

# **December 2017 Quarterly Activities Report**

# **HIGHLIGHTS**

- Induced polarisation (IP) survey identifies a large 2.5km diameter porphyry copper prospect (the "Perseverance" prospect) at the Frisco Project, Utah, characterised by a large and strong chargeability signature and located near the large, heavily mineralised Accrington skarn
- Additional large geophysical targets identified, following the end of the December quarter along the Cactus Corridor including the Bandit Prospect, a strong, chargeability anomaly across 600m by 400m at 25-50m depth and associated with a circular, underlying magnetic anomaly. The Bandit Prospect possibly represents porphyry or porphyry related copper mineralisation at shallow depths
- Drilling at the Cactus prospect has confirmed wide intervals of copper within historical mine boundaries including:
  - 56.4m @ 0.81% Cu, 0.19g/t Au, 6 g/tAg from 175.6m including 17.55m @ 1.41% Cu, 0.41g/t Au, 5.4g/t Ag (ALCA002)
  - 27m @ 1.01% Cu, 1.24 g/t Au, 30.6 g/t Ag from 74m and 13m at 1.13% Cu, 0.28 g/t Au, 9.2 g/t Ag from 126m (ALCA005)
- Results build on historical drilling and confirm mineralisation extends along strike of the Cactus orebody towards the Comet mine and below historic workings
- Permitting underway for drilling of Bandit, Wasp, Accrington and Perserverance as part of the ongoing drill program with further assay expected in February
- An additional 89 claims staked following aggressive staking by Rio Tinto (Kennecott) on the eastern side of Frisco

Alderan Resources Limited (ASX: AL8) is pleased to report on its activities for the quarter ended 31 December 2017.

# Geophysics identifies large-scale porphyry copper prospect

During the quarter, the Company announced that results from 3D modelling of the IP survey, undertaken at its Frisco Project in Utah, USA had identified a large 2.5km diameter chargeability feature consistent with a large mineralised porphyry copper system (see Figure 1). The chargeability anomaly occurs as a large domal feature and is located between the mineralised Cactus Corridor, host to the Cactus Mine, and the large Accrington skarn, and to many historical mines and large outcropping copper-zinc skarns.

Alderan named the new prospect Perseverance in recognition of Page Blakemore Snr, who dedicated much of his lifetime to the Frisco Project and was the founder of Horn Silver Mines Inc, the principal private landholder at Frisco.



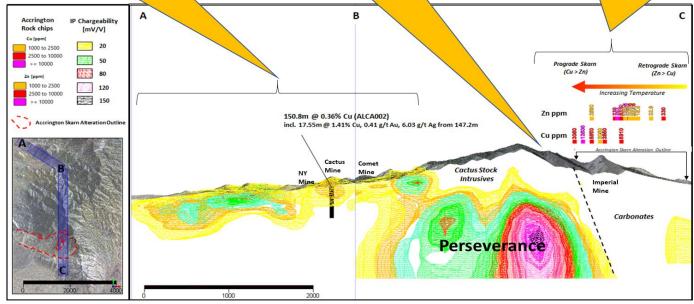
Within the context of a mineralised porphyry system, high chargeability zones are likely to represent pyrite-rich zones of alteration surrounding copper bearing stockwork mineralisation, which is usually less chargeable and often more conductive in nature. High chargeability and low resistivity (i.e. more conductive) features may also represent other styles of mineralisation in the distal parts of the porphyry system and can host higher grade deposits (such as skarns, breccias or carbonate replacement deposits).



end of hole)

# Accrington (Cu-Zn-Pb-Au-Ag skarn)

- 4km by 2km outcropping skarn
- Dozens of historical mines
- Strong geochemical zonation (copper increasing) towards
- Copper bearing porphyry dykes mapped throughout Accrington



41.5m @ 0.94% Cu (from 0m\* to

Figure 1: Cross section through the Perseverance porphyry target showing the location of distal skarn (Imperial/Accrington) and breccia hosted mineralisation (Cactus Corridor). Refer to ASX announcements on 28 June 2017, 19 July 2017 and 15 Dec 2017 for further results and discussion.

130.45m @ 0.76% Cu, 43.6m @

1.69% Cu, 38.4m @ 1.40% Cu

Shares on Issue: 107,963,908

Pb-Zn Pb-Zn/Pyrite Pyrite Cu-Pyrite



The results demonstrate that Perserverance may host a mineralised porphyry intrusion(s), similar in size to Bingham Canyon, a world-class porphyry copper deposit and one of the world's largest mines, located just outside of Salt Lake City (refer to Figure 2). The Bingham Canyon porphyry system, including the pyrite shell which envelops the copper-molybdenum orebody, occurs over approximately 2-2.5km diameter, which is similar in size to Perserverance.

