

## Alderan successfully completes maiden drilling at Drum oxide gold deposit, Utah, USA

### HIGHLIGHTS

- Eight diamond drill holes for 868.6m completed at the Drum oxide gold deposit at Alderan's Detroit project in Utah, USA.
- Holes targeted verification and extensions of modelled remnant oxide gold mineralisation - most assays yet to be received.
- Previously reported Alderan holes 9DD22-001 & 9DD22-003 at Drum intersected broad oxide gold mineralised intervals of **16.2m @ 1.04 g/t Au** (including **6.2m @ 2.9g/t Au**) and **17.8m @ 1.70g/t** (including **6.6m @ 2.5g/t Au**) respectively, confirming historical grades and thicknesses.
- Results indicate remnant high-grade oxide gold mineralisation is open down dip below the southern and northern ends of the East Pit at Drum.
- One step-out diamond drill hole completed 350m northwest of the Mizpah oxide gold prospect (Mizpah) to a depth of 164.89m intersected **69m @ 0.18g/t Au** - indicates that the mineralised system could be much larger than past work indicates.
- Alderan is renegotiating an option agreement over a reduced area at Detroit Project - to be executed in early May.
- Assays for Drum holes 9DD22-004 to 9DD22-008 expected in May; rig booked to recommence drilling at Drum and Mizpah in August 2022.



*Figure 1: Drum Gold Mine's East Pit, looking south*

Alderan Resources Limited (ASX: AL8) (**Alderan** or the **Company**) is pleased to announce it has successfully completed its 1,033m diamond drilling programme at its flagship Detroit project in the Drum Mountains region of western Utah, USA. The programme consisted of eight holes (868.6m) at the historical Drum oxide gold mine

and one hole (164.9m) at the Mizpah oxide gold prospect, 2km north of Drum, and aimed to verify and extend remnant oxide mineralisation at both prospects.<sup>1</sup>

**Alderan Managing Director Scott Caithness said:** “Our Drum drilling programme has successfully concluded without incident. Early assay results from holes 9DD22-001 and -003 have confirmed that thick and high-grade oxide gold zones remain below both the northern and southern ends of Drum’s East Pit. This provides confidence in Alderan’s modelling of historical drill data and optimism that the assays for holes 9DD22-004 to -008 will also contain gold mineralisation.

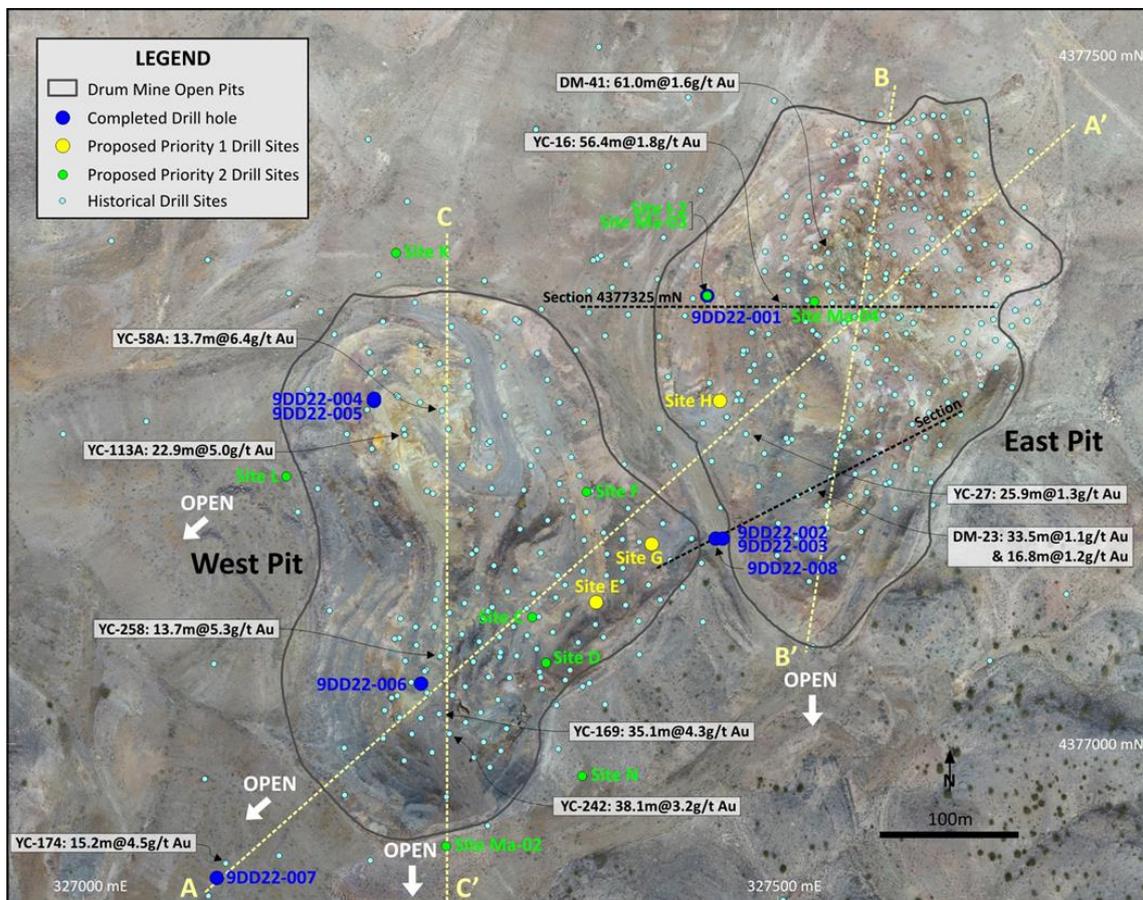
“The hole at Mizpah was also an exciting result as it demonstrated that the gold mineralised system is greater than 50m thick 350m down dip from the historically drilled deposit. This suggests that the system could be significantly larger than historically defined.

