Alderan enhances gold in soil anomalies and receives encouraging oxide gold recovery results at Detroit

HIGHLIGHTS

- **Infill soil sampling at Detroit enhances the Mizpah, Basin Main and Midway gold anomalies with grades up to 0.32g/t Au and also identifies the Section 32 anomaly**
- **Mizpah, Basin Main and Midway lie along a 3km strike length of Detroit's 6km of favourable host stratigraphy**
- **The Mizpah anomaly has gold grades up to 0.26g/t Au, occurs over a 300m north-south strike length and is up to 360m wide along lines**
- **The Basin Main anomaly has the highest grade gold with assays up to 0.32g/t , occurs over 400m north-south and is up to 480m wide along lines**
- **The Midway anomaly has assays up to 0.21g/t Au, occurs over 200m north-south, is up to 120m wide and has a northeast-southwest trend**
- **The Section 32 anomaly extends over 500m north south and is potentially aligned along a northeast-southwest structure which trends towards Mizpah**
- **First pass cyanide leach gold recovery testwork on Alderan's Mizpah and Drum reverse circulation drill hole samples has indicated strong recoveries of 66% and 95% respectively for oxide mineralisation. Gold recoveries for mixed oxide-sulphide mineralisation varied widely and as expected was low order for the sulphide zone**
- **Alderan's next step will be to compile and review all drilling, soil geochemistry and gold recovery data ahead of determining its CY2023 Detroit exploration programme**

Alderan Resources Limited (ASX: AL8) (**Alderan** or the **Company**) is pleased to announce in-fill soil sample assay results for the Detroit project area in the Drum Mountains region of western Utah, USA and first pass gold recovery results for samples collected from drill holes completed at the Mizpah and Drum prospects at Detroit.

The in-fill soil sampling was carried out to better delineate anomalies identified in 2021 along a 2km strike length of prospective host stratigraphy and along interpreted structural zones.[1] The gold recovery work was aimed at giving an initial indication of potential heap leach recoveries from oxide, mixed oxide-sulphide and sulphide mineralisation.

Alderan Managing Director Scott Caithness said: *"Alderan's in-fill soil sampling has better defined and enhanced the Mizpah, Basin Main and Midway anomalies with gold grades up to 0.32g/t Au. It has also identified the more subtle Section 32 anomaly which appears to align along an interpreted NE-SW structure which trends towards the Mizpah deposit. The anomalies all occur over multiple 100m spaced soil lines.*

First pass gold recovery test work on oxide mineralisation in reverse circulation drill hole chips from Mizpah and Drum show encouraging recoveries of 66% and 95% respectively. Gold mineralisation is from surface at Mizpah and the depth of oxidation down Alderan's drill holes ranges from 3-38m from surface.[2] At Drum the mineralised oxide host

[1] *Refer Alderan ASX announcement dated 27 June 2022 for further information.*
[2] *Refer Alderan ASX announcements dated 30 September 2022 and 2 November 2022 for further information.*

horizons have been intersected below un-oxidised units at depths of greater than 70m below surface. Both Drum and Mizpah mineralisation remain open to the southwest.

"Alderan's next step will be to compile and review all the drilling, soil geochemistry and first pass gold recovery data from its exploration at Detroit ahead of determining its 2023 exploration programme."

Detroit Soil Sampling Results

In August-September 2022, Alderan collected an additional 665 C-horizon soil samples at Detroit to bring the total number of soil samples to 2,433 over the project area. The sampling was designed to decrease the sample line spacing from 200m to 100m in anomalous areas identified from the 2021 soil programme and also fill in gaps in the 2021 sampling. Samples were collected at 40m intervals along lines (see Figure 1). All samples were sent to the ALS laboratory in Twin Falls, Idaho for multi-element analysis.

The soil sampling has better defined and enhanced the Mizpah, Basin Main and Midway anomalies identified from the 2021 soil programme and also defined the new Section 32 anomaly.

The Mizpah soil anomaly is significantly larger than previously identified and contains gold grades up to 0.26g/t Au. It now occurs over five lines covering a north-south strike length of 300m and has an east-west width of up to 400m. The strike length of the anomaly is consistent with the distance covered by gold mineralised intersections in Alderan drill holes completed in September 2022 however the width of the anomaly is 400m, significantly wider than the 250m covered by Alderan's drilling. This supports Alderan's conclusion from its drilling that the Mizpah gold mineralisation is open down dip to the west and southwest.

The Basin Main gold in soil anomaly is larger and higher order than Mizpah with grades up to 0.32g/t Au. It lies 800m north of Mizpah in the same rock unit however it is on the contact of the Basin porphyry intrusive stock which contains low-grade gold and copper mineralisation intersected in Alderan and historical drilling. The soil anomaly occurs over four lines covering a north-south distance of 500m and along lines the anomaly reaches an east-west width of 480m. Drilling at Detroit in the 1960's intersected chalcocite copper mineralisation immediately to the west of the soil anomaly on the margin of the Basin Porphyry however historical reports contain no gold assays.

The Midway anomaly, 800m to the south of Mizpah, contains grades up to 0.19g/t Au. It occurs over two lines (200m north-south) and reaches an east-west width of 200m along lines. It appears to have a northeast-southwest orientation which is consistent with the prevailing structural trend throughout the Detroit district, including at the Drum gold mine 800m to the south.

The Section 32 anomaly located in Detroit's northeast tenement is lower order with a maximum assay of 0.056g/t Au. It occurs over 500m (five lines), has a maximum east-west width of 160m and has a prominent northeast-southwest trend. Mizpah lies 1.5km to the southwest along this structural trend.

Mizpah and Drum First Pass Gold Recovery Results

Results have been received for first pass gold recovery test work carried out on 277 samples collected from Alderan's Mizpah and Drum reverse circulation drill holes. The aim of the programme was to obtain an early indication of gold recoveries from oxide, mixed oxide-sulphide and sulphide mineralisation. The testing involved cyanide leaching and AAS gold analysis of residual pulp samples collected from gold mineralised intersections grading +0.3g/t Au.

At Mizpah, the cyanide gold recoveries averaged 65.9% for 55 oxide samples from mineralised intervals in 13 of the 22 reverse circulation holes drilled by Alderan. The averaged fire assay gold grade for the samples was 0.89g/t Au and the recovered grade averaged 0.64g/t Au. The samples were all collected over 1.52m intervals from rock types logged primarily as sandstones and siltstones of the upper and lower Tatow members of the Pioche Formation. Six samples were logged as calcitic marble or dolomite and there was one andesite, one intrusive and one clay sample.

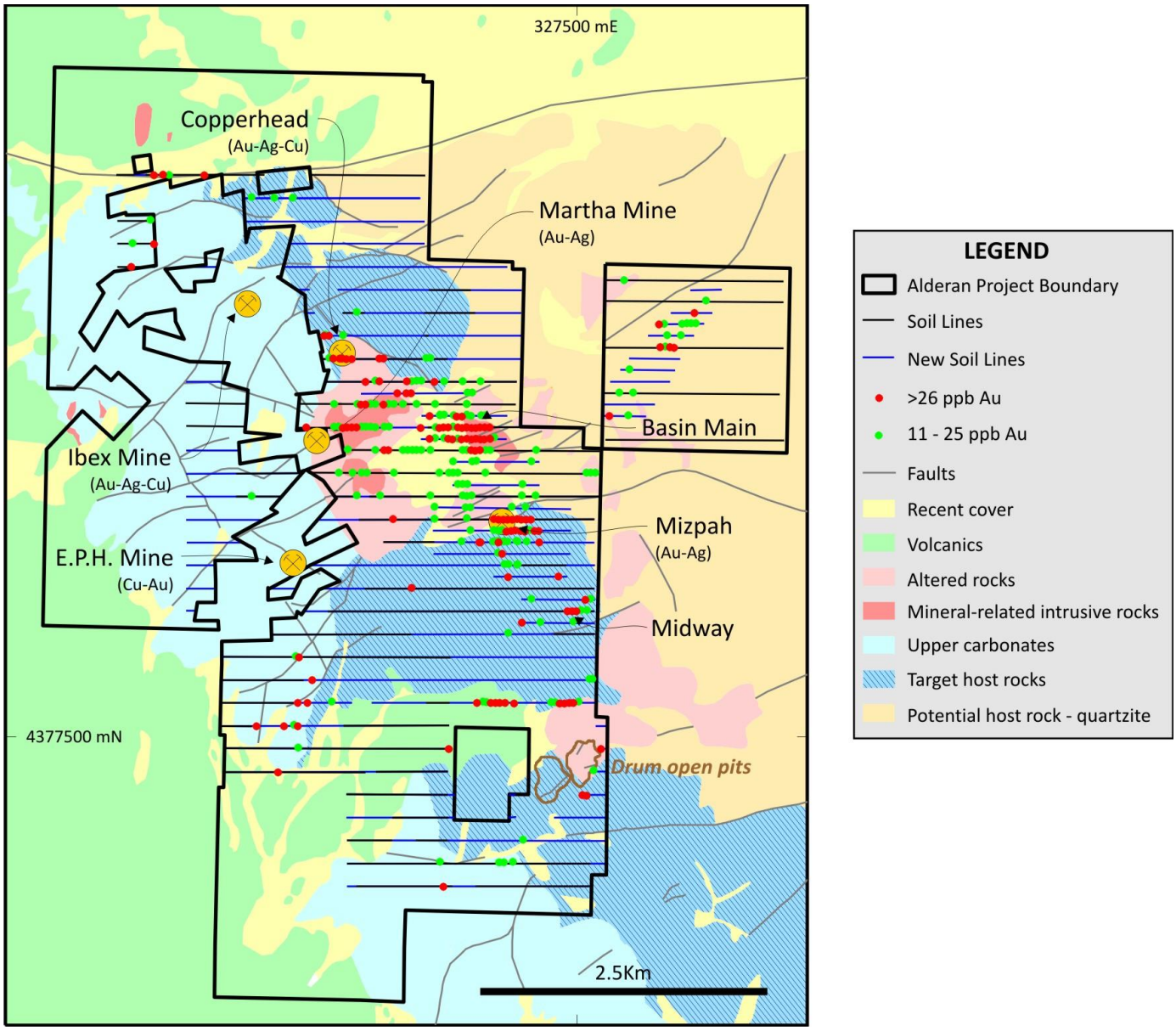

Figure 1: *Detroit soil sampling lines with infill samples collected along lines in blue. The sampling has enhanced the Basin Main, Mizpah and Midway anomalies and highlighted the Section 32 NE-SW trending anomaly over 5 lines in the northeast tenement.*

At Drum, the gold recovery averaged 95.5% over three oxide samples from the mineralised interval of 7.62m @ 0.96g/t Au from 106.7m in hole 9DRC22-001. The average fire assay grade of the samples was 1.27g/t Au with 1.21g/t Au the recovered gold grade. All samples were logged as Chisholm Formation siltstone. The hole was drilled 150m down dip of the mineralisation mined in Drum's West Pit and confirms that the mineralised horizon remains open to the southwest.

