complete the DHEM survey. Core from the fault zone (1203.0m) showed further signs of disseminated chalcopyrite, pyrite and galena mineralisation.

Initial interpretation of the DHEM data has shown a marked increase in conductivity at the bottom of the hole indicates the potential for an EM conductor below the hole.

Consequently, Auroch has made the decision to continue drilling Hole 3 beyond its present depth to continue to test the potential for Cu-Zn s mineralisation. It is anticipated that Hole 3 will reach its new end of hole depth of approximately 1400m (the limit of the drill rig) in the next two weeks at which time Auroch will report further results.

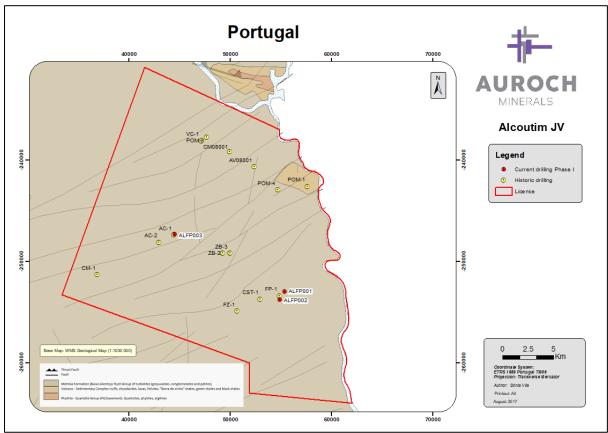
With the completion of Hole 3, Auroch has completed its Phase 1 Exploration plans and completed the required licence condition of 3000m of drilling. A license renewal application for the Alcoutim Exploration Licence has been submitted to the DGEG (Portuguese Directorate of Energy and Geology) and whilst Auroch awaits the license renewal, we will continue to study results from its Phase 1 exploration and plan further geophysics and drilling in the area of ALFP003 as well as plan for other targets across the licence. Phase 2 exploration will commence once the Licence renewal has been received.





Photo of core from ALFP003 at 1203.0m

A strongly sheared and deformed black shale with intense quartz veining and 2-3% finegrained disseminated chalcopyrite within the shales. Chalcopyrite also occurs as blebs and aggregates within the veins



Current and historical Drill collar locations from the Alcoutim Licence



#### **About Auroch Minerals**

Auroch Minerals (ASX: AOU) is primarily focusing on the exploration of metals crucial to the Renewable Energy Industry. The Company is specifically targeting Cobalt and Lithium, both used in the production of Li ion batteries in addition to Copper.

It is the Company's vision to add shareholder value through the identification, exploration and subsequent development of assets located in under-explored provinces that contain historic production and prospective geology. Auroch's current portfolio of projects contains three highly prospective exploration projects;

**Tisová Cobalt Copper Gold Project** located in the Czech Republic, where the Company currently holds an agreement to acquire 100% of the project (3<sup>rd</sup> July 2017 release). Tisová is located in the heart of the European industrial hub, has a long history of copper production with mine infrastructure in place and recent sampling carried out by Auroch has confirmed the presence of Cobalt. Auroch is currently carrying out its initial drilling program.

The Company is also earning 75% of the **Alcoutim Copper Zinc Project** in Eastern Portugal. Alcoutim is located on one of the world's most significant mining districts, the Iberian Pyrite Belt (IPB). Known as the Land of the Giants, the IPB is renowned for its poly-metallic (Copper and Zinc dominant) Volcanic Massive Sulphide (VMS) deposits. Home to three Super Giant deposits (Rio Tinto, Neves Corvo and Aljustrel) and 10 Giant deposits, the area hosts over 80 known deposits containing resources totalling over 1,700 Million Tonnes. Auroch's Alcoutim Project is located immediately along strike of the Super Giant Neves Corvo deposit.

**Karibib Li Project** is located in Namibia and provides Auroch with immediate upside potential in the rapidly evolving lithium market. The Project is situated next door to two of Namibia's high-grade historic lithium producing mines, Rubikon and Helikon.