“We are keenly awaiting the assay results for Drum holes 9DD22-004 to 008 which are expected in May, and plan to recommence drilling in August 2022.”

**Drum Drilling**

Drum oxide gold mine produced 125,000oz gold between 1984-89, however until Alderan commenced exploration in late 2021, it had seen no modern exploration since mining ceased<sup>2</sup>.

Alderan drilled a total of 868.6m in eight diamond holes at Drum (see Figure 2), designed primarily to test for remnant oxide gold mineralisation left behind when mining ceased in 1989 plus indicate whether potential exists for down-dip extensions to the mineralised horizons<sup>3</sup>. This remnant mineralisation was modelled from historical drill hole data collected by Western States Minerals and Jumbo Mining between 1982-89.



**Figure 2:** Drum pit outlines showing locations of Alderan completed and proposed drill sites.

<sup>1</sup> Refer Alderan ASX announcements dated 20 January 2022 and 22 February 2022.

<sup>2</sup> Krahulec, K.; Sedimentary rock-hosted gold and silver deposits in the Northeast Basin and Range, Utah; Utah Geol Survey; Jan 2011.

<sup>3</sup> Refer Alderan ASX announcement dated 20 January 2022.

Historical data indicates that the gold mineralisation at Drum primarily occurs in two stratigraphic horizons, the lower Tatow unit and the upper Chisholm Formation within a northeast-southwest trending structural corridor bound by two steeply dipping faults.<sup>4</sup> Both the Tatow and Chisholm units consist of fine-grained calcareous shales, siltstones and carbonates and are separated by the massive and un-mineralised Howell Limestone. All units dip gently at ~20° to the southwest and strike roughly north-south.

Alderan's holes at Drum targeted either the Tatow unit which was the prime source of historical ore in the East Pit or the Chisholm unit, the historical ore host in the West Pit. Holes were drilled at the northern and southern ends of both pits and 150m down dip to the southwest of the West Pit boundary. Some assays have been received for holes 9DD22-001 and 9DD22-003 (see Alderan ASX announcements on 25<sup>th</sup> February and 5<sup>th</sup> April 2022) with assays for the remaining holes yet to be received.

A summary of each hole is outlined below.

#### *9DD22-001<sup>5</sup>*

Hole 9DD22-001 was drilled to 117.95m to test for remnant gold mineralisation in the zone surrounding historical hole YC-16 on the western side of Drum's East Pit which intersected **56.4m @ 1.8g/t Au** from 44.2m downhole in the Tatow unit which hosts historical ore in the East Pit (see Figure 3). Alderan modelling of historical drill data indicated that 10-20m of gold mineralisation at the bottom of the YC-16 remained below Drum's pit bottom including sample grades up to 7.1g/t Au.