Gold recoveries for mixed oxide-sulphide mineralisation at Mizpah were broken into three categories based on geological logging of the drillholes - 1) oxide > sulphide, 2) oxide = sulphide, and 3) sulphide > oxide. Table 1 below summarises the results of the tests.

Table 1: Mizpah mixed oxide-sulphide zone mineralisation gold recoveries.

	Number of samples	Number of drill holes sampled	Average Fire Assay Grade (Au g/t)	Gold Cyanide Recovery (%)	Average Recovered Gold Grade (Au g/t)
Oxide > Sulphide	9	6	0.72	38.9	0.31
Oxide = Sulphide	9	4	0.46	14.3	0.05
Sulphide > Oxide	29	9	0.61	8.9	0.05

Gold recoveries at Drum for the transition zone from oxide to sulphide in hole 9DRC22-001 were significantly better than at Mizpah with an average of 77.8% across one oxide > sulphide and three sulphide > oxide samples. The averaged fire assay grade for the samples is 0.37g/t Au and the averaged recovered grade is 0.29g/t Au.

Gold recoveries for 167 sulphide zone samples collected from 18 holes at Mizpah averaged 4.5%. The fire assay grade for the samples averaged 0.85g/t Au and the recovered gold grade for these samples is 0.03g/t Au. At Drum, the recovery for one sulphide sample is 11.5%.

Table 2 summarises all the gold recovery results for different mineralisation zones in Mizpah and Drum reverse circulation drill samples.

Conclusions and Next Steps

Alderan's key conclusion from the soil sampling and first pass gold recovery results include:

- The Basin Main, Midway and Section 32 gold in soil anomalies represent new targets within the Detroit District which have received no previous gold exploration
- Basin Main is a higher order anomaly than Mizpah and covers a larger area while the Midway and Section 32 gold anomalies are potentially structurally controlled
- First pass gold recovery testwork suggests that cyanide heap leaching may be a suitable gold extraction technique for oxidised and mixed oxide-sulphide mineralisation

Alderan's next step will be reviewing all drill hole, soil and gold recovery data ahead of determining its 2023 Detroit exploration programme.

Table 2: Summarised gold recovery results from cyanide leaching with AAS analysis of 277 Alderan reverse circulation drill hole samples from the Mizpah and Drum prospects, Detroit Project, Utah, USA.

	Number of Samples	Fire Assay Grade Range (Au g/t)	Average Grade of Fire Assay (Au g/t)	Cyanide Gold Grade Range (Au g/t)	Average Cyanide Gold Grade (Au g/t)	Cyanide Gold Recovery Range* (%)	Cyanide Gold Average Recovery (%)
Mizpah oxide samples	55	0.116 -5.23	0.816	0.015-4.430	0.635	4.4-113.6	65.9
Drum oxide samples	3	1.175-1.405	1.273	1.14-1.31	1.213	91.9-101.3	95.5
Mizpah oxide > sulphide samples	9	0.137-1.60	0.724	0.015-1.14	0.305	2.8-105.1	38.9
Drum oxide > sulphide samples	1	0.351	0.351	0.28	0.28	79.8	79.8
Mizpah oxide = sulphide samples	9	0.298-0.785	0.461	0.015-0.30	0.053	1.9-82.4	14.3
Mizpah sulphide > oxide samples	29	0.207-2.10	0.613	0.015-0.55	0.045	0.7-85.3	8.9
Drum sulphide > oxide samples	3	0.111-0.765	0.379	0.09-0.59	0.29	73.1-81.1	77.1
Mizpah sulphide samples	167	0.205-4.91	0.851	0.015-0.14	0.028	0.4-19.7	4.5
Drum sulphide samples	1	0.131	0.131	0.015	0.015	11.5	11.5

**Recovery analysis was carried out on residual sample pulps after fire assaying was completed on Alderan's reverse circulation holes in November 2022 (AL8 ASX announcement dated 2 Nov 2022). Recoveries of greater than 100% compared to fire assays are due to natural gold content variation between different samples.*

Detroit Project

The Detroit Project is one of four Alderan projects (Figure 2) 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.

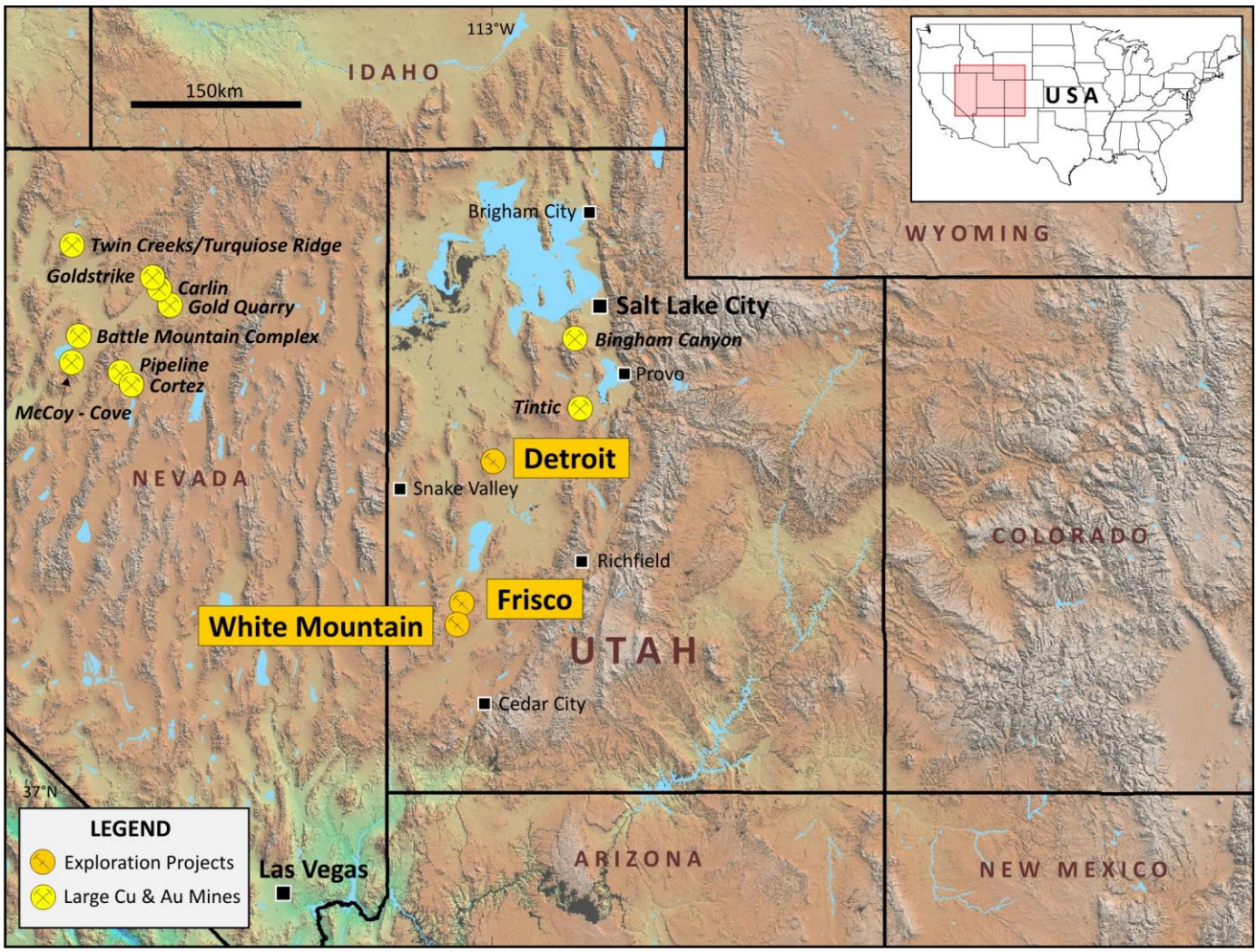

***Figure 2**: Alderan Resources project locations in western Utah.*

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

ALDERAN RESOURCES LIMITED
ABN: 55 165 079 201
Suite 23, 513 Hay Street, Subiaco, 6008, WA
www.alderanresources.com.au

For further information:

Scott Caithness, Managing Director
Alderan Resources
M: +61 8 6143 6711
E: scott@alderanresources.com.au

Rod North, Managing Director
Bourse Communications Pty Ltd
M: +61 408 670 706
E: rod@boursecommunications.com.au

About Alderan Resources Limited

Alderan Resources specialises in base and precious metal exploration in the USA, with three key exploration projects in Utah, USA (Detroit, Frisco and White Mountain), with tenements held either directly or through option agreements via Alderan's USA subsidiary, Volantis Resources Corp. Our objective is to rapidly discover, delineate and develop copper and gold deposits for mining. The Company's project portfolio has high potential for discovery as it lies in under-explored geological belts with strong similarities to the nearby and highly productive Bingham, Carlin and Battle Mountain mining districts. Our exploration plans also include reviewing new opportunities to secure and upgrade our pipeline of projects in North America.

For more information please visit: https://alderanresources.com.au/

Competent Persons Statement

The information contained in this announcement that relates to the new exploration results relating to soil samples is based on, and fairly reflects, information compiled by Mr Scott Caithness, who is a Member of the Australian Institute of Mining and Metallurgy. Mr Caithness is the Managing Director of Alderan and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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'. Mr Caithness consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears. Mr Caithness holds securities in the Company.

The information in this announcement that relates to historical exploration results were reported by the Company in accordance with listing rule 5.7 on 25 May 2022, 27 June 2022, 3 August 2022, 25 August 2022, 30 September 2022 and 2 November 2022. The Company confirms it is not aware of any new information or data that materially affects the information included in the previous announcements.

Appendix 1: Soil sample location details with gold assay results and reverse circulation drill hole location and gold recovery results for first pass cyanide leach test samples

The information in the table below contains sample collection and gold assay data for 45 soil samples which assayed greater than 0.026ppm Au, the threshold used by Alderan for strongly anomalous gold in soils in the Detroit district. A total of 665 soil samples were collected and analysed.

