



## NEWS RELEASE

### **Aldebaran Provides Update on 2020 Exploration Program and Outlines Plan for 2021**

VANCOUVER, CANADA (December 3, 2020) – **Aldebaran Resources Inc.** ("**Aldebaran**" or the "**Company**") (**TSX-V: ALDE**) is pleased to provide an update regarding ongoing technical work being done in advance of a 2021 drill program at its Altar copper-gold porphyry project in San Juan Province, Argentina. The Company has completed a variety of programs and surveys (listed below) that have provided valuable information and insights into the controls of the copper-gold mineralization at the Altar project. The culmination of this work will be the development of a new geological model, which will be used as the base for an updated resource estimate focussed on highlighting higher-grade mineralization, as well as the delineation of areas for possible extensions of the known higher-grade mineralization and new, previously untested, exploration targets.

#### **Highlights of Work Completed (2020) and Work Planned (2021)**

##### **2020:**

- Detailed Core Re-logging Program
  - ~115,000 m of historical core completed
- Surface Geological Mapping
  - ~3,000 hectares covered (1:10,000 scale)
- Surface Talus Fine Geochemical Sampling Program
  - 1,915 of a planned ~3,200 talus fine samples collected to date over the entire property; program is ongoing and expected to be completed soon
- Ground Magnetic Geophysical Survey
  - ~4,425 hectares surveyed
- Hyperspectral Survey & Structural Analysis
  - Aster: Regional 1:50,000 Area 60 x 60 km (3,600 km<sup>2</sup>)
  - Worldview3: Detailed 1:10,000 Area 16 x 24 km (384 km<sup>2</sup>)
- Creation of a Fault Block Model for the Altar Cluster of Porphyries
  - Definition of syn- & post-mineral faults
- Definition and Modeling of the Supergene Copper Zones
  - For future re-evaluation of lower CapEx heap-leach opportunities
- Definition of Hypogene Copper Grade Shells that Respect the Fault Blocks
  - Helps identify higher-grade copper zones and their possible extensions
- Definition of Gold Grade Shells that Respect the Fault Blocks
  - Helps identify higher-grade gold zones and their possible extensions
- Modelling of Arsenic using >300 ppm Grade Shells
  - Will better constrain arsenic in the resource block model

## 2021:

- Updated 43-101 Compliant Resource Statement
  - Using geological constraints versus the previous resource model that only used geo-statistics
  - Focus on highlighting the location, geometry, and volume of the higher-grade copper-gold zones
- Drill Program
  - Plan to follow up on higher-grade intercepts encountered in recent drilling and test newly defined targets that have never been drilled
- 3D Induced Polarization (IP) & Magneto-Telluric (MT) Geophysical Survey
  - ~26.5 km<sup>2</sup> to be surveyed
- Detailed 1:2,000 Scale Surface Geological Mapping
  - To be completed over the principal mineralized areas
  - More detailed definition of controlling structures and alteration for targeting purposes
- Complete the Surface Talus Fine Geochemical Sampling Program
  - ~1,300 talus fine samples over the areas not completed during 2020
- Re-evaluation of all the historical metallurgical data in the context of:
  - The new geological/structural model
  - Better definition of supergene copper versus hypogene copper zones
  - Better definition of the arsenic controls and geometries

**Dr. Kevin B. Heather, Chief Geological Officer of Aldebaran, commented as follows:** *“We have been extremely busy over the past year building up important technical information and data that are critical to move the Altar project forward. The project is now positioned to be shown in a different light than the historical perceptions in the marketplace. We strongly believe we can add significant value by highlighting the existing zones of higher-grade copper-gold mineralization, as well as testing multiple new drill targets to either extend those higher-grade zones or discover completely new zones/deposits. The 2021 field season should be an exciting time for Aldebaran.”*

## **Overview of Exploration Work Programs Completed**

### ***Detailed Core Re-logging Program***

All of the historical core, totaling ~115,000 m, has been relogged by Aldebaran geologists using a systematic set of logging criteria in order to have more consistent definition of the various rock types, alteration types, veining types and mineralization types. In addition to now having more consistent and reliable geological data across all the drill holes, we have also recognized new geological features that suggest the geological evolution of the Altar deposits is likely different from previous interpretations. This new geologic understanding will aid us in the development of the forthcoming updated resource estimate and the development of new exploration targets, both extensions of known high grade mineralization and new undrilled targets.