Gold-only assays for 20 samples ranging in length from 0.5-2.15m between 57.0-78.3m down the hole have been received. The hole intersected a thick oxide zone of **16.15m @ 1.04g/t Au** from 60.04m downhole which included:

- **6.3m @ 2.9g/t Au** from 65.9m downhole and
- **1.5m grading 5.6g/t Au** from 70.7m downhole.
- Highest grade assays included **6.01g/t Au** (0.61m), **5.23g/t Au** (0.92m) and **3.4g/t Au** (1.13m).

The hole verified Alderan's modelling of historical drill data and confirmed that potential exists for a significant thickness of high-grade oxide gold mineralisation in the Tatow unit at the northern end of the East Pit.

#### *9DD22-002*

Hole abandoned at 28.95m - hole 9DD22-003 is the re-drill.

#### *9DD22-003<sup>6</sup>*

Hole 9DD22-003 was drilled to 145.24m to test for remnant gold mineralisation in the Tatow unit below the southern end of the East Pit where Alderan modelling indicated a 10-20m zone of oxide mineralisation grading +1.0g/t Au remained below the pit bottom (see Figure 4). Historical holes in the immediate vicinity of the hole include YC-24, DM-23 and DM-24 which intersected 12.2m @ 1.1g/t Au from 30.5m downhole, 16.8m @ 1.2g/t Au from 79.2m downhole and 22.9m @ 1.2g/t Au from 47.2m downhole with its final assay 1.9g/t Au respectively. DM-12 which intersected 67m @ 0.9g/t Au from surface with last assay 2.8g/t Au lies approximately 15m off-section to the south.

Gold-only assays for 30 samples ranging in length from 0.47-2.42m between 85.95-123.0m down the hole (61-87m below surface given the hole's -45° drilling dip angle) have been received. The hole intersected a thick, oxide zone of **17.77m grading 1.70g/t Au** from 88.0m downhole (includes a 0.76m cavity interval grading 0.0g/t Au) which included:

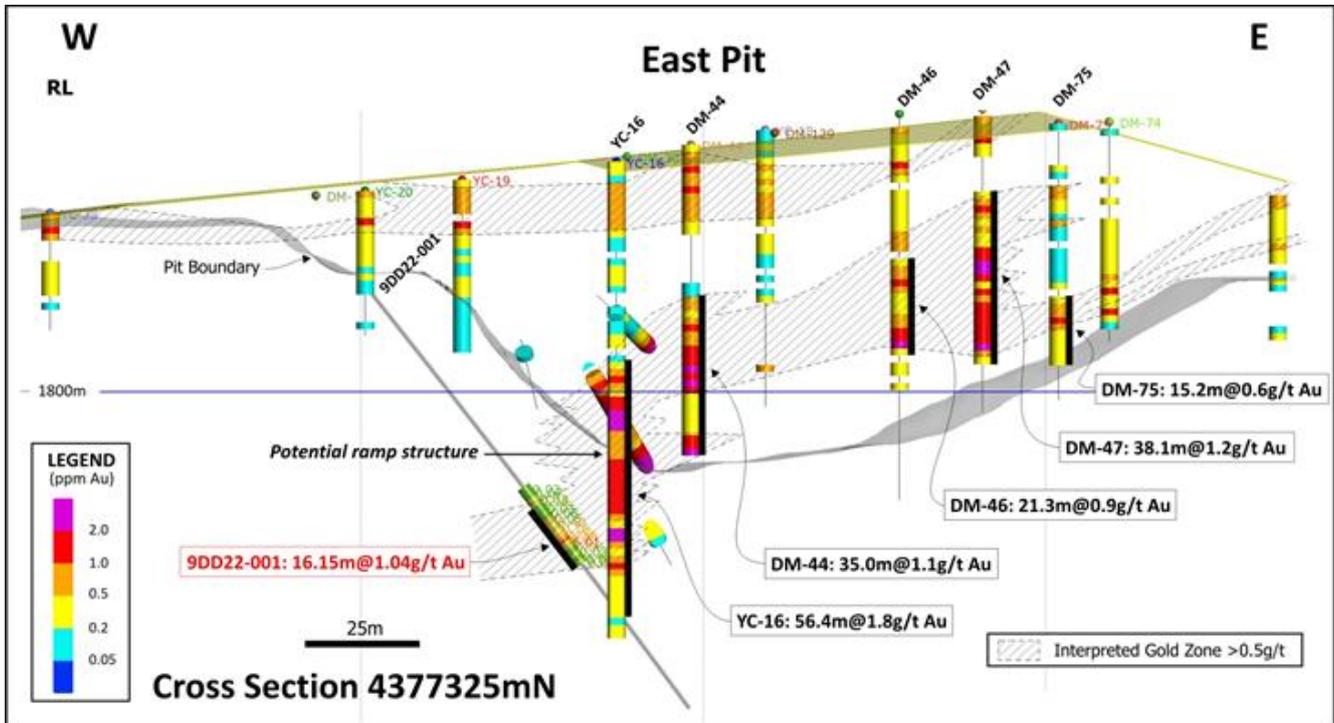
- **6.57m grading 2.48g/t Au** from 99.2m downhole and,
- **3.19m grading 3.54g/t Au** from 101.01m downhole with,
- Highest grade assays of **4.13g/t Au** (1.48m), **3.91g/t Au** (0.48m) and **3.33g/t Au** (0.51m).