Sample ID	Easting	Northing	Date	Colour	Depth (cm)	Sieved	Weight (kg)	Au (ppm)
SN_009	326750.0	4377803.6	30/08/2022	tan	25	yes	0.64	0.5520
T_159	327051.0	4379296.1	27/08/2022	tan	20	yes	1.31	0.2600
T_160	327010.9	4379299.7	27/08/2022	tan	20	yes	1.29	0.2470
T_354	326455.4	4380295.1	29/08/2022	tan	25	yes	0.96	0.2380
ND_030	327588.4	4376994.6	30/08/2022	tan	15	yes	1.53	0.2080
T_070	327577.9	4378699.0	26/08/2022	tan	25	yes	1.24	0.1735
T_161	326966.6	4379302.8	27/08/2022	tan	25	yes	1.23	0.1585
T_163	326889.2	4379295.2	27/08/2022	tan	25	yes	1.26	0.1565
SN_025	327390.8	4377798.4	30/08/2022	tan	25	yes	0.83	0.1380
SN_027	327473.9	4377800.5	30/08/2022	tan	25	yes	1.25	0.1380
T_156	327170.4	4379296.8	27/08/2022	tan	25	yes	1.16	0.1200
T_336	326662.8	4380098.2	29/08/2022	tan	25	yes	0.97	0.1200
T_330	326419.3	4380096.8	29/08/2022	tan	25	yes	0.95	0.1025
T_162	326926.3	4379298.4	27/08/2022	tan	25	yes	1.24	0.0944
SN_012	326874.7	4377800.8	30/08/2022	tan	25	yes	0.95	0.0943
T_355	326499.7	4380297.5	29/08/2022	tan	25	yes	0.90	0.0934
T_001	327021.8	4378498.4	26/08/2022	tan	25	yes	1.23	0.0884
T_338	326743.8	4380104.2	29/08/2022	tan	25	yes	0.98	0.0842
SN_011	326831.6	4377802.5	30/08/2022	tan	25	yes	1.18	0.0783
T_337	326696.4	4380098.2	29/08/2022	tan	25	yes	0.75	0.0767
T_345	326218.6	4380301.4	29/08/2022	tan	25	yes	1.27	0.0762
F_005	325938.0	4380499.1	29/08/2022	tan	25	yes	1.32	0.0563
F_002	326059.2	4380500.1	29/08/2022	tan	25	yes	1.12	0.0560
T_335	326620.0	4380100.0	29/08/2022	tan	25	yes	0.68	0.0556
SN_006	326632.2	4377801.2	30/08/2022	tan	25	yes	0.99	0.0537
SN_010	326794.1	4377799.3	30/08/2022	tan	25	yes	1.10	0.0528
F_003	326017.2	4380501.0	29/08/2022	tan	25	yes	1.10	0.0521
ND_031	327550.5	4376997.6	30/08/2022	tan	15	yes	1.64	0.0515
T_125	326904.1	4378897.0	26/08/2022	tan	25	yes	1.05	0.0497
T_334	326582.1	4380097.5	29/08/2022	tan	25	yes	1.05	0.0472
T_333	326540.6	4380100.7	29/08/2022	tan	25	yes	1.03	0.0470
T_038	327171.5	4379202.3	27/08/2022	tan	10	yes	1.41	0.0440
T_101	326852.0	4379098.9	27/08/2022	tan	15	yes	1.04	0.0440

T_332	326498.5	4380098.5	29/08/2022	tan	25	yes	0.85	0.0409
T_054	327340.0	4378900.0	26/08/2022	tan	25	yes	1.17	0.0408
SN_014	326952.6	4377797.5	30/08/2022	tan	25	yes	0.85	0.0407
SN_024	327349.7	4377799.2	30/08/2022	tan	25	yes	1.03	0.0374
T_329	326378.8	4380104.0	29/08/2022	tan	25	yes	1.03	0.0364
S32-013	328524.6	4381197.9	31/08/2022	tan	20	yes	1.18	0.0360
T_166	326652.2	4379201.2	28/08/2022	tan	25	yes	1.18	0.0339
S32-107	327786.5	4380300.1	01/09/2022	tan	25	yes	0.80	0.0316
T_246	326217.8	4380101.5	29/08/2022	tan	25	yes	0.97	0.0308
SN_026	327434.5	4377802.2	30/08/2022	tan	25	yes	1.27	0.0305
S32-052	328216.9	4381100.3	31/08/2022	tan	25	yes	1.30	0.0290
T_157	327131.7	4379298.5	27/08/2022	tan	10	yes	1.36	0.0280

**NAD83-z12*

The information in the table below contains location data for Mizpah (prefix '3MZRC22') and Drum (prefix '9DPRC22') reverse circulation holes which were sampled for first pass cyanide leach gold recovery testwork.

Drill hole ID	***Easting****	***Northing****	***RL (m)***	***Dip***	***Azimuth***	***Depth (m)***	***Drill Type***
3MZRC22-01	*326,786*	*4,379,440*	*1,904*	*-90º*	*0º*	*50*	*Reverse circulation*
3MZRC22-02	*326,786*	*4,379,440*	*1,904*	*-45°*	*80°*	*55*	*Reverse circulation*
3MZRC22-03	*326,866*	*4,379,328*	*1,905*	*-90°*	*0°*	*70*	*Reverse circulation*
3MZRC22-04	*326,832*	*4,379,306*	*1,901*	*-65°*	*50°*	*75*	*Reverse circulation*
3MZRC22-05	*326,832*	*4,379,306*	*1,901*	*-65°*	*150°*	*90*	*Reverse circulation*
3MZRC22-06	*326,780*	*4,379,234*	*1,895*	*-80°*	*80°*	*80*	*Reverse circulation*
3MZRC22-07	*326,863*	*4,379,262*	*1,906*	*-60°*	*5°*	*85*	*Reverse circulation*
3MZRC22-08	*326,880*	*4,379,437*	*1,916*	*-45°*	*353°*	*50*	*Reverse circulation*
3MZRC22-09	*326,805*	*4,379,193*	*1,899*	*-60°*	*160°*	*125*	*Reverse circulation*
3MZRC22-10	*326,804*	*4,379,192*	*1,898*	*-90°*	*0°*	*100*	*Reverse circulation*
3MZRC22-11	*326,804*	*4,379,193*	*1,899*	*-60°*	*0°*	*90*	*Reverse circulation*
3MZRC22-12	*326,906*	*4,379,294*	*1,908*	*-90°*	*0°*	*70*	*Reverse circulation*
3MZRC22-13	*326,878*	*4,379,249*	*1,903*	*-50°*	*0°*	*65*	*Reverse circulation*
3MZRC22-14	*326,737*	*4,379,193*	*1,895*	*-45°*	*135°*	*135*	*Reverse circulation*
3MZRC22-15	*326,812*	*4,379,277*	*1,905*	*-65°*	*150°*	*77*	*Reverse circulation*
3MZRC22-16	*326,876*	*4,379,247*	*1,903*	*-55°*	*150°*	*65*	*Reverse circulation*
3MZRC22-17	*326,978*	*4,379,275*	*1,916*	*-45°*	*78°*	*60*	*Reverse circulation*
3MZRC22-18	*326,978*	*4,379,276*	*1,916*	*-50°*	*330°*	*40*	*Reverse circulation*
3MZRC22-19	*326,978*	*4,379,275*	*1,916*	*-55°*	*150°*	*40*	*Reverse circulation*
3MZRC22-20	*326,879*	*4,379,254*	*1,903*	*-60°*	*330°*	*85*	*Reverse circulation*
3MZRC22-21	*326,720*	*4,379,346*	*1,900*	*-50°*	*25°*	*90*	*Reverse circulation*

3MZRC22-22	*327,086*	*4,379,165*	*1,935*	*-70°*	*150°*	*200*	*Reverse circulation*
9DPRC22-01	*327,082*	*4,376,903*	*1,817*	*-90°*	*0°*	*130*	*Reverse circulation*

**NAD83-z12*

The information in the table below contains the fire assay and cyanide leach analysis results and redox zone data for samples collected from Mizpah (prefix '3MZRC22') and Drum (prefix '9DPRC22') reverse circulation holes for first pass cyanide leach gold recovery testwork.

Hole	Sample Number	From (m)	To (m)	Interval (m)	Sample Weight (kg)	Au Grade (g/t fire assay)	Au Grade (g/t cyanide)	Gold Recovery (%)	Sample Redox Zone
3MZRC22_01	E263665	21.34	22.86	1.52	9.73	1.600	0.820	51.3	oxide>sulfide
3MZRC22_01	E263669	24.38	25.91	1.52	8.12	0.116	0.015	12.9	oxide (oxidized)
3MZRC22_01	E263671	27.43	28.96	1.52	7.27	0.128	0.040	31.3	oxide (oxidized)
3MZRC22_01	E263659	12.19	13.72	1.52	6.86	0.231	0.200	86.6	oxide (oxidized)
3MZRC22_01	E263663	18.29	19.81	1.52	6.42	0.137	0.040	29.2	oxide>sulfide
3MZRC22_01	E263666	22.86	24.38	1.52	6.02	0.162	0.060	37.0	oxide (oxidized)
3MZRC22_01	E263662	16.76	18.29	1.52	5.90	0.460	0.440	95.7	oxide (oxidized)
3MZRC22_01	E263655	6.10	7.62	1.52	5.57	0.383	0.180	47.0	oxide (oxidized)
3MZRC22_01	E263654	4.57	6.10	1.52	4.60	0.241	0.080	33.2	oxide (oxidized)
3MZRC22_01	E263658	10.67	12.19	1.52	4.52	0.153	0.140	91.5	oxide (oxidized)
3MZRC22_01	E263657	9.14	10.67	1.52	3.86	3.900	4.430	113.6	oxide (oxidized)
3MZRC22_01	E263653	3.05	4.57	1.52	3.74	0.937	0.770	82.2	oxide (oxidized)
3MZRC22_01	E263656	7.62	9.14	1.52	2.75	0.224	0.200	89.3	oxide (oxidized)
3MZRC22_01	E263664	19.81	21.34	1.52	1.24	1.115	0.760	68.2	oxide (oxidized)
3MZRC22_02	E263725	32.00	33.53	1.52	9.18	0.645	0.550	85.3	sulfide>oxide
3MZRC22_02	E263709	12.19	13.72	1.52	8.01	2.570	2.330	90.7	oxide (oxidized)
3MZRC22_02	E263704	4.57	6.10	1.52	6.63	0.659	0.500	75.9	oxide (oxidized)
3MZRC22_02	E263724	30.48	32.00	1.52	5.56	0.280	0.270	96.4	oxide (oxidized)
3MZRC22_02	E263705	6.10	7.62	1.52	4.97	0.271	0.190	70.1	oxide (oxidized)
3MZRC22_02	E263703	3.05	4.57	1.52	4.36	0.577	0.470	81.5	oxide (oxidized)
3MZRC22_02	E263714	19.81	21.34	1.52	3.50	0.218	0.200	91.7	oxide (oxidized)
3MZRC22_02	E263707	9.14	10.67	1.52	3.46	0.710	0.550	77.5	oxide (oxidized)
3MZRC22_02	E263708	10.67	12.19	1.52	3.39	2.210	1.850	83.7	oxide (oxidized)
3MZRC22_02	E263706	7.62	9.14	1.52	2.39	0.392	0.250	63.8	oxide (oxidized)
3MZRC22_03	E263830	39.62	41.15	1.52	7.49	0.295	0.015	5.1	sulfide (reduced)
3MZRC22_03	E263807	9.14	10.67	1.52	7.19	0.325	0.190	58.5	oxide>sulfide
3MZRC22_03	E263809	12.19	13.72	1.52	6.56	0.475	0.030	6.3	sulfide>oxide
3MZRC22_03	E263819	24.38	25.91	1.52	5.34	0.356	0.015	4.2	sulfide=oxide
3MZRC22_03	E263820	25.91	27.43	1.52	3.93	0.310	0.015	4.8	sulfide=oxide
3MZRC22_03	E263814	19.81	21.34	1.52	3.90	0.664	0.015	2.3	sulfide=oxide
3MZRC22_03	E263816	22.86	24.38	1.52	3.74	0.364	0.015	4.1	sulfide=oxide