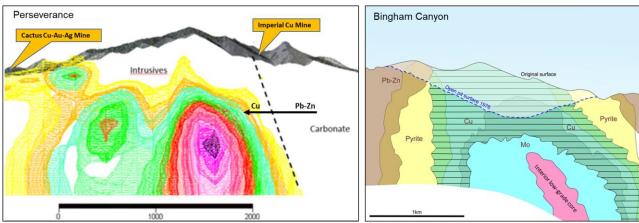


Figure 2: Scale comparison of Perseverance (chargeability shells shown on the left, see figure 1 for legend) with Bingham Canyon - ore zones and surrounding\ outer pyrite shells shown (right)¹. Note that the pyrite rich shell will normally account for higher chargeability, however the presence of high-temperature copper-garnet skarns at surface (Imperial) also suggests a close vicinity to the Perseverance porphyry.

# **Cactus Corridor Targets**

The IP results also indicated a continuation of strong chargeability at depth within and along the Cactus Corridor containing the Cactus, New Year, Comet mines and beyond, connecting to the main Perseverance anomaly and thereby suggesting a genetic link between Perseverance and mineralisation within the Cactus Corridor. Refer to ASX announcement dated 21 December 2017 for the details of the IP survey results, including associated JORC disclosures.

Further analysis of results along the Cactus Corridor identified a strong, flat-lying chargeability anomaly measuring approximately 800m by 400m with a central zone of lower resistivity which sits within a circular magnetic high (**Bandit Prospect**). Bandit lies at approximately 50m depth and may represent a large body of sulphides possibly within or related to a porphyry copper system.

A second significant target was identified below and adjacent to the Cactus Mine. The **Wasp Prospect** is a low resistivity anomaly measuring approximately 600m by 400m, which exhibits a similar geophysical signature to mineralisation intersected at the Cactus Mine and may represent a continuation or a primary source of the Cactus mineralisation to depth.

<sup>&</sup>lt;sup>1</sup> Source (right image) – Modified from U.S. Geological Survey Bulletin 1857-E, Gold in the Bingham District, E. Tooker, 1990



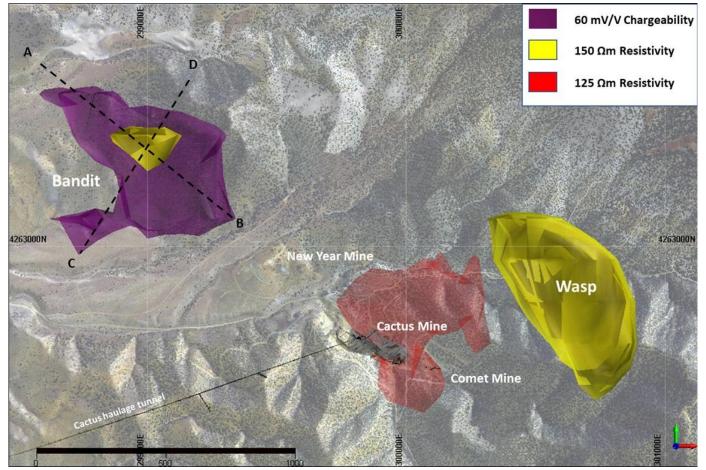


Figure 3: Map showing the location of the Bandit and Wasp geophysical targets with respect to the Cactus Cu-Au-Ag Mine

# Wide intervals of copper-gold-silver mineralisation at Cactus

Alderan received initial results from its drilling program at the Cactus Mine, which confirmed wide intervals of copper-gold-silver mineralisation. Results are presented in Table 1 below.

Drillholes ALCA001 to ALCA003 were designed to test the upper and lower level workings of the Cactus Mine to determine the nature, grade and precious metal content of mineralisation within and surrouding historical workings. Results confirmed broad intervals of copper-gold-silver mineralisation with up to 56.4m at 0.81% Cu, 0.19 g/t Au and 6 g/t Ag from 175.6m (ALCA002) with higher grade zones including 6.55m @ 3.11% Cu, 0.55 g/t Au, 18 g/t Ag from 94.3m (ALCA001).

Drillholes ALCA004 and ALCA005 were drilled approximately 185m southeast of ALCA001/ALCA002 to test for extensions to mineralisation beyond the historical Cactus claim boundary and intersected significant widths and grades of mineralisation at shallow depth (74m), including higher gold grades. Historical mining ceased at the claim boundary due to a dispute with the then owner of the neighbouring Comet claim. Alderan's results in ALCA004-005 confirm that mineralisation extended beyond historical claim boundaries and is likely to continue to the Comet Mine to the south-east of the Cactus Mine.