### ***Surface Geological Mapping***

The first-ever surface bedrock geological map has now been completed over a ~3,000-hectare area covering the Altar property. At a scale of 1:10,000, the mapping focussed on defining the major lithological units, the main faults, and structures, as well as the main alteration and mineralization types. This work has been rationalized with the sub-surface drill hole information and incorporated into the new geological model.

### ***Hyperspectral & Structural Mapping***

Satellite-borne high-resolution imagery and hyperspectral data were collected over the Altar project area in early 2020. Two sets of data were collected and analysed: (1) ASTER regional, 1:50,000 scale satellite data covering an area 60 x 60 km (3,600 km<sup>2</sup>) around the Altar project, and (2) WORLDVIEW3 high-resolution 1:10,000 scale satellite data covering an area 16 x 24 km (384 km<sup>2</sup>) immediately over the areas of known mineralization. The purpose of these data sets is to give us some regional and more detailed context of the structural setting and associated hydrothermal

alteration related to the Altar cluster of mineralized porphyries. This information has been integrated into our new geological/structural model for the project.

### ***Geophysics – Ground Magnetic Survey***

The first-ever systematic ground magnetics survey has been completed over most of the Altar property; a total of 383.4 line-kilometres, on 100m spaced lines, covering ~4,425 hectares. This detailed ground magnetics provides much needed information regarding structure and locations of potentially favourable magnetite-bearing potassically-altered porphyry intrusions.

### ***Geological – Structural Modeling***

All the data sets described previously have been integrated into a new robust geological/structural model that has changed our understanding of the mineralization in a significant way. The recognition of discrete fault-bounded structural blocks that have played a role in controlling mineralization, as well as potentially subsequently offsetting mineralization, is an important revelation. This new 3D model will become the backbone for the re-evaluation of the current resource and targeting for resource expansion and drill testing of newly identified areas.

### ***Copper (Cu), Gold (Au) and Copper Equivalent (CuEq) Grade Shell Modeling***

Using the new geological/structural model described above as a framework, grade shells at different cut-offs were modeled for copper, gold, and copper equivalent. The purpose of these grade shells is to better highlight the distribution and geometry of the higher-grade mineralized zones and will be used as guides for the upcoming resource re-evaluation. Special attention was given to modeling supergene secondary copper zones (amenable to heap leach technology) versus hypogene primary copper zones (amenable to milling and flotation technology).

### ***Arsenic (As) Modeling***

Historically, Altar has been viewed to have an “arsenic issue” however, based on detailed relogging of the drill holes, several important observations can be made:

- Arsenic is associated with enargite ( $\text{Cu}_3\text{AsS}_4$ ).
- Enargite occurs in centimeter-wide, sheeted veinlets with pyrite.
- The veinlets are sub-vertical and therefore sub-parallel to the core axis of the vertically drilled holes (the majority of the historical drill holes are vertical).
- These sheeted veinlets form narrow structural corridors which have been now modeled.
- These narrow sub-vertical veinlets, and hence arsenic, could be overestimated within the vertical drill holes.
- A significant amount of the highest arsenic grade occurs within the supergene copper region of Altar Central, which could be processed using heap-leach technology and would not make it to a potential copper concentrate.
- The current resource model used no geology or arsenic grade shells and was based solely on geostatistical modeling; hence it may have overestimated arsenic and spread it throughout the deposit.

To better constrain the arsenic and consider the observations above, detailed wireframes/solids of arsenic >300 ppm were constructed to represent the structural corridors of sheeted veinlets. It is anticipated that these high-arsenic solids will more realistically show the distribution and geometry of arsenic and reduce the overall arsenic content of the resource in future modeling.

## **Overview of Exploration Work Programs in Progress or to Be Completed in 2021**

### ***Resource Modeling***

The current 43-101 resource statement for Altar, completed by the previous operator, shows a very large, low-grade mineral resource with elevated arsenic content. This is in part due to no geology being used, the low cut-off grade chosen, and the emphasis on “make it big” at the expense of grade. Aldebaran’s approach is very different and focuses on having a robust and consistent geological/structural model in conjunction with grade shells at different cut-offs for

all the key economic and deleterious elements in order to highlight the potentially more economically attractive higher-grade zones and minimize the impact of the deleterious elements.