3MZRC22_03	E263808	10.67	12.19	1.52	3.45	0.298	0.060	20.1	sulfide=oxide
3MZRC22_03	E263803	3.05	4.57	1.52	3.44	0.706	0.400	56.7	oxide (oxidized)
3MZRC22_03	E263805	6.10	7.62	1.52	2.82	1.100	0.700	63.6	oxide (oxidized)
3MZRC22_03	E263801	0.00	1.52	1.52	2.74	0.380	0.290	76.3	oxide (oxidized)
3MZRC22_03	E263828	36.58	38.10	1.52	2.67	0.357	0.015	4.2	sulfide=oxide
3MZRC22_03	E263804	4.57	6.10	1.52	2.58	0.794	0.560	70.5	oxide (oxidized)
3MZRC22_03	E263806	7.62	9.14	1.52	2.48	3.790	3.310	87.3	oxide (oxidized)
3MZRC22_03	E263802	1.52	3.05	1.52	2.09	1.290	0.890	69.0	oxide (oxidized)
3MZRC22_04	E263903	3.05	4.57	1.52	10.96	0.338	0.100	29.6	oxide (oxidized)
3MZRC22_04	E263934	45.72	47.24	1.52	5.49	0.430	0.015	3.5	sulfide (reduced)
3MZRC22_04	E263909	12.19	13.72	1.52	5.42	0.785	0.015	1.9	sulfide=oxide
3MZRC22_04	E263929	38.10	39.62	1.52	5.31	0.205	0.015	7.3	sulfide (reduced)
3MZRC22_04	E263912	16.76	18.29	1.52	5.09	0.963	0.015	1.6	sulfide>oxide
3MZRC22_04	E263908	10.67	12.19	1.52	4.43	0.812	0.040	4.9	oxide>sulfide
3MZRC22_04	E263910	13.72	15.24	1.52	3.71	0.337	0.060	17.8	sulfide>oxide
3MZRC22_04	E263907	9.14	10.67	1.52	3.60	0.656	0.140	21.3	oxide (oxidized)
3MZRC22_04	E263925	32.00	33.53	1.52	3.27	0.207	0.015	7.2	sulfide>oxide
3MZRC22_04	E263911	15.24	16.76	1.52	2.77	0.406	0.050	12.3	sulfide>oxide
3MZRC22_04	E263904	4.57	6.10	1.52	2.45	0.251	0.140	55.8	oxide (oxidized)
3MZRC22_04	E263906	7.62	9.14	1.52	2.05	0.561	0.270	48.1	oxide (oxidized)
3MZRC22_04	E263905	6.10	7.62	1.52	2.02	0.302	0.180	59.6	oxide (oxidized)
3MZRC22_05	E262020	25.91	27.43	1.52	9.61	0.486	0.015	3.1	sulfide>oxide
3MZRC22_05	E262026	33.53	35.05	1.52	9.04	0.309	0.015	4.9	sulfide>oxide
3MZRC22_05	E262028	36.58	38.10	1.52	8.64	0.951	0.030	3.2	sulfide>oxide
3MZRC22_05	E262009	12.19	13.72	1.52	8.25	1.155	0.015	1.3	sulfide (reduced)
3MZRC22_05	E262030	39.62	41.15	1.52	6.97	0.404	0.015	3.7	oxide>sulfide
3MZRC22_05	E262016	22.86	24.38	1.52	6.75	2.100	0.015	0.7	sulfide>oxide
3MZRC22_05	E262029	38.10	39.62	1.52	5.52	1.070	0.030	2.8	oxide>sulfide
3MZRC22_05	E262004	4.57	6.10	1.52	5.40	0.954	0.580	60.8	oxide (oxidized)
3MZRC22_05	E262007	9.14	10.67	1.52	4.84	0.607	0.080	13.2	oxide>sulfide
3MZRC22_05	E262008	10.67	12.19	1.52	4.45	0.246	0.015	6.1	sulfide>oxide
3MZRC22_05	E262014	19.81	21.34	1.52	4.45	3.960	0.015	0.4	sulfide (reduced)
3MZRC22_05	E262010	13.72	15.24	1.52	4.35	0.207	0.015	7.2	sulfide (reduced)
3MZRC22_05	E262019	24.38	25.91	1.52	3.36	0.540	0.015	2.8	sulfide>oxide
3MZRC22_05	E262015	21.34	22.86	1.52	1.37	0.669	0.015	2.2	sulfide>oxide
3MZRC22_06	E262125	32.00	33.53	1.52	11.21	0.307	0.015	4.9	sulfide (reduced)
3MZRC22_06	E262131	41.15	42.67	1.52	9.41	3.740	0.015	0.4	sulfide (reduced)
3MZRC22_06	E262128	36.58	38.10	1.52	5.22	1.910	0.015	0.8	sulfide (reduced)
3MZRC22_06	E262132	42.67	44.20	1.52	4.97	1.590	0.015	0.9	sulfide (reduced)
3MZRC22_06	E262138	51.82	53.34	1.52	4.66	0.949	0.015	1.6	sulfide>oxide

3MZRC22_06	E262134	45.72	47.24	1.52	4.55	0.327	0.015	4.6	sulfide (reduced)
3MZRC22_06	E262133	44.20	45.72	1.52	4.42	0.780	0.015	1.9	sulfide>oxide
3MZRC22_06	E262126	33.53	35.05	1.52	4.33	0.745	0.015	2.0	sulfide (reduced)
3MZRC22_06	E262130	39.62	41.15	1.52	4.25	1.710	0.015	0.9	sulfide (reduced)
3MZRC22_06	E262121	27.43	28.96	1.52	3.97	0.357	0.015	4.2	sulfide (reduced)
3MZRC22_06	E262127	35.05	36.58	1.52	3.96	2.040	0.015	0.7	sulfide (reduced)
3MZRC22_06	E262119	24.38	25.91	1.52	3.93	0.532	0.015	2.8	sulfide (reduced)
3MZRC22_06	E262122	28.96	30.48	1.52	3.78	0.299	0.015	5.0	sulfide (reduced)
3MZRC22_06	E262142	57.91	59.44	1.52	3.25	0.916	0.015	1.6	sulfide>oxide
3MZRC22_06	E262141	56.39	57.91	1.52	2.86	1.155	0.015	1.3	sulfide>oxide
3MZRC22_06	E262140	54.86	56.39	1.52	2.81	0.492	0.015	3.0	sulfide>oxide
3MZRC22_06	E262129	38.10	39.62	1.52	2.70	1.460	0.015	1.0	sulfide (reduced)
3MZRC22_06	E262137	50.29	51.82	1.52	2.49	0.527	0.015	2.8	sulfide>oxide
3MZRC22_06	E262120	25.91	27.43	1.52	1.88	0.616	0.015	2.4	sulfide (reduced)
3MZRC22_07	E262228	36.58	38.10	1.52	15.16	0.296	0.015	5.1	sulfide>oxide
3MZRC22_07	E262221	25.91	27.43	1.52	9.30	0.789	0.015	1.9	sulfide (reduced)
3MZRC22_07	E262215	19.81	21.34	1.52	6.77	1.055	0.015	1.4	sulfide (reduced)
3MZRC22_07	E262221A	27.43	28.96	1.52	6.76	0.345	0.015	4.3	sulfide (reduced)
3MZRC22_07	E262219	22.86	24.38	1.52	6.74	2.050	0.015	0.7	sulfide (reduced)
3MZRC22_07	E262232	42.67	44.20	1.52	6.24	0.339	0.015	4.4	sulfide>oxide
3MZRC22_07	E262220	24.38	25.91	1.52	6.17	2.620	0.015	0.6	sulfide (reduced)
3MZRC22_07	E262229	38.10	39.62	1.52	5.33	0.282	0.015	5.3	sulfide>oxide
3MZRC22_07	E262214	18.29	19.81	1.52	4.82	0.389	0.015	3.9	sulfide (reduced)
3MZRC22_07	E262216	21.34	22.86	1.52	3.85	1.540	0.015	1.0	sulfide (reduced)
3MZRC22_07	E262227	35.05	36.58	1.52	2.75	0.330	0.015	4.5	sulfide>oxide
3MZRC22_08	E263778	36.58	38.10	1.52	11.62	0.336	0.330	98.2	oxide (oxidized)
3MZRC22_08	E263774	30.48	32.00	1.52	10.70	0.324	0.320	98.8	oxide (oxidized)
3MZRC22_08	E263764	19.81	21.34	1.52	6.14	1.395	1.420	101.8	oxide (oxidized)
3MZRC22_08	E263763	18.29	19.81	1.52	4.62	1.085	1.140	105.1	oxide>sulfide
3MZRC22_08	E263777	35.05	36.58	1.52	3.87	0.662	0.650	98.2	oxide (oxidized)
3MZRC22_08	E263751	0.00	1.52	1.52	3.81	1.105	1.060	95.9	oxide (oxidized)
3MZRC22_09	E262371	97.54	99.06	1.52	9.47	1.585	0.015	0.9	sulfide (reduced)
3MZRC22_09	E262369	94.49	96.01	1.52	8.61	0.709	0.015	2.1	sulfide (reduced)
3MZRC22_09	E262332	42.67	44.20	1.52	8.05	0.418	0.015	3.6	sulfide (reduced)
3MZRC22_09	E262337	50.29	51.82	1.52	7.09	1.565	0.015	1.0	sulfide (reduced)
3MZRC22_09	E262338	51.82	53.34	1.52	6.81	1.475	0.015	1.0	sulfide (reduced)
3MZRC22_09	E262344	60.96	62.48	1.52	6.66	0.874	0.015	1.7	sulfide (reduced)
3MZRC22_09	E262370	96.01	97.54	1.52	6.64	1.855	0.015	0.8	sulfide (reduced)
3MZRC22_09	E262328	36.58	38.10	1.52	6.50	0.311	0.015	4.8	sulfide (reduced)
3MZRC22_09	E262376	105.16	106.68	1.52	6.47	0.323	0.015	4.6	sulfide (reduced)

