

# **Review Identifies Two Areas for Drill Focus near Frisco, Utah**

# HIGHLIGHTS

- Following a detailed review of the results of the 2018 drilling programme at Frisco, Utah by Company management, and additional mapping by an independent consultant, two areas have been chosen for major drilling focus in 2019:
  - The White Mountain Epithermal Gold Project, located 10km SW of Frisco, which has recently been acquired through staking by Alderan; and,
  - The Tourmaline Breccias, which are located in the north central region of the Frisco Claims.
- The surface rocks at White Mountain have many of the characteristics commonly found within the higher levels of a fully preserved epithermal system such as sinter terraces, chalcedony and alunite alteration.
- Epithermal systems are notable for having a well established geological model with vertical zoning and containing high grades of gold and often large tonnages.
- Alderan has identified at least four additional **Tourmaline Breccias** on the Frisco Claims around the **Cactus Breccia** where:

## 1.272 million tonnes @ 2.07% Cu, 0.33g/t Au and 7.36g/t Ag were mined

with production ending in 1957 (Alderan Prospectus 2017). The **Cactus Mine** area was the subject of previous Alderan drilling.

- The New Years Breccia, which appears to be underexplored from geophysical and geological evidence, has only had cursory drilling with some encouraging results.
- In addition, there may be several mineralised breccias at the nearby Southwest Zone, which has abundant tourmaline veining covering an area larger than the zone containing the four known breccias. A further large tourmaline breccia has been identified to the south at Copperopolis where historic drilling intersected mineralised breccia veining over hundreds of metres.
- Geological mapping and sampling over the next month will refine drill targets at both White Mountain and the Tourmaline Breccias for a planned major drilling campaign later in the year.
- > Permits are in place for drill targets at **New Years** and two of the other breccias.
- Incoming Executive Chairman, Tom Eadie, says:

"The planned mapping and sampling campaign is designed to be a quick and cost effective approach to defining and refining drill targets on the highest ranked project areas in the Frisco area. Both the Epithermal Gold and Breccia-hosted copper/gold settings are known around the world to host large and high grade ore bodies. To find one or more of these is our objective here."



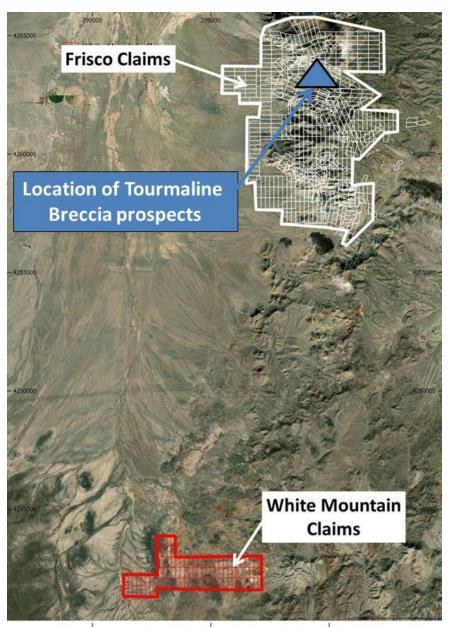


Figure 1: Location map of exploration focus areas

#### Introduction

Alderan Resources Limited (ASX: AL8) ("Alderan" or "the Company") is pleased to provide an update on forthcoming exploration at **White Mountain** and the **Tourmaline Breccia** target area, both part of the Company's Frisco Project located in Utah, USA.

At **White Mountain**, Alderan has recently completed staking of an area that has the hallmarks of the upper levels of a large, fully preserved Epithermal Gold system including sinter terraces, chalcedony mineralisation and alunite alteration in outcrop.

Further, an independent review was conducted in December of the **Tourmaline Breccia** area, focusing on mapping the known breccias and other areas of possible further breccias. Multiple targets have been identified, highlighted by the underexplored **New Years Breccia**. Several other breccias have been mapped and two further areas have been identified as likely clusters of further breccia emplacement (see Figure 6). These areas will be a focus of the imminent mapping and sampling programme.



#### White Mountain Epithermal Gold System

The **White Mountain** prospect is a large scale, outcropping epithermal system showing many attributes of a large, fully preserved epithermal gold/ silver system. Sinter terraces, large zones of chalcedony/quartz and argillite/alunite alteration over approximately 5km by 2km at surface (Figures 2-4) indicate an upper level setting of the system with the potential of a larger hydrothermal system preserved at depth. Alunite has been historically mined in larger quantities in the area and minor workings for gold exist.