<sup>4</sup> Refer Alderan ASX announcement dated 18 November 2021.

<sup>5</sup> Refer Alderan ASX announcement dated 25 February 2022.

<sup>6</sup> Refer Alderan ASX announcement dated 5 April 2022.

The hole again verified Alderan’s modelling of historical drill data and confirmed that potential exists for significant thicknesses of high-grade oxide gold mineralisation at the southern end of the East Pit. Also, the geological logging suggests that the mineralisation occurs dominantly in quartzites that sit stratigraphically below the Tatow unit. This opens the possibility that the gold can extend well below the historically mined Tatow horizon.



**Figure 3:** Drum E-W section through northern end of East Pit showing 9DD22-001 intersection. The hole verifies intersections in surrounding historical holes and suggests that the mineralisation extends down dip to the SW. Due to the thickness and grade of the historical hole YC-16 intersection, it is interpreted to traverse a ramp structure - a step in the mineralised horizon.

#### 9DD22-004

Hole 9DD22-004 is located at the northern end of the West Pit. It was drilled at a -45° dip angle to the north to a depth of 47.85m to test the Chisholm Formation towards the interpreted steeply dipping northeast trending fault which defines the northern boundary of the structural corridor hosting the Drum deposit. Historical holes in the vicinity include YC-114 and YC-115 which intersected 9.1m @ 2.0g/t Au from 48.8m downhole and 7.6m @ 2.8g/t Au from 42.7m downhole respectively.

The hole intersected prospective Chisholm Formation siltstones and shales from surface to 32.6m before traversing Howell Limestone to its final depth. The Chisholm is typically altered and oxidized where silty and locally brecciated.