3MZRC22_09	E262356	79.25	80.77	1.52	6.40	0.720	0.015	2.1	sulfide (reduced)
3MZRC22_09	E262333	44.20	45.72	1.52	6.34	0.322	0.015	4.7	sulfide (reduced)
3MZRC22_09	E262349	68.58	70.10	1.52	6.06	0.511	0.015	2.9	sulfide (reduced)
3MZRC22_09	E262348	67.06	68.58	1.52	5.31	1.210	0.015	1.2	sulfide (reduced)
3MZRC22_09	E262307	9.14	10.67	1.52	4.98	0.892	0.830	93.0	oxide (oxidized)
3MZRC22_09	E262309	12.19	13.72	1.52	4.73	0.594	0.170	28.6	oxide (oxidized)
3MZRC22_09	E262343	59.44	60.96	1.52	4.04	1.610	0.015	0.9	sulfide (reduced)
3MZRC22_09	E262378	108.20	109.73	1.52	4.00	0.685	0.015	2.2	sulfide (reduced)
3MZRC22_09	E262306	7.62	9.14	1.52	3.80	1.500	1.330	88.7	oxide (oxidized)
3MZRC22_09	E262372	99.06	100.58	1.52	3.76	0.809	0.015	1.9	sulfide (reduced)
3MZRC22_09	E262345	62.48	64.01	1.52	3.14	0.339	0.015	4.4	sulfide (reduced)
3MZRC22_09	E262327	35.05	36.58	1.52	1.76	0.639	0.015	2.3	sulfide (reduced)
3MZRC22_10	E262438	51.82	53.34	1.52	3.85	1.850	0.015	0.8	sulfide (reduced)
3MZRC22_10	E262437	50.29	51.82	1.52	3.59	2.630	0.040	1.5	sulfide (reduced)
3MZRC22_10	E262404	4.57	6.10	1.52	3.54	0.364	0.180	49.5	oxide (oxidized)
3MZRC22_10	E262427	35.05	36.58	1.52	3.52	0.560	0.015	2.7	sulfide (reduced)
3MZRC22_10	E262444	60.96	62.48	1.52	3.40	0.396	0.015	3.8	sulfide (reduced)
3MZRC22_10	E262449	68.58	70.10	1.52	2.79	0.361	0.015	4.2	sulfide (reduced)
3MZRC22_10	E262435	47.24	48.77	1.52	2.77	0.410	0.015	3.7	sulfide (reduced)
3MZRC22_10	E262443	59.44	60.96	1.52	2.55	1.145	0.015	1.3	sulfide (reduced)
3MZRC22_10	E262426	33.53	35.05	1.52	2.09	0.489	0.015	3.1	sulfide>oxide
3MZRC22_10	E262436	48.77	50.29	1.52	1.64	1.240	0.015	1.2	sulfide (reduced)
3MZRC22_10	E262422	28.96	30.48	1.52	1.36	0.403	0.015	3.7	sulfide>oxide
3MZRC22_10	E262445	62.48	64.01	1.52	1.20	0.753	0.015	2.0	sulfide (reduced)
3MZRC22_11	E261542	57.91	59.44	1.52	6.76	0.558	0.030	5.4	sulfide (reduced)
3MZRC22_11	E261535	47.24	48.77	1.52	6.66	1.810	0.040	2.2	sulfide (reduced)
3MZRC22_11	E261537	50.29	51.82	1.52	5.86	0.508	0.040	7.9	sulfide (reduced)
3MZRC22_11	E261533	44.20	45.72	1.52	4.72	0.870	0.015	1.7	sulfide (reduced)
3MZRC22_11	E261534	45.72	47.24	1.52	4.55	0.796	0.015	1.9	sulfide (reduced)
3MZRC22_11	E261541	56.39	57.91	1.52	4.51	0.380	0.030	7.9	sulfide (reduced)
3MZRC22_11	E261505	6.10	7.62	1.52	4.23	0.538	0.420	78.1	oxide (oxidized)
3MZRC22_11	E261530	39.62	41.15	1.52	4.20	0.392	0.030	7.7	sulfide (reduced)
3MZRC22_11	E261544	60.96	62.48	1.52	4.11	0.987	0.040	4.1	sulfide (reduced)
3MZRC22_11	E261531	41.15	42.67	1.52	3.67	0.642	0.015	2.3	sulfide (reduced)
3MZRC22_11	E261543	59.44	60.96	1.52	3.26	0.492	0.030	6.1	sulfide (reduced)
3MZRC22_11	E261527	35.05	36.58	1.52	2.91	0.544	0.015	2.8	sulfide (reduced)
3MZRC22_11	E261504	4.57	6.10	1.52	1.96	0.383	0.260	67.9	oxide (oxidized)
3MZRC22_11	E261532	42.67	44.20	1.52	1.95	0.568	0.015	2.6	sulfide (reduced)
3MZRC22_11	E261526	33.53	35.05	1.52	1.16	0.384	0.015	3.9	sulfide (reduced)
3MZRC22_11	E261536	48.77	50.29	1.52	1.09	1.030	0.070	6.8	sulfide (reduced)

3MZRC22_12	E261610	13.72	15.24	1.52	6.52	0.355	0.180	50.7	sulfide>oxide
3MZRC22_12	E261606	7.62	9.14	1.52	5.70	1.185	0.480	40.5	oxide (oxidized)
3MZRC22_12	E261608	10.67	12.19	1.52	4.95	0.686	0.330	48.1	oxide (oxidized)
3MZRC22_12	E261605	6.10	7.62	1.52	4.85	1.495	1.250	83.6	oxide (oxidized)
3MZRC22_12	E261609	12.19	13.72	1.52	4.78	0.480	0.390	81.3	oxide>sulfide
3MZRC22_12	E261604	4.57	6.10	1.52	4.61	1.825	1.480	81.1	oxide (oxidized)
3MZRC22_12	E261607	9.14	10.67	1.52	4.41	5.230	1.340	25.6	oxide (oxidized)
3MZRC22_12	E261603	3.05	4.57	1.52	2.71	1.175	0.980	83.4	oxide (oxidized)
3MZRC22_13	E261721	27.43	28.96	1.52	7.38	0.793	0.140	17.7	sulfide (reduced)
3MZRC22_13	E261716	22.86	24.38	1.52	6.41	0.522	0.030	5.7	sulfide>oxide
3MZRC22_13	E261719	24.38	25.91	1.52	6.40	0.925	0.040	4.3	sulfide>oxide
3MZRC22_13	E261715	21.34	22.86	1.52	4.68	0.680	0.030	4.4	sulfide>oxide
3MZRC22_13	E261710	13.72	15.24	1.52	4.61	0.483	0.015	3.1	sulfide (reduced)
3MZRC22_13	E261705	6.10	7.62	1.52	4.57	0.330	0.070	21.2	oxide (oxidized)
3MZRC22_13	E261714	19.81	21.34	1.52	2.44	0.655	0.030	4.6	sulfide=oxide
3MZRC22_13	E261722	28.96	30.48	1.52	2.21	0.525	0.050	9.5	sulfide (reduced)
3MZRC22_13	E261720	25.91	27.43	1.52	2.09	0.711	0.140	19.7	sulfide (reduced)
3MZRC22_14	E261842	129.54	131.06	1.52	9.50	4.910	0.130	2.6	sulfide (reduced)
3MZRC22_14	E261769	24.38	25.91	1.52	8.18	0.364	0.300	82.4	sulfide=oxide
3MZRC22_14	E261781	41.15	42.67	1.52	8.09	0.373	0.060	16.1	sulfide (reduced)
3MZRC22_14	E261777	35.05	36.58	1.52	7.12	1.175	0.030	2.6	sulfide (reduced)
3MZRC22_14	E261797	65.53	67.06	1.52	6.92	0.351	0.030	8.5	sulfide (reduced)
3MZRC22_14	E261776	33.53	35.05	1.52	6.31	0.536	0.015	2.8	sulfide (reduced)
3MZRC22_14	E261778	36.58	38.10	1.52	6.09	0.389	0.015	3.9	sulfide (reduced)
3MZRC22_14	E261770	25.91	27.43	1.52	6.05	0.918	0.015	1.6	sulfide (reduced)
3MZRC22_14	E261840	126.49	128.02	1.52	5.50	0.530	0.015	2.8	sulfide (reduced)
3MZRC22_14	E261841	128.02	129.54	1.52	5.35	1.790	0.060	3.4	sulfide (reduced)
3MZRC22_14	E261782	42.67	44.20	1.52	5.11	0.481	0.040	8.3	sulfide (reduced)
3MZRC22_14	E261780	39.62	41.15	1.52	4.76	0.423	0.015	3.5	sulfide (reduced)
3MZRC22_14	E261844	132.59	134.11	1.52	4.53	0.673	0.015	2.2	sulfide (reduced)
3MZRC22_14	E261823	100.58	102.11	1.52	4.38	0.819	0.015	1.8	sulfide (reduced)
3MZRC22_14	E261824	102.11	103.63	1.52	4.29	2.150	0.015	0.7	sulfide (reduced)
3MZRC22_14	E261845	134.11	135.64	1.52	3.64	0.326	0.015	4.6	sulfide (reduced)
3MZRC22_14	E261785	47.24	48.77	1.52	3.64	0.366	0.015	4.1	sulfide (reduced)
3MZRC22_14	E261843	131.06	132.59	1.52	3.59	0.856	0.015	1.8	sulfide (reduced)
3MZRC22_14	E261832	114.30	115.82	1.52	3.52	0.469	0.015	3.2	sulfide (reduced)
3MZRC22_14	E261784	45.72	47.24	1.52	3.12	0.515	0.015	2.9	sulfide (reduced)
3MZRC22_14	E261833	115.82	117.35	1.52	2.81	0.394	0.015	3.8	sulfide (reduced)
3MZRC22_14	E261826	105.16	106.68	1.52	2.71	0.444	0.015	3.4	sulfide (reduced)
3MZRC22_14	E261771	27.43	28.96	1.52	2.60	0.966	0.015	1.6	sulfide (reduced)