#### **BOARD AND MANAGEMENT**

Nicolaus Heinen | Non-executive Chairman
Christopher Wanless | Chief Executive Officer
Bruno Hegner | Director & Chief Operating Officer
Tom Eadie | Non-executive Director
Brett Tucker | Company Secretary
Peter Geerdts | Chief Geologist
Brian Kay | Exploration Manager

ASX Code: AL8
Share Price: \$1.25
Shares on Issue: 107,963,908
Options on Issue: 19.257.454



The increase in gold grades within ALCA004-005 is also consisent with historical drilling which intersected higher gold grades at the Comet Mine, indicating a horizontal or vertical zonation within the Cactus orebody towards higher gold grades within the Comet Mine, which lies at a higher elevation than the Cactus Mine.

Table 1: Results from ALCA003 to ALCA005, Cactus Mine

| Hole ID   | From (m) | To (m) | Interval (m) | Cu % | Au g/t | Ag g/t |
|-----------|----------|--------|--------------|------|--------|--------|
| ALCA001   | 76       | 84.9   | 8.9          | 0.92 | 0.14   | 7.79   |
|           | 94.3     | 100.85 | 6.55         | 3.11 | 0.55   | 18     |
| ALCA002   | 175.6    | 223    | 56.4         | 0.81 | 0.19   | 6      |
|           | 175.6    | 183.15 | 17.55        | 1.41 | 0.41   | 5.4    |
| ALCA003   | 332.5    | 358    | 25.5         | 0.65 | 0.08   | 6.26   |
| ALCA004   | 117      | 148    | 31           | 0.51 | 0.46   | 7.7    |
| and       | 130      | 148    | 18           | 0.7  | 0.58   | 9.66   |
| ALCA005   | 74       | 101    | 27           | 1.01 | 1.24   | 30.6   |
| including | 74       | 91     | 17           | 1.35 | 1.39   | 44.89  |
| and       | 126      | 139    | 13           | 1.13 | 0.28   | 9.2    |

The Cactus Mine is part of a series of outcropping breccia pipes and mineralised zones (New Years, Cactus, Comet) aligned along the NW-SE trending structural Cactus Corridor. Historical exploration, previously reported by Alderan, has identified significant mineralisation within the Cactus mine boundaries (see ASX announcements dated 28 June 2017 and 21 August 2017). Historical high-grade underground channel sampling results included 21.5m @ 6.1% Cu, 32.5m @ 3.8% Cu and 83m @ 1.2% Cu. Historical drilling results included 130.45m @ 0.76% Cu, 43.6m @ 1.69% Cu, 38.4m @ 1.40% Cu.

Drilling is currently ongoing with drillholes subsequent to the end of the December quarter continuing to target mineralisation to the south-east of Cactus and to the north-west towards the New Year mine.

Permitting is underway to expand Alderan's ongoing diamond drill program at Frisco to drill test additional targets including Bandit, Wasp, Accrington and Perseverance.

# New claims secured at Frisco and staking by Rio Tinto

Alderan staked a further 31 claims west of Accrington and 58 claims to the west of the Cactus Mine (January 2018) through its US subsidiary, Volantis Resources Corp. All claims are unpatented claims on Federal land. The new claims bring the amount of claims held by Alderan to 341 unpatented claims and 275 patented claims (secured by lease).



Rio Tinto (Kennecott) has also emerged as the holder of approximately 300 unpatented claims adjoining the Frisco Project to the east. Rio Tinto are the owners and operators of the world class Bingham Canyon copper-gold mine, located 3 hours drive to the north of Frisco near Salt Lake City. Bingham Canyon has mined over 3 billion tonnes of ore across over 100 years of continuous production and is one of the worlds largest open piit mines.

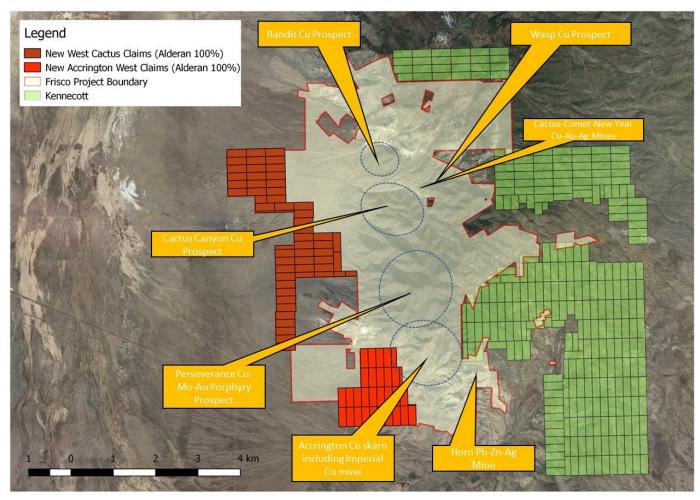


Figure 4: Project map showing the location of new claims staked at West Cactus and West Accrington and the location of claims staked by Rio Tinto (Kennecott).