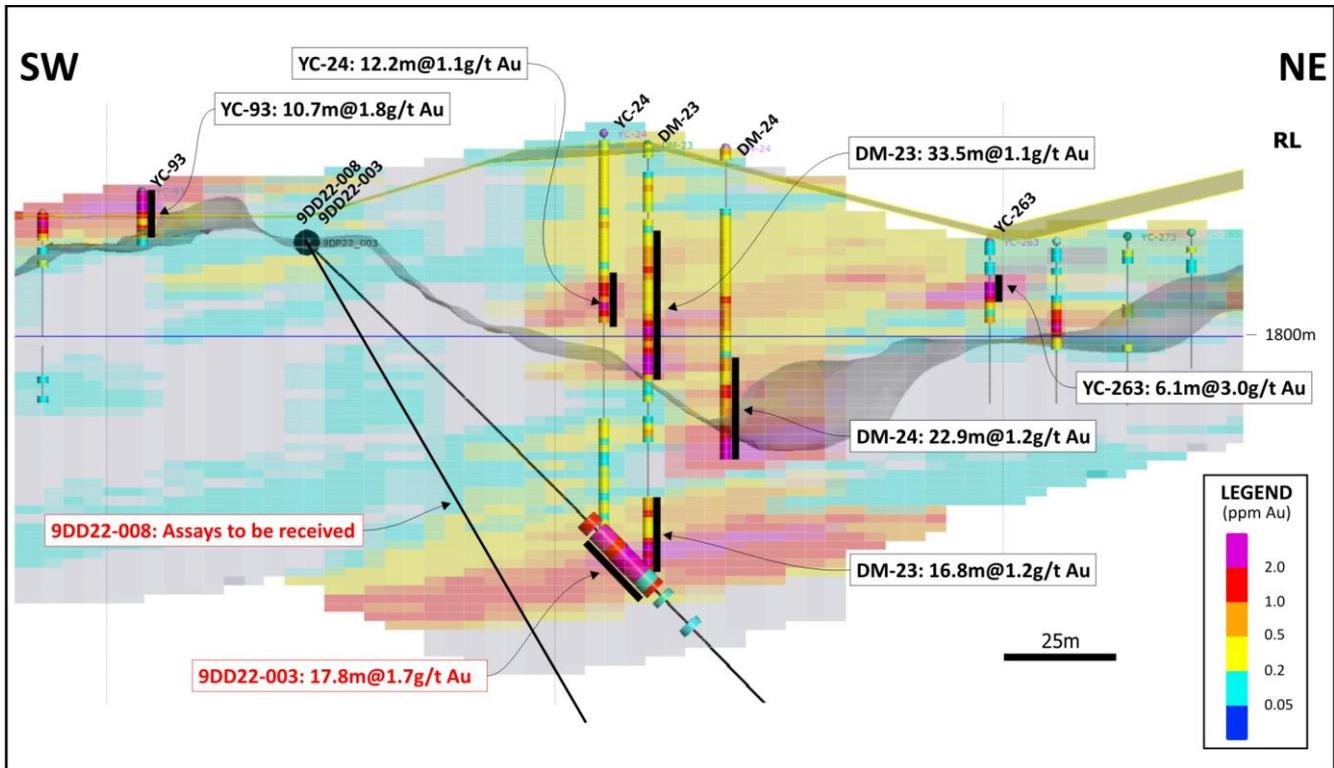
Alderan awaits assay results for this hole.

#### 9DD22-005

Hole 9DD22-005 was drilled vertically from the same collar location in the West Pit as hole 9DD22-004. It targeted a deep test of the northeast trending fault which is interpreted to dip southeast and mark the northern boundary of the structural corridor which hosts Drum. Modelling of neighbouring historical holes YC-114 and YC-127 suggest potential exists for mineralisation in Chisholm Formation at the top of the hole.

The hole traversed prospective oxidised and argillic altered Chisholm Formation shales and siltstones from surface to a depth of 18.8m before entering primarily fresh, unaltered Howell Formation Limestone to the final depth of 134.74m. The hole did not traverse a major structural zone.

Alderan awaits assay results for this hole.



**Figure 4:** Drum NE-SW section through East Pit showing the 9DD22-003 intersection overlain on mineralised blocks from Alderan modelling of historical drill hole data. The hole verifies and is higher grade than intersections in surrounding historical holes. Assays are awaited for hole 9DD22-008 which tests the same mineralised zone ~30m down dip.

#### 9DD22-006

Hole 9DD22-006 was designed to intersect the Chisholm Formation and Tatow unit close to the northeast trending King Tut fault which defines the southern boundary of the Drum deposit corridor at the southern end of the West Pit. The hole was drilled from the bottom of the West Pit at an azimuth of 135° and dip of -60° and traversed below historical hole YC-169 which intersected 35m @ 4.3g/t from 25.9m downhole to the end of the hole at 61m. No West Pit historical drilling extended into the lower Tatow unit which was the ore host in the East Pit.

The hole traversed Chisholm Formation shales and siltstones to a depth of 38.6m followed by Howell Limestone to 126m and then the prospective Tatow unit to the end of the hole at 159.41m. The Tatow consists of oxidised shale, sandy carbonate and limestone.