Epithermal Gold Deposits are vertically/horizontally zoned hydrothermal systems. The general geological characteristics are well established, with barren quartz (sinter zones, chalcedony) along with clay alteration (such as alunite, argillite or kaolinite) at surface. Gold usually occurs within favorable accomodation zones such as structures (high grade veins) or permeable rocks at depth (large tonnage/ lower grade targets). White Mountain shows evidence for a high level setting of a large, low sulphidation epithermal system with sinter terraces at surface and a preserved hydrothermal system at depth (Figure 5) where higher grades are expected.

Many excellent examples of this type of deposit are found in the western Americas. A nearby example is the blind Midas discovery in Nevada (2.7mt @ 34g/t Au).

Alderan has recently completed staking of this 5km long system (see Figure 2). Some small mining claims owned by other parties occur in the east of the staked block. The forward programme is geological mapping/sampling in March/April to define drill targets for later in 2019.

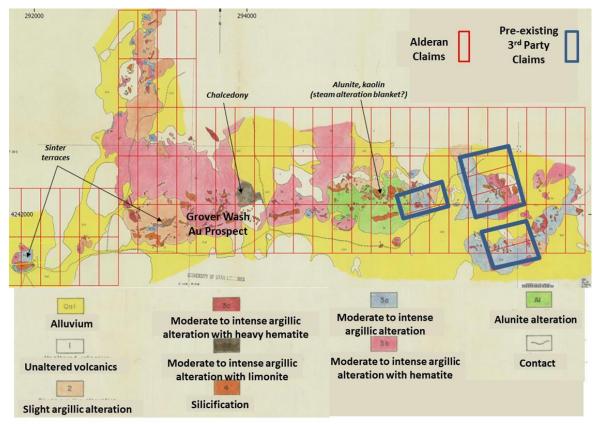


Figure 2: The White Mountain claim block contains all of the quartz-rich (sinter zones, chalcedony) and clay alteration (argillite, alunite) expected in the high levels of a low sulphidation Epithermal Gold system.





Figure 3: View looking West from the chalcedony outcrop showing large scale epithermal alteration and silicification on surface with a sinter terrace in the background. Geologist for scale.

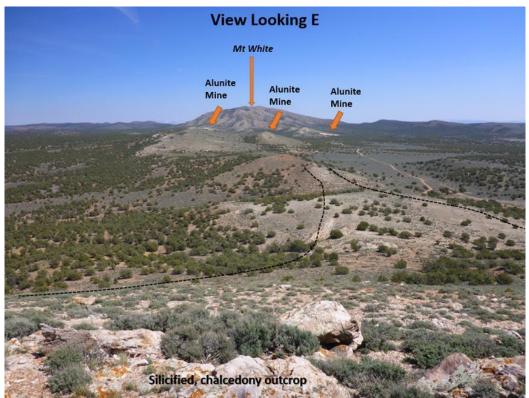


Figure 4: View looking East from the chalcedony outcropshowing large scale epithermal alteration and silicification on surface for about 2.5km and historic WWII Alunite mines in the background.

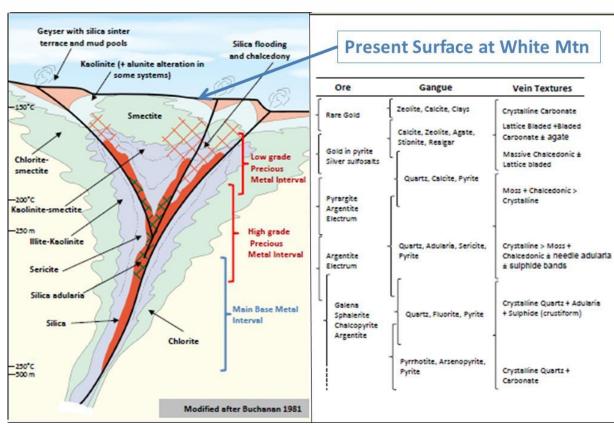


Figure 5: The surface geology at White Mountain is consistent with the classic model for low sulphidation epithermal gold mineralisation. Silica-rich flooding at surface (sinters, chalcedony), develop into possible pervasive low grade gold mineralisation and high grade vein-hosted gold at depth.

## **Tourmaline Breccia Target Area**

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Copper bearing tourmaline breccia clusters are an underestimated exploration target despite often hosting high grade mineralisation across multiple deposits with vertical extents of up to 1000m. Alderan's breccias on the Frisco Claims (Figures 6 and 7) exhibit similarities to other copper bearing tourmaline breccia clusters. Alderan's cluster deserves to be a high priority target given their location close to infrastructure and in a low-risk jurisdiction. This prospectivity was confirmed by an independent review in December 2018 which highlighted that this type of breccia can increase in size with depth and can have vertical dimensions exceeding one kilometer. The highest metal concentration is typically found near the inside margins and upper parts of the tourmaline breccias where there is often more intense development of shingle breccias (refer to Figure 8).