#### CORPORATE

# Annual General Meeting

The Company held its Annual General Meeting (AGM) of shareholders on 28 Novemer 2017 and all resolutions were passed on a show of hands.

#### **BOARD AND MANAGEMENT**

Nicolaus Heinen | Non-executive Chairman Christopher Wanless| Chief Executive Officer Bruno Hegner | Director & Chief Operating Officer Tom Eadie | Non-executive Director Brett Tucker | Company Secretary Peter Geerdts | Chief Geologist Brian Kay | Exploration Manager MARKET DATA

Share Price: \$1.2



# **Incentive Options**

During the quarter, Alderan issued a number of options over fully paid ordinary shares to Director Bruno Hegner, two employees and a key contractor as incentive for future performance under the Company's long-term incentive plan. The issue of options to Mr Hegner was approved at the 2017 AGM.

# Shares released from escrow

Alderan advised that 3,046,666 fully paid ordinary shares were due to be released from escrow on 23 December 2017 in accordance with ASX Listing Rule 3.10A. A further 163,333 shares were released on 9 January 2018.

As at 31 December, Alderan was well funded to continue its exploration of the Frisco Project, with over \$3 million cash at bank.



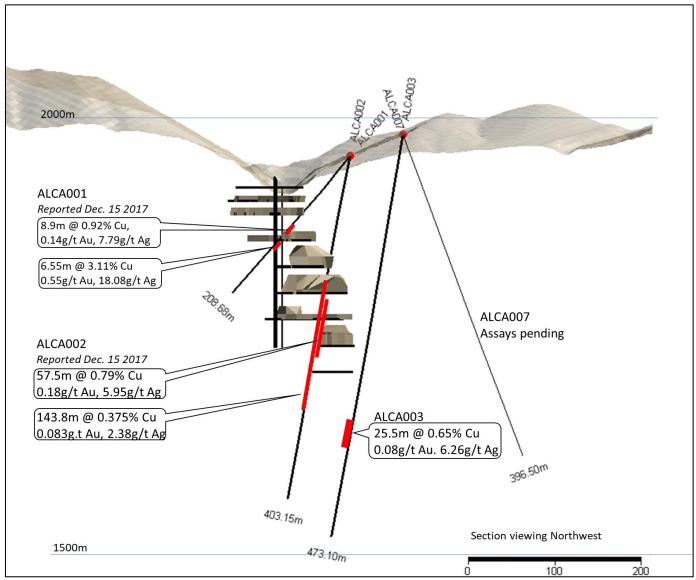


Figure 5: Cross section showing ALCA001-3 and ALCA007, down-hole mineralised intervals and historical mine workings.



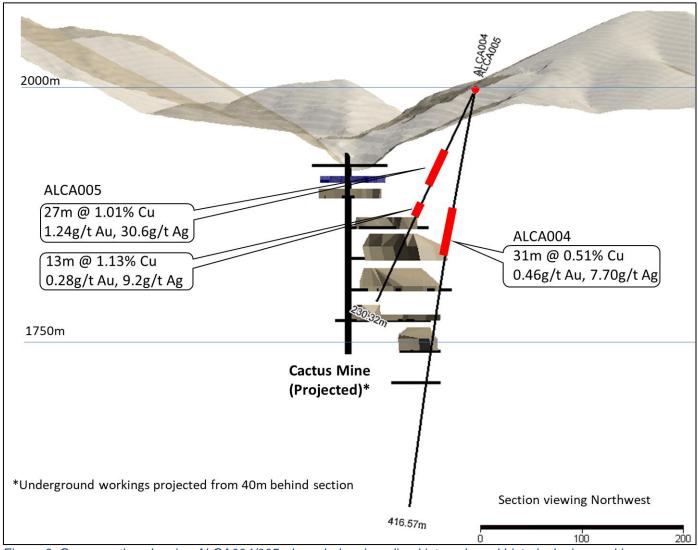


Figure 6: Cross section showing ALCA004/005, down-hole mineralised intervals and historical mine workings.