Alderan awaits assay results for this hole.

#### 9DD22-007

Hole 9DD22-007 is located 150m down-dip to the southwest of the West Pit boundary and was designed as a verification of historical hole YC-174 which intersected 15.2m @ 4.5g/t Au from 73.2m downhole including 6.1m @ 10.3g/t Au in Chisholm Formation. The hole was abandoned at a depth of 109.45m, 11m short of its planned depth, due to rods being lost at the bottom of the hole.

The hole traversed massive fresh limestones to a depth of 100.6m before entering the oxidised and altered Chisholm formation shales and mudstones. Based on the depth drilled, the hole has entered the targeted zone however logging suggests that it may not have reached the lower mineralised portion of the Chisholm Formation before being abandoned. Alderan's plan is to re-enter and extend the hole when drilling re-commences in August.

Alderan awaits assay results for this hole.

**9DD22-008**

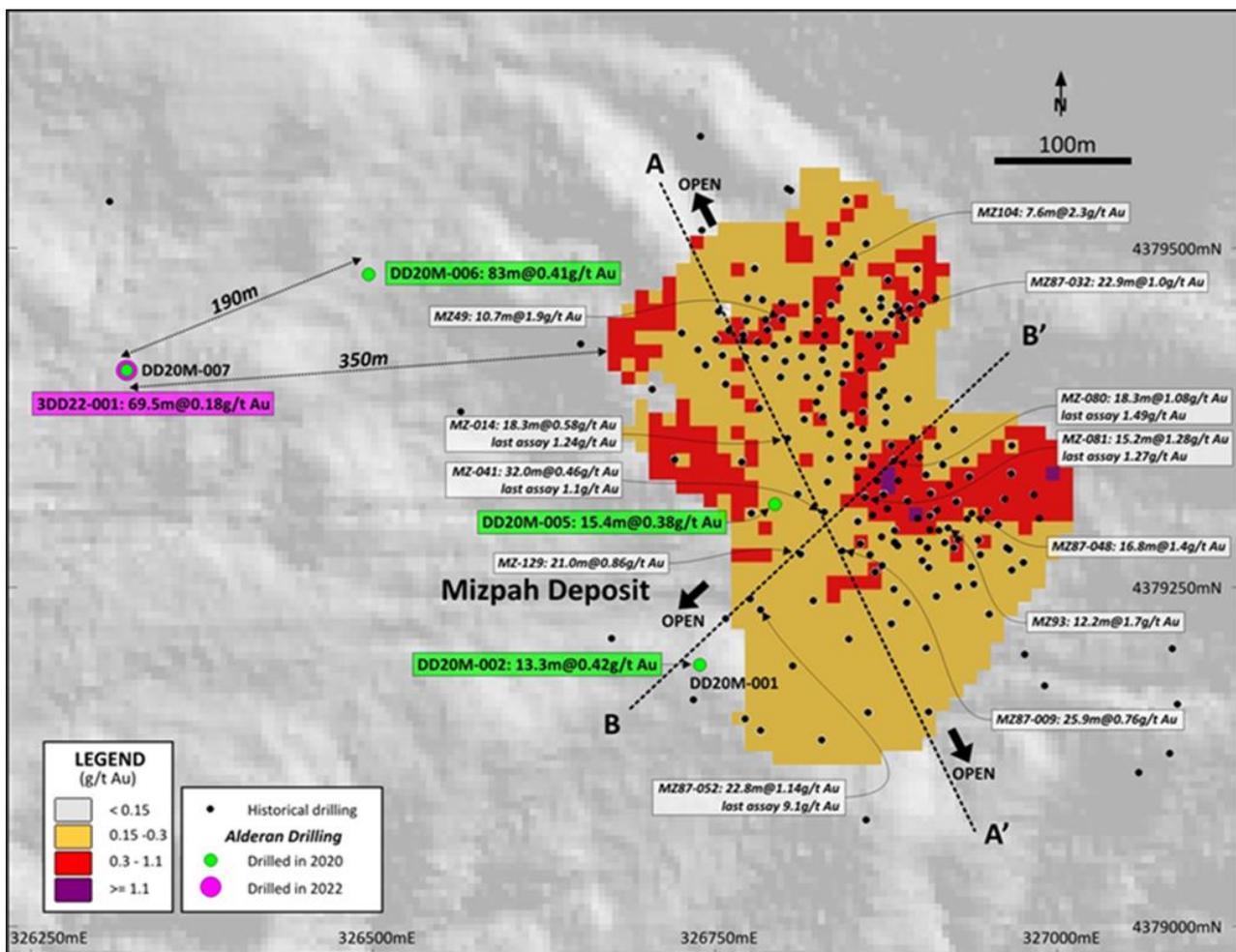
Hole 9DD22-008, drilled at a dip angle of  $-60^\circ$  from the same location as 9DD22-003, was designed to test for extensions to the mineralisation intersected in 9DD22-003 approximately 30m down dip (see Figure 4).