Previous drilling by the Company on the **Cactus Breccia** defined copper-gold-silver mineralisation across a 600m strike length. The recent independent review has highlighted that the **Cactus Breccia** has been eroded more than the other breccias. The New Years breccia displays greater preservation (see Figure 8), indicated by the presence of shingle breccias and extensive tourmaline breccia and alteration at surface associated with a distinct topographic high. Historical drilling at **New Years** was restricted to shallow drill holes which encountered mineralisation over significant widths in several drill holes.

An offset magnetic low may also indicate a continuation of the breccia or a separate breccia to the west. The independent review has recommended several drill holes to test beneath and along from the historical shallow drilling at **New Years**.



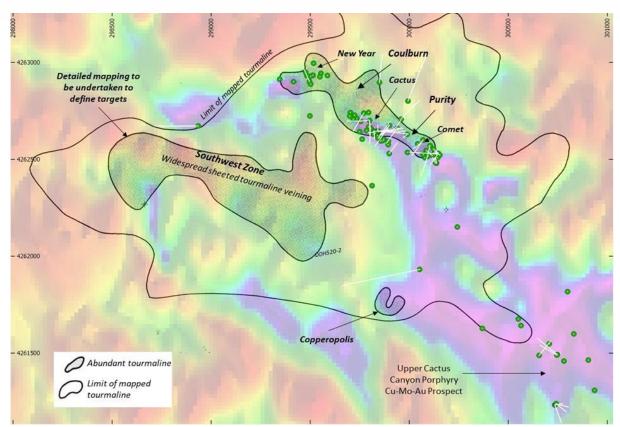


Figure 6: Prospect map with tourmaline alteration within the Tourmaline Breccia area shown against magnetics with all drill holes shown.

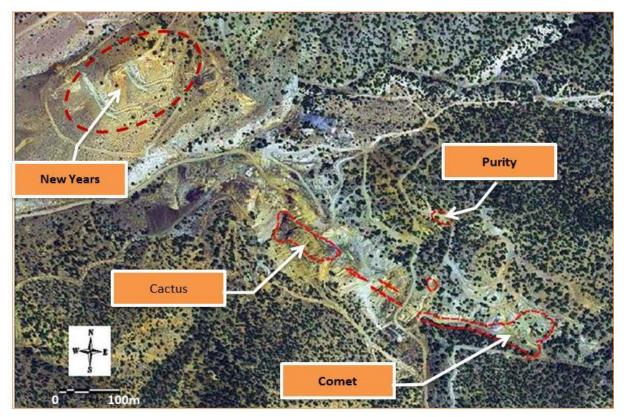


Figure 7: Detailed view of the area of the currently known and mapped Tourmaline Breccias. New Years appears to be unexplored at depth and along strike.



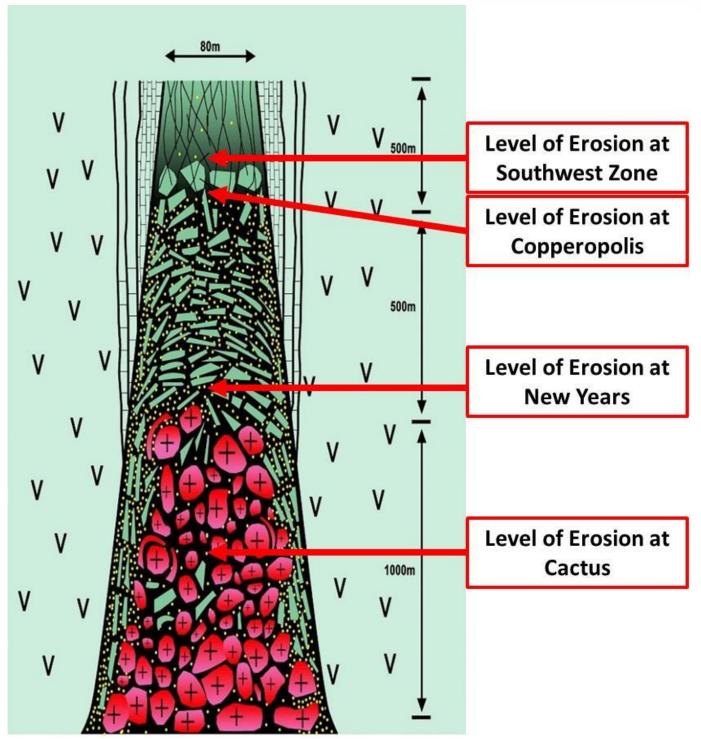


Figure 8: Conceptual model for a tourmaline breccia pipe (after Kirwin et al., 2017) showing the level of interpreted erosion at the various prospects. It appears that most of the Cactus Breccia has been eroded away while potential for higher tonnage exists at all the other prospects. The pale green represents the host rock, the black is tourmaline, the gold is chalcopyrite and other sulphides, and the pink is the causative intrusion.