3MZRC22_14	E261834	117.35	118.87	1.52	2.54	0.518	0.015	2.9	sulfide (reduced)
3MZRC22_14	E261822	99.06	100.58	1.52	2.50	0.344	0.015	4.4	sulfide (reduced)
3MZRC22_14	E261831	112.78	114.30	1.52	2.04	0.317	0.030	9.5	sulfide (reduced)
3MZRC22_14	E261783	44.20	45.72	1.52	1.89	0.459	0.060	13.1	sulfide (reduced)
3MZRC22_14	E261825	103.63	105.16	1.52	1.45	0.606	0.015	2.5	sulfide (reduced)
3MZRC22_14	E261786	48.77	50.29	1.52	1.43	0.332	0.015	4.5	sulfide (reduced)
3MZRC22_15	E261915	21.34	22.86	1.52	6.70	0.336	0.015	4.5	sulfide (reduced)
3MZRC22_15	E261930	39.62	41.15	1.52	6.18	0.853	0.050	5.9	sulfide (reduced)
3MZRC22_15	E261927	35.05	36.58	1.52	5.68	0.478	0.015	3.1	sulfide (reduced)
3MZRC22_15	E261936	48.77	50.29	1.52	4.89	3.950	0.090	2.3	sulfide (reduced)
3MZRC22_15	E261938	51.82	53.34	1.52	4.68	0.442	0.040	9.0	sulfide (reduced)
3MZRC22_15	E261937	50.29	51.82	1.52	3.52	0.707	0.040	5.7	sulfide (reduced)
3MZRC22_15	E261939	53.34	54.86	1.52	3.24	0.388	0.015	3.9	sulfide (reduced)
3MZRC22_15	E261926	33.53	35.05	1.52	3.13	0.619	0.015	2.4	sulfide (reduced)
3MZRC22_15	E261929	38.10	39.62	1.52	1.41	0.950	0.015	1.6	sulfide (reduced)
3MZRC22_16	E262536	48.77	50.29	1.52	7.19	0.615	0.015	2.4	sulfide (reduced)
3MZRC22_16	E262524	30.48	32.00	1.52	6.70	0.398	0.015	3.8	sulfide (reduced)
3MZRC22_16	E262525	32.00	33.53	1.52	6.38	0.367	0.015	4.1	sulfide (reduced)
3MZRC22_16	E262532	42.67	44.20	1.52	5.69	0.382	0.015	3.9	sulfide (reduced)
3MZRC22_16	E262537	50.29	51.82	1.52	4.77	0.325	0.015	4.6	sulfide (reduced)
3MZRC22_16	E262528	36.58	38.10	1.52	3.89	0.492	0.015	3.0	sulfide (reduced)
3MZRC22_16	E262527	35.05	36.58	1.52	3.84	0.950	0.040	4.2	sulfide (reduced)
3MZRC22_16	E262516	22.86	24.38	1.52	1.90	0.466	0.015	3.2	sulfide (reduced)
3MZRC22_17	E262553	3.05	4.57	1.52	13.20	0.521	0.190	36.5	oxide (oxidized)
3MZRC22_17	E262561	15.24	16.76	1.52	6.28	0.308	0.030	9.7	sulfide (reduced)
3MZRC22_17	E262575	32.00	33.53	1.52	6.05	1.225	0.100	8.2	sulfide (reduced)
3MZRC22_17	E262572	28.96	30.48	1.52	5.55	1.210	0.090	7.4	sulfide (reduced)
3MZRC22_17	E262579	38.10	39.62	1.52	5.38	0.320	0.050	15.6	sulfide (reduced)
3MZRC22_17	E262564	19.81	21.34	1.52	4.90	0.512	0.060	11.7	sulfide (reduced)
3MZRC22_17	E262576	33.53	35.05	1.52	4.36	0.306	0.050	16.3	sulfide (reduced)
3MZRC22_17	E262574	30.48	32.00	1.52	4.36	0.608	0.070	11.5	sulfide (reduced)
3MZRC22_17	E262565	21.34	22.86	1.52	3.61	0.554	0.060	10.8	sulfide (reduced)
3MZRC22_17	E262563	18.29	19.81	1.52	3.30	0.500	0.030	6.0	sulfide (reduced)
3MZRC22_17	E262552	1.52	3.05	1.52	2.93	0.435	0.230	52.9	oxide (oxidized)
3MZRC22_17	E262562	16.76	18.29	1.52	2.59	0.777	0.015	1.9	sulfide (reduced)
3MZRC22_18	E261864	19.81	21.34	1.52	4.99	1.365	0.015	1.1	sulfide (reduced)
3MZRC22_18	E261865	21.34	22.86	1.52	4.76	0.878	0.015	1.7	sulfide (reduced)
3MZRC22_18	E261863	18.29	19.81	1.52	3.62	0.751	0.015	2.0	sulfide (reduced)
3MZRC22_18	E261860	13.72	15.24	1.52	3.47	0.722	0.030	4.2	sulfide (reduced)
3MZRC22_18	E261861	15.24	16.76	1.52	3.23	0.273	0.015	5.5	sulfide (reduced)

3MZRC22_18	E261862	16.76	18.29	1.52	2.16	0.320	0.015	4.7	sulfide (reduced)
3MZRC22_19	E262755	6.10	7.62	1.52	11.12	0.342	0.015	4.4	oxide (oxidized)
3MZRC22_19	E262754	4.57	6.10	1.52	5.24	0.415	0.120	28.9	oxide (oxidized)
3MZRC22_19	E262780	39.62	41.15	1.52	4.16	1.225	0.015	1.2	sulfide (reduced)
3MZRC22_19	E262770	25.91	27.43	1.52	3.32	0.658	0.030	4.6	sulfide (reduced)
3MZRC22_19	E262778	36.58	38.10	1.52	2.59	0.495	0.030	6.1	sulfide (reduced)
3MZRC22_19	E262769	24.38	25.91	1.52	2.13	0.494	0.015	3.0	sulfide (reduced)
3MZRC22_19	E262779	38.10	39.62	1.52	1.95	1.355	0.050	3.7	sulfide (reduced)
3MZRC22_19	E262772	28.96	30.48	1.52	1.57	0.529	0.040	7.6	sulfide (reduced)
3MZRC22_20	E262819	24.38	25.91	1.52	8.81	0.549	0.090	16.4	sulfide (reduced)
3MZRC22_20	E262815	21.34	22.86	1.52	7.84	0.534	0.015	2.8	sulfide (reduced)
3MZRC22_20	E262816	22.86	24.38	1.52	7.82	1.930	0.015	0.8	sulfide (reduced)
3MZRC22_20	E262821	27.43	28.96	1.52	7.54	0.474	0.070	14.8	sulfide (reduced)
3MZRC22_20	E262820	25.91	27.43	1.52	7.51	0.638	0.080	12.5	sulfide (reduced)
3MZRC22_20	E262826	33.53	35.05	1.52	7.02	0.313	0.060	19.2	sulfide (reduced)
3MZRC22_20	E262825	32.00	33.53	1.52	6.98	0.331	0.060	18.1	sulfide (reduced)
3MZRC22_20	E262809	12.19	13.72	1.52	6.17	0.343	0.015	4.4	sulfide (reduced)
3MZRC22_20	E262814	19.81	21.34	1.52	5.54	0.939	0.015	1.6	sulfide (reduced)
3MZRC22_20	E262830	39.62	41.15	1.52	5.27	0.663	0.015	2.3	sulfide (reduced)
3MZRC22_20	E262827	35.05	36.58	1.52	4.53	0.522	0.040	7.7	sulfide (reduced)
3MZRC22_20	E262829	38.10	39.62	1.52	3.60	0.799	0.070	8.8	sulfide (reduced)
3MZRC22_21	E262940	54.86	56.39	1.52	7.74	0.436	0.015	3.4	sulfide (reduced)
3MZRC22_21	E262945	62.48	64.01	1.52	7.23	0.393	0.015	3.8	sulfide (reduced)
3MZRC22_21	E262942	57.91	59.44	1.52	6.28	1.195	0.015	1.3	sulfide (reduced)
3MZRC22_21	E262944	60.96	62.48	1.52	4.74	1.085	0.015	1.4	sulfide (reduced)
3MZRC22_21	E262943	59.44	60.96	1.52	3.78	0.799	0.015	1.9	sulfide (reduced)
3MZRC22_21	E262941	56.39	57.91	1.52	2.94	0.778	0.015	1.9	sulfide (reduced)
3MZRC22_22	E262621	27.43	28.96	1.52	8.76	0.517	0.015	2.9	sulfide (reduced)
3MZRC22_22	E262620	25.91	27.43	1.52	7.39	0.601	0.015	2.5	sulfide (reduced)
3MZRC22_22	E262632	42.67	44.20	1.52	6.52	2.120	0.110	5.2	sulfide (reduced)
3MZRC22_22	E262615	21.34	22.86	1.52	6.47	0.722	0.015	2.1	sulfide (reduced)
3MZRC22_22	E262633	44.20	45.72	1.52	6.30	0.373	0.015	4.0	sulfide (reduced)
3MZRC22_22	E262614	19.81	21.34	1.52	5.70	0.813	0.040	4.9	sulfide (reduced)
3MZRC22_22	E262613	18.29	19.81	1.52	4.92	0.639	0.040	6.3	sulfide (reduced)
3MZRC22_22	E262616	22.86	24.38	1.52	4.73	0.714	0.015	2.1	sulfide (reduced)
3MZRC22_22	E262629	38.10	39.62	1.52	4.25	0.418	0.040	9.6	sulfide (reduced)
3MZRC22_22	E262630	39.62	41.15	1.52	3.67	0.971	0.070	7.2	sulfide (reduced)
3MZRC22_22	E262631	41.15	42.67	1.52	2.50	2.570	0.120	4.7	sulfide (reduced)
9DPRC22_01	E261074	124.97	126.49	1.52	8.17	0.260	0.190	73.1	sulfide>oxide
9DPRC22_01	E261067	114.30	115.82	1.52	5.63	0.131	0.015	11.5	sulfide (reduced)