ASX Code: AL8
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Table 2: Drill collar details (Cactus Mine). Co-ordinates are in WGS84 Zone 12.

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|-------------------------------|--------|---|--------|---------|-----------|-----------|------------|--|--|
| Drillhole<br>ID               | East   | North   | Dip    | Azimuth | Elevation | Depth (m) | Drill type |  |  |
| ALCA001                       | 299900 | 4262675   | -49.64 | 213.86  | 1958 asl  | 208.68    | Diamond    |  |  |
| ALCA002                       | 299900 | 4262675   | -80    | 214.8   | 1958 asl  | 403.15    | Diamond    |  |  |
| ALCA003                       | 299959 | 4262707   | -80    | 210     | 1983 asl  | 473.10    | Diamond    |  |  |
| ALCA004                       | 300070 | 4262600   | -80    | 210     | 1997 asl  | 416.57    | Diamond    |  |  |
| ALCA005                       | 300070 | 4262600   | -65    | 210     | 1997 asl  | 230.32    | Diamond    |  |  |
| ALCA006                       | 299990 | 4262629   | -82    | 220     | 1989 asl  | 128.36    | Diamond    |  |  |
| ALCA007                       | 299959 | 4262707   | -70    | 042     | 1983 asl  | 396.5     | Diamond    |  |  |
| ALCA008                       | 300105 | 426574  | -55    | 195     | 2008 asl  | 297.50    | Diamond    |  |  |

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#### ALDERAN RESOURCES LIMITED

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### **Stay Connected**

Interested investors and shareholders are encouraged to subscribe to the Company's social media channels using the links below:





Options on Issue: 19,257,454



### **Competent Persons Statement**

The information in this presentation that relates to exploration targets, exploration results, mineral resources or ore reserves is based on information compiled by Brian Kay, a competent person who is a member of Engineers and Geoscientists British Columbia (formerly The Association of Professional Engineers and Geoscientists of British Columbia). Brian Kay is the Exploration Manager of Alderan Resources Limited. Brian Kay has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the JORC Code (JORC Code). Brian Kay consents to the inclusion of this information in the form and context in which it appears. Mr Kay confirms that that the information provided in this announcement provided under ASX Listing Rules Chapter 5.12.2 to 5.12.7 is an accurate representation of the available data and studies for the proposed exploration programmes that relate to this "material mining project".

The information in this presentation that relates to geophysical results is based on information compiled by Kim Francombe, a competent person who is a member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Kim Francombe is a geophysical consultant to Alderan Resources Limited. Kim Francombe has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the JORC Code (JORC Code). Kim Francombe consents to the inclusion of this information in the form and context in which it appears. Kim Franncombe confirms that that the information provided in this announcement provided under ASX Listing Rules Chapter 5.12.2 to 5.12.7 is an accurate representation of the available data and studies for the proposed exploration programmes that relate to this "material mining project".

#### **About Alderan Resources Limited**

Alderan is a copper explorer with a focus on the Frisco Project, located in Utah, United States of America. The Frisco Project encompasses an area of significant historical mining activity with numerous old mines and workings across an area of approximately 7km by 4km. These include:

- the Cactus copper-gold-silver deposit and breccia pipe, one of several mineralised breccia pipes over an area of approximately 1000 m by up to 400 m. Modelling of magnetic survey data demonstrates that these pipes are likely connected at depth;
- the Accrington copper-zinc-silver-gold skarn, which hosts extensive mineralisation across an area of 1.8 km by 1.2 km; and
- the Horn zinc deposit, a historical lead-silver mine, which contains significant amounts of unmined high grade zinc.

The Company believes that these three deposits are genetically related to, and were formed contemporaneously with, underlying mineralised (copper-molybdenum-gold) porphyry intrusions. Work undertaken by the Company has confirmed the presence of a mineralised porphyry system beneath and adjacent to the Cactus breccia pipes (Cactus Canyon prospect) which is coincident with a large circular magnetic anomaly and a large induced polarisation anomaly. The Accrington prospect is also considered to be related to a large underlying mineralised (copper-molybdenum-gold) porphyry.

#### **Forward Looking Statement**

Statements contained in this release, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices, resources, reserves or potential growth of Alderan Resources Limited, are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors.

#### **BOARD AND MANAGEMENT**

Nicolaus Heinen | Non-executive Chairman Christopher Wanless | Chief Executive Officer Bruno Hegner | Director & Chief Operating Officer Tom Eadle | Non-executive Director Brett Tucker | Company Secretary Peter Geerdts | Chief Geologist Brian Kay | Exploration Manager ASX Code: AL8 Share Price: \$1.25