The hole traversed fresh limestone to 60.6m before entering dominantly oxidised Tatow unit calcareous sediments. Lower Pioche unit sandstones and phyllites are logged from 106.2m to the end of the hole at 125.5m.

Alderan awaits assay results for this hole.

**Mizpah Drilling**

Mizpah hole 3DD22-001 drilled to a depth of 164.89m was designed as a bold 190m down dip step-out from Alderan's 2020 hole DD20M-006 which intersected 83m @ 0.41g/t Au from 35.8m downhole (includes 6.9m @ 1.98g/t Au; see Figure 5).<sup>7</sup> The hole was drilled to the northeast at a down-dip angle of  $-60^\circ$  and is approximately 350m from the Mizpah deposit outlined by drilling in the mid-1980s. It was collared on the same site as Alderan hole DD20M-007 which drilled to the north at  $-60^\circ$  dip angle in 2020 and intersected 11.75m @ 0.17g/t Au.



**Figure 5:** The location of hole 3DD22-001 in relation to the Mizpah gold deposit modelled from historical (1980s) drill data.

Gold assays received for 3DD22-001 are highly anomalous and suggest that the Mizpah gold mineralised system could be significantly larger than that modelled from historical drilling.<sup>8</sup> Assays range up to 0.98g/t Au within an

<sup>7</sup> Refer Alderan ASX announcement dated 22 March 2022.

<sup>8</sup> Refer Alderan ASX announcement dated 24 August 2021.

intercept of 69.5m grading 0.18g/t Au from 87.48m downhole (includes 5m @ 0.77g/t Au). Alderan's modelling of historical drilling indicates that Mizpah currently has a north-south strike length of approximately 350m and down dip width of 200m. The deposit is open along strike to the north and south and hole 3DD22-001 suggests that the gold mineralisation could extend for a further 350m down dip.

### **Miller-Myer Option**

Following completion of its district scale exploration and receipt of results for drilling at the Copperhead, Southern and Northern Extension targets at Detroit, Alderan has allowed the Miller-Myers option agreement entered into in February 2021 to expire<sup>9</sup>. This agreement covered 60 patented claims (1,010 acres; ~4.1km<sup>2</sup>) running north-south through the Detroit project area with quarterly payments of US\$50,000 and an option exercise payment of US\$4,500,000.

Alderan has negotiated terms for a new Miller-Myers option agreement covering a reduced area. The new agreement covers two patented claims (68.5 acres) and is expected to be executed in late April-early May.

### **Next Steps**

Alderan awaits remaining outstanding assays for samples from all drill holes completed in 2022. Designing the next phase of drilling at Drum and at Mizpah is underway, the drilling rig is booked to re-commence in August and preparations for drill site permitting is in progress.

Early preparations are also underway to complete an environmental assessment at Drum, a requirement on Federal land when ground disturbance activities such as drill site preparation and access track construction exceeds 5 acres (~2 hectares). Alderan is currently permitted to drill in excess of 10 holes from already permitted sites. Mizpah is on Utah State land which does not have the same environmental assessment requirement hence permitting of drill sites is proceeding.

Early sighter metallurgical testwork will also be carried out on oxide drill core from Drum to provide indicative recovery rates.