9DPRC22_01	E261063	109.73	111.25	1.52	5.48	1.175	1.190	101.3	oxide (oxidized)
9DPRC22_01	E261062	108.20	109.73	1.52	5.24	1.405	1.310	93.2	oxide (oxidized)
9DPRC22_01	E261066	112.78	114.30	1.52	5.21	0.765	0.590	77.1	sulfide>oxide
9DPRC22_01	E261061	106.68	108.20	1.52	4.83	0.351	0.280	79.8	oxide>sulfide
9DPRC22_01	E261075	126.49	128.02	1.52	3.66	0.111	0.090	81.1	sulfide>oxide
9DPRC22_01	E261065	111.25	112.78	1.52	3.23	1.240	1.140	91.9	oxide (oxidized)
9DPRC22_01	E261001	19.81	21.34	1.52	1.36	0.157	0.040	25.5	oxide (oxidized)

Appendix 2: JORC Code, 2012 Edition – Table 1 Report in relation to soil sampling and first pass gold recovery testwork

Section 1 - Sampling Techniques and Data

(Criterial in this section apply to all succeeding sections)

Criteria of JORC Code 2012	***JORC Code (2012) explanation***	***Details of the Reported Project***
Sampling techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialized industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	665 soil samples were collected by a contracted team from North American Exploration Inc with sample sites located using Garmin etrex 20x GPS units. The datum used on the project is NAD83. The soil sampling procedure consisted of: 1. Clearing top 5cm of material around where the sample was to be collected. 2. Digging a hole to 30cm with the material in the hole was removed. If the 30cm hole was not reached or exceeded a note was made and the depth was recorded. 3. Sampling from the side walls of the hole from 5cm to 30cm where possible. 4. The material was then run through a sieve and bagged. 5. If a sample was sieved a sample of 500+ grams was collected. 6. If a bulk sample was collected at least one kilogram was collected. 7. The samples were bagged, delivered to the Volantis office where they were later shipped to ALS in Nevada for assay. Preliminary gold recoveries using cyanide leaching was carried out on 277 residual -75 micron pulps of reverse circulation drill hole samples originally collected for analysis down Alderan holes at Mizpah and Drum prospects in 2022. The samples were collected from gold mineralised zones grading +0.3g/t Au.
	Include reference to measures taken to ensure sample representativeness and the appropriate calibration of any measurement tools or systems used.	Soil samples were collected using a standard procedure as indicated in the section above. Gold recovery samples were collected as indicated in the section above.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1	Soil weights submitted for analysis to ALS ranged from 0.21kg to 2.21kg. The analysis involved using ALS sample preparation procedure PREP-41 and analytical procedure AuME-ST43/ST44 which uses aqua regia extraction with an ICP-MS finish to detect low level gold in the range of 0.0001- 1.0ppm. Sample weights required for analysis are 25/50grams. Two samples were under-weight due to poor soil development at sample locations.

	m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Gold recovery sample weights ranged from 1.09-15.16kg. The samples were residual pulps of Alderan 2022 reverse circulation drill holes at Mizpah and Drum prospects prepared using ALS standard sample preparation procedure. All sample intervals were 1.52m and sample charges for analysis were 30gm.
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	No applicable for soil samples as no drilling undertaken. Gold recovery cyanide leach testing was completed on pulps of chip samples from reverse circulation drill holes into the Mizpah and Drum prospects completed by Alderan in 2022.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Not applicable for soil samples as no drilling undertaken. For gold recovery cyanide leach testing Sample weights ranged from 1.09kg to 15.16kg for individual 5ft (1.52m) sample intervals. Geologist were on site during all drilling and responsible for all logging.
	Measures taken to maximize sample recovery and ensure representative nature of the samples.	Not applicable for soil samples as no drilling undertaken. Industry standard practices, e.g. optimized drilling speed, regular changes of the drill bits and drilling muds were used throughout to ensure no recovery or sample representation issues were encountered.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Not applicable for soil samples as no drilling undertaken. No relationships observed between the core recovery and sample grades.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	Not applicable for soil samples as no drilling undertaken. Geological logging was completed on all of the reverse circulation drill hole sample intervals and is to an industry standard appropriate to the initial exploration nature of the program. Particular attention was given to identifying the oxide, oxide-sulphide and sulphide zones down holes.

<table>
<tr><td></td><td>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</td><td>Not applicable for soil samples as no drilling undertaken.
Geologic logging is qualitative to semi-quantitative making use of an experienced geologist and high-quality binocular microscope.</td></tr>
<tr><td></td><td>The total length and percentage of the relevant intersections logged.</td><td>Not applicable for soil samples as no drilling undertaken.
100% of the reverse circulation drill holes were logged applying the same logging and documentation principles.</td></tr>
<tr><td rowspan="3">Sub-sampling techniques and sample preparation</td><td>If core, whether cut or sawn and whether quarter, half or all core taken</td><td>Not applicable for soil samples as no drilling undertaken.</td></tr>
<tr><td>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</td><td>Where soil samples were dry, they were sieved in the field to deliver +500gram samples which were then bagged for analysis. Where the soil was too wet for field sieving a minimum of 1kg was collected and sent to the laboratory for preparation and analysis.
All reverse circulation drill chips for sample intervals were collected and sent to the laboratory for preparation and analysis. No splitting, drying or other forms of sample preparation were carried out at the drill site.</td></tr>
<tr><td>For all sample types, the nature, quality, and appropriateness of the sample preparation technique.</td><td>The soil samples were prepared in the ALS laboratory in USA using the soil and sediment preparation package (PREP SCR-41 procedure) which involves drying at <60ºC/140ºF, sieving to -180 microns and retaining both fractions. Sample preparation follows the standard procedure of the ALS lab, representing industry common practice.
The reverse circulation samples are prepared in the ALS laboratory in USA. Sample preparation follows the standard procedure of the ALS lab, representing the industry common practice. Each sample was weighed, fine crushed to <2mm (70% pass) and split by a riffle splitter. The sample was then pulverized up to 250g at 85% < 75um.
SAMPLE PREPARATION
ALS CODE — DESCRIPTION
WEI-21 — Received Sample Weight
LOG-22 — Sample login - Rcd w/o BarCode
LOG-24 — Pulp Login - Rcd w/o Barcode
SND-ALS — Send samples to internal laboratory
CRU-QC — Crushing QC Test
PUL-QC — Pulverizing QC Test
CRU-31 — Fine crushing - 70% <2mm
SPL-21 — Split sample - riffle splitter
PUL-31 — Pulverize up to 250g 85% <75 um</td></tr>
</table>

	Quality control procedures adopted for all sub-sampling stages to maximise representativeness of samples.	Experienced contract soil sampling and analytical laboratory was used. Field checks carried out during sampling and results checked for appropriateness by Alderan geologist team in USA. The logging geologist supervised drill chip sampling to ensure all samples were geological representative. Quality of comminutions is verified by a control sieving, which is a standard procedure of the ALS laboratories.
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	Field checks carried out during soil sampling and results checked for appropriateness by Alderan geologist team in USA. The reverse circulation drill holes were either vertical or oriented and drilled in such a way to attempt to cut inferred geologic controls (bedding, faults etc.) perpendicular to their strike in order to measure true thicknesses. The logging geologist supervised sample collection to ensure all samples were geological representative.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Soil sample weight ranges from 0.21 to 2.21kg. Two samples out of 665 were underweight for the analytical procedure. Gold recovery pulp sample weights ranged from 1.09-15.16kg.

Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	Super Trace Gold and Multi-Element in Soils & Sediments ALS offers the lowest detection limits in the industry for gold in soils and sediments by both cyanide and aqua regia digestion, using our innovative super trace analytical methodology. Full multi-element geochemical suites may be read from the same digest solution as our aqua regia and ICP-MS super trace gold method. This package mirrors our ME-MS41L™ method, with slight adjustments made to accommodate the larger nominal sample weight necessary for representative gold analysis. The soils were analysed by ALS using the AuME-ST43/ST44 procedure above - these are standard techniques commonly used for analysis of the gold mineralisation. The reverse circulation drill hole pulp samples were analysed using ALS gold cyanide technique Au-AA13

CODE	ANALYTE	RANGE	DESCRIPTION
Au-CN43™	Au	0.02ppb-1ppm	Au by cyanide extraction with ICP-MS finish. **25g sample** **50g sample**
Au-CN44™			
Au-ST43™	Au	0.1ppb-0.1ppm	Au by aqua regia extraction with ICP-MS finish. **25g sample** **50g sample**
Au-ST44™			

CODE	ANALYTES & RANGES (ppm)							
AuME-ST43™ **25g sample** AuME-ST44™ **50g sample**	Au	0.0001-1	Cu	0.01-10000	Nb	0.002-500	Ta	0.005-500
	Ag	0.001-100	Fe	0.001-50 %	Ni	0.02-10000	Te	0.001-500
	Al	0.01-25 %	Ga	0.004-10000	P	0.0005-1 %	Th	0.0005-10000
	As	0.01-10000	Ge	0.005-500	Pb	0.005-10000	Ti	0.0001-10 %
	B	2-10000	Hf	0.002-500	Pd	0.001-100	Tl	0.0005-10000
	Ba	0.05-10000	Hg	0.002-10000	Pt	0.001-100	U	0.0005-2500
	Be	0.005-1000	In	0.005-500	Rb	0.005-10000	V	0.05-10000
	Bi	0.0005-10000	K	0.01-10 %	Re	0.0002-50	W	0.001-10000
	Ca	0.01-25 %	La	0.002-10000	S	0.002-10 %	Y	0.001-5000
	Cd	0.001-2000	Li	0.1-10000	Sb	0.002-10000	Zn	0.1-10000
	Ce	0.001-10000	Mg	0.01-25 %	Sc	0.005-10000	Zr	0.01-500
	Co	0.001-10000	Mn	0.1-50000	Se	0.002-1000		
	Cr	0.01-10000	Mo	0.002-10000	Sn	0.01-500		
	Cs	0.001-500	Na	0.001-10 %	Sr	0.01-10000		