Aldebaran is currently working with IMC out of Tucson Arizona on a re-evaluation and update of the Altar project resource using our newly developed geological/structural model, grade shells and incorporation of eight additional new drill holes completed during 2018 and 2019. The objective is to highlight the size and geometry of (a) the known higher-grade primary copper-gold zones at QDM/Radio, Altar Central and Altar East, and (b) the size and geometry of the supergene copper zones. In addition, this work will provide valuable information on where additional exploration drilling should be focussed to extend these higher-grade zones. An updated resource statement is scheduled for release in Q1 2021.

### ***Talus Fine Geochemistry***

The first-ever systematic talus fine geochemical sampling program has now been completed over ~60% of the main Altar area, with the remaining ~40% currently in progress. Talus fine samples were collected on a 100 x 100 m grid pattern covering most of the Altar property. Approximately 1,915 samples have been collected and analyzed for multi-element geochemistry. The purpose of this type of sampling is to identify areas not only with anomalous Cu, Au, and Ag geochemistry, but also areas with anomalous geochemistry in the trace elements typically associated with porphyry copper-gold systems. Processing and analysis of this data is currently underway and will be used as one integrant for the generation of drill hole targets.

### ***Geophysics – 3D Induced Polarization (IP) and Magneto-Telluric (MT) Survey***

A 3D Induced Polarization (IP) and Magneto-Telluric (MT) survey is planned to be completed during this upcoming field season. The survey will cover a 26.5 km<sup>2</sup> area (7.8 x 3.4 km) over the main mineralized areas and their surrounds. The objective of the survey is to provide additional characterization of the known mineralization and identify possible extensions and/or new areas for drill testing. Most mineralized porphyry systems have clear responses to both IP and MT, with IP helping to map out sulphide distributions and MT helping to identify areas of favourable alteration such as potassic alteration and silicification, both typically associated with copper mineralization in these types of systems.

### ***Metallurgy***

An extensive amount of metallurgical test work has been completed for the Altar project over the last several years and Aldebaran will be re-evaluating the results of this data, taking into consideration the new geological/structural model and the numerous other new data sets to determine if additional, more focussed metallurgical test work is required.

### ***Drill Program***

Aldebaran is currently reviewing all the work completed to date to define exploration targets and rank them in terms of priority in advance of a drill program that is expected to commence in Q1 2021.

### **Qualified Person**

The scientific and technical data contained in this news release has been reviewed and approved by Dr. Kevin B. Heather, B.Sc. (Hons), M.Sc, Ph.D, FAusIMM, Chief Geological Officer (CGO) and director of Aldebaran, who serves as the qualified person (QP) under the definitions of National Instrument 43-101.

### **ON BEHALF OF THE ALDEBARAN BOARD**

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“John Black”

John Black  
Chief Executive Officer and Director

**For further information, please consult our website at [www.aldebaranresources.com](http://www.aldebaranresources.com) or contact:**

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### **About Aldebaran Resources Inc.**

Aldebaran is a mineral exploration company that was spun out of Regulus Resources Inc. in 2018 and has the same core management team. Aldebaran acquired the Rio Grande copper-gold project located in Salta Province, Argentina from Regulus along with several other early stage projects in Argentina. Aldebaran also has the right to earn up to an 80% interest in the Altar copper-gold project in San Juan Province, Argentina from Sibanye Stillwater. Altar hosts a large porphyry copper-gold system with mineralization currently defined in three distinct zones. The Altar project forms part of a cluster of world-class porphyry copper deposits which includes Los Pelambres (Antofagasta Minerals), El Pachon (Glencore), and Los Azules (McEwen Mining). A total of 259 drill holes (124,701 m) have been completed at Altar between 1995 and 2019. In mid-2018 an updated NI 43-101 resource was prepared for Altar by Independent Mining Consultants Inc. based on the drilling completed up to 2017. The updated Altar NI 43-101 report is available on Aldebaran's SEDAR profile at [www.sedar.com](http://www.sedar.com). Aldebaran's primary focus is the Altar project with a view to discovering new zones with higher-grade mineralization.

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