#### **Geologic summary log for ALFP003:**

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Hole collared at 620739 E and 4144842N- -88° towards 220° - hole designed to lift to --70° at target

0.00 – 491.75m	Flysch represented by interbedded greywackes and argilites, from 470m argilite are dominant, becoming gradually darker towards bottom; typical fossil rich horizon at the bottom of flysch.
491.75 - 583.00m	Dark argilites and minor siltstones with common 2% pyrite disseminated and in stratabound blebs of several centimetres; grey and green tuffitic beds increasing towards bottom. Two major shear/fault zones 531.50-533.70m and 556.75-570.60m.
584.00 - 953.00m	Undifferentiated volcanics intercalated argilitic, light grey and green, silicified in parts. Green and purple shale of the Borra De Vinho Formation typical of the upper VSC. This sequence is structurally repeated 6 with intense quartz veining. Weakly mineralized black argilites in last 2 repetitions of this unit; Mineralisation is mainly remobilized Pyrite, Chalcopyrite, and
953.00 – 983.00m	Siltites and dark to black argilites with typical fossil occurrences on the bottom of unit. Black argilites occasionally with disseminated pyrite. Common centimetric beds of greywacke with argilites clasts typical from the Flysch group. Bottom contact is gradational.
983.00- 1012.00m	Dark to black, pyritic argilites with interbedded grey centimetric tuff beds. Pyrite occurs in percentages from 1-40% usually in mm beds parallel to bedding. or fine grained disseminated in richer horizons. Pyrite is the only observed pyrite.
1012.00 – 1181.60m	Dark argilites and medium grey siltites with minor greywacke beds. Common metre scale shear/fault zones throughout this horizon. Bottom contact is gradational marked by an increase in tuffitic / ash tuff content and graphitic shales + pyrite increase.
1181.60 – 1206.55m	Argillite and siltites with minor ash tuff beds. Original E.O.H at 1206.55 ending in a strongly graphitic shear/fault zone. On this last shear zone, pyrite and chalcopyrite occur associated with quartz veining.



For further information visit www.aurochminerals.com or contact:

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#### **Competent Persons Statement**

The information in this report that relates to Exploration Results is based on information compiled by Dr. Andrew Tunks and represents an accurate representation of the available data. Dr. Tunks (Member Australian Institute Geoscientists) is the Company's Chief Executive Officer and 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 Results, Mineral Resources and Ore Reserves'. Dr Tunks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### JORC Code, 2012 Edition

#### Table 1 - Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
Sampling techniques	No sampling is reported
Drilling techniques	Drilling is standard diamond drilling
	Hole diameter commences at HQ and reduces at depth to NQ and BQ as
	necessary
Drill sample recovery	All drilling is logged for recovery
Logging	All logging is carried out by a team of Geologists who are supervising the
	drilling on a daily basis
Sub-sampling techniques and	No sampling is reported
sample preparation	
Quality of assay data and	No assaying is reported
laboratory tests	
Verification of sampling &	No assaying is reported
assaying	
Location of data points	Coordinates in report are given in in WGS84 Zone 29N
	ALFP003 is collared at 620739 E and 4144842N – WGS 84 29
Data spacing and distribution	No data is reported
Orientation of data in relation	Holes are collared subvertical to allow for lifting during the drilling process.
to geological structure	At intersection with the target stratigraphy holes are close to orthogonal with
	the geology
Sample security	No sampling reported
Audits or reviews	No audits or review undertaken



## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure status	<ul> <li>Alcoutim Licence is held by Bolt Resource</li> <li>Auroch are in phase one of a JV earning into 65% of Licence</li> <li>Licence is currently pending a renewal by the DGEG Portugal 29/09/2017</li> <li>All documents relevant to licence renewal have been submitted to the DGEG and the Company is awaiting DGEG confirmation of the renewal</li> </ul>
Exploration done by other parties	None reported
Geology	<ul> <li>The Alcoutim Project lies within the Iberian Pyrite Belt a home to significant Volcanic Hosted Massive Sulphide mineralisation</li> <li>The targeted sequence is known as the Volcanic Sedimentary Complex -a bimodal volcanic sedimentary sequence containing rhyolites, basalts, shales and marine clastic sediments</li> <li>The VCS is unconformably overlain by the Baixo Alentejano Flysch Group (Locally the Mértola Formation) a sequence of interbedded shales, greywackes and siltstones</li> </ul>
Drill hole Information	<ul> <li>ALFP003 is collared at 620739 E and 4144842N – WGS 84 29S</li> <li>Holes are collared subvertical to allow for lifting during the drilling process.</li> </ul>
Data aggregation methods	No data aggregation has been used
Relationship between mineralisation widths and intercept lengths	<ul> <li>Only disseminated mineralisation is reported from logging at this stage.</li> <li>No assaying has been completed at this stage and the core has not yet been cut and sampled.</li> <li>Logging indicates that the bedding and veins are at a high angle to the core so drilled widths are close to true thickness. At this stage no intercepts are reported</li> </ul>
Diagrams	See report
Balanced reporting	See Report
Other substantive exploration	<ul> <li>Preliminary DHEM results are discussed in report</li> <li>The DHEM is collected by Terratech Geophysical Services a German Consultancy</li> <li>Equipment used is a Digi Atlantis 3 component system for measuring TEM, MMR and Magnetics</li> </ul>