<table>
<tr><td></td><td></td><td>
<h2>Gold Cyanidation</h2>
In mining and exploration applications, cyanide leach tests are used to establish the potential cyanide extraction efficiency for gold and silver.
High concentrations of some sulphides, particularly chalcopyrite, can negatively impact gold extraction. For samples that are expected to contain high copper sulphide concentration please contact ALS for suggestions.
<table>
<tr><th>CODE</th><th>ANALYTE</th><th>RANGE (ppm)</th><th>DESCRIPTION</th></tr>
<tr><td>Au-AA13
Ag-AA13
Cu-AA13</td><td>Au
Ag
Cu</td><td>0.03-50
0.03-350
0.1-2,000</td><td>Au, Ag, Cu by cyanide leach with AAS finish.
30g sample</td></tr>
<tr><td>Au-AA14</td><td>Au</td><td>0.01-200</td><td>Au by cyanide leach with AAS finish.
12hr Leach.
Up to 1kg sample</td></tr>
<tr><td>Au-AA15a
Au-AA15b
Au-AA15c
Au-AA15d</td><td>Au</td><td>0.001-125</td><td>Au by accelerated cyanide leach using LeachWELL Assay Tabs™ with AAS finish. 4hr Leach.
500g sample request Au-AA15a
For 1kg request Au-AA15b
For 2kg request Au-AA15c
For 3kg request Au-AA15d</td></tr>
<tr><td>Au-AA31
Au-AA31a</td><td>Au</td><td>0.03-500</td><td>Au Preg Rob Leach with Gold Spike.
Au Preg Rob Leach without Gold Spike.
10g sample per method</td></tr>
</table>
Note: Cyanide disposal fees apply in some countries. For Super Trace Au with cyanide leach see me
</td></tr>
<tr><td></td><td>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</td><td>Not applicable – no such tools used.</td></tr>
<tr><td></td><td>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</td><td>Alderan’s standard procedure is that QA/QC samples be inserted at a rate of 2% certified reference samples, 2% blanks and 2% field duplicates.
Duplicates for the soils were collected by excavating a second hole 1-2m from the first (in the same geology) and then excavating and sieving material as per the original sample. This sample is placed out of sequence – forward or back in the number sequence.</td></tr>
<tr><td>Verification of sampling and assaying</td><td>The verification of significant intersections by either independent or alternative company personnel.</td><td>Not applicable – no drilling undertaken.</td></tr>
<tr><td></td><td>The use of twinned holes.</td><td>No applicable – no drilling undertaken.</td></tr>
</table>

	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Soil samples were rigorously documented by the North American Exploration Inc sampling team. All field data were collected, entered into excel spreadsheets and validated. Assay results have been obtained electronically from the ALS laboratory. Reverse circulation drill chips were rigorously documented by Alderan geologists. All field data are collected, entered into excel spreadsheets and validated. Assay results have been obtained electronically from the ALS laboratory. All data are safely stored in the company offices in Perth and Park City, Utah.
	Discuss any adjustment to assay data.	Not applicable – no adjustments made.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Garmin etrex 20x GPS units were used to locate soil sample points. Accuracy of the GPS based techniques is deemed sufficient given the initial exploration nature of the sampling programme. A handheld sub-meter GPS was used for drill hole collars locating. Accuracy of the GPS based techniques was deemed sufficient given the initial exploration nature of the drill program.
	Specification of the grid system used.	All data are recorded in a UTM zone 12 (North) NAD83 grid.
	Quality and adequacy of topographic control.	Not applicable. RL values obtained by GPS were routinely compared with the nominal elevation values for drill hole collars.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Soil samples were collected at 40m intervals along east-west grid lines. The aim of the programme was to fill in gaps in the 2021 sampling grid.
	Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The soil sampling is appropriate for outlining areas of prospectivity for more detailed follow up exploration in the future. Location and spatial distribution of the drillholes and the gold recovery results are applicable for assessment of the prospectivity of the project area, but the data is not suitable and was not intended to be used for quantitative assessments of the project, i.e. not intended for estimation of the Mineral Resources.
	Whether sample compositing has been applied.	Not applicable - no sample compositing applied.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	The soil sample lines were designed to run largely perpendicular to the prevailing strike of the geology. Significant structures in the Detroit District trend predominantly NE-SW. Known mineralisation in the district is typically associated with the intersection of favourable host lithologies and structures. The reverse circulation drill holes were oriented and drilled in such a way to attempt to cut inferred geologic controls (bedding, faults etc.) perpendicular to their strike in order to measure true thicknesses. The logging geologist supervised sample collection to ensure all samples were geological representative.

	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Not applicable for soil samples as no drilling undertaken. The reverse circulation drill holes were oriented and drilled in such a way to attempt to cut inferred geologic controls (bedding, faults etc.) perpendicular to their strike in order to measure true thicknesses. The logging geologist supervised sample collection to ensure all samples were geological representative.
Sample security	*The measures taken to ensure sample security*	Chain of custody was maintained at all steps of the sampling procedure. Only authorised personnel handled or viewed the sampled materials.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Sampling procedures were established and systematically reviewed by the company personnel with Scott Caithness, Alderan's Managing Director, acting as the project's Competent Person.

Section 2 – Reporting of Exploration Results

(Criterial in this section apply to all succeeding sections)

Criteria of JORC Code 2012	**JORC Code (2012) explanation**	**Details of the Reported Project**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	All soil samples and drill holes are located on State of Utah Metalliferous leases, patented claims and unpatented mining claims which are owned directly or the subject of Mining Lease with Option to Purchase agreements between the tenement owner and Alderan through its USA subsidiaries Valyrian Resources Corp and Volantis Resources Corp. For option agreement details see Alderan ASX releases dated 16 April 2020, 11 February 2021, 30 September 2021 and 3 June 2022.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	Title is maintained in accordance with the General Mining Act of 1872 and its associated regulations and Utah Admin. Code R850-2. The claims are valid and in good standing. The claims have been properly located and monumented.
Exploration done by other parties (2.2)	*Acknowledgment and appraisal of exploration by other parties.*	The Detroit mineral district in the Drum Mountains of west central Utah was the subject of mining and exploration for gold, copper, and manganese from the 1800's until early 1900's. This was followed by renewed interest in beryllium, gold, manganese, and uranium in the past 20 years. Gold and copper were discovered at Detroit in 1872, and from 1904 to 1917, gold, silver, and copper were produced from siliceous replacement fissure deposits in jasperoids, limestone and dolomite, for a total value of about $46,000. Exploration for gold and base metals intermittently continued through the entire 20th century, in particular, since the early 1960's when jasperoids similar to those commonly found in highly productive gold mining districts in Utah and the neighbouring state of Nevada have been identified in the Drum Mountains of Utah. Specialised studies of the jasperoids have been undertaken by USGS and the other companies over this period and sampling of these rocks commonly reveals anomalous concentrations of gold. The Drum oxide gold deposit was mined from 1984-89 and produced 125,000oz of gold. The Mizpah oxide gold deposit was drilled during the same period but never mined.
Geology	*Deposit type, geological setting, and style of mineralisation.*	Different types and styles of mineralisation in the Drum Mountains include Carlin-like gold, gold-bearing skarns, Cu-Mo-Au porphyries and Marigold-type distal disseminated gold. The focus of Alderan's exploration efforts at Detroit is to discover a distal disseminated gold deposit. Key features of these deposits include: a) Favourable permeable reactive rocks (silty limestones and limey siltstones)

		b) Favourable structures often coincident with mineral-related intrusive c) Gold-bearing hydrothermal solutions d) Micron-sized gold in fine-grained disseminated pyrite e) Common geochemical indicators are: As, Sb, Ba, Te, Se, Hg f) Common argillization, development of the jasperoids and decalcification of the host rocks. This mineralisation is being actively explored for by Alderan in the Detroit district. Additional Alderan exploration targets at Detroit include: 1. Intrusion hosted/related gold mineralisation. 2. Carlin-like mineralisation. 3. Magnetite copper-gold skarns that were identified through ground magnetics.
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*	The gold recovery results in the announcement relate to samples collected from reverse circulation holes drilled into the Mizpah and Drum prospects. All data on these holes is contain ed in Alderan ASX announcements dated 30 September 2022 and 2 November 2022.
	Easting and Northing of the drill hole collar. Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar.	
	Dip and azimuth of the hole.	
	Down hole length and interception depth and *hole length.*	
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	Not applicable – no exclusions.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	In Figure 1 of the announcement, highlighted anomalous spot soil samples grade >0.026g/t Au and anomalous zones along soil lines are where continuous runs of samples grading >0.026g/t Au over more than two 40m spaced sample occur. No averaging of grade over anomalous sample intervals has been carried out.

		Table 2 in the announcement provides a complete summary of the cyanide leach recovery results for oxide, mixed oxide-sulphide and sulphide reverse circulation hole samples from Mizpah and Drum. This includes gold grade ranges, cyanide recovery ranges and recovered gold grades.
	Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Not applicable.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	Alderan's aim with the drilling at Mizpah and Drum was to both verify historical drilling results and intersect near surface high grade gold mineralisation. Rock units hosting the mineralisation are interpreted to dip relatively gently at 20-30^{o} to the southwest. Historical data including sample assays, logs and sections of reverse circulation holes drilled in the 1980s interpreted mineralisation horizons, structures and geological contacts. Alderan's vertical drill holes are targeting the interpreted mineralised horizons and its angled holes are targeting either zones between historical drill holes or interpreted structures that have potential to host mineralisation. The true width of mineralisation has not yet been calculated and will vary from the intersections down drillholes.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	The units which hosts the mineralisation in holes at Drum and Mizpah is interpreted to dip gently at between 20-30^{o} toward the southwest at an azimuth of around 220^{o}. Holes drilled vary from vertical to -45^{o} depending on whether they are targeting the host unit, zones between historical drillholes or interpreted structures.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	Not applicable.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Maps and tables are presented in the text of this ASX release and in the JORC Table 1.

Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	The release is focused on presenting the assay results of infill soil sampling completed in prospective areas identified from Alderan's 2021 soil sampling in its Detroit project area. Soil sample assays confirm the presence of unexplored gold mineralisation. It also presents the results of first pass cyanide leach gold recovery results for mineralised intervals in reverse circulation drill holes at Drum and Mizpah.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Alderan district scale exploration at Detroit has resulted in a focus on the gold potential of the District. Modelling of historical drilling data, surface rock sampling and drilling has verified the presence of gold mineralisation at Drum and Mizpah and highlighted the potential for additional oxide and primary gold mineralisation.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	The infill soil results will be assessed in conjunction with the preliminary gold recovery and drilling results to determine Alderan's next steps at Detroit.