### **Detroit Project**

The Detroit Project is one of four Alderan projects (Figure 6) in Utah, USA. It lies within the Detroit Mining District, approximately 175km southwest of Salt Lake City, and contains numerous historical copper, gold and manganese mines. The district has been explored for copper and gold in the past by major mining companies such as Anaconda Copper, Kennecott, Newmont, BHP and Freeport-McMoRan but no one company was able to build a significant contiguous land position to enable district-wide modern exploration. The United States Geological Survey (**USGS**) has also explored the area, sampling extensive mineralised jasperoids.

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<sup>9</sup> Refer Alderan ASX announcement dated 11 February 2021.

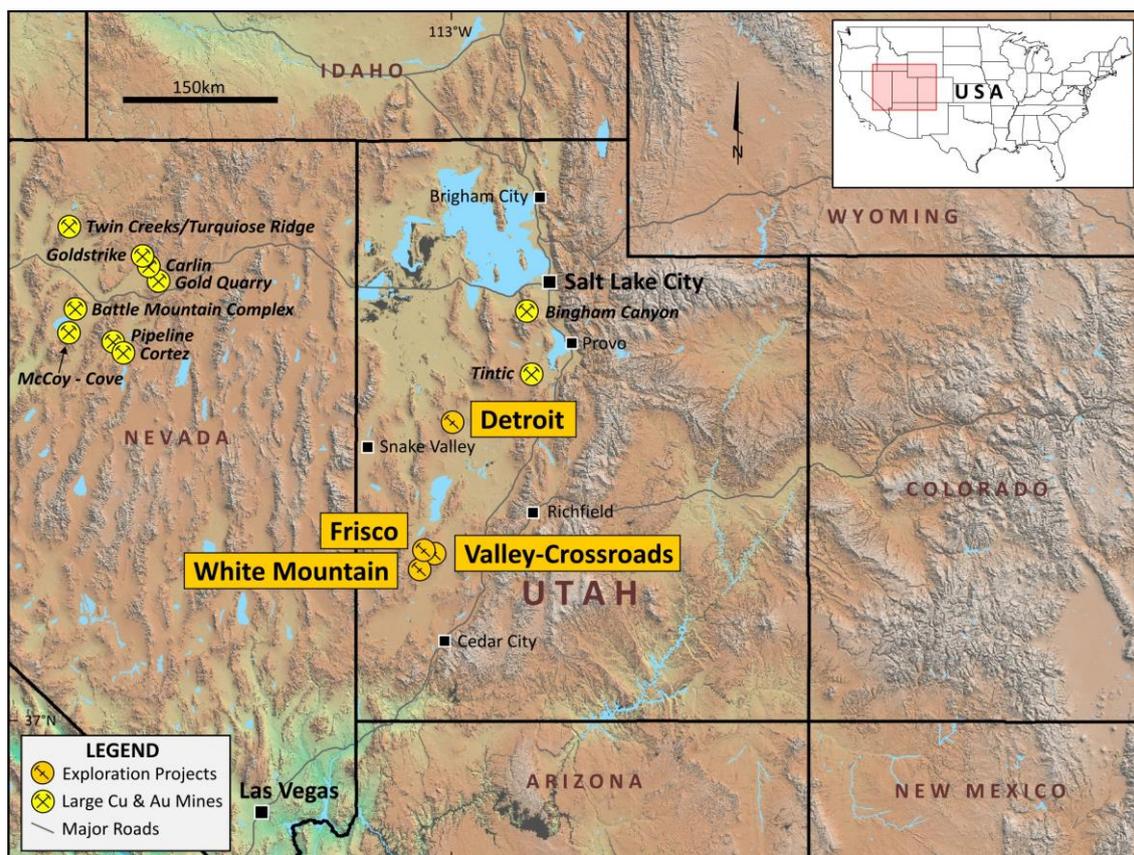


Figure 6: Alderan Resources project locations in western Utah.

## ENDS

This announcement was authorised for release by the Board of Alderan Resources Limited.

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### Competent Persons Statement

The information in this announcement that relates to historical exploration results were reported by the Company in accordance with listing rule 5.7 on 11 February 2021, 24 August 2021, 18 November 2021, 19 November 2021, 20 January 2022, 22 February 2022, 25 February 2022, 22 March 2022 and 5 April 2022. The Company confirms it is not aware of any new information or data that materially affects the information included in the original announcements.