At the **Cactus Breccia**, previous drilling by Alderan and historical explorers intersected continuous mineralisation across approximately 600m within a mostly tabular deposit controlled by a structural corridor. Historical mining widths reached up to 55m. The next phase of mapping and sampling in March/April will determine whether or not the **Cactus Breccia** merits further drilling.



Refer to ASX announcements dated 15 December 2017, 17 January 2018, 5 March 2018 and 29 March 2018 for a complete list of results for the Cactus drilling and associated JORC disclosures.

### Nearby Prospective Areas for Additional Breccias

Strong indications of additional blind breccias also occur in the **Southwest Zone** (see Figure 6) across an area of 2km by 1.5km, indicative of a larger breccia cluster capable of hosting multiple deposits. This includes widespread quartz sericite alteration and sheeted quartz-tourmaline veining and distinct circular magnetic low signatures, indicative of a possible breccia.

In addition, the **Copperopolis Breccia** is located approximately 800m to the south of the Cactus Mine and appears to represent a fifth breccia similar in size to the **Cactus** and **New Years Breccias**. Key features of **Copperopolis** include:

- outcropping tourmaline breccia and sheeted tourmaline veins approximately 200m higher in elevation than the Cactus Mine;
- a distinct magnetic low similar to the Cactus Breccia; and
- a single historical drill hole that intersected mineralised chalcopyrite-pyrite-tourmaline breccia and veins over an interval of approximately 400m which may indicate the presence of a mineralised breccia at depth or to the side.

A single drill hole is proposed to test the **Copperopolis** prospect. Further mapping is to be undertaken ahead of drill testing.

### Work Program

Work will commence in late March, subject to snow cover clearing sufficiently, with detailed mapping and sampling within the **Tourmaline Breccia** and **White Mountain Epithermal Gold** prospects. The objective will be to define and refine drill targets. A drill program at both prospects, incorporating the recommendations of the independent review and detailed mapping will be organised at the completion of this program.

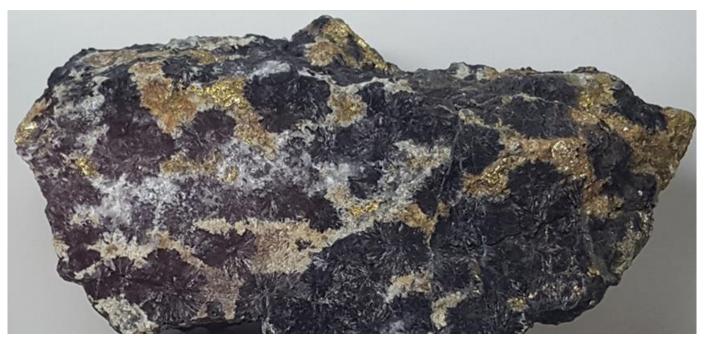


Figure 9: Chalcopyrite-rich tourmaline breccia from the Cactus Breccia.



#### References

Buchanan, L.J., 1981; Precious Metals Deposits Associated with Volcanic Environments in the Southwest; in, Dickinson, W.R. and Payne, W.D, eds., Arizona Geological Society Digest Vol 14, p. 237-262.

Kirwin D, Kelley D, Azevedo F & Wolf R, 2018; Characteristics of Intrusion-related copper bearing tourmaline breccia pipes; Society of Economic Geology, 2018 Keystone, Colorado Conference proceedings.

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#### **Competent Persons Statement**

The information in this report as it relates to geological, geochemical, geophysical and exploration results was compiled by Mr Tom Eadie, FAusIMM, who is a Director of Alderan Resources Ltd. Mr Eadie has more than 20 years experience in the activities being reported on and has sufficient expertise which is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 edition of the JORC Code. He consents to the inclusion of this information in the form and context in which it appears in this report.

#### 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.

References to historical production and third party held mineral resources do not in any way guarantee that Alderan will have any success or similar successes in delineating a JORC compliant mineral resource on the Frisco Project